

# Agenda

## General scrutiny committee

Date: **Monday 28 September 2020**

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Time: **10.15 am**

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Place: Online meeting only

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Notes: Watch this meeting live on the Herefordshire Council YouTube Channel:  
<https://www.youtube.com/HerefordshireCouncil>.

For any further information please contact:

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# **Agenda for the meeting of the General scrutiny committee**

## **Membership**

**Chairperson**            **Councillor Jonathan Lester**  
**Vice-Chairperson**   **Councillor Tracy Bowes**

**Councillor Barry Durkin**  
**Councillor Jennie Hewitt**  
**Councillor Bernard Hunt**  
**Councillor Paul Symonds**  
**Councillor William Wilding**

## Agenda

		Pages
<b>PUBLICS RIGHTS TO INFORMATION AND ATTENDANCE AT MEETINGS</b>		
<b>GUIDE TO THE COMMITTEE</b>		
<b>1.</b>	<b>APOLOGIES FOR ABSENCE</b> To receive apologies for absence.	
<b>2.</b>	<b>NAMED SUBSTITUTES</b> To receive details of members nominated to attend the meeting in place of a member of the committee.	
<b>3.</b>	<b>DECLARATIONS OF INTEREST</b> To receive declarations of interests in respect of Schedule 1, Schedule 2 or Other Interests from members of the committee in respect of items on the agenda.	
<b>4.</b>	<b>MINUTES</b> To receive the minutes of the meeting held on 20 January 2020.	9 - 18
<b>5.</b>	<b>QUESTIONS FROM MEMBERS OF THE PUBLIC</b> To receive any written questions from members of the public.  Details of the scheme and related guidance are available here:  <a href="https://www.herefordshire.gov.uk/info/200148/your_council/61/get_involved">https://www.herefordshire.gov.uk/info/200148/your_council/61/get_involved</a>  Please submit questions to <a href="mailto:councillorservices@herefordshire.gov.uk">councillorservices@herefordshire.gov.uk</a>  The deadline for the receipt of questions is Tuesday 22 September 2020 at 5.00 pm.  Accepted questions will be published as a supplement prior to the meeting.	
<b>6.</b>	<b>QUESTIONS FROM MEMBERS OF THE COUNCIL</b> To receive any written questions from members of the council.  Deadline for receipt of questions is 5.00 pm on Tuesday 22 September.  Accepted questions will be published as a supplement prior to the meeting.  Please submit questions to <a href="mailto:councillorservices@herefordshire.gov.uk">councillorservices@herefordshire.gov.uk</a>	
<b>7.</b>	<b>MINERALS AND WASTE LOCAL PLAN</b> To ask the committee to determine whether it wishes to make any recommendations to the executive on the draft Minerals and Waste Local Plan (MWLP), which would strengthen the emerging policy approach.	19 - 336
<b>8.</b>	<b>TASK AND FINISH GROUP REPORT - WASTE MANAGEMENT STRATEGIC REVIEW</b> To consider the Task and Finish Group's report on waste management strategic review.	337 - 462

**9. WORK PROGRAMME**

To review the committee's work programme.

**10. DATE OF NEXT MEETING**

The next scheduled meeting is 12 October 2020.

463 - 484

## The Public's Rights to Information and Attendance at Meetings

Herefordshire Council is currently conducting its public committees, including the General Scrutiny Committee, as "virtual" meetings. These meetings will be video streamed live on the internet and a video recording maintained on the council's website after the meeting. This is in response to a recent change in legislation as a result of COVID-19. This arrangement will be adopted while public health emergency measures including, for example, social distancing, remain in place.

Meetings will be streamed live on the Herefordshire Council YouTube Channel at

<https://www.youtube.com/HerefordshireCouncil>

The recording of the meeting will be available shortly after the meeting has concluded through the General Scrutiny Committee meeting page on the council's web-site.

<http://councillors.herefordshire.gov.uk/ieListMeetings.aspx?CId=809&Year=0>

### YOU HAVE A RIGHT TO: -

- Observe all "virtual" Council, Cabinet, Committee and Sub-Committee meetings unless the business to be transacted would disclose 'confidential' or 'exempt' information.
- Inspect agenda and public reports at least five clear days before the date of the meeting. (These will be published on the Planning and Regulatory Committee meeting page on the council's web-site. See link above).
- Inspect minutes of the Council and all Committees and Sub-Committees and written statements of decisions taken by the Cabinet or individual Cabinet Members for up to six years following a meeting. (These will be published on the Planning and Regulatory Committee meeting page on the council's web-site. See link above).
- Inspect background papers used in the preparation of public reports for a period of up to four years from the date of the meeting. (A list of the background papers to a report is given at the end of each report). A background paper is a document on which the officer has relied in writing the report and which otherwise is not available to the public.
- Access to a public register stating the names, addresses and wards of all Councillors with details of the membership of Cabinet and of all Committees and Sub-Committees.
- Have access to a list specifying those powers on which the Council have delegated decision making to their officers identifying the officers concerned by title.
- Access to this summary of your rights as members of the public to observe "virtual" meetings of the Council, Cabinet, Committees and Sub-Committees and to inspect documents.

1 September 2020



## Guide to General Scrutiny Committee

Scrutiny is a statutory role fulfilled by councillors who are not members of the cabinet.

The role of the scrutiny committees is to help develop policy, to carry out reviews of council and other local services, and to hold decision makers to account for their actions and decisions.

Council has decided that there will be three scrutiny committees. The Committees reflect the balance of political groups on the council.

The General Scrutiny Committee consists of 7 Councillors.

Councillor Tracy Bowes (Vice-Chairperson)	It's Our County
Councillor Barry Durkin	Conservative
Councillor Jennie Hewitt	Herefordshire Independents
Councillor Bernard Hunt	True Independents
Councillor Jonathan Lester (Chairperson)	Conservative
Councillor Paul Symonds	Liberal Democrat
Councillor William Wilding	Herefordshire Independents

The committees have the power:

- (a) to review or scrutinise decisions made, or other action taken, in connection with the discharge of any functions which are the responsibility of the executive,
- (b) to make reports or recommendations to the authority or the executive with respect to the discharge of any functions which are the responsibility of the executive,
- (c) to review or scrutinise decisions made, or other action taken, in connection with the discharge of any functions which are not the responsibility of the executive,
- (d) to make reports or recommendations to council or the cabinet with respect to the discharge of any functions which are not the responsibility of the executive,
- (e) to make reports or recommendations to council or the cabinet on matters which affect the authority's area or the inhabitants of that area
- (f) to review or scrutinise decisions made, or other action taken, in connection with the discharge by the responsible authorities of their crime and disorder functions and to make reports or recommendations to the council with respect to the discharge of those functions. In this regard crime and disorder functions means:
  - (i) a strategy for the reduction of crime and disorder in the area (including anti-social and other behaviour adversely affecting the local environment); and
  - (ii) a strategy for combatting the misuse of drugs, alcohol and other substances in the area; and
  - (iii) a strategy for the reduction of re-offending in the area
- (g) to review and scrutinise any matter relating to the planning, provision and operation of the health service in its area and make reports and recommendations to a responsible person on any matter it has reviewed or scrutinised or to be consulted by a relevant NHS

body or health service provider in accordance with the Regulations (2013/218) as amended. In this regard *health service* includes services designed to secure improvement—

- (i) in the physical and mental health of the people of England, and
- (ii) in the prevention, diagnosis and treatment of physical and mental illness
- (iii) And any services provided in pursuance of arrangements under section 75 in relation to the exercise of health-related functions of a local authority.

(h) to review and scrutinise the exercise by risk management authorities of flood risk management functions or coastal erosion risk management functions which may affect the local authority's area.

The specific remit of the general scrutiny committee includes:

- Services within the economy and place directorate and corporate centre
- Corporate performance
- Budget and policy framework matters
- Statutory flood risk management scrutiny powers
- Statutory community safety and policing scrutiny powers

### **Who attends general scrutiny committee meetings?**

The following attend the committee:

- Members of the committee, including the chairperson and vice chairperson.
- Cabinet Members – They are not members of the committee but attend principally to answer any questions the Committee may have and inform the debate.
- Officers of the council – to present reports and give technical advice to the committee
- People external to the Council invited to provide information to the committee.

(Other councillors - may attend as observers but are only entitled to speak at the discretion of the chairman.)

**Minutes of the meeting of General scrutiny committee held at Council Chamber, The Shire Hall, St Peter's Square, Hereford, HR1 2HX on Monday 20 January 2020 at 10.15 am**

**Present:** Councillor Jonathan Lester (chairperson)  
Councillor Tracy Bowes (vice-chairperson)

**Councillors:** Barry Durkin, Jennie Hewitt, Bernard Hunt, Paul Symonds and William Wilding

**In attendance:** Councillors Jenny Bartlett, Sebastian Bowen, Gemma Davies (Cabinet Member), John Harrington (Cabinet Member), Liz Harvey (Cabinet Member), David Hitchiner (Cabinet Member), Trish Marsh (Cabinet Member), Nigel Shaw and Elissa Swinglehurst

**Officers:** C Baird – Director for Children and Families, R Ball – Director for Economy and Place (DEP), B Boswell – Energy and Active Travel Manager (EATM), A Lovegrove – Chief Finance Officer (CFO), K Morris – Strategic Capital Finance Manager, J Rushgrove – Head of Corporate Finance, P Smith – Assistant Director All Ages Commissioning, D Vickers – Assistant Director People and Performance.

**36. APOLOGIES FOR ABSENCE**

None.

**37. NAMED SUBSTITUTES**

None.

**38. DECLARATIONS OF INTEREST**

None.

**39. MINUTES**

**RESOLVED:** That the minutes of the meeting held on 29 November 2019 be approved as a correct record.

**40. QUESTIONS FROM MEMBERS OF THE PUBLIC**

None.

**41. QUESTIONS FROM MEMBERS OF THE COUNCIL**

A copy of the question and answer received is appended.

## 42. REVIEW OF BUDGET AND CORPORATE PLAN PROPOSALS FOR 2020/21

The Committee's views were sought on the budget proposals for 2020/21 and the draft corporate plan following the conclusion of consultation and the announcement of the provisional financial settlement.

The Assistant Director People and Performance and the Chief Finance Officer gave a presentation. A copy of the presentation was attached at appendix 7 to the report.

In discussion the following principal points were made (page number references are to pages in the agenda papers/Corporate Plan (CP) as numbered):

### Corporate Plan

- (p49/CP15) It was requested that explicit reference be made to protecting and enhancing community based health services and that an appropriate success measure should be included at CP17 along the lines of numbers of people accessing services outside Hereford.

The CMFCS observed that health service partners had responsibility for this issue but the council would seek to use the influence it had. The Plan did have an emphasis on community centric services noting the development of the Talk Community initiative and community hubs encompassing all aspects of wellbeing including access to health services.

- (p43/CP7) The following points were made in relation to the "till receipt" showing how the council spent revenue:
- It was suggested that there were a number of areas where expenditure appeared to be lower than in 2019/20 such as roads and bridges and care of public spaces and libraries, records and customer services and looking after children.

The CMFCS commented that what was shown on the till receipt did not represent the full picture of expenditure. There were, for example a number of capital projects involving investment in the public realm which would not feature on the till receipt except as revenue expenditure on debt and interest repayments. She provided a number of examples.

A member proposed that If the till receipt did not represent the complete picture this should be made clear in the accompanying text.

The CMCPA commented that it was proposed that savings of some £250k that had been planned in libraries, records and customer services would not proceed. She would clarify if the till receipt would need be adjusted to reflect this proposal if it were agreed.

The CFO commented that the till receipt was a summary of a range of services. It covered revenue spend only and did not include capital expenditure.

The CMEES commented that some categories had been modified from the previous financial year so comparing the two till receipts was not necessarily comparing like with like.

- (P51/CP17) With regard to the proposed success measures it was proposed that there should be a specific reference to market towns and focusing resources to improve infrastructure and community resilience.

The CMFCS commented that p19 of the Plan stated that the Council wanted to emphasise the critical role the market towns and villages play in the county's economy. P20 referred to supporting investment programmes across all the market towns. A suggested indicator for success in strengthening market towns and communities would be welcome.

- (p41/CP7) The CFO acknowledged that the paragraph referring to the receipt from the sale of smallholdings and the cost of building up to 1,000 affordable homes needed to be clarified, both to explain the level of receipt and the cost of building the proposed number of homes.
- (p52/53CP18/19) It was suggested the wording 'spend more local' and 'sweat our assets' be revised, the term "better use of assets" being preferred.
- (p43/CP9) It was asked if the expenditure on rural roll out of broadband identified in the till receipt was sufficient to meet local and national targets.

The CMFCS commented that the council was continuing to invest in the roll out. Fibre broadband had been rolled out as far as it could through the original contract and BT programme. The majority of households had already benefitted. Contracts were now having to be let to deliver the fibre network to individual premises in more rural areas who had not yet been reached. The complexity of identifying the need to be met had meant it was taking time to draw up these contracts. Information was provided on both the Fastershire and Council websites. An update on current and planned coverage would be provided to members of the committee.

The CMECS added that progress was good in national comparison terms. She noted that council funding was complemented by government funding and the investment represented good value.

- A member proposed that the corporate plan include a specific element on what farmers are doing to contribute to addressing the climate change emergency.

## **Budget**

- The CFO clarified that the council received Rural Service Delivery Grant in recognition of the county's rurality. The grant was used to support services across the board according to need and was not accounted for separately from other expenditure. It would require additional resource to account for expenditure by ward.
- The CFO confirmed that information requested by Councillor Symonds in relation to a number of capital schemes and a breakdown of savings required in the Economy and Place Directorate was in preparation.
- (p74) A timeline was requested for the Peterchurch Primary School capital project emphasising the need for the works to be progressed and the negative impact on educational outcomes of a poor building environment. The CMCPA commented that the need for the project was recognised and a business case was in place. The local ward member was welcome to attend meetings with the cabinet member on the project. The views of the local community on what school facilities were required would also be sought.
- A view was expressed that one of the principal causes of congestion in the city was transporting children to school. In addition to car transport a lot of schools were using service buses. This was costly and in addition children were having to stand. It was asked whether there was a plan in the budget to address this issue.

The CMIT commented that nothing had specifically been identified in the revenue budget for school transport. The intention was to seek to encourage schools to refresh school travel plans. He confirmed that whilst the focus had to date tended to be on city schools, current work sought to engage more widely. In seeking to apply for capital funding for a county bus service consideration was being given to how to incorporate school transport within this project. He did consider that there was scope to look more strategically at transport options across the county.

The DEP referred to the provision in the capital programme for a passenger transport fleet. The council also continued to benefit from the national access fund which supported Destination Hereford and active travel promotion with schools to support walking, cycling and bus use. There were also a number of elements in the capital programme that could fund additional infrastructure such as cycle parking at schools, creating the potential to offer incentives to schools that complemented the active travel measures in providing safer routes to schools along the highway network.

The EATM added that Sustrans, a leader in active travel nationally, were delivering a programme in schools amongst other things supporting them to rewrite and own their travel plans. He outlined a range of other active travel activities being undertaken in schools.

It was suggested that support for schools in updating their travel plans warranted further consideration.

- (p64/73) It was asked if a portion of the £5.5m identified for Hereford city centre improvements could be allocated to the market towns.

The CMFCS commented that the sum had been part of the plans of the previous administration and was earmarked for a number of specific projects that were already in train. It would be preferable to identify additional funding for the market towns rather than disrupt these planned projects. Market Towns were being encouraged to contribute to the development of public realm and infrastructure delivery plans. This should identify priority programmes for grant allocations and capital investment with evidence to support the need for them.

It was requested that the CFO provide a breakdown of the \$5.5m allocation.

- It was proposed that cabinet consider providing a specific capital allocation for market towns to be able to bid for public realm improvements.
- (p65) It was confirmed that the provision for Business Improvement District Development related to the county as a whole, excluding Hereford City because it already had a BID.
- It was requested that specific resources were identified and included to support the proposed work of the task and finish group the Committee had established to carry out a waste management strategic review.

The CMCPA acknowledged this request. The DEP commented that a replacement for the former Head of Service in this area was in the process of being appointed. It would be important to ensure the procurement of new contracts for waste collection and waste disposal as a whole was resourced.

- (p102) The current forecast showed the council's underlying need to borrow was expected to increase by £55.9m. It was questioned whether this was prudent. The CFO commented that the table showed the maximum the council could borrow to deliver the committed capital investment programme but cashflow was such that he did not expect that it would be necessary to borrow that amount. Using surplus cash rather than borrowing minimised the cost of borrowing. The council had not changed its approach in this regard. The capital programme was a rolling programme. The borrowing requirement reflected decisions previously taken. The particular question before the Committee was the addition of some £88m to the capital programme. He confirmed that borrowing was not for revenue expenditure.
- The CFO explained why the proposed purchase of electric buses was included in the capital programme but the proposal to build affordable housing was not.
- It was questioned how the cost of a bypass compared over the long term with the provision of an electric bus fleet, having regard to the comparative lifespans, costs of upkeep, other running costs and replacement. The CFO commented that such an analysis had not been conducted and would be quite difficult to carry out.

- (p66) A sum of 70k was identified against a heading: climate change. The amount was questioned. It was also asked why there was no reference to a plan for addressing phosphate levels in the Lugg catchment.

The CMECS commented that the heading related specifically to natural flood management measures. Several projects were underway in relation to addressing the climate emergency with budget headings including solar panels, energy efficiency, warm homes, lighting and the corporate fleet.

The CMIT added in relation to phosphate levels that the council had a limited role. It did not control the water courses. The Environment Agency and other agencies had the principal responsibility. The council could expedite some of the actions that needed to be taken. Reference was made to the investment in reed beds linking to the management of wetlands.

It was suggested that action being taken should be clearly set out for the benefit of the public.

It was also suggested that there should be a separate line in the MTFs on what was being proposed to address climate change.

- The DEC commented that as referenced in the answer to the question submitted by a member of the Council (minute no 41 refers) the provisional local government funding settlement included funding of £2.2m in relation to new homes bonus. If necessary, this would be available to assist in bringing forward appropriate measures to address the phosphate issues to support the delivery of new homes.
- He explained the role of the Nutrient Management Board and its Technical Advisory Group in seeking to improve protection of the river catchments and some of the work being undertaken. A business case identifying the necessary improvements was being prepared. The Marches LEP had also been approached for funding.
- It was questioned whether a contingency fund could be provided to meet any recommendations arising from the work of the Committee's task and finish group on the climate emergency.

The CMFCS commented that there was headroom within the budget to undertake additional projects where there was a business case for them.

- The section on the environment in the corporate plan referenced a range of matters including river systems and flood management. The moratorium on building in the Lugg catchment was a significant issue and the sooner a credible nutrient management plan was in place the sooner this could be lifted. The Council had the ability through planning policy to consider water management, flood management, pollution and waste management as part of the update of the core strategy.

The website held information on the nutrient management planning process. There was a role for ward members in communicating with the public, the farming community and the business community on the issues to help to address them.

- It was requested that greater clarity be provided on the funding sources for capital investment as set out at paragraph 23 of the report.

**RESOLVED: That**

**(a) in relation to the draft corporate plan:**

- I. **reference be included to protecting and enhancing our local health care services with the inclusion of key performance indicators to underpin this commitment;**
- II. **the presentation of the till receipt as at p7 of the Plan be reviewed to ensure it is an accurate representation of the actual spend;**
- III. **the plan explains where the council is paying less than it did in the previous financial year;**

- IV. the plan at p15 includes success measures – to consider additional focus on resources to improve infrastructure and community resilience in market towns;
- V. that the committee receives a briefing note on the progress on broadband roll out;
- VI. the corporate plan is reworded on page 7 to reflect that the figure of £46m is revised to ensure it reflects the compensation paid to the tenants; and it is made clear that £46m is not enough to fund 1000 new homes and that further borrowing is being proposed of up to a further £100m;
- VII. the corporate plan is reworded on page 18 – to say ‘spend more locally’ and on page 19 – rather than say ‘sweat our assets’ the committee recommends this is changed to say ‘better use of our assets; and
- VIII. that the corporate plan includes a specific element on what farmers are doing to contribute to the climate change emergency.

**(b) in relation to the 2020/21 budget:**

- I. that the executive respond to the proposal that schools are better supported in updating their travel plans;
- II. the cabinet considers providing a specific capital allocation for market towns to be able to bid for public realm improvements;
- III. the MTFS includes a separate line on what is being proposed for climate change;
- IV. that specific resources are identified and included to support the proposed work on the waste task and finish group;
- V. greater clarity be provided on the funding sources for capital investment as set out at paragraph 23 of the report;and
- VI. the following recommendations of the Adults and Wellbeing and Children and young People Scrutiny Committee be considered:

**Adults and Wellbeing Scrutiny Committee – 13 January 2020**

- 1. To inform the detailed business cases for the key areas of capital investment and to provide assurance that they are sustainable and represent value for money, the executive be asked to arrange an all members’ seminar to explore the options appraisals.
- 2. That the options appraisal for public housing also consider the potential to support key workers with their accommodation needs.
- 3. There is further clarification and detail provided on the proposed shared social care pooled budget between the adults and children’s directorates when it is available.

**Children and Young People Scrutiny Committee – 14 January 2020**

- 1 That the committee supports the additional areas of investment identified in the budget.

#### **43. WORK PROGRAMME**

The Committee considered its work programme.

**RESOLVED: That**

- (a) the draft work programme as set out at appendix 1 to the report be approved; and
- (b) a task and finish group on the climate emergency be established to undertake the work outlined in the draft scoping statement (Appendix 2 to

**the report) membership comprising Cllrs Fagan, Hewitt, Swinglehurst and Wilding (Chairperson).**

**44. DATE OF NEXT MEETING**

Monday 23 March 2020 at 10.15 am.

**Appendix - Members Questions and Answers**

The meeting ended at 12.25 pm

**Chairperson**



**MEMBER QUESTIONS TO GENERAL SCRUTINY COMMITTEE – 20 January 2020**

Question 1

**Councillor Nigel Shaw – Bromyard Bringsty**

I was surprised to not see specific reference to the current phosphate problem that affects North Herefordshire. I am advised that the lack of development coming forward is now affecting family building companies in the region. Certainly it will have an effect on the authority's five year land supply and thence a knock on effect on any planning weight given to all Neighbourhood Development plans in the county. Such a moratorium on development is affecting business investment and may even impact our deadline for favourable conservation status, with an attendant fine on the authority. All contrary to the Corporate Plan.

The scrutiny committee might enquire why, given the immediacy and the gravity of the situation, the authority has not seen prudent a line in the capital investment plan and additional funding in the revenue budget to urgently address these matters?

**Response**

The administration is fully aware of the current phosphate problem preventing development proposals coming forward and work is underway to explore with the relevant statutory agencies how best to overcome the issue. Paragraphs 18 and 19 of the Budget report on the agenda for the committee highlights that the provisional local government funding settlement included funding of £2.2m in relation to new homes bonus. It is proposed in the report that this funding is treated as one-off funding and is earmarked to facilitate the delivery of houses in support of delivering the core strategy. If necessary, this would be available to assist in bringing forward appropriate measure to address the phosphate issues.

**Supplementary Comment**

Councillor Shaw urged the Committee to establish what the timescale would be for the implementation of a plan to address the issue.





<b>Meeting:</b>	<b>General scrutiny committee</b>
<b>Meeting date:</b>	<b>Monday 28 September 2020</b>
<b>Title of report:</b>	<b>Minerals and Waste Local Plan (MWLP)</b>
<b>Report by:</b>	<b>Senior Planning Officer</b>

## Classification

Open

## Decision type

This is not an executive decision

## Wards affected

Countywide, but individual aggregate minerals extraction sites are proposed in the parishes of:

- Aymestrey (Mortimer ward)
- Stoke Edith (Backbury ward)
- Wellington (Queenswood ward)
- Pipe and Lyde (Queenswood ward)
- Shobdon (Arrow ward)

## Purpose

To present to the committee the publication draft Minerals and Waste Local Plan (MWLP) (Appendix A).

The Council is required to produce a MWLP (a development plan document (“DPD”)) as part of the Herefordshire Local Plan, and this forms part of the Council’s budget and policy framework.

The Budget and Policy Framework rules require that committee work programmes include any such plan, strategy or budget to enable Scrutiny members to inform and support the process for making Cabinet proposals to Council, in terms of the adoption of any item that forms part of the framework, including providing constructive challenge to the responsible cabinet member on policy proposals and exploring options for future policy development.

## Recommendation(s)

**That:**

**the committee determines whether it wishes to make any recommendations to the executive, which would strengthen the emerging policy approach.**

## **Alternative options**

1. There are no alternative options. Not to progress the MWLP would leave the Council in a position where the extant Unitary Development Plan policies are out of date. This would be contrary to the recommendation of the Core Strategy inspector, who stated that a separate MWLP should be prepared in accordance with the local development scheme. When adopted, this will form part of the Herefordshire Local Plan.

## **Key considerations**

2. The MWLP is an element of the Herefordshire Local Plan. Initially the Core Strategy included minerals and waste policies, however, these were removed at examination and the inspector recommended they be set out in a separate minerals and waste local plan. The MWLP aligns with the principles and strategic direction established in the Core Strategy, but provides the policy framework relevant to minerals and waste development.
3. Minerals development includes activities such as mining and quarrying. Waste development includes activities such as waste recycling and the treatment and disposal of waste.
4. The MWLP will provide guidance to developers, local communities and other interested parties on where and when minerals and waste development may be expected over the plan period (up to 2041), as well as how it will be managed to both reduce adverse impacts and maximise benefits.
5. Once adopted, the MWLP will form part of the statutory development plan for the area and will be used as such for the purpose of determining planning applications for minerals and waste matters. Its preparation has involved ensuring compliance with statutory procedural requirements, including: Duty to Cooperate, Sustainability Appraisals and Habitat Regulations Assessments undertaken at key stages during the preparation of the Plan.
6. The MWLP and the majority of its evidence base is being produced for Herefordshire Council by the consultancy Hendeca, with the Sustainability Appraisals and Habitats Regulations Assessments undertaken by consultants Land Use Consultants (LUC). Other parts of the evidence base have been produced by British Geological Survey and the council's retained consultants BBLP/WSP.
7. The MWLP's preparation process is summarised below:
  - 2016 first call for sites
  - 2017 second call for sites
  - 2017 issues and options public consultation
  - 2019 draft plan public consultation
  - *2021 publication, submission and examination in public*
8. During the MWLP's key stages of production, members of Herefordshire Council were involved and their views sought, this included the establishment of a scrutiny panel. In

addition to the formal governance procedures which were adhered to, the following are of note:

- 2017 members' seminar and first minerals and waste panel meeting
  - 2018 two minerals and waste panel meetings
  - 2019 members' presentation and Q&A session
9. Following consultation on the draft MWLP in early 2019, the representations received from all parties (including; members of the public, local parishes, members of the council, statutory and other organisations) were reviewed and additional work was undertaken as required. Supplementary tasks included further analysis of those sites proposed to be allocated, assessment of a new site that was promoted through the representations, considering historic landfill sites within Herefordshire and updating the minerals and waste needs assessments.
10. In addition, the publication draft MWLP has been prepared to: reflect changes in the National Planning Policy Framework and other relevant national policy documents, including the national waste strategy titled 'Our waste, our resources: a strategy for England' and will incorporate recommendations from the emerging documents: Strategic Flood Risk Assessment (level 2)<sup>1</sup>, Sustainability Appraisal and Habitats Regulations Assessment.
11. Those representations received to the draft MWLP that are considered to be key matters (those that would affect the policy approach or evidence base of the plan) are:
12. **a) Review of the Core Strategy**  
Some respondents said that reliance on the Core Strategy was not appropriate, either because they felt that the evidence to that development plan document, or the consequent policy, was out of date.
13. Evidence for the MWLP has been either undertaken specifically in the preparation of the document (e.g. minerals and waste needs assessments), or has been reviewed as appropriate to it (e.g. considering potential environmental effects from the proposed sites to be allocated). Consequently the evidence base is considered to be appropriate and robust.
14. An update of the Core Strategy has commenced. However, the recent consultation white paper on Planning for the Future, and any subsequent new approach to the plan making system, will need to be considered, along with how such changes may need to be reflected in the MWLP. The plan making teams responsible for both the Core Strategy and the preparation of the MWLP are in regular dialogue to ensure that, together, these documents will continue to provide a comprehensive policy framework.
15. **b) Policy M7: Unconventional hydrocarbons**  
Opposition to fracking was raised in representations to the draft MWLP and through the Full Council resolution on 16 Dec 2016 to seek to block any hydrocarbon extraction processes in or under the Areas of Outstanding Natural Beauty in Herefordshire.
16. There is just one area of coalbed methane in Herefordshire. At the time of preparing the MWLP, the relevant license for its exploration had not been taken up, although an opportunity for this to be reconsidered may arise in the future.

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<sup>1</sup> Strategic Flood Risk Assessment Level 2 was received on 20.08.20

17. At the time of preparing the draft MWLP in 2018, the National Planning Policy Framework advised that mineral planning authorities should; “recognise the benefits of on-shore oil and gas development, including unconventional hydrocarbons, for the security of energy supplies and supporting the transition to a low-carbon economy; and put in place policies to facilitate their exploration and extraction.” Consequently, even whilst recognising the opposition to fracking, it was concluded that the draft MWLP 2018 should include a policy regarding this type of mineral development.
18. In 2018 a range of representations were made to the unconventional hydrocarbon policy M7 in the draft MWLP, including: some remaining objection to the principle of having the policy; the CPRE recognising the inevitability of having the policy and referring to its own guidance; the Environment Agency referring to its own guidance and regulatory role; the Coal Authority welcoming the policy and industry representatives considering the policy to be inappropriate, poorly worded and too restrictive.
19. The exploration and extraction of unconventional hydrocarbons remains a topic subject to legal challenge and change. From July to October 2018, the Government undertook early stage consultation on the inclusion of shale gas production projects to be included in the Nationally Significant Infrastructure Projects (NSIP) regime. Although at the time of preparing the publication draft MWLP, no decision had been reported. Just prior to the start of that consultation, a government report titled ‘Planning guidance on fracking’ was published, paragraph 59 of which states:  
*“There is a contradiction between the spirit of the Localism Act 2011 and the 2018 Written Ministerial Statement on fracking planning policy which could unreasonably restrict Local Plans. Mineral Planning Authorities are best placed to understand their local area and weigh up what requirements should be in place for fracking developments. We note that Local Plans are already subject to scrutiny at national level from the Planning Inspectorate. Given that the English planning system is plan led, Mineral Planning Authorities should be free to adapt their Local Plans as they see fit as long as they do not arbitrarily restrict fracking developments. It is essential that Mineral Planning Authorities have the right to put conditions in the Local Plans which can be justified having proposer regard to local circumstances.”*
20. The Oil and Gas Authority was consulted in September 2019 but no response was received.
21. In November 2019, the Government issued a moratorium on fracking, with immediate effect. At the time of preparing the publication draft MWLP, the ban had not been made permanent. The oil and gas industry has committed to providing the scientific evidence required to have the moratorium lifted.
22. It is concluded that policy M7 should be removed from the MWLP. However, as explained within the supporting text to the policy, both conventional and unconventional hydrocarbons are covered in policy M1, to retain flexibility should either resource become workable and of interest in the future. As mineral resources, they would also be protected by policy M2.
23. Further, whilst policy M7 has been deleted, the supplementary text that preceded it has been retained, but reviewed and updated, incorporating reference to the guidance provided on the department for Business, Energy and Industrial Strategy website, ‘Guidance on fracking: developing shale gas in the UK’ last updated in March 2019.
24. **c) Policy W3: Agricultural waste**

It is unusual to include a policy relevant to agricultural waste within a development plan document; however, it is relevant here as Herefordshire is a unitary authority that has a strong agricultural sector.

25. In addition, it is recognised that the draft MWLP 2018 incorrectly identified a '*relatively small role*' played by agriculture in terms of impacts on the River Wye SAC. In fact, the River Wye SAC Nutrient Management Plan evidence base identified diffuse phosphate pollution from agriculture to be one of the main pressures (alongside sewage treatment works discharges), particularly in the River Lugg catchment.
26. The judgment made in 'the Dutch Case' [*Cooperatie Mobilisation* (joined cases C-293/17 and C294/17)] strengthens the need for all available tools to be used to reduce phosphate levels in the River Wye SAC.
27. Consequently, whilst there was some objection to policy W3 made in the representations to the draft MWLP 2018, it is retained within the publication draft MWLP, albeit with some amendments to both the supporting text and the policy itself, primarily to clarify the policy purpose.
28. **(d) Policy W6: Preferred locations for construction, demolition and excavation waste management facilities**

There was limited comment made to policy W6, however, the representation submitted on behalf of Ataghan Limited Stoke Edith Estate merited further consideration. The representation considers that Perton Quarry could be suitable for waste recycling or deposit and should not be discounted on account of the existing permission.
29. Perton Quarry is not considered suitable to be promoted within the MWLP as a waste treatment or disposal location, not least on account of the local highway network. However, as recognised in the representation, the site could be proposed for inert waste treatment under policy W6, as an active mineral working.
30. It is the intention of policy W6 that active mineral sites may be used for inert waste recycling. However, it will be for the submitted application to demonstrate that such a proposal would be acceptable development, this is different to the site specifically being promoted within the MWLP.
31. Further, this representation indicated that policy W6 should be amended, in order to clarify the order of preference in terms of locations for inert waste recycling. The preferred location is at Former Lugg Bridge Quarry, with active mineral workings providing a fall-back position if appropriate.
32. **(e) Agent of Change, safeguarding and the use of buffer zones**

The National Planning Policy Framework, paragraph 182, states:  
*Planning policies and decisions should ensure that new development can be integrated effectively with existing businesses and community facilities (such as places of worship, pubs, music venues and sports clubs). Existing businesses and facilities should not have unreasonable restrictions placed on them as a result of development permitted after they were established. Where the operation of an existing business or community facilities could have a significant adverse effect on new development (including changes of use) in its vicinity, the applicant (or 'agent of change' should be required to provide suitable mitigation before the development has been completed."*
33. Representations from, *inter alia*, the Minerals Products Association, request that the agent of change principle is written into policies of the MWLP, in conjunction with stated buffer

zones. Representations also consider that reference to buffer zones within policy represent best practice, with the Mineral Products Association suggesting that buffer zones should be applied both around the safeguarded area, and then again to indicate a further zone within which the agent of change principle would continue to apply.

34. The concept of protecting the existing development has been present in minerals (as safeguarding) and waste for some time, However, the July 2018 published version of the National Planning Policy Framework was the first time the concept was applied to all other developments.
35. The approach developed for safeguarding, and the decision not to pursue buffer zones, is set out from paragraph 2.2.30 of the Spatial Context and Sites Report. There has been no new evidence suggested in response to the draft MWLP 2018 to demonstrate that this should change. The MPA refers to guidance produced by the British Geological Survey 'Mineral safeguarding in England: good practice advice'. This has been reviewed during the preparation of the draft and publication draft MWLP stages.
36. The concepts of safeguarding (both minerals and waste assets) is well established and the 'agent of change' principle is clearly set out in the National Planning Policy Framework. In simple terms, it should not be necessary to repeat these within the MWLP. Further, the decision not to include buffer zones within the MWLP is considered to be sound.
37. However, it is clear that these are issues that do concern the minerals industry and so policy M2 has been amended to incorporate the agent of change text presented in the National Planning Policy Framework. This is considered appropriate text to address the potential for non-minerals development to adversely affect minerals resource, infrastructure and workings without relying on a fixed distance buffer zone.
38. It has also been incorporated into policy W1, to ensure adequate protection for existing waste infrastructure.
39. In addition, policy M2 has been amended to include explicit reference to associated infrastructure
40. **(f) Presentation and use of data in the site assessment**  
The Spatial Context and Sites Report was one of the documents accompanying the draft MWLP through consultation. Representations were received in response to the sites proposed to be allocated (as set out in Annex A to the draft MWLP 2018).
41. Whilst limited objection was made in relation to the sites proposed to be allocated, and none was received in relation to those that were discounted through the sites assessment, substantial comment was received in relation to the site assessment work that had been undertaken, including: detailed comment on specific sites, e.g. to identify that a feature had not been considered in enough detail; and overarching comment in relation to the level of detail and analysis provided within the site assessment. Historic England sought detail on nearby heritage assets and how impacts from development at each of the proposed sites could be mitigated effectively. A meeting was subsequently held with Historic England to discuss each of their points raised.
42. A new site was proposed for mineral extraction at Arrow Green. The site was then subjected to the same analysis as other sites previously considered in the Spatial Context and Sites Report. It was concluded that it was not appropriate to allocate.
43. As a result of the representations received and the meeting with Historic England, it was decided that additional work should be undertaken to supplement the site assessment

work. This focussed on the sites proposed to be allocated and the additional informed was used to evidence their suitability and to demonstrate that their constraints could be overcome. This included a review of the potential impact of the sites on the night sky.

44. As a result of the additional work, three main changes were made to the MWLP:

- Site M05g, a new area of working located to the east of Wellington Quarry, has been reduced in size to protect the setting of the Church of St. Mary, in Marden.
- All of the key development criteria have been reviewed and updated, to incorporate both detail from the supplementary sites report (appendix B), but also consultation representations where appropriate; and
- Policy/supporting text has been reviewed and updated, e.g. clarifying the expectations in regard to phased working and maximising geological assets.

45. **(g) Environment Agency**

In addition to comments on the sites analysis, the Environment Agency also commented on:

- restoration plans;
- infrastructure resilience;
- terminology;
- landfill mining;
- agents of change;
- presumption against stockpiling; and
- other – increased reference to Environment Agency resources, including the Catchment Data Explorer, conventional and unconventional hydrocarbons; and resource audit, waste to Doncaster.

46. Restoration achieved through backfilling with waste has the potential to have a detrimental effect. Such deposits are subject to planning and any proposal will be considered in detail on submission of an application and include consultation with the Environment Agency. The MWLP only promotes the use of inert wastes for site reclamation, this is primarily as use of this waste stream will reduce the likelihood of detrimental effects occurring. The MWLP also recognises the regulatory regime delivered through environmental permits and encourages developers to follow a twin-track approach.

47. The Environment Agency requests that consideration is given to contingency planning for the most at risk waste streams, to ensure operations are not significantly disrupted and business continuity is maintained. Contingency planning, *per se*, is not within the remit of the MWLP. However, the plan seeks to improved resilience through promoting development and encouraging more facilities to be built at appropriate locations across the waste hierarchy. Waste needs assessment have been carried out to identify the range of facilities required, taking account of local circumstances. The MWLP provides multiple location options for facility types higher up the waste hierarchy, with decreasing options available for facility types lower down, and none available for non-inert waste disposal.

48. The MWLP is primarily a land use document directing new development, rather than attempting to bring about cultural (personal) change. Through policy such as SS8, it places greater responsibility on all to engage in more sustainable waste/resource management.

49. In preparing the MWLP, the government's 25 Year Environment Plan and Resources and Waste Strategy have been reviewed. The language of the MWLP has been checked to ensure it is clear, but there remains reference to all of the terms of: waste management, waste hierarchy; and circular economy. Such terminology is considered to be acceptable and necessary and is defined in the glossary to the plan.

50. The Environment Agency's suggestion of a policy on landfill mining has been considered in some detail through a European and national literature review and a local landfill legacy review. These demonstrate that there is potential for some important resources to reside in old landfill sites, and that technical capability to extract these resources, safely, is developing. However, it is also clear that there remains substantial barriers to landfill mining, and there is little evidence to suggest that this will become a substantial market in the foreseeable future, or at least within the MWLP period.
51. Research of historic landfill sites within Herefordshire indicates only one location at which further research would be appropriate; and this concluded that the site was not appropriate and that there was no interest in it for mining. There is little evidence that there is any interest for landfill mining to occur in Herefordshire.
52. The research undertaken has been at high level, however, it is considered to be both proportionate and credible. On the basis of this research, there is little evidence that such development would be appropriate to promote or even that it would be deliverable. It is therefore not considered to be necessary or appropriate to have a policy for landfill mining in the MWLP.
53. The Environment Agency identified incidents of large scale waste stockpiling, "*mainly of baled wastes in Staffordshire and at other locations around the country.*" Further, that "*Herefordshire benefits from extensive areas of open land that could be used for storage.*" Hendeca's research found reported incidents of unauthorised storage of wastes in the West Midlands, with the closest being in Kidderminster, in Worcestershire.
54. Within Herefordshire, neither fly-tipping nor unauthorised storage of waste are considered to be a material problem. The number of fly-tipping incidents is considered to be low when compared to larger cities. There is no knowledge of any large scale waste storage within the county that is not otherwise associated with some other permitted activity, or at a site with the appropriate environmental permit.
55. The MWLP should be a positive, actively promoting the delivery of desired development at preferred locations. It cannot cater for all eventualities and should not have a policy that is written in the negative. Further, fly-tipping and the storage of waste without permission are not lawful in planning terms and are otherwise illegal activities. There is a robust regulatory framework already in place that would be appropriately supported by policy of both the core strategy and the MWLP, should enforcement be expedient. A presumption against stockpiling as suggested by the Environment Agency is not considered to be necessary or appropriate.
56. The publication draft MWLP has been amended to supplement reference to the Environment Agency's on-line resources.
57. The publication draft MWLP does not promote the extraction of either conventional or unconventional hydrocarbons. The National Planning Policy Framework does not promote the extraction of coal and the PEDL Block SO51a is not active and a licence has not been granted for hydrocarbon extraction.
58. The publication draft MWLP supplementary text has been amended to include reference to major developments that are not new build, such as substantial refurbishment.
59. Waste transported to Doncaster for incineration. The evidence base for the MWLP considers waste arisings, movement and implications for policy development. The MWLP

sets out a range of new opportunities for waste management facility development to provide greater opportunities in the country. A new waste needs assessment has been completed, incorporating the latest data from 2018.

**60. (h) Historic England**

In addition to comments on the site assessment evidence base, other comments were made:

- the MWLP does not demonstrate a positive approach to the historic environment as required by the National Planning Policy Framework, paragraph 185;
- reliance on the Core Strategy was not sufficient to ensure the historic environment can be sustained in line with National Planning Policy Framework requirements; and
- additional guidance documents prepared by Historic England should be referenced within the MWLP

61. The requirements of the National Planning Policy Framework were addressed in the draft MWLP and are continued and reinforced in the publication draft MWLP.

62. The overarching strategy in the Core Strategy is the starting point for the MWLP. Being supplemented by the MWLP for mineral and waste development, there is, inherently, a positive strategy presented for the conservation and enjoyment of the historic environment. Not least, a MWLP has been prepared to enable the provision of sandstone and other minerals that are required to maintain built heritage assets within Herefordshire and beyond.

63. The desire of the Core Strategy to sustain and enhance the significance of heritage assets is repeated in the vision and objectives of the publication draft MWLP and delivered through the identified policies, including the early restoration of sites. The MWLP also considers movement and transportation requirements associated with minerals and waste sites, including that access arrangements and pipe/conveyor routes should avoid damage to heritage assets.

64. The Core Strategy makes clear the desirability of new development in making a positive contribution to local character and distinctiveness and addresses the contribution made by the historic environment to the character of a place. These priorities are continued through the MWLP, principally through the potential for restoration schemes to be delivered at the landscape scale and incorporating priorities for heritage assets. In addition, the key development criteria require proportionate assessment of impacts on heritage assets from proposed development. This assessment should also include identifying opportunities to enhance significance and make a positive contribution to local character and distinctiveness.

65. It is considered that the MWLP, read alongside the Core Strategy, provides a positive strategy for the historic environment and that this approach, is sufficient to ensure that the historic environment can be sustained in line with the National Planning Policy Framework requirements. Further, it is considered that this approach will enable both the historic environment and heritage assets within Herefordshire to be improved.

66. The publication draft MWLP has been amended to supplement reference to Historic England's guidance.

**67. (i) Phosphates in the River Wye SAC**

The preparation of any local plan is undertaken with an objective of having no likely significant effect on a designated site. In addition, local concern regarding phosphate

levels in the River Lugg has been understood since the start of preparing the MWLP. The starting point for preparation of the MWLP has been to seek to avoid the likelihood of having any adverse effect, but also seek to deliver policy that would help to improve the condition of the designated site. This outcome has been sought through a number of different routes including:

- the site analysis has recognised and considered the potential for impact on designated sites;
- the key development criteria have been developed as relevant;
- policy has been drafted seeking to achieve improved reclamation of sites, incorporating green infrastructure priorities that reflect local conditions;
- policy has been drafted to address the management of agricultural wastes; and
- incorporating recommendations from the HRA Screening Report.

68. The preparation of the publication draft MWLP has focussed on how it, as a land use policy document, can contribute to achieving betterment and/or neutrality on terms of phosphates in the River Wye SAC.

69. Since it is not a land use policy document promoting either housing or tourism, these sectors are not necessary to consider further. Minerals and waste projects, including waste infrastructure, can reasonably be described as commercial developments. Such developments experience change over time and can also involve a change in agricultural practices, for example, where a former agricultural field is developed for mineral extraction or waste infrastructure. So, whilst the MWLP is not a land use policy document to promote agricultural development, it is intended to have a role in influencing the management of wastes from agricultural units within the county.

70. The policies of the MWLP have been drawn up to cover the following matters:

- *Waste water management*

Information from Dwr Cymru/Welsh Water identifies specific locations in the River Wye SAC at which phosphate removal will be undertaken. If this requires development above ground, planning permission is likely to be required. Consequently, it is considered appropriate that these waste water treatment works are identified in the publication draft MWLP.

Severn Trent Water infrastructure does not release water into the River Wye SAC and therefore no further policy framework is considered necessary.

Dwr Cymru/Welsh Water requested that further advice be included in the MWLP to address protection for its assets, which has been incorporated into the publication draft MWLP.

Consequently policy W4 has been updated to include an expectation that waste water treatment will achieve reductions in phosphate releases and to encourage phosphate recovery for beneficial uses. The supporting text has been updated to reflect the location specific intention for waste water infrastructure operated by Dwr Cymru/Welsh Water.

- *Minerals and waste projects and agricultural waste*

As a commercial activity that does not incorporate overnight accommodation, minerals working projects would not normally be considered as a source of phosphate. However, it is recognised that they could result in a change in agricultural land throughout the extraction process; stripping away topsoil and subsoil; extracting the mineral and restoration. These risks can be avoided by the

use of conditions requiring proposals to demonstrate how nutrient neutrality, or betterment, would be achieved. For example, testing soils prior to their stripping and setting out a plan to manage phosphate releases; restricting development proposals within any one area; and restricting restoration proposals that would become tourist attractions.

The key development criteria attached the sand and gravel development areas at Upper Lyde, Shobdon and Wellington already seek to avoid a proliferation of operational sites; only one area should we worked at any one time, limiting the amount of associated infrastructure.

The publication draft MWLP has been updated to incorporate these requirements.

- *Waste development (excluding waste water facilities)*  
As a commercial activity that does not incorporate overnight accommodation, solid waste projects would not normally be considered as a source of phosphate. Further, no new sites are proposed that would result in a change to agricultural land or practices.

Some research indicates that some waste management processes may result in the emission of phosphates. These include municipal solid wastes and clinical and hazardous wastes going through thermal processes and disposal to landfill. The MWLP does not promote such management of these wastes within the county and no suitable locations have been identified.

The MWLP does not promote the use of thermal processes to recover energy from residual wastes. However, there is a recognised benefit in recovering the phosphates from energy recovery facilities for beneficial purposes. Evidence points to a potential 70% phosphorous recovery rate from municipal solid waste incineration fly ash.

Although the thermal treatment of waste is not itself a likely phosphate source, recognising the importance of this issue within Herefordshire, the publication draft MWLP has been updated to include encouragement for the recovery of phosphorous from the resultant fly ash, to be put to beneficial purposes.

71. **(j) Agricultural waste**

Such waste is widely recognised as a key diffuse source of phosphates and is a primary contributor to phosphates in the River Wye SAC. For this reason, the MWLP includes a policy to address agricultural wastes. This should give Herefordshire Council (as the local planning authority) more control over the land use aspects of the sector, which include waste disposal, leading to an improved environmental outcome.

72. Within the publication draft MWLP, the supporting text which accompanies policy W3 has been supplemented with references to relevant case law and to the council's position statement on phosphates in the River Wye SAC and new development.

73. Policy W3 is considered to be an innovative and effective measure, adding to the range of tools available to regulatory bodies to reduce phosphate releases from agriculture, a significant sector within Herefordshire. This will add to and support the raft of other legislation which already regulates the agricultural sector.

74. **(k) Incorporating the recovery of phosphorous in policy**

Phosphorous is an essential, but non-renewable mineral, the raw resources of which are likely to become unavailable within the foreseeable future. The recovery of phosphorous is therefore an important activity that should be encouraged.

75. Waste water treatment companies operating within Herefordshire are already testing appropriate methods of recovering phosphates.
76. An objective of the MWLP is to deliver a circular economy. There is a need to reduce phosphate emissions into the River Wye SAC, which means they will need to be captured prior to their release. The MWLP promotes the use of energy recovery for residual wastes, which has the potential to recover phosphate from the fly ash. Anaerobic digestion processes, that can be used at waste water treatment facilities and promoted on farm and are promoted in the MWLP, can also provide a source for phosphate recovery. However, it is noted that anaerobic digestion plants may also be a pollution risk and this will be considered in the determination of proposals for such development.
77. Drawing all of this together, leads to the inclusion of a policy intention to encourage the development of infrastructure to enable the recovery of phosphorous.
78. **(I) Minerals Forecasting**  
Representations to the minerals evidence base included some level of concern in regard to mineral forecasting, principally from CPRE, Here for Hereford and Wye Ruin It. They considered that the demand forecasts were too high and that consequent levels of extraction were too high and failed to ensure the long-term conservation of minerals resource. Also, the approach of comparing the infrastructure set out in the Core Strategy with that in the Unitary Development Plan was considered to be '*spurious*'. The Core Strategy was considered to be out of date and the housing trajectory forecasts were considered unlikely to represent the central element of the Core Strategy to grow the County's economy at a faster rate than elsewhere.
79. The Core Strategy is an adopted development plan and is therefore considered to be an appropriate resource to consider within the range of forecast indicators that are used. The minerals need assessment has been updated with the most recent information available.
80. The Experian forecast is also considered to be an appropriate reference. It was developed on Herefordshire specific data and, whilst it is a couple of years old, recognising the uncertainties that lie ahead as Brexit is implemented, it is considered to remain relevant.
81. Forecasting is not an exact science, and minerals data is not comprehensive. A range of forecasts have been considered.
82. Staffordshire County Council sought more detail on the assessment of sand and gravel provision and also considered that a 10-year sales average should provide the basis for provision, identifying that, as Herefordshire currently relies on a level of imports, a level of provision greater than the current 10-year sales average could be justified.
83. An annual rate of working is not forecast, as this is considered to be too precise a level of detail that can reasonably be calculated on the basis of the available data. In any event, the rate of extraction will primarily be driven by market demand, which is beyond the remit of the MWLP.
84. The minerals industry felt that policies M3 and M4 should be altered to permit greater mineral extraction within Herefordshire over the plan period. The Minerals Products

Association also considered that the winning and working of sandstone should be less restrictive, and not focussed on addressed local demand.

85. The policy wording has not been amended as suggested as the proposed text is considered to provide too much encouragement for minerals working. Instead the policies have been proposed to provide a balance between providing for the County's forecast levels of demand and an ability to contribute to the Managed Aggregates Supply System (MASS), and not promoting excessive mineral working, such that reserves are not worked efficiently. The policy has been amended to make clear the ability to review the demand forecast through the annual and five-year reviews of the plan.
86. The assessment in the mineral needs assessment 2019 has been extended to 2041, to reflect the intended end date of the MWLP. This provides a plan period of more than 15 years and should enable appropriate levels of landbank to still be available at the end of the plan period, and leading into the preparation of any revised minerals local plan.
87. *Sand and Gravel*  
In order to deliver the positive approach sought in the vision and objectives of the MWLP, to be self-sufficient and to make a reasonable contribution to MASS, it is appropriate to consider planning for the greatest forecast demand, recognising that this may be an overestimate. The approach to site allocation and preferred areas of search are demonstrated to be sufficient to meet the wide range of demand forecast for sand and gravel through the plan period to 2041. However, it would not be a preferred strategy for many quarries to be opened to meet the highest forecast demand, without there being a robust market for it. Policy of the MWLP seeks to phase development such that sand and gravel reserves and sales can be monitored throughout the lifetime of the MWLP, allowing new operation only as required. This will avoid a proliferation of working and should encourage optimal working at each operational quarry.
88. *Crushed rock*  
Two methods of forecasting crushed rock demand have been considered and the varying results reflect the uncertainties in mineral data. It is not possible to be definitive about whether the two proposed allocations for extensions at Leinthall and Perton quarries will be sufficient throughout the Plan period. If demand for crushed rock in Herefordshire is at the lower end of the forecasts, then it would appear to be so. There is potential that a forecast demand of nearly 21 million tonnes is excessive. Discussions with the operators during sites visits indicated that the crushed rock in the County is not of a particularly high quality. For example, it cannot be used for road surfacing, although it is use in a range of other construction projects.
89. The approach to site allocation and areas of search are demonstrated to be generally sufficient to meet the wide range of demand forecast for crushed rock through the Plan period to 2041. However, if the higher demand does arise over the plan period, there is potential that Herefordshire would not be able to make a material contribution to MASS for crushed rock.
90. As with sand and gravel, it would not be a preferred strategy for many quarries to be opened to meet the highest forecast demand, without there being a robust market for it. Policy seeks to phase development such that crushed rock reserves and sales can be monitored throughout the lifetime of the MWLP, allowing new operations only as required. This approach will avoid a proliferation of workings and should encourage optimal working at each operational quarry.
91. *Building stone*

All active sandstone delves appeared to be suitable in principle to be able to gain extensions of time for minerals working and three appeared to be appropriate for future extensions in size of the working area.

92. Forecasts show limited demand, which is similar to past levels. The proposed sites are considered appropriate to satisfy this. In addition, the policy allows other workings where relevant criteria are met.
93. *Clay, coal and unconventional hydrocarbons*  
It is reasonably assumed that there will be no demand for these minerals and consequently no site is proposed to be allocated in the MWLP.
94. **(m) Waste**  
There were no representations made in direct response to the Waste Needs Assessment or to the level of need stated in the draft MWLP policy.
95. Representations were received seeking to:
  - extend the principles of the resource audit to refurbishment schemes and not just to new build development;
  - include composting schemes; and
  - more fully integrate the circular economy.
96. All of the above points have been accepted and the relevant text has been amended within the publication draft MWLP.
97. The Strategic Flood Risk Assessment Level 2 report was received on 20.08.20 and has been sent to consultants Hendeca. It is not anticipated that this last piece of evidence for the Plan will alter, to any significant extent, the policies and proposals of the publication draft MWLP. Once any necessary amendments to the Plan have been made a Habitats Regulations Assessment and Sustainability Appraisal will be undertaken (by consultants LUC) and subsequently their recommendations will be incorporated into the publication draft MWLP prior to it being presented to Full Council and, subsequently, undergoing its last round of public consultation before examination.

## **Community impact**

98. The MWLP seeks to ensure that sites and locations are identified for mineral and waste development according to the forecasted demand until 2041. This is as relevant to the whole population of Herefordshire and is as pertinent to those residing in the rural parishes as it is to those in Hereford and the market towns.
99. This report provides the General Scrutiny Committee with the opportunity to respond to the content of publication draft MWLP. Comments will be reported to cabinet before the plan progresses to Full Council. Any outstanding comments which are not incorporated into the MWLP can be addressed at the subsequent examination in public.
100. The General Scrutiny Committee can help to ensure that the protection of the environment and climate change are sufficiently addressed in the sustainable development policies and proposals of the publication draft MWLP.

## **Environmental Impact**

101. The MWLP has had due regard to the Council's environmental policy commitments. Many of them underpin its policies and proposals:

- *Natural resources are used efficiently.* The National Planning Policy Framework also identifies the need to ensure that mineral resources should be used sustainably. The MWLP, in assessing future need, only identifies sites for future minerals extraction which are necessary over the plan period and encourages the use of secondary and recycled materials in preference to the extraction of primary materials. It also safeguard mineral resources and infrastructure for future uses.
- *Minimise waste.* The MWLP seeks to deliver the circular economy and promotes the concepts of waste hierarchy. The MWLP's sustainable waste strategy will deliver a reduction in the amount of waste re-used, recycled or used to recover energy and a decrease in the amount of waste disposed to landfill. Waste management facilities are also an element of the circular economy, so long as the materials and/or energy recovered are put to beneficial uses.
- *Reduce greenhouse gas emissions.* The built form of waste management facilities may more obviously align with the expectations of this policy commitment, but minerals working can also make a significant impact. Minerals are to extracted efficiently and ensure that a high quality of reclamation and after use can be achieved.

The winning and working of minerals, and some waste processing operations, is resource intensive. Reduced energy usage can be achieved through good site design to reduce transport movements, for example. Buildings and plant can be designed to reduce resource requirements and consequent carbon emissions, for example, through the use of ultra-low emission vehicles and renewable energy supply (including solar panels, open-loop ground source or surface waste source heating and cooling systems).

The MWLP will expect increased resource efficiency measures in plant, buildings and operation in order to achieve climate change priorities.

- *Raise awareness of and mitigate against and adapt to climate change impacts.* The strategy of the MWLP is centred on sustainability, from its vision and objectives through to its specific policies and proposals. In addition to the text of the bullet point above, an example of how it addresses climate change is; the reclamation of sites, which provides opportunities, in assisting ecological networks to be more resilient, enabling the movement of wildlife as it adapts to a changing climate. The after-use of a site can also deliver objectives to address climate change, for example, creating new habitat that also provides flood storage to alleviate risks elsewhere.
- *Prevent and reduce pollution.* The waste strategy set out in the MWLP seeks to deliver sustainable management of waste in the County. Its waste policies will prevent and reduce pollution from a variety of waste streams and a specific wastewater management is also included, in order to assist in the minimisation of phosphate levels in the River Wye SAC.
- *Conserve the natural and historic environment of Herefordshire.* Good design requires full consideration of the surrounding environment, its constraints and the opportunities for enhancement, including change for the better. The MWLP sets out a comprehensive approach, addressing exploration, construction, operation, buildings and machinery and people and place across the lifetime of the site and through its aftercare. This will enable sustainable development to be realised.

All minerals and waste development will be expected to incorporate robust measures to ensure that the proposed development does not cause unacceptable adverse impacts on either the environment or local communities, many of which can be overcome by implementing standard measures, which are set out in the plan. Protection of the landscape, townscape, biodiversity, geodiversity, historic environment and heritage assets (whether above or below ground) are all addressed through the MWLP's policies.

- *Promote links between environmental sustainability and economic growth and well-being.* Minerals and waste management infrastructure is essential to support a modern economy. Minerals provide many of the raw materials necessary for construction, energy and industry and they are therefore essential in helping to sustain economic growth. Therefore the MWLP plans for their supply, whilst at the same time requiring that the impacts of extracting them are kept within acceptable limits. Dealing with waste is a major challenge for society and needs to be addressed alongside other initiatives to improve the sustainability of our environment and economy.

The MWLP provides for a network of waste management facilities and appropriate infrastructure to maximise waste as a resource and to avoid significant adverse impacts on the environment and communities.

102. The MWLP is subject to Sustainability Appraisals and Habitats Regulations Assessments at draft and publication stages and these reports influence the Plan's content. In addition, statutory undertakers, such as the Environment Agency and Historic England, have been consultees during the Plan's development, and their representations fully addressed.
103. Herefordshire Council provides and purchases a wide range of services for the people of Herefordshire. Together with partner organisations in the private, public and voluntary sectors, we share a strong commitment to improving our environmental sustainability, achieving carbon neutrality and to protect and enhance Herefordshire's outstanding natural environment.

## Equality duty

104. Under section 149 of the Equality Act 2010, the 'general duty' on public authorities is set out as follows:

A public authority must, in the exercise of its functions, have due regard to the need to -

- (a) eliminate discrimination, harassment, victimisation and any other conduct that is prohibited by or under this Act;
  - (b) advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it;
  - (c) foster good relations between persons who share a relevant protected characteristic and persons who do not share it.
105. The Equality Act 2010 established a positive obligation on local authorities to promote equality and to reduce discrimination in relation to any of the nine 'protected characteristics' (age; disability; gender reassignment; pregnancy and maternity; marriage and civil partnership; race; religion or belief; sex; and sexual orientation). In particular, the council must have 'due regard' to the public sector equality duty when taking any decisions on service changes.

106. Where a decision is likely to result in detrimental impact on any group with a protected characteristic it must be justified objectively. This means that attempts to mitigate the harm need to be explored. If the harm cannot be avoided, the decision maker must balance this detrimental impact against the strength of legitimate public need to pursue the service change.
107. It is not considered that the MWLP, or its content, has in impact on the Council's Equality Duty. All stages of public consultation on the plan have been made accessible to all and were made in accordance with the regulatory requirements of the Town and Country Planning (Local Development) (England) Regulations 2012 and a Consultation Statement will be produced to assist the inspector at the forthcoming examination in public as to whether the MWLP complies with the requirements for public participation and Government guidance.
108. Public involvement was carried out following the approach set out in Herefordshire's Statement of Community Involvement, adopted in 2017. Methods included: emails, letters, Facebook, Twitter, council website, cabinet members' newsletter, hard copies of MWLP made available at info points and/or libraries across the county, a presentation to stakeholders and exhibitions open to the public. Responses could be made via online surveys, via email or letter.
109. It is considered that the approach to public engagement was appropriate and that those with protected characteristics were able to fully engage with the process.

## **Resource implications**

110. The production of the MWLP has been funded through the local plan budget and reserves.
111. There will be a continuing need to fund the production of the Sustainability Appraisal (SA), the Habitats Regulation Assessment work, the continued work on the Plan's development by Hendeca (specialist minerals and waste planning consultants) and the examination in public (expected in 2021). This additional funding will also be sourced from the local plan reserves.
112. Costs are estimated to be:
- SA/HRA           £30,000
  - Hendeca           £40,000
  - Examination     £30,000

## **Legal implications**

113. The Council is required to produce a MWLP (a DPD) as part of the Herefordshire Local Plan. This forms part of the council's policy framework. As explained in the Purpose of this report, the budget and policy framework rules require that Scrutiny committees consider in their work programmes including any such plan, strategy or budget to enable them to inform and support the process for making Cabinet proposals to Council.
114. Under Part 3 Section 3 of the constitution, Cabinet are required to formulate or prepare the documents consisting of the budget and policy framework and shall make recommendations to Council on their implementation. The MWLP as a DPD pursuant to Section 15 of the Planning and Compulsory Purchase Act 2004 (as amended) is one of the documents within the budget and policy framework which Cabinet are required to make

recommendations to Council on, the adoption thereof being a Council function under Part 3 Section 1 of the constitution.

115. Sections 15 and 16 of the Planning and Compulsory Purchase Act 2004 (as amended by the Localism Act 2011) places a duty on local planning authorities to prepare a Minerals and Waste Development Scheme which will specify documents such as proposals and policies to guide minerals and waste related planning decisions to be produced for the area, including the MWLP. The MWLP is required to take account of national government policy and planning practice guidance when being formulated, including the NPPF and Guidance Local Plans.
116. Section 20 of the Planning and Compulsory Purchase Act 2004 (as amended) requires the MWLP to be submitted to the Secretary of State for independent examination, once the council is satisfied it has complied with procedural requirements on preparation, publication and consultation (section 19 of the Planning and Compulsory Purchase Act 2004 and regulations 18-20) as laid out in the Town and Country Planning (Local Development) (England) Regulations 2012 (as amended). This report recommends that following this consultation, Scrutiny Committee determine whether any recommendations should be made to Cabinet to strengthen the emerging policy approach as outlined.
117. There are no legal problems in doing what is proposed

## **Risk management**

Risk / opportunity	Mitigation
<ul style="list-style-type: none"> <li>Risk (procedural and financial): the MWLP is found to be unsound at examination</li> </ul>	<ul style="list-style-type: none"> <li>The risks of the MWLP being found unsound are low, as the appropriate mitigation measures have been employed to ensure that the plan has been drawn up using specialist mineral and waste planning expertise. Consultants have assisted in collation of the evidence base (BGS, Hendeca and BBLP/WSP) which underpins the MWLP, developed the plan's policies and proposals (Hendeca), produced the sustainability appraisal and habitats regulations assessments (LUC) and will continue to be engaged in the next stage of the plan's production (Hendeca); the examination in public. This risk will be managed at service level.</li> </ul>
<ul style="list-style-type: none"> <li>Risk (procedural and reputational): not to proceed to consultation on the publication draft MWLP</li> </ul>	<ul style="list-style-type: none"> <li>This would leave the council without an up to date minerals and waste planning policy framework and would effectively create a policy vacuum. This would be contrary to the requirements set out by the assistant planning inspector during the core strategy examination, who stated that a MWLP was to be produced.</li> </ul> <p>It would also mean that the decision making process on minerals and waste planning developments would not stress the importance of taking into account climate change. This would be contrary to the aims of Herefordshire Council, as set out in its environmental policy.</p> <p>This risk will be managed at service level.</p>
<ul style="list-style-type: none"> <li>Risk (procedural and financial): the introduction of regulatory changes to the planning system before the MWLP reaches examination in public, which may result in the need to follow a new plan production process.</li> </ul>	<ul style="list-style-type: none"> <li>If the publication draft MWLP is reported to full council in December, as anticipated, and the recommendation approved to proceed to the next stage of consultation (regulation 19), then the plan can be submitted to the secretary of state in the first quarter of 2021. It is therefore likely that the MWLP will fall into the transitional arrangements which will be set out by government for development plans which have reached this late stage in their production.</li> </ul> <p>This risk will be managed at service level.</p>
<ul style="list-style-type: none"> <li>Risk (procedural): the targets for levels of aggregate production and waste management requirements set out in the MWLP may become increasingly out of date, both during the Plan production process and after the Plan is adopted.</li> </ul>	<ul style="list-style-type: none"> <li>Resources have been identified to expedite the preparation of the MWLP and to ensure a robust approach has been adopted. Once adopted, the Plan will undergo a 5-yearly review to ensure that it is kept up to date.</li> </ul>

The above risks should be entered in the Growth Risk Register.

## Consultees

118. Herefordshire Council undertook consultations in 2017 and 2019 to inform the publication draft MWLP, pursuant to the Town and Country Planning (Local Development) (England) Regulations 2012 (regulation 18).
  - The first consultation was undertaken on the MWLP Issues and Options during later summer 2017 over a 6-week period.
  - The second consultation was undertaken on the draft MWLP early in 2019 for a 6-week period.
119. 92 people/organisations made representations overall.
120. A Consultation Statement will be made available at the consultation on the publication draft MWLP (regulation 19) which will set out details of these consultations. It will also show: which bodies and persons were invited to make representation under regulation 18, how those bodies and persons were invited to make such representation; a summary of the main issues raised and how those issues have been addressed in the MWLP.
121. All public involvement in the MWLP's preparation process was carried out following the approach set out in the Council's Statement of Community Involvement (adopted in 2017).
122. The Council has an extensive consultation database, containing over 3,000 contact names. The list includes individual residents, developers, businesses based across the county, parish councils, community and voluntary groups, infrastructure providers, neighbouring authorities, government agencies and elected members.
123. The Council used a range of methods to engage with all potentially interested parties, in order to ensure they had the opportunity to make representations. Stakeholders and local community members were informed by email or letter about ways to get involved in the consultations. Methods of responding, both on and offline were given, in order to reach the broadest audience possible.
124. The following approaches were undertaken:
  - direct mail or email to contacts on the Council's database
  - information made available at libraries and information centres across Herefordshire
  - Cabinet Members' newsletter
  - Herefordshire Council website
  - Herefordshire Council social media
  - presentations and exhibitions
125. Notification was sent to: Parish Councils, specified consultees, all those who had registered an interest in Herefordshire planning, stakeholders, industry contacts, statutory bodies (such as Highways England) and utility companies, neighbouring local planning authorities, agents and land owners. The correspondence included details of where to find further information and how to make representations either online or in writing.
126. All relevant documentation was made available to download on a dedicated Council webpage and in hard copy format at libraries and information centres across the County.

127. 36 responses were submitted to the issues and options consultation in 2017 and 56 responses were submitted to the draft MWLP in 2019. Many individual points were raised to the Plan's contents. The Consultation Statement will set out all points raised and the council's responses to them and how the results of these consultations have informed the MWLP's preparation.
128. In addition to the regulatory consultations, the Issues and Options and draft plan stages of preparation were fully discussed with adjoining planning authorities as part of the statutory Duty to Cooperate. As a result Memoranda of Understanding have been signed between Herefordshire, Gloucestershire, Worcestershire, Shropshire and Powys minerals and waste planning authorities and a Statement of Common Ground is also being produced setting out areas of agreement on cross-boundary matters.
129. Local members were also kept informed of the MWLP's preparation and a minerals and, in addition to mandatory governance processes prior to the two stages of statutory consultation on the Issues and Options report and the draft MWLP, a Waste Standing Panel was formed, which met three times during 2017 and 2018. The views raised at the meetings of the panel were fed into the draft MWLP's preparation.

## Appendices

Appendix A: Publication draft Minerals and Waste Local Plan

Appendix B: Supplementary Sites Report

Appendix C: Mineral Needs Assessment 2019

Appendix D: Waste Needs Assessment 2019

## Background papers

- Draft Minerals and Waste Local Plan 2018  
[https://www.herefordshire.gov.uk/download/downloads/id/16729/draft\\_minerals\\_and\\_waste\\_local\\_plan\\_january\\_2019.pdf](https://www.herefordshire.gov.uk/download/downloads/id/16729/draft_minerals_and_waste_local_plan_january_2019.pdf)
- Annex A to Draft Minerals and Waste Local Plan 2018  
[https://www.herefordshire.gov.uk/download/downloads/id/16730/draft\\_minerals\\_and\\_waste\\_local\\_plan\\_january\\_2018\\_annex\\_a.pdf](https://www.herefordshire.gov.uk/download/downloads/id/16730/draft_minerals_and_waste_local_plan_january_2018_annex_a.pdf)
- National Planning Policy Framework 2019  
<https://www.gov.uk/government/publications/national-planning-policy-framework--2>
- National Waste Strategy 2018  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/765914/resources-waste-strategy-dec-2018.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/765914/resources-waste-strategy-dec-2018.pdf)
- Herefordshire Core Strategy 2015  
[https://www.herefordshire.gov.uk/downloads/download/123/adopted\\_core\\_strategy](https://www.herefordshire.gov.uk/downloads/download/123/adopted_core_strategy)
- Guidance on fracking: developing shale gas in the UK 2019  
<https://www.gov.uk/government/publications/about-shale-gas-and-hydraulic-fracturing-fracking/developing-shale-oil-and-gas-in-the-uk>

- MWLP Spatial Context and Sites Report 2018  
[https://www.herefordshire.gov.uk/download/downloads/id/16838/spatial\\_context\\_and\\_sites\\_report\\_2018.pdf](https://www.herefordshire.gov.uk/download/downloads/id/16838/spatial_context_and_sites_report_2018.pdf)
- Mineral safeguarding in England: good practice advice (BGS) 2007  
[bgs.ac.uk/downloads/home.html](https://www.bgs.ac.uk/downloads/home.html)
- A Green Future: Our 25 Year Plan to Improve the Environment 2018  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/693158/25-year-environment-plan.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/693158/25-year-environment-plan.pdf)
- Statement of Community Involvement 2017  
[https://www.herefordshire.gov.uk/download/downloads/id/1566/statement\\_of\\_community\\_involvement\\_january\\_2017.pdf](https://www.herefordshire.gov.uk/download/downloads/id/1566/statement_of_community_involvement_january_2017.pdf)
- Planning for the Future white paper 2020  
<https://www.gov.uk/government/consultations/planning-for-the-future>

## Glossary of Abbreviations

MWLP: Minerals and Waste Local Plan

MASS: managed aggregate supply system. The underpinning concept behind the managed aggregate supply system is that mineral planning authorities which have adequate resources of aggregates make an appropriate contribution to national as well as local supply, while making due allowance for the need to reduce environmental damage to an acceptable level.

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*NB: Please note that there is no direct link between this report and another relating to options for providing Herefordshire Council's municipal waste management service in the future. However, subsequent decisions to be made on the waste disposal service will have a more direct link to the policies and proposals of the MWLP.*

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Herefordshire  
Minerals and Waste  
Local Plan

Publication Draft

## 1. The Publication Draft Minerals and Waste Local Plan for Herefordshire

### 1.1 About this document

- 1.1.1 This publication draft of the Herefordshire Minerals and Waste Local Plan (Publication Draft MWLP) sets out the council's preferred strategy for meeting the county's minerals and waste needs until 2041. It is the draft that Herefordshire Council proposes to submit to the Secretary of State for examination and is intended to be adopted.
- 1.1.2 This Publication Draft MWLP has been prepared following a comprehensive review of the evidence base and extensive consultation. Following a further statutory 6-week period in which representations can be made on legal compliance with relevant legislation and matters of soundness, it will be submitted, along with any proposed changes and other submission documents, for examination by an independent planning inspector.
- 1.1.3 Representations submitted at this stage must be made on grounds of legal compliance or soundness and be supported with evidence to demonstrate why these tests have not been met. Any representations received will be considered by the inspector as part of the examination. To be legally compliant, the MWLP has to be prepared in accordance with the Duty to Cooperate and legal and procedural requirements including the 2011 Localism Act and Town and Country Planning (Local Planning) (England) Regulations 2012 (as amended).
- 1.1.4 The National Planning Policy Framework (the 'Framework') presents the following tests of soundness for a Local Plan:
- Positively prepared – the plan should be based on a strategy which seeks to meet objectively assessed development and infrastructure requirements, including unmet requirements from neighbouring authorities where it is reasonable to do so and consistent with achieving sustainable development;
  - Justified – the plan should be the most appropriate strategy, when considered against the reasonable alternatives, based on proportionate evidence;
  - Effective – the plan should be deliverable over its period and based on effective joint working on cross-boundary strategic priorities; and
  - Consistent with national policy – the plan should enable the delivery of sustainable development in accordance with the policies in the Framework.

### 1.2 Consultation Details

- 1.2.1 This Publication Draft MWLP and supporting documents, as well as full details of how to make representations on the MWLP, are available on the website: [www.herefordshire.gov.uk](http://www.herefordshire.gov.uk).

- 1.2.3 Paper copies of the documents will be available to view at the Herefordshire Customer Service Centre, Blueschool House, Blueschool Street, Hereford, HR1 2LX and at the following libraries:
- Hereford Library, Broad Street, Hereford, HR4 9AU;
  - Leominster Library, 8 Buttercross, Leominster, HR6 8BN;
  - Kington Library, 64 Bridge Street, Kington, HR5 3DJ; and
  - Leintwardine Library, Leintwardine Village Hall, High Street, Leintwardine, SY7 0LB.
- 1.2.4 Please check the council's website for details of library opening hours.
- 1.2.5 We recommend that you use the response form provided, as this will enable us to record your representations correctly. All representations should contain a paragraph and/or policy or site reference as relevant and appropriate.
- 1.2.6 You can submit your completed response form either:
- by email to: [ldf@herefordshire.gov.uk](mailto:ldf@herefordshire.gov.uk);
  - or
  - by post to: Forward Planning – Publication Draft MWLP, Herefordshire Council, Plough Lane, Hereford, HR4 0LE.
- 1.2.7 The closing date for representations is **1700 hours on DATE 2020 SUGGEST IT IS A SUNDAY?.**
- 1.2.8 Please note that we are unable to accept representations received after this deadline.
- 1.2.9 If you would like to speak to someone about this Publication Draft MWLP, please contact either:
- Kevin Singleton, Strategic Planning Manager, using email: [kevin.singleton@herefordshire.gov.uk](mailto:kevin.singleton@herefordshire.gov.uk);
  - or
  - Victoria Eaton, Senior Planning Officer, using email: [vicky.eaton@herefordshire.gov.uk](mailto:vicky.eaton@herefordshire.gov.uk).

## 2. Introduction and Background

### 2.1 The Herefordshire Local Plan

- 2.1.1 The council has prepared a Local Plan, to comprise of a number of documents including the Core Strategy, to guide development and change in the county up to 2031. A list of all the Local Plan documents and the timetable for their preparation are set out in the Local Development Scheme.
- 2.1.2 This first document in the production of the Local Plan, and adopted in October 2015, is the Core Strategy<sup>1</sup>. This development plan document shapes future development and sets the overall strategic planning framework for the county.
- 2.1.3 When adopted, the Minerals and Waste Local Plan will be another element of the Herefordshire Local Plan as shown in Figure 1.

#### Figure 1 Structure of the Herefordshire Local Plan

Needs new graphic

- 2.1.4 As set out in the Core Strategy (paragraph 1.10), this MWLP establishes targets and planning policies relating to minerals and waste activities and associated development in Herefordshire. The plan period has been extended to 2041 to provide for the timeframe sought in the National Planning Policy Framework<sup>2</sup> and to sit alongside the updated Core Strategy.
- 2.1.5 The MWLP has been produced taking account of the National Planning Policy Framework<sup>3</sup>, Planning Practice Guidance<sup>4</sup>, up-to-date evidence base studies and ensuring close co-operation with neighbouring local authorities on cross-boundary issues. Regard has also been given to other plans and strategies produced by the council (particularly the Core Strategy, including its review and update) and other organisations.
- 2.1.6 The MWLP has been subject to independent assessment:
- Sustainability Appraisal, which is assessing the social, economic and environmental impacts of the MWLP throughout the development of the document;
  - Habitats Regulations Assessment, which has assessed any impacts on protected European sites; and
  - Strategic Flood Risk Assessment (SFRA), to assess flood risk in the plan area, and the risks to and from surrounding areas as a result of minerals and waste development.

### 2.2 Timeframe, scope and purpose of the MWLP

- 2.2.1 The MWLP will cover the period up to 31 December 2041 and applies across the administrative area of Herefordshire. More detail regarding the plan area and the consequent spatial strategy is set out in section 4.

<sup>1</sup> [https://www.herefordshire.gov.uk/info/200185/local\\_plan/137/adopted\\_core\\_strategy](https://www.herefordshire.gov.uk/info/200185/local_plan/137/adopted_core_strategy)

<sup>2</sup> Page 9, paragraph 22, National Planning Policy Framework, February 2019.

<sup>3</sup> <https://www.gov.uk/government/publications/national-planning-policy-framework--2>

<sup>4</sup> <https://www.gov.uk/government/collections/planning-practice-guidance>

- 2.2.2 The main purpose of the MWLP is to provide guidance to developers, local communities and other interested parties on where and when minerals and waste development may be expected over the plan period, as well as how it will be managed to reduce adverse impacts and maximise benefits. Minerals development includes activities such as mining, quarrying and gas extraction. Waste development includes activities such as waste recycling and the treatment and disposal of waste.
- 2.2.3 The MWLP forms part of the statutory development plan and the council will use it, along with the Core Strategy, as the starting point for decisions on planning applications for development relating to these activities. Where the MWLP contains relevant policies, decisions will be made in accordance with those policies, unless there are other material considerations related to planning, which indicate otherwise.
- 2.2.4 The MWLP must be read as a whole. Whilst the specific policies in the MWLP are particularly significant in setting out the key principles on which decisions will be based, the supporting text explains in more detail how the individual policies will be interpreted and applied. It will therefore be used by the council, in conjunction with the policies, to guide its approach to decision-making.

## **2.3 Why does Herefordshire need to plan for minerals and waste?**

### **Minerals**

- 2.3.1 Minerals and waste management infrastructure are essential to support a modern economy.
- 2.3.2 Minerals are important as they provide many of the raw materials necessary for construction, energy and industry. They are therefore essential in helping to sustain economic growth. For these reasons, Government attaches importance to planning for their supply, whilst at the same time requiring that the impacts of extracting them are kept within acceptable limits. An important consideration in planning for minerals is that they can only be worked where they occur in sufficient quantity and quality, and this fundamental geological constraint will always be a key influence on minerals planning.
- 2.3.3 Minerals gained from across the UK are required throughout the construction, manufacturing, chemicals and energy industries; for example: sand and gravel are used to build houses; silica sand is used to make glass; and hydrocarbons are used to make energy. However, within Herefordshire minerals are primarily used in the construction industry, for example local building stone is used to repair historic buildings.
- 2.3.4 The geology of Herefordshire incorporates the: dramatic contortions of the ancient Malvern Hills (the oldest in England); internationally renowned fossil records of Silurian limestones; and glacial remains and river gravels revealing ice age history and astonishing changes of drainage patterns among the tributaries of the River Wye. Mineral extraction can provide good opportunities for geological and archaeological research and net benefits following reclamation.

### **Waste**

- 2.3.5 Dealing with waste is a major challenge for society and needs to be addressed alongside other initiatives to improve the sustainability of our environment and economy. Many items discarded as waste have the potential to be re-used, recycled or used as a resource.

- 2.3.6 Managing waste in these ways has benefits in reducing the amount of natural resources that are consumed. For example, re-using or recycling materials generated during demolition activity can reduce the need for extraction of new minerals. At the same time, it can reduce the need for landfilling of waste. Treating waste as a resource can also lead to new opportunities for the economy, with the outputs of modern waste management processes acting as inputs to businesses that can use them. The circular economy encapsulates this approach, seeking to keep materials at their highest value for the longest period of time.
- 2.3.7 A network of waste management facilities is required to ensure that the appropriate infrastructure is in place to maximise its potential use as a resource and to avoid significant adverse impacts on the environment and communities. For example, there is a network of household waste recycling centres across Herefordshire, which enables householders to deposit items no longer required at a location where they can be recycled or disposed of safely.

## Policy

- 2.3.8 Whilst any minerals or waste development proposal would be subject to the Core Strategy, that development plan document does not specifically address these sectors. The MWLP provides the strategic direction and development management policies necessary to enable sustainable minerals and waste development.
- 2.3.9 Minerals and waste policy is currently contained in the Unitary Development Plan, adopted in 2007. Much of the Unitary Development Plan has been replaced by the Core Strategy, with just the minerals and waste policies being saved. These policies will be replaced by the MWLP; it is important to update the minerals and waste policies to ensure a modern policy framework is in place.

## 2.4 Evidence Base

### British Geological Survey<sup>5</sup>

- 2.4.1 British Geological Survey is the standard provider of objective and authoritative geoscientific data, information and knowledge to help society to:
- use its natural resources responsibly;
  - manage environmental change; and
  - be resilient to environmental hazards.
- 2.4.2 British Geological Survey was commissioned to prepare comprehensive mapping of the geology and mineral reserves across Herefordshire. This information became available in early 2017 and has been used in the sites analysis.
- 2.4.3 The British Geological Society also prepares data on sand and gravel and aggregate production and consumption, with the latest available dataset based on 2014. This data has been used to inform the Minerals Need Assessment; whilst it is recognised to have its limitations as a dataset, it is the most credible data available. The information has also been

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<sup>5</sup> <http://www.bgs.ac.uk>

reviewed against more strategic minerals relevant reporting, including 'Collation of the results of the 2014 Aggregate Minerals Survey for England and Wales' (March 2016)<sup>6</sup>.

## **Coal Authority<sup>7</sup>**

- 2.4.4 The Coal Authority is an executive non-departmental public body, sponsored by the Department for Business, Energy & Industrial Strategy. It manages the effects of past coal mining, including subsidence damage claims that are not the responsibility of licensed coal mine operators. It also deals with mine water pollution and other mining legacy issues.
- 2.4.5 The Coal Authority prepares a series of maps that have been referred to in preparing the MWLP.

## **Call for Sites**

- 2.4.6 In 2016 and 2017, Herefordshire Council made a 'call for sites', asking minerals and waste site operators and landowners to put forward site proposals to consider for future minerals or waste development and to outline future aspirations for existing sites.
- 2.4.7 These have been considered in the Spatial Context and Sites Report.
- 2.4.8 Respondents were invited to comment on the sites proposed to be allocated and to put forward any additional suggestions. One new site was put forward and has been considered in the Supplementary Sites Report.

## **Minerals and Waste Need Assessments**

- 2.4.9 The need assessments seek both to identify current supply of minerals and waste management capacity and to forecast demand. They provide the essential evidence to determine what future requirements for both mineral supply and waste management capacity can reasonably be expected to be, such that this can be planned for in the MWLP.
- 2.4.10 Separate minerals and waste need assessments were prepared in February 2017 and accompanied the Issues and Options consultation. Each assessment was then updated, to reflect comments made in the consultation responses and to incorporate new data that had become available. The updated need assessments were finalised in November 2018 and accompanied the consultation on the Draft MWLP.
- 2.4.11 Both minerals and waste need assessments were undertaken again in late 2019 using the latest available information. These are reported in the: Minerals Need Assessment 2019 ('MNA 2019'); and Waste Need Assessment 2019 ('WNA 2019').

## **Local Aggregate Assessment**

- 2.4.12 Mineral planning authorities are required to prepare a Local Aggregates Assessment (LAA) on an annual basis. They should be based on a rolling average of 10 years sales data and other relevant local information and include an assessment of all supply options for aggregates minerals.
- 2.4.13 In preparing the 2018 LAA, the relevant data and historical entries were comprehensively reviewed, such that it provided a robust baseline for the mineral need assessment and for monitoring the MWLP.

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<sup>6</sup> <https://www.gov.uk/government/publications/aggregate-minerals-survey-for-england-and-wales-2014>

<sup>7</sup> <https://www.gov.uk/government/organisations/the-coal-authority>

2.4.14 The LAA was updated again in late 2019.

## **Minerals Safeguarding Studies**

2.4.15 The National Planning Policy Framework requires planning authorities to define Minerals Safeguarding Area(s), to protect resources from sterilisation by other forms of development. The analysis of the British Geological Survey data is presented in the Spatial Context and Sites Report. This data, and responses to consultation, have informed the approach to mineral safeguarding within the MWLP.

## **Sustainability Appraisal, Habitats Regulation Assessment and Strategic Flood Risk Assessment**

2.4.16 Sustainability Appraisal is a requirement for all development plan documents. Sustainability is about ensuring the long-term maintenance of well-being and the environment for our present and future communities. The process assesses the impact of the MWLP on the environment, people and the economy. It incorporates the requirements of the European Directive on Strategic Environmental Assessment.

2.4.17 Following consultation with key local, regional and national organisations such as the Environment Agency, Natural England and Historic England, sustainability criteria were agreed covering issues such as: air quality; water quality and quantity; landscape; health and economic performance.

2.4.18 Habitats Regulations Assessment (HRA) has been used to assess the emerging MWLP to assess whether there would be likely significant effects on sites of international importance for wildlife (European designated sites). Where a land use plan is likely to have a significant effect on such sites, an appropriate assessment must be carried out of the implications in respect of their conservation objectives.

2.4.19 Strategic Flood Risk Assessment (SFRA) for Herefordshire has been carried out at Levels 1 and 2, focussing on key development areas. This informed the emerging MWLP prior to a SFRA being completed on the plan. In early 2020, a Level 2 SFRA was undertaken of the MWLP, which has informed preparation of this Publication Draft MWLP.

## **2.5 Flexibility**

2.5.1 The Publication Draft MWLP has been prepared to enable appropriate development to occur within the context of change likely to occur both nationally and within Herefordshire. This might be driven by amendments to national policy and updates to the evidence base, or by external impacts such as new waste management practices and mineral demand. More specifically, situations which may arise are: new minerals or waste management resources failing to come forward as planned; infrastructure not being provided at the same time as development; or market changes adversely affecting the viability of development.

2.5.2 The evidence base will be kept up to date and specific studies e.g. the LAA will be reviewed annually. All of the policies are written to refer to national policy and the evidence base rather than repeat them. This allows the policies to be effective even where there are minor changes to higher level policies or the evidence base.

## 2.6 Consultation

- 2.6.1 One of the main principles of development plan preparation is that local communities are involved from the outset. This approach is set out in national policy and in Herefordshire's Statement of Community Involvement 2017, which forms part of the Herefordshire Local Plan. To ensure early engagement on the preparation of the Draft MWLP and the opportunity to comment and help shape it, Issues and Options consultation was undertaken from 14 August to 6 October 2017.
- 2.6.2 Consultation on the Draft MWLP and its accompanying evidence base document occurred over the period 21 January to 4 March 2019, including a consultation event held on 5 February 2019. The responses received were carefully reviewed and have, where appropriate, informed the content of the Publication Draft MWLP.
- 2.6.3 This Publication Draft MWLP is the final stage of consultation being undertaken prior to the document being submitted for examination.

### 3. Context

#### 3.1 Spatial portrait of the plan area

##### Overview

- 3.1.1 A detailed portrait of the plan area can be found within evidence supporting the Publication Draft MWLP and the Core Strategy, all of which can be viewed at [www.herefordshire.gov.uk](http://www.herefordshire.gov.uk).
- 3.1.2 The plan area for the MWLP comprises the administrative area of Herefordshire Council; a large, predominately rural, landlocked county situated in the south western corner of the West Midlands region and on the eastern border of Wales.

**Figure 2 The Plan Area**

Would be better to insert the original graphic



## Minerals

- 3.1.3 Known mineral resources in Herefordshire are relatively limited in range, primarily consisting of aggregates for use in construction but also a small amount of building stone. Aggregates comprise: sand and gravel; crushed rock (limestone); and secondary or recycled materials gained from quarry and waste operations.
- 3.1.4 Key areas for minerals in Herefordshire are:
- Sand and gravel:
    - river terrace deposits are mainly found in the river valleys of the Wye, Lugg and Arrow; and
    - glacial deposits are present in the north and west of Herefordshire.
  - Crushed rock:
    - silurian limestone is found on the western side of the Malvern Hills and Ledbury, the Woolhope dome and in the north-west of the county in the Presteigne/Aymestrey areas;
    - carboniferous limestone is present to the south-west of Ross-on-Wye on the northern flanks of the Forest of Dean; and
    - igneous and metamorphic rock occurs in the Malvern Hills.
  - Sandstone occurs extensively throughout much of Herefordshire and several operational quarries exist in the north, west and south of the county. The output is of particular importance for heritage restoration and in creating authentic character for new-build properties.
- 3.1.5 Coal is no longer extracted in Herefordshire, but was formerly worked in two locations:
- the southern tip of the Wyre Forest Coalfield, which extended into the north of the county, near the boundary with Worcestershire and Shropshire; and
  - a small outlier site of the Forest of Dean Coalfield, which extended into southern Herefordshire.
- 3.1.6 In 1999, the British Geological Survey reported<sup>8</sup> that the hydrocarbon prospectivity of the county was low. Wells drilled to test the oil and gas potential of sandstones in the Worcestershire Basin and rocks in the Woolhope Inlier failed to discover hydrocarbons.
- 3.1.7 In December 2015, a small block of land in the south of the county was offered for onshore hydrocarbon exploration, appraisal and extraction in relation to coalbed methane. This offer was declined by the energy company to which it was offered and has not been made available again.
- 3.1.8 It is considered highly unlikely that there will be any activities relating to the exploration or extraction of hydrocarbons within Herefordshire in the short term. In the medium to long term, it is possible that this situation may change but, recognising current policy on minimising carbon emissions this is considered to be unlikely.

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<sup>8</sup> Mineral Resource Information for Development Plans: Phase One Herefordshire and Worcestershire: Resources and Constraints, British Geological Survey and the Department of the Environment Transport and the Regions, 1999

- 3.1.9 There are currently eleven permitted mineral workings in Herefordshire that could be worked during the plan period:
- Sand and gravel:
    - Shobdon Quarry (inactive at the time of preparing the MWLP)
    - Upper Lyde Quarry
    - Wellington Quarry
  - Limestone/Crushed rock:
    - Leinthall Quarry
    - Perton Quarry
  - Sandstone:
    - Callow Delve
    - Black Hill Delve
    - Llandraw Delve
    - Pennsylvani Delves
    - Sunnybank Delve
    - Westonhill Wood Delves
- 3.1.10 There are also a number of quarries that are mothballed, closed or abandoned. All the sites are shown on Figure 3.
- 3.1.11 Data (from 2014) that has been made available from the British Geological Survey, though not verified by the organisation, indicates that Herefordshire provides 40% to 50% of its own sand and gravel demand, but only 20% to 30% of its crushed rock demand. This may be due to the particular quality of the limestone, which representatives on site describe as quite soft and not suitable for road building. According to the British Geological Survey data, the most significant import of sand and gravel is from Staffordshire (30% to 40%) and of crushed rock is from Powys (40% to 50%).
- 3.1.12 In addition, Herefordshire hosts some key elements of ancillary infrastructure, notably the Moreton-on-Lugg railhead used to transport mineral from Wellington Quarry to the south east of England, predominantly London. However, the mineral travelling by rail freight is mainly crushed rock from quarries located in Wales. Otherwise, minerals travel by road as there is no other transport mode available within Herefordshire. Concrete batching plant, concrete block making plant and coating plant operate on working quarries and industrial estates around Herefordshire.
- 3.1.13 Secondary and recycled materials have an important role to play in the overall supply of aggregates. Secondary aggregates are minerals that are produced as a by-product of other mining or quarrying activities or as a by-product of an industrial process. Recycled aggregates arise from several sources, notably from the demolition of buildings or from civil engineering works such as asphalt planings from road resurfacing and railway track ballast. Recycling aggregates usually involves the removal of unwanted or inappropriate material such as fines, wood, plastic and metal, and some form of treatment (crushing, washing and/or screening) to reach industry standards for its re-use.

3.1.14 There are no known viable resources within Herefordshire for silica sand, clay or any other mineral. These are not considered further.

**INSERT: Figure 3 Minerals in Herefordshire and Permitted Quarries/Delves**

**[refer to PDF]**

Note to Herefordshire Council ... hendeca can help make all these pdf mapping available digitally via the HC website if that would be useful

## Waste

3.1.15 Waste is generated from a wide range of domestic, commercial and industrial activities. The main waste types are:

- Local Authority Collected Waste (LACW) which includes household waste and other wastes collected by local authorities;
- Commercial and industrial (C&I) waste; this includes waste from businesses and manufacturing companies;
- Construction, demolition and excavation (CD&E) waste; these wastes can be produced through a wide range of building projects, from home renovations to major redevelopments;
- Hazardous waste; waste is generally considered hazardous if it is harmful to humans or the environment, particularly through being toxic, corrosive or an irritant - examples of hazardous waste include asbestos, chemicals such as brake fluid or print toner;
- Agricultural waste includes both natural, such as animal manure, animal bedding and crop waste, and non-natural, such as plastic wrapping or bottles;
- Low level (non-nuclear industry) radioactive waste, such as is used in research laboratories; and
- Wastewater; is used water from any combination of domestic, industrial, commercial or agricultural activities such as surface runoff or stormwater, and any sewer inflow or sewer infiltration - in Herefordshire this waste stream is managed by Dwr Cymru/Welsh Water and Severn Trent Water.

3.1.16 The amount and type of waste produced, and the ways in which it is managed, partly reflects the environmental, social and economic characteristics of the area. Concentrated populations and commercial/industrial activities, as are found in Hereford and the five market towns are the largest producers of waste, and this is generally reflected in the pattern of waste management facilities within Herefordshire. The more interesting pattern in Herefordshire is the number of anaerobic digestion and biological treatment facilities dispersed around the county, reflecting its strong agricultural sector.

3.1.17 The waste need assessments identify that most of the waste (80% and more) managed in facilities operating in Herefordshire was generated in the county. These facilities also receive waste from other authorities, principally those in Wales, the West Midlands and Gloucestershire.

3.1.18 However, whilst there is a range of waste management facilities (including transfer, re-use and recycling) permitted in Herefordshire that address a variety of wastes, there are no residual waste management facilities, such as energy from waste plant or landfill sites.

3.1.19 Herefordshire Council has historically worked with Worcestershire County Council to manage effectively the authorities' LACW. This collaboration has resulted in the production of a Joint Municipal Waste Management Strategy and joint procurement of strategic waste management capacity (EnviroSort and EnviRecover). Whilst these facilities are not located in Herefordshire, this arrangement means that long-term capacity is available to manage Herefordshire's LACW.

3.1.20 Wastes are exported from Herefordshire, predominantly for materials recovery, energy recovery and disposal to landfill, with the most significant exports made to the Vale of Glamorgan and Cardiff. This pattern of movement indicates a need for more residual waste management capacity in Herefordshire.

3.1.21 The waste facilities permitted in Herefordshire in 2019 are all shown on Figure 4.

**INSERT: Figure 4 Permitted Waste Facilities in Herefordshire**

**[refer to PDF]**

## Minerals and waste development

- 3.1.22 There are important links between minerals and waste development. The efficient use of materials such as recycled aggregate, as alternatives to primary minerals, can help to conserve natural resources. Quarries may have potential for the disposal of waste as part of the reclamation process, and in some cases, the disposal of inert waste by landfill or landraise can help to improve the quality of derelict or degraded land. These links are reflected in the content of the MWLP.
- 3.1.23 Both minerals and waste development has the potential to give rise to adverse impacts, for example effects on the landscape, through the impact of vehicle movements, or the generation of dust or other forms of pollution.
- 3.1.24 Just as importantly, minerals and waste developments can also deliver benefits. For example, through the careful design, operation and reclamation of mineral sites it can be possible to enhance wildlife habitats, improve the provision of floodwater storage capacity or deliver other environmental benefits to help support local businesses and the economy. Some waste developments are able to produce power or heat for use by local consumers. Through delivery of the circular economy, materials can be retained at their highest value for as long as possible; minimising the use of raw resources and reducing environmental impacts.
- 3.1.25 A key role for the MWLP is to develop planning policies that promote appropriate development that meets the recognised market needs, whilst ensuring that detrimental impacts are minimized and opportunities for betterment are optimized.

## 3.2 Working with other authorities

### Local Authority Collected Waste

- 3.2.1 Herefordshire and Worcestershire's Joint Municipal Waste Management Strategy: Managing Waste for a Brighter Future<sup>9</sup> (the Waste Strategy) was first published in 2004. It was prepared and adopted by the eight local authorities across Herefordshire and Worcestershire.
- 3.2.2 A detailed review and republication of the Waste Strategy was completed in 2011. This set a suite of principles, policies and targets for the management of municipal waste across both counties. As part of this work, and in line with Government guidance, the authorities committed to review the Strategy at least every 5 years.
- 3.2.3 An Addendum to the Waste Strategy was prepared in September 2017, to provide a summary of the 2016 review of the Waste Strategy. In particular it includes:
- information on significant changes/ developments in Government waste management policy since 2011, including potential future changes to European policy;
  - updates on waste management data including waste growth predictions; and
  - commentary on performance against key principles, policies and targets within the Strategy.

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<sup>9</sup> [https://www.herefordshire.gov.uk/downloads/file/1428/herefordshire\\_and\\_worcestershire\\_joint\\_waste\\_strategy](https://www.herefordshire.gov.uk/downloads/file/1428/herefordshire_and_worcestershire_joint_waste_strategy)

- 3.2.4 The review process and the production of the Addendum has been undertaken by the Strategic Waste Management Board, which represents the eight authorities across Herefordshire and Worcestershire.
- 3.2.5 The Addendum confirms that the authorities continue to invest in the existing processing and collection capabilities, with the example of EnviroSort, the material reclamation facility having been refurbished to include the provision of a glass breaker and improved fire protection system. However, the Addendum also makes clear the challenges that lie ahead in delivering the Strategy, recognising financial constraints and budget cuts.
- 3.2.6 No new infrastructure is identified and the facilities in place currently should be available for the plan period and beyond.

### **Duty to co-operate**

- 3.2.7 Herefordshire is a landlocked county that does not exist in isolation from its neighbours; both minerals and waste are materials driven by market demand that consequently readily cross administrative boundaries. The MWLP takes account of these movements and the wider challenges, issues and opportunities presented by them.
- 3.2.8 Cross-boundary working is already in place through the joint waste management approach with Worcestershire County Council and discussions with other neighbouring authorities has taken place during the preparation of the MWLP. This has been undertaken through on-going liaison with neighbouring authorities, discussions at the regional level, and through the review of proposals within adjoining local plans and other development plan documents.
- 3.2.9 Herefordshire is an active member of both the Technical Advisory Body (considering waste matters) and the Aggregates Working Party (considering minerals) comprising authorities of the former West Midlands Region and other interested parties, including representatives from the Environment Agency and industries.
- 3.2.10 Herefordshire has sought to provide a positive policy framework to bring forward deliverable development to meet its own needs and to provide for those identified through these meetings.

## **3.3 Policy Context**

### **European**

- 3.3.1 At the time of writing (March 2020) the UK is in a transition period of negotiation with the EU, expected to last until the end of 2020. During this transition period, existing legislation remains in place and applicable across the UK.
- 3.3.2 The details of any final deal(s) made with the EU are not currently known. In relation to the wide ranging environmental legislation relevant to the MWLP, it is not unreasonable to expect that existing legislation will remain in place and this is the approach adopted in preparing the MWLP.
- 3.3.3 Consequently, existing EU legislation is referenced throughout the MWLP.

## National policy

- 3.3.4 The National Planning Policy Framework (the 'NPPF', February 2019) contains the Government's overarching policies on minerals planning. The NPPF identifies a need to ensure that a continuous supply of minerals is available to support the economy and states that great weight should be given to the economic benefits of minerals extraction, whilst also making clear that minerals should be used sustainably. It identifies a range of minerals that are of '*local and national importance*' for which planning authorities should have policies. Minerals of '*local and national importance*' that lie within Herefordshire are: aggregates; coal; gas; and building stone.
- 3.3.5 The NPPF sets out specific policies in relation to the supply of a number of types of minerals. Relevant to the MWLP, it requires the maintenance of landbanks of at least 7 years for sand and gravel, and at least 10 years for crushed rock and states that planning authorities should consider how to meet demand for minerals required for the repair of heritage assets.
- 3.3.6 In aiming to reduce the need to extract primary minerals and find uses for waste materials, the NPPF requires planning authorities to take account of the contribution that substitute or secondary and recycled materials and minerals waste would make to the supply of materials, before considering extraction of primary materials. It also places an emphasis upon safeguarding mineral resources for future use and safeguarding minerals infrastructure.
- 3.3.7 The NPPF seeks to conserve important landscape and heritage assets by requiring that landbanks for non-energy minerals are provided outside National Parks, Areas of Outstanding Natural Beauty, Scheduled Monuments and World Heritage Sites. In National Parks and Areas of Outstanding Natural Beauty, many minerals and waste developments would be classed as '*major development*' and should not be permitted except in exceptional circumstances, as defined by a series of considerations known as the '*major development test*'.
- 3.3.8 The MWLP can enable a steady and sustainable supply of construction minerals to be delivered through a positive policy approach, identifying sites for quarry working and preferred areas of search.
- 3.3.9 The NPPF was published (in February 2019) advising mineral planning authorities to recognise the benefits of on-shore oil and gas development, including for unconventional hydrocarbons (at paragraph 209a). Ministerial Written Statement<sup>10</sup> made on 23 May 2019 confirms that '*paragraph 209(a) of the National Planning Policy Framework has been quashed.*' In November 2019, the Government issued a moratorium on the hydraulic fracturing of hydrocarbons.
- 3.3.10 A further important consideration, relevant to planning for both waste and minerals, is the Climate Change Act 2008<sup>11</sup> and an associated requirement at a national level to reduce greenhouse gas emissions by 80% below 1990 levels by 2050.

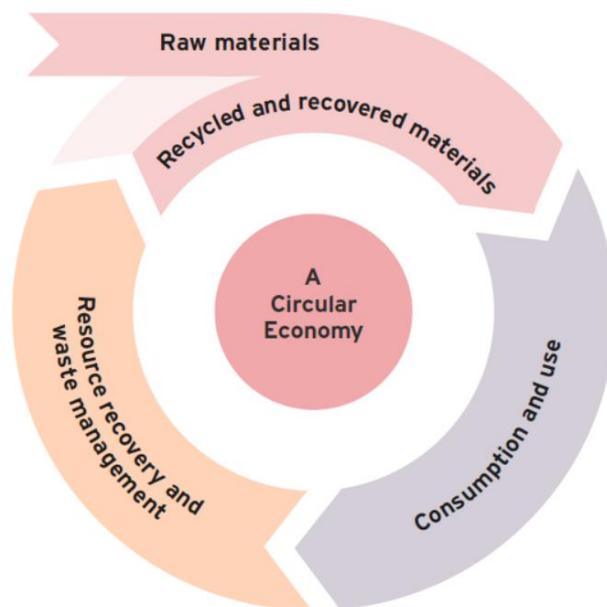
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<sup>10</sup> Reference: HCWS1586

<sup>11</sup> <https://www.legislation.gov.uk/ukpga/2008/27/contents>

- 3.3.11 Similarly the Government's 25 Year Environment Plan<sup>12</sup> (2018) presents policy relevant to both minerals and waste development as it sets out the priority actions intended to '*help the natural world regain and retain good health.*'
- 3.3.12 The NPPF does not contain specific policies on planning for waste management, although its policies generally remain relevant. National waste planning policy is informed by European waste policy such as the Directive 2018/851 of the European Parliament and of the Council<sup>13</sup> (the 'rWFD', which came into force on 4 July 2018, and amends Directive 2008/98/EC on waste). The rWFD introduces the legislation relevant to delivery of the circular economy and clarifies the concepts of waste hierarchy, self-sufficiency and nearest appropriate installation. In December 2018, Defra published 'Our Waste, Our Resources: A Strategy for England'<sup>14</sup> (the 'Resources and Waste Strategy'). This was the first significant waste policy intervention by the Government in over a decade; delivery of the circular economy is a core focus of the document. Figure 5 is taken from the RWS.

**Figure 5 The circular economy, Resources and Waste Strategy**



- 3.3.13 National Planning Policy for Waste<sup>15</sup> ('NPPW') was published in October 2014 and should be read alongside the Waste Management Plan for England.
- 3.3.14 NPPW states that planning strategies should help to drive waste up the waste hierarchy, deliver sustainable development and resource efficiency, provide appropriate infrastructure and enable businesses and communities to take more responsibility for their own waste without harming human health or the environment. The waste hierarchy places priority on the

<sup>12</sup> A Green Future: Our 25 Year Plan to Improve the Environment, 2018, [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/693158/25-year-environment-plan.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/693158/25-year-environment-plan.pdf)

<sup>13</sup> [https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L\\_2018.150.01.0109.01.ENG](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_2018.150.01.0109.01.ENG)

<sup>14</sup> <https://www.gov.uk/government/publications/resources-and-waste-strategy-for-england>

<sup>15</sup> <https://www.gov.uk/government/publications/national-planning-policy-for-waste>

prevention of waste, followed by re-use, then recycling, then other recovery (which can include recovering energy from waste) and finally disposal as a last resort.

- 3.3.15 Enabling the management of waste at higher levels of the waste hierarchy will require actions by a wide range of businesses, other organisations and the public, as well as Herefordshire Council.
- 3.3.16 The MWLP can play a role in moving waste up the hierarchy by encouraging and supporting proposals which facilitate reuse, recycling and recovery and discourage incineration without energy recovery and landfill. However, landfill can play an important role in the reclamation of mineral workings and therefore, in some circumstances, can be justified.
- 3.3.17 Currently, waste management is evolving to deliver the concept of the circular economy. A circular economy is about valuing our products differently and creating a more robust economy in the process. By assessing how we design, make, sell, re-use and recycle products we can determine how to get the maximum value from them, both in use and at the end of their life.<sup>16</sup>
- 3.3.18 The concept of the circular economy is considered to incorporate the key priorities of the waste hierarchy and develop these to provide a positive environment within which new, innovative resource use and waste management solutions can be developed. Much of the circular economy priorities will be achieved outwith the MWLP, for example through improved product design. However, the MWLP can contribute through encouraging development of complementary sectors alongside each other and enabling new facilities to support the retention of waste at its highest value. The MWLP has been developed to help the circular economy thrive in Herefordshire, with policy focussed on keeping resources at their highest value for as long as possible.
- 3.3.19 Self-sufficiency is an important principle, but cannot always be delivered. For example, the minerals evidence base suggests that the county simply does not have all the types of minerals required to support all the development that is likely to occur over the plan period. This limitation can be counterbalanced by optimising those factors that can be influenced. For example, through encouraging innovative solutions to maximise recycled products to replace virgin materials.
- 3.3.20 The management of waste is also not constrained by local authority boundaries. As explained above, Herefordshire Council has a joint contract with Worcestershire County Council. Evidence suggests that there are both imports and exports of waste across the West Midlands region, as well as imports of waste from authorities in Wales. Whilst some of these movements may be part of well-established patterns of waste management, other movements may take place in a more ad hoc way, depending on shorter term commercial and market considerations. There is nothing in legislation or policy that says accepting waste from another authority or region is a bad thing and, indeed, in many cases it may be the best economic and environmental solution.
- 3.3.21 The approach followed by authorities across the West Midlands is to seek to achieve 'equivalent self-sufficiency', which means that the capacity provided in any authority would be

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<sup>16</sup> WRAP, formerly a government agency is now a charity that works with governments, businesses and communities to deliver practical solutions to improve resource efficiency. <http://www.wrap.org.uk/content/how-wrap-supports-circular-economy>

adequate to treat waste that arises in that authority, but allows for the inevitable cross-boundary movements that occur.

- 3.3.22 Similarly, the authorities in the West Midlands seek to deliver the Managed Aggregate Supply System (MASS), the underpinning concept of which is that mineral planning authorities that have adequate resources of aggregates make an appropriate contribution to national as well as local supply, while making due allowance for the need to reduce environmental damage to an acceptable level.

## Local policies and strategies

- 3.3.23 The Core Strategy and Joint Municipal Waste Management Strategy are important context documents for the MWLP; these have been outlined above.
- 3.3.24 The aim of Invest Herefordshire, Herefordshire's Economic Vision<sup>17</sup> is to realise the full economic potential of the county through a coordinated plan. The Strategic Economic Plan<sup>18</sup> (the 'SEP', 2019), published by the Marches Local Enterprise Partnership, seeks to grow the local economy from £8.78 billion 2016 to 23.8 billion by 2038; equivalent to an average annual growth of 2.3% per annum in GVA. The MWLP will help to deliver these key economic priorities, supporting the growth of Herefordshire, and attracting investment to Herefordshire.
- 3.3.25 There are two Areas of Outstanding Natural Beauty (AONB) in Herefordshire: the Malvern Hills; and the Wye Valley. The Malvern Hills AONB Management Plan 2014-2019<sup>19</sup> recognises that the striking scenery in the AONB is ultimately dependent on the rocks that lie beneath the ground surface and has a consequent aim to preserve, promote and wisely use the geodiversity of the AONB. The Wye Valley AONB Management Plan 2015-2020<sup>20</sup> recognises the variety of geological outcrops and rich wildlife habitats, not least as reflected in the presence of separate Special Areas of Conservation. Conserving and, where necessary, enhancing the natural beauty of this unique landscape is a primary theme. These will be revised throughout the lifetime of the MWLP.
- 3.3.26 The Green Infrastructure Strategy<sup>21</sup> (2010) was prepared as part of the evidence base for the Core Strategy. It provides a baseline of green infrastructure assets within Herefordshire and establishes a vision for their future, including producing guidelines for developer and identifying projects to achieve improvements across the county. The MWLP will help to deliver some of these objectives, principally through site reclamation.
- 3.3.27 The Renewable Energy Study<sup>22</sup> (2010) presents baseline data and identifies future renewable and low carbon energy resources. It recognises biomass (incorporating waste wood, municipal waste and agricultural waste) as a potential generation source for heat and electricity and identifies the strategic urban extensions as potentially appropriate locations for combined heat and power facilities and/or district heating networks. The MWLP will help to drive waste recovery facilities to these locations such that a beneficial contribution can be

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<sup>17</sup> [https://www.herefordshire.gov.uk/info/200145/business/754/invest\\_herefordshire/1](https://www.herefordshire.gov.uk/info/200145/business/754/invest_herefordshire/1)

<sup>18</sup> [https://www.marcheslep.org.uk/download/economic\\_plans/strategic-economic-plan-update-2019/The-Marches-LEP-Strategic-Economic-Plan-2019.pdf](https://www.marcheslep.org.uk/download/economic_plans/strategic-economic-plan-update-2019/The-Marches-LEP-Strategic-Economic-Plan-2019.pdf) [30.11.2019@16:19]

<sup>19</sup> <http://www.malvernhillsaonb.org.uk/managing-the-aonb/management-plan/>

<sup>20</sup> <http://www.wyevalleyaonb.org.uk/index.php/about-us/management-and-guidance/management-plan-2015-2020/>

<sup>21</sup> <https://www.herefordshire.gov.uk/greeninfrastructure>

<sup>22</sup> [https://www.herefordshire.gov.uk/downloads/file/1689/renewable\\_energy\\_study](https://www.herefordshire.gov.uk/downloads/file/1689/renewable_energy_study)

made to delivering renewable/low carbon energy to Herefordshire. Taking waste out of landfill is one the most effective ways that the MWLP will contribute to reducing Herefordshire's carbon emissions.

- 3.3.28 The Local Transport Plan 2016-2031<sup>23</sup> was redrafted to reflect the Core Strategy and sets out the council's strategy for supporting economic growth, improving health and wellbeing and reducing the environmental impacts of transport. These principles have been incorporated into the MWLP.
- 3.3.29 Dwr Cymru/Welsh Water's Water Resources Management Plan<sup>24</sup> (2019) provides an overview of water resources across its delivery area, including Herefordshire, presents its approach to management the supply and demand balance and identifies deficit zones. The aim of achieving Good Ecological Status as required by the European Water Framework Directive is a key element of the company's environmental sustainability commitments..
- 3.3.30 In May 2014, the Environment Agency and Natural England published the River Wye SAC Nutrient Management Plan, Evidence base and options appraisal<sup>25</sup> (the River Wye SAC NMP). This identified that phosphate loss to watercourses is a particular issue in rural catchments with a high degree of agricultural activity, such as in the upper River Wye and River Lugg sub-catchments.
- 3.3.31 The Rivers Wye, Lugg, Teme and Clun are identified as Sites of Special Scientific Interest and that the River Wye, including part of the River Lugg, part of the River Clun and Downton Gorge on the River Teme are also designated as Special Areas of Conservation.
- 3.3.32 The water quality of Herefordshire's main rivers and their tributaries is of strategic importance. High levels of phosphates have been identified as a particular problem, with concentration levels exceeding targets along part of the rivers.
- 3.3.33 In November 2018, judgement was handed down from the Court of Justice of the European Union in the case of *Cooperatie Mobilisatie* (Joined Cases C-293/17 and C-294/17, the 'Dutch Case'). The Dutch Case concluded that where a site is failing in its water quality objectives, and is therefore classed as being in an unfavourable condition, there is limited scope for the approval of additional damaging effects and that the future benefit of mitigation measures cannot be relied upon at Appropriate Assessment, where those benefits are uncertain at the time of the assessment.
- 3.3.34 In response to this judgement, and discussion with Natural England, the council concluded that the measures set out in the River Wye SAC NMP could no longer be relied upon and issued three new documents relevant to development that could affect the River Wye SAC. At the time of writing the MWLP, the most recent versions of these documents were published in March 2020 and titled:
- Position Statement – Development in the River Lugg Catchment Area;
  - Guidance Note and Checklist for applicants/agents relating to HRA and planning applications; and

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<sup>23</sup> [https://www.herefordshire.gov.uk/downloads/file/2912/local\\_transport\\_plan\\_2016-2031\\_strategy](https://www.herefordshire.gov.uk/downloads/file/2912/local_transport_plan_2016-2031_strategy)

<sup>24</sup> <https://www.dwrcymru.com/en/My-Water/Water-Resources/Final-Water-Resources-Management-Plan-2019.aspx>

<sup>25</sup> <https://www.gov.uk/government/publications/nutrient-management-plan-river-wye>

- Frequently Asked Questions Relating to the Development in the River Lugg Catchment.

3.3.35 The MWLP incorporates the requirements of these documents in policy designed to help deliver nutrient neutrality or betterment within the River Wye SAC.

### **Future change in policy**

3.3.36 It is recognised that any or all of the policies outlined above will change over the course of the MWLP plan period. To seek to avoid the MWLP going out of alignment with these other policies and strategies, focus has been on the matters of strategic importance, rather than detail.

3.3.37 This section is provided for context only and reference should always be made to the most recently published document.

## **3.4 Issues and Challenges**

3.4.1 The issues and challenges considered to be of most significance are summarised below. These are addressed in more detail in the relevant sections of the MWLP.

### **Minerals**

- Ensuring a continuity of minerals supply to meet the social and economic needs of the county to 2031, taking account of cross-boundary supply challenges.
- Maximising the use of alternative sources of supply of minerals such as secondary and recycled aggregate to reduce the demand for aggregate supply from primary land won minerals.
- Maintaining the required landbanks for sand and gravel and crushed rock, but as far as practicable providing for these outside of the AONB.
- Continuing to provide a supply of building stone for the repair and maintenance of Herefordshire's traditional buildings and for new built development.
- Addressing the potential positive and negative impacts of exploiting unconventional hydrocarbon resources such as shale gas as well as planning for conventional forms of energy minerals.
- Safeguarding important minerals resources and infrastructure from sterilisation by other uses in order to meet local and regional needs by current and future generations.
- Ensuring there are sufficient safeguards in place to minimise the impacts of minerals extraction on communities, the environment and other important assets.
- Providing for a range of enhancements, including ecological services and biodiversity, particularly through reclamation of workings.
- Developing an appropriate locational strategy for minerals supply, reflecting where practicable the likely levels of economic and housing growth and future requirements for minerals.

## **Waste**

- Enabling a circular economy to develop within Herefordshire and considering opportunities to co-locate waste management facilities with complementary uses.
- Promoting the management of waste further up the waste hierarchy i.e. reducing the amount going to landfill and encouraging the re-use, recycling, composting and recovery of waste, as well as supporting an overall reduction in the generation of waste.
- Developing an appropriate locational strategy for new waste management facilities, reflecting where practicable the likely levels of economic and housing growth and future requirements.
- Supporting the delivery of the additional waste management capacity expected to be required, taking account of cross-boundary movements where relevant.
- Incorporating flexibility to reflect uncertainties resulting from waste data limitations and evolving technologies and practice.
- Ensuring there are sufficient safeguards in place to minimise the local impacts of waste management on communities, the environment and other important assets.

## **General**

- Establishing policies that are appropriate across the diverse characteristics of the plan area.
- Developing an appropriate approach to the protection and enhancement of the plan area's important landscapes, and natural and heritage assets, including the two Areas of Outstanding Natural Beauty, numerous Conservation Areas, Sites of Special Scientific Interest, Special Areas of Conservation, Ramsar Sites, Special Protection Areas, Sites of Importance for Nature Conservation, nature reserves and listed buildings and ground and surface water supply and quality; as well as the wide range of non-designated assets which are important for their own intrinsic value.
- Ensuring minerals and waste development contributes to and supports economic growth both within the plan area and nationally, including the employment opportunities that they provide.
- Seeking to reduce carbon emissions, particularly in relation to the transportation of minerals and waste, promoting re-use and recycling of materials and recovery of energy from waste; and providing opportunities to assist in adapting to the effects of climate change, such as reducing flood risk and enhancing habitat connectivity.
- Considering accessibility to major transportation networks and sustainable transport infrastructure, recognising the constraints on opportunities for the movement of minerals or waste.
- Recognising the potential for mutually beneficial links between minerals and waste activities, such as utilising specific waste streams in the sustainable reclamation of mineral workings.
- Ensuring an element of flexibility and adaptive management is built into the MWLP.

## 4. Vision, Objectives and Spatial Strategy

### 4.1 Vision

- 4.1.1 Having a vision and objectives gives direction to the policies of a plan, identifying the priorities to be achieved through policy, and focussing attention on how this should be achieved.
- 4.1.2 The vision and objectives of the MWLP will not stand alone; they are complementary to those set out in the Core Strategy, providing a minerals and waste focus. Both minerals and waste are considered to be important assets within Herefordshire; being resources that should be used sustainably and to their full potential.
- 4.1.3 The Core Strategy vision is focussed on achieving sustainable development that is based upon success across society, economy and the environment; it also seeks to achieve self-reliance and resilience. These are all principles that are readily transferable to minerals and waste.
- 4.1.4 Key policy principles for minerals and waste include the following matters:
- Efficient use of minerals:
    - ensuring mineral resource is not prejudiced by other development; and
    - ensuring mineral is extracted and used efficiently, primarily achieved through the method of working and restoration.
  - Effective minimisation and use of wastes:
    - delivering a circular economy - in which we keep resources for as long as possible, extract the maximum value from them whilst in use, then recover and regenerate products and materials at the end of each service life.
    - achieving the Waste Hierarchy - giving priority to preventing waste in the first place; when waste is created, giving priority to preparing it for re-use, then recycling, then recovery, and last of all disposal (e.g. landfill); and
  - Enabling self-sufficiency:
    - through the provision of infrastructure and development to deliver the resources required, enabling sustainable communities to be developed and avoiding placing unnecessary demands on other authorities; and
    - minerals and waste move freely in the market according to the needs and characteristics of the sectors, Herefordshire will therefore seek to deliver 'equivalent self-sufficiency' by providing opportunities for mineral working and waste management for dealing with the forecast demands within the plan period and contributing to meeting some of the challenges faced by neighbouring authorities.
  - Enabling resilience:
    - minerals development can enable resilience through: flood and water management opportunities; site betterment; and new opportunities for green infrastructure, public open space and recreation.

- waste development can enable resilience through: improved infrastructure provision; delivery of the circular economy; renewable energy generation; improved air quality and climate change measures; improved food and agricultural waste management measures that provide the opportunity to sequester carbon.

4.1.5 The Vision for the MWLP should be ambitious and aspirational, it is the point to be achieved several years from now; it would be a stretch, but ultimately deliverable. Starting with the Core Strategy Vision and making it relevant to minerals and waste, the Vision for the MWLP is:

## Vision

**Over the period to 2041, Herefordshire will deliver sustainable provision of minerals supply and waste management, balancing development needs whilst supporting the county’s communities, protecting and enhancing environmental, heritage and cultural assets and strengthening the local economy.**

**Sustainable provision within Herefordshire will be achieved through: efficient use and effective protection of mineral resources; efficient waste management infrastructure including delivery of the circular economy; taking a strategic approach to achieving high quality reclamation that provides site betterment; and optimising self-sufficiency and resilience.**

## 4.2 Strategic Objectives

4.2.1 The Core Strategy has 13 strategic objectives. These have been the starting point for the objectives of the MWLP, which have been developed through reference to national policy, local priorities and responses from consultation.

4.2.2 Table 1 presents the objectives developed for the MWLP.

**Table 1 MWLP objectives**

Objectives		Policies	
		Core Strategy	MWLP
<b>Social Progress</b>			
1	To enable minerals and waste development to make an appropriate contribution to improve the health, well-being and quality of life of residents, through best practice operations, open space provision, educational and cultural information, green infrastructure and delivery of strategic, landscape scale site reclamation.	OS1, OS2, OS3, SD1	SP2, SP4
2	To prioritise the long-term conservation of primary minerals through enabling provision of sustainable alternatives, effective use of mineral reserves, and promoting efficient use of minerals in new development.	SD1	SP1
3	To safeguard appropriate mineral and waste resources within Herefordshire and the associated transport infrastructure for the future.	SD1	M1, M2, W1

Objectives		Policies	
		Core Strategy	MWLP
4	To enable the management of waste in accordance with the waste hierarchy and to deliver a circular economy within Herefordshire.	SD1, SD2, SD3, SD4,	SP1, W1, W2, W3, W5, W6, W7
<b>Economic Prosperity</b>			
5	To optimise the contribution that mineral working and waste management makes to Herefordshire's economy as land-based industries, balanced with effective protection of people, places and businesses from adverse impacts.	E1, SD1, SD3, SD2, SD3, SD4, LD1, LD2, LD3, LD4, ID1	ALL
6	To plan for the steady and sustainable supply of minerals present within Herefordshire, to contribute to the county's economic growth, development and local distinctiveness and to make a reasonable contribution to the MASS.	E1, SD1	M1, M2, M3, M4, M5,
7	To deliver new waste management infrastructure to enable Herefordshire to achieve equivalent self-sufficiency and to contribute to the county's economic growth, innovation development and energy demands.	E1, SD1, SD2	W1, W2, W3, W4, W5, W6, W7
8	To reduce the need to travel and lessen the harmful impacts from traffic growth, promoting the use of alternatives to road transport and ensuring that new development is served by suitable transport networks.	SS1, SS2, SS4, MT1	SP3
<b>Environmental Quality</b>			
9	To identify suitable locations for minerals and waste development.	SS1, SS4, SS5	M3, M4, M5, W3, W4, W5, W6
10	To achieve sustainable communities and protect the environment by delivering well-designed and well-operated minerals and waste development that use land efficiently, reinforce local distinctiveness, and are supported by the necessary infrastructure, including green infrastructure.	SD1, SD3, SD4, LD1, LD2, LD3, ID1	ALL
11	To address the causes and impacts of climate change relating to minerals and waste development activity, including using opportunities arising from minerals and waste operations and reclamation activity to mitigate and adapt to climate change and to leave a positive legacy.	SS7, SD1, SD2, SD3, SD4, LD3	SP1, SP3, SP4, M1, M6, W1, W3, W7
12	To conserve, promote, utilise and enjoy our natural, built, heritage and cultural assets for the fullest benefits to the whole community, by: safeguarding the county's current stock of valued heritage and significant environmental assets from loss and damage, and seeking enhancement; reversing negative trends; ensuring good quality landscape design and condition; delivering site betterment; and appropriately managing future assets.	SS6, SS7, LD1, LD2, LD3, LD4	SP2, SP3, SP4 and the key development criteria

## 4.3 Spatial Strategy

- 4.3.1 The overarching spatial strategy of the Core Strategy is relevant to the MWLP and forms the backbone to its spatial strategy. Consequently, waste development will be focussed at Hereford, Leominster and the market towns. However, it is recognised that some waste management development will likely be more dispersed; principally this is to deliver a locally identified demand such as agricultural or construction and demolition waste management. In line with the spatial strategy, such development will not be promoted in policy but may be acceptable on a specific site basis.
- 4.3.2 Minerals extraction can only take place where the mineral occurs; consequently, this urban focus cannot generally be followed for minerals development. The review of the underlying geology and natural and built environment of Herefordshire has identified both key areas of search for minerals development and those areas that should be constrained from future development. Not surprisingly, these areas generally follow the approach to development set out in both the NPPF and the Core Strategy, such as giving great weight to conserving landscape and scenic beauty in Areas of Outstanding Natural Beauty.
- 4.3.3 Sand and gravel working is to be focussed within the large expanse of reserve that wraps around the northern and eastern sides of Hereford and at Shobdon, to the north-west of Hereford. These reserves are well located to supply aggregate for the growth proposed in Hereford and having two areas brings resilience to supply.
- 4.3.4 Focusing future sand and gravel workings within these areas provides the industry with access to a large area of reserve, but means that a proliferation of minerals development across the county can be avoided. Optimal extraction can be promoted at these areas before new reserves are opened.
- 4.3.5 Limestone working will be preferred within the reserves located to the north of the county and to the east of Hereford. The two areas provide resilience to supply and provide more local supply potential to the main settlements of Herefordshire.
- 4.3.6 No preferred areas of search are identified for sandstone, clay, coal or gas. Sandstone is worked as low-key development in small delves; the potential for harm is limited. There is little evidence to suggest that clay, coal or gas will be exploited over the plan period.
- 4.3.7 The Key Diagram is at Figure 6 presenting the spatial strategy for minerals and waste development in Herefordshire.

**INSERT Figure 6 Key Diagram**

**[refer to PDF]**

## 5. Strategic Policy and General Principles

### 5.1 Principles

- 5.1.1 It is a basic tenet of planning law that any adopted development plan must be read as a whole; development proposals will be considered in relation to all relevant policies. In addition, proposals for minerals or waste development must be assessed not just in relation to the MWLP, but also against all parts of the development plan.
- 5.1.2 Under the Planning and Compulsory Purchase Act 2004 the development plan for proposals in Herefordshire comprises:
- the Core Strategy;
  - the MWLP; and
  - other documents that comprise the Herefordshire Local Plan as relevant to the development proposed.
- 5.1.3 Some Core Strategy policies are directly relevant to minerals and waste development. They are necessarily written at a strategic level of detail and their interpretation for minerals and waste development can be enhanced through further explanation, which is provided in this section of the MWLP.
- 5.1.4 This section of the MWLP also presents policy of a strategic nature specifically prepared for minerals and waste development.
- 5.1.5 Mineral working and waste management may also require an Environmental Permit, gained from the Environment Agency, the application for which will also include consideration of potential impacts from the operations of such development. In determining planning applications, the council will focus on whether the development itself is an acceptable use of the land, and the impact of the use, rather than the control of processes or emissions themselves, where these are subject to approval under pollution control regimes.
- 5.1.6 Any new dewatering activity will require an abstraction licence, which is gained from the Environment Agency.
- 5.1.7 It is generally beneficial to submit the Environmental Permit and/or abstraction licences application(s) at the same time as the planning application, so that all the relevant details can be understood by the determining authorities, consultees and local communities. This approach is strongly encouraged by Herefordshire Council .

### 5.2 Sustainable Development – Core Strategy policy SS1

- 5.2.1 Minerals and waste developments can make a positive contribution to each of the three objectives of sustainable development:
- social – for example through job creation, the supply of virgin and secondary materials required for building houses, and providing outdoor public access;
  - economic – for example through inward investment, underpinning communities with essential infrastructure, and supporting growth and innovation, such as delivery of the circular economy; and

- environmental – for example through avoided landfill, the provision of renewable/low carbon energy or a new priority habitat.

5.2.2 It can also cause harm:

- social – for example through disrupting access to the countryside or creating a poor quality built environment;
- economic – for example affecting tourism and agriculture (two of Herefordshire’s key industries) through development in the wrong place; and
- environmental – for example through adverse landscape or cultural impacts or disturbance to habitats.

5.2.3 Many minerals and waste developments will be subject to the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as may be amended) but not all. As identified in the Core Strategy, a sufficient level of information should be submitted with each planning application to enable the council to determine the effect.

5.2.4 Planning applications should also consider the potential for cumulative impacts to occur. It may be that impacts from an individual proposal would be acceptable, but that the effects of one or more existing or planned developments in the same vicinity could, cumulatively, have impacts that would not be acceptable, even after mitigation. Opportunities to maximise positive impacts should be identified and implemented.

5.2.5 Whilst they can bring local benefit, minerals and waste development can be a source of concern to local communities (people, places or business). The potential for both beneficial and adverse impacts will vary according to the nature, size, location and duration of the development, and can change over its lifetime. Taking local circumstances into account, to consider the potential for effect on people, businesses and the natural environment, will enable minerals and waste developments to respond to the different opportunities for achieving sustainable development.

5.2.6 Early consultation will enable good design throughout the life of the site to be enhanced, especially for larger scale proposals. It is expected that developers will consult with local communities and other stakeholders on proposals for mineral development before the planning application is submitted. Positive consideration shall be given to development proposals that demonstrably take account of a local community’s response.

## 5.3 Movement and transportation

### Core Strategy policies SS4 and MT1

5.3.1 A large percentage of the vehicle movements associated with minerals and waste development are heavy goods vehicles, which are likely to be significant in volume. It may not always be possible to gain access directly to the strategic highway network from a site, but the proposed route should avoid local roads and settlements wherever feasible.

5.3.2 Any required improvements, alterations or agreed routes may be secured through the use of planning obligations, as set out in Core Strategy policy ID1.

5.3.3 Larger scale development, including new or extended mineral workings and strategic waste management facilities, will operate over a relatively long period of time, such that significant transport effects might be felt for many years. Such development proposals should

demonstrate how green infrastructure would be incorporated in the working schemes. The following examples could be appropriate:

1. site access arrangements, or routes of conveyors or pipelines being:
    - a. designed/laid out to avoid damage to sensitive habitats or heritage assets;
    - b. designed/laid out to provide cycle links or footpaths upon reclamation of the site;
    - c. landscaped and/or enhanced to promote biodiversity; and
    - d. drained using SuDs methods;
  2. providing nature reserves and/or floristically rich roadside verges and sidings;
  3. implementing flood compensation measures or balancing ponds within an ecological framework.
- 5.3.4 Appropriate planting enables carbon sequestration, air pollutant absorption, aesthetic improvement and increased biodiversity and wildlife habitat. Wetland areas, used to store and slow down storm water and run-off, can also absorb carbon dioxide and reduce the pollutant load in road runoff. Such elements can provide a contribution to offsetting carbon emissions caused by minerals and waste related traffic, and such measures should be included as appropriate in development proposals. These elements may be acceptably located off-site.
- 5.3.5 Considering the whole life of the site at the application stage will enable a sustainable transport strategy to be put in place at the earliest opportunity. This approach can influence the overall design of the site, for example identifying appropriate locations for footpaths or parking areas for the proposed after-use that can be incorporated as the site is developed.

## **5.4 Environmental Quality and Local Distinctiveness – Core Strategy policies SS6; LD1; LD2; LD3; and LD4**

- 5.4.1 One of Herefordshire's elements of local distinctiveness is the extent of dark sky across the county. Analysis undertaken by the CRPE identifies Herefordshire as the third darkest county with 60% of the county lying in the darkest category and 88% of the county when combined with the next darkest category.<sup>26</sup> This matter should be considered in preparing development proposals, including a commitment that lighting will be kept to the minimum necessary to ensure safe working on site.
- 5.4.2 Good design requires full consideration of the surrounding environment, its constraints and the opportunities for enhancement, including change for the better. A comprehensive approach, addressing exploration, construction, operation, buildings and machinery and people and place, across the lifetime of the site and through its aftercare, will enable sustainable development to be realised.
- 5.4.3 A comprehensive approach will make good use of a wide range of reference documents, many of which are signposted within this MWLP. One that will be relevant across a number of development proposals is 'The ecological effects of air pollution from road transport: an updated review', as prepared for Natural England (reference NECR199).

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<sup>26</sup> [https://www.nightblight.cpre.org.uk/images/resources/Night\\_Blight\\_cpre.pdf](https://www.nightblight.cpre.org.uk/images/resources/Night_Blight_cpre.pdf)

- 5.4.4 The consideration of cumulative or in-combination effects can be a legal requirement, for example as in Environmental Impact and Habitats Regulations Assessments. Even where this level of assessment is not required, the council expects planning applications to include a proportionate consideration of cumulative impacts. Appropriate measures to optimise benefits and to avoid or mitigate harm should be made clear within the planning application.
- 5.4.5 All applications will be expected to incorporate robust measures to ensure that the proposed development does not cause an unacceptable adverse impact on either the environment or local communities, many of which can be overcome by implementing standard measures, such as:
- limiting working hours;
  - locating plant, machinery and haulage routes away from sensitive receptors;
  - advanced tree planting;
  - sensitive lighting design;
  - phasing so the development moves away from sensitive receptors;
  - acoustic screening measures;
  - enclosing plant and machinery;
  - plant being fitted with silencers and white noise alarms;
  - sheeting of lorries;
  - cleaning of lorry wheels before they exit the site;
  - good maintenance of bunds and stockpiles;
  - avoiding or minimising the use of blasting explosives; and
  - careful design of external lighting to confine its influence to the point of use.

## **Landscape and townscape – Core Strategy policy LD1**

- 5.4.6 Due to their potential size, and location, minerals and waste sites have the potential to make landscape scale change; a term commonly used to refer to action that covers a large spatial scale, usually addressing a range of ecosystem processes, conservation objectives and land uses.
- 5.4.7 Landscape scale conservation is characterised by the pursuit of multiple benefits across a defined area (e.g. water quality, biodiversity and access). The best examples also make links to wider economic and social priorities, where enhancing nature can provide benefits to the local economy and quality of life. There are strong links between the landscape scale approach and an 'ecosystems approach', which encourages an integrated approach to land management, considering the costs and benefits of land use decisions, and pursuing those that minimise risks and maximise opportunities for people, for nature and for the economy.<sup>27</sup>

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<sup>27</sup> From, The Natural Choice, Natural Environment White Paper, 2011

5.4.8 This might include measures such as:

- protecting, enhancing or creating views;
- interpretation boards at publicly accessible areas to enable greater understanding of the landscape, local/historic landscape character and influence of the underlying geology;
- designing waterbodies to be of a type, shape and scale that fits with the local landscape character and optimises biodiversity gains;
- protecting or re-instating local/historic landscape features such as hedgerows or woodland; and
- ensuring any planting is appropriate to the landscape character, using locally present species to optimise biodiversity gains.

5.4.9 Developers should refer to the Landscape Character Assessment Supplementary Planning Guidance (2004)<sup>28</sup>.

### **Biodiversity and geodiversity – Core Strategy policy LD2**

5.4.10 A management strategy associated with a minerals or waste development may include a buffer within the development site to protect vulnerable features. The size and shape of the buffer will be defined on a site-by-site basis dependent on the attributes of the feature. Conversely, where greater benefit would be realised, for example through improved connectivity between habitats, it may be appropriate to work close to identified features.

5.4.11 The Core Strategy recognises that its soils are an essential element of the geodiversity of Herefordshire. The soils and geodiversity of Herefordshire underpin the agriculture and tourism industries. Recognising that the winning and working of mineral in particular is likely to take place on greenfield sites, it is appropriate to consider soil quality in more detail.

5.4.12 Forest Research<sup>29</sup> an organisation established for forestry related research advises that '*soil quality*' encompasses the physical, chemical and biological properties of soil.' Together, each of these properties determines the ability of the soil to perform a range of beneficial functions:

*'Nutrient cycling – soil provides a habitat for the soil invertebrate and microbial communities required to break down organic materials and release the nutrients necessary to sustain growth. If the full range of invertebrates and microbes necessary to carry out these processes cannot function, plants and higher organisms will be unable to thrive within the ecosystem.*

*Water balance – soil acts as a store for water. A healthy soil will retain the water necessary to support the ecosystem, allowing infiltration of excess water to groundwater and preventing surface run-off and waterlogging.*

*Physical structure – soil will provide the physical medium to support vegetation, allowing adequate root development and the medium in which to hold water.*

<sup>28</sup>

[https://www.herefordshire.gov.uk/download/downloads/id/2069/landscape\\_character\\_assessment\\_for\\_herefordshire.pdf](https://www.herefordshire.gov.uk/download/downloads/id/2069/landscape_character_assessment_for_herefordshire.pdf)

<sup>29</sup> <https://www.forestryresearch.gov.uk/>

*Pollution mitigation – soil acts as a buffer to pollution entering the system. The organic matter and clay constituents of soil allow pollutants to be immobilised within the system, reducing the risk of them being transferred to water bodies, vegetation and soil fauna. ’*

- 5.4.13 The Agricultural Land Classification provides a method for assessing the quality of farmland to enable sustainable choices to be made about its future use within the planning system. The system classifies land into five grades with the 'best and most versatile land' defined as grades 1, 2 and 3a. Development proposals should prioritise the use of areas of poorer quality land, especially where development of agricultural land is demonstrated to be necessary.
- 5.4.14 Planning applications should consider the following matters in demonstrating that mineral development on the best and most versatile agricultural land is necessary:
- whether there is an available alternative;
  - whether the need for development outweighs the adverse impact upon agricultural land quality;
  - whether proposals will affect the long term agricultural potential of the land or soils;
  - whether alternative land of lower agricultural value has considerations which outweigh the adverse impact upon agricultural land quality.
- 5.4.15 Protection of the original soils removed prior to mineral extraction should always be a priority. The stripping and storage of soils for reuse and restoration can lead to degradation, although best practice in soil management can minimise the impacts of this damage. Planning applications should demonstrate how best practice measures for soil handling and storage will be achieved on site, throughout the life of the development. Reference may be made to guidance published by Defra, including: 'Construction Code of Practice for the Sustainable Use of Soils on Construction Sites'; and the series 'Good Practice Guide for Handling Soils'.
- 5.4.16 Reclamation schemes should incorporate remediation activities and after-use proposals that optimise the storage and use of best and most versatile soils. It is not necessary for high quality land to be restored to agricultural use, but restoration and land use following mineral development should safeguard a site's long-term agricultural potential. Alternatively, it may be more beneficial for an area previously identified as best and most versatile agricultural land to be restored to another purpose, if this enables improved reclamation elsewhere on site. Reference should be made to 'Guidance for the Successful Reclamation of Mineral and Waste Sites', Defra (2004).
- 5.4.17 The minerals and waste industries present significant opportunities to provide a net gain in biodiversity and to improve the coherence and resilience of habitats and ecological networks, enabling wildlife to respond to a range of environmental pressures. Agriculture and biodiversity enhancement need not be incompatible land uses. A balance should be achieved between current and future agricultural need, site-specific biodiversity value and/or potential, and other considerations, including flood alleviation. Well-designed agricultural restoration can still deliver significant benefits for biodiversity in the form of hedgerows, lakes and ponds, habitat features and small woodlands
- 5.4.18 Site reclamation will be expected to contribute, at a landscape scale, to achieving nationally identified habitats of principal importance, taking account of the attributes of the site and of nearby areas, supporting coherent and resilient networks of habitats that link the site with

relevant ecological features in the wider landscape. Water features in agricultural reclamation can contribute to agricultural irrigation, biodiversity, flood alleviation and storage, and landscape enhancement in a multi-functional way, and should all be considered.

5.4.19 Minerals and waste development proposals will be expected to avoid unacceptable impacts on geodiversity value. Planning applications should demonstrate how the proposed development will deliver objectives of UK and Herefordshire Geodiversity Action Plans, such that geodiversity features are successfully identified, investigated and incorporated with green infrastructure into reclamation and after-use, through measures such as:

- providing safe public access to geological features, whilst avoiding damage to them;
- involving geologists, geodiversity groups and museums in advising on, recording and sampling geodiversity at all stages from pre-application through to reclamation and aftercare;
- incorporating geodiversity considerations into site management plans to protect and maintain exposures and to support access at appropriate intervals for research and recording purposes, e.g. limited excavation of organic rich deposits that become exposed at the base of river gravels;
- providing information to support understanding, interpretation and enjoyment of the features;
- creating links beyond the site boundary into the wider landscape.

5.4.20 Mineral sites offer opportunities to enhance scientific and cultural understanding of geodiversity by revealing, recording or retaining features of geological conservation interest. Sand and gravel deposits cannot be preserved except by leaving parts of the site untouched, but features of interest, such as changes in lithology, discovery of conspicuous vertebrate remains or organic-rich fossil beds can be recognised and exploited as extraction progresses. Planned investigations of lithology might include collecting samples for dating purposes and material for education/interpretative purposes.

5.4.21 The sand and gravel sites at Shobdon and Upper Lyde are Local Geological Sites designated for their glacial and glacial-fluvial features respectively, whilst sub-alluvial gravels have been extracted at Wellington that may hold clues to the changing drainage patterns in Herefordshire in glacial times. The Silurian rocks obtained from Perton and Leinthall Quarries are rich sources of fossils.

5.4.22 There is potential for mineral extraction across Herefordshire, even in undesignated sites, to reveal important features. Consequently, a detailed approach to mitigate impact on geodiversity will be required for all development proposals.

### **Green infrastructure – Core Strategy policy LD3**

5.4.23 As recognised in the Core Strategy, green infrastructure is a practical way to consider sustainable development. The preferred areas of search for minerals development and the spatial strategy for waste development reflect the priority areas of the green infrastructure concept map (Green Infrastructure Strategy, Figure 4-3<sup>30</sup>). This overlap means that minerals

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[https://www.herefordshire.gov.uk/download/downloads/id/2063/herfordshire\\_green\\_infrastructure\\_strategy.pdf](https://www.herefordshire.gov.uk/download/downloads/id/2063/herfordshire_green_infrastructure_strategy.pdf)

and waste development have a good reference and potential to deliver integrated benefits on site and at a landscape scale.

- 5.4.24 Incorporating green infrastructure objectives will enable proposals to make a positive contribution to Herefordshire's local character and distinctiveness, recognising the wider social, cultural and environmental benefits that multi-disciplined, integrated development can bring.
- 5.4.25 The delivery of green infrastructure can underpin the realisation of net gain from minerals and waste operations. This can be achieved at any time during the life of the site and should not be restricted to reclamation or after-use. The council will expect all opportunities for green infrastructure to be optimised and delivered throughout the life of the development proposed.

## **Historic environment and heritage assets – Core Strategy policy LD4**

- 5.4.26 Minerals and waste development proposals should take account of the significance of heritage assets (whether above or below ground) and include a clear strategy for enhancing the historic environment character. Wet working of mineral sites may not be a viable option where there are potential archaeological assets, as this can significantly restrict the delivery of appropriate mitigation measures.
- 5.4.27 Site reclamation and after-use may enable improved access to historic sites, enhance the setting of historic features (such as water meadows) reinstate historic features such as hedgerows, or provide on-site interpretation of the site and its history in association with publicly accessible areas.
- 5.4.28 The Herefordshire County Archaeology and Minerals Resource Assessment<sup>31</sup> (2014) confirms that the county has a wealth of archaeological assets. It is to be expected that more will be revealed with extended mineral working. There are well established procedures for the investigation and evaluation of archaeological assets that have been practiced to good effect within Herefordshire. In accordance with Core Strategy policy LD4 and requirements of the National Planning Policy Framework, these will continue to be implemented.
- 5.4.29 Historic England has published a number of documents useful to understand the significance of heritage assets and practical advice on how to incorporate the historic environment into sustainable mineral working. One such document is titled 'Mineral Extraction and Archaeology: A Practice Guide'.

## **5.5 Addressing Climate Change**

### **Core Strategy policy SS7**

- 5.5.1 The built form of waste management facilities may more obviously align with the expectations of policy SS7, but minerals working can also make a significant impact.
- 5.5.2 Not least, minerals should be extracted efficiently. Development should propose to extract as much of the mineral as possible, whilst avoiding unacceptable harm and ensuring that a high quality of reclamation and afteruse can be achieved.

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<sup>31</sup> The report is available from the Archaeological Data Service, along with other documents reporting on the archaeology of Herefordshire.

<https://archaeologydataservice.ac.uk/library/browse/organisationDetails.xhtml?organisationId=400>

- 5.5.3 The winning and working of minerals, and some waste processing operations, is resource intensive. Reduced energy and water usage can be achieved through different ways, including good site design to reduce transport movements and circulating water within operations to reduce overall demand.
- 5.5.4 Buildings and plant can be designed to reduce resource requirements and consequent carbon emissions, for example through the use of ultra-low emission vehicles (including non-fossil fuels and electric vehicles) and renewable energy supply (including solar panels, open-loop ground source or surface water source heating and cooling systems). The council will expect increased resource efficiency measures in plant, buildings and operations in order to achieve climate change priorities.
- 5.5.5 Reclamation of sites also provides opportunities, for example in assisting ecological networks to be more resilient, enabling the movement of wildlife as it adapts to a changing climate. The after-use of a site can also deliver objectives to address climate change, for example creating a new habitat that also provides flood storage to alleviate risks elsewhere.

## **Resource Management, MWLP policy SP1**

- 5.5.6 Spatial planning goes beyond traditional land use planning to bring together and integrate policies for the development and use of land with other policies and programmes which influence the nature of places and how they function. This will include policies that can impact on land use by influencing the demands on, or needs for, development, but which are not capable of being delivered solely or mainly through the granting or refusal of planning permission and which may be implemented by other means.
- 5.5.7 The Core Strategy proposes substantial new development that should be delivered sustainably. Minerals and waste are key resources, their use and management affecting how sustainably the new development will be delivered. Sustainable design principles make efficient use of resource through location, design, positioning, specification and sourcing of materials, as well as improving the quality of development and enhancing their environmental performance.
- 5.5.8 These principles, and policy SP1, is not limited to new build projects. It applies to all development including substantial refurbishment projects.

### *Waste prevention*

- 5.5.9 Waste prevention has clear links to spatial planning policy. Examples of waste prevention include buying goods without packaging, purchasing only the materials/services required and subsequently disposing of less waste. Longer life products reduce the need for replacements, which create waste in their own production. If communities are successful in reducing the amount of waste produced, then the need for additional waste management facilities can be reduced.
- 5.5.10 Maintaining engagement with local authorities, businesses and community groups enables each sector of the community to act together, raising levels of awareness and understanding of waste issues. These initiatives can help inform investment and consumer decisions, helping to deliver the circular economy.
- 5.5.11 The MWLP can contribute positively through the promotion of waste prevention and reuse in new, waste and non-waste related, development, and in this way enable achievement of the circular economy in Herefordshire.

- 5.5.12 A circular economy is one where materials are retained in use at their highest value for as long as possible and are then re-used or recycled, leaving a minimum of residual waste. Herefordshire seeks to achieve a circular economy as this will save resources, increase the resource efficiency of the county's businesses, and help to reduce carbon emissions. The successful implementation of circular economy principles will help to reduce the volume of waste that Herefordshire produces. Waste management facilities are also an element of the circular economy, so long as the materials and/or energy recovered are put to beneficial uses.
- 5.5.13 Reuse has been practised throughout society for a long time and diverts materials from entering a waste stream. In recent years, the domestic reuse market has moved from the second-hand furniture/house clearance shops and returnable bottles, to charity shops and initiatives set up as small businesses. Car boot and jumble sales are probably the most common and well known form of waste reuse. Household Waste Recycling Centres and web-based exchange sites also provide opportunities for reuse. Exchange schemes could be developed on a multi-sector basis to encourage and increase reuse.

### *Resource audit*

- 5.5.14 New development requires significant volumes of construction materials, and the facilities provided on site can affect how it performs through its operational lifetime. The planning system has a role to play encouraging the use of secondary or recycled construction materials and preventing waste generated in construction and redevelopment projects.
- 5.5.15 Any application for major development, defined as residential development of 10 units or more or 0.5ha or more, and all other development of 1ha or more will be required to be accompanied by a Resource Audit.
- 5.5.16 Resource Audits will identify (quantifying where possible): the approach to materials used in construction; the quantity of construction aggregates to be used and clarity of whether these are raw, secondary or recycled; how waste will be minimised; what waste will be generated from the development and how this will be managed to promote the recovery of materials and/or energy from it. Finally, the Resource Audit will set out end of life considerations for the materials used in the development, including the ease of recovery of demolition materials to demonstrate how these might be put to beneficial use after the development is no longer required.
- 5.5.17 Such documents are expected to have an increasing role demonstrating how new development is delivered and managed in a sustainable manner; explicitly setting out how the use of raw materials will be minimised, how waste created can be reused, with priority given to the reuse of materials on site, and how the long term management of the development will contribute to delivering the circular economy. Smaller applications, accompanied by Design and Access Statements, should include commentary on waste prevention and management measures.
- 5.5.18 All development should be designed to increase the potential for recycling waste. The details would be negotiated as relevant to each development proposal, but examples include new residential development required to provide space for facilities for segregating and recycling waste, or to contribute (financially or through the provision of land) towards a household waste recycling centre or composting facility. Industrial, commercial and retail development may be required to provide more substantial waste segregation and collection facilities as part of the built development.

## **Policy SP1: Resource Management**

**The use of minerals and waste resources will be directed to contribute positively to addressing climate change through:**

- 1. Herefordshire Council encouraging waste prevention by:**
    - a. promoting a more circular economy that improves resource efficiency and innovation to keep products and materials at their highest value for as long as possible;**
    - b. maintaining engagement with businesses, community groups, and the general public to raise levels of awareness and understanding of waste issues;**
    - c. working in partnership with other public bodies to ensure that waste prevention and the circular economy is addressed in all contracts for works and services; and**
    - d. leading by example in its activities.**
  - 2. the provision of a Resource Audit that identifies the quantum required and approach to sourcing construction materials, the amount and type of waste that is expected to be produced by the development and end of life considerations for the development materials. The Resource Audit will set out how waste will be minimised and how it will be managed, both during the construction phase and once it is in use, in order to meet the strategic objective of driving waste management up the waste hierarchy. Information appropriate to the planning application shall be provided on the following matters:**
    - a. the amount and type of construction aggregates required and their likely source;**
    - b. the steps to be taken to minimise the use of raw materials (including hazardous materials) in the construction phase, through sustainable design and the use of recycled or reprocessed materials;**
    - c. the steps to be taken to reduce, reuse and recycle waste (including hazardous wastes) that is produced through the construction phase;**
    - d. the type and volume of waste that the development will generate (both through the construction and operational phases);**
    - e. on-site waste recycling facilities to be provided (both through the construction and operational phases);**
    - f. the steps to be taken to ensure the maximum diversion of waste from landfill (through recycling, composting and recovery) once the development is operational; and**
    - g. end of life considerations for the materials used in the development.**
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## 5.6 Access to open space and recreation from minerals and waste development

### Core Strategy policies OS1 to OS3

- 5.6.1 As recognised in the Core Strategy, open spaces and areas of outdoor recreation are enjoyed across Herefordshire and are an important element to people's quality of life. Mineral workings, waste sites and restored sites have an important contribution to make to the protection and enhancement of outdoor public access and recreation resources within Herefordshire.
- 5.6.2 Particularly for mineral sites, due to their location, they also have the potential to affect public rights of way. Consequently, policy SP2 is relevant to minerals and waste development, in addition to Core Strategy policies OS1 to OS3.

### Access to open space, MWLP policy SP2

- 5.6.3 Policy SP2 applies to all public rights of way and open spaces, whether definitive or permissive. Recreation assets will be expected to be natural or semi-natural, with a minimum of buildings and infrastructure; they might include community ownership areas (for example orchard or nature reserve) or mountain bike trails. Any potential for a greater level of built development is likely to require separate planning permission. The focus of policy SP2 is on providing outdoor facilities from mineral workings and waste sites that benefit both wildlife and local communities.
- 5.6.4 Public access and recreation need not be restricted to the restoration phase and, mindful of the need for safety, should be made available at the earliest opportunity. Incorporating green infrastructure, proposals might include:
- simply making open spaces available to the public, which might be seeded and managed for wildlife and pollinator species;
  - providing access to archaeological, geodiversity, or heritage assets, either across the site or as features along a route;
  - improving the route, surface or accessibility of rights of way or adding links to existing rights of way networks;
  - making outdoor areas accessible and engaging for people with disabilities;
  - providing information about the area and its significance; or
  - through providing new recreational assets that respect the surrounding environment.
- 5.6.5 Conversely, public access may not be appropriate, or may need to be restricted in some areas, for example due to safety hazards or to protect a particular habitat. These areas, and the reasons why public access is not appropriate, or needs to be restricted, should be made clear within the planning application.
- 5.6.6 The need to access mineral reserve, or deposit restoration material, and to implement appropriate safety measures may result in footpaths being temporarily or permanently diverted or, in exceptional circumstances, closed. Temporary diversions should follow the shortest route that delivers a suitable replacement and only be in place for the shortest duration required, which may not be the lifetime of the consent.

- 5.6.7 Footpaths are rooted in an historical and landscape context. A permanent diversion may sever important cultural links, but also brings the opportunity to improve a route that has been adversely affected, for example by flooding or a changed view. Permanent diversions should be well designed, reflecting the local cultural and landscape context, to result in an enhancement to the rights of way network within Herefordshire. Enhancement can be achieved through improvements to the view from, surface of and/or route of the right of way, including making provision for disabled people.
- 5.6.8 Any closure of the right of way network, or existing open space, should be avoided. Where it is necessary, the council will expect compensatory provision to be made proportionate to the scale of the closure. This can include the provision of new or improved access or recreation facilities located off site. The council is clear that development should have the smallest impact as practicable and enhancement will be sought at every reasonable opportunity.

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## **Policy SP2 Access to open space and recreation from minerals and waste development**

- 1. Planning permission will be granted for mineral development proposals that optimise opportunities to improve public access to open spaces, integrating green infrastructure as appropriate.**
- 2. Development that affects a right of way or existing open space will only be permitted where it is demonstrated that:**
  - a. any temporary diversion is designed to be for as short a distance and duration as practicable;**
  - b. any permanent diversion is designed to achieve an enhanced route over that which was previously available; and**
  - c. any closure occurs only in exceptional circumstances and compensatory provision is made.**

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## **5.7 Sustainable design and energy efficiency – Core Strategy policy SD1**

- 5.7.1 Policy SD1 applies to minerals and waste development. This section of the MWLP supplements the Core Strategy by considering topics that are more specialised in relation to minerals and waste development.

### **Aviation safety**

- 5.7.2 Modern waste management operations and the process of mineral extraction itself are unlikely to attract bird populations. On site infrastructure, such as settlement lagoons or open water bodies and reclamation to a nature reserve all have the potential to attract birds. Bird strike can cause significant damage to civil aviation and military aircraft. Most bird strikes occur at low altitudes affecting either low flying aircraft or aircraft taking-off or approaching an airfield.
- 5.7.3 Proposals for site working, restoration and after-use will be required to consider aviation safety in demonstrating the appropriateness of water management and site reclamation schemes.

- 5.7.4 The Mineral Products Association document titled 'Mineral Sites and Bird Strike Hazard and Risk: Practice Guide for Mineral Development and Restoration within Aerodrome Safeguarding Areas', revised version published in May 2015, should be referenced.

## **Dust**

- 5.7.5 Dust can arise from: mineral winning and working processes; the passage of vehicles over unpaved ground and dirt and debris tracked onto the public highway; handling dusty materials; mineral, soils and overburden movement; stockpiles and dusty surfaces.
- 5.7.6 If not properly controlled at source, dust can cause nuisance to people and businesses, and harm through deposition on property and farmland.
- 5.7.7 A dust assessment will be required where fugitive dust emissions are likely to cause a nuisance; atmospheric dispersion modelling may be required to determine whether there is a risk of health effects due to dust emissions. A separate dust assessment is not required where dust is addressed within an air quality assessment and/or health impact assessment as appropriate.
- 5.7.8 Reference should be made to appropriate advice, including that produced by the Institute of Air Quality Management: Guidance on the Assessment of Minerals Dust Impacts for Planning, May 2016; Guidance on the assessment of dust from demolition and constructions; Guidance on the Assessment of the Impacts of Construction on Air Quality and the Determination of their Significance, December 2011; and Guidance on Air Quality Monitoring in the Vicinity of Demolition and Construction Sites.

## **Land instability**

- 5.7.9 Proposals should demonstrate the measures to be used to ensure that quarry sides and slopes are stable and will not result in landslip, either within the site or on adjoining land, both during and after the lifetime of the development. Waste stockpiles and mineral waste tips should be constructed and accessed so that they are unlikely to give rise to danger through instability; using suitable vegetation can assist with stability and bring environmental benefit.
- 5.7.10 Unsafe ground conditions can be caused by water movement including changes in groundwater levels through de-watering, and increases in flow velocity at times of flood, which can cause scouring of pit sides, breaches of flood protection measures or erode banks of restored lakes. Good water management will integrate safety and environmental objectives.
- 5.7.11 Where there is any likelihood of instability, a stability report should be provided setting out measures appropriate to ensure the continued stability and integrity of infrastructure adjoining or close to the development site. Ensuring stability may require leaving unworked areas or margins within or around the site.
- 5.7.12 Overburden, mineral waste materials, and any other material or waste to be used in restoration, should be placed within the site to ensure that differential settlement does not occur, which could lead to instability in the future.
- 5.7.13 Coal has historically been worked in Herefordshire, in the far south of the county with the reserve largely contained within the Forest of Dean. It is the responsibility of the Coal Authority to map and monitor previous areas of extraction. Maps are available<sup>32</sup> on-line that show: surface coal resource areas; coal mining legacy areas; and coal mining risk areas. The

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<sup>32</sup> <https://www.gov.uk/government/publications/coalfield-plans-herefordshire-county-and-district-council-area>

area around Hope Mansell is identified as a high risk area and the Coal Authority should be consulted on certain types of development.

## Noise

- 5.7.14 Minerals workings and waste management facilities can be noisy locations. The potential for adverse impacts can be substantially avoided through good site design and working practices, such as using local topography to contain sound within the site, keeping vehicles in good working condition and covering moving equipment.
- 5.7.15 The council will expect all planning applications to identify the potential sources of noise and to demonstrate how they will be managed effectively. Noise should be assessed using relevant British Standards (referencing the most recent publication) advise contained in national planning policy guidance and the Noise Policy Statement for England.

## Odour

- 5.7.16 Particularly when handling biodegradable materials, waste management facilities can be a source of odour; though with good building design and operational practice it is readily capable of being controlled.
- 5.7.17 Mineral sites are unlikely to be a source of odour. However, there is potential for odour from water bodies on site, such as settlement and silt lagoons or restoration features, which are poorly designed or managed such that they become stagnant and odorous.
- 5.7.18 The council will expect all planning applications to identify any potential odour sources and to demonstrate how they will be managed effectively. The Environment Agency has issued guidance on odour that contains indicative benchmark levels for use in the assessment of potential impacts from industrial facilities subject to the Environmental Permitting (England and Wales) Regulations (2010). Further useful information may be gained from the Institute of Air Quality Management publication, Guidance on the Assessment of Odour for Planning, May 2014.

## Utilities

- 5.7.19 Planning applications should identify all existing and proposed utility services that cross, abut, or are adjacent to the proposed development site. The submitted details should demonstrate how such infrastructure would be protected, to ensure it remains operational and safe.
- 5.7.20 LinesearchbeforeUdig<sup>33</sup> is a free to use online search service that any individual can use to check their works against utility assets including underground and overhead pipelines and cables in the electricity, gas, high pressure fuel/oil, heating, water and fibre optic networks.
- 5.7.21 Developers are encouraged to consult with the relevant utilities company prior to submitting a planning application. Where a proposed minerals or waste development site is crossed by or contains any utilities infrastructure, landowners/operators are likely to need to ensure that the asset is protected by way of an easement width, protection zone or diversion. Any required works are likely to be required to be undertaken at the expense of the landowner/operator.
- 5.7.22 At the time of writing the MWLP the relevant infrastructure providers are: Dwr Cymru/Welsh Water; Severn Trent Water; and Cadent Gas.

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<sup>33</sup> <https://www.linesearchbeforeudig.co.uk/>

## **Vibration**

- 5.7.23 Vibration associated with mineral operations is principally caused by lorry movements, particularly over uneven surfaces, or by blasting. Blasting can cause both ground vibration and air overpressure, which can be disturbing to the local community and harmful to wildlife habitats.
- 5.7.24 Where vibration, including air overpressure, is likely to occur, an assessment should be undertaken to demonstrate the extent of the impact and how it will be managed to an acceptable level. Vibration should be assessed using relevant British Standards (referencing the most recent publication) and advice contained in national planning policy guidance.

## **Visual intrusion**

- 5.7.25 Separately to the potential for landscape and/or visual impact, larger scale minerals and waste development can cause visual intrusion, an amenity concern, or be distracting to drivers, posing a road safety hazard.
- 5.7.26 The council will expect proposals to incorporate best practice measures to minimise the effects of visual intrusion; care should be taken to ensure that screening measures are appropriate and are not, in themselves, a source of visual intrusion.

## **5.8 Renewable and low carbon energy generation – Core Strategy policy SD2**

- 5.8.1 Waste management operations, including anaerobic digestion and incineration with energy recovery, are recognised as providing a supply of renewable/low carbon energy. The benefits can be optimised by providing heat as well as electricity. MWLP policy W7 makes clear the expectation that these opportunities should be pursued.

## **5.9 Sustainable water management and water resources – Core Strategy policy SD3**

- 5.9.1 Quarrying is an activity that can physically remove aquifers and the usable groundwater resources contained within aquifers, which may lead to impacts on the water environment through altered groundwater flows. Waste processing facilities will require water supply and land reclamation can affect future water quantity and quality, including flow. Proposals for minerals extraction and waste management should ensure protection of water resources, particularly when river abstraction and/or groundwater sources may be affected.
- 5.9.2 Dewatering activities are likely to require an abstraction licence from the Environment Agency<sup>34</sup>; a water audit can be used to consider sustainable water management options before, during and post construction.
- 5.9.3 The potential for impact on water quantity, quality and flow should be assessed through hydrological and hydro-geological assessments to establish the base line position and ensure operations are appropriately designed, monitored and managed. The council will seek to avoid:

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<sup>34</sup> [www.gov.uk/guidance/water-management-apply-for-a-water-abstraction-or-impoundment-licence](http://www.gov.uk/guidance/water-management-apply-for-a-water-abstraction-or-impoundment-licence)

- significant change to groundwater or surface water levels, for example, the process of 'dewatering' (when water is pumped out of a pit to allow dry working below the water table) must be carefully monitored, to ensure no adverse impacts on surrounding water availability; and
- pollution of ground and surface water by chemicals and other contaminants, for example a considerable amount of water can be used when processing wastes or aggregates; drainage during site operations and any discharge to local watercourses, must be controlled to comply with standards set by the Environment Agency.

- 5.9.4 More information can be found in the Environment Agency's document titled 'Hydrogeological impact appraisal for dewatering abstractions, Science Report – SC040020/SR1'<sup>35</sup> that should be referenced in preparing any relevant planning application. There is also summary guidance available, providing a methodology on how to assess the hydrogeological impact of groundwater abstractions in connection with dewatering operations at quarries, mines and engineering works. It is titled 'Assessing the impact of dewatering on water resources. Science Summary SC040020/SS' with summary product code of Summary Product Code: SCHO0407BMAF-E-P.<sup>36</sup>
- 5.9.5 The Environment Agency also hosts the 'Catchment Data Explorer', supports and builds upon the data in the river basin management plans. The Catchment Data Explorer should be used to help developers understand the water environment in the vicinity of proposal sites. It is available at <https://environment.data.gov.uk/catchment-planning/>.

## 5.10 Transportation within sites – MWLP policy SP3

- 5.10.1 Minerals often need to be moved around within quarries, from the point at which they are extracted (the working face) to the processing plant, stockpiles, or areas where they will be treated or used to make product for sale. Other materials can be brought to site and may be deposited in one place for storage prior to their use.
- 5.10.2 A similar range of movements is also seen at landfill sites. This is particularly relevant in Herefordshire, where landfill is likely to be limited to inert wastes being used to restore former quarries.
- 5.10.3 All internal transport modes and routes need good design to reduce landscape, environmental and amenity impacts. The use of natural attributes, such as following an existing hedgerow, or wooded or lower lying area within the site, should be optimised, whilst sensitive or visually exposed land, or important landscape or historic features, should be avoided. Noise, dust and vibration can all have an adverse impact on both the environment and local communities. Flood risk on site should be considered to ensure there is a safe route from the working faces to the site exit or refuge point.
- 5.10.4 There are various options available to operators for the efficient movement of minerals and materials within sites, with resultant reductions in fuel use, carbon emissions, noise, dust and

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[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/291080/scho0407bmae-e-e.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/291080/scho0407bmae-e-e.pdf)

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[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/290526/scho0407bmaf-e-e.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/290526/scho0407bmaf-e-e.pdf)

vibration effects. Electric vehicles, conveyors and pipelines offer environmental and amenity benefits over the use of fossil-fuelled vehicles as they are generally more energy efficient, generate reduced levels of emissions or fumes and tend to be quieter.

- 5.10.5 Considering the site in the context of green infrastructure principles can enable an appropriate solution to be found and help to deliver sustainable development; examples include:
1. internal transport routes designed and laid out to provide cycle links or footpaths upon reclamation of the site (and earlier where practicable);
  2. early landscaping of internal transport routes, to enable planting to mature pending reclamation of the site; and
  3. transport routes designed to protect existing wildlife movement and to enhance wildlife corridors.
- 5.10.6 Each site will have different spatial influences on transport design, requirements for the material to be moved, and receptors. An assessment should be undertaken to demonstrate that all relevant factors have been considered, with the level of detail within that assessment proportionate to the scale of development proposed. Development proposals should consider which transport mode (i.e. vehicular, conveyor, or pipeline) and route is most appropriate, finding the balance between practicability, energy and carbon efficiency, reduced impacts, integrated design and safety.

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### **Policy SP3 Transport within sites**

**Planning permission will be granted for minerals or waste development where it is demonstrated that the arrangements for the transport of mineral, waste or other materials within the site minimises the potential for adverse impacts, including greenhouse gas emissions, and optimises the opportunities for green infrastructure. The use of conveyors and/or pipelines is required where they would be appropriate to the circumstances of the site and the nature of the material to be moved. Electric powered vehicles would be considered an appropriate alternative.**

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### **5.11 Reclamation of sites – MWLP policy SP4**

- 5.11.1 Mineral and waste developments can make a particular contribution to the environmental quality and local distinctiveness of Herefordshire through site reclamation and restoration.
- 5.11.2 The NPPF states that land worked for minerals should be reclaimed at the earliest opportunity, taking account of aviation safety, and that high-quality restoration and aftercare of mineral sites should take place. It also states that bonds and other financial guarantees to underpin planning conditions should only be sought in exceptional circumstances. These principles also apply to the reclamation of waste sites.
- 5.11.3 The nature of minerals development, which often involves permanent or long-term physical change to land, sometimes on a substantial scale, means that it is important that consideration is given to how sites are reclaimed and used once workings have finished. In contrast, many waste management facilities, particularly modern developments not involving

landfill, are buildings located in urban areas that do not give rise to such considerations. However, the development of former mineral sites or greenfield sites for waste use, which may include landfill or temporary plant and buildings, can lead to the need for site reclamation. Whilst the main focus of this section is on minerals development, the policy it contains is also intended to be applied to relevant forms of waste development.

- 5.11.4 As waste is managed more sustainably, the traditional link between mineral working and reclamation back to original ground levels through landfill has been largely broken. There is no non-hazardous landfill in Herefordshire and this is likely to continue as new arrangements for managing residual waste arising in the plan area are implemented. Increasingly, inert material is also being diverted away from landfill, as it is subject to more re-use and recycling. However, the quality of construction and demolition waste recovery is such that improved materials, which can meet quality protocols for soils, can now be used to reclaim former mineral workings and other sites to a higher standard overall.
- 5.11.5 All new mineral workings are only likely to receive planning permission where they provide for the restoration and aftercare of the site to a beneficial use, in a phased manner. The Town and Country Planning Act (as amended) gives the council, as the mineral planning authority, the ability to apply a restoration condition requiring such steps to be taken as may be necessary to bring the land to the required standard for use for agriculture, forestry or amenity. However, reclamation provides the opportunity for delivering a range of benefits to the environment and/or amenity and the council will welcome well-considered schemes that will deliver green infrastructure priorities on a landscape scale. A number of examples have been provided throughout the MWLP.
- 5.11.6 Reclamation schemes should take into account the location and context of the site, including the implications of other significant permitted or proposed development in the area and the range of environmental and other assets and infrastructure that may be affected, including any important interactions between those assets and infrastructure. Reclamation schemes should take account of the proximity and purpose of airfields and be designed accordingly. They should be developed following discussion with local communities and other relevant stakeholders and, where practicable, the proposals should reflect the outcome of those discussions.
- 5.11.7 Phased working and reclamation of the site will enable impacts to be reduced and benefits to be delivered sooner. Consequently, phasing is consequently expected to form a part of any mineral working programme and is seen as one element of site reclamation. Phased working and reclamation should take care to avoid sterilisation of any viable mineral resource.
- 5.11.8 The council will require planning applications to present evidence of a practicable, long-term reclamation strategy that will reduce adverse effects, optimise benefits and which may extend beyond the boundary of the former operational site. As a starting point, developers should refer to the particular issues identified in the key development criteria (Appendix A) established for the allocated sites and the Green Infrastructure Strategy already in place. Reclamation schemes should be comprehensive, addressing all relevant details, for example: the removal of all plant and infrastructure; the retention of appropriate surface water features; the proposed reinstatement of soils; planting proposals; and the provision of information to enhance the experience of those enjoying the restored site.
- 5.11.9 In all cases a high standard of reclamation will be expected, that integrates green infrastructure and leaves a positive legacy. Defra's Guidance for Successful Reclamation of

Mineral and Waste Sites<sup>37</sup> is a useful reference document for designing reclamation schemes. Long-term management beyond the statutory five-year aftercare period will be required where appropriate, for example to establish a new habitat or to bring community benefit. Commitment for such provision will be gained through a planning obligation, as set out in Core Strategy policy ID1.

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## **Policy SP4: Site Reclamation**

**Development that requires reclamation will only be permitted where it is demonstrated that the proposal incorporates measures for safe working and satisfactory reclamation, including its delivery, at the earliest opportunity, and phasing where appropriate, to a beneficial after-use of the required standard. Satisfactory reclamation schemes shall accompany such applications and include the following:**

- a. proposals that take account of the geography of the site, its surroundings, and any development and development plan policies relevant to the area;**
- b. proposals that deliver landscape scale benefits and/or integrated green infrastructure appropriate to its location;**
- c. evidence to show that the scheme incorporates best practice advice, is practical to deliver and achievable;**
- d. demonstration that the proposal responds to the existing (or likely future) characteristics of the site, its context and surrounding area;**
- e. a Reclamation Plan, setting out the management requirements and process of returning the land to the agreed after-use and standard which includes both the restoration and the aftercare periods; and**
- f. provision for a 5-year period of aftercare, as a minimum.**

**Where appropriate, a planning obligation will be sought in order to secure the after-use, long-term management and maintenance of the site.**

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<sup>37</sup> Guidance for Successful Reclamation of Mineral and Waste Sites, Defra, 2004.  
<http://webarchive.nationalarchives.gov.uk/20090318074725/http://www.defra.gov.uk/farm/environment/land-use/reclamation/guidance-full.pdf>

## 6. Minerals

### 6.1 Minerals Strategy

- 6.1.1 At the time of plan preparation, Herefordshire hosted: two active sand and gravel quarries; two active crushed rock quarries; and six active building stone delves. Two areas had previously been worked for coal and there was one Petroleum Exploration and Development Licence Block (So51a) covering a small part of the south of the county.
- 6.1.2 Similar to the waste hierarchy, a minerals hierarchy presents the favoured approach to mineral supply. The most sustainable option is to reduce the amount of mineral used, followed by use of secondary and recycled minerals, with the extraction of primary mineral likely to have the greatest impact. The MWLP seeks to influence all development so that minerals provision can move up the hierarchy.
- 6.1.3 Secondary aggregates are minerals that are produced as a by-product of other mining or quarrying activities or as a by-product of an industrial process. There is little or no secondary aggregate production within Herefordshire. The limestone is predominantly crushed for use as a primary aggregate and building stone offcuts from the sandstone delves are used in their restoration.
- 6.1.4 Recycled aggregates arise from several sources, notably from the demolition of buildings or from civil engineering works, such as asphalt plantings from road resurfacing and railway track ballast. Recycling aggregates usually involves the removal of unwanted or inappropriate material such as fines, wood, plastic and metal, and some form of treatment (crushing, washing and/or screening) to reach industry standards for its re-use. There is production of recycled aggregate, with expansion potential, and this is further promoted in waste policy.
- 6.1.5 Despite seeking to reduce demand, the extraction of primary minerals for construction is likely to continue to be required throughout the plan period, and policy M1 makes commitment to identifying those areas where such development should be directed. It is widely recognised that neither conventional nor unconventional hydrocarbon extraction is likely to occur over the plan period. Coal working in Herefordshire has ceased and shows little sign of recommencing. There is just one area of unconventional hydrocarbon resource in Herefordshire, located in the south of the county around Whitchurch, Welsh Newton, Goodrich, Kerne Bridge, Hope Mansell and Marstow. The area was identified for a Petroleum Exploration and Development Licence (PEDL) block SO51a by the Oil and Gas Authority and offered to the industry in 2015 as part of the 14th Onshore Licence Round. The PEDL was not taken up by the industry and has not been issued.
- 6.1.6 Block SO51a is classified as coalbed methane, although the PEDL is for any hydrocarbon and is not limited to this classification. Coalbed methane is produced during the process of coal formation. The gas is either adsorbed into the coal or dispersed into pore spaces around the coal seam. By drilling a network of wells, the gas can be extracted from coal seams that have not been mined. The gas is typically extracted via the well through natural pressure release, or

through the pumping of water from the seam in order to reduce pressure. More information is available from at the GOV.UK website.<sup>38</sup>

- 6.1.7 The extraction of fossil fuels for energy does not fit easily with the climate change aspirations of European or national policy or the Core Strategy. Nevertheless, both conventional and unconventional hydrocarbons are included in policy M1, to retain flexibility should either resource become workable and of interest in the future. The council will expect any development proposal for the extraction of either coal or unconventional hydrocarbons for energy to present a compelling case to demonstrate the environmental, economic and social benefits of the project.
- 6.1.8 Because mineral resources may be substantial, it is possible for more than one quarry to operate within a single reserve area, either through extensions or new quarries opening up in the vicinity of an existing site. This is generally seen to be advantageous, as it enables the resource to be worked efficiently and for infrastructure (conveyors, processing plant etc.) to be shared. Consequently, the policy priority will be to achieve efficient use of land, extracting the most mineral with the least adverse impact and avoiding a proliferation of built development.
- 6.1.9 The sterilisation of minerals occurs when other non-minerals developments take place on, or close to, mineral deposits and render them incapable of being worked. The council will seek to ensure that, where practicable, known mineral resources are not sterilised or encroached upon by other forms of development. Figure 7 sets out the mineral reserve and key elements of infrastructure safeguarded by policy M1. Policy M2 provides further detail.
- 6.1.10 The legislative requirements of the Planning and Compensation Act 1991 and the Environment Act 1995 enable the review of old mineral permissions, commonly referred to as 'ROMP'. The ROMP provides an opportunity for the mineral planning authority to ensure mineral sites continue to work under modern conditions that reflect sustainability aspirations and offer appropriate environmental protection. Subject to certain legal provisions, the ROMP determination process is conducted in a similar way to the processing of a planning application. Consequently, the development plan, including the MWLP, and other material considerations will apply in determining ROMP.

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## Policy M1: Minerals Strategy

**The sustainable winning and working of mineral resources in Herefordshire will be delivered through:**

- a. identifying sources of alternatives to primary mineral resources, and encouraging the development of facilities to process alternative materials either at the point of production or other suitable locations;**
- b. ensuring new-build and refurbishment developments contribute to the efficient use of resources, increasing the proportion of recycled materials used as an alternative to primary mineral where appropriate;**
- c. allocating preferred areas and sites that are considered appropriate in principle for construction minerals development;**

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<sup>38</sup> [www.gov.uk/government/publications/about-shale-gas-and-hydraulic-fracturing-fracking/developing-shale-oil-and-gas-in-the-uk](http://www.gov.uk/government/publications/about-shale-gas-and-hydraulic-fracturing-fracking/developing-shale-oil-and-gas-in-the-uk)

- d. restricting the extraction of hydrocarbons to within either the Surface Coal Resource areas or PEDL block SO51a (as appropriate to the mineral) and requiring compelling reasons to demonstrate that the use of any hydrocarbon is necessary, acceptable and provides national, local or community benefits which clearly outweigh the likely impacts, including the greenhouse gas emissions associated with both the extraction and use of hydrocarbons for energy;**
  - e. the efficient use of land, including shared use of associated infrastructure where minerals are worked in close proximity; and**
  - f. identifying mineral resources and infrastructure within Herefordshire and safeguarding them from the encroachment of incompatible uses and sterilisation by built development.**
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## Safeguarding

- 6.1.11 Because minerals are a finite natural resource, and can only be worked where they are found, it is important to make best use of them to secure their long-term conservation. The National Planning Policy Framework requires Minerals Safeguarding Areas to be defined in order that known locations of specific minerals resources of local and national importance are not needlessly sterilised by non-mineral development, whilst not creating a presumption that the resources so defined will be worked.
- 6.1.12 Figure 7 presents the Minerals Safeguarding Areas for Herefordshire, incorporating: areas of reserve indicated by the British Geological Survey data; surface coal resource areas from the Coal Authority; currently permitted quarries and their associated infrastructure; the operating rail head at Moreton-on-Lugg; and the disused railhead at Moreton Business Park.
- 6.1.13 Non-minerals development could potentially sterilise the minerals resource where it takes place over shallow deposits or where the nature of the non-minerals use is classed as a sensitive receptor when in close proximity to extraction activities. In such instances, extraction of the mineral prior to the proposed development will be encouraged, where this would not significantly adversely affect the timing and viability of the non-minerals development. Any such prior extraction proposals must themselves comply with national and development plan policy. Applicants for non-mineral development that fall within the minerals safeguarding areas will be required to submit an assessment of the effect of the proposed development on the mineral resource beneath or adjacent to the site of the development. This is often termed a mineral resource assessment. The assessment will provide the appropriate level of information to demonstrate to the council that the relevant mineral interests have been adequately considered and that known mineral resources will be appropriately protected from being sterilised or unduly restricted by other forms of development occurring on or close to the resource.
- 6.1.14 The National Planning Policy Framework extends the concept of minerals safeguarding to make clear that the applicant of a new development, the 'agent of change', should ensure that the intended project does not unreasonably restrict an existing business. Depending on the nature of the proposed development, such an outcome may be felt at different distances from the mineral resource or associated infrastructure. Recognising the importance of mineral resources and associated infrastructure, this principle has been incorporated into policy M2.

6.1.15 Policy M2 applies to all minerals resources, regardless of whether they have been permitted to be extracted. Identification of these areas does not imply that any application for the working of minerals within them will be granted planning permission. Policy M2 also applies to the infrastructure associated with the mineral resource, including rail heads.

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**Policy M2: Safeguarding of Minerals Resources and Associated Infrastructure from Sterilisation or Significant Adverse Effect**

- 1. Within the minerals safeguarding areas, non-minerals development will only be permitted in the following circumstances:**
    - a. the development would not sterilise or prejudice the future extraction of the mineral resource because it can be demonstrated that the resource: is not of economic value; occurs at depth and can be extracted in an alternative way; does not exist or has been sufficiently depleted by previous extraction; or**
    - b. the mineral can be extracted satisfactorily prior to non-minerals development without materially affecting the timing and viability of the non-minerals development; or**
    - c. the non-minerals development is of a temporary nature that can be completed and the site returned to a condition that does not prevent mineral extraction or operation of the associated infrastructure within the timescale that the mineral is likely to be needed; or**
    - d. the need for the non-mineral development is strategic and can be demonstrated to outweigh the need for the mineral resource and associated infrastructure.**
  - 2. Where the operation of an existing mineral working could have a significant adverse effect on new development (including changes of use) in its vicinity, the applicant shall be required to provide suitable mitigation before the new development is completed.**
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**INSERT: Figure 7 Minerals Safeguarded Areas and Rail Heads**

[refer to PDF]

## 6.2 Aggregates

6.2.1 Aggregate minerals are primarily used in construction, including concrete manufacture, road building and landscaping. The primary aggregate minerals extracted in Herefordshire are sand and gravel and crushed rock (limestone).

### Sand and gravel

- 6.2.2 The MNA 2019 forecasts a range of future sand and gravel demand, indicating that the landbank at 2041 could be less than 7 years, particularly if a level of self-sufficiency is to be achieved. Data released by the British Geological Survey for year 2014, indicates that Herefordshire was 40% to 50% self-sufficient in sand and gravel provision. This data is not verified, but provides the most comprehensive indication of mineral movements currently available.
- 6.2.3 It would be advantageous for Herefordshire to increase its level of self-sufficiency (not least to reduce the environmental burdens from transport) and to make a reasonable contribution to the Managed Aggregate Supply System.
- 6.2.4 In addition, at the time of preparing the MWLP, the two operational quarries Wellington and Upper Lyde are subject to planning conditions requiring that the winning and working of minerals must cease by 31 December 2026 and 30 September 2029 respectively. Therefore, regardless of which forecast most closely represents the real outcome for sand and gravel over the lifetime of the Draft MWLP, there will be a need for additional reserves of sand and gravel to be permitted to meet demand from 2027 onwards.
- 6.2.5 To ensure that an adequate supply (i.e. to maintain a landbank of at least 7 years) is available at the end of 2041 additional resource may be needed, depending on the actual scale of demand that arises. Recognising the level of uncertainty in forecasts, it can be reasonably expected that the demand forecast for sand and gravel may change over the plan period. Therefore, it is not considered appropriate to specify the precise level of further provision that may be needed in order to maintain a minimum 7-year landbank at 31 December 2041. This is a matter that is effectively and appropriately addressed by monitoring the MWLP, through annual reviews of the Local Aggregates Assessment and the five-year MWLP reviews, at which time the level of additional provision can be considered, with additional site allocations brought forward if necessary.
- 6.2.6 Recognising the advantages of working an area efficiently, specific sites for future sand and gravel extraction are allocated adjacent or near to existing permitted sites. Sand and gravel reserves at Upper Lyde, Shobdon and Wellington are allocated in the MWLP. The MWLP evidence base indicates that these allocations would provide a minimum of nearly 3 million tonnes of sand and gravel resource.
- 6.2.7 In addition, policy M3 identifies preferred areas for sand and gravel working; new operations in these areas of search would add to the robustness of sand and gravel supply within Herefordshire. Sand and gravel working is to be focussed within the large expanse of reserve that wraps around the northern and eastern sides of Hereford and at Shobdon, to the north-west of Hereford.
- 6.2.8 Only where the preferred locations cannot be demonstrated to fulfil a reasonable level of demand, will proposals for sand and gravel extraction outside of these areas be permitted.

Policy M3/2 is deliberately worded to refer only to extraction. In order to reduce the potential for adverse impacts, it is intended that mineral would be transported off-site for processing,

- 6.2.9 As made clear in Strategic Policy and General Principles; any adopted development plan must be read as a whole and development proposals will be considered against all relevant policies. The development plan for minerals includes the Core Strategy and its policies, not least those concerned with protection (and enhancement) of the environment. In addition to this policy framework, the allocated sites are accompanied by key development criteria that present particular issues to be comprehensively addressed in association with any development proposal.
- 6.2.10 The order of preference set out at policy M3/2 is for the Specific Sites to be preferred over the Preferred Areas; there is no order of preference within the locations identified under each of those categories.

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### **Policy M3: Winning and working of sand and gravel**

- 1. Total provision for sand and gravel over the plan period to 31 December 2041 will be 5 million tonnes. Additional provision shall be made through the five-year reviews, if necessary, to maintain a landbank of at least seven years for sand and gravel at 31 December 2041, based on an annual rate of provision to be determined through the review.**
- 2. In order of preference, sand and gravel extraction shall be permitted at the following locations:**
  - a. Specific Sites (presented in alphabetical order) subject to the key development criteria set out at Appendix A:**
    - Shobdon Quarry;
    - Upper Lyde Quarry;
    - Wellington Quarry.
  - b. Preferred Areas of Search:**
    - Area B of the Key Diagram;
    - Area C of the Key Diagram.
- 3. Only where it is demonstrated to be necessary to maintain an adequate landbank or there is a shortfall in production capacity available at the Specific Sites or Preferred Areas of Search, will sand and gravel extraction will be permitted in any other area of reserve.**

## **Crushed rock (limestone)**

- 6.2.11 The MNA 2019 makes two forecasts of future crushed rock demand, indicating that the landbank at 2041 could be less than 10 years, particularly if a level of self-sufficiency is to be achieved. Data released by the British Geological Survey for year 2014, indicates that Herefordshire was 20% to 30% self-sufficient in crushed rock provision. This data is not verified, but provides the most comprehensive indication of mineral movements currently available.
- 6.2.12 It would be advantageous for Herefordshire to increase its level of self-sufficiency (not least to reduce the environmental burdens from transport) and to make a reasonable contribution to the Managed Aggregate Supply System.
- 6.2.13 In addition, at the time of preparing the MWLP, there were two active crushed rock quarries in Herefordshire, with the planning conditions for Leinthall Quarry requiring that the winning and working of minerals at that site must cease by 31 August 2027. There may remain a need for additional reserves of crushed rock to be permitted to meet demand from 2027 onwards.
- 6.2.14 To ensure that an adequate supply (i.e. to maintain a landbank of at least 10 years) is available at the end of 2041, additional resources may be needed, depending on the actual scale of demand that arises. Recognising the level of uncertainty in forecasts it can be reasonably expected that the demand forecast for crushed rock may change over the plan period. Therefore, it is not considered appropriate to specify the precise level of further provision that may be needed in order to maintain a minimum 10 year landbank at 31 December 2041. This is a matter that is effectively and appropriately addressed by monitoring the MWLP, through annual reviews of the Local Aggregates Assessment and the five-year reviews of the MWLP, at which time the level of additional provision can be considered, with additional site allocations brought forward if necessary.
- 6.2.15 Recognising the advantages of working an area efficiently, specific sites for future crushed rock extraction are allocated adjacent or near to existing permitted sites. Crushed rock reserves at Leinthall and Perton are allocated in the MWLP. The MWLP evidence base indicates that these allocations would provide around 9 million tonnes of crushed rock.
- 6.2.16 In addition, policy M4 identifies preferred areas for limestone working, new operations in these areas of search would add to the robustness of crushed rock supply within Herefordshire. Limestone working will be preferred within the reserves located to the north of the county and to the east of Hereford.
- 6.2.17 Only where the preferred locations cannot be demonstrated to fulfil a reasonable level of demand will proposals for limestone extraction outside of these areas be permitted. Policy M4/2 is deliberately worded to refer only to extraction. In order to reduce the potential for adverse impacts, it is intended that mineral would be transported off-site for processing,
- 6.2.18 As made clear in Strategic Policy and General Principles, any adopted development plan must be read as a whole and development proposals will be considered against all relevant policies. The development plan for minerals includes the Core Strategy and its policies, not least those concerned with protection (and enhancement) of the environment. In addition to this policy framework, the allocated sites are accompanied by key development criteria that present

particular issues to be comprehensively addressed in association with any development proposal.

- 6.2.19 The order of preference set out at policy M4/2 is for the Specific Sites to be preferred over the Preferred Areas; there is no order of preference within the locations identified under each of those categories.

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## **Policy M4: Winning and working of crushed rock (limestone)**

- 1. Total provision for crushed rock over the plan period to 31 December 2041 will be 9 million tonnes. Additional provision shall be made through the five-year reviews if necessary to maintain a landbank of at least ten years for crushed rock at 31 December 2041, based on an annual rate of provision to be determined through the review.**
- 2. In order of preference, crushed rock extraction shall be permitted at the following locations:**
  - a. Specific Sites (presented in alphabetical order) subject to the key development criteria set out at Appendix A:**
    - **Leinthall Quarry;**
    - **Perton Quarry.**
  - b. Preferred Area of Search:**
    - **Area A of the Key Diagram;**
    - **Area D of the Key Diagram.**
- 3. Only where it is demonstrated to be necessary in order to maintain an adequate landbank or there is a shortfall in production capacity available at the Specific Sites or Preferred Areas of Search, will limestone extraction be permitted in any other area of reserve.**

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## **6.3 Building Stone**

- 6.3.1 Building stone includes material used for roofing, walling, flagstones or ornamental purposes. The primary building stone extracted in Herefordshire is sandstone.
- 6.3.2 The supply of building stone is important for the upkeep of traditional buildings and historic assets and for ensuring new development reflects the character of its surroundings. It is therefore important in maintaining and enhancing the overall quality of the environment in the plan area.
- 6.3.3 Within Herefordshire, sandstone is worked in small quarries called delves, generally by hand, with just one or a few workers on site. They are backfilled with the soils, overburden and mineral wastes such that their impact should be minimised. This approach should be continued, ensuring a sustainable supply of local building stone remains available throughout the plan period.
- 6.3.4 The available evidence suggests that 2,000 tonnes per year has been a consistent level of demand over the past few years. Some of the operators visited indicated that the current area of working was coming to a close and the delve would either be restored, or they would seek

an extension. All of the delves are subject to conditions limiting their working period, some of which cease within the plan period. There are six building stone delves currently permitted and active, all of which would be suitable in principle to gain an extension of time to enable extraction to be completed. Three of these sites would also be suitable, in principle, for a lateral extension or deepening of workings.

- 6.3.5 New sites might be appropriate where the building stone is important to ensure the preservation of local distinctiveness, the workings are small-scale (reflecting the historic pattern of sandstone extraction) and the proposal is limited to the production of non-aggregate materials (principally building stone, dimension stone and roof tiles). Any overburden (the soil and rock layers overlying the sandstone) and spoil (the offcuts and residues remaining from working the building stone) shall be retained on site and used for its reclamation.
- 6.3.6 As made clear in Strategic Policy and General Principles; any adopted development plan must be read as a whole and development proposals will be considered against all relevant policies. The development plan for minerals includes the Core Strategy and its policies, not least those concerned with protection (and enhancement) of the environment. In addition to this policy framework, the allocated sites are accompanied by key development criteria that present particular issues to be comprehensively addressed in association with any development proposal.

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## **Policy M5: Winning and working of sandstone**

- 1. In order to maintain an adequate supply of sandstone to preserve local distinctiveness within Herefordshire, proposals will be permitted for:**
  - a. the extension of time for completion of extraction at permitted sandstone extraction sites;**
  - b. the lateral extension and/or deepening of workings at the following permitted sandstone extraction sites, subject to the key development criteria set out at Appendix A:**
    - **Black Hill Delve;**
    - **Llandraw Delve;**
    - **Westonhill Wood Delves;**
  - c. the opening of new sites for sandstone extraction at appropriate locations, including micro-scale extraction on or adjacent to existing historic buildings or structures and new build developments, where the extracted materials will only be used in connection with the identified project.**
- 2. The working of sandstone at the above locations will be permitted where:**
  - a. the need for the material for the preservation of local distinctiveness, particularly features of local historic or architectural interest, listed and vernacular buildings or archaeological sites, outweighs any material harm extraction might cause to matters of acknowledged importance;**
  - b. the proposed workings are small scale; and**

- c. the proposal is limited to the production of non-aggregate materials, with any overburden and spoils retained on-site and used for its reclamation.**
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## **6.4 Borrow Pits**

- 6.4.1 In the course of large-scale civil engineering construction projects, there is often a need to develop off-site extraction for a variety of reasons. Following extraction, such excavations, known as borrow pits, are infilled with unusable materials from the construction project. It is often only possible to consider the suitability of areas for use as borrow pits once the nature, scale and timing of a project is known. Such uncertainties may extend into the construction phase itself; road building for instance often encounters unexpected problems.
  - 6.4.2 Applications for borrow pits within Herefordshire are not expected to be numerous, but they are expected to result in a high quality of development. It is essential that borrow pits are controlled and subject to the same environmental considerations as other mineral workings. If permission is granted, such sites will be conditioned to ensure that their reclamation is achieved as part of the main construction project, and that their aftercare and after-use are properly controlled.
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### **Policy M6: Borrow Pits**

**Proposals for the development of borrow pits will be permitted where:**

- a. granting planning permission would create significant environmental benefits that outweigh any material planning objections;**
  - b. the borrow pit lies on or adjacent to the proposed construction project and the extracted materials will only be used in connection with the specific construction project with which they are associated;**
  - c. the site can be restored to a state capable of beneficial after-use without the use of imported material, other than that generated on the associated construction project; and**
  - d. the life of the borrow pit is commensurate with the duration of the associated construction project.**
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## 7. Waste

### 7.1 Waste Strategy

- 7.1.1 Sustainable waste management in Herefordshire would deliver: a reduction in the amount of waste generated; an increase in the amount of waste re-used, recycled or used to recover energy; and a decrease in the amount of waste disposed to landfill.
- 7.1.2 At the time of plan preparation, Herefordshire hosted a robust waste transfer, re-use and recycling network, but had very little residual waste treatment or disposal capacity, particularly for C&I and CD&E wastes. LACW is, primarily, managed through the jointly contracted residual waste management facilities located in Worcestershire, which will operate for the foreseeable future.
- 7.1.3 Other residual wastes were generally exported for recovery at facilities located beyond Herefordshire. This movement is a clear demonstration of the market forces at work within the waste sector, and is not necessarily a disadvantageous outcome. The most significant disadvantage is felt in Herefordshire, which would lose out on the potential for inward investment, jobs, secondary materials and renewable/low carbon sources of energy if new waste management infrastructure is not developed.
- 7.1.4 The plan area is very rural and relatively remote. Excluding CD&E wastes, the amount of residual wastes remaining to be managed are calculated to be in the region of 200,000 tonnes. This tonnage is relatively low, is generated from a number of different sources and is consequently not particularly attractive to waste management companies that operate nationally.
- 7.1.5 In preparing this MWLP, the local waste management industry was found to be dynamic. The evidence base found new sites being opened and previous waste management service businesses being restructured. Within the Core Strategy, Herefordshire has adopted a number of strategic employment sites, which include the specific growth areas of the Rotherwas Enterprise Zone and Leominster Enterprise Park. These locations have good potential to deliver the circular economy, where engineering, creative industry, manufacturing, waste and research sectors can combine resources to enable materials (including wastes) to be kept at their highest value for as long as possible. In its simplest form, this might be the development of an incineration facility accepting residual waste from local businesses and which returns electricity and, ideally, heat, but also phosphorus for beneficial use. This energy supply would be decentralised, secure and low carbon, enabling national and local priorities on climate change to be realised. Recovering phosphorus would provide a supply of this essential mineral, whilst avoiding both its loss to the natural environment and extraction of the raw material.
- 7.1.6 An objective of the MWLP is to deliver a circular economy. Within Herefordshire there is a need to reduce phosphate emissions into the River Wye SAC, which means they will need to be captured prior to their release. Waste water treatment works improvements are being pursued by both Dwr Cymru/Welsh Water and Severn Trent Water; the latter of which has developed a pilot plant in Warwickshire, to evaluate energy neutral waste water treatment and the potential for materials recovery. The MWLP promotes the use of energy recovery for residual wastes, which gives the potential to recover phosphate from the fly ash. Anaerobic

digestion processes, that can be used at waste water treatment facilities and promoted on farm and are promoted in the MWLP, can also provide a source for phosphorus recovery.

- 7.1.7 There did not appear to be any currently viable locations for non-hazardous waste disposal facilities, and again, the tonnages calculated for disposal were low; the industry has made no submissions for new non-hazardous disposal facilities in Herefordshire. Submissions have been made for inert waste disposal to be used in the restoration of mineral workings and this is generally considered to be an acceptable approach.
- 7.1.8 Consequently, the policy priority is provide a positive framework within which to deliver additional waste management capacity, addressing all levels of the waste hierarchy, except non-hazardous disposal, but making development opportunities for residual waste treatment facilities particularly attractive.
- 7.1.9 Effective diversion of waste from landfill means that proposed facility is able to demonstrate real benefit in the form of treatment proposed. Historically, some treatment options have, for example, simply changed the moisture content of waste but without resulting in a material that can be put to beneficial use. This type of facility does not effectively move waste up the hierarchy or deliver the circular economy, as the resultant material is still disposed to landfill.
- 7.1.10 National Planning Policy for Waste<sup>39</sup>, paragraph 8 makes clear that non-waste development should not prejudice the implementation of the waste hierarchy or the efficient operation of waste management facilities. Similarly, the National Planning Policy Framework makes clear that the applicant of a new development, the 'agent of change', should ensure that the intended project does not unreasonably restrict an existing business. Depending on the nature of the proposed development, such an outcome may be felt at different distances from the waste management facility. Recognising the importance of waste infrastructure, this principle has been incorporated into policy W1.
- 7.1.11 It is recognised that there are some waste management facilities already operating within Herefordshire that would not satisfy policy of the MWLP; it is intended that these facilities are not protected by policy W1.

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## **Policy W1: Waste Strategy**

**Sustainable waste management in Herefordshire will be delivered through:**

- 1. permitting development that enables delivery of the circular economy;**
- 2. permitting the infrastructure necessary to recover phosphorus for beneficial purposes;**
- 3. permitting waste treatment development that effectively diverts waste from landfill;**
- 4. making provision for sufficient annual waste treatment capacity to enable equivalent self-sufficiency across all waste streams with development focussed within Hereford and the market towns of Bromyard, Kington, Ledbury, Leominster; and Ross on Wye;**
- 5. making provision for sufficient inert waste disposal capacity; and**

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<sup>39</sup> National Planning Policy for Waste, DCLG, October 2014.  
<https://www.gov.uk/government/publications/national-planning-policy-for-waste>

6. **ensuring that the continued operation of existing waste management facilities in locations that are consistent with the spatial strategy is safeguarded, including against the encroachment of incompatible uses. Where the operation of an existing waste management facility could have a significant adverse effect on new development (including changes of use) in its vicinity, the applicant shall be required to provide suitable mitigation before the new development is completed.**

## 7.2 Waste Management Requirements

### Solid Wastes

- 7.2.1 The three most prevalent solid wastes received at permitted facilities in Herefordshire are: municipal at around 45% (principally waste from households); construction and demolition wastes, at around 30%; and agriculture and processing wastes, at around 20%. This is quite different to the picture seen nationally, where construction and demolition wastes generally make up about 50% of total arisings, with C&I waste at around 25%, municipal waste at around 20% and other wastes making up the remainder.
- 7.2.2 The WNA 2019 calculated that additional waste management capacity will be required to manage these wastes throughout the plan period. This principally recognises that additional treatment capacity should be provided for the treatment of residual wastes and to balance out the lack of non-hazardous disposal opportunities within Herefordshire to enable equivalent self-sufficiency.
- 7.2.3 A flexible approach to the provision of waste management infrastructure is set out within the MWLP. This is deliberate, recognising both the lack of certainty that exists around forecasting future wastes and infrastructure demand, and that the provision of waste management infrastructure is market led and unlikely to result in the provision of too much capacity. Table 2 presents the maximum forecast capacity demand for each waste stream. This number is referenced in policy W4 (generally rounded up) to provide a framework for delivery over the plan period; for all management routes except disposal, this is a one-off requirement. A waste treatment facility providing 25,000tpa of capacity will be able to do this year on year, under standard operating procedures. However, a landfill void will be filled up every time a deposit is made, consequently an annual, or cumulative, tonnage is required.

**Table 2 Forecast additional waste management infrastructure demand**

Waste	Management route	YEAR				Estimated Demand
		2025	2030	2035	2041	
LACW	Biological	None	10,000			<b>10,000</b>
	Recycling	None	22,500 to 30,000			<b>30,000</b>
	Residual Treatment	No additional capacity requirement identified				
C&I	Biological	50,000				<b>50,000</b>
	Recycling					
	Residual Treatment	63,000 to 94,500	61,200 to 86,800	58,400 to 78,400	64,700 to 81,500	<b>87,000</b>

Waste	Management route	YEAR				Estimated Demand
		2025	2030	2035	2041	
<b>Non-natural Agricultural</b>	Residual Treatment	6,000 to 8,000				<b>8,000</b>
<b>Hazardous</b>	Residual Treatment	8,000 to 12,000				<b>12,000</b>
<b>CD&amp;E</b>	Recovery (90% recovery)	194,400 to 207,000	208,800 to 223,200	221,400 to 236,700	238,500 to 255,600	<b>255,600</b>
	Disposal (90% recovery)	21,600 to 23,000	23,200 to 24,800	24,600 to 26,300	26,500 to 28,400	<b>28,400 each year</b>
	Disposal (70% recovery)	64,800 to 69,000	69,600 to 74,400	73,800 to 78,900	79,500 to 85,200	<b>82,500 each year</b>

7.2.4 Objective 4 of this MWLP seeks to move waste up the management hierarchy and deliver a circular economy. Within Herefordshire this means seeking to achieve future, aspirational waste management targets for municipal waste:

- preparation for re-use and recycling (including composting/anaerobic digestion) target of 55% by 2025;
- preparation for re-use and recycling (including composting/anaerobic digestion) target of 60% by 2030;
- preparation for re-use and recycling (including composting/anaerobic digestion) target of 65% by 2035;
- gradual limitation on landfilling , to 10% by 2035; and
- requirement for the separate collection of bio-waste for recycling.

7.2.5 For CD&E wastes it has been assumed that a recovery rate of 90% will be achieved, which exceeds current policy expectations and would deliver management that aligns to the best practice currently found across England. Whilst higher rates of recovery are to be welcomed, it is also important to make provision for a reasonable level of disposal capacity, recognising that some wastes may not be recoverable and former mineral workings can be beneficially reclaimed.

7.2.6 Whilst these recycling rates are important context indicators, they are deliberately not written into policy. Apart from LACW, which already benefits from a well-established network of management facilities ensuring its diversion from landfill, the management route of wastes cannot be readily or reliably monitored.

7.2.7 National policy supports the location of waste activities within areas of new development, which may have a role to play in providing the required local waste management infrastructure. New development (including refurbishment) should provide for integrated waste management infrastructure where appropriate. In particular, in the early stages of planning major development, any scope for integrating waste treatment and heat generation should be exploited where practicable.

7.2.8 Hazardous and low level radioactive waste facilities are specialist facilities recognised as being facilities of regional and national importance. There is no identified strategic need for

new hazardous or low level radioactive waste management capacity within the plan area; however, policies W2 and W5 provide the relevant framework to enable Herefordshire to meet equivalent self-sufficiency.

- 7.2.9 Developed in the right locations, modern waste management facilities can bring many benefits: sustainable infrastructure; renewable/low carbon energy supply; secondary materials; inward investment; and jobs. Consequently, the tonnages presented in policy W2 are intended as a guide, to enable monitoring over time. They are not presented as a limit on new waste management development that is well designed, appropriately situated and demonstrated to deliver a sustainable outcome.

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## **Policy W2: Solid waste management requirements**

**Development for the following waste management priorities will be permitted:**

- 1. biological treatment of household waste of at least 10,000 tonnes;**
  - 2. recycling capacity of municipal, commercial and industrial and non-natural agricultural wastes of at least 50,000 tonnes;**
  - 3. recovery of materials and energy from municipal, commercial and industrial, non-natural agricultural and hazardous wastes of at least 110,000 tonnes;**
  - 4. recovery of materials from construction and demolition waste of at least 250,000; and**
  - 5. disposal of inert wastes providing a cumulative void of 30,000 tonnes per year.**
-

## Agricultural Waste

- 7.2.10 Herefordshire is a large, predominantly rural county; the agriculture and food/drink processing sectors are recognised to have a material influence on waste arisings. Whilst natural agricultural waste is not usually appropriate as a matter for a waste local plan, due to the local distinctiveness of Herefordshire, policy W3 has been prepared to address both natural and non-natural agricultural wastes.
- 7.2.11 Natural wastes appropriate for anaerobic digestion (or other biological technologies) will be organic and likely to comprise: manures; poultry litter; spoilt crops; dirty water; and used bedding. Non-natural wastes are likely to comprise plastics, fencing materials, cleaning products and medicines that are likely to require treatment and/or disposal off-farm.
- 7.2.12 The water quality of Herefordshire's main rivers and their tributaries is a matter of strategic importance. Not least the River Wye and its tributaries are designated a Special Area for Conservation (SAC), recognised as being of international importance for their unique character and wildlife, requiring the highest level of protection, management, enhancement and, where appropriate, restoration.
- 7.2.13 At the time of preparing the MWLP, the River Lugg, a tributary of the River Wye and included within the River Wye SAC, is failing its conservation targets of phosphate levels as a result of water pollution from both: point sources, particularly sewage outlets; and diffuse sources, principally run-off from agricultural land. The key pollutants are phosphates, but also ammonia.
- 7.2.14 In November 2018, judgement was handed down from the Court of Justice of the European Union in the case of *Cooperatie Mobilisatie* (Joined Cases C-293/17 and C-294/17, the 'Dutch Case'). The Dutch Case concluded that where a site is failing in its water quality objectives, and is therefore classed as being in an unfavourable condition, there is limited scope for the approval of additional damaging effects and that the future benefit of mitigation measures cannot be relied upon at Appropriate Assessment, where those benefits are uncertain at the time of the assessment.
- 7.2.15 Herefordshire Council subsequently prepared a Position Statement titled 'Current Development in the River Lugg catchment Area' dated 15 October 2019 (the 'Herefordshire Council Position Statement'. The Herefordshire Council Position Statement advises (on page 2) that:
- 7.2.16 *'There remains potential for a positive Appropriate Assessment to enable development to proceed, on Natural England's advice, where it can be demonstrated that any impacts would be neutral (where avoidance / mitigation measures included in the plan or project, counterbalance any nutrient (phosphate) increase from the plan or project), or would lead to 'betterment.'*
- 7.2.17 The River Wye SAC Nutrient Management Plan makes clear that the farming community plays a crucial role in the River Wye SAC catchment. Published in 2014, the evidence base and options appraisal was developed to reduce phosphate levels in the River Wye catchment, including the River Lugg, to below the target level by 2027, in line with the Water Framework Directive. It incorporated a number of measures that should be implemented to promote the culture of environmental best practice.

- 7.2.18 'Top 5' recommendations for agriculture directly address waste management practices, including:
- storing solid manure heaps on an impermeable base;
  - collecting effluent and dirty waters securely;
  - not spreading farmyard manure to fields at high-risk times;
  - incorporating manure into the soil; and
  - using dry cleaning techniques to remove solid waste from yards prior to cleaning.
- 7.2.19 Farming rules for water – getting full value from fertilisers and soil<sup>40</sup> is a policy paper produced by Defra, prepared to deliver a new approach to regulating the agriculture sector, including new rules<sup>41</sup> that are outcome focussed and risk based establishing a consistent baseline of good practice across the agricultural industry in England.
- 7.2.20 The rules fulfil obligations on diffuse pollution under the Water Framework Directive and came into force on 2 April 2018; they mean it is now mandatory for all farmers in England to maintain good practice to protect water quality and prevent water pollution incidents. The rules:
- promote good practice in managing fertilisers and manures;
  - encourage land managers to take reasonable precautions to prevent diffuse pollution from runoff or soil erosion;
  - require land managers to plan each application of manure or fertilisers, based on soil tests, to meet but not exceed crop and soil needs.
- 7.2.21 It is also important to recognise that the agricultural sector has a significant role to play as custodians of the land and that wider benefits can be achieved from applying best practice in managing agricultural wastes, critically in terms of reducing carbon emissions. The Committee on Climate Change's 2019 Report<sup>42</sup> identifies that greenhouse gas emissions from agriculture represented about 10% of all UK emissions from 2016 to 2017 (page 26). *'Emissions from managing agricultural soils, largely resulting from nitrogen fertiliser use, accounted for 25% of the sector's emissions, with the remainder from waste management and on-farm energy use.'* The digestive processes of ruminants (cows and sheep) and the management of livestock waste and manures accounting for almost all the methane emitted in agriculture. Medium-term milestones include increasing the take-up of low carbon farming practices, which include greater on-farm energy efficiency, and improved nutrient, waste and manure management .
- 7.2.22 Consequently, policy W3 promotes the use of anaerobic digestion to manage natural agricultural wastes. Anaerobic digestion systems capture the methane from natural agricultural wastes, which can then be used as a source of energy or fuel, and produce a digestate that is, more beneficial to soil than raw manure when put on the land at the appropriate time.

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<sup>40</sup>

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/695598/farming-rules-for-water-policy-paper-v2.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/695598/farming-rules-for-water-policy-paper-v2.pdf)

<sup>41</sup> <https://www.gov.uk/guidance/rules-for-farmers-and-land-managers-to-prevent-water-pollution>

<sup>42</sup> <https://www.theccc.org.uk/publication/reducing-uk-emissions-2019-progress-report-to-parliament/>

- 7.2.23 Agricultural units are dispersed across much of Herefordshire, consequently there is no spatial strategy proposed. It is expected that any waste treatment facilities proposed will primarily operate in association with the agricultural unit on which they are located. However, imports of natural or non-natural wastes from off-farm may be appropriate; each application will be considered against relevant policy of the development plan.
- 7.2.24 The waste management practices available to the agricultural sector are wide-ranging and varied, and can be expected to change over the plan period, for example Defra is due to publish the Farm Emissions Reduction Plan in 2020, which will also provide a framework of actions. Consequently, policy W3 is not prescriptive. There is a good support network available to farmers and landowners to gain advice in preparing their planning applications. This includes **FarmHerefordshire**,<sup>43</sup> established in 2015, to support the agricultural industry by promoting best practice, facilitating innovative approaches and ensuring that the county's farmers and growers have access to practical and user-friendly advice.
- 7.2.25 Implementing best practice for water protection and waste management should reduce the amount of nutrients and pollutants released to waterbodies and help to protect the environment. Whilst policy W3 is not prescriptive about how natural and non-natural wastes will be appropriately managed, Herefordshire Council will expect a level of demonstration proportionate to the development proposed and the agricultural holding at which it is located.
- 7.2.26 Policy W3 requires a waste management method statement to be submitted with all applications for livestock unit(s) on agricultural holdings. The statement will include clear details on the following matters as relevant for either the proposed development or the whole agricultural holding, dependent on the scale of development: the type and quantity of livestock; the type and quantity of by-products likely to arise; methods for dealing with inputs and outputs; pollution controls; transportation requirements; and any other reasonable matters as requested by Herefordshire Council. The waste management method statement may incorporate or cross refer to discrete Manure Management Plans, Transport Assessments and/or the operational details prepared to satisfy the farming rules for water or environmental permitting requirements.
- 7.2.27 Environmental impact assessment (EIA) is a statutory tool for assessing the environmental impacts of development projects and identifying measures that can be taken to reduce these impacts. The process of EIA in the context of town and country planning in England is governed by the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (which may be amended). These Regulations specify which development requires EIA (referred to as 'EIA development') and should be referenced in applying this policy.
- 7.2.28 It is recognised that there are other organisations involved in the permitting and regulation of agricultural practices, it is not solely the responsibility of Herefordshire Council. Policy W3 has been prepared to provide a land use policy framework for the management of agricultural waste that will contribute to enabling objectives of the Water Framework Directive to be met.

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<sup>43</sup> <https://www.cla.org.uk/your-area/midlands/regional-news/farm-herefordshire-launched>

## Policy W3: Agricultural waste management

1. **Planning permission for livestock units on agricultural holdings will be permitted where it is demonstrated through a waste management method statement that:**
  - a. **for non-EIA development, both natural and non-natural wastes generated by the proposed development will be appropriately managed both on and off-site; or**
  - b. **for EIA development, both natural and non-natural wastes generated by the whole agricultural unit will be appropriately managed both on and off-site.**
2. **Anaerobic digestion will be permitted where its use is primarily intended to manage natural wastes generated on the agricultural unit within which it is located.**

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## Wastewater

- 7.2.29 Dwr Cymru/Welsh Water and Severn Trent Water provide wastewater treatment services within Herefordshire, with both companies operating wastewater treatment works. These facilities and the associated pipelines need to be upgraded and extended periodically in order to meet improved standards, cope with increased flows from new developments in their catchment area and to replace out of date equipment.
- 7.2.30 Both companies have recently adopted their business case for investment in sewage treatment and water supply facilities for the period from 2020 to 2025. As utility companies, their asset management plans are only ever prepared on a five-year rolling cycle. Consequently, their future development needs over the plan period are not capable of being fully understood and **policy W4** can only set out guiding principles for new wastewater development, making clear the preference for existing works to be upgraded and expanded as appropriate.
- 7.2.31 The River Wye SAC NMP identifies that sewage treatment works discharges are a main contributor to the baseline source apportionment; more so in the upper River Wye sub-catchment compared with the River Lugg sub-catchment. More stringent discharge levels at the sewage treatment works across Herefordshire are likely to be required to achieve conservation targets.
- 7.2.32 In its AMP7, Dwr Cymru/Welsh Water proposes to undertake phosphorous removal at 11 of its waste water treatment works ('WwTW') that discharge into the rivers Wye or Lugg. The five waste water treatment works that are located within Herefordshire are:
- Hereford Eign WwTW;
  - Hereford Rotherwas WwTW;
  - Leominster WwTW;
  - Kingstone and Madley WwTW;
  - Weobley WwTW.
- 7.2.33 Further to these facilities, Dwr Cymru/Welsh Water also proposes to undertake phosphorous removal at the Pontrilas WwTW. Whilst this facility is in Herefordshire, it does not release waters into the River Wye SAC.

- 7.2.34 As with all development proposals, any proposal for wastewater management would also be subject to the other relevant development management policies. The principles of wastewater treatment requirements for new development are contained at Core Strategy policy SD4.

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## **Policy W4: Wastewater management**

**Planning permission will be granted to the statutory water and sewerage undertaker to extend, upgrade, or make provision for new infrastructure necessary to ensure the statutory undertaker can continue to undertake its duty to supply potable water and treat foul flows. Works undertaken should contribute to achieving nutrient neutrality within the River Wye SAC. Wherever practical and economical, biogas should be recovered for use as an energy source and phosphorus should be recovered for beneficial uses.**

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## **7.3 Spatial distribution of waste management sites**

### **Solid Wastes**

- 7.3.1 Most modern waste management facilities are enclosed within buildings and can be beneficially located on industrial or brownfield land within or near urban areas. In order to provide for the additional capacity identified above, sufficient land must be identified in suitable places. The preferred approach to the spatial distribution of new waste management facilities is in accordance with the Core Strategy, focussing the majority of development in Hereford and the market towns of Bromyard, Kington, Ledbury, Leominster and Ross on Wye.
- 7.3.2 Herefordshire has a number of well-established industrial estates and extensive strategic employment areas distributed within the market towns that lie within the spatial strategy. Developing at these locations will provide opportunities for symbiotic relationships between waste management, engineering, manufacturing and research industries and help to deliver the circular economy at a materials level. Promoting energy from waste facilities in these locations will enable a renewable/low carbon supply of electricity and potentially heat/cooling to be distributed to neighbouring uses, also contributing to the circular economy and achieving objectives of renewable energy supply.
- 7.3.3 Planning applications for waste management activities should provide an appropriate level of detail to inform a reasonable degree of certainty on the planning application and to ensure the principle of the development and use of the land is acceptable with cross reference to permitting constraints. Where development is also subject to approval under pollution control regimes, Herefordshire Council will continue to work closely with the Environment Agency to manage potential operational impacts where detailed assessment may be required.
- 7.3.4 Whilst it would not be appropriate to set an absolute threshold, as the development of land is site specific, the following guidelines are intended to apply:
- Small-scale facility is one of around or less than 50,000 tonnes per annum throughput and would be focussed on delivering a more local service, for example a household waste recycling centre, open windrow composting, or construction and demolition waste recycling facility.

- Large-scale facility is one providing more than 50,000 tonnes per annum throughput and would be focussed on providing a more strategic service, for example a materials recycling facility or energy recovery facility (either biological or incineration) accepting waste from across Herefordshire and potentially beyond.

7.3.5 The principles set out at policy W5 would be applicable to any waste stream, providing opportunities for new hazardous and low-level radioactive waste treatment facilities to be developed in Herefordshire, should there be a market demand. There is no order of preference within the locations identified at policy W5.

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## **Policy W5: Preferred locations for solid waste treatment facilities**

**Sustainable waste treatment will be delivered through a combination of small and large-scale facilities focussed at the following locations:**

- 1. small-scale facilities located at any industrial estate or strategic employment area;**
- 2. large-scale facilities located at any strategic employment area; and**
- 3. at the following locations (presented in alphabetical order) subject to the key development criteria set out at Appendix A:**
  - **Former City Spares Site;**
  - **Kington Household Waste Recovery Centre;**
  - **Ledbury Household Waste Recovery Centre; and**
  - **Leominster HWS & HWRC.**

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## **Construction, Demolition and Excavation Waste**

7.3.6 There is an identified need for new waste management (recovery and disposal) capacity for CD&E wastes.

7.3.7 The CD&E waste recovery facility operating at Former Lugg Bridge Quarry has the potential for a substantial increase capacity; this is the preferred location for additional CD&E waste recovery capacity. CD&E waste recovery facilities are often appropriately located on industrial estates and strategic employment areas, where they may be close to substantial demolition and refurbishment projects. In addition, they can be located at minerals workings, where the same processing equipment can be shared.

7.3.8 Its relatively remote position geographically, its natural geology and geography of water resources significantly restrict opportunities for non-hazardous landfill in Herefordshire because of the potential for adverse impacts on groundwater. EU law and national guidance from the Environment Agency restrict or prevent landfill and land raising sites where there is a significant risk that water quality could be adversely affected. Consequently, there have been no sites identified for non-hazardous waste disposal facilities.

7.3.9 There remains an identified need for inert waste disposal and sites have been proposed for this purpose. The inert wastes remaining after CD&E waste recycling, and the recovered

materials, can be put to good use in the reclamation of former mineral workings. There is no order of preference within the locations identified for the disposal of inert wastes.

- 7.3.10 The deposit of CD&E waste materials is likely to require an Environmental Permit, the application for which should be twin-tracked with the planning application. Only clean, uncontaminated, inert materials should be deposited and a hydrological impact assessment is likely to be required, to consider the impact on groundwater quality and quantity.
- 7.3.11 Reference should also be made to Directive 2006/21/EC of the European Parliament and the Council on the management of waste from extractive industries (as may be amended) commonly known as the Mining Waste Directive. Guidance on the application of the Mining Waste Directive is available from the Environment Agency.<sup>44</sup>

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## **Policy W6: Preferred locations for construction, demolition and excavation waste management facilities**

- 1. In order of preference, sustainable recovery of construction, demolition and excavation wastes will be delivered at the following locations:**
  - a. Former Lugg Bridge Quarry, subject to the key development criteria set out at Appendix A;**
  - b. strategic employment areas and industrial estates, subject to the key development criteria set out at Appendix A;**
  - c. active mineral workings, recognising that the lifetime of the waste treatment facility may be limited to the lifetime of the quarry;**
- 2. The sustainable disposal of inert wastes will be delivered at the following locations (presented in alphabetical order) subject to the key development criteria set out at Appendix A:**
  - Shobdon Quarry (including the consented area);**
  - Upper Lyde Quarry (including the consented area);**
  - Wellington Quarry (including the consented area).**

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## **7.4 Waste Management Operations**

- 7.4.1 The Draft MWLP is not technology specific, recognising that waste treatment facilities are wide ranging and incorporate:
- composting facilities;
  - recycling facilities;
  - mechanical processes that will recover materials; and
  - biological or incineration processes that will recover materials and/or energy, either as a gas, heat and/or electricity.

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<sup>44</sup> <https://www.gov.uk/government/publications/environmental-permitting-guidance-the-mining-waste-directive>

- 7.4.2 A waste treatment facility not designed to recover energy would be expected to produce a valued material, for example recovered recyclables such as glass and metal or secondary recovered fuel that would be used to generate heat or electricity elsewhere.
- 7.4.3 Energy recovery is placed beneath materials recovery in the waste hierarchy. However, it has a beneficial role to play and this is recognised in national policy, in terms of both sustainable waste management and provision of a decentralised, renewable and/or low carbon energy source. Furthermore, beneficial materials can also be recovered, including digestate from anaerobic digestion facilities and glass, metal and secondary aggregate after combustion. Proposals incorporating combined heat and power (CHP) or electricity generation will help national policy objectives and should be encouraged as such in the draft MWLP.
- 7.4.4 In order to assist both the developer and the council to determine that a proposed facility is for energy recovery and not for waste disposal, policy W7 seeks information on the level of energy recovery expected to be achieved and the market(s) for that energy (e.g. identifying an electricity connection or heat/power recipient).
- 7.4.5 The disposal of inert wastes can be put to good use in the reclamation and restoration of land, particularly former minerals workings. This is to be encouraged at appropriate locations, so long as a satisfactory form of reclamation is proposed, with suitable after-use and comprehensive restoration scheme.
- 7.4.6 Planning permission will not be granted for inert waste disposal unless satisfactory proposals have been made for the reclamation and after-use of the site, and means of securing these in the long-term.
- 7.4.7 Planning applications for waste management activities should provide an appropriate level of detail to inform a reasonable degree of certainty on the planning application and to ensure the principle of the development and use of the land is acceptable with cross reference to permitting constraints.

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## **Policy W7: Waste management operations**

- 1. Facilities for the reuse, recycling or recovery of materials shall be permitted where it is demonstrated that the proposed development will enable delivery of the waste hierarchy and/or make a positive contribution to achieving the circular economy in Herefordshire.**
- 2. Facilities for the recovery of energy shall only be permitted where it is demonstrated:**
  - a. that the proposed development will enable delivery of the waste hierarchy and/or make a positive contribution to achieving the circular economy in Herefordshire; and**
  - b. that phosphorus in the fly ash will be separately recovered and put to beneficial use;**
  - c. that both the resultant heat and power will be utilised where viable.**
- 3. Proposals for new landfill or landraising facilities or extensions to existing facilities shall be permitted where it is demonstrated that the proposed development will enable delivery of the waste hierarchy and the proposal incorporates measures for safe working and satisfactory reclamation, particularly in accordance with policy SP4.**

- 4. Planning permission may be granted if these expectations are demonstrated to be unachievable but that a material level of benefit is otherwise gained and no unacceptable adverse impact results from the proposed development.**
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## 8. Delivery, Implementation and Monitoring

### 8.1 Delivery

- 8.1.1 As is made clear in the Core Strategy, infrastructure includes waste management and sewerage facilities. Even as elements of the infrastructure necessary to deliver sustainable development within Herefordshire, such development proposals are also subject to Core Strategy Policy ID1.
- 8.1.2 Mineral workings may also impact upon existing services and facilities in the area local to the site being worked and can also be subject to Core Strategy Policy ID1. Delivering sustainable mineral and waste disposal development requires a comprehensive approach, looking from the start of operations, through the life of the quarry/landfill, and beyond restoration, ensuring a positive legacy remains into the future.
- 8.1.3 Where it is necessary, relevant to planning, directly related to the proposed development, fairly and reasonably related in scale and kind to the proposed development, and reasonable in all other aspects, a planning obligation will be required in order to secure any or all of the following:
- a. infrastructure provision;
  - b. measures to mitigate the effects of development and provide monitoring;
  - c. long term management following the statutory 5 year aftercare period;
  - d. public access;
  - e. community benefits.
- 8.1.4 The planning obligation may either commit the developer to delivering the agreed provision directly or to make a suitable financial contribution to its delivery.
- 8.1.5 The council expects the developer to provide for all infrastructure works necessary to make the development proposal acceptable. Development should be phased appropriately to take account of critical infrastructure delivery and seek positively to contribute towards local infrastructure improvements, including the provision of green infrastructure, public access and community benefits.
- 8.1.6 Where necessary, routing agreements and/or travel plans may be sought to control and alleviate the effects of traffic movements. For example, in order to avoid environmentally sensitive places or local conditions of congestion on the highway network.
- 8.1.7 Developers will be expected to provide for the recording, preserving and future management of important archaeological, heritage, geological, ecological and water features as appropriate to the development proposal. Monitoring may be required, for example of: water quality, quantity or flow; air quality; or site stability. The developer will be expected to provide for this monitoring and for any remedial action reasonably required.
- 8.1.8 The developer's accountability does not end with restoration and statutory aftercare. Reclamation schemes may require longer than five years to become fully established and recognised as functional. Planning obligations will be sought in order to secure the after-use, long-term management and maintenance of the site and any associated land.

- 8.1.9 Public access to the outdoors is important for quality of life and well-being; reclaimed minerals and waste sites can make a valuable contribution to this resource. Conversely, it may be necessary to restrict public access across some areas, for example due to safety hazards or to protect a particular habitat. Planning obligations will be sought in order to secure the long- term availability and maintenance of public access to appropriate areas within mineral workings and restored sites, this might include the ability to secure compensatory provision in the event that public rights of way or open spaces are subject to closure.
- 8.1.10 To help redress the burden placed on local communities throughout the life of mineral workings and landfill sites, such development will be expected to plan positively for the provision and use of shared space, community facilities and other local services to enhance the sustainability of communities and residential environments.
- 8.1.11 Wherever possible, development should add value by considering the opportunities or benefits that can be provided, for example through design, to help meet local community aspirations or contribute to addressing local infrastructure constraints identified within the Core Strategy or other development plan documents of the Herefordshire Local Plan.
- 8.1.12 Planning obligations may be sought to secure the provision, and where appropriate maintenance, of community benefits. Such contributions are not limited to the restoration phase and should be made at the earliest opportunity.

## **8.2 Implementation**

- 8.2.1 Delivery of the objectives of the Minerals and Waste Local Plan will be highly reliant on the minerals and waste sectors.
- 8.2.2 Consequently, policy has been prepared with the intention of making Herefordshire an attractive place for these businesses to develop, whilst also providing clarity about where development is expected to be located and the standards to be achieved, so as to protect the interests of existing communities across the county.

## **8.3 Monitoring**

- 8.3.1 The MWLP will sit beneath the Core Strategy and together these local plan documents present the development plan for minerals and waste development. Table 3 presents the key Core Strategy policies that are relevant to each Draft MWLP policy in terms of implementation and identifies how each Draft MWLP policy would be monitored over the plan period.
- 8.3.2 Throughout the lifetime of the MWLP, it will be necessary to monitor and review the policies to determine the extent to which each is being implemented, and the degree to which implementation is achieving objectives. Where any targets are not on track, the Annual Monitoring Report (AMR) should also include an assessment of the reasons why.
- 8.3.3 The AMR will gather relevant information and identify whether policy targets are being achieved or not. It will highlight any concerns about policy performance. If policies are shown to be failing to perform, Herefordshire Council will consider if it is appropriate to review the appropriate policy. The justification for this will be made clear in the AMR.
- 8.3.4 In the pre-submission plan, the monitoring framework also includes indicators to monitor the likely significant impacts of the MWLP, taken from the sustainability appraisal. One of the aims of monitoring as specified by the Strategic Environmental Assessment Directive is to

identify unforeseen adverse effects in order to be able to take appropriate remedial action. To enable this to be done, the indicators from the sustainability appraisal also include monitoring potential sustainability impacts which are not expected to occur as foreseen by the appraisal.

- 8.3.5 It should be remembered that not all the information will be readily available annually. For example, the Environment Agency is responsible for collecting information on C&I, C&D and hazardous waste and recording this it within the Waste Data Interrogator, with an annual update being made available.<sup>45</sup> However, this only reports on the quantities and types of waste that operators of regulated waste management facilities deal with ; it does not identify all wastes generated and cannot easily be used to identify levels of recycling or recovery.
- 8.3.6 The monitoring framework is restricted to the planning permissions granted because it is up to the minerals and waste industries to open or construct and operate the development for which planning permission has been gained. Similarly, the monitoring cannot readily take account of waste management facilities that may cease to operate during the plan period.
- 8.3.7 Clearly, the MWLP must be able to respond to changing needs and circumstances. This will include assessing the potential impacts of new or updated national and local policy and guidance. This will be addressed in the AMR.
- 8.3.8 There are three key policy areas addressed in the Draft MWLP, identifiable at this stage, which could lead to a need for review. These are:
- To ensure that adequate landbanks of sand and gravel and/or crushed rock are maintained in the latter part of the Draft MWLP period. This will be influenced by the actual level of demand for these minerals that arises during the earlier years of the Draft MWLP and whether suitable proposals are brought forward on sites or areas identified in the Draft MWLP. This matter will be kept under review, including through the preparation of an annual Local Aggregates Assessment, with review of the relevant policies and any further requirement for site allocations or areas carried out as necessary.
  - To ensure that equivalent self-sufficiency is achieved in terms of waste management capacity, delivering a circular economy in Herefordshire and ensuring that waste management makes its contribution to achieving sustainable communities. This matter will be kept under review through monitoring of the Draft MWLP, including consideration of the type and tonnage of new waste management development.
  - To respond to new issues arising out of any further exploration activity for shale gas within Herefordshire.
- 8.3.9 It is intended that, in addition to annual monitoring, an intermediate and more comprehensive review of the Draft MWLP is undertaken at least every five years. Not only will this enable compliance with Regulation 10A of The Town and Country Planning (Local Planning) (England) Regulations 2012 (as amended), this approach will also deliver early identification of any need for action prior to the end of the plan period, and enable a good evidence base to be prepared such that any new policies can be adopted in a timely manner.
- 8.3.10 These elements are drawn together for each policy in Table 3.

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<sup>45</sup> <https://www.gov.uk/guidance/how-to-access-waste-management-data-for-england>

**Table 3 Delivery, Implementation and Monitoring**

Draft MWLP Policy	Key Core Strategy Policy	MWLP policy will be delivered by	Indicators to monitor effectiveness
<b>Strategic</b>			
SP1: Resource Management	SS1; SS7	Herefordshire Council continuing engagement with other public bodies, local businesses, community groups and the general public to raise awareness of the financial and environmental benefits of sustainable waste management.  Development management process and sustainable resource use by developers.	Record of activities undertaken by Herefordshire Council, including indication of effect (qualitative or quantitative).  Record of audits received and innovative solutions presented.
SP2: Access to open space and recreation from minerals and waste development	OS1; OS2; OS3	Development management process and sustainable solutions proposed by developers.	Record of new public access to outdoor spaces and impact on open spaces and rights of way.
SP3: Transport within sites	SS4 MT1	Development management process and sustainable solutions proposed by developers.	Record of on-site transport methods and associated green infrastructure.
SP4: Reclamation	SD1; SD2; SD3; SD4	Development management process and sustainable solutions proposed by developers.	Record of reclamation achieved and associated green infrastructure.
<b>Minerals</b>			
M1: Mineral Strategy	SS1; SS4; SS6; SS7 RA6; MT1; E1; ID1 LD1; LD2; LD3; LD4	Development management process making appropriate decisions considering the development plan and all other material considerations.	Record of alternative materials used to primary minerals.

	SD1; SD2; SD3; SD4		Permitted reserve of new mineral workings and record of their location.
M2: Safeguarding of mineral resources from sterilisation	SD1	Development management process making appropriate decisions, considering the development plan and all other material considerations.	Record of development undertaken within the Minerals Safeguarding Areas.
M3: The winning and working of sand and gravel	SS1; SS4; SS6; SS7 OS1; MT1; E1; ID1 LD1; LD2; LD3; LD4 SD1; SD3; SD4	Submission of planning applications and the development management process making appropriate decisions, considering the development plan and all other material considerations.	Permitted reserve of new mineral workings and record of their location.  Record of permitted reserve worked annually and destination of mineral.
M4: The winning and working of crushed rock (limestone)	SS1; SS4; SS6; SS7 OS1; MT1; E1; ID1 LD1; LD2; LD3; LD4 SD1; SD3; SD4	Submission of planning applications and the development management process making appropriate decisions, considering the development plan and all other material considerations.	Permitted reserve of new mineral workings and record of their location.  Record of permitted reserve worked annually and destination of mineral.
M5: The winning and working of building stone (sandstone)	SS1; SS4; SS6; SS7 OS1; MT1; E1; ID1 LD1; LD2; LD3; LD4 SD1; SD3; SD4	Submission of planning applications and the development management process making appropriate decisions, considering the development plan and all other material considerations.	Permitted reserve of new mineral workings and record of their location.  Record of permitted reserve worked annually and destination of mineral.
M6: Borrow Pits	SS1; SS4; SS6; SS7 OS1; MT1; E1; ID1 LD1; LD2; LD3; LD4 SD1; SD3; SD4	Submission of planning applications and the development management process making appropriate decisions, considering the development plan and all other material considerations.	Record of permitted borrow pits, their location and level of interaction with associated construction project.

Waste			
W1: Waste Strategy	SS1; SS4; SS6; SS7 RA5; RA6 MT1; E1; ID1 LD1; LD2; LD3; LD4 SD1; SD2; SD3; SD4	Development management process making appropriate decisions, considering the development plan and all other material considerations.	Data from Economic Development Team to indicate circular economy type activity.  Capacity of new waste management facilities by type.
W2: Solid waste management requirements	SS1; SS4; SS6; SS7 OS1; MT1; E1; ID1 LD1; LD2; LD3; LD4 SD1; SD2; SD3; SD4	Submission of planning applications and the development management process making appropriate decisions, considering the development plan and all other material considerations.	Capacity of new waste management facilities by type as set out in policy.  Record of source of waste.
W3: Agricultural waste management	SS1; SS4; SS6; SS7 MT1; ID1 LD1; LD2; LD3; LD4 SD1; SD2; SD3; SD4	Development management process making appropriate decisions, considering the development plan and all other material considerations.  Sustainable waste management practices promoted by farmers and land owners.	Record of waste management practice(s) presented and water quality assessments of the River Wye and River Lugg.
W4: Wastewater management	SS1; SS4; SS6; SS7 MT1; E1 ; ID1 LD1; LD2; LD3; LD4 SD1; SD2; SD3; SD4	Development management process making appropriate decisions, considering the development plan and all other material considerations.  Sustainable waste management practices promoted by the relevant utility company.	Record of waste management practice(s) presented and water quality assessments of the River Wye and River Lugg.

<p>W5: Preferred locations for solid waste treatment facilities</p>	<p>SS1; SS4; SS5; SS6; SS7            HD1; HD5; HD6; HD7            BY1; KG1; LB1; LO1; LO2; RW1            OS1; MT1; E1; ID1            LD1; LD2; LD3; LD4            SD1; SD2; SD3; SD4</p>	<p>Submission of planning applications and the development management process making appropriate decisions, considering the development plan and all other material considerations.</p>	<p>Capacity of new waste treatment facilities by type, size and location.</p>
<p>W6: Preferred locations for construction, demolition and excavation waste facilities</p>	<p>SS1; SS4; SS5; SS6; SS7            HD1; HD5; HD6; HD7            BY1; KG1; LB1; LO1; LO2; RW1            OS1; MT1; E1; ID1            LD1; LD2; LD3; LD4            SD1; SD2; SD3; SD4</p>	<p>Submission of planning applications and the development management process making appropriate decisions, considering the development plan and all other material considerations.</p>	<p>Capacity of new waste management facilities by type, size and location.</p>
<p>W7: Waste management operational expectations</p>	<p>SS1; SS7            LD1; LD2; LD3; LD4            SD1; SD2; SD3; SD4            ID1</p>	<p>Submission of planning applications and the development management process making appropriate decisions, considering the development plan and all other material considerations.</p>	<p>Data from Economic Development Team to indicate circular economy type activity.            Record of materials and/or energy recovered and indication of final destination.            Record of reclamation progress and innovative/integrated solutions presented.</p>

## 9. Glossary

Term	Description
<b>A</b>	
Aggregates	Sand and gravel, crushed rock and other bulk materials used in the construction industry for purposes such as the making of concrete, mortar, asphalt or for roadstone, drainage or bulk filling.
Agricultural waste	Includes a variety of substances such as pesticides containers, oil and silage wrap, as well as slurry which result from activities including horticulture, fruit growing, dairy farming, livestock breeding, seed growing, grazing and nurseries.
Airfield (aerodrome) safeguarding	Aerodromes need to take measures necessary to ensure safety of aircraft while flying in the vicinity of an aerodrome. Planning applications should meet certain criteria relating to height and location of proposed development to the aerodrome. Any proposed development with bird attractant properties, within 13km of an aerodrome needs to be consulted upon.
Anaerobic digestion	The process by which biodegradable material is broken down in the absence of oxygen in an enclosed vessel, yielding carbon dioxide, methane and solids/liquors, which can be used as fertilizer or compost.
Area of Outstanding Natural Beauty (AONB)	A statutory landscape designation, which recognises that a particular landscape is of national importance. The special qualities of the AONB encompass natural beauty, amenity, heritage and landscape assets. The primary purpose of the designation is to conserve and enhance the natural beauty of the landscape.  Parts of the Wye Valley and Malvern Hills AONB lie within Herefordshire.
Appropriate assessment	Process for assessing impacts on European sites, habitats or species. It is a decision making tool.
Aquifers	An aquifer is an underground layer of water-bearing permeable rock or unconsolidated materials (gravel, sand, or silt) from which groundwater can be extracted.
Area of search	An area identified as having minerals resources potentially suitable for extraction and where working may be acceptable subject to more detailed assessment at project stage.
<b>B</b>	
Best and most versatile land	Land in grades 1, 2 and 3a of the Agricultural Land Classification.
Biodegradable waste	Includes food waste, garden waste and cardboards, which can decompose without any assistance.
Biodiversity	The variety of plants and animal life on earth, encompassing the diversity of habitats, species and genetic variation. Biodiversity provides our life support system as well as having social and economic value.
Biodiversity Action Plan (BAP)	Local BAP identify national and local targets for species and habitats conservation and actions.

Borrow pit	Site where mineral (often aggregate) is excavated specifically for a construction project nearby.
Building stone	Hard rock types suitable for use directly for construction in the form of walling, roofing, flagstones or for ornamental purposes. In the plan area the principle rock type used as building stone is sandstone.
<b>C</b>	
Circular Economy	An approach to resource management, seeking to keep materials at their highest value for the longest period of time.
Climate change	The term climate change is generally used when referring to changes in our climate, which have been identified since the early parts of the 1900s. The changes that we have seen over recent years, and those which are predicted over the next 80 years, are thought by many to be mainly as a result of human behavior, rather than due to natural changes in the atmosphere.
Coal mining legacy	Disused mines which give rise to land stability issues and other hazards. The Coal Authority map and monitor the mines and highlight public safety hazards and risk associated with them.
Coal mining risk assessment	Needs to be carried out by applicant in Development High Risk Areas and submitted alongside a planning application.
Commercial and industrial waste	Produced by a range of sectors which can be separated into commercial groups (including Retail & Wholesale, Public Services and other services) and industrial groups (including food, drink & tobacco, chemical/non-metallic minerals, power and utilities, metal manufacturing, machinery and equipment and textiles, wood and paper publishing).
Composting	Aerobic processing of biologically degradable organic wastes to produce an end product of compost.
Construction, demolition and excavation waste	Waste which arises from activities such as construction, refurbishment, demolition or excavation. It includes items such as plasterboard, bricks, soils, minerals, glass, metals and tiles.
Conventional hydrocarbons	Oil and gas where the reservoir is in porous rock such as sandstone or limestone and can be extracted using traditional drilling techniques.
Crushed rock	Hard rock (in Herefordshire, limestone) which has been quarried, fragmented and graded for use as aggregate.
<b>D</b>	
Developer contributions	This includes section 106 agreements and the Community Infrastructure Levy (CIL).
<b>E</b>	
Ecosystem services	Can be simply described as the benefits people obtain from ecosystems. These include: provisioning services (food and water); regulating services (flood and disease control); cultural services (such as spiritual and cultural benefits); and supporting services (such as nutrient cycling that maintains conditions for life on Earth).
Energy from waste	The conversion of waste into a useable form of energy, often electricity and/or heat.

Environmental assets	Features in the physical environment that are valued for a variety of cultural and scientific reasons.
Evidence base	The information and data gathered by local authorities to justify the 'soundness' of the policy approach set out in development plan documents, including physical, economic and social aspects of the area.
<b>F</b>	
Floodplain	This is identified as the area of land at risk of flooding, when water flowing into a watercourse channel overtops its banks.
Flood alleviation	Measures put in place to lower or eliminate the risk of flooding in developed areas.
Flood zone	An area identified by the Environment Agency as being at risk of flooding, flood zone 3 having the greatest risk.
<b>G</b>	
Geodiversity	The range of rocks, minerals, fossils, soils and landforms.
Greenfield land	Land that has not been previously developed, often in agricultural use.
Green infrastructure	A planned and delivered network of green spaces and other environmental features designed and managed as a multifunctional resource providing a range of environmental and quality of life benefits for local communities. Green infrastructure includes parks, open spaces, playing fields, woodlands, allotments and private gardens.
Groundwater source protection zones	Protection zones for groundwater supplies such as wells, boreholes and springs including those used for public drinking water supply. Displayed on maps and used to help prevent contamination of the water.
<b>H</b>	
Habitats Regulation Assessment	A Habitats Regulations Assessment is the assessment of the impacts of implementing a plan or policy on a Natura 2000 site. Its purpose is to consider the impacts of a land use plan against conservation objectives of the site and to ascertain whether it would adversely affect the integrity of the site. Where significant negative effects are identified, alternative options should be examined to avoid any potential damaging effects.
Hazardous waste	Waste that may cause particular harm to human health or the environment.
Heritage asset	A building, monument, site, place, area or landscape identified as having a degree of significance meriting consideration in planning decisions, because of its heritage interest. Heritage asset includes designated assets and assets identified by the local planning authority.
Historic environment	All aspects of the environment resulting from the interaction between people and places through time, including all surviving physical remains of past human activity, whether visible, buried or submerged, and landscaped and planted or managed flora.
<b>I</b>	
Incineration with energy recovery	Burning of waste in an incinerator and using the energy produced as heat or as electrical energy.

Infrastructure	A collective term for services such as roads, electricity, sewerage, water, social services, health facilities and recycling and refuse facilities. For minerals development this also includes the plant necessary to work the mineral before it leaves the site.
Infrastructure delivery plan	This sets out details of the infrastructure required to support development in the future.
<b>L</b>	
Landbank	A landbank is a stock of land with planning permissions for the winning and working of minerals, usually expressed in terms of assumptions about annual production rates.
Landfill site	The place where controlled waste is deposited. References to landfill may also refer to land raising and waste disposal.
Landscape	An area, as perceived by people, the character of which is the result of the action and interaction of natural and/or human factors.
Local Aggregates Assessment (LAA)	An annual assessment, prepared by mineral planning authorities, of aggregate minerals supply requirements in a planning area or areas.
Local Authority Collected Waste (LACW)	Household waste plus other similar waste collected and managed by local authorities.
Low level (non-nuclear) radioactive waste (LLR waste)	Waste, not derived from the nuclear industry and having a radioactive content not exceeding four gigabecquerels per tonne (GBq/te) of alpha or 12 GBq/te of beta/gamma activity.
<b>M</b>	
Mechanical biological treatment (MBT)	Involves processing residual waste by a combination of both mechanical and biological treatment methods.
Mechanical recovery facility (MRF)	Actively alters the composition of waste in order to produce an end product that can be utilised.
Mineral safeguarding areas (MSA)	Areas defined by mineral planning authorities to protect potentially economic resources of minerals from other forms of development which may prevent future extraction of the mineral.
Mitigation	Measures taken to reduce adverse impacts; for example, changing the way development is carried out to minimise adverse effects through appropriate methods or timing.
Monitoring	Process where outcomes of policies and proposals are checked on a continuous or periodic basis, in order to assess their effectiveness and impact.
Municipal waste	Comprises mainly household and some other waste for which the waste collection and disposal authorities have responsibility forms an element of LACW, which includes similar C&I waste collected by local authorities.
Municipal Waste Management Strategy	Strategy produced by waste management authorities which outlines targets for dealing with municipal waste within their area.
<b>N</b>	

National Planning Policy Framework	This sets out the Government's planning policies for England and is the framework within which Herefordshire Council has produced the Local Plan – Core Strategy.
<b>O</b>	
Oil and Gas Authority	Oil and gas regulator in the UK.
Open space	All open space of public value, including not just land, but also areas of water (such as rivers, canals, lakes and reservoirs), which offer important opportunities for sport and recreation and can act as a visual amenity.
<b>P</b>	
Petroleum Exploration and Development Licence (PEDL)	PEDLs cover the three main stages of petroleum activity which are: exploration; appraisal; and development. The licence provides exclusivity to the holder to undertake seismic investigations, drill wells and develop discoveries. PEDLs are issued by the Oil and Gas Authority, an Executive Agency of the Department for Business, Enterprise, Industry and Skills.
Preferred area of search	An area identified as having policy support for development, but where it is not practicable to define a specific development boundary.
<b>R</b>	
Ramsar Site	A site designated for conservation under the Ramsar Convention on Wetlands of International Importance especially as Waterfowl Habitat, also known as the Convention on Wetlands. The Convention is an international treaty for the conservation and sustainable use of wetlands. It is named after the city of Ramsar in Iran, where the Convention was signed in 1971.
Reclamation	Restoring land that was once used for mineral extraction or as a landfill, in order to return it to a condition suitable for some other beneficial use.
Renewable energy	Power derived from a source that is continually replenished, such as wind, wave, solar, hydroelectric and energy from plant material, but not fossil fuels or nuclear energy.  The biogenic content of waste is important in terms of considering energy from waste as renewable. Energy from residual waste is therefore a partially renewable energy source, sometimes referred to as a low carbon energy. In a typical household waste bag, somewhere between one half and two thirds will contain biogenic materials.
Residual waste	Waste which cannot be recycled or otherwise dealt with further up the waste hierarchy.
River Wye SAC Nutrient Management Plan	Prepared by Natural England and the Environment Agency the Plan for the River Wye, this will aim to control and reduce phosphates in the SAC to facilitate the delivery of the proposed development.
<b>S</b>	
SAC Special Area of Conservation	A Special Area of Conservation (SAC) is defined in the European Union's Habitats Directive (92/43/EEC), also known as the Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora.
Safeguarding	Protection of specific resource or site from being adversely impacted by alternative or encroaching development.
Self-sufficiency	The European Community (EC) Framework Directive on Waste and the EC Landfill Directive set out a common framework for action on waste. Waste management should

	protect human health and the environment by establishing an integrated network of waste facilities. Member States should promote self-sufficiency by dealing with waste as close as possible to its point of origin and promoting waste avoidance by recycling, reclamation and energy recovery.
Source protection zone	Environment Agency defined zones that include boreholes, springs and wells used for public drinking supply and certain commercial uses and so need protection from pollution.
SPA Special Protection Area	A Special Protection Area (SPA) is a designation under the European Union Directive on the Conservation of Wild Birds. Under the Directive, Member States of the European Union (EU) have a duty to safeguard the habitats of migratory birds and certain particularly threatened birds.
Sustainable development	In broad terms, this means development that meets the needs of the present without compromising the ability of future generations to meet their own needs.
Sustainable drainage systems (SuDS)	Measures introduced in developments that aim to minimise surface water run-off and the level of waste water generated by the development. These can include use of reed beds to filter water and water storage areas.
<b>U</b>	
Unconventional hydrocarbons	Oil or gas that cannot be extracted using traditional drilling techniques and include underground coal gasification, coal bed methane and shale gas.
<b>W</b>	
Waste hierarchy	A guiding theme for waste policy at all levels. Seeks the sustainable management of waste by giving preference to waste management methods towards the top of the hierarchy (such as prevention, re-use and recycling) over methods lower down the hierarchy (such as recovery and disposal).
Waste management facilities	These include facilities for waste treatment and disposal.
Waste recovery	Processing waste to prevent it going to landfill. Recovery processes include incineration with energy recovery, advanced thermal treatment, anaerobic digestion and composting.
Wastewater	Water that is disposed of at domestic properties or through commercial and industrial activities.
<b>Z</b>	
Zero waste economy	Where material resources are re-used, recycled or recovered wherever possible, and only disposed of as the option of very last resort.

## Contents

<b>1. The Publication Draft Minerals and Waste Local Plan for Herefordshire .....</b>	<b>1-1</b>
1.1 About this document.....	1-1
<b>1.2 Consultation Details.....</b>	<b>1-1</b>
<b>2. Introduction and Background .....</b>	<b>2-1</b>
2.1 The Herefordshire Local Plan.....	2-1
2.2 Timeframe, scope and purpose of the MWLP.....	2-1
2.3 Why does Herefordshire need to plan for minerals and waste?.....	2-2
2.4 Evidence Base .....	2-3
British Geological Survey.....	2-3
Coal Authority .....	2-4
Call for Sites .....	2-4
Minerals and Waste Need Assessments.....	2-4
Local Aggregate Assessment.....	2-4
Minerals Safeguarding Studies.....	2-5
Sustainability Appraisal, Habitats Regulation Assessment and Strategic Flood Risk Assessment.....	2-5
2.5 Flexibility.....	2-5
2.6 Consultation.....	2-6
<b>3. Context.....</b>	<b>3-1</b>
3.1 Spatial portrait of the plan area.....	3-1
Overview.....	3-1
Minerals.....	3-2
Waste.....	3-6
Minerals and waste development.....	3-9
3.2 Working with other authorities.....	3-9
Local Authority Collected Waste.....	3-9
Duty to co-operate.....	3-10
3.3 Policy Context.....	3-10
European.....	3-10
National policy.....	3-11
Local policies and strategies.....	3-14
Future change in policy .....	3-16

3.4 Issues and Challenges .....	3-16
Minerals.....	3-16
Waste.....	3-17
General.....	3-17
<b>4. Vision, Objectives and Spatial Strategy .....</b>	<b>4-1</b>
4.1 Vision .....	4-1
4.2 Strategic Objectives.....	4-2
4.3 Spatial Strategy.....	4-4
<b>5. Strategic Policy and General Principles .....</b>	<b>5-1</b>
5.1 Principles .....	5-1
5.2 Sustainable Development – Core Strategy policy SS1 .....	5-1
5.3 Movement and transportation.....	5-2
Core Strategy policies SS4 and MT1.....	5-2
5.4 Environmental Quality and Local Distinctiveness – Core Strategy policies SS6; LD1; LD2; LD3; and LD4.....	5-3
Landscape and townscape – Core Strategy policy LD1.....	5-4
Biodiversity and geodiversity – Core Strategy policy LD2.....	5-5
Green infrastructure – Core Strategy policy LD3 .....	5-7
Historic environment and heritage assets – Core Strategy policy LD4 .....	5-8
5.5 Addressing Climate Change.....	5-8
Core Strategy policy SS7 .....	5-8
Resource Management, MWLP policy SP1 .....	5-9
<i>Waste prevention</i> .....	5-9
<i>Resource audit</i> .....	5-10
5.6 Access to open space and recreation from minerals and waste development.....	5-12
Core Strategy policies OS1 to OS3.....	5-12
Access to open space, MWLP policy SP2.....	5-12
5.7 Sustainable design and energy efficiency – Core Strategy policy SD1.....	5-13
Aviation safety.....	5-13
Dust.....	5-14
Land instability.....	5-14
Noise.....	5-15
Odour .....	5-15

Utilities .....	5-15
Vibration.....	5-16
Visual intrusion .....	5-16
5.8 Renewable and low carbon energy generation – Core Strategy policy SD2.....	5-16
5.9 Sustainable water management and water resources – Core Strategy policy SD3 .....	5-16
5.10 Transportation within sites – MWLP policy SP3 .....	5-17
5.11 Reclamation of sites – MWLP policy SP4 .....	5-18
Policy SP4: Site Reclamation.....	5-20
<b>6. Minerals .....</b>	<b>6-1</b>
6.1 Minerals Strategy .....	6-1
Safeguarding .....	6-3
6.2 Aggregates .....	6-6
Sand and gravel.....	6-6
Crushed rock (limestone).....	6-8
6.3 Building Stone .....	6-9
6.4 Borrow Pits.....	6-11
<b>7. Waste.....</b>	<b>7-1</b>
7.1 Waste Strategy .....	7-1
7.2 Waste Management Requirements.....	7-3
Solid Wastes.....	7-3
Agricultural Waste .....	7-6
Policy W3: Agricultural waste management .....	7-9
Wastewater.....	7-9
7.3 Spatial distribution of waste management sites .....	7-10
Solid Wastes.....	7-10
Construction, Demolition and Excavation Waste.....	7-11
7.4 Waste Management Operations .....	7-12
<b>8. Delivery, Implementation and Monitoring .....</b>	<b>8-1</b>
8.1 Delivery .....	8-1
8.2 Implementation .....	8-2
8.3 Monitoring.....	8-2
<b>9. Glossary.....</b>	<b>9-1</b>

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Supplementary Report  
to the Spatial Context  
and Sites Report

**Herefordshire Minerals and Waste Local Plan**

**March 2020**  
HENDECA LTD



## Contents

<b>1. Introduction</b> .....	<b>1-1</b>
1.1 Background and Purpose of the Report.....	1-1
1.2 Format of the Report.....	1-1
<b>2. Additional Site Analysis</b> .....	<b>2-1</b>
2.1 Introduction .....	2-1
2.2 Approach.....	2-1
2.3 Dark Skies.....	2-3
2.4 Outcome.....	2-7
<b>3. M23: Land at Arrow Green</b> .....	<b>3-1</b>
3.1 Introduction .....	3-1
3.2 Site Details.....	3-1
3.3 Assessment.....	3-3
3.4 Conclusion .....	3-3

## Annex

Annex A Each of the sites proposed to be allocated and the additional analysis undertaken



## 1. Introduction

### 1.1 Background and Purpose of the Report

- 1.1.1 Consultation on the Draft Minerals and Waste Local Plan (dated December 2018, the 'Draft MWLP 2018') and its accompanying evidence base documents occurred over the period 21 January to 4 March 2019. The Spatial Context and Sites Report (March 2018) was one of those accompanying documents.
- 1.1.2 Representations were received in response to the sites proposed to be allocated, as set out in Annex A to the Draft MWLP 2018. This included a detailed response from Historic England that sought greater detail regarding the analysis undertaken on those sites, principally focussing on nearby heritage assets and how resultant impacts from development at each of the proposed sites could be mitigated effectively.
- 1.1.3 In addition, the representations included a new site proposed for mineral extraction. This site has been subjected to the same analysis as the sites discussed in the Spatial Context and Sites Report.
- 1.1.4 This Supplementary Report to the Spatial Context and Sites Report (the 'Supplementary Sites Report') has been prepared both to:
- address comments made on the sites proposed to be allocated in the Draft MWLP 2018; and
  - assess the new site proposed at Arrow Green.

### 1.2 Format of the Report

- 1.2.1 This Supplementary Sites Report addresses the relevant matters in the following order:
- **Section 2** presents the additional site analysis undertaken in response to consultation representations; and
  - **Section 3** considers the new site proposed at Land at Arrow Green.



## 2. Additional Site Analysis

### 2.1 Introduction

- 2.1.1 Several representations were received making comment on the sites proposed to be allocated in the Draft MWLP 2018. All of these have been considered, not least through double checking all of the details relevant to each site.
- 2.1.2 Historic England's representation was of a more strategic nature and incorporated a number of comments regarding the level of detail contained within the Spatial Context and Sites Report. Following a meeting with Historic England, it was agreed that additional analysis would be undertaken for each of the sites proposed to be allocated.
- 2.1.3 Whilst Historic England's representation is made in regard to heritage assets only, the additional analysis has been undertaken across a broader range of environmental topics, using the headings of:
- Ecology;
  - Geology;
  - Heritage;
  - Landscape; and
  - Water.
- 2.1.4 In addition, a new piece of analysis has been undertaken, to consider the potential for impact on dark skies in Herefordshire.

### 2.2 Approach

- 2.2.1 The starting point for the additional analysis was Historic England's Advice Note 3, titled 'The Historic Environment and Site Allocations in Local Plans' (October 2015), principally the site selection methodology presented therein. This was used as the framework for the analysis.
- 2.2.2 Several of the previously used sources of information were revisited and this was supplemented with new sources of information. This additional research has enabled a fuller description of the constraints pertaining to each of the sites to be presented.
- 2.2.3 Using an understanding of the likely development at each of the sites proposed to be allocated, an assessment has been made of the potential impacts of that development in relation to the identified topics. This additional research has meant that each of the sites has been subject to further analysis, to check that it is appropriate to be allocated. In addition, the work has informed consideration of reasonable and appropriate mitigation measures, considered both to avoid harm but also to maximise enhancements.
- 2.2.4 The data sets that have been used to undertake this additional analysis are set out below, the use of parentheses indicate the source of that data:
- **Ecology and Geology:**
    - GIS data on Sites of Special Scientific Interest (SSSI) (open source data) and SSSI Impact Risk Zones (MAGIC website, Defra);

- GIS data on Natura 2000 sites (open source data);
- Data on biodiversity Priority Habitats and Species (MAGIC website, Defra);
- Data on veteran trees on the Historic Environment Record (Herefordshire Council);
- Data on veteran trees from the Ancient Tree Inventory (The Woodland Trust);
- GIS data on Local Wildlife Sites (LWS) (Herefordshire Council);
- GIS data on ancient woodland (open source data);
- Current Development in the River Lugg Catchment Area Position Statement (Herefordshire Council, October 2019, 'Herefordshire Council Position Statement'); and
- Advice on achieving nutrient neutrality for new development in the Solent Region for local planning authorities (Natural England, June 2019, 'NE Solent Region Advice').
- **Heritage:**
  - The Historic Environment Record (Herefordshire Council, the 'HER');
  - GIS data on Listed Buildings (open source data);
  - GIS data on Conservation Areas (open source data);
  - GIS data on Registered Parks and Gardens (open source data);
  - GIS data on Scheduled Ancient Monuments (open source data);
  - Data on heritage assets (MAGIC website, Defra);
  - Herefordshire County Archaeology and Minerals Resource Assessment (Herefordshire Council, April 2014);
  - The Lower Lugg Archaeology and Aggregates Project (Herefordshire Council, 2006/7, 'Lower Lugg AAP'); and
  - Crafta Webb, Bredwardine, Herefordshire, An Archaeological Investigation, Herefordshire Archaeology Report No. 277 (Herefordshire Council, 2006/07, 'Crafta Webb Report').
- **Landscape:**
  - Landscape character data (Herefordshire Council); and
  - Historic Landscape Characterisation data (Herefordshire Council).
- **Water:**
  - GIS data on major rivers (open source data);
  - GIS data on groundwater source protection zones (open source data);
  - Flood map for planning (on-line at Gov.UK);
  - Herefordshire Strategic Flood Risk Assessment, Level 1, and associated appendices (WSP, April 2019, 'Herefordshire SFRA 2019'); and
  - Herefordshire Minerals and Waste Strategic Flood Risk Assessment, Level 2, and associated appendices (WSP, January 2020, 'MWSFRA 2020').

- 2.2.5 In addition, and on the advise of and Ecology officer within Herefordshire Council, reference has been made to document titled 'The ecological effects of air pollution from road transport: an updated review', as prepared for Natural England (reference NECR199). Whilst NECR199 provides useful information, it is not readily transferable to the specific site allocations considered in this report. It would be appropriately referenced within the P'Draft MWLP for use in preparing planning applications.
- 2.2.6 All the comments made in the representations submitted in response to the Draft MWLP 2018 have been checked and incorporated where appropriate. Further discussions regarding particular sites and topics have also been undertaken with appropriate officers within Herefordshire Council, including the Archaeology Adviser and Principal Building Conservation Officer.
- 2.2.7 Reference has also been made to on-line mapping, aerial and 3D aerial images (all Ordnance Survey) to supplement the understanding of site layout and context gained previously from the site visits.

## 2.3 Dark Skies

- 2.3.1 In addition, a separate piece of work was undertaken to understand the impact of minerals and waste development on the night sky. The source for this work was GIS data provided by Campaign to Protect Rural England ('CPRE'). The CPRE's publicly available interactive tool is available on their website at <https://www.nightblight.cpre.org.uk/how-to-use-the-interactive-maps>. Similar to other rural counties, Herefordshire generally benefits from dark skies. A summary of CPRE position on light pollution is also provided on their website <https://www.nightblight.cpre.org.uk/cpre-s-view>.
- 2.3.2 The CPRE data is based on satellite imagery from the Suomi NPP weather satellite run by the National Oceanographic and Atmospheric Administration in America. The satellite captures visible and infrared imagery and passes over the UK at 1:30am, enabling light sources to be identified. The data used in this analysis was captured during September 2015 and the final CPRE dataset was created from a mosaic of cloud free images from that month.
- 2.3.3 The imagery identifies the amount of light shining up into the sky and is measured by the satellite in nanowatts (nw). The resulting imagery is divided into nine categories of brightness ranging from the 'Brightest' (>32 nw/cm<sup>2</sup>/sr) to 'Darkest' (<0.25 nw/cm<sup>2</sup>/sr).
- 2.3.4 The analysis by CRPE for the whole of England identifies Herefordshire as the third darkest county (after Northumberland and Cumbria) with 60% of the county lying in the darkest category and 88% of the county when combined with the next darkest category ([https://www.nightblight.cpre.org.uk/images/resources/Night\\_Blight\\_cpre.pdf](https://www.nightblight.cpre.org.uk/images/resources/Night_Blight_cpre.pdf)).
- 2.3.5 To help protect this expanse of 'dark skies', a more detailed analysis of the locations of the allocated sites was undertaken to identify any sites where consideration of light pollution should be prioritised. Hendeca took the site boundaries and applied a 500m buffer around each. The CRPRE 'Night Lights' dataset was then overlaid to give the minimum, maximum and mean values for 'night light levels'. This has been mapped across Herefordshire and is shown in Figure 2.1.

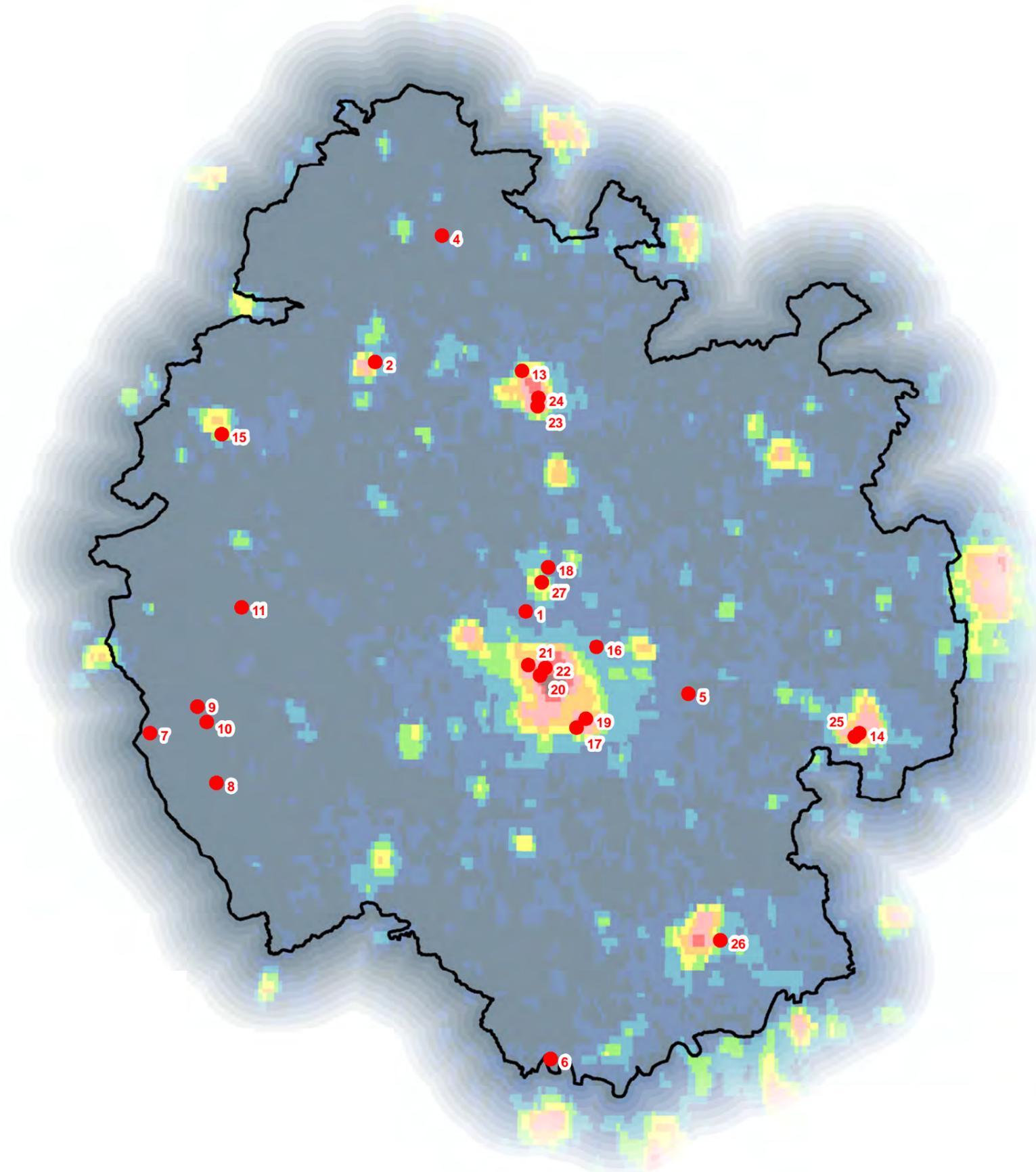
- 2.3.6 The 'Night Lights' dataset is provided at a resolution of 400m, i.e. the smallest area that can be analysed is based on a 400mx400m grid. Buffering by 500m allows for a margin of error in the locational accuracy of the night lights information and allows for neighbouring areas to be taken into consideration to allow for 'light bleed' impacts (i.e. the impacts of lights on the boundary of the site lighting up a larger area than just the light post location itself).
- 2.3.7 The analysis of minimum, maximum and mean values for 'night light levels' for each site is shown in Table 2.1. In this table, the site number is that used in Figure 2.1, and the sites are presented in order of the maximum night light level.
- 2.3.8 This work indicates four sites as being in an area of 'Darkest' sky (where the maximum brightness is less than 0.25 nw/cm<sup>2</sup>/sr). All are clustered in an area to the west of the county:
- Llandraw Delve;
  - Pennsylvani Delves;
  - Westonhill Wood Delves; and
  - Sunnybank Delve.
- 2.3.9 There are five sites located in the next range of maximum brightness (0.25 to 0.5 nw/cm<sup>2</sup>/sr):
- Black Hill Delve;
  - Callow Delve;
  - Perton Quarry;
  - Leinthall Quarry; and
  - Upper Lyde Quarry.
- 2.3.10 All of the sites located within an area of 'Darkest' sky and two of those in the next classification (0.25 to 0.5 nw/cm<sup>2</sup>/sr) are sandstone delves. These sites are generally worked by hand, or using light machinery, and with a minimal workforce. No substantial external lighting was observed at any of the delves. It is considered that extended working at these sites would have little effect on the night time light.
- 2.3.11 Perton and Leinthall Quarries are large, well-established, limestone quarries. Upper Lyde Quarry commenced extraction in 2019 for sand and gravel. All have planning permission for mineral extraction and proposed extension areas. All are likely to require some level of external lighting to ensure health and safety measures are implemented. Good lighting design should be capable of reducing the effect on the night sky to an acceptable level.

**Table 2.1 CPRE Darkest Skies analysis, Herefordshire**

Sites are by order of maximum night light level, lowest to highest

Map number	Site Name and reference	Dark Skies level (nanowatts /cm <sup>2</sup> / sr)		
		Min	Max	Mean
8	Llandraw Delve (M16)	0.06	0.18	0.13
9	Pennysylvani Delves (M17)	0.12	0.18	0.16
11	Westonhill Wood Delves (M20)	0.03	0.20	0.11
10	Sunnybank Delve (M18)	0.05	0.22	0.12
7	Black Hill Delve (M13)	0.09	0.25	0.17
6	Callow Delve (M12)	0.20	0.29	0.25
5	Perton Quarry (M10 and W48)	0.20	0.36	0.26
4	Leinthall Quarry (M07 and W46)	0.09	0.43	0.24
1	Upper Lyde Quarry (M03 and W43)	0.33	0.49	0.39
16	Former Lugg Bridge Quarry (W13)	0.50	0.97	0.75
15	Kington HWRC (W10)	0.49	3.44	1.56
18	Wellington Quarry (M05 and W45)	0.18	5.29	0.91
27	Moreton Business Park (W66)	0.36	5.29	1.78
26	Model Farm (W65)	0.67	5.31	1.80
13	Leominster HWS and HWRC (W05)	1.00	6.01	3.07
2	Shobdon Quarry (M04 and W44)	0.34	9.68	3.06
14	Ledbury HWRC (W07)	5.55	12.25	9.95
25	Land between Little Marcle Road and Ross Road (W64)	1.44	12.25	7.90
21	Three Elms Trading Estate (W60)	4.64	15.91	7.14
17	Former City Spares Site (W19)	3.73	16.15	7.81
19	Rotherwas Industrial Estate (Hereford Enterprise Zone) (W58)	0.98	16.15	6.62
23	Leominster Enterprise Park (W62)	1.19	20.02	13.51
24	Southern Avenue (W63)	2.95	20.02	14.36
22	Holmer Road (W61)	11.94	41.98	20.67
20	Westfields Trading Estate (W59)	4.15	53.29	19.75

Figure 2.1  
CPRE Darkest Skies  
analysis, Herefordshire



● Allocated Sites

**Night Lights**

(NanoWatts / cm<sup>2</sup> /sr)

>32 (high)

16 - 32

8 - 16

4 - 8

2 - 4

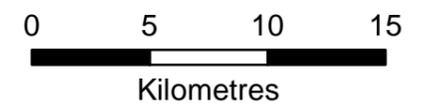
1 - 2

0.5 - 1

0.25 - 0.5

< 0.25 (low)

Night Lights information provided by CPRE based on their report "England's Light Pollution and Dark Skies"



SCALE  
1:300,000 @ A3

DATE  
29/11/2019

## 2.4 Outcome

2.4.1 Step 5 of Historic England's Advice Note 3 is to determine whether the proposed site allocation is appropriate in light of the tests of soundness, described in that document as:

- Positively prepared in terms of meeting objectively assessed development and infrastructure needs where it is reasonable to do so, and consistent with achieving sustainable development;
- Justified in terms of any impacts on heritage assets, when considered against reasonable alternative sites and based on proportionate evidence;
- Effective in terms of deliverability, so that enhancement is maximised and harm is minimised;
- Consistent with national policy in the National Planning Policy Framework, including the need to conserve heritage assets in a manner appropriate to their significance.

*'Decisions should be clearly stated and evidenced within the Local Plan, particularly where site allocations are put forward where some degree of harm cannot be avoided, and be consistent with legislative requirements.'*

2.4.2 Whilst the National Planning Policy Framework has been updated since publication of Advice Note 3, the tests as set out are consistent with the current national policy.

2.4.3 Having considered each of the sites within this assessment framework, it is concluded that they all remain suitable for allocation in their proposed form, apart from one site (M05g, Land east of Wellington Quarry).

2.4.4 The summary of this conclusion is presented below, by reference to the tests of soundness set out above.

- Positively prepared - Both the minerals and waste need assessments have been reviewed and updated throughout preparation of the Herefordshire MWLP. They demonstrate an objectively assessed level of development and infrastructure need within Herefordshire.
- Justified – The additional analysis has considered environmental impacts beyond heritage assets. None of the topics considered result in a likely impact of such magnitude that a site allocation would be inappropriate; it is reasonable to conclude that avoidance and mitigation will satisfactorily address all those constraints identified. The analysis demonstrates that, based on a proportionate evidence base, each of the site choices are justified and that all should be included in order to provide reasonable alternatives within the MWLP.
- Effective in terms of deliverability – All sites are subject to some limitation and those proposed to be allocated in the MWLP are no exception; however, all the sites are considered to be deliverable, even recognising some may be subject to constraints. They have all either been promoted or potentially made available by the landowner, or previously developed, and so are demonstrated to be deliverable in practicable terms too. The approach of policy requirements, incorporating the key development criteria, has been used previously and is demonstrated to be effective. The key development criteria have all been updated, so that those promoting development will be aware of the principal expectations for each site. The key development criteria set out both the constraints for which harm should be avoided and the opportunities for enhancement.

- Consistent with national policy in the National Planning Policy Framework – The selected sites are consistent with the objectives of national policy. In addition, policy of the MWLP, including the key development criteria, has been prepared cognisant of the current requirements of the National Planning Policy Framework, and to be consistent with it, unless there is a relevant local circumstance.

2.4.5 Annex A presents each of the sites proposed to be allocated and the additional analysis undertaken.

### **Key Development Criteria**

2.4.6 Each of the key development criteria relevant to each site has been updated. This review has incorporated some of the additional detail gained from this supplementary site assessment. However, this review has also removed some of the more generic key development criteria, topics that should expect to be addressed anyway, for example a requirement to demonstrate the effect on the local road network in the vicinity of the site (unless the access arrangements with the public highway are unusual).

## 3. M23: Land at Arrow Green

### 3.1 Introduction

- 3.1.1 The representations made to the Draft MWLP included submission of a potential new sand and gravel site, at Arrow Green, between Eardisland and Leominster (which lies to the east).
- 3.1.2 The site was taken through the same assessment process as those reported in the Spatial Context and Sites Report and is reported here.

### 3.2 Site Details

- 3.2.1 A series of fields lying to the south of Arrow Mill. The River Arrow runs through the site to the north, whilst the Moor Brook runs through the site to the south.

**Table M23: Land at Arrow Green**

Criteria		Notes
Viability		Submitted details suggest at least 550,000 tonnes of sand and gravel.
Availability		Proposed in representation made to Draft MWLP.
Deliverability	Infrastructure constraint	Access can be gained directed from the A4110, but sight lines are constrained. Site is within 5km of an airfield (Shobdon). Electricity/telephone wires cross the site.
	Human constraint	Housing at Arrow Green lies along the A4110.
	Environmental constraint	Within 5km of the River Lugg SSSI and Moseley Common SSSI. Within 10km of the River Wye. The River Arrow runs through the site. Ancient woodland, and priority habitats deciduous woodland, traditional orchards and woodpasture and parkland, within 1km. Arrow Mill (Grade II*) and Arrow Mill House (Grade II) located on the northern side of the site. Two SAM located within 1km to the west (Eardisland). Other listed buildings located within Eardisland and surrounding the site. Northern half of the site is within flood zones 2 and 3.
Date visited		23.07.2019
Site visit notes		Grass and cereal fields, local roads for access, prominent setting for Arrow Mill.

**Photograph M23\_1: View of southern fields of the proposed site  
(looking north towards Arrow Green)**



**Photograph M23\_2: View from A4110 looking toward fields south of Arrow Mill. Moor Brook indicated by tree line to the left of photograph, River Arrow by the marshy land to the right.**



## 3.3 Assessment

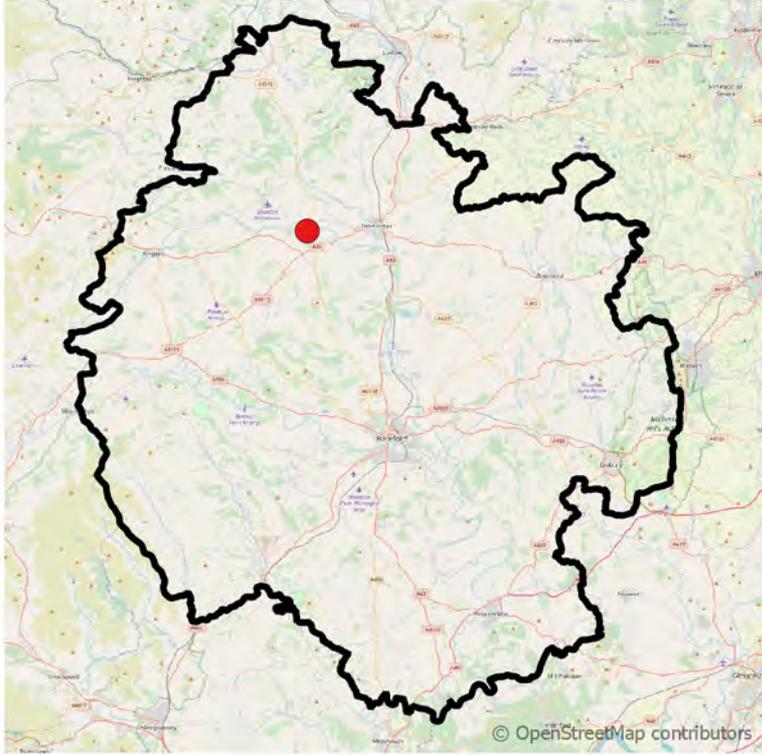
- 3.3.1 Unusually, a site evaluation study (dated July 2002) has been provided with the site proposal, which provides a reasonable amount of detail concerning the mineral reserve at this location. Whilst preliminary, the study suggests a minimum of 550,000 tonnes reserve, but potentially more than 665,000 tonnes. The study concludes that the mineral is *'likely to be of commercial value for use as concreting aggregate and in a range of highway works applications.'*
- 3.3.2 The site is strategically well located, situated in the north of the county, to the west of Leominster. It is directly accessible from the A4110, which connects to the A44 to the south. Access to the wider road network is consequently good. However, the A4110 is quite windy in the vicinity of the site, with relatively poor visibility.
- 3.3.3 The site is located within flood zones 2 and 3, but sand and gravel workings are recognised to be water compatible and can be restored to provide flood alleviation.
- 3.3.4 The greatest constraint for this site is its location directly south of Arrow Mill, a grade II\* listed building. Arrow Mill is described by the Herefordshire Building Conservation Team as *'an exceptional example of a well preserved C16 and C17 water mill with well preserved machinery. The mill leat and tranquil rural setting are key aspects of the setting of the building which contribute strongly to its significance.'* (Email, Matthew Knight, 24.07.2019) The Building Conservation Team has requested that the site is not allocated on heritage grounds.
- 3.3.5 The Historic England entry for Arrow Mill, describes the following criteria as the reason for designation:
- Historic: The timber-framed mill building dating from the C16, C17 and C18 has clear quality and has been little altered since it grew to its present shape in the late-C18 or early-C19.
  - Intactness: the machinery in the mill, including the gearing for the mill wheels, clover mill and bolter, are all in good, original condition.
  - Rarity: The clover mill and bolter are significant rarities, as are the rammed earth floor and the hop kiln, attached to the north of the building.
  - Legibility: The functioning of the mill and the different dates of its machinery can be read with ease.
- 3.3.6 The GIS based, site criteria RAG sheet is provided on the following page.

## 3.4 Conclusion

- 3.4.1 The site is considered not appropriate to allocate on account of the potential impact on the identified heritage asset, including its setting.

**Site: M23 - Land at Arrow Green**

**Sand and gravel – Proposed**



**Site Area:** 34.12 ha  
**Postcode:** HR6 9AT  
**Easting:** 343409  
**Northing:** 258561  
**Site Visit Date:**

The site comprises agricultural fields and was proposed for sand and gravel extraction in response to the draft MWLP.

**Site Criteria**

<p><b>Site Size:</b></p> <p><b>Natura2000:</b></p> <p><b>UK Ecological Sites:</b></p> <p><b>Local Ecological Sites:</b></p> <p><b>Area of Outstanding Natural Beauty and National Parks:</b></p> <p><b>Agricultural Land Classification:</b></p> <p><b>Air Quality Management Areas:</b></p> <p><b>Road Access:</b></p>	<p><span style="display: inline-block; width: 20px; height: 10px; background-color: green; margin-bottom: 5px;"></span></p> <p><span style="display: inline-block; width: 20px; height: 10px; background-color: orange; margin-bottom: 5px;"></span></p> <p><span style="display: inline-block; width: 20px; height: 10px; background-color: yellow; margin-bottom: 5px;"></span></p> <p><span style="display: inline-block; width: 20px; height: 10px; background-color: red; margin-bottom: 5px;"></span></p> <p><span style="display: inline-block; width: 20px; height: 10px; background-color: green; margin-bottom: 5px;"></span></p> <p><span style="display: inline-block; width: 20px; height: 10px; background-color: red; margin-bottom: 5px;"></span></p> <p><span style="display: inline-block; width: 20px; height: 10px; background-color: green; margin-bottom: 5px;"></span></p> <p><span style="display: inline-block; width: 20px; height: 10px; background-color: red; margin-bottom: 5px;"></span></p> <p><span style="display: inline-block; width: 20px; height: 10px; background-color: green; margin-bottom: 5px;"></span></p> <p><span style="display: inline-block; width: 20px; height: 10px; background-color: green; margin-bottom: 5px;"></span></p>	<p><b>Sensitive Buildings:</b></p> <p><b>Cultural and Historical Sites:</b></p> <p><b>Airports and Airfields:</b></p> <p><b>MOD Low Fly Zones:</b></p> <p><b>Major River:</b></p> <p><b>Flood Zones:</b></p> <p><b>Source Protection Zones:</b></p> <p><b>Walking Trail:</b></p>	<p><span style="display: inline-block; width: 20px; height: 10px; background-color: green; margin-bottom: 5px;"></span></p> <p><span style="display: inline-block; width: 20px; height: 10px; background-color: white; margin-bottom: 5px;"></span></p> <p><span style="display: inline-block; width: 20px; height: 10px; background-color: red; margin-bottom: 5px;"></span></p> <p><span style="display: inline-block; width: 20px; height: 10px; background-color: green; margin-bottom: 5px;"></span></p> <p><span style="display: inline-block; width: 20px; height: 10px; background-color: red; margin-bottom: 5px;"></span></p> <p><span style="display: inline-block; width: 20px; height: 10px; background-color: red; margin-bottom: 5px;"></span></p> <p><span style="display: inline-block; width: 20px; height: 10px; background-color: green; margin-bottom: 5px;"></span></p> <p><span style="display: inline-block; width: 20px; height: 10px; background-color: green; margin-bottom: 5px;"></span></p>
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# Mineral Need Assessment 2019

**Herefordshire Minerals and Waste Local Plan**

**March 2020**  
HENDECA LTD



## Contents

<b>1. Introduction</b> .....	<b>1-1</b>
1.1 Introduction.....	1-1
1.2 Data Sources.....	1-2
<b>2. Minerals within Herefordshire</b> .....	<b>2-1</b>
2.1 Overview.....	2-1
2.2 Quarrying in Herefordshire.....	2-1
<b>3. Aggregates, Baseline</b> .....	<b>3-1</b>
3.1 Introduction.....	3-1
3.2 Supply of sand and gravel .....	3-1
3.3 Supply of crushed rock.....	3-6
<b>4. Aggregates, Future Demand</b> .....	<b>4-1</b>
4.1 Introduction.....	4-1
4.2 Growth Forecasts.....	4-1
4.3 Conclusions for sand and gravel .....	4-15
4.4 Conclusions for crushed rock .....	4-16
4.5 Secondary and recycled aggregates.....	4-17
<b>5. Other Minerals</b> .....	<b>5-1</b>
5.1 Building Stone.....	5-1
5.2 Conventional and Unconventional Hydrocarbons.....	5-1
<b>6. Conclusions</b> .....	<b>6-1</b>
6.1 Overview .....	6-1
6.2 Aggregates.....	6-1
6.3 Building stone.....	6-2
6.4 Hydrocarbons.....	6-2

## Annexes

Annex A: Consumption of total sand and gravel (land-won and marine-dredged) for aggregate use in 2014 identifying for each sub-region the principal supplying Mineral Planning Authorities, BGS, 2014

Annex B: Consumption of crushed rock for aggregate use in 2014 identifying for each sub-region the principal supplying Mineral Planning Authorities, BGS 2014



## 1. Introduction

### 1.1 Introduction

- 1.1.1 Herefordshire Council has commenced preparation of the Minerals and Waste Local Plan (the 'MWLP') to guide development related to minerals and waste within Herefordshire up to 2041.
- 1.1.2 The National Planning Policy Framework (published February 2019, the 'NPPF') advises *'it is essential that there is a sufficient supply of minerals to provide the infrastructure, buildings, energy and goods that the country needs.'* (paragraph 203). This is to be achieved, not least, by making provision for the maintenance of landbanks of: at least 7 years for sand and gravel; and at least 10 years for crushed rock. These minerals are found in Herefordshire and are being actively quarried; they are addressed within this report.
- 1.1.3 The NPPF also seeks a steady and adequate supply of industrial minerals, including: silica sand; cement primary (chalk and limestone) and secondary (clay and shale) materials; and brick clay. These minerals are not currently understood to be readily available or actively worked within the county; they are not considered further within this report.
- 1.1.4 The original Minerals Need Assessment was produced in February 2017 (the 'MNA 2017') to provide an assessment of key factors relating to the need for minerals such as the amount and type of mineral within the county and future demands. It was made available for consultation, alongside the Issues and Options Report, undertaken as part of the MWLP development process. The MNA 2017 considered base data up to year 2015.
- 1.1.5 An updated need assessment was published in November 2018 (the 'MNA Update 2018') which sought to respond to the comments received to the Issues and Options Report consultation and to refresh the data used.
- 1.1.6 This report (the/this 'MNA 2019' or 'this Assessment') reviews these data sources to consider the amount and type of mineral within the county, and future demands, afresh.
- 1.1.7 Despite being finalised in March 2020, this report is dated 2019 primarily to reflect more closely the time period that it is reporting and to continue the sequencing with the previous reports.

#### Updates

- 1.1.8 Since publication of the MNA Update 2018 key data sources have been updated, with the most recent data (for years 2017 and 2018) being:
- Section 5 of the Herefordshire Authority Monitoring Report 2019 presents the Herefordshire Local Aggregates Assessment 2019 (the 'LAA 2019'). This incorporates survey data relevant for the period January to December 2018 and is a key data source for this report.
  - The West Midlands Aggregate Working Party, Annual Monitoring Report 2017 (the 'West Midlands AMR 2017') has also been published since the MNA Update 2018, incorporating data from January to December 2017.

- 1.1.9 In addition, the MNA 2019 has incorporated revisions of:
- a briefing paper on regional and country economic indicators produced by the House of Commons Library;
  - an economic and fiscal outlook at the national level published by the Office for Budget Responsibility (OBR); and
  - a forecast of construction output nationally from the Construction Products Association.
- 1.1.10 Table 2.1 of this Assessment has been refreshed to reflect a slight change in status at one of the sites.
- 1.1.11 The MNA 2017 provided forecasts of need to 2031. As well as updating the 2031 forecasts, the MNA Update 2018 extended some of the forecasts to 2035.
- 1.1.12 This Assessment updates the principal data tables and figures, where new data is available, and extends the forecasts to 2041.
- 1.1.13 This MNA 2019 is a complete analysis, using the most up to date information. It has been prepared to be a discrete report, so the reader does not need to refer back to previous MNA; where there are interesting observations to be made, cross referencing is provided as appropriate.

## Structure

- 1.1.14 This report is structured as follows:
- Section 1 – Introduction and Data Sources;
  - Section 2 – Minerals within Herefordshire: refreshed information about existing and former quarries in the county;
  - Section 3 – Aggregates, Baseline: an understanding of the current permitted reserves of sand and gravel and crushed rock;
  - Section 4 – Aggregates, Future Demand: an assessment of the potential future demand for aggregates, including recycled aggregates;
  - Section 5 - Other Minerals: building stone; and hydrocarbons; and
  - Section 6 – Conclusions: presenting the key conclusions made from the information available.

## 1.2 Data Sources

### Annual Minerals Survey

- 1.2.1 Herefordshire Council undertakes an Annual Minerals Survey of operators in the county to obtain data on: permitted reserves of aggregates at the end of the calendar year; sales of minerals during the year; and the destination point of those sales. This data is collated so that figures for individual operators cannot be identified.
- 1.2.2 The most recent year for which this data exists is 2018.
- 1.2.3 This report is hereafter referred to as the 'Herefordshire AMS 2018'.

## Local Aggregates Assessment

- 1.2.4 The results of the Annual Minerals Survey are used to compile the Local Aggregate Assessment ('LAA'). Mineral planning authorities ('MPA') are required to prepare a LAA and to update it annually. The LAA is required to:
- forecast the demand for aggregates based on average 10-years sales data and other relevant supply information; and
  - analyse supply options through the consideration of current planning permissions and minerals safeguarding areas.
- 1.2.5 The LAA 2019, the most recently published LAA data for Herefordshire<sup>1</sup> reports on minerals data for 2018.

## West Midlands Aggregate Working Party Annual Monitoring Report

- 1.2.6 The West Midlands Aggregate Working Party ('WM AWP') is a technical group concerned with data collection, collation and monitoring. It also provides advice on future trends in and affecting the area, together with the environmental and other implications of meeting Government aggregate demand forecasts.
- 1.2.7 The WM AWP draws its members from the MPA in the region<sup>2</sup> together with representatives from the minerals industry through its trade associations (the Mineral Products Association and the British Aggregates Association) plus the Ministry of Housing, Communities and Local Government, the National Federation of Demolition Contractors, and the Environment Agency.
- 1.2.8 Data from the Annual Minerals Survey undertaken by each relevant MPA is collated by the WM AWP, which produces a regional Annual Monitoring Report.
- 1.2.9 The most recent is the WM AMR 2017<sup>3</sup>. This provides sales and reserves data for the 2017 calendar year as well as data for earlier years.

## Aggregate Minerals Survey

- 1.2.10 The Department for Communities and Local Government<sup>4</sup> (DCLG) published the Aggregate Minerals Survey<sup>5</sup> every four years, a collation of data from the Annual Minerals Surveys undertaken by each MPA in England and Wales. The most recent available version is for year 2014<sup>6</sup>.
- 1.2.11 The report presents sales of aggregates produced in Herefordshire and the destination for those sales, either within Herefordshire, in the West Midlands or elsewhere. The report also

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<sup>1</sup> Herefordshire Local Aggregates Assessment 2019, Herefordshire Council, February 2020

<sup>2</sup> Herefordshire, Worcestershire, Shropshire, Staffordshire, Warwickshire and the West Midlands Conurbations.

<sup>3</sup> West Midlands Aggregate Working Party, Annual Monitoring Report 2017, incorporating data from January – December 2017, Urban Vision Partnership Ltd, December 2018

<sup>4</sup> It is recognised that this Department is now the Ministry for Housing, Communities and Local Government, but the Ministry has not published minerals data to date. Consequently, reference to the Department for Communities and Local Government, or DCLG, is retained within this report.

<sup>5</sup>

<http://webarchive.nationalarchives.gov.uk/20121030202828/http://www.communities.gov.uk/planningandbuilding/planningbuilding/planningresearch/researchreports/mineralswasteresearch/aggregatemineralssurveys>

<sup>6</sup> <https://www.gov.uk/government/publications/aggregate-minerals-survey-for-england-and-wales-2014>

shows movement of materials, setting out information on the inter-regional flow of aggregates.

- 1.2.12 The three most recent Aggregate Minerals Surveys are used within this report, i.e. those published for 2005, 2009 and 2014. It is recognised that some of this data is now somewhat old, but it is considered to provide useful and relevant contextual information for policy preparation.
- 1.2.13 These reports are hereafter referred to as the 'DCLG AMS 2005', 'DCLG AMS 2009', and 'DCLG AMS 2014'.
- 1.2.14 It is also important to note that the 2014 data has not been verified by the British Geological Survey ('BGS'), and discussion with adjacent MPA has questioned its accuracy. However, it remains the best available data in relation to both minerals movements across administrative boundaries and consumption within an authority.

### **Annual Raised Enquiry**

- 1.2.15 The Office for National Statistics ('ONS') carries out an Annual Raised Enquiry of the sales of all minerals except coal, for the MHCLG<sup>7</sup> and the Department for Business, Energy and Industrial Strategy. The data is presented in an annual report, Mineral Extraction in Great Britain, the latest available version of which is for 2014<sup>8</sup>.
- 1.2.16 Data is available at county level. However, for Herefordshire figures are only available for building stone. The figures for sand and gravel and for crushed rock within Herefordshire are confidential.

### **Construction, Demolition and Excavation Waste Survey**

- 1.2.17 In February 2007, DCLG published the Survey of Arisings and Use of Alternatives to Primary Aggregates in England<sup>9</sup>. This report was generated by information gained from operators of crushers and screens and of licensed landfill sites for the year 2005. Its purpose was to generate estimates for the amount of recycled aggregates and soil used and disposed of at licensed landfill facilities and for construction, demolition and excavation waste ('CD&E waste') spread on registered exempt sites.
- 1.2.18 This was the third in a series of surveys undertaken every two years and provides figures for Herefordshire and Worcestershire combined. However, it is quite an old data source and is used for background context only.

### **Waste Need Assessment 2017, Update 2018 and Waste Need Assessment 2019**

- 1.2.19 Alongside this assessment of need for minerals, Herefordshire has commissioned preparation of a waste need assessment. This study uses the current method for estimating the amount of CD&E waste available for use as a recycled aggregate and provides data relevant to Herefordshire only.
- 1.2.20 An update of the Waste Need Assessment dated February 2017 was undertaken and produced in November 2018 to take account of new sources of data on waste and responses

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<sup>7</sup> Ministry of Housing, Communities and Local Government

<sup>8</sup> Mineral Extraction in Great Britain 2014, DCLG, March 2016. <https://www.gov.uk/government/statistics/mineral-extraction-in-great-britain-2014> [27.02.2020@10:52]

<sup>9</sup> Survey of Arisings and Use of Alternatives to Primary Aggregates in England 2005: Final Report, DCLG, February 2007

made to the Issues and Options Report. The WNA was run afresh in December 2019 to incorporate the latest available data. This report is hereafter referred to as the 'WNA 2019'.



## 2. Minerals within Herefordshire

### 2.1 Overview

- 2.1.1 Herefordshire's bedrock geology is almost entirely sedimentary in origin. It is dominated by the Old Red Sandstone but fringed by older rocks and covered in a mantle of ice age deposits.
- 2.1.2 The predominant underlying geology of Herefordshire consists of Devonian Old Red Sandstone, comprising mudstones and sandstone. However, there are some older outcrops occurring in the north-west of the county (around Brampton Bryan) consisting of mudstones, sandstones and volcanic rocks. Silurian mudstones and siltstones also occur in this area. Significant outcrops of limestone also occur in the north-west of the county, in the areas around Aymestrey, Leintwardine and towards the Welsh border near Presteigne.
- 2.1.3 Silurian limestone and mudstones also outcrop in the Woolhope area, surrounded by the younger Old Red Sandstone rocks. Similar aged hard rocks also occur on the western flanks of the Malvern Hills, on the border with Worcestershire.
- 2.1.4 Throughout Herefordshire, there are superficial sedimentary deposits of glacial tills, sand and gravels.

### 2.2 Quarrying in Herefordshire

- 2.2.1 Known mineral resources in Herefordshire are relatively limited in range, primarily consisting of aggregates for use in construction but also a small amount of building stone. Aggregates comprise: sand and gravel; crushed rock; and secondary or recycled materials gained from quarry and waste operations.
- 2.2.2 The BGS was commissioned to provide further detail on the mineral resource within Herefordshire and its viability for use. This information has been used in preparing minerals policy of the MWLP.
- 2.2.3 Using the currently available information, the commercially exploitable minerals available for extraction from within Herefordshire include sand, gravel, crushed rock and sandstone.
- Sand and gravel:
    - River terrace deposits are mainly found in the river valleys of the Wye, Lugg and Arrow; and
    - Glacial deposits are present in the north and west of Herefordshire.
  - Crushed rock:
    - Silurian limestone is found on the western side of the Malvern Hills and Ledbury, the Woolhope dome and in the north-west of the county in the Presteigne/Aymestrey areas;
    - Carboniferous limestone is present to the south-west of Ross-on-Wye in the northern flanks of the Forest of Dean; and
    - Igneous and metamorphic rock occurs in the Malvern Hills.

- Sandstone occurs extensively throughout much of Herefordshire and several operational quarries exist in the north, west and south of the county. The output is of particular importance for heritage restoration and in creating authentic character for new-build properties.
- 2.2.4 Secondary and recycled materials have an important role to play in the overall supply of aggregates. Secondary aggregates are minerals that are produced as a by-product of other mining or quarrying activities or as a by-product of an industrial process. Recycled aggregates arise from several sources, notably from the demolition of buildings or from civil engineering works such as asphalt planings from road resurfacing and railway track ballast. Recycling aggregates usually involves the removal of unwanted or inappropriate material such as fines, wood, plastic and metal, and some form of treatment (crushing, washing and/or screening) to reach industry standards for its re-use.
- 2.2.5 Coal was formerly worked in two locations:
- the southern tip of the Wyre Forest Coalfield, which extended into the north of the county near the boundary with Worcestershire and Shropshire; and
  - a small outlier site of the Forest of Dean Coalfield that extends into southern Herefordshire.
- 2.2.6 In 1999, the BGS<sup>10</sup> reported that the hydrocarbon prospectivity of the county was low. Wells drilled to test the oil and gas potential of sandstones in the Worcestershire Basin and rocks in the Woolhope Inlier had failed to discover hydrocarbons.
- 2.2.7 Coalbed methane is believed to lie in the south of the county, within a reserve that extends into Gloucestershire. At the time of writing there was no publicly stated intention to work the reserve.
- 2.2.8 Table 2.1 presents the currently known information about quarries in Herefordshire, these are presented graphically in Figure 2.1.
- 2.2.9 Moreton on Lugg Quarry (see Table 2.1, MNA 2017) was renamed Upper Lyde Quarry in Table 2.1 of the MNA Update 2018 and has retained that name in this Assessment. Planning conditions for the quarry have now been discharged, and the operator advised Herefordshire Council that sand and gravel extraction commenced on 20 September 2019<sup>11</sup>. Because it is reporting on data from year 2018, the LAA 2019 reports that the site is not yet operational.
- 2.2.10 The data in Table 2 has been collated for information and should not be relied upon for commercial purposes.

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<sup>10</sup> Mineral Resource Information for Development Plans: Phase One Herefordshire and Worcestershire: Resources and Constraints, BGS and the Department of the Environment Transport and the Regions, 1999

<sup>11</sup> Email from Wye Valley Group dated 30 September 2019

**Table 2.1 Identified mineral sites, Herefordshire, 2019**

	Quarry name	Status	Planning history	Operational requirements
<b>Sand and gravel</b>				
1	Stretton Sugwas Quarry (Hereford Quarry)	Closed	Approval in June 2004 for extraction of sand and gravel.	
2	Lugg Bridge Quarry	Closed	Approval in 2005 for restoration of redundant sand and gravel quarry. Permission in October 2013 for change of use from sand and gravel and ancillary ready mixed concrete plant to stand alone ready mixed concrete plant.	
3	Upper Lyde Quarry	Operational	Approval in August 2001 for imposition of new conditions and deletion of original conditions attached to an existing planning permission for gravel extraction granted on 1 December 1965.	Written notice of commencement of sand and gravel working at 20 September 2019. All mineral extraction to cease and site to be restored to agricultural land and nature conservation within 10 years of the date of commencement.
4	Shobdon Quarry	Inactive	Review of Old Mineral Permission (ROMP) approved July 2005.	
5	Wellington Quarry	Active	Permission in February 2013 to extend operational area for sand and gravel extraction.	Winning and working to cease by 31 December 2026.
6	St Donat's Quarry	Restored	Approval in January 1997 for extraction of sand and gravel. Permission granted in September 2004 to vary condition 1, required works to commence within 5 years. Consent not implemented and now lapsed.	

	Quarry name	Status	Planning history	Operational requirements
<b>Limestone</b>				
7	Leinthall Quarry	Active	Permission in November 2009 for continuation of operations.	Reclamation by August 2027.
8	Loxter Ashbed Quarry	Restored	Permission in January 2000 for restoration of part of quarry to woodland. Permission in July 2001 for temporary haul road for quarry.	
9	Nash Scar Quarry	Mothballed	Permission in January 2011 to extend deadline for scheme submission to August 2026.	
10	Perton Quarry	Active	Permission in May 2000 for continued extraction and processing of limestone. Refusal in January 2002 for extension of hours for lorry movements.	All extraction and restoration to cease by February 2042.
<b>Sandstone</b>				
11	Brakes Farm Delve	Abandoned	Permission given in October 2008 for the winning, working and preparation of Downton Castle stone.	Maximum of 4 vehicle movements in 24 hrs Development, including restoration, will cease no more than 15 years from commencement date. Commencement must begin within 3 years of the permission date.
12	Callow Delve	Active	Permission given in August 2013 for extension of existing approved mineral extraction to excavate area of 0.075 hectares. Officer report describes sand and gravel quarry as ceased.	The maximum volume of aggregate to be exported from the site shall not exceed 15% of the total export of building stone from the site, averaged over a 3-year

	Quarry name	Status	Planning history	Operational requirements
				period. Sufficient building stone for hand working shall be made available during the life of the quarry to supply the reasonable demand for such stone in the local area.
13	Black Hill Delve (formerly Coed Major Delve)	Active	Planning approval given in October 1999 for extension to small sandstone quarry.	
14	High House Delve	Unsuccessful, never exploited	Approval in August 2002 for extraction of sandstone using low tech tools and limited use of farm size machinery.	
15	Hunters Post Delve	Closed, naturally regenerated	Listed by the BGS and Historic England's Heritage's Strategic Stone Study <sup>12</sup> as active in 2014.	
16	Llandraw Delve	Active	Permission in January 2014 for reopening of disused delve.	Maximum of 3 vehicle outbound movements per day and maximum of 12 per week. Cessation of workings by 7 years from permission (January 2014).
17	Pennsylvania Delves	Active	Approval in July 2000 for surface quarrying of flagstones, roofing tiles and building stone.	
18	Sunnybank Delve	Active	Permission in August 2002 for extraction of building stone using chisels, hammer and limited use of farm size machinery.	

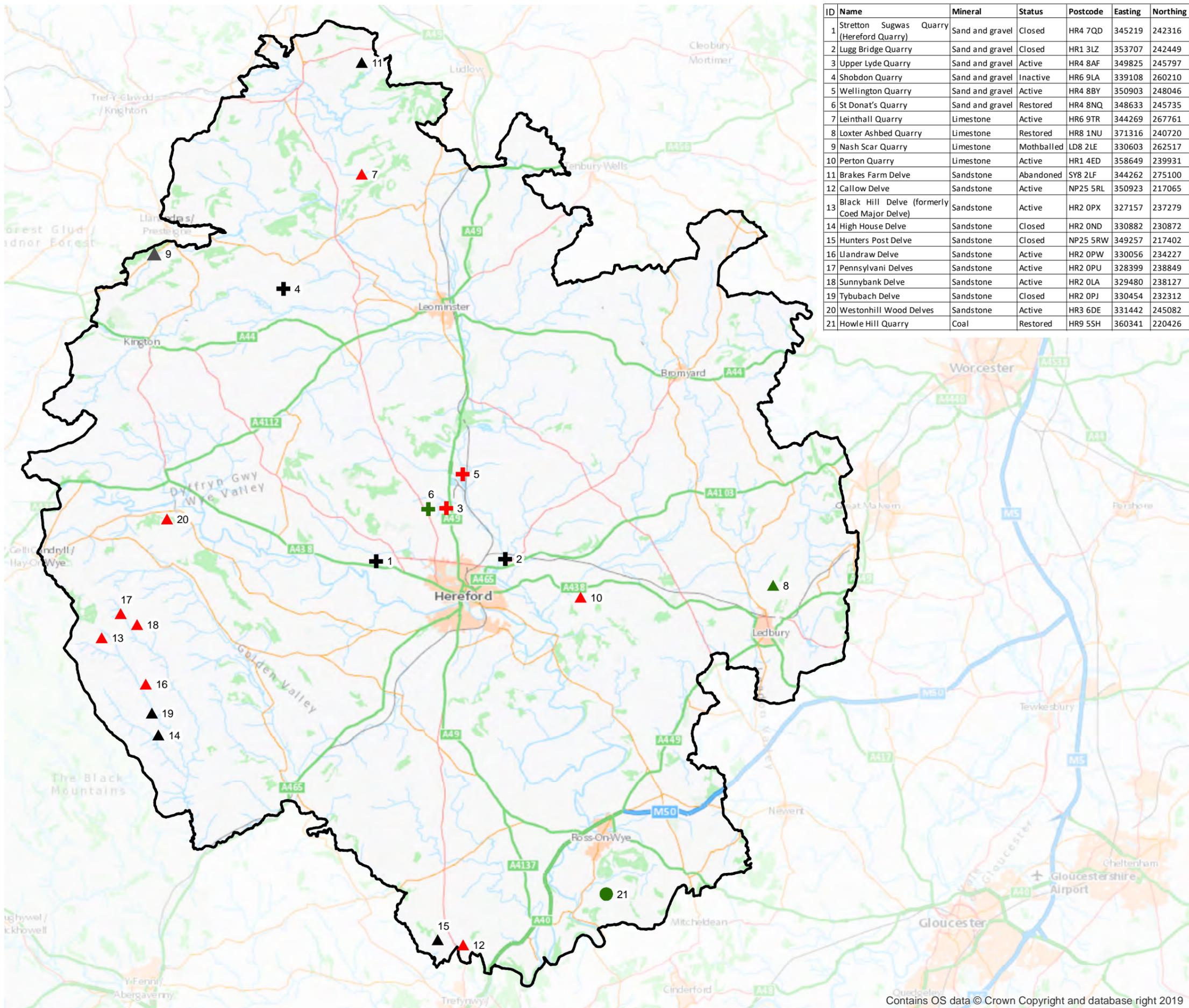
<sup>12</sup> [http://www.bgs.ac.uk/mineralsuk/buildingStones/StrategicStoneStudy/EH\\_atlases.html](http://www.bgs.ac.uk/mineralsuk/buildingStones/StrategicStoneStudy/EH_atlases.html)

	Quarry name	Status	Planning history	Operational requirements
19	Tybubach Delve	Abandoned, to be restored	Permission in December 2010 for time extension.	Maximum of 3 vehicle movements in a day and maximum of 12 per week. All development, including restoration, is to take place within 15 years of commencement of activity. Activity is to commence within 5 years of the permission.
20	Westonhill Wood Delves	Active	Permission in March 2014 to extend life of existing quarry and alter site areas for good access to quality stone.	Maximum of 6 outbound vehicles per day and maximum of 25 per week. Development, including restoration, to cease not later than 25 years from date of permission (March 2014).
<b>Coal</b>				
21	Howle Hill Quarry	Restored	Permission refused in October 2004 for infill with inert material and restoration to agricultural use.	

# Herefordshire Minerals and Waste Local Plan

**Figure 2.1**  
Identified mineral sites,  
Herefordshire, 2018

ID	Name	Mineral	Status	Postcode	Easting	Northing
1	Stretton Sugwas (Hereford Quarry)	Quarry	Sand and gravel	Closed	HR4 7QD	345219 242316
2	Lugg Bridge Quarry	Sand and gravel	Closed	HR1 3LZ	353707	242449
3	Upper Lyde Quarry	Sand and gravel	Active	HR4 8AF	349825	245797
4	Shobdon Quarry	Sand and gravel	Inactive	HR6 9LA	339108	260210
5	Wellington Quarry	Sand and gravel	Active	HR4 8BY	350903	248046
6	St Donat's Quarry	Sand and gravel	Restored	HR4 8NQ	348633	245735
7	Leinthall Quarry	Limestone	Active	HR6 9TR	344269	267761
8	Loxter Ashbed Quarry	Limestone	Restored	HR8 1NU	371316	240720
9	Nash Scar Quarry	Limestone	Mothballed	LD8 2LE	330603	262517
10	Perton Quarry	Limestone	Active	HR1 4ED	358649	239931
11	Brakes Farm Delve	Sandstone	Abandoned	SY8 2LF	344262	275100
12	Callow Delve	Sandstone	Active	NP25 5RL	350923	217065
13	Black Hill Delve (formerly Coed Major Delve)	Sandstone	Active	HR2 0PX	327157	237279
14	High House Delve	Sandstone	Closed	HR2 0ND	330882	230872
15	Hunters Post Delve	Sandstone	Closed	NP25 5RW	349257	217402
16	Llandraw Delve	Sandstone	Active	HR2 0PW	330056	234227
17	Pennsylvania Delves	Sandstone	Active	HR2 0PU	328399	238849
18	Sunnybank Delve	Sandstone	Active	HR2 0LA	329480	238127
19	Tyubach Delve	Sandstone	Closed	HR2 0PJ	330454	232312
20	Westonhill Wood Delves	Sandstone	Active	HR3 6DE	331442	245082
21	Howle Hill Quarry	Coal	Restored	HR9 5SH	360341	220426



## Legend

### Minerals Facilities

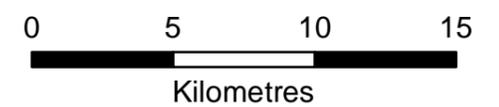
#### Type

- Coal
- ▲ Limestone
- + Sand and gravel
- ▲ Sandstone

#### Status

- Active
- Restored
- Uncertain
- Inactive/Closed

Herefordshire County Boundary



SCALE  
1:250,000 @ A3

DATE  
12/03/2020

hendeca



## 3. Aggregates, Baseline

### 3.1 Introduction

3.1.1 This section of the MNA 2019 deals with aggregates, consisting of sand and gravel, crushed rock, marine aggregates and secondary and recycled aggregates. It aims to identify the current level of supply of aggregates, assessed in terms of sales, and compare this with the existing and likely future demand for aggregates over the lifetime of the MWLP.

### 3.2 Supply of sand and gravel

3.2.1 There are three sand and gravel quarries permitted within Herefordshire:

- Upper Lyde Quarry;
- Shobdon Quarry; and
- Wellington Quarry.

3.2.2 However, only Wellington Quarry is operational at the time of writing and able to supply data (there is no data for Upper Lyde Quarry).

#### LAA 2019

3.2.3 Due to the openness of the operator at Wellington Quarry, having agreed that this single source of data can be made public, it is possible to understand a reasonable level of detail about sand and gravel reserves, supply and potential demand within Herefordshire.

3.2.4 The LAA 2019 reports that there were 2,476,000 tonnes of permitted reserves of sand and gravel in the county at 31 December 2018 and 192,000 tonnes sold during that year.

3.2.5 A ten year historic average annual sales figure of 125,000 tonnes, gives a landbank of 19.8 years.

3.2.6 This is discussed further from paragraph 3.2.19.

#### West Midlands Aggregate Working Party Annual Monitoring Report 2017

3.2.7 The West Midlands AMR 2017 provides information on sand and gravel permitted reserves and sales from 2008 to 2017; this is represented in Table 3.1.

**Table 3.1 Sand and gravel sales and permitted reserves, Herefordshire and Worcestershire, 2008 to 2017**

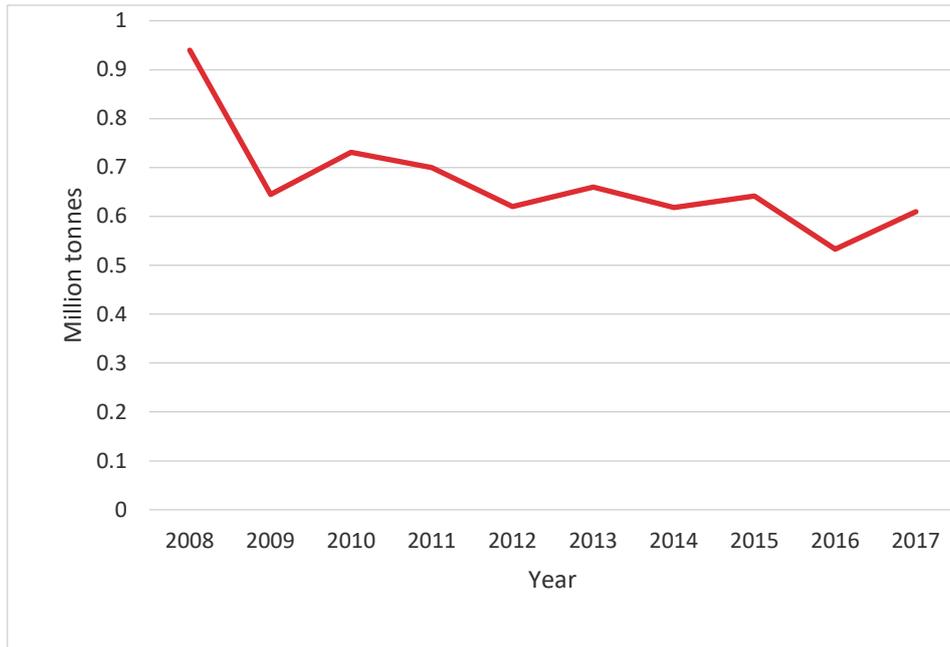
Year	Permitted reserves <sup>13</sup>		Sales <sup>14</sup>	
	Herefordshire	Worcestershire	Herefordshire	Worcestershire
Million tonnes				
2008	6.148	3.021	0.18	0.76
2009	5.15	3.65	0.13	0.52
2010	2.92	4.49	0.11	0.62
2011	2.87	3.85	0.07	0.63
2012	6.57		0.62	
2013	6.01		0.66	
2014	2.76	2.50	0.10	0.52
2015	2.66	0.54	0.10	0.54
2016	2.75	4.29	0.13	0.40
2017	2.60	3.47	0.15	0.46
<b>Total 10 year sales</b>			1.21	5.73
<b>Average 10 year sales</b>			0.13	0.60

3.2.8 Figure 3.1 graphically presents the combined sand and gravel sales data for Herefordshire and Worcestershire. Using the data as combined provides useful context to historical sand and gravel sales across the two authorities.

<sup>13</sup> Table 2, West Midlands Aggregate Working Party, Annual Monitoring Report 2017, incorporating data from January – December 2017

<sup>14</sup> Table 1, West Midlands Aggregate Working Party, Annual Monitoring Report 2017, incorporating data from January – December 2017

**Figure 3.1 Sand and gravel sales and permitted reserves, Herefordshire and Worcestershire, 2008 to 2017**



3.2.9 The data shows that sales fell significantly in 2008-09, had a brief recovery in 2010, but have since continued to decline over time, with a slight recovery in 2017. Looking back to 2005, indicates that minerals sales have historically shown some volatility. However, it is likely that the global recession and its consequent financial uncertainties, which have been compounded by the UK's exit from the European Union, has affected sales.

3.2.10 Table 3 of the West Midlands AMR 2017 identifies a 21.67 years landbank for sand and gravel in Herefordshire. Recognising the lack of detail available for minerals data, the difference between this landbank and that identified in the LAA 2019 (just two years, see paragraph 3.2.5) is not considered to be significant. The LAA 2019 uses more up to date information and consequently is relied upon within this Assessment.

### Aggregate Minerals Survey

3.2.11 The supply and destination of sand and gravel from Herefordshire is documented in the DCLG AMS 2005, 2009 and 2014. Sales of aggregates from Herefordshire in each year and their principal destinations are set out in Table 3.2.

**Table 3.2 Sales and principal destination of land-won sand and gravel from Herefordshire, 2005, 2009 and 2014**

Destination	2005	2009	2014
	Tonnes		
Herefordshire	156,000	111,000	69,000
Elsewhere in West Midlands	49,000	5,000	24,000
Elsewhere	11,000	6,000	4,000
Unknown	19,000	0	0

3.2.12 The DCLG AMS 2005, 2009 and 2014 also provide data on the level of import of sand and gravel into the county and consumption within Herefordshire, reproduced in Table 3.3.

**Table 3.3 Import and consumption of sand and gravel in Herefordshire, 2005, 2009 and 2014**

Year	2005	2009	2014
Tonnes			
<b>Imports</b>			
Land-won sand and gravel	121,000	63,000	83,000
Marine sand and gravel	12,000	4,000	1,000
<b>Consumption</b>			
Land-won sand and gravel	603,000	174,000	153,000
Marine sand and gravel	12,000	4,000	1,000

3.2.13 Tables 3.2 and 3.3 show a significant drop in sales, import and consumption in 2009 compared to 2005. A significant drop in sales is seen again at 2014, with a limited drop in consumption, but import of land-won mineral has slightly increased.

3.2.14 The initial drop in these factors can be explained by the economic recession which began around 2008 and led to a significant reduction in construction and other economic activity. A change of 20,000 tonnes between the 2009 and 2014 data may be due to data inaccuracies and is not considered material; the level of import and consumption can reasonably be considered to be fairly constant. However, the successive drop in sales is more relevant to plan making and may indicate the need for greater robustness in sand and gravel supply.

3.2.15 The figures also show that about half of Herefordshire's consumption is met by imports of sand and gravel from outside of the county. The need for mineral operators to obtain the correct specification for market products, such as ready-mix concrete, can dictate some of this movement where such materials are not available from local deposits.

3.2.16 Herefordshire has no marine reserves, but a small amount is imported into the county, constituting about 1% of total sand and gravel consumption in 2014. Marine aggregates can have special qualities which meet particular specifications.

3.2.17 Annex A presents the BGS prepared consumption of total sand and gravel (land-won and marine-dredged) for aggregate in 2014 identifying for each sub-region the principal

supplying MPA. This data has not been verified by the BGS but is the only such available data set.

3.2.18 It indicates that Herefordshire was 40% to 50% self-sufficient in sand and gravel provision in 2014, which is also reflected in Tables 3.2 and 3.3 above. Sand and gravel is primarily (over 10%) imported from Staffordshire (30% to 40%) and Worcestershire (10% to 20%). The primary export destination is Worcestershire (10% to 20%).

### Historic ten year average sales

3.2.19 The LAA 2019 provides historic annual data on sales of sand and gravel in Herefordshire for most of a ten year period. For two of those years (2012 and 2013) the sales data is only available combined with sales in Worcestershire, thus providing significantly higher figures for those years. For these two years, the LAA 2019 assumes that Herefordshire sales of sand and gravel were 13% of the sales in the two counties combined, to enable a ten year average to be calculated.

3.2.20 Table 3.4 gives the current ten years' worth of sales and annual average sales for that ten year period for Herefordshire.

**Table 3.4 Ten year sales of sand and gravel in Herefordshire, 2009 to 2018**

Year	Sales (million tonnes)
For information	
2007	0.19
2008	0.177
Ten year average data	
2009	0.125
2010	0.111
2011	0.07
2012	0.081
2013	0.086
2014	0.098
2015	0.102
2016	0.133
2017	0.15
2018	0.192
<b>Ten year average</b>	<b>0.115</b>

3.2.21 The NPPF seeks a minimum landbank of seven years for sand and gravel provision. With permitted reserves in Herefordshire standing at 2,476,000 tonnes in 2018, a ten year average annual sales figure of 115,000 tonnes gives a landbank of 21.5 years for sand and gravel under current conditions.

## 3.3 Supply of crushed rock

3.3.1 The picture for crushed rock permitted reserve and sales is unclear due to commercial sensitivities and because of a sequence of discontinuities in the time series data for sales. This is due to changes in the amalgamation of sales data across several different groupings of counties over the ten-year period.

### LAA 2019

3.3.2 There are only two producers of crushed rock in Herefordshire. Data for reserves and sales of crushed rock from quarries within Herefordshire therefore remains confidential.

3.3.3 Consequently, the LAA 2019 provides data on sales and permitted reserves in 2018 for Herefordshire, Staffordshire, Warwickshire and Worcestershire combined. This is shown in Table 3.5.

### West Midlands Aggregate Working Party Annual Monitoring Report

3.3.4 The LAA 2019 provides information on crushed rock permitted reserves and sales from 2009 to 2018 (at Table 5), this is represented in Table 3.5 below. The source of the LAA data is the WM AMR 2017 and latest officer information.

**Table 3.5 Crushed rock sales and permitted reserves in Herefordshire, Staffordshire, Warwickshire and Worcestershire, 2009 to 2018**

Year	Permitted reserves in Herefordshire <sup>15</sup>	Total sales combined <sup>16</sup>
	Million tonnes	
2009	15.00	1.2*
2010	12.20	0.8*
2011	11.00	0.81*
2012	11.79	0.71*
2013	11.54	0.82*
2014	197.92*	0.66*
2015	200.27*	0.61*
2016	202.14*	1.23*
2017	104.21*	1.27*
2018	102.946*	1.383*
<b>Total 10 year sales</b>		9.488*
<b>Average 10 year sales</b>		0.9488*

\* Figures are for Herefordshire, Staffordshire, Warwickshire and Worcestershire combined

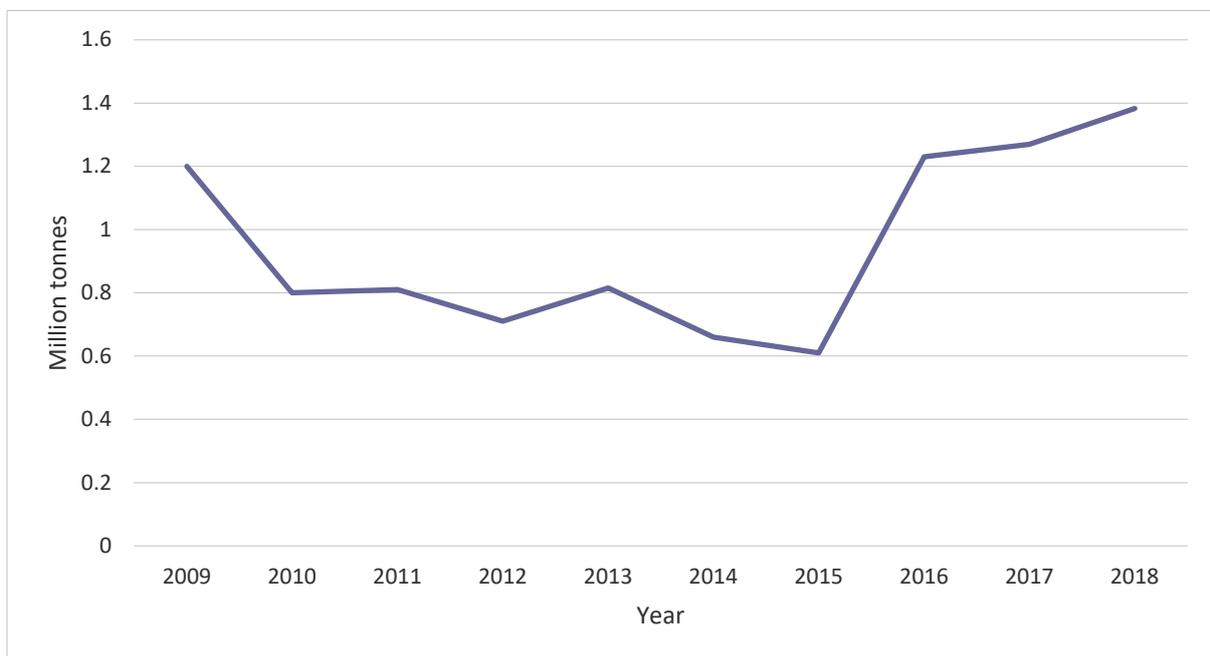
<sup>15</sup> Table 2, West Midlands Aggregate Working Party, Annual Monitoring Report 2017, incorporating data from January – December 2017

<sup>16</sup> Table 1, West Midlands Aggregate Working Party, Annual Monitoring Report 2017, incorporating data from January – December 2017

3.3.5 Figure 3.2 shows the above sales data graphically, indicating a period of significant decline from 2009 to 2010, which can be attributed to the economic recession. Sales continued to decline more gradually, with a slight recovery in 2013 followed by the lowest level of sales over the past 10 years in 2015. In 2016, significant growth was seen, followed by increases in 2017 and 2018.

3.3.6 Whilst Figure 3.2 indicates great volatility over the past ten years, over a 5 year period (between 2010 and 2015) the data indicates that sales of crushed rock remained within a variable of about 200,000 tonnes; this would indicate that sales were reasonably consistent and the market had plateaued somewhat. Recent data indicates a sustained recovery from that period back to pre-recession levels.

**Figure 3.2 Crushed rock sales in Herefordshire, Staffordshire, Warwickshire and Worcestershire, 2009 to 2018**



3.3.7 The NPPF seeks a minimum landbank of ten years for crushed rock provision. Permitted reserves data is presented separately from the other counties only up to 2013, with the preceding years showing some interesting fluctuations. Some disaggregation of this data is required in order to determine a landbank to use for Herefordshire crushed rock reserves.

3.3.8 One method would be to consider the proportion of crushed rock contributed by Herefordshire in 2013 (the most recent year available) to the combined authorities' total in that year.

- Herefordshire crushed rock, 2013: 11.54 million tonnes
- Staffordshire, Warwickshire and Worcestershire crushed rock, 2013 = 188.61 million tonnes<sup>17</sup>

<sup>17</sup> Table 4, West Midlands Aggregate Working Party, Annual Monitoring Report 2016, incorporating data from January – December 2016

- Total reserve across all counties = 200.15 million tonnes
- Herefordshire proportion = 5.77%

3.3.9 The combined reserve in 2018 is 102.946 million tonnes, 5.77% of which is 5.94 million tonnes, which indicates current crushed rock reserve in Herefordshire.

3.3.10 In order to test this approach, and in the absence of other publicly available data to rely upon, a more arbitrary approach has also been used, which seeks also to balance out some of the vagaries present in the data. This approach simply assumes that, in 2008, there was 14 million tonnes of permitted crushed rock reserve in Herefordshire, and that this has been worked at a consistent rate of one million tonnes per year. One million tonnes of sales per year was chosen as an arbitrary figure, although it is reflective of the 10year average sales of crushed rock across the combined authorities. This is presented in Table 3.6.

**Table 3.6 Arbitrary approach to identifying crushed rock reserve, Herefordshire, 2018**

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
	Million tonnes										
<b>WM AMR 2017</b>	14.40	15.00	12.20	11.00	11.79	11.54	Not available for Herefordshire only				
<b>Assumed reserve</b>	14.00	13.00	12.00	11.00	10.00	9.00	8.00	7.00	6.00	5.00	4.00

3.3.11 This approach presents some alignment with the data of the West Midlands AMR 2017 and LAA 2019, particularly in the early years, dropping rapidly to leave a permitted reserve of just 4 million tonnes of crushed rock in Herefordshire at 2018.

3.3.12 If sales were really happening at this rate, which takes no account of any external effects (e.g. the 2008 recession) and incorporates sales reflective of those seen across the combined authorities, it would mean that Herefordshire would have only four years of reserve remaining, below the minimum sought in the NPPF.

3.3.13 Staffordshire, Warwickshire and Worcestershire County Councils have all used data on crushed rock for combined groupings of counties in their respective Local Aggregate Assessments. In Staffordshire<sup>18</sup> and Warwickshire<sup>19</sup>, figures are presented for Staffordshire, Herefordshire, Warwickshire, and Worcestershire combined; while in Warwickshire, figures are presented for the landbank for Warwickshire based on the former sub-regional apportionment. Staffordshire concludes that, as part of a grouping of combined authorities, there is more than sufficient crushed rock reserve for the plan period. The Worcestershire Analysis of Mineral Resources<sup>20</sup> states that there are no permitted reserves in Worcestershire.

3.3.14 Reference to the proportioned approach indicated a landbank of 5.94 million tonnes whilst the arbitrary approach would indicate a landbank of 4 million tonnes.

3.3.15 This MNA 2019 relies upon the proportioned approach, identifying 5.94 million tonnes of crushed rock reserve within Herefordshire at 2018. This is a more widely recognised and used

<sup>18</sup> Draft Local Aggregate Assessment – 2018 Survey,, Staffordshire County Council, 2019

<sup>19</sup> Warwickshire Draft Local Aggregate Assessment 2017, Warwickshire County Council, October 2017

<sup>20</sup> Analysis of Mineral Resources in Worcestershire, Worcestershire County Council, April 2019

approach and would appear to be realistic when compared against the arbitrary calculations presented in Table 3.6.

- 3.3.16 Even if sales of 1 million tonnes per year were occurring (which does not appear to be the case looking at the data from the WM AMR 2017) this would mean that the proportioned approach over-estimated Herefordshire’s current landbank by c.2 million tonnes. Recognising the lack of detail available for minerals data, the difference between these two conclusions is not considered to be significant.
- 3.3.17 It is not possible to report annual sales for crushed rock within Herefordshire. The proportioned approach is deliberately not applied to estimate annual sales of crushed rock. Table 3.5 shows that the average ten-year sales across the combined authorities is 948,800 tonnes. 5.77% of this would indicate an average ten-year sales figure of 54,700 tonnes in Herefordshire. If this were applied, it would indicate a landbank of over 100 years of crushed rock within Herefordshire (5.94 million tonnes divided by 54,700 tonnes).
- 3.3.18 At the site visits, made in November 2017, it appeared that both crushed rock quarries within Herefordshire were substantially worked out and both operators advised that extensions would be required in the foreseeable future. Applying the proportioned approach to sales is not a robust approach to take.

### Aggregate Minerals Survey

- 3.3.19 Sales of crushed rock from Herefordshire are confidential due to the small number of operators in the county. However, the DCLG AMS 2005, 2009 and 2014 do provide data for imports and consumption of crushed rock for Herefordshire. These are reproduced in Table 3.7.

**Table 3.7 Imports and consumption of crushed rock in Herefordshire**

Year	2005	2009	2014
	Tonnes		
Import of crushed rock	1,522,000	421,000	533,000
Consumption of crushed rock	1,691,000	435,000	700,000

- 3.3.20 The data shows a significant drop in both imports and consumption in 2009 compared to 2005. This can be accounted for by the economic recession, which began around 2008 and led to a significant reduction in construction activity. Consumption in 2014 significantly increased, indicating some growth, and whilst imports also increased, this was by a lesser factor, indicating that Herefordshire may have decreased its reliance on crushed rock from elsewhere.
- 3.3.21 Nevertheless, the data indicates that Herefordshire remains a significant net importer of crushed rock. The need for mineral operators to obtain the correct specification for market products, such as ready-mix concrete, can dictate some of this movement, where such materials are not available from local deposits.
- 3.3.22 Annex B presents the BGS prepared Consumption of crushed rock for aggregate use in 2014, identifying for each sub-region the principal supplying MPA. Again, this has not been verified by the BGS, but is the only such available data set.

- 3.3.23 It indicates that Herefordshire was 20% to 30% self-sufficient in crushed rock provision in 2014, which is reflected in Table 3.7 above. Crushed rock is overwhelmingly imported from Powys (40% to 50%) but also from Somerset (10% to 20%).
- 3.3.24 This indicates that crushed rock travels very much further than sand and gravel, indeed the rail head at Wellington Quarry is used to transport crushed rock from Tarmac quarries in Wales to the south east of England, primarily London. Again, the primary export destination is Worcestershire (10% to 20%) which is known to have little crushed rock reserve.

## 4. Aggregates, Future Demand

### 4.1 Introduction

- 4.1.1 Sections 3.2 and 3.3 indicate that within Herefordshire, under current operations and market conditions, there is an appropriate landbank of sand and gravel, but a potential shortfall of crushed rock.
- 4.1.2 Looking forward, demand for aggregates can be estimated in a number of different ways. The methods most commonly used are:
- Gross Value Added ('GVA') forecasts;
  - population projections;
  - household or housing projections; and/or
  - Core Strategy infrastructure requirements.
- 4.1.3 Each of these methods are considered for sand and gravel. It should be remembered that aggregate is more than just sand and gravel, but current information does not enable the same level of analysis to be undertaken for crushed rock.
- 4.1.4 National policy seeks to promote the use of alternatives to primary aggregates by encouraging the use of recycled aggregates as a substitute. The principal source of recycled aggregates is waste arising from construction and demolition activities. In parallel with this MNA 2019, an assessment of the need for waste infrastructure has been undertaken. The WNA 2019 has, inter alia, forecast estimates for the amount of construction and demolition waste arising in Herefordshire annually up to 2041 and these forecasts are reproduced in section 4.4 of this Assessment.

### 4.2 Growth Forecasts

#### Gross Value Added forecasts

- 4.2.1 Overall growth in the economy can be measured through projected growth in Gross Value Added (GVA). Projected change in GVA could be applied to the most recent sand and gravel annual sales data in order to estimate the potential change in demand for sand and gravel on the basis that it is changes in levels of economic wealth that drive demand for construction of buildings and infrastructure.
- 4.2.2 Herefordshire's GVA in 2017 was £3,878 million<sup>21</sup>. However, there is little data available on projected GVA for Herefordshire over the timeframe of the MWLP.
- 4.2.3 The Marches Local Enterprise Partnership (the 'LEP'), which covers Shropshire, Herefordshire and Telford & Wrekin, published a Strategic Economic Plan<sup>22</sup> (the 'SEP') in 2019. The vision of the SEP is to grow the economy from £8.78 billion 2016 to 23.8 billion by 2038, which is equivalent to an average annual growth of 2.3% per annum in GVA. However, SEP Evidence

<sup>21</sup> <https://understanding.herefordshire.gov.uk/economy-place/topics-relating-to-the-economy/>

<sup>22</sup> [https://www.marcheslep.org.uk/download/economic\\_plans/strategic-economic-plan-update-2019/The-Marches-LEP-Strategic-Economic-Plan-2019.pdf](https://www.marcheslep.org.uk/download/economic_plans/strategic-economic-plan-update-2019/The-Marches-LEP-Strategic-Economic-Plan-2019.pdf)

Base<sup>23</sup> (October 2018) reports that the GVA growth between 2014 and 2016 was only 0.9%, which highlights the ambitious nature of the SEP.

- 4.2.4 A briefing paper<sup>24</sup> on regional and country economic indicators produced by the House of Commons Library shows the GVA of the West Midlands region in 2018 to be £160 billion. It forecasts that this will grow at an annual average of 1.1% over the period 2019-2029. This percentage growth rate could be applied to 2018 aggregate sales to estimate the potential demand for aggregates arising from growth in the economy.
- 4.2.5 The Office for Budget Responsibility (the 'OBR') publishes an economic and fiscal outlook at the national level, the most recent of which<sup>25</sup> was published in March 2019. This produces a range of forecasts for real Gross Domestic Product ('GDP') growth from 2019 to 2023.
- 4.2.6 The OBR outlook reports a central forecast and four higher and four lower forecasts, representing probability bands based on past official forecast errors. Risks to the central forecast include: risks to growth from productivity and migratory flows and the risks from shocks; fiscal risks associated with a large financial sector; the sustainability of various tax bases; risk from changes or delays to policies; balance sheet risks; and debt interest risks.
- 4.2.7 Table 4.1 shows the central GDP growth forecast (50% column) and also a range of eight other growth forecasts for each year, four higher and four lower than the central forecast, to allow for differing degrees of uncertainty in the forecasting.

**Table 4.1 Projected annual percentage change in GDP by probability bands**

Year	Percentage probability bands								
	10%	20%	30%	40%	50%	60%	70%	80%	90%
2018					1.4				
2019	0.1	0.5	0.7	1.0	1.2	1.5	1.8	2.1	2.6
2020	-0.8	0.0	0.6	1.0	1.4	1.8	2.3	2.7	3.3
2021	-1.0	-0.1	0.6	1.1	1.6	2.0	2.5	2.9	3.5
2022	-1.1	-0.2	0.5	1.1	1.6	2.1	2.5	3.0	3.6
2023	-1.2	-0.2	0.5	1.1	1.6	2.1	2.6	3.1	3.8

- 4.2.8 There are other forecasts of economic growth available, notably those produced independently by the information services company Experian. Experian has produced national, regional and county-level forecasts which show projected growth in the whole economy and the construction sector to 2037. Unfortunately, data for Herefordshire is combined with Worcestershire and is not available separately. As the Experian data only runs to 2037, the growth from 2036 to 2037 has been used for the years 2038 to 2041 to cover the plan period.

<sup>23</sup> [https://www.marcheslep.org.uk/download/economic\\_plans/strategic-economic-plan-update-2019/The-Marches-SEP-Evidence-Base.pdf](https://www.marcheslep.org.uk/download/economic_plans/strategic-economic-plan-update-2019/The-Marches-SEP-Evidence-Base.pdf)

<sup>24</sup> Regional and Country Economic Indicators: Briefing Paper number 06924, House of Commons Library, February 2020, <https://researchbriefings.parliament.uk/ResearchBriefing/Summary/SN06924#fullreport>

<sup>25</sup> Economic and Fiscal Outlook, Office for Budget Responsibility, March 2019, <https://obr.uk/efo/economic-fiscal-outlook-march-2019/>

- 4.2.9 GVA forecasts specific to Herefordshire and Worcestershire were obtained from Experian for the MNA 2017. These were used in the MNA Update 2018 and have been used again for this Assessment. The Experian forecast shows projected national GVA over the same period to be lower than compared to their pre-referendum outlook given post-Brexit uncertainties.
- 4.2.10 Table 4.2 shows the Experian annual forecast growth for Herefordshire and Worcestershire up to 2037, for the whole economy and for the construction sector separately.
- 4.2.11 The Experian forecasts to 2023 and 2029 for the West Midlands are higher than those forecast by the House of Commons Library briefing paper to 2029 and the central forecast of the Office for Budget Responsibility for national growth to 2023.

**Table 4.2 Experian forecasts of economic growth for Herefordshire and Worcestershire, 2016 to 2037**

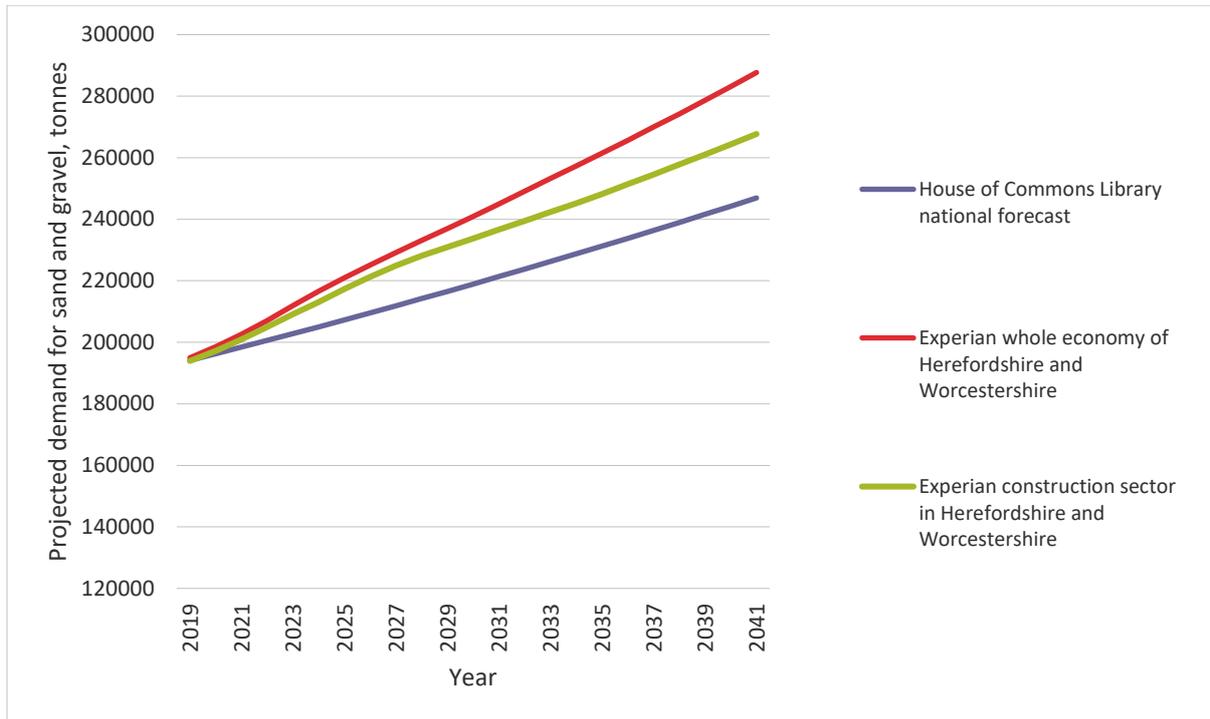
Year	Whole economy	Construction sector
2016	1.4%	-1.5%
2017	0.8%	-0.4%
2018	1.3%	0.0%
2019	1.5%	1.0%
2020	1.9%	1.7%
2021	2.0%	1.9%
2022	2.2%	2.0%
2023	2.4%	2.0%
2024	2.2%	1.9%
2025	2.0%	2.0%
2026	1.9%	1.8%
2027	1.8%	1.6%
2028	1.7%	1.4%
2029	1.6%	1.2%
2030	1.7%	1.2%
2031	1.7%	1.2%
2032	1.7%	1.2%
2033	1.7%	1.2%
2034	1.6%	1.2%
2035	1.6%	1.2%
2036	1.6%	1.3%
2037	1.6%	1.3%

- 4.2.12 The latest forecast from the Construction Products Association<sup>26</sup> is that construction output nationally is forecast to grow at 0.5% in 2020 and 0.9% in 2021. These figures are very much lower than the Associations' 2016 forecast (referenced in the MNA 2017) and 2018 forecast (referenced in the MNA Update 2018) and lower than the Experian short-term forecast for the sector in Herefordshire and Worcestershire.
- 4.2.13 There is a relatively wide range of GVA growth forecasts which may be used to calculate future sand and gravel demand.
- 4.2.14 The OBR outlook is not considered appropriate for two reasons. First, the forecast is for the UK as a whole and therefore gives no localised definition to growth forecasts. Second, the forecast is to 2023 only and provides no indication of how this could be extrapolated up to 2041.
- 4.2.15 The Construction Products Association forecast is also not pursued further as it is a forecast for the UK as a whole and there is no indication of how to extrapolate it beyond 2021.
- 4.2.16 The Marches LEP SEP growth aim is also not pursued, as it is more of a target than a forecast and is not mirrored in recent evidence.
- 4.2.17 The three forecasts of GVA considered most relevant to derive a range of scenarios for future demand for aggregates are:
- The House of Commons Library briefing paper forecast of 1.3% per annum, extrapolated at the same annual growth rate from 2029 to 2036 to be extended to 2041;
  - The Experian forecast for the whole economy of Herefordshire and Worcestershire to 2037, extended to 2041;
  - The Experian forecast for the construction sector in Herefordshire and Worcestershire to 2037, extended to 2041.
- 4.2.18 These growth rates have the benefit of being independent of any one industry, locally focused, but also providing a national comparator. The demand calculated from these GVA forecasts is shown in Figure 4.1.

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<sup>26</sup> <https://www.constructionproducts.org.uk/news-media-events/news/2018/april/construction-output-forecast-to-flatline-in-2018/>

**Figure 4.1 Projected demand for sand and gravel in Herefordshire based on selected GVA forecasts**



- 4.2.19 Using this method, it is calculated that, at 2041, demand for sand and gravel would be between 247,000 and 288,000 tonnes per annum, equating to a ten year annual average in 2041 of between 235,000 and 268,000 tonnes.
- 4.2.20 If demand for sand and gravel should rise in line with forecasts for GVA and no additional reserves are permitted, reserves will have fallen to zero tonnes in 2030 if the Experian whole economy forecast for Herefordshire and Worcestershire is used (the highest GVA forecast). A predicted ten-year average annual sales figure of 268,000 tonnes in 2041 using this forecast gives a landbank of 0 years for sand and gravel. The Experian whole economy forecast indicates a need for 4,944,000 tonnes of sand and gravel to be permitted throughout the plan period, in order to retain a seven-year landbank at 2041.
- 4.2.21 The figures in the above two paragraphs are based on the assumption that Herefordshire would continue to be reliant on imports of sand and gravel to meet 54% of its needs, a figure taken from the AMS 2014. If Herefordshire were to be self-sufficient in sand and gravel production, then in 2041 demand for sand and gravel would be between 539,000 and 628,000 tonnes and the landbank would have fallen to zero in 2024 (with the Experian whole economy forecast) if no new reserves are permitted.
- 4.2.22 The Experian whole economy forecast indicates a need for 13,716,000 tonnes of sand and gravel to be permitted throughout the plan period, in order to retain a seven-year landbank at 2041.
- 4.2.23 It is not possible to generate a forecast for crushed rock using GVA forecasts, because data is not available on current sales to which to apply the GVA multipliers.

## Population projections

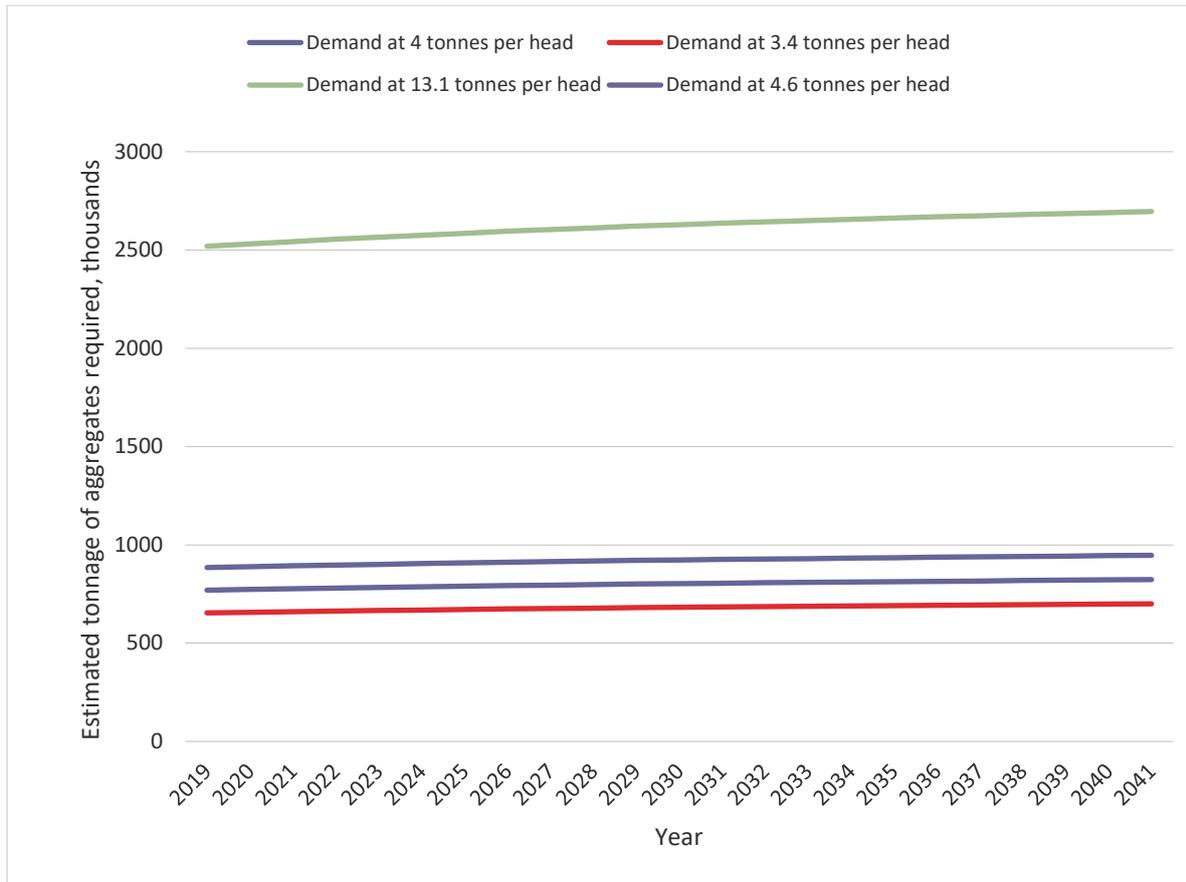
- 4.2.24 The (undated) publication Planning 4 Minerals: A Guide on Aggregates, published by the Quarry Products Association, the British Marine Aggregate Producers Association, the BGS and Entec UK Ltd (hereafter referred to as 'Planning 4 Minerals') suggests that demand for aggregates in the UK is equivalent to a little under 4 tonnes per head per annum. Population projections data can therefore be used to assess the possible implications of population changes for future demand for aggregate.
- 4.2.25 The latest sub-national population projections were published by the ONS in May 2018. However, the most recent consumption data is gained from the DCLG AMS 2005, 2009 and 2014. Applying the consumption data provided in these data sets and mid-year population estimates from the ONS for 2005, 2009 and 2014 gives the per capita consumption of aggregates as 13.1 tonnes, 3.4 tonnes and 4.6 tonnes respectively. This calls into question the reliability of applying such multipliers regardless of geography or levels of economic activity.
- 4.2.26 Table 4.3 presents the population projections for Herefordshire by year and the calculated consequent demand for aggregates using each of the rates identified. The assumptions of 4 tonnes, 4.6 tonnes and 3.4 tonnes per head per annum are reasonably consistent; consequently, Table 4.3 includes demand based on 13.1 tonnes per head per annum, as derived from the DCLG AMS 2005. These multipliers have limitations in that the 2009 and 2014 figures take no account of the possibility of an increase in economic vitality in Herefordshire over the period to 2039, while the 2005 figure may overestimate economic vitality in the short to medium term. For each, their long-term accuracy is very unclear.

**Table 4.3 Projected population and associated demand**

Year	Population (thousands)	Demand at			
		4 tonnes per head	4.6 tonnes per head	3.4 tonnes per head	13.1 tonnes per head
2019	192.3	769.2	884.6	653.8	2519.1
2020	193.2	772.8	888.7	656.9	2530.9
2021	194.1	776.4	892.9	659.9	2542.7
2022	195.0	780.0	897.0	663.0	2554.5
2023	195.8	783.2	900.7	665.7	2565.0
2024	196.6	786.4	904.4	668.4	2575.5
2025	197.3	789.2	907.6	670.8	2584.6
2026	198.1	792.4	911.3	673.5	2595.1
2027	198.8	795.2	914.5	675.9	2604.3
2028	199.4	797.6	917.2	678.0	2612.1
2029	200.1	800.4	920.5	680.3	2621.3
2030	200.6	802.4	922.8	682.0	2627.9
2031	201.2	804.8	925.5	684.1	2635.7
2032	201.7	806.8	927.8	685.8	2642.3
2033	202.2	808.8	930.1	687.5	2648.8
2034	202.7	810.8	932.4	689.2	2655.4
2035	203.2	812.8	934.7	690.9	2661.9
2036	203.7	814.8	937.0	692.6	2668.5
2037	204.1	816.4	938.9	693.9	2673.7
2038	204.6	818.4	941.2	695.6	2680.3
2039	205.0	820.0	943.0	697.0	2685.5
2040	205.4	821.6	944.8	698.4	2690.7
2041	205.8	823.2	946.7	699.7	2696.0

4.2.27 Figure 4.2 presents the four population-based forecasts for aggregate demand. It should be noted that this is total aggregate demand arising from population growth within Herefordshire. This can be met through supply of sand and gravel, crushed rock, and secondary, recycled and marine aggregates, and, continuing a long running trend, this could be from supply outside the county.

**Figure 4.2 Estimated tonnages of aggregates required in Herefordshire based on population projections**



4.2.28 Using this method, it is calculated that at 2041 an aggregate demand of between 700,000 and 2,696,000 tonnes per annum would be sought, equating to a ten year annual average in 2041 of between 693,000 and 2,670,000 tonnes.

4.2.29 It is considered that the forecast on the basis of 13.1 tonnes of aggregate per head is unrealistically high. The forecast is derived on the basis of pre-recession levels of per capita demand, a time when national GDP growth was as high as 6.7% per annum in the fourth quarter of 2005<sup>27</sup>. Current forecasts indicate that growth over the lifetime of the MWLP is unlikely to return to such high levels and therefore this forecast has been ruled out of further consideration.

4.2.30 Using the forecast on the basis of 4.6 tonnes per head of aggregate, being the highest of the remaining forecasts, the annual aggregate demand in 2041 would be 947,000 tonnes. Assuming 28% of this demand would be met by secondary and recycled aggregates (paragraph 4.5.1) 682,000 tonnes of primary aggregate would be required to meet this level of demand.

4.2.31 Taking the most recent (2014) data for the proportion of demand met by land-won sand and gravel (18%) and by crushed rock (82%) (see Tables 3.3 and 3.7 respectively) 123,000 tonnes

<sup>27</sup> <https://www.ons.gov.uk/economy/grossdomesticproductgdp/timeseries/ihyo/ukea>

of this would be demand for land-won sand and gravel and 559,000 would be demand for crushed rock.

- 4.2.32 Tables 3.3 and 3.7 further show that 46% of land-won sand and gravel demand and 24% of crushed rock demand was met by production within Herefordshire, which suggests 56,000 tonnes of sand and gravel and 134,000 tonnes of crushed rock would need to be mined within Herefordshire to meet demand assuming levels of import remain the same as currently. These figures are significantly different from those reported in the MNA 2017 but similar to those reported in the MNA Update 2018.
- 4.2.33 With permitted reserves for sand and gravel in Herefordshire standing at 2,476,000 tonnes in 2018 and sales in 2018 of 192,000 tonnes, the current landbank is 21.5 years for sand and gravel. This would ensure sufficient supply up to 2039 if demand were to stay at current levels. If demand rose in line with population projections, to 56,000 tonnes per annum as estimated in the above paragraph, and no additional reserves are permitted, reserves will have fallen to 1,214,000 tonnes in 2041 (using the forecast based on 4.6 tonnes per head of aggregate demand). A predicted ten-year average annual sales figure of 56,000 tonnes in 2041 using this forecast gives a landbank of 21.7 years for sand and gravel.
- 4.2.34 The figures in the above paragraph are based on the assumption that Herefordshire would continue to be reliant on imports of sand and gravel to meet 54% of its needs, a figure taken from the AMS 2014. If Herefordshire were to be self-sufficient in sand and gravel production, then in 2041 demand for sand and gravel would be 123,000 tonnes and the landbank would have fallen to 0 years by 2039 if no new reserves are permitted. The assumption of 4.6 tonnes per head of aggregate demand indicates a need for 1,118,000 tonnes of sand and gravel to be permitted throughout the plan period, in order to retain a seven-year landbank at 2041.
- 4.2.35 This scenario indicates that new sand and gravel reserve is required to maintain the seven-year landbank at 2041. This is different from the conclusion for the MNA 2017 and MNA 2018.
- 4.2.36 Although the current level of supply of crushed rock within Herefordshire is unknown, the total forecast demand for 2019-2041 on the basis of 4.6 tonnes of aggregate demand per head is 2,999,000 tonnes. This figure is substantially higher than that reported in the MNA 2017 and MNA 2018. Nevertheless, it is significantly below the 11.54 million tonnes of permitted reserves data for 2013, the most recent year for which figures were available for Herefordshire separately from other counties (see Table 3.5) and 5.94 million tonnes assumed reserve for 2018 (paragraph 3.3.9).
- 4.2.37 The figures in the above paragraph are based on the assumption that Herefordshire would continue to be reliant on imports of crushed rock to meet 76% of its needs, a figure taken from the AMS 2014. If Herefordshire were to be self-sufficient in crushed rock production, and assuming a 5.94 million tonne reserve in 2018, then total forecast demand for 2019-2041 for crushed rock would be 12,495,000 tonnes and the landbank would have fallen to 0 years in 2030 if no new reserves are permitted.

## Household projections

- 4.2.38 Planning 4 Minerals indicates that 60 tonnes of aggregate are required to build a typical house, with around 400 tonnes in total being required when associated infrastructure is taken into account. Household projections data can therefore be used to assess the possible implications of household changes for future demand for aggregate.

4.2.39 The ONS predicts household projections at local authority level, with the most recent published in September 2018<sup>28</sup>. Table 4.4 shows estimated demand on the basis of 400 tonnes of aggregate required for both housing and associated infrastructure for the increase in households predicted by ONS.

**Table 4.4 ONS household projections and associated demand for aggregates, 2017 to 2041**

Year	ONS household projections	Aggregates required (thousand tonnes)
2017	81.570	187.2
2018	82.047	190.8
2019	82.538	196.4
2020	82.989	180.4
2021	83.408	167.6
2022	84.010	240.8
2023	84.589	231.6
2024	85.183	237.6
2025	85.742	223.6
2026	86.277	214.0
2027	86.820	217.2
2028	87.359	215.6
2029	87.877	207.2
2030	88.362	194.0
2031	88.852	196.0
2032	89.323	188.4
2033	89.795	188.8
2034	90.232	174.8
2035	90.668	174.4
2036	91.115	178.8
2037	91.531	166.4
2038	91.943	164.8
2039	92.331	155.2
2040	92.679	139.2
2041	93.090	164.4

<sup>28</sup>

<https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/datasets/householdprojectionsforengland>

- 4.2.40 However, this approach has limitations, in that it takes no account of variations in household type, either between local authority areas or over time in any one authority, both of which can affect the type of housing required, the associated infrastructure and the consequent level of demand for aggregates. Furthermore, it does not allow for changes in construction practices and materials or improvements in resource efficiency in house construction.
- 4.2.41 An alternative approach would be to look at the housing trajectory set out in the Herefordshire Local Plan Core Strategy 2011-2031 (the Core Strategy) and compare this to historic housing completion rates, available from MHCLG statistical tables<sup>29,30</sup>, and Herefordshire's Annual Monitoring Reports<sup>31</sup>. This comparison could be used to derive a percentage multiplier that can then be applied to the most recent ten year average annual aggregates sales figure in order to project aggregate requirements over the period of the Core Strategy.
- 4.2.42 However, with the extension of the time period for the MWLP to 2041, the Core Strategy housing trajectory now covers only the first half of the MWLP. The likely housing trajectory after 2030/31 is not currently known. Using the housing trajectory for the current Core Strategy would therefore be of little use for estimating aggregate demand.
- 4.2.43 Therefore, the ONS household projections have been used in this Assessment to estimate demand for aggregate over the period of the MWLP, replacing the use of the Core Strategy in previous MNA.
- 4.2.44 Figure 4.3 shows the projected total aggregate demand in Herefordshire calculated on the basis of the ONS household projections.

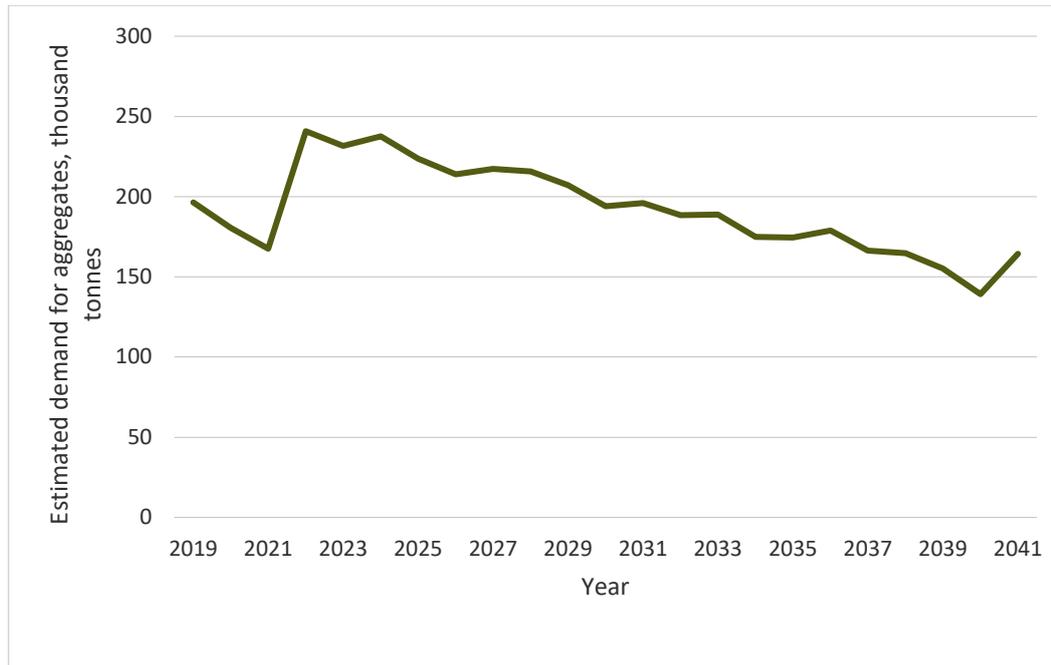
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<sup>29</sup> <https://www.gov.uk/government/statistical-data-sets/live-tables-on-house-building>

<sup>30</sup> It is recognised that managing housing statistics has moved from DCLG/MHCLG to the ONS and that the ONS has revised both past and forecast housing numbers. The difference in housing numbers is considered insignificant and unlikely to change the outcome of this Update. Not least as demonstrated in the WNA 2019, the most change is likely to be a decrease of demand. This Assessment continues to rely upon the MHCLG data.

<sup>31</sup> [https://www.herefordshire.gov.uk/info/200185/local\\_plan/142/authority\\_monitoring\\_reports](https://www.herefordshire.gov.uk/info/200185/local_plan/142/authority_monitoring_reports)

**Figure 4.3 Estimated demand for aggregates in Herefordshire based on ONS household projections**



- 4.2.45 Using this method, it is calculated that in 2041 a total aggregate demand of 1,096,000 tonnes per annum would be sought, equating to a ten year annual average in 2041 of 1,130,000 tonnes.
- 4.2.46 Assuming 28% of this demand would be met by secondary and recycled aggregates (paragraph 4.5.1) 789,000 tonnes of primary aggregate would be required to meet this level of demand. Taking the most recent (2014) data for the proportion of demand met by land-won sand and gravel (18%) and by crushed rock (82%) (see Tables 3.3 and 3.7 respectively) 142,000 tonnes of this would be demand for land-won sand and gravel and 647,000 tonnes would be demand for crushed rock.
- 4.2.47 Tables 3.3 and 3.7 further show that 46% of land-won sand and gravel demand and 24% of crushed rock demand was met by production within Herefordshire, which suggests 65,000 tonnes of sand and gravel and 155,000 tonnes of crushed rock would need to be mined within Herefordshire to meet demand.
- 4.2.48 With permitted reserves for sand and gravel in Herefordshire standing at 2,476,000 tonnes in 2018 and sales in 2018 of 192,000 tonnes, the current landbank is 21.5 years for sand and gravel, which would ensure sufficient supply up to 2039 if demand were to stay at current levels. If demand rose in line with the ONS household projections to 65,000 tonnes per annum as estimated in the above paragraph, and no additional reserves are permitted, reserves will have fallen to 720,000 by 2041 sufficient for a 10.7 year landbank at that point of the MWLP.
- 4.2.49 The figures in the above paragraph are based on the assumption that Herefordshire would continue to be reliant on imports of sand and gravel to meet 54% of its needs, a figure taken from the AMS 2014. If Herefordshire were to be self-sufficient in sand and gravel production,

then in 2041 demand for sand and gravel would be 142,000 tonnes and the landbank would have fallen to zero by 2032 if no new reserves are permitted.

- 4.2.50 This indicates a need for 2,366,000 tonnes of sand and gravel to be permitted throughout the plan period, in order to retain a seven-year landbank at 2041.
- 4.2.51 Although the current level of supply of crushed rock within Herefordshire is unknown, the total forecast demand for 2019 to 2041 on the basis of the ONS household projections is 4,173,000 tonnes, significantly below the 11.54 million tonnes of permitted reserves data for 2013, the most recent year for which figures were available for Herefordshire separately from other counties (Table 3.5) and 5.94 million tonnes assumed reserve for 2018 (paragraph 3.3.9).
- 4.2.52 The figures in the above paragraph are based on the assumption that Herefordshire would continue to be reliant on imports of crushed rock to meet 76% of its needs, a figure taken from the AMS 2014. If Herefordshire were to be self-sufficient in crushed rock production and assuming a 5.94 million tonne reserve in 2018, then total forecast demand for 2019-2041 for crushed rock would be 17,386,000 tonnes and the landbank would have fallen to zero in 2026.

### **Core Strategy Infrastructure Requirements**

- 4.2.53 The infrastructure requirements arising from policies in the Core Strategy have been examined, with reference to Appendix 5, which lists the necessary infrastructure for strategic sites, as well as to the text of the Core Strategy itself. The main infrastructure proposals which could have a significant demand for aggregates within the period of the MWLP have been identified and these are listed in Table 4.6.
- 4.2.54 Table 4.6 also shows the main infrastructure proposals that were planned by the earlier Herefordshire Unitary Development Plan<sup>32</sup> for comparative purposes.
- 4.2.55 No data is available to enable estimates to be made of the likely demand for aggregates arising from the construction of the development. However, Table 4.6 shows that the infrastructure needs arising from the Core Strategy are similar in nature and scale to those arising from the Unitary Development Plan. There is therefore no indication to suppose that there will be a significant change in the demand for aggregates over the life of the Core Strategy when compared to the period since the adoption of the Unitary Development Plan.
- 4.2.56 It is recognised that the Core Strategy is currently being revised and the future level of infrastructure provision is not known. However, the purpose of this exercise is to consider, proportionally, what the impact might be on future aggregate demand. The outcome is consequently still relevant to this Assessment.

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<sup>32</sup> Herefordshire Unitary Development Plan, Herefordshire Council, March 2007

**Table 4.6 Planned infrastructure in Herefordshire with a potentially significant aggregate requirement**

Unitary Development Plan 1996-2011	Core Strategy 2011-2031
12,200 dwellings over plan period (813 dpa) 800 dpa 2001-2007 600 dpa from 2008 onwards	16,500 dwellings over plan period (825 dpa) 600 dpa 2011-2016 850 dpa 2016-2021 900 dpa 2021-2026 950 dpa 2026-2031
100 ha of Part B employment land	148 ha of employment land
14-16,000m <sup>2</sup> of retail floorspace	
11-15,000m <sup>2</sup> of retail warehouse floorspace	
12-14,000m <sup>2</sup> of office floorspace	
Edgar Street Grid: A new canal basin (residential, commercial, leisure, bars, hotel) A new civic quarter (public offices, library, retail, leisure, visitor amenities) Modernisation and relocation of Hereford United FC Multiplex cinema	New urban village in Eign Gate and Edgar Street regeneration areas including: canal basin leisure and recreation facilities Redevelopment of Hereford United FC New police headquarters Divisional Fire Brigade headquarters
Public transport interchange	Purpose-built transport hub
New road link between Edgar Street and Commercial Road Extension of Canal Road to provide a new route between the station and city centre Downgrade inner ring road New road link A49 to B4399 Extending Roman Road improvements from A480 to A438 Improvements to eastern section of Roman Road New road link across northern half of Edgar Street regeneration area Leominster Enterprise Park access roads Ledbury bypass extension	Western Hereford Relief Road with second river crossing Upgrade to inner ring road Leominster southern link road New road infrastructure for lower Bullingham New roundabout for Rotherwas Access Road Road link in Leominster linking B4361 to A44 New roundabout and road link on periphery of development at Bromyard
Park and ride schemes will be permitted	3 park and ride facilities
Land for enhancing capacity of rail network will be safeguarded	Additional capacity on rail through passing loops or double track on Hereford to Great Malvern section
Cycling and pedestrian links	Cycling and pedestrian links

## 4.3 Conclusions for sand and gravel

### Availability

4.3.1 Section 4.1 sets out a number of forecasts for future sand and gravel demand using a range of forecasts based on GVA growth, on population projections and on the ONS household projections. Table 4.7 summarises the estimates calculated on the basis of a selection of these forecasts.

**Table 4.7 Summary of sand and gravel forecast demand at 2041, assuming current level of import**

Current level of import Scenario	Demand (tonnes)	Permitted reserve (tonnes)	Landbank	Tonnage required to maintain 7 year landbank
<b>GVA growth (highest forecast)</b>	288,000	0	0 years	4,944,000
<b>Population growth, demand at 4.6 tonnes of aggregate per head</b>	56,000	1,214,000	21.7 years	0
<b>ONS household projections</b>	65,000	720,000	10.7 years	0

4.3.4 Table 4.7 shows that, depending on the forecast method used, there may be sufficient permitted reserves of sand and gravel remaining for the lifetime of the MWLP, or there may be an insufficient landbank remaining at the end of the plan period. By 2041, if the highest GVA growth projection is used, the landbank will have fallen to zero, requiring just under 5 million tonnes of new reserve. Using population growth or household projections as the basis for a forecast, the landbank would still be sufficient in 2041, requiring no new reserves.

4.3.5 The figures in Table 4.7 are calculated based on the assumption that Herefordshire would continue to be reliant on imports of sand and gravel to meet 54% of its needs, a figure taken from the AMS 2014.

4.3.6 If Herefordshire was to be self-sufficient in sand and gravel, Table 4.8 shows that no forecast predicts a sufficient landbank for sand and gravel in 2041 if no new reserves are permitted. Table 4.8 indicates a wide range of between 1.1 and 13.7 million tonnes of new reserve required to enable self-sufficiency at 2041.

**Table 4.8 Summary of sand and gravel forecast demand at 2041, assuming self-sufficiency in sand and gravel production**

Self-sufficient Scenario	Demand (tonnes)	Permitted reserve (tonnes)	Landbank	Tonnage required to maintain 7 year landbank
<b>GVA growth (highest forecast)</b>	628,000	0	0 years	13,716,000
<b>Population growth, demand at 4.6 tonnes of aggregate per head</b>	123,000	0	0 years	1,118,000
<b>ONS household projections</b>	142,000	0	0 years	2,366,000

4.3.9 It is acknowledged that these outcomes have been calculated through forecasts relying upon a number of assumptions, some of which are based on data for single years and some of which is becoming dated. However, if during the course of the development of the MWLP better data becomes available, this can be used to improve the forecasts produced wherever appropriate.

#### **Flexibility**

4.3.10 Wellington Quarry is the only established sand and gravel quarry in Herefordshire (at the time of writing) with permitted reserves constituting over half the total permitted reserves within the county. Current planning conditions require that the winning and working of minerals must cease by 31 December 2026.

4.3.11 Upper Lyde Quarry commenced extraction in September 2019 and is required to be restored within a period of 10 years; September 2029.

4.3.12 Therefore, regardless of which forecast most closely represents the real outcome for sand and gravel over the lifetime of the MWLP there will be a need for additional reserves of sand and gravel to become operational to meet demand from 2027 onwards.

## **4.4 Conclusions for crushed rock**

#### **Availability**

4.4.1 There is, generally, a lack of data in relation to crushed rock within Herefordshire.

4.4.2 Two methods have been considered for forecasting the potential future demand. These have produced widely varying forecasts of demand for 2019-2041. Calculations have been made for two different scenarios, on the basis of whether Herefordshire continues to rely on imports of crushed rock to meet 76% of its needs, and on the basis of Herefordshire being self-sufficient in crushed rock production.

**Table 4.9 Summary of crushed rock forecast demand at 2041, assuming current level of import and self-sufficiency**

Scenario	Demand 2019-2041	
	Assuming imports at current level	Assuming self-sufficiency
<b>Population growth, demand at 4.6 tonnes of aggregate per head</b>	2,999,000	12,495,000
<b>ONS household projections</b>	4,173,000	17,386,000

4.4.4 Table 4.9 shows that demand for crushed rock could exceed even the 11.54 million tonnes of permitted reserves data for 2013, the most recent year for which figures were available for Herefordshire separately from other counties (see Table 3.5).

4.4.5 It is acknowledged that these outcomes have been calculated through forecasts relying upon a number of assumptions, some of which are based on data for single years and some of which is becoming dated. However, if during the course of the development of the MWLP better data becomes available, this can be used to improve the forecasts produced wherever appropriate.

### Flexibility

4.4.6 Of the two operational quarries for crushed rock in Herefordshire, Leinthall Quarry is required to cease operations by 2027, and therefore could not, currently, contribute to meeting demand after that date.

4.4.7 Perton Quarry can continue operations until 2042.

4.4.8 Therefore, regardless of which forecast most closely represents the real outcome for crushed rock over the lifetime of the MWLP there will likely be a need for additional reserves of sand and gravel to become operational to meet demand from 2027 onwards.

## 4.5 Secondary and recycled aggregates

4.5.1 The Mineral Products Association<sup>33</sup> estimates that secondary and recycled aggregates constituted 28% of total aggregate consumption in Great Britain in 2015.

4.5.2 There are currently no industrial processes in Herefordshire which are known to produce secondary aggregates<sup>34</sup>. There may be potential for some provision of secondary aggregates from existing quarrying operations; however there does not appear to be any current proposals for this activity. It is understood, from the site visits, that some hard rock dust from quarries in Wales is used in concrete block manufacture within Herefordshire.

4.5.3 Recycled aggregates are currently being produced within Herefordshire, principally at the CD&E waste recovery facility at Former Lugg Bridge Quarry.

<sup>33</sup> The Mineral Products Industry At A Glance: 2016 Edition, Mineral Products Association, 2016, [http://www.mineralproducts.org/documents/Mineral\\_Products\\_Industry\\_At\\_A\\_Glance\\_2016.pdf](http://www.mineralproducts.org/documents/Mineral_Products_Industry_At_A_Glance_2016.pdf)

<sup>34</sup> Herefordshire Local Aggregates Assessment December 2019, Herefordshire Council, February 2020

- 4.5.4 The WNA 2019 (section 5.3) has produced forecasts for arisings of CD&E waste in Herefordshire based on the forecast change in GVA for the construction sector in Herefordshire and Worcestershire produced by Experian. The forecasts are:
- Scenario 1a: Growth based on Herefordshire and Worcestershire construction sector GVA growth and a baseline figure of 393,000 tonnes in 2016 (calculated as per capita arisings using an UK per capita multiplier); and
  - Scenario 2a: Growth based on Herefordshire and Worcestershire construction sector GVA growth and a baseline figure of 412,000 tonnes in 2016 (calculated as per capita arisings using an England waste per capita multiplier).
- 4.5.5 The forecasts are broken down into the key elements of the CD&E waste stream (non-hazardous construction and demolition waste, hazardous construction and demolition waste and dredging and excavation spoils) based on relative proportions estimated in 2014 and assuming that these remain constant. In this way, two forecasts for arisings of non-hazardous construction and demolition waste have been made, this being the particular element of the CD&E waste stream likely to be the source of recycled aggregates.
- 4.5.6 However, not necessarily all of the arisings will be recovered for recycling. The latest figures from Defra<sup>35</sup> show that 92.1% of non-hazardous construction and demolition waste was recovered in England in 2014 and 91.0% for the UK as a whole. Therefore, in considering this data for minerals purposes the arisings forecast by the WNA 2019 have been reduced in accordance with these rates. The adjusted forecasts are set out in Table 4.10 and presented in Figure 4.4.

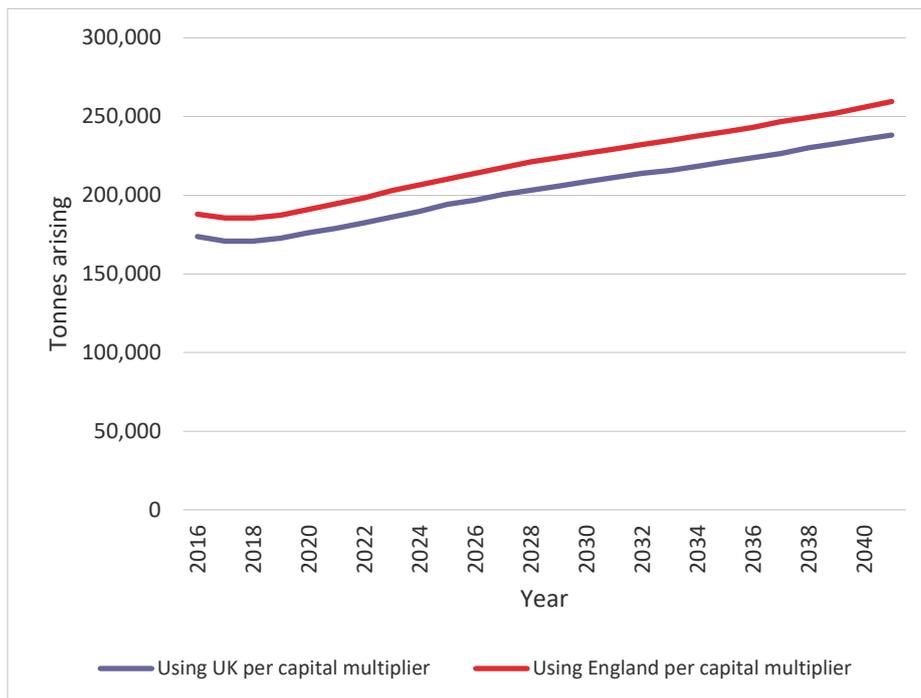
**Table 4.10 Forecast arisings of recovered non-hazardous construction and demolition waste, Herefordshire, 2016 to 2041**

Year	Using a UK per capita multiplier	Using an England per capita multiplier
2016	173,810	187,884
2017	170,810	185,542
2018	170,810	185,542
2019	172,608	187,370
2020	176,204	191,026
2021	178,901	194,682
2022	182,497	198,338
2023	186,093	202,908
2024	189,689	206,564
2025	194,184	210,220
2026	196,881	213,876
2027	200,477	217,532
2028	203,174	221,188

<sup>35</sup> Statistics on Waste Notice: Non-Hazardous Construction and Demolition Waste UK and England 2010-2016, Defra, March 2019

2029	205,871	223,930
2030	208,568	226,672
2031	211,265	229,414
2032	213,962	232,156
2033	215,760	234,898
2034	218,457	237,640
2035	221,154	240,382
2036	223,851	243,124
2037	226,548	246,780
2038	230,144	249,522
2039	232,841	252,264
2040	235,538	255,920
2041	238,235	259,576

**Figure 4.4 Forecast arisings of recycled aggregates, Herefordshire, 2016 20 2041**



4.5.7 The forecasts indicate that up to 260,000 tonnes of recycled aggregates could be gained from non-hazardous construction and demolition waste in Herefordshire by 2041. In simple terms, i.e. not considering all the different recycled aggregates produced, this could be provided by the proposed extensions to the operations undertaken at the Former Lugg Bridge site.



## 5. Other Minerals

### 5.1 Building Stone

5.1.1 The Annual Raised Enquiry prepared by the ONS provides data for building stone sales from Herefordshire. The most recent data for building stone is reproduced in Table 5.1. Prior to 2011, data on building stone was only provided at the regional level.

**Table 5.1 Sales of building stone, Herefordshire, 2011 to 2014**

Year	Building stone sales (tonnes)
2014	2,000
2013	2,000
2012	2,000
2011	2,000*

\* Figure for Herefordshire and Worcestershire combined

- 5.1.2 The figures indicate a small and stable market for the sale of building stone from Herefordshire.
- 5.1.3 There are several active quarries for building stone within Herefordshire. Some of these have planning conditions imposed that require operations to cease within the lifetime of the MWLP. Llandraw Delve is required to cease working by 2021 and Tybubach Delve by 2030 at the latest (this site already appears to have ceased working). Westonhill Wood Delves are required to cease working by 2039, also within the plan period. Therefore, with the closure of some quarries before the end of the plan period, there may be a need to facilitate new permissions, or extended time periods, for the winning and working of building stone.

### 5.2 Conventional and Unconventional Hydrocarbons

- 5.2.1 Herefordshire has two areas that have been worked in the past for coal. However, such conventional extraction of hydrocarbons has ceased in Herefordshire and shows little sign of recommencing. In 1999, the BGS reported that the hydrocarbon prospectivity of the area was low.
- 5.2.2 Recently, new technologies have been developed for extracting hydrocarbons in an unconventional way that may allow the extraction of resources from deposits which were previously considered uneconomic.
- 5.2.3 The UK has a long history of onshore gas exploration and has developed a robust regulatory system to ensure that any such operations will be carried out to the highest standards of safety and environmental protection. The 14th Onshore Oil and Gas Licensing Round was launched on 28 July 2014 and applications were received from 47 companies covering 295 Ordnance Survey Blocks.
- 5.2.4 A Petroleum Exploration and Development Licence (PEDL) does not itself give any direct permission for operations to begin but grants the licensee exclusivity over an area of land for

onshore hydrocarbon exploration, appraisal and extraction. The exclusivity applies to both conventional and unconventional operations.

- 5.2.5 The PEDL are issued for an identified block of land, one of which, referred to as SO51a, included a small part of the south of Herefordshire around Whitchurch, Welsh Newton, Goodrich, Kerne Bridge, Hope Mansell and Marstow.
- 5.2.6 The PEDL for block SO51a is classified as coalbed methane, although the licence is for any hydrocarbon and is not limited to this classification. It was offered to South West Energy Limited, but the Oil and Gas Authority has confirmed that the licence was not taken up, and therefore no PEDL was awarded in this area. It is possible that the block could be subject to future licensing rounds, although the Oil and Gas Authority has not been able to provide any timeframe for that<sup>36</sup>.
- 5.2.7 It is also of note that the NPPF was amended in May 2019 to remove support for oil and gas development, including unconventional hydrocarbons<sup>37</sup>.
- 5.2.8 Activities related to hydrocarbon exploration or extraction will therefore not take place in Herefordshire, at least in the short term. It is therefore still possible, although perhaps unlikely, that hydrocarbon operations will take place in Herefordshire within the plan period, although this will be influenced by future developments in both policy and technology.

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<sup>36</sup> Email exchange with OGA, March 2018

<sup>37</sup> Ministerial Written Statement (reference: HCWS1586) made on 23 May 2019 confirms that '*paragraph 209(a) of the National Planning Policy Framework has been quashed.*'

## 6. Conclusions

### 6.1 Overview

- 6.1.1 The previous sections have collated and analysed the available data on supply of and demand for minerals in Herefordshire. In many instances, data is unavailable and estimates have had to be made using assumptions based on information from other sources or from several years ago. While every attempt has been made to use reliable data, the figures derived can only be an indication of the actual position regarding supply of minerals, except in the cases of sand and gravel and building stone where actual figures are available.
- 6.1.2 When making projections of future demand, especially over a 15 to 20 year time-frame, estimates are by their nature uncertain and the true outcome is uncertain. A range of forecasts have been made to show the possible variation in outcome
- 6.1.3 On the basis of the estimates derived for supply and demand, it is possible to draw some conclusions about the balance between supply and demand for minerals. These conclusions have changed considerably from the MNA 2017 and Update 2018, reflecting the incorporation of new and updated information and extended plan period.

### 6.2 Aggregates

#### Sand and gravel

- 6.2.1 Clear data is held on the supply of sand and gravel and permitted reserves remaining.
- 6.2.2 In most of the scenarios considered, additional sand and gravel reserve is required to maintain a seven-year landbank at 2041.
- 6.2.3 Regardless of the demand forecast used, permitted quarry operations must cease within the plan period. There is therefore a need for additional reserves of sand and gravel to become operational before the end of the MWLP.

#### Crushed rock

- 6.2.4 Poor data is held on the supply of crushed rock and permitted reserves remaining.
- 6.2.5 Two methods have been provided for forecasting the potential future demand for crushed rock. These have produced widely varying forecasts of demand for 2019 to 2041. However, in both cases the forecast is significantly below the tonnes of permitted reserves data for 2013, the most recent year for which figures were available for Herefordshire separately from other counties. This assumes that Herefordshire continues to rely on imports of crushed rock at current levels.
- 6.2.6 If Herefordshire were to be self-sufficient in crushed rock production, then demand would outstrip the available permitted reserves extant in 2013.
- 6.2.7 Of the two operational quarries for crushed rock in Herefordshire, one is required to cease operations by 2027.
- 6.2.8 There is an indicated need for additional reserve of crushed rock to become operational before the end of the MWLP. However, recognising the poor data available and consequent

wide range of future demand, it is difficult to be precise on the amount of future reserve required.

## **Recycled aggregates**

- 6.2.9 Herefordshire is a net importer of aggregates, and overwhelmingly so for crushed rock. As discussed above, there is an indicated need to secure more permitted reserves for both sand and gravel and crushed rock reserves. Recycled aggregates could have an increasingly important role to play in reducing the reliance on imports of aggregates.
- 6.2.10 Forecasts have been made for the potential arisings of recycled aggregates over the plan period. These have been calculated using a baseline of per capita arisings in Herefordshire and assumed to change over the plan period in line with forecasts for the change in GVA for the construction sector in Herefordshire and Worcestershire.
- 6.2.11 This gives a baseline for arisings of recycled aggregates in 2016 of between 174,000 tonnes and 188,000 tonnes, rising to between 238,000 tonnes and 260,000 tonnes by 2041. While a useful contribution to the supply of aggregates, these figures fall well short of the predicted tonnages required to meet the estimated demand calculated by reference to the ONS household projections.

## **6.3 Building stone**

- 6.3.1 Clear (albeit not very recent) data is held on the supply of building stone and permitted reserves remaining.
- 6.3.2 There is a small and stable market for the sale of building stone from Herefordshire. This is important for retaining the local character of buildings and also has a market for quality construction in other parts of the country.
- 6.3.3 All of the active delves for building stone within Herefordshire are required to cease operations within the lifetime of the MWLP. Therefore, there may be a need for policy to address the winning and working of building stone to enable supply to continue to meet demand.

## **6.4 Hydrocarbons**

- 6.4.1 There will not be any activities relating to the exploration or extraction of hydrocarbons within Herefordshire in the short term.
- 6.4.2 In the medium to long term, it is possible that this situation may change but the current position would indicate this is unlikely.



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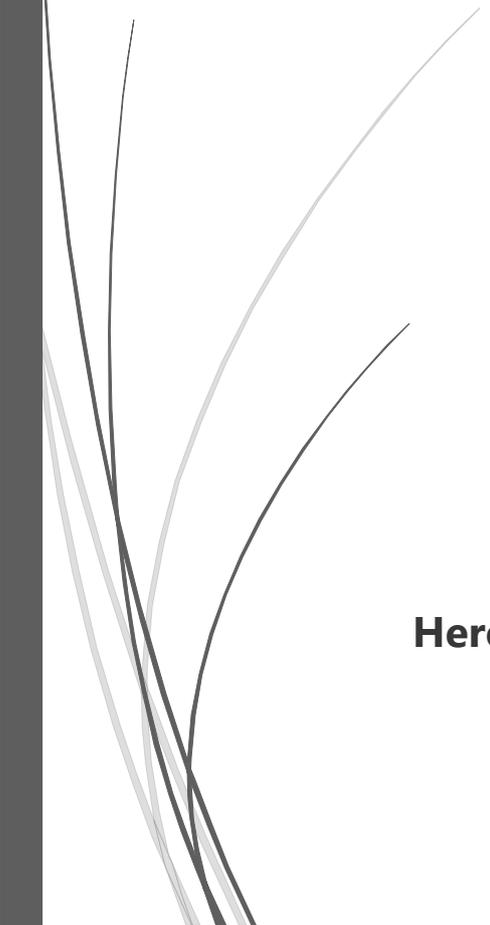
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Waste Need  
Assessment 2019



**Herefordshire Minerals and Waste Local Plan**

**March 2020**  
HENDECA LTD



## Contents

<b>1. Introduction</b> .....	<b>1-1</b>
1.1 Background and Purpose of this Report .....	1-1
1.2 Structure .....	1-2
<b>2. Context</b> .....	<b>2-1</b>
2.1 Explanations for Waste Terminology .....	2-1
2.2 Data Sources .....	2-4
<b>3. Waste Management Facilities in Herefordshire</b> .....	<b>3-1</b>
3.1 Facilities Operating under an Environmental Permit .....	3-1
3.3 Facilities exempt from environmental permitting .....	3-27
<b>4. Waste Arisings</b> .....	<b>4-1</b>
4.1 Local Authority Collected Waste ('LACW') .....	4-1
4.2 Commercial and Industrial (C&I) waste .....	4-6
4.3 Construction, Demolition and Excavation Waste (CD&E waste) .....	4-23
4.4 Agricultural Waste .....	4-30
4.5 Hazardous Waste .....	4-34
4.6 Radioactive waste .....	4-42
4.7 Summary of estimates for waste generated in Herefordshire .....	4-44
<b>5. Waste Forecasts</b> .....	<b>5-1</b>
5.1 Local Authority Collected Wastes (LACW) .....	5-1
5.2 Commercial and Industrial Waste (C&I waste) .....	5-6
5.3 Construction, Demolition and Excavation Waste (CD&E waste) .....	5-11
5.4 Agricultural Waste .....	5-14
5.5 Hazardous Waste .....	5-14
5.6 Summary of Waste Forecasts .....	5-14
<b>6. Capacity Needs</b> .....	<b>6-1</b>
6.1 Introduction .....	6-1
6.2 Local Authority Collected Waste (LACW) .....	6-1
6.3 Commercial and Industrial Waste (C&I waste) .....	6-6
6.4 Construction, Demolition and Excavation Waste (CD&E waste) .....	6-11
6.5 Agricultural Waste .....	6-14
6.6 Hazardous Waste .....	6-15
6.7 Summary of Capacity Requirements .....	6-16

## **Annexes**

Annex A: Permitted waste facilities, Herefordshire, 2018

Annex B: Origin of waste at permitted facilities in Herefordshire, 2018, by WPA or Region

Annex C: European List of Wastes (LoW)

Annex D: Wastes accepted at permitted facilities by LoW Chapter heading, Herefordshire, 2015 to 2018

Annex E: Exemption descriptions

Annex F: Not on a Farm Exemptions

Annex G: Assumptions for non-farm exempt activities

Annex H: Tonnage discounted to prevent double counting for years 2013 to 2018

Annex I: Breakdown of generic hazardous waste management methods by LoW Chapter heading, Herefordshire, 2015 to 2018

## 1. Introduction

### 1.1 Background and Purpose of this Report

- 1.1.1 Herefordshire Council is preparing the Minerals and Waste Local Plan (MWLP) to guide development related to minerals and waste within Herefordshire up to 2041.
- 1.1.2 The original Waste Need Assessment was produced in February 2017 (the 'WNA 2017') to provide an understanding of waste management infrastructure within Herefordshire and to consider potential future demand, so as to prepare comprehensive, compelling and long-lasting policy. The WNA 2017 considered base data up to year 2015. This work was updated by the Waste Need Assessment Update 2018 (the 'WNA Update 2018', March 2018) that considered base data up to year 2017. The WNA Update 2018 also undertook further analysis to understand the movement of wastes into and out of Herefordshire. However, it relied on the WNA 2017 data for other matters, e.g. consideration of exempt activities.
- 1.1.3 The key data sources used in all the WNA, principally WasteDataFlow (the local authority collected waste data base) and the Environment Agency's Waste Data Interrogator (WDI) are updated each year, with the data for 2018 becoming available in Autumn 2019.
- 1.1.4 This report (the/this 'WNA 2019' or 'this Assessment') returns to the source data to consider all matters afresh, including those such as exempt activities.
- 1.1.5 This WNA 2019 is consequently a complete analysis, using the most up to date information. It has been prepared to be a discrete report, so the reader does not need to refer back to previous WNA; where there are interesting comparisons to be made cross referencing is provided as appropriate.
- 1.1.6 Despite being finalised in March 2020, this report is dated 2019 primarily to reflect more closely the time period that it is reporting and to continue the sequencing with the previous reports.

#### Plan making context

- 1.1.7 The National Planning Policy for Waste (published October 2014, the NPPW) identifies that positive planning should play a pivotal role in delivering waste ambitions through:
- delivery of sustainable development and resource efficiency, including provision of modern infrastructure, local employment opportunities and wider climate change benefits, by driving waste management up the waste hierarchy;
  - ensuring that waste management is considered alongside other spatial planning concerns, such as housing and transport, recognising the positive contribution that waste management can make to the development of sustainable communities;
  - providing a framework in which communities and businesses are engaged with and take more responsibility for their own waste, including by enabling waste to be disposed of or, in the case of mixed municipal waste from households, recovered, in line with the proximity principle;
  - helping to secure the re-use, recovery or disposal of waste without endangering human health and without harming the environment; and

- ensuring the design and layout of new residential and commercial development and other infrastructure (such as safe and reliable transport links) complements sustainable waste management, including the provision of appropriate storage and segregation facilities to facilitate high quality collections of waste.
- 1.1.8 The NPPW requires waste planning authorities to prepare a local plan addressing waste management that: is based on a proportionate evidence base; will identify the level of need of their area; and will identify sites and/or areas for new or enhanced waste management facilities.
- 1.1.9 A range of wastes are generated and managed within Herefordshire and these are all addressed as relevant within this need assessment.
- 1.1.10 The Herefordshire MWLP will be applicable across all of Herefordshire and is intended to have a plan period to 2041. Once adopted, it will sit with the Herefordshire Core Strategy and be part of the development plan.

## **1.2 Structure**

- 1.2.1 This report is structured as follows:
- Section 1 - Introduction;
  - Section 2 - Context: the key definitions for waste and the sources of data used;
  - Section 3 - Permitted facilities in Herefordshire: the current waste management infrastructure operating within the county;
  - Section 4 - Waste Arisings: estimating waste arisings for year 2018 where data is available and drawing comparisons with previous data;
  - Section 5 - Waste Forecasts: estimating future waste arisings, up to 2041; and
  - Section 6 - Capacity Needs: considering the need for new waste management capacity.

## 2. Context

### 2.1 Explanations for Waste Terminology

2.1.1 Waste terminology has changed over time as a result of greater understanding of different waste streams, changes to waste classification systems and the adoption of common European definitions. This section explains some key definitions used within this Assessment.

#### **Municipal waste, local authority collected waste and household waste**

2.1.2 In 2011, the UK adopted the European definition of municipal waste, which is 'waste from households, as well as other waste which, because of its nature or composition, is similar to waste from households'. This definition is quite broad and includes those wastes not collected by a local authority (principally commercial and industrial wastes).

2.1.3 To provide consistency with the data recorded pre-2011 and to provide clarity over the different waste streams, the term 'local authority collected waste', abbreviated to 'LACW' is used to refer to all waste collected by a local authority.

2.1.4 Within this report, LACW is further categorised as:

- household waste - waste collected from households within the local authority;
- trade waste - the commercial and industrial waste collected by the local authority (e.g. from local businesses);
- other municipal wastes - for example waste from parks and gardens, or fly tipping; and
- non-municipal fractions - principally construction and demolition waste.

#### **Commercial and industrial waste**

2.1.5 Commercial waste is generated from the business sector, including the activities of wholesalers, catering establishments, shops and offices. Industrial waste is generated by factories and industrial facilities.

2.1.6 These wastes have different properties but are often, and within this report, considered together, using the abbreviation 'C&I waste'.

2.1.7 The majority of C&I waste is managed directly through contracts held between the business and the waste management industry, however some is collected by the local authority. This report makes clear the C&I waste generated within Herefordshire and whether it is managed through the waste management industry or as LACW.

#### **Construction, demolition and excavation waste**

2.1.8 Construction and demolition wastes are those generated through building projects; whilst excavation waste refers to wastes produced from earth moving activities. The abbreviation used is 'CD&E waste'.

2.1.9 Again, these wastes are generally managed through private contracts held directly with the waste management industry. However, a small amount is captured in LACW, principally through deposits made at household waste recycling centres (HWRC) also known as civic amenity (CA) sites.

## **Agricultural waste**

- 2.1.10 Agricultural waste is that generated by the agriculture sector, principally farms. Most of this waste is natural and can be managed on-farm, e.g. soiled animal bedding; non-natural wastes (e.g. plastic wrapping) is generally managed through the private sector.

## **Hazardous waste**

- 2.1.11 Hazardous waste relates to wastes that could cause harm to human health or the environment due to the presence or concentration of dangerous substances.
- 2.1.12 Hazardous wastes are a component of other waste streams, i.e. hazardous wastes can arise in households, from industrial premises, at construction sites etc.

## **Radioactive waste**

- 2.1.13 Radioactive waste is not a controlled waste under UK legislation. However, waste planning authorities are required to consider disposal requirements that may arise for this waste stream in preparing their development plans.

## **Municipal waste**

- 2.1.14 Directive 2018/851 of the European Parliament and of the Council<sup>1</sup> (which came into force on 4 July 2018, the 'rWFD') amends Directive 2008/98/EC on waste. The rWFD gives Member States two years in which to transpose the agreed amendments, which the UK Government has indicated it will implement in full.

- 2.1.15 Article 1 of the rWFD amends the definitions presented in Directive 2008/98/EC on waste, updating the definition for 'municipal waste' at Article 1(3) to:

*'(a) mixed waste and separately collected waste from households, including paper and cardboard, glass, metals, plastics, bio-waste, wood, textiles, packaging, waste electrical and electronic equipment, waste batteries and accumulators, and bulky waste, including mattresses and furniture;*

*(b) mixed waste and separately collected waste from other sources, where such waste is similar in nature and composition to waste from households;*

*Municipal waste does not include waste from production, agriculture, forestry, fishing, septic tanks and sewage network and treatment, including sewage sludge, end-of-life vehicles or construction and demolition waste.'*

- 2.1.16 Municipal waste will consequently comprise both LACW and elements of C&I wastes.

## **Waste management hierarchy**

- 2.1.17 Directive 2008/98/EC on waste established the overarching framework for the management of waste across the EU. It required Member States to '*bring into force the laws, regulations and administrative provisions necessary to comply with this Directive*' within two years of its entry into force, i.e. by December 2010. The Directive brought together existing elements of waste legislation and introduced a new approach to waste management that focused more strongly on the prevention of waste.

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<sup>1</sup> [https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L\\_2018.150.01.0109.01.ENG](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_2018.150.01.0109.01.ENG)  
[07.11.2019@10:37]

- 2.1.18 Article 4(1) Directive 2008/98/EC included the five point waste hierarchy, based on the priority order of:
- prevention (preferred option);
  - preparing for re-use;
  - recycling;
  - other recovery (e.g. energy recovery); and
  - disposal (i.e. landfilling or incineration without energy recovery).
- 2.1.19 The rWFD also makes changes to how waste is managed, including incorporation of measures required to achieve the Circular Economy Package and amendments to Article 4, adding a requirement for Member States to make use of economic instruments and other measures to provide incentives for the application of the waste hierarchy.
- 2.1.20 Consequently, the requirement on Member States to apply the hierarchy as a priority order '*in waste prevention and management legislation and policy*' remains following EU-wide agreement on the Circular Economy Package (described in more detail below).

## **Waste technology and future trends**

- 2.1.21 There are several methods available for the treatment of waste, information on which is available from Defra and WRAP<sup>2</sup>.
- 2.1.22 WRAP designs and delivers grant programmes to promote and encourage waste prevention, resource efficiency, renewable energy and the sustainability of products and materials. Information on resource efficiency and waste management initiatives are available on its website.
- 2.1.23 In June 2011, Defra published a report titled 'Guidance on applying the Waste Hierarchy'<sup>3</sup>. This provides information on dealing with waste in line with the hierarchy. Over the past 10 years or so waste management in the UK has already shifted significantly to recycling and recovering waste rather than dispose of it to landfill; this is likely to continue into the future. Looking forward there is likely to be a focus on those wastes that would have greatest impact on carbon emissions, primarily plastics and biodegradable wastes (e.g. food waste).
- 2.1.24 In February 2014, Defra updated a document titled 'Energy from waste, A guide to the debate' that was accompanied by waste technology briefs to provide more detail on specific energy from waste technologies. These are all available at the GOV.UK website:  
<https://www.gov.uk/government/publications/energy-from-waste-a-guide-to-the-debate>.
- 2.1.25 Locally, the EnviRecover Facility at Hartlebury in Worcestershire commenced operation in 2017. This enables a further 230,000 tonnes per annum (tpa) to be diverted from landfill.
- 2.1.26 However, there is also a greater focus on the Circular Economy, an alternative approach to a traditional linear economy (make, use, dispose) in which we keep resources in use for as long as possible, extract the maximum value from them whilst in use, then recover and regenerate products and materials at the end of each service life.

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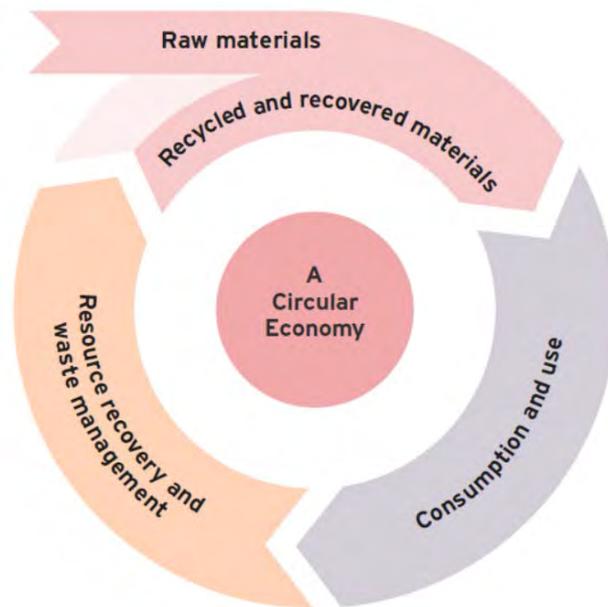
<sup>2</sup> Waste and Resources Action Programme. <http://www.wrap.org.uk/> [07.11.2019@10:42]

<sup>3</sup> <https://www.gov.uk/government/publications/guidance-on-applying-the-waste-hierarchy> [07.11.2019@10:45]

2.1.27 In December 2018, Defra published 'Our Waste, Our Resources: A Strategy for England'<sup>4</sup> (the 'Resources and Waste Strategy' or 'RWS') the first significant waste policy intervention by the Government in over a decade, with the Circular Economy as a central strand.

2.1.28 Figure 2.1 is taken from page 8 of the RWS. The MWLP has been developed to help the Circular Economy thrive in Herefordshire.

**Figure 2.1 Graphic representation of the Circular Economy**



## 2.2 Data Sources

### Arisings Data

2.2.1 In 2018, the year for which the most recent statistics are available, England generated an estimated 213 million tonnes of waste, predominantly managed through transfer, treatment and disposal to landfill<sup>5</sup>.

2.2.2 However, there are notable gaps in our knowledge, and we cannot be certain about the total amount of commercial and industrial, construction, demolition and excavation or agricultural wastes because currently data are not captured from all waste management facilities or waste producing sectors.

2.2.3 The only waste stream where the total waste generation is accurately known is Local Authority Collected Waste (LACW). This is as a result of the detailed data set collected through WasteDataFlow.

<sup>4</sup> <https://www.gov.uk/government/publications/resources-and-waste-strategy-for-england> [07.11.2019@10:48]

<sup>5</sup> <https://data.gov.uk/dataset/312ace0a-ff0a-4f6f-a7ea-f757164cc488/waste-data-interrogator-2018> [27.11.2019@11:18]

- 2.2.4 WasteDataFlow is the web-based system for LACW data reporting by UK local authorities to government, which went live over ten years ago on 30 April 2004. Validated information held on WasteDataFlow can be downloaded by the general public.
- 2.2.5 For most other waste streams and data on permitted facilities, the Waste Data Interrogator (WDI) run by the Environment Agency is the data source point. Data on hazardous waste are available from the Hazardous Waste Data Interrogator (HWDI) also run by the Environment Agency. Both these data sets require information to be submitted by the waste management facility operator.
- 2.2.6 In relation to waste streams other than LACW, there are limitations in the data available on waste generation:
- C&I waste. Data gaps result from the lack of reporting associated with exempt activities and it is difficult to allocate waste accurately to the producing sectors. In addition, most recent estimates have been at the national level and the data has not been broken down to the regional or waste planning authority level.
  - CD&E waste. Significant quantities of waste are processed at the site of production and/or managed at exempt facilities. This has resulted in this waste stream historically being estimated through surveys, but there has been limited new research available in 2010, when WRAP published 'Construction, demolition and excavation waste arisings, use and disposal for England 2008'. The WRAP report looked at national level arisings rather than waste generated within regions or waste planning authority.
  - Agricultural waste. Limited data is captured on natural and non-natural agricultural wastes as wastes generated on farms are often managed under exemptions.

## Facility Data

- 2.2.7 Some caution also needs to be applied in using data relating to waste management capacity. The Environmental Permitting (England and Wales) Regulations 2010 provide the system for **environmental permits ('EP')** for industrial activities and waste operations, including treating, keeping and disposing of waste. Environmental Permits set out conditions under which waste management facilities must operate.
- 2.2.8 The first principle to establish is that this Assessment only considers those waste management facilities that are operational. In many authority areas, planning permission is gained for new or enhanced waste management facilities that are not implemented for a variety of reasons. This capacity is considered only to have been consented but not operational and is not incorporated into this Waste Need Assessment.
- 2.2.9 Within this Assessment, it has been assumed that if a facility has an EP, i.e. if it is permitted, it is operational and should be considered as part of the current capacity operating within Herefordshire.
- 2.2.10 However, there remains a further complication **between permitted and operational capacity**.
- 2.2.11 When applying for an EP, an operator is required to state the facility's annual capacity. This is considered by the Environment Agency during the application process and a maximum input is stated within the EP. The maximum input is related to the type of EP and the risks associated with the type of facility (e.g. Standard Rules Permit "SR2015 No21: Materials Recycling Facility up to 75kte per annum"); the maximum input is often set within pre-defined

bands. The maximum input set out in the EP is the facility's permitted capacity; however, this may not reflect the actual quantity of waste that the facility could handle in a year.

- 2.2.12 In many cases, the permitted capacity is higher than the actual throughput a facility can handle. Therefore, care is needed when considering available capacity; an assumption that the permitted capacity is the available capacity may result in capacity being over-estimated.
- 2.2.13 Certain activities, generally related to recovery and temporary storage of waste, can be exempt from the requirement to hold an environmental permit. Part 1 of Schedule 3 to the Environmental Permitting (England and Wales) Regulations 2016 lists and describes the waste operations which do not require an environmental permit, providing that the establishment or undertaking carrying them out has registered the exemption(s) with the Environment Agency.
- 2.2.14 **Exempt activities** are those considered to be low risk due to the type and quantity of waste handled. There is no requirement for the operator of exempt activities to report on the type or quantity of waste handled, resulting in an incomplete data set.
- 2.2.15 At the time of writing this report (November 2019) the Government had undertaken a consultation on proposals to tackle crime and poor performance in the waste sector and introduce a new fixed penalty for waste duty of care offences<sup>6</sup>. This may change how waste management activities are registered to be exempt activities in the future but has not affected the estimation contained in this Assessment.
- 2.2.16 The WDI contains details of all waste deposited and removed from permitted waste facilities in England; this includes wastes handled through transfer stations. Therefore, care is needed when collating tonnages handled through transfer stations to avoid double counting.

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<sup>6</sup> [https://consult.defra.gov.uk/waste/crime-and-poor-performance-in-the-waste-sector/supporting\\_documents/Waste\\_Crime\\_Cons\\_English.pdf](https://consult.defra.gov.uk/waste/crime-and-poor-performance-in-the-waste-sector/supporting_documents/Waste_Crime_Cons_English.pdf) [27.11.2019@11:26]

## 3. Waste Management Facilities in Herefordshire

### 3.1 Facilities Operating under an Environmental Permit

- 3.1.1 All operators of permitted waste management facilities must provide the EA with details of the quantities and types of waste handled i.e. waste received onto site, the process it went through on site, and waste sent from site on to other destinations. This data is collated in the WDI, which provides the detail of all permitted facilities by waste planning authority (WPA) area.
- 3.1.2 Table 3.1 summarises the type and number of waste management facilities permitted in Herefordshire over the years 2013 to 2018, providing some context to the changes in the number of facilities permitted.
- 3.1.3 Within this WNA, data analysis is sometimes focused on calendar years 2015 to 2018. This provides four years of data to consider, which is considered to be both proportionate and manageable; too much data presented in this report would simply become unwieldy. Further, the earlier years have already been considered in the previous WNA, with this Assessment building on that understanding.

#### Number and type of permitted facilities and the type of waste accepted

- 3.1.4 Table 3.1 shows that in 2018 there were 34 permitted facilities operating in Herefordshire, compared to 35 in 2015, 39 in 2016 and 38 in 2017 (line 22).
- 3.1.5 Whilst most waste management capacity has stayed fairly constant, there are a few changes of note:
- there is now only one hazardous waste transfer facility (line 1); this is not a new facility but a change of permit type from S0807: Household, Commercial & Industrial Waste TS/Treatment/Asbestos in 2016 (line 13). An animal funeral service became operational in 2017, however it is not listed as an active site in the 2018 data;
  - a new material recycling facility to handle construction and demolition wastes commenced operation in 2016 (line 5);
  - an additional physical treatment facility became operational in 2016 (line 6);
  - the number of vehicle dismantlers has fluctuated since 2013, increasing to four in 2014 and five by 2016, following by a reduction back to three in 2017 and 2018 (line 7); and
  - the clinical waste transfer facility (line 16) was not operational in 2017 and 2018.
- 3.1.6 The use of anaerobic digestion to treat on-farm waste grew significantly from 2013 to 2015, with a couple of additional facilities becoming operational over the past three years (line 17).
- 3.1.7 Table 3.1 still highlights that whilst there is a range of waste management, re-use and recycling capacity permitted in Herefordshire addressing a variety of wastes, there are no residual waste management facilities such as energy from waste plant or landfill sites.

**Table 3.1 Number of permitted facilities, Herefordshire, 2013 to 2018**

ROW	Facility type	Site Category	Site Type	2013	2014	2015	2016	2017	2018
1	A9: Haz Waste Transfer Station <sup>a</sup>	Transfer	Hazardous Waste Transfer	n/r	n/r	n/r	1	2	1
2	A11: Household, Commercial & Industrial WTS	Transfer	Non-hazardous waste transfer	3	2	2	3	3	2
3	A11: Household, Commercial & Industrial WTS and A13: Household Waste Amenity Site	Transfer	Non- hazardous waste transfer and civic amenity site	2	2	2	2	2	2
4	A13: Household Waste Amenity Site	Transfer	Civic amenity site	3	3	3	3	3	3
5	A15: Material Recycling Treatment Facility	Treatment	Material recycling facility	1	n/r	n/r	1	1	1
6	A16 : Physical Treatment Facility	Treatment	Physical treatment	1	-	3	4	4	4
7	A19: Metal Recycling Site (Vehicle Dismantler)	Metal Recycling Site	Car breaker	3	4	4	5	3	3
8	A19a: End of Life Vehicle Facility	Metal Recycling Site	Car breaker	1	1	1	1	1	n/r
9	A20: Metal Recycling Site	Metal Recycling Site	Metal recycling	2	2	2	2	2	2
10	A23: Biological Treatment Facility	Treatment	Biological treatment	2	3	4	4	4	4
11	A25: Deposit of waste to land as a recovery operation	On/In Land	Deposit of waste to land (recovery)	1	1	1	1	1	n/r
12	S0803: Household, Commercial & Industrial Waste TS/Treatment	Treatment	Non- hazardous waste transfer / treatment	1	1	1	1	1	n/r
13	S0807: Household, Commercial & Industrial Waste TS/Treatment/Asbestos <sup>1</sup>	Treatment	Hazardous waste transfer / treatment	1	1	1	n/r	n/r	n/r
14	S0813: Non-hazardous & hazardous HWA Site	Transfer	CA Site	n/r	n/r	n/r	1	1	1
15	S0821: Metal recycling site	Metal Recycling Site	Metal recycling	1	1	1	n/r	n/r	n/r
16	S0824: Clinical Waste Transfer Station (A12: Clinical Waste Transfer Station in 2013)	Transfer	Clinical waste transfer	1	1	1	1	n/r	n/r
17	S1210: On-farm AD using farm wastes only	Treatment	Anaerobic digestion	1	5	8	8	9	10

row	Facility type	Site Category	Site Type	2013	2014	2015	2016	2017	2018
18	SR2010 No7: Use of waste in construction <50ktps	Use of Waste	Construction	1	n/r	n/r	n/r	n/r	n/r
19	SR2010 No8: Use of waste in construction <100ktps	Use of Waste	Construction	1	n/r	n/r	n/r	n/r	n/r
20	SR2010 No12: Treatment of waste to produce soil <75ktpa	Treatment	Physical treatment	n/r	1	1	1	n/r	n/r
21	SR2010 No16: On-farm anaerobic digestion <75,000tpa	Treatment	Anaerobic digestion					1	1
22	<b>Total</b>			<b>26</b>	<b>28</b>	<b>35</b>	<b>39</b>	<b>38</b>	<b>34</b>
<p><b>Abbreviations:</b>  n/r: no active sites reported    ktps: kilo tonnes per site    ktpa: kilo tonnes per annum  a: A9: Haz Waste Transfer Station was previously S0807: Household, Commercial &amp; Industrial WTS/Treatment/asbestos</p>									
<p><b>Annexes:</b>  Annex A of this Assessment provides the detail for year 2018  Annexes B and C of the WNA Update 2018 provide the detail for years 2016 and 2017 respectively  Annexes B to D of the WNA 2017 provide the detail for years 2013 to 2015 respectively</p>									

3.1.8 Table 3.2 shows the origin of waste received at permitted facilities in Herefordshire from 2015 to 2018.

**Table 3.2 Origin of waste received at permitted facilities, Herefordshire, 2015 to 2018**

row	WPA / Local Authority	2015		2016		2017		2018	
		Tonnage	%	Tonnage	%	Tonnage	%	Tonnage	%
1	Herefordshire	314,880	77.3%	356,692	85.7%	388,240	87.5%	417,211	90.1%
2	West Midlands – WPA not codeable	29,199	7.2%	7,208	1.7%	(a)		(a)	
3	Monmouthshire	13,595	3.3%	9,520	2.3%	8,521	1.9%	6,713	1.4%
4	Gloucestershire	9,040	2.2%	7,099	1.7%	8,802	2.0%	3,258	0.7%
5	Worcestershire	8,858	2.2%	8,178	2.0%	4,624	1.0%	3,111	0.7%
6	Powys	6,799	1.7%	7,750	1.9%	10,108	2.3%	11,171	2.4%
7	Caerphilly	5,576	1.4%	3,324	0.8%	(b)		(a)	
8	South West - WPA not codeable	5,166	1.3%	(b)		(b)		(c)	
9	Shropshire	4,074	1.0%	4,993	1.2%	8,761	2.0%	7,544	1.6%
10	Newport	2,620	0.6%	5,377	1.3%	3,609	0.8%	4,783	1.0%
11	Blaenau Gwent	2,350	0.6%	1,463	0.4%	1,944	0.4%	1,468	0.3%
12	Vale of Glamorgan	1,138	0.3%	1,005	0.2%	1,768	0.4%	2,323	0.5%
13	Staffordshire	(a)		1,038	0.2%	(b)		(b)	
14	Hertfordshire	(b)		(b)		2,670	0.6%	(a)	
15	Other (less than 1,000 tonnes)	4,203	1.0%	2,450	0.6%	4,450	1.0%	5,627	1.2%
16	<b>Total</b>	<b>407,498</b>	<b>100%</b>	<b>416,097</b>	<b>100%</b>	<b>443,498</b>	<b>100%</b>	<b>463,209</b>	<b>100%</b>

**Note:**

<sup>a</sup> Less than 1,000 tonnes and included in 'Other (less than 1,000 tonnes)'

<sup>b</sup> Less than 100 tonnes and included in 'Other (less than 1,000 tonnes)'

<sup>c</sup> None reported

**Annexes**

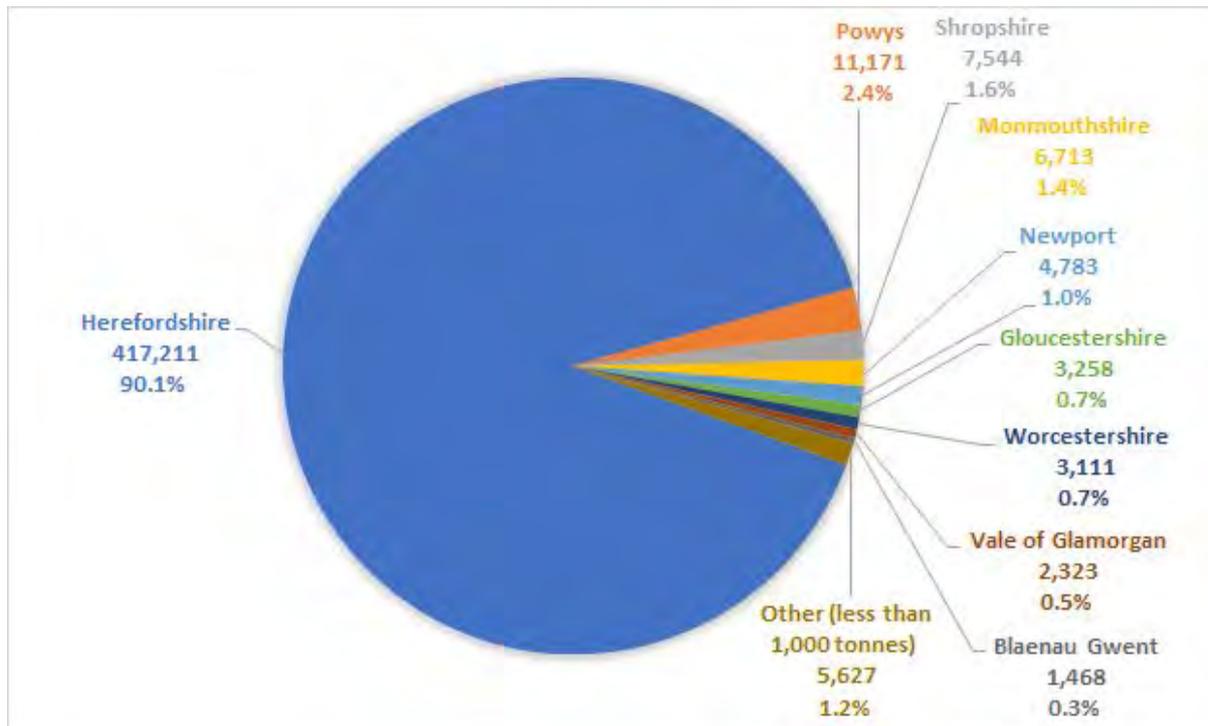
Annex B of this Assessment provides the detail for year 2018

Annexes D and E of the WNA Update 2018 provide the detail for years 2016 and 2017 respectively

Annexes E of the WNA 2017 provides the detail for year 2015

3.1.10 Figure 3.1 presents the data for 2018 (from Table 3.2) graphically

**Figure 3.1 Origin of waste received at permitted facilities, Herefordshire, 2018**



3.1.11 Table 3.2 shows that between 2015 and 2018, the waste received at permitted facilities in Herefordshire, that had its origin reported as Herefordshire, increased from 77% to 90% (line 1).

3.1.12 Whilst this suggests that Herefordshire is managing more wastes within the county than previous years, it could also be a result of an apparent improvement in reporting, with 'West Midlands - WPA not codeable' being less than 1,000 tonnes in 2017 and 2018 (line 2). If the wastes with their origin identified as 'West Midlands - WPA not codeable' were assumed to arise in Herefordshire, then the waste with its origin in Herefordshire would be 84.5% in 2015 and 87.4% in 2016.

3.1.13 This apparent improvement in reporting also has implications for estimating C&I wastes, as the methodology assumes that a proportion of waste reported as 'West Midlands - WPA not codeable' arises in Herefordshire and attributes this to the C&I waste estimates. If there has been an improvement in the reporting of waste origins by the sites in Herefordshire, then the amount of attributed to 'West Midlands - WPA not codeable' could be an overestimate, which in turn could lead to an overestimate of C&I arisings.

3.1.14 The data also suggests that Herefordshire is reasonably self-sufficient, at least in waste transfer capacity; although as noted above there is no residual waste management capacity.

3.1.15 The remaining wastes originate from adjacent and nearby authorities.

## **Capacity and waste input at the permitted facilities**

- 3.1.16 Table 3.3 provides a summary of the permitted capacity and actual input by waste management facility category between years 2013 and 2018, showing that the annual permitted capacity of each site is generally materially greater than the actual input to the facility. This may be due to a number of reasons, with the most likely being that the permitted capacity is simply the closest band available or that the facility is just starting operations and so building up to full capacity.
- 3.1.17 This demonstrates the need to exercise caution in relying on the permitted capacity; some sites may never be able to accept the maximum amount of waste set out in their EP and this would inflate the amount of useful, operational capacity available within Herefordshire.

**Table 3.3 Summary of permitted capacity and waste input by waste management facility category, Herefordshire, 2013 to 2018**

Category	Facility Type	2013		2014		2015		2016		2017		2018		row
		Capacity	Input	Capacity	Input	Capacity	Input	Capacity	Input	Capacity	Input	Capacity	Input	
		tonnes		tonnes		tonnes		tonnes		tonnes		tonnes		
Transfer	Haz Waste Transfer	n/r	n/r	n/r	n/r	n/r	n/r	75,000	40,824	80,000	41,053	75,000	43,593	1
	Non-Haz WTS	74,997	35,909	49,998	35,024	49,998	40,605	106,239	44,923	106,239	41,491	99,999	47,360	2
	Non-Haz WTS & CA Site	109,550	76,344	109,550	79,202	109,550	80,613	109,550	81,821	109,550	82,592	109,550	80,589	3
	CA Site	34,349	8,338	34,349	8,673	34,349	8,691	109,348	10,075	109,348	10,626	109,348	10,290	4
	Clinical WTS	520	153	75,000	84	75,000	38	75,000	23	n/r	n/r	n/r	n/r	5
Metal Recycling Site	Car Breaker	64,897	1,820	138,397	23,581	138,397	24,691	149,597	26,917	105,997	31,765	103,498	44,877	6
	Metal Recycling	88,768	11,062	88,768	7,336	88,768	7,455	77,568	1,823	77,568	3,274	77,568	3,702	7
Treatment	Non-Haz WTS / Treatment	74,999	172	74,999	115	74,999	22	74,999	19	74,999	1	n/r	n/r	8
	Haz Waste WTS / Treatment	75,000	53,338	75,000	70,389	75,000	52,399	n/r	n/r	n/r	n/r	n/r	n/r	9
	Biological Treatment	283,999	52,326	299,998	73,699	333,998	106,282	333,998	77,713	333,998	59,040	333,998	48,537	10
	AD (farm wastes only)	36,499	807	166,413	6,574	339,413	52,497	339,413	56,370	450,912	58,810	479,512	66,294	11
	Material Recycling Facility	24,999	6,789	n/r	n/r	n/r	n/r	70,000	2,950	70,000	3,657	70,000	5,152	12
	Physical Treatment	5,000	2,949	75,000	22,020	99,999	22,086	174,998	63,531	334,999	101,290	334,999	112,813	13

Category	Facility Type	2013		2014		2015		2016		2017		2018		row
		Capacity	Input											
		tonnes		tonnes		tonnes		tonnes		tonnes		tonnes		
Recovery in/on land and use in construction	Deposit of waste to land (recovery)	58,000	23,400	58,000	19,005	94,000	12,120	94,000	9,108	94,000	9,898	n/r	n/r	14
	Use of waste in construction	149,998	30,662	n/r	n/r	15								
<b>Total</b>		1,081,575	<b>304,069</b>	1,245,472	<b>345,702</b>	1,513,471	<b>407,499</b>	1,789,710	<b>416,097</b>	1,947,610	<b>443,497</b>	1,793,472	<b>463,207</b>	16

**Abbreviations:**

Capacity: EP capacity                      Input: Waste input                      n/r: no reported tonnage  
 AD: Anaerobic Digestion                      WTS: Waste Transfer Station                      HWS: Household Waste Site

**Annexes:**

Annex A of this Assessment provides the detail for year 2018  
 Annexes B and C of the WNA Update 2018 provide the detail for years 2016 and 2017 respectively  
 Annexes B to D of the WNA 2017 provide the detail for years 2013 to 2015 respectively

- 3.1.18 Table 3.4 presents both the permitted capacity and the annual input for each operational site over years 2013 to 2018 and provides additional detail to supplement the summary provided in Table 3.3.
- 3.1.19 For ease of cross reference, each facility in Table 3.4 has been numbered to reflect the numbering used in previous WNA and the Site and Spatial Context Report. Facilities that have not reported for more than two years are not numbered. All of the numbered facilities are mapped at Figure 3.2.

**Table 3.4 Permitted capacity and waste input for each operational facility, Herefordshire, 2013 to 2018**

row	Operator	Site Name	Site Type	Annual Permitted Capacity <sup>a</sup>	Input					
					2013	2014	2015	2016	2017	2018
					Tonnes					
1	Eastside 2000 Ltd.	Eastside Recycling Facility	Haz Waste Transfer <sup>b</sup>	75,000	53,338	70,389	52,399	40,824	41,035	43,593
	Rachael Slaughter	Animal Funeral Services	Haz Waste Transfer	5,000	n/r	n/r	n/r	n/r	18	n/r
	Lively Joseph Henry	Quickskip Transfer Station	Non-Haz Waste Transfer	24,999	6,000	n/r	n/r	n/r	n/r	n/r
2	Lively Joseph Henry	Quickskip (Hereford) Transfer Station	Non-Haz Waste Transfer	75,000 <sup>c</sup>	19,780	27,636	31,244	34,780	31,739	35,114
3	Wye Valley Skips	Wye Valley Skips	Non-Haz Waste Transfer	6,240	n/r	n/r	n/r	296	51	n/r
4	MS & EM Patrick Ltd	Marlbrook Farm	Non-Haz Waste Transfer	24,999	10,129	7,388	9,361	9,847	9,701	12,246
5	Mercia Waste Management Ltd	Leominster HWRC & WTS	Non-Haz Waste Transfer	39,050	9,324	10,335	18,354	19,167	17,804	17,939
			CA Site		6,227	6,400	6,601	6,551	6,522	6,211
6	Mercia Waste Management Ltd	Rotherwas HWRC, WTS & MRF	Non-Haz Waste Transfer	70,500	50,583	49,521	41,869	41,807	44,826	43,972
			CA Site		10,210	12,946	13,789	14,296	13,440	12,467
7	Mercia Waste Management Ltd	Ledbury HWRC	CA Site	4,350	2,276	2,462	2,493	2,585	2,531	2,423
8	Mercia Waste Management Ltd	Ross on Wye HWRC	CA Site	25,000	4,210	4,334	4,347	4,573	4,641	4,451
9	Mercia Waste Management Ltd	Bromyard HWRC	CA Site	4,999	1,852	1,877	1,851	2,067	2,093	1,992
10	Severn Waste Services Ltd	Kington Household Recycling Centre	CA Site	74,999	n/r	n/r	n/r	850	1,361	1,424
	The Mann Organisation Ltd	Mann Organisation Ltd	Material Recycling Facility	24,999	6,789	n/r	n/r	n/r	n/r	n/r

row	Operator	Site Name	Site Type	Annual Permitted Capacity <sup>a</sup>	Input					
					2013	2014	2015	2016	2017	2018
					Tonnes					
11	Hereford Crushing and Demolition Limited	HCD Limited	Material Recycling Facility	70,000	n/r	n/r	n/r	2,950	3,657	5,152
12	Balfour Beatty Living Places Ltd	Land Adjacent to Unit 3	Physical Treatment	5,000	2,949	n/r	3,740	3,345	3,747	3,097
13	Hereford Quarries Limited	Lugg Bridge Quarry	Physical Treatment	250,000 <sup>d</sup>	n/r	n/r	5,655	50,956	87,409	100,355
14	Kingspan Insulation Ltd	Kingspan Insulation Ltd	Physical Treatment <sup>e</sup>	5,000 <sup>f</sup>	172	115	141	205	144	175
15	Quickskip Hereford Ltd	Quickskip Hereford Limited	Physical Treatment <sup>e</sup>	74,999	n/r	n/r	n/r	6,825	9,990	9,186
16	Quickskip Hereford Ltd	Fir Tree Lane Site	Physical Treatment (Soil Production)	75,000	n/r	22,020	12,550	2,200	n/r	n/r
17	Avalon Metals Ltd	Eastside Recycling Facility	Car Breaker	73,500	n/r	21,369	22,572	24,340	29,950	42,731
18	Jason and Richard Baker	J & R Recovery	Car Breaker	2,499	74	85	70	76	9	n/r
19	Mr D Craddock & Mrs J Evans (Pre 2016 Morris F G)	City Spares MRS Site	Car Breaker	32,400	154	194	266	30	n/r	n/r
20	P & T Moore Ltd	P & T Moore Vehicle Dismantlers	Car Breaker	4,999	1,376	1,708	1,514	1,478	1,658	1,835
21	UK Bus Dismantlers Ltd	Streamhall Garage	Car Breaker	24,999	216	225	269	201	148	311
22	Avalon Metals Ltd (Pre 2015 Smith R)	R Smith Metals	Car Breaker <sup>g</sup>	11,200	3,358	2,742	2,117	792	n/r	n/r
23	Avalon Metals Ltd (Pre 2015 European Metal Recycling Ltd)	Former EMR Hereford	Metal Recycling	75,000	7,514	4,431	5,162	1,607	3,034	3,443
24	Evans R	Cobhall Cottage	Metal Recycling	2,568	190	163	176	216	240	259
25	Mayglothling Waste Ltd	Yaidon Farm	Biological Treatment	49,999	25,626	25,503	24,258	28,590	28,159	23,888
26	Mr N Green & Mrs S Green	Much Fawley Farm	Biological Treatment	15,999	n/r	11,887	12,560	12,432	12,350	11,650
27	STL Energy Ltd	STL Energy Ltd	Biological Treatment	34,000	n/r	n/r	28,826	5,977	4,437	2,724
28	Welsh Water Organic Waste Limited (was Tradebe Gwent Ltd)	Hereford Liquid Waste Treatment Centre (was Eign Waste Treatment Centre)	Biological Treatment	234,000	26,700	36,309	40,638	30,714	14,094	10,275

row	Operator	Site Name	Site Type	Annual Permitted Capacity <sup>a</sup>	Input					
					2013	2014	2015	2016	2017	2018
					Tonnes					
29	Gelpack Excelsior Ltd	Gelpack Excelsior Ltd	Non-Haz Waste Transfer/ Treatment	74,999	n/r	n/r	22	19	1	n/r
30	Sodexo Property Solutions Ltd	County Hospital	Clinical Waste Transfer	75,000	153	84	38	23	n/r	n/r
31	Assured Energy LLP	Two Hoots Farm AD Plant	Anaerobic Digestion	28,314	n/r	1,773	8,985	4,477	806	237
32	Bowley Storage and Marketing Ltd	Bowley Court	Anaerobic Digestion	100,000	n/r	n/r	8,985	3,807	6,023	7,420
33	David and Helen Morgan	Penllan AD	Anaerobic Digestion	36,500	n/r	n/r	200	4,466	4,658	3,714
34	Herefordshire Biogas Ltd	Herefordshire Biogas	Anaerobic Digestion	36,500	n/r	394	13,669	12,155	13,792	12,708
35	M & M Power Limited	The Biogas Facility	Anaerobic Digestion	28,600	n/r	2,210	10,965	11,810	13,290	12,985
36	Mr D, Mrs E & Mr R Pursey	Trevase Farm AD	Anaerobic Digestion	36,500	n/r	368	1,460	1,468	1,462	1,463
37	PT Baker Farms Ltd	Eardisley Park Farm Facility	Anaerobic Digestion	36,499	807	1,829	1,391	1,475	1,996	1,672
38	Shed Field Growers Ltd	The Leen Digester	Anaerobic Digestion	36,500	n/r	n/r	11,363	16,712	15,626	22,597
41	R Edwards & Co (Staunton) Ltd	R Edwards & Co (Staunton) Limited	Anaerobic Digestion	36,500	n/r	n/r	n/r	n/r	200	589
42	Mr P Mann, Mr M Mann & Ms J Mann	Heath Farm	Anaerobic Digestion	74,999	n/r	n/r	n/r	n/r	957	2,101
43	M F G Generation Limited	The Farm Biogas Facility	Anaerobic Digestion	28,600	n/r	n/r	n/r	n/r	n/r	808
	Eastside 2000 Ltd	The Valletts	Use of waste in construction	49,999	6,990	n/r	n/r	n/r	n/r	n/r
	Smiths (Gloucester) Ltd	Land at Netherton Road	Use of waste in construction	99,999	23,672	n/r	n/r	n/r	n/r	n/r
39	The Pipe Corporation Ltd	Land at Lower Vern	Deposit of waste to land (recovery)	58,000	23,400	19,005	12,120	9,108	9,898	n/r
<p><b>Note:</b></p> <p>a: Annual Permitted Capacity in most recent operational year</p> <p>b: Prior to 2016 was classified as Haz Waste Transfer / Treatment with a S0807: HCI Waste TS + treatment + asbestos, now has an A9: Haz Waste Transfer Station permit</p>										

row	Operator	Site Name	Site Type	Annual Permitted Capacity <sup>a</sup>	Input					
					2013	2014	2015	2016	2017	2018
Tonnes										
<p>c: Permitted capacity increased from 24,999 tonnes to 75,000 tonnes in 2016</p> <p>d: Permitted capacity increased from 14,999 tonnes to 250,000 tonnes in 2017</p> <p>e: Prior to 2015 was classified as Non-Hazardous Waste Transfer/Treatment</p> <p>f: Permitted capacity decreased from 74,999 tonnes to 5,000 tonnes in 2015</p> <p>g: Prior to 2016 was classified as A20: Metal Recycling Site (mixed MRS's), now has an A19: Metal Recycling Site (Vehicle Dismantler) permit</p> <p>n/r: no reported tonnage</p> <p><b>Annexes:</b>            Annex A of this Assessment provides the detail for year 2018            Annexes B and C of the WNA Update 2018 provide the detail for years 2016 and 2017 respectively            Annexes B to D of the WNA 2017 provide the detail for years 2013 to 2015 respectively</p>										

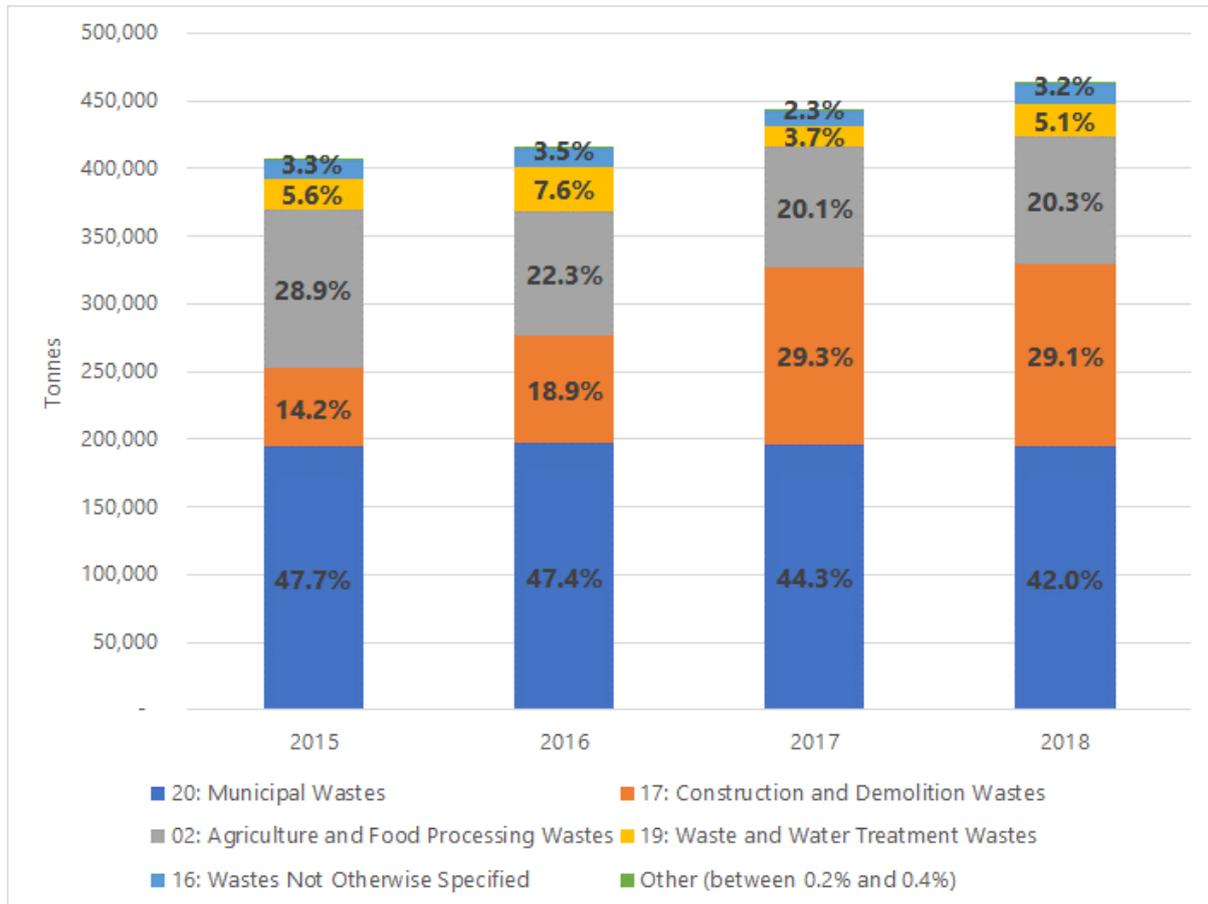
3.1.20 Table 3.5 and Figure 3.2 provide a summary of the types and quantities of waste, by European List of Wastes<sup>7</sup> (LoW) chapter headings (Annex C), accepted at the permitted facilities between 2015 and 2018. Annex D provides the data by permitted facility.

**Table 3.5 Types and quantities of waste received at permitted facilities in Herefordshire by LoW Chapter, 2015 to 2018**

row	LoW Chapter	2015		2016		2017		2018	
		Tonnes	%	Tonnes	%	Tonnes	%	Tonnes	%
1	01: Mine and Quarry Wastes	n/r	-	n/r	-	n/r	-	2	<0.1%
2	02: Agriculture and Food Processing Wastes	117,879	28.9%	92,814	22.3%	88,966	20.1%	93,953	20.3%
3	03: Furniture, Paper and Cardboard Manufacturing Wastes	222	0.1%	61	<0.1%	n/r	-	n/r	-
4	08: Paint, Adhesive, Sealant and Ink Manufacturing Waste	2	<0.1%	2	<0.1%	<1	0.0%	1	<0.1%
5	10: Thermal Processes Waste	36	<0.1%	82	<0.1%	83	<0.1%	75	<0.1%
6	12: Shaping and Physical Treatment of Metals and Plastics	301	0.1%	322	0.1%	601	0.1%	402	0.1%
7	13: Oil Wastes and Wastes of Liquid Fuels	6	<0.1%	1	<0.1%	5	<0.1%	10	<0.1%
8	15: Packaging, Absorbents, Wiping Cloths etc N.O.S.	786	0.2%	741	0.2%	560	0.1%	578	0.1%
9	16: Wastes Not Otherwise Specified	13,312	3.3%	14,430	3.5%	10,404	2.3%	14,776	3.2%
10	17: Construction and Demolition Wastes	57,708	14.2%	78,657	18.9%	130,101	29.3%	134,968	29.1%
11	18: Human and Animal Health Care Waste	90	<0.1%	57	<0.1%	28	<0.1%	<1	<0.1%
12	19: Waste and Water Treatment Wastes	22,830	5.6%	31,712	7.6%	16,273	3.7%	23,851	5.1%
13	20: Municipal Wastes	194,325	47.7%	197,218	47.4%	196,478	44.3%	194,591	42.0%
<b>14</b>	<b>Grand Total</b>	<b>407,498</b>		<b>416,097</b>		<b>443,498</b>		<b>463,209</b>	

<sup>7</sup> Commission Decision 2000/532/EC, as amended, most recently by Commission Decision 2014/955/EU, formally known as the European Waste Catalogue (EWC). The LoW is the system used for classifying waste, required by law and used in most waste regulatory and data reporting systems.

**Figure 3.2 Types and quantities of waste received at permitted facilities in Herefordshire by LoW Chapter, 2015 to 2018**



### Review of wastes received at permitted facilities

3.1.21 Table 3.3 shows that between 2013 and 2018, the amount of waste managed at permitted facilities located in Herefordshire increased from just over 300,000 tonnes in 2013 to just over 460,000 tonnes by 2018 (line 16).

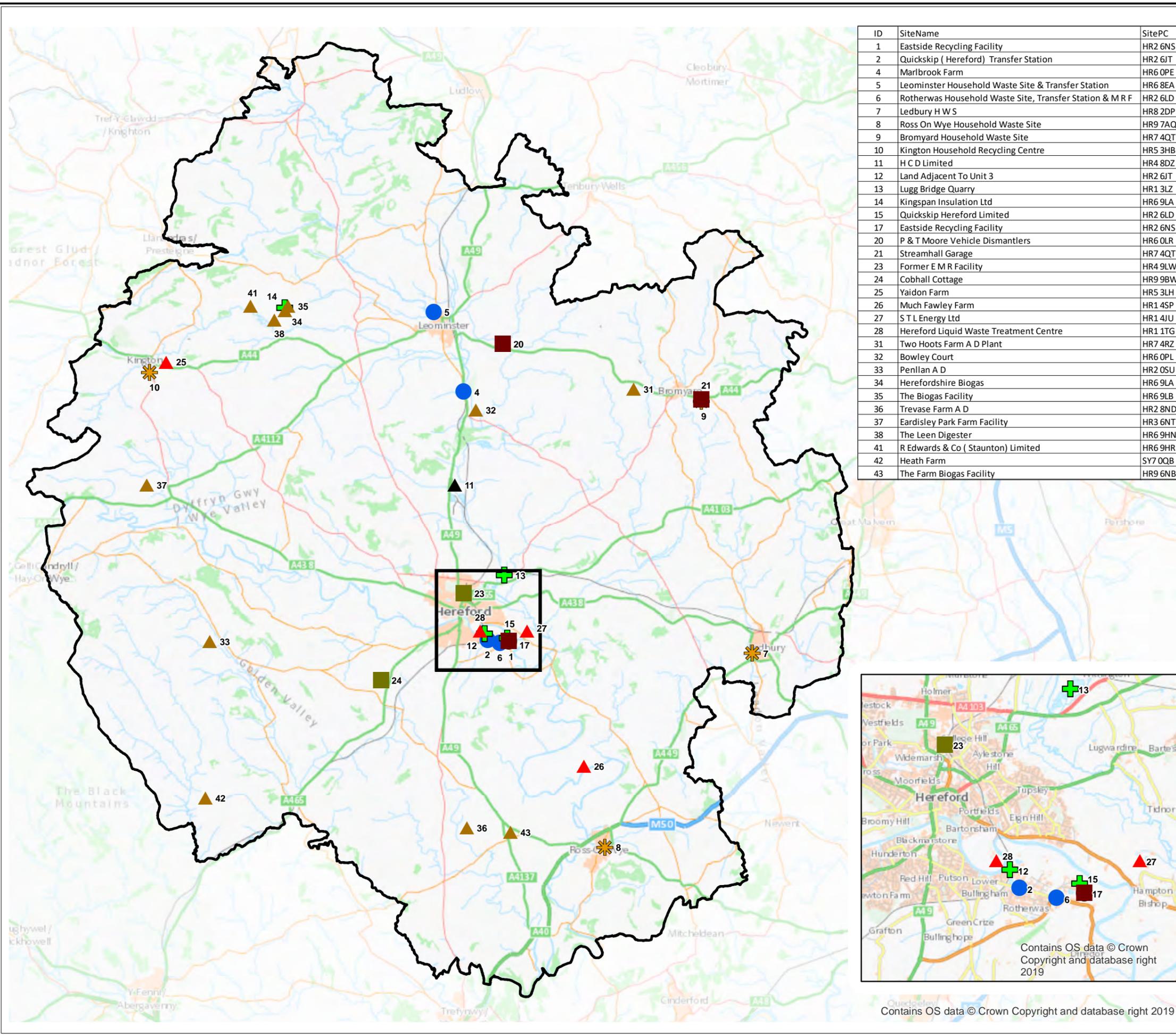
3.1.22 There are three principal reasons for the increases:

- a net increase of 35,000 tonnes of waste received at metal recycling sites between 2013 and 2018 (lines 6 and 7);
- an increase in on-farm AD, with a 65,000 tonne increase in the amount managed between 2013 and 2018 (line 11); and
- the development of a physical treatment facility at Lugg Bridge Quarry, which became operational in 2015 and by 2018 was receiving 100,000 tonnes of CD&E wastes for treatment (line 13).

3.1.23 Table 3.5 and Figure 3.2 show that the single largest tonnage is municipal waste (principally wastes from households); representing 42% to 48% of the wastes managed at permitted facilities in Herefordshire between 2015 and 2018. The second largest tonnage, by 2018, is formed by construction and demolition wastes (29% in 2018) followed by agriculture and food processing wastes (20% in 2018). If all the other wastes are added together, they still only

represent about 6% to 11% of all wastes managed at permitted facilities in Herefordshire, depending on the year being considered.

- 3.1.24 This is different to the picture seen nationally, where construction and demolition wastes generally make up about 50% of total arisings, with C&I waste at around 25%, municipal waste at around 20% and other wastes making up the remainder.
- 3.1.25 That municipal and agriculture wastes continue to dominate is perhaps not surprising considering the county is very rural. The increase in construction and demolition wastes may be attributed to development growth in the county and/or that CD&E recovery facilities have commenced operations and are drawing these wastes in, whereas they may previously have gone out of Herefordshire.



ID	SiteName	SitePC
1	Eastside Recycling Facility	HR2 6NS
2	Quickskip ( Hereford) Transfer Station	HR2 6JT
4	Marlbrook Farm	HR6 0PE
5	Leominster Household Waste Site & Transfer Station	HR6 8EA
6	Rotherwas Household Waste Site, Transfer Station & M R F	HR2 6LD
7	Ledbury H W S	HR8 2DP
8	Ross On Wye Household Waste Site	HR9 7AQ
9	Bromyard Household Waste Site	HR7 4QT
10	Kington Household Recycling Centre	HR5 3HB
11	H C D Limited	HR4 8DZ
12	Land Adjacent To Unit 3	HR2 6JT
13	Lugg Bridge Quarry	HR1 3LZ
14	Kingspan Insulation Ltd	HR6 9LA
15	Quickskip Hereford Limited	HR2 6LD
17	Eastside Recycling Facility	HR2 6NS
20	P & T Moore Vehicle Dismantlers	HR6 0LR
21	Streamhall Garage	HR7 4QT
23	Former E M R Facility	HR4 9LW
24	Cobhall Cottage	HR9 9BW
25	Yaidon Farm	HR5 3LH
26	Much Fawley Farm	HR1 4SP
27	S T L Energy Ltd	HR1 4JU
28	Hereford Liquid Waste Treatment Centre	HR1 1TG
31	Two Hoots Farm A D Plant	HR7 4RZ
32	Bowley Court	HR6 0PL
33	Penllan A D	HR2 0SU
34	Herefordshire Biogas	HR6 9LA
35	The Biogas Facility	HR6 9LB
36	Trevase Farm A D	HR2 8ND
37	Eardisley Park Farm Facility	HR3 6NT
38	The Leen Digester	HR6 9HN
41	R Edwards & Co ( Staunton) Limited	HR6 9HR
42	Heath Farm	SY7 0QB
43	The Farm Biogas Facility	HR9 6NB

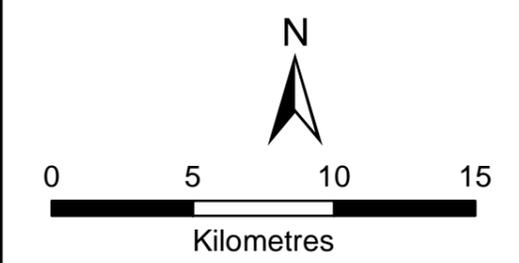
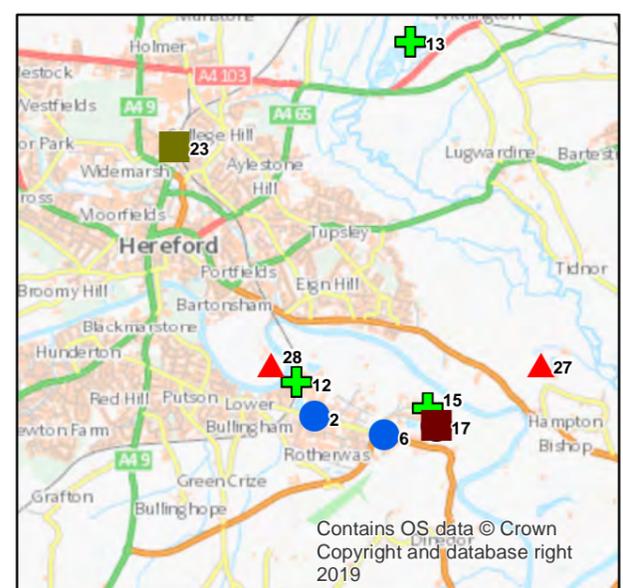
**Herefordshire Minerals and Waste Local Plan**

**Figure 3.3  
Herefordshire Waste Facilities, 2018**

**Legend**

**Waste Facility Type**

- Anaerobic Digestion (Farm Waste)
- Biological Treatment
- CA Site
- Non-Haz Waste Transfer
- Non-Haz Waste Transfer / Treatment
- Physical Treatment
- Car Breaker
- Metal Recycling
- Haz Waste Transfer
- Material Recycling Facility
- Herefordshire County Boundary



SCALE 1:250,000 @ A3 DATE 13/11/2019

## Movement of waste

- 3.1.27 Figure 3.1 shows that in 2018, 90% of wastes received at permitted facilities operating in Herefordshire originated in the county. Of the waste imported from outside of Herefordshire: c. 6% came from authorities in Wales; 3% is attributable to each of the West Midlands, Worcestershire, Shropshire and Gloucestershire; and smaller amounts from elsewhere. Individually these are not significant tonnages of waste.
- 3.1.28 The data in Table 3.2 indicates that there has been an increase in the proportion of waste received at permitted facilities which originated in the county i.e. 77% in 2015 compared to 90% by 2018 (line 1). However, the 2015 and 2016 tonnages had notable quantities of waste which were identified as 'West Midlands - WPA not codeable' (line 2). It is reasonable to assume that the waste identified as 'West Midlands - WPA not codeable' actually arose in Herefordshire, given there is no significant change in the waste with its origins in Worcestershire, Shropshire and Gloucestershire in 2018 when there is no 'West Midlands - WPA not codeable' reported. Using this assumption, the amount of waste received at permitted facilities which originated in the county would fall within the range 84% to 90% between 2015 and 2018.
- 3.1.29 Table 3.6 provides a summary of the waste removed from permitted facilities operating in Herefordshire in 2016 to 2018, identifying both the destination waste planning authority and fate of the waste.
- 3.1.30 Care is needed when considering these figures. Operators are asked to report 'Fate' from a list limited to six options: incineration; landfill; recovery; transfer; treatment; and unknown. The quality of reporting is reliant upon the operator's knowledge of the destination and its location.
- 3.1.31 The potential for error is highlighted by the indication that approximately 31,000 tonnes of waste are reported to have been sent to landfill in Herefordshire in 2016, 58,000 tonnes in 2017 and 60,000 tonnes in 2018; there are no operational landfill facilities in Herefordshire. The site known as Land at Lower Vern (Table 3.4, line 39) is permitted for the deposit of waste to land as a recovery operation, however it received less waste than was reported as being disposed to landfill in 2016 and 2017 and was an inactive site in 2018.
- 3.1.32 Whilst recognising the potential for error in the reporting of the data presented in Table 3.6, it provides useful context for the management of wastes from Herefordshire.
- 3.1.33 Around half of the waste in Table 3.6 is indicated to remain within Herefordshire. The greatest tonnage exported is sent to Worcestershire. This is not surprising as the Herefordshire and Worcestershire waste disposal authorities have a joint municipal waste management contract and jointly procured capacity which is located in Worcestershire (a materials recovery facility, EnviroSort and a residual waste energy recovery facility, EnviRecover).
- 3.1.34 In addition to Worcestershire, waste is exported, at a level of more than 10,000 tonnes, to other locations:
- in 2016, to WPA Not Codeable locations, Vale of Glamorgan, and Doncaster; in 2017, only the Vale of Glamorgan;
  - in 2017, to Vale of Glamorgan; and
  - in 2018, to Vale of Glamorgan, Cardiff, West Midlands Not Codeable and Gloucestershire.

3.1.35 Waste exports of 5,000 to 10,000 tonnes were sent:

- in 2016, to Bristol and Gloucestershire;
- in 2017, to Cardiff, Bristol, Gloucestershire and Doncaster; and
- in 2018, to Bristol.

3.1.36 The other export amounts are less than 5,000 tonnes each and are not considered material to consider individually.

3.1.37 After 2016, the only exports of more than 10,000 tonnes are made to a fate of: Incinerator; Landfill; or Recovery. In 2016, the export of more than 10,000 tonnes made to a fate of Treatment was sent to destination WPA Not Codeable. It is possible that a reasonable proportion of this waste was treated in Herefordshire, but the fact that it disappears in years 2017 and 2018 reflects the increase in operational tonnage of the physical treatment facility at Lugg Bridge Quarry (Table 3.4, line13).

**Table 3.6 Tonnage of waste removed from permitted facilities in Herefordshire by destination fate and waste planning authority, 2016 to 2018**

		YEAR 2016						
row	Waste Planning Authority Area	Incinerator	Landfill	Recovery	Transfer	Treatment	Unknown	Total
1	Herefordshire		30,718	72,708	5,107	49,842	2,033	160,409
2	Worcestershire	6,905	42,384	21,452			12	70,753
3	WPA Not Codeable <sup>a</sup>			1,437		29,055		30,492
4	Vale of Glamorgan		1,049	23,383	27			24,459
5	Doncaster	12,862						12,862
6	Bristol		921	8,557		40		9,518
7	Gloucestershire		1,027	6,062			8	7,097
8	Birmingham City			4,222				4,222
9	Liverpool			3,993				3,993
10	Monmouthshire			3,939				3,939
11	Wales Not Codeable <sup>b</sup>			3,295				3,295
12	Newport UA			120	26	3,119		3,264
13	West Midlands Not Codeable <sup>c</sup>			1,370	30		383	1,783
14	Scottish WPA			1,566				1,566
15	Warwickshire			1,513				1,513
16	Other <sup>d</sup> (<1,000 tonnes)	23	-	5,476	318	2	6	5,826
17	<b>Total</b>	<b>19,790</b>	<b>76,099</b>	<b>159,094</b>	<b>5,507</b>	<b>82,058</b>	<b>2,443</b>	<b>344,991</b>
<p><b>Notes:</b></p> <p>a: It is not possible to identify the destination of the waste</p> <p>b: It is not possible to identify the destination of this waste within Wales</p> <p>c: It is not possible to identify the destination of this waste within the West Midlands</p> <p>d: Culmination of all waste movements of less than 1,000 tonnes</p> <p>e: It is not possible to identify the destination of this waste within Merseyside</p>								

YEAR 2017								
row	Waste Planning Authority Area	Incinerator	Landfill	Recovery	Transfer	Treatment	Unknown	Total
18	Herefordshire	4	57,775	86,313	3,366	52,170	329	199,956
19	Worcestershire	38,569	10,570	25,030		102	4	74,274
20	Vale of Glamorgan		49	33,532				33,582
21	Cardiff	6,966		2,965		27		9,958
22	Bristol		890	7,800		185		8,874
23	Gloucestershire		93	5,760		18	96	5,967
24	Doncaster	5,120						5,120
25	West Midlands Not Codeable <sup>c</sup>			3,524	2		661	4,188
26	Merseyside Not Codeable <sup>e</sup>			3,487				3,487
27	Monmouthshire			3,035				3,035
28	Wales Not Codeable <sup>b</sup>			2,190				2,190
29	Newport			141	336	990		1,467
30	Kent			1,081				1,081
31	Other <sup>d</sup> (<1,000 tonnes)	46	67	9,331	37	189	1,139	10,810
32	<b>Total</b>	<b>50,705</b>	<b>69,443</b>	<b>184,189</b>	<b>3,741</b>	<b>53,681</b>	<b>2,230</b>	<b>363,989</b>
<p><b>Notes:</b></p> <p>a: It is not possible to identify the destination of the waste</p> <p>b: It is not possible to identify the destination of this waste within Wales</p> <p>c: It is not possible to identify the destination of this waste within the West Midlands</p> <p>d: Culmination of all waste movements of less than 1,000 tonnes</p> <p>e: It is not possible to identify the destination of this waste within Merseyside</p>								

YEAR 2018								
row	Waste Planning Authority Area	Incinerator	Landfill	Recovery	Transfer	Treatment	Unknown	Total
33	Herefordshire		60,609	75,854	2,531	68,273		207,266
34	Worcestershire	33,477	13,683	25,357		223		72,740
35	Vale of Glamorgan			31,145				31,145
36	Cardiff	13,772		12,628		81		26,481
37	West Midlands Not Codeable <sup>c</sup>			10,784				10,784
38	Gloucestershire		50	9,860	4	662		10,575
39	Bristol			5,488		164		5,652
40	Monmouthshire			2,676				2,676
41	Newport			227	308	2,136		2,670
42	Wales Not Codeable <sup>b</sup>			2,523		99		2,622
43	Manchester	1,437		241				1,679
44	Other <sup>d</sup> (<1,000 tonnes)	559	65	5,756	5	311		6,696
45	<b>Total</b>	<b>49,245</b>	<b>74,406</b>	<b>182,537</b>	<b>2,847</b>	<b>71,949</b>		<b>380,985</b>
<p><b>Notes:</b></p> <p>a: It is not possible to identify the destination of the waste</p> <p>b: It is not possible to identify the destination of this waste within Wales</p> <p>c: It is not possible to identify the destination of this waste within the West Midlands</p> <p>d: Culmination of all waste movements of less than 1,000 tonnes</p> <p>e: It is not possible to identify the destination of this waste within Merseyside</p>								

3.1.38 Table 3.7 considers the base data presented in Table 3.6, with adjustments made for key known elements, i.e. that there is no landfill within Herefordshire and that Herefordshire's LACW goes for energy recovery (Incinerator) and materials recovery (Recovery) at jointly procured capacity located within Worcestershire.

3.1.39 These factors have been considered within Table 3.7 such that:

- total wastes exported from Herefordshire is derived by subtracting waste with a destination in Herefordshire from the total waste presented in Table 3.6;
- landfill does not remain within Herefordshire, but is exported, and so the tonnage is retained (added back in) to our understanding of total wastes exported;
- incineration and recovery within Worcestershire is assumed as having a destination of Herefordshire, so the tonnage is subtracted from the total wastes exported. It is recognised that not all of the waste sent to Recovery in Worcestershire is LACW.

**Table 3.7 Adjustments to Table 3.6 to clarify wastes exported from Herefordshire, 2016 to 2018**

row	2016	Incinerator	Landfill	Recovery	Transfer	Treatment	Unknown	Total
1	<b>Total Waste</b> (Table 3.6, line 17)	19,790	76,099	159,094	5,507	82,058	2,443	344,991
2	<b>Destination Herefordshire</b> (Table 3.6, line 1)	0	30,718	72,708	5,107	49,842	2,033	160,409
3	<b>Exported waste</b> (Calculated: line 1 minus line 2)	19,790	45,381	86,386	400	32,216	410	184,582
4	<b>Landfill, Herefordshire</b> (Table 3.6, line 1)		30,718					
5	<b>Incinerator and Recovery, Worcestershire</b> (Table 3.6, line 2)	6,905		21,452 <sup>a</sup>				
6	<b>Total exported</b> (Calculated: line 3 plus line 4, minus line 5)	<b>12,885</b>	<b>76,099</b>	<b>64,934</b>	<b>400</b>	<b>32,216</b>	<b>410</b>	<b>186,944</b>
<sup>a</sup> 19,082 tonnes LACW to Worcestershire								
row	2017	Incinerator	Landfill	Recovery	Transfer	Treatment	Unknown	Total
7	<b>Total Waste</b> (Table 3.6, line 32)	50,705	69,443	184,189	3,741	53,681	2,230	363,989
8	<b>Destination Herefordshire</b> (Table 3.6, line 18)	4	57,775	86,313	3,366	52,170	329	199,956
9	<b>Exported waste</b> (Calculated: line 7 minus line 8)	50,701	11,668	97,876	375	1,511	1,901	164,033
10	<b>Landfill, Herefordshire</b> (Table 3.6, line 18)		57,775					
11	<b>Incinerator and Recovery, Worcestershire</b> (Table 3.6, line 19)	38,569		25,030 <sup>b</sup>				
12	<b>Total exported</b> (Calculated: line 9 plus line 10, minus line 11)	<b>12,132</b>	<b>69,443</b>	<b>72,846</b>	<b>375</b>	<b>1,511</b>	<b>1,901</b>	<b>158,208</b>
<sup>b</sup> 18,940 tonnes LACW to Worcestershire								
row	2018	Incinerator	Landfill	Recovery	Transfer	Treatment	Unknown	Total
13	<b>Total Waste</b> (Table 3.6, line 45)	49,245	74,406	182,537	2,847	71,949		380,985
14	<b>Destination Herefordshire</b> (Table 3.6, line 33)		60,609	75,854	2,531	68,273		207,266
15	<b>Exported waste</b> (Calculated: line 13 minus line 14)	49,245	13,797	106,683	316	3,676		173,719
16	<b>Landfill, Herefordshire</b> (Table 3.6, line 33)		60,609					
17	<b>Incinerator and Recovery, Worcestershire</b> (Table 3.6, line 34)	33,477		25,357 <sup>c</sup>				
18	<b>Total exported</b> (Calculated: line 15 plus line 16, minus line 17)	<b>15,768</b>	<b>74,406</b>	<b>81,326</b>	<b>316</b>	<b>3,676</b>	<b>0</b>	<b>175,492</b>
<sup>c</sup> 18,944 tonnes LACW to Worcestershire								

- 3.1.40 Looking strictly at the data presented in Table 3.6, the dominant (assumed as more than 10,000 tonnes) fates for wastes exported from Herefordshire would be Incinerator, Landfill and Recovery, with Treatment appearing in 2016 only.
- 3.1.41 However, this does not consider the local relevance of landfill (there being none in the plan but it being reported within Herefordshire) and LACW management (benefitting from jointly procured incineration and recovery capacity located in Worcestershire). Table 3.7, lines 6, 12 and 18 does this respectively for years 2016, 2017 and 2018. Waste exports of more than 10,000 tonnes remains to be made to Incinerator, although this has activity substantially dropped in recognition of the LACW capacity located in Worcestershire.
- 3.1.42 However, waste exports significantly in excess of 10,000 tonnes remain to be made to Landfill and Recovery suggesting that these are key elements of waste management infrastructure not available within (or to) Herefordshire. This conclusion is exacerbated by recognising that not all the waste sent for Recovery in Worcestershire is LACW, but other waste streams that do not benefit from the jointly procured capacity.
- 3.1.43 This analysis corroborates the earlier reflection of the waste management facilities that are operational with Herefordshire; that this infrastructure is missing residual waste capacity.

### **Key points on permitted capacity**

- 3.1.44 The permitted facilities data for 2016 to 2018 shows transfer (with basic treatment) capacity, biological treatment and recovery capacity, and CD&E waste recovery capacity operating in Hereford. However, there is no residual waste treatment capacity for other waste streams, such as mechanical biological treatment (MBT) refuse derived fuel (RDF) production, incineration (with or without energy recovery) and no disposal capacity (landfill) beyond one land recovery operation.
- 3.1.45 There remains some reliance on residual waste management and disposal capacity outside the county, including a significant proportion of strategic capacity that has been jointly procured with Worcestershire County Council to manage LACW.
- 3.1.46 Permitted facilities are mapped, at Figure 3.4 and Figure 3.5:
- Figure 3.4 shows each facility represented by its capacity under the Environmental Permit, in 2018;
  - Figure 3.5 shows each facility represented by the tonnage of waste received, in 2018.

# Herefordshire Minerals and Waste Local Plan

**Figure 3.4**  
Herefordshire waste facilities by EP capacity, 2018

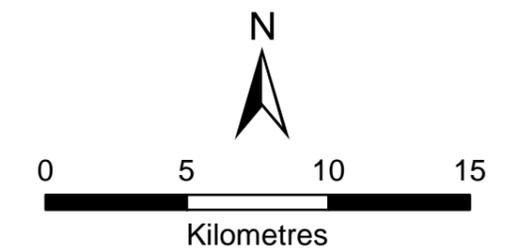
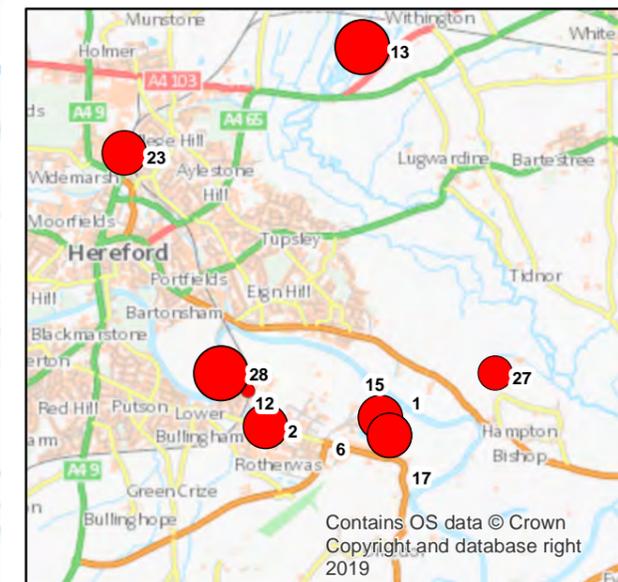
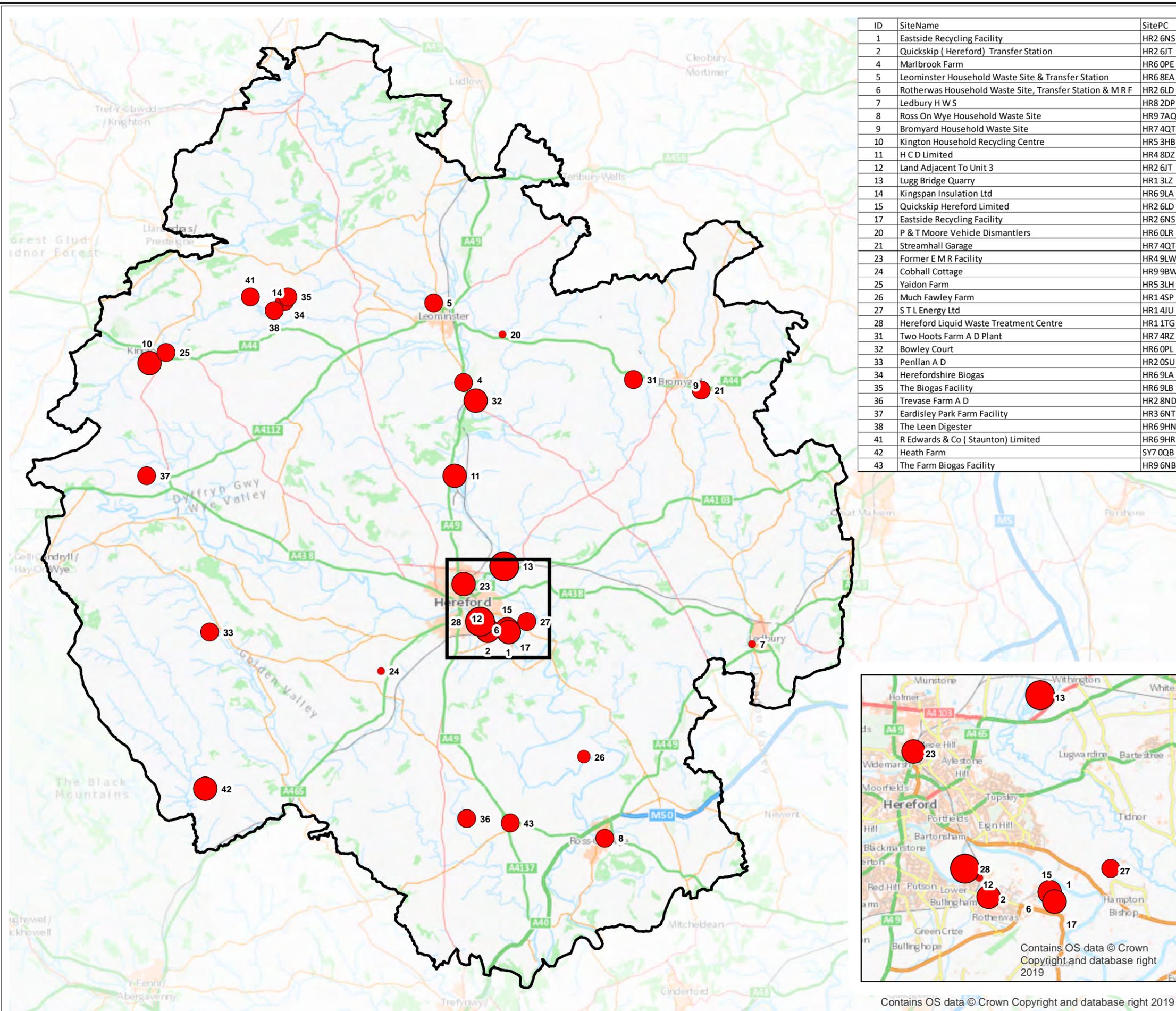
### Legend

#### Annual Capacity Tonnes

- < 10,000
- 10,001 - 20,000
- 20,001 - 50,000
- 50,001 - 100,000
- 100,001 - 250,000

Herefordshire County Boundary

ID	SiteName	SitePC
1	Eastside Recycling Facility	HR2 6NS
2	Quickskip ( Hereford) Transfer Station	HR2 6JT
4	Marlbrook Farm	HR6 0PE
5	Leominster Household Waste Site & Transfer Station	HR6 8EA
6	Rotherwas Household Waste Site, Transfer Station & M R F	HR2 6LD
7	Ledbury H W S	HR8 2DP
8	Ross On Wye Household Waste Site	HR9 7AQ
9	Bromyard Household Waste Site	HR7 4QT
10	Kington Household Recycling Centre	HR5 3HB
11	H C D Limited	HR4 8DZ
12	Land Adjacent To Unit 3	HR2 6JT
13	Lugg Bridge Quarry	HR1 3LZ
14	Kingspan Insulation Ltd	HR6 9LA
15	Quickskip Hereford Limited	HR2 6LD
17	Eastside Recycling Facility	HR2 6NS
20	P & T Moore Vehicle Dismantlers	HR6 0LR
21	Streamhall Garage	HR7 4QT
23	Former E M R Facility	HR4 9LW
24	Cobhall Cottage	HR9 9BW
25	Yaidon Farm	HR5 3LH
26	Much Fawley Farm	HR1 4SP
27	S T L Energy Ltd	HR1 4JU
28	Hereford Liquid Waste Treatment Centre	HR1 1TG
31	Two Hoots Farm A D Plant	HR7 4RZ
32	Bowley Court	HR6 0PL
33	Penllan A D	HR2 0SU
34	Herefordshire Biogas	HR6 9LA
35	The Biogas Facility	HR6 9LB
36	Trevase Farm A D	HR2 8ND
37	Eardley Park Farm Facility	HR3 6NT
38	The Leen Digester	HR6 9HN
41	R Edwards & Co ( Staunton) Limited	HR6 9HR
42	Heath Farm	SV7 0QB
43	The Farm Biogas Facility	HR9 6NB



SCALE: 1:250,000 @ A3  
DATE: 13/11/2019

# Herefordshire Minerals and Waste Local Plan

**Figure 3.5**  
Herefordshire waste facilities by input tonnes, 2018

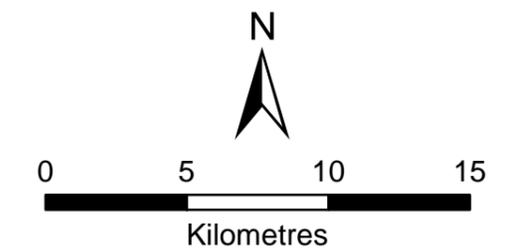
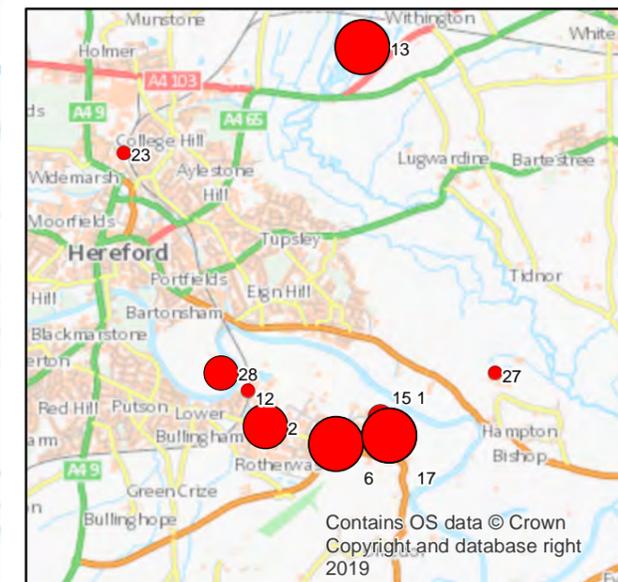
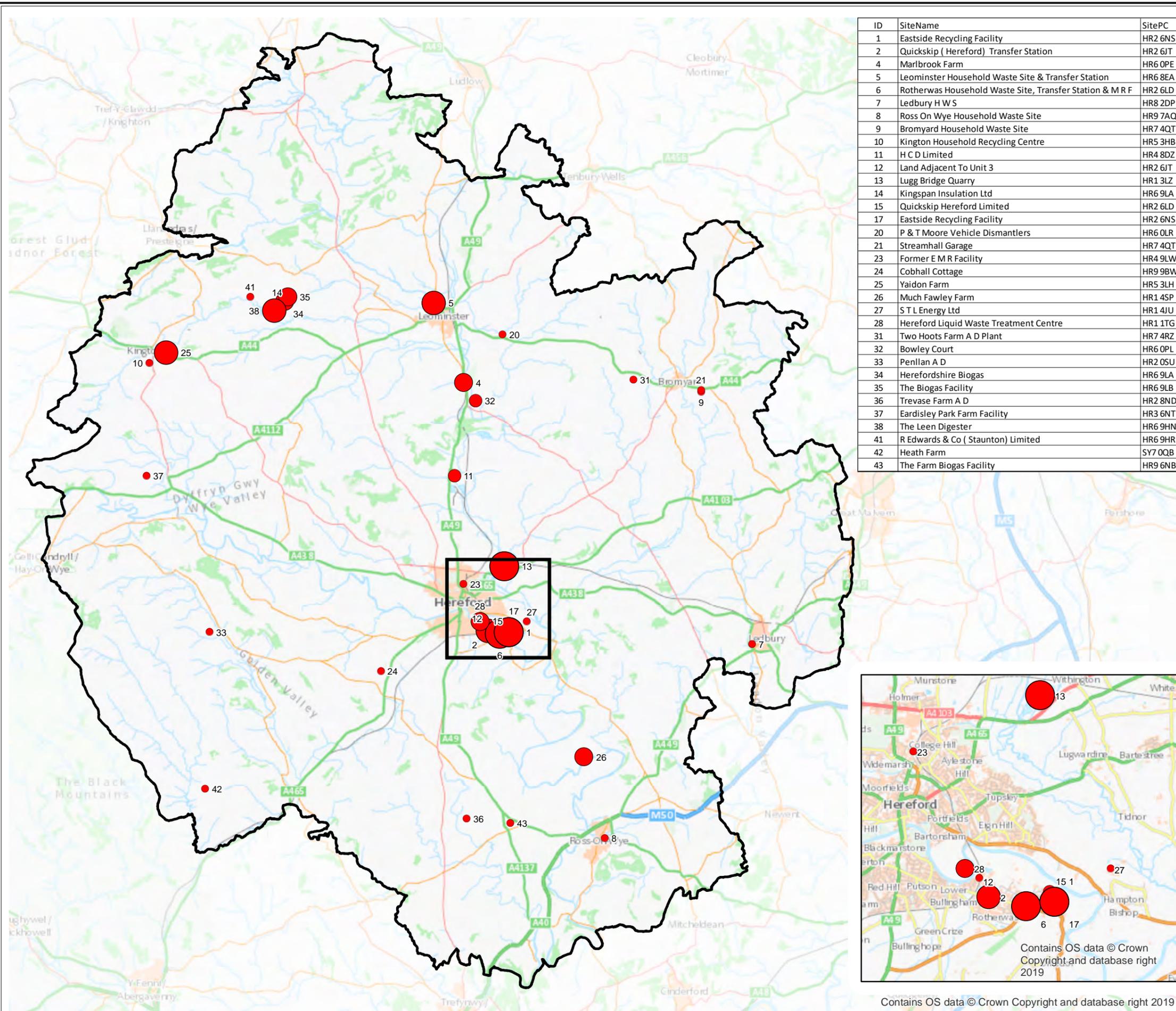
**Legend**

**Site Input 2018 (Tonnes)**

- < 5,000
- 5,001 - 10,000
- 10,001 - 20,000
- 20,001 - 40,000
- > 40,000

Herefordshire County Boundary

ID	SiteName	SitePC
1	Eastside Recycling Facility	HR2 6NS
2	Quickskip ( Hereford) Transfer Station	HR2 6JT
4	Marlbrook Farm	HR6 0PE
5	Leominster Household Waste Site & Transfer Station	HR6 8EA
6	Rotherwas Household Waste Site, Transfer Station & M R F	HR2 6LD
7	Ledbury H W S	HR8 2DP
8	Ross On Wye Household Waste Site	HR9 7AQ
9	Bromyard Household Waste Site	HR7 4QT
10	Kington Household Recycling Centre	HR5 3HB
11	H C D Limited	HR4 8DZ
12	Land Adjacent To Unit 3	HR2 6JT
13	Lugg Bridge Quarry	HR1 3LZ
14	Kingspan Insulation Ltd	HR6 9LA
15	Quickskip Hereford Limited	HR2 6LD
17	Eastside Recycling Facility	HR2 6NS
20	P & T Moore Vehicle Dismantlers	HR6 0LR
21	Streamhall Garage	HR7 4QT
23	Former E M R Facility	HR4 9LW
24	Cobhall Cottage	HR9 9BW
25	Yaidon Farm	HR5 3LH
26	Much Fawley Farm	HR1 4SP
27	S T L Energy Ltd	HR1 4JU
28	Hereford Liquid Waste Treatment Centre	HR1 1TG
31	Two Hoots Farm A D Plant	HR7 4RZ
32	Bowley Court	HR6 0PL
33	Penllan A D	HR2 0SU
34	Herefordshire Biogas	HR6 9LA
35	The Biogas Facility	HR6 9LB
36	Trevase Farm A D	HR2 8ND
37	Eardisley Park Farm Facility	HR3 6NT
38	The Leen Digester	HR6 9HN
41	R Edwards & Co ( Staunton) Limited	HR6 9HR
42	Heath Farm	SV7 0QB
43	The Farm Biogas Facility	HR9 6NB



SCALE: 1:250,000 @ A3  
DATE: 13/11/2019

## 3.3 Facilities exempt from environmental permitting

- 3.3.1 Exemptions can be gained for the use, treatment, disposal and storage of waste. In 2010 there was a significant change to the waste exemptions system that brought greater clarity over the types and quantities of waste that can be handled under each exemption.
- 3.3.2 The revised system requires all exempt operations to be newly registered and limits each exemption to three years from the date of registration, at which point there is a need to re-register the exemption if an operator wants to continue to benefit from the exemption.
- 3.3.3 Under the old system, there was no requirement to remove an exemption from the register once an operation had ceased, so the new system results in a 'cleaner' data set in that the exemption expires after three years. However, there is no requirement for an exemption that is completed within the three-year registration period to be removed from the register. This is a potential issue for estimating capacity for exemptions related to construction activities, which would not normally accept waste for the full three years.
- 3.3.4 There is no reporting of waste tonnage inputs to exempt facilities. However, the details provided in the waste exemption registrations can be used to estimate waste arisings and capacity.
- 3.3.5 Exempt activities are split into four categories:
- Using waste (U codes);
  - Treating waste (T codes);
  - Disposing of waste (D codes); and
  - Storing waste (S codes).
- 3.3.6 However not all exempt activities are important to this Waste Need Assessment on the basis that:
- they do not contribute to the waste management capacity in the county;
  - they do not significantly affect C&I or CD&E waste estimates; or
  - the wastes handled through a particular exemption would be captured in other exemptions/permitted facilities once moved on (and so recognising them would result in double counting).
- 3.3.7 A summary of all exemptions is provided in Annex E, along with comments and assumptions about which exemptions need to be considered in terms of waste arisings and capacity estimates.
- 3.3.8 An extract from the Environment Agency's Environmental Permit Exemptions Database for Shropshire, Herefordshire, Worcestershire and Gloucestershire (the 'EP Exemptions Database') was obtained from the Environment Agency for the WNA 2017, providing the details of each exemption registered at a site as of September 2016. This data was also use for the WNA Update 2018.
- 3.3.9 At this time the EP Exemptions Database used inconsistent terminology with regards to the type of exemption. 'Non-farm' and 'non-agricultural waste only' exemptions are assumed to be the same; as are 'on-farm' and 'agricultural waste only' exemptions; and 'both agricultural

and non-agricultural waste' are generally activities on farms where waste is brought onto a farm e.g. CD&E wastes such as rubble to repair farm roads/tracks.

3.3.10 The EP Exemptions Database<sup>8</sup> can now be downloaded from the data.gov website. The currently available data covers active exemptions as of the end of June 2019 and provides the details of each exemption registered at a site. The database includes a field for Environment Agency Areas, the relevant Environment Agency Area being Shropshire, Herefordshire, Worcestershire & Gloucestershire. However, there are a notable number of entries where this field is blank. In addition, the inconsistent terminology with regards to farm and non-farm exemptions has been simplified, with exemptions now identified as 'On a farm' exemptions or 'Not on a farm' exemptions.

3.3.11 Therefore, the data in the EP Exemptions Database needed to be analysed and cleansed to:

- identify exemptions within Herefordshire by using GIS to locate exemptions based in the county by reference to the grid reference given in the database;
- identify the exemptions registered at each site, as multiple exemptions are often registered at a given site; and
- remove duplicate registrations, which can occur for a number of reasons<sup>9</sup>:
  - exemption holders renewing their registration before the existing registration has expired, resulting in identical registrations for the same location between two and a half and three years apart;
  - the same exemption being registered more than once for the same activity/location e.g. two doctors at the same surgery applying for a T28 exemption (Sorting and denaturing of controlled drugs for disposal); or
  - multiple registrations of the same exemption at the same location, resulting in multiple registration for the same location; and
- split the exemptions into 'On a farm' exemptions and 'Not on a farm' exemptions.

### **Not on a farm exemptions**

3.3.12 Within Herefordshire, there are 131 'Not on a farm' exemptions in the EP Exemptions Database as of the end of June 2019, with a total of 343 exemptions registered across these 131 locations (Annex F).

3.3.13 However, when this data set is rationalised there remain 83 locations covering 179 exempt activities that should be considered in arisings estimates and/or capacity estimates. Rationalisation is achieved by the removal of:

- duplicate registrations;
- storage only exemptions;
- treatment exemptions where the outputs are likely to be captured at a permitted facility once moved on (e.g. T28 - Sorting and denaturing of controlled drugs for disposal, T17 - Crushing waste fluorescent tubes); and

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<sup>8</sup> <https://data.gov.uk/dataset/fe546d38-408d-4275-8e74-55e197c6f11a/exemptions> accessed 9th October 2019

<sup>9</sup> To overcome these issues the grid reference was used to identify individual locations with an exemption only counted once at each location.

- activities where the tonnage involved is likely to be insignificant are excluded (e.g. D6 - Disposal by incineration).

3.3.14 Table 3.8 presents a summary of the relevant data.

**Table 3.8 Relevant 'Not on a farm' exempt activities, Herefordshire, June 2019**

Exemption	Description	Number
D7	Burning waste in the open	38
T1	Cleaning, washing, spraying or coating relevant waste	5
T2	Recovery of textiles	1
T4	Preparatory treatments (baling, sorting, shredding etc)	8
T5	Screening and blending of waste	2
T6	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising	18
T8	Mechanical treatment of end-of-life tyres	1
T9	Recovery of scrap metal	8
T10	Sorting mixed waste	2
T12	Manual treatment of waste	4
T16	Treatment of waste toner cartridges and waste ink cartridges by sorting, dismantling, cleaning or refilling	1
T19	Physical and chemical treatment of waste edible oil and fat to produce biodiesel	1
T23	Aerobic composting and associated prior treatment	6
T25	Anaerobic digestion at premises not used for agriculture and burning of resultant biogas	2
U1	Use of waste in construction	35
U4	Burning of waste as a fuel in a small appliance	13
U8	Use of waste for a specified purpose	13
U9	Use of waste to manufacture finished goods	2
U11	Spreading waste on non-agricultural land to confer benefit	7
U12	Use of mulch	12
Note: Some of these exemptions could be on-farm activities based on the address provided for certain exemptions (Annex F)		

3.3.15 The detail of these exempt activities has been reviewed so as to estimate the waste tonnages that should be used within this WNA (the assumptions used are presented at Annex G). This review shows how the exemptions have been considered and are proposed to be used in the assessment.

3.3.16 There are a number of exemptions that are more appropriately considered as agricultural (on-farm) wastes. These are reported in the non-farm data set as an entry error by the operator.

## 'On a farm' exemptions

3.3.17 Many everyday activities on farms need to be carried out under an exemption. These include:

- using hardcore/road planings/woodchip to improve tracks;
- using tyres on a silage pit;
- using paper or woodchip as bedding;
- using railway sleepers in farmyard construction;
- clearing drainage ditches;
- treatment of waste in biobeds;
- burning waste in the open;
- storing sewage sludge before spreading; and
- washing out spray containers.

3.3.18 This means that most farms have to register for numerous exemptions. In Herefordshire, 1,470 farms/locations on farms have registered exemptions in June 2019, with multiple exemptions registered at many farms. This is a significant increase from the 635 locations recorded in the EP Exemptions Database at the end of September 2016. Whilst the requirement for farms to register exemptions came into effect in 2013, the Environment Agency only launched the digital service for registering waste exemptions in 2016 and there could have been a delay in farms using the system, which could explain the uplift in numbers.

3.3.19 Table 3.9 lists the top 20 most registered exemptions by farms in Herefordshire. Table 3.9 highlights that the majority of registered exemptions relate to handling wastes generated on-farm, which would be captured within agricultural waste estimates.

**Table 3.9 Top 20 On a farm exempt activities, Herefordshire, June 2019**

Exemption	Description	Number
D7	Burning waste in the open	1,407
U10	Spreading waste on agricultural land to confer benefit	1,125
D1	Deposit of waste from dredging of inland waters	999
U1	Use of waste in construction	991
T6	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising	887
U8	Use of waste for a specified purpose	823
S2	Storage of waste in a secure place	642
S1	Storage of waste in secure containers	536
U13	Spreading of plant matter to confer benefit	429
T14	Crushing and emptying vehicle waste oil filters	387
U4	Burning of waste as a fuel in a small appliance	334
U12	Use of mulch	310
D4	Deposit of agricultural waste consisting of plant tissue under a Plant Health Notice	278
U14	Incorporation of ash into soil	250
T23	Aerobic composting and associated prior treatment	232
S3	Storage of sludge	217

Exemption	Description	Number
T1	Cleaning, washing, spraying or coating relevant waste	210
D6	Disposal by incineration	160
T9	Recovery of scrap metal	159
T4	Preparatory treatments (baling, sorting, shredding etc)	150

3.3.20 There are a small number of on-farm exemptions that will import C&I and CD&E wastes and consequently are considered further (Annex G). The key exemptions are:

- U10 (Spreading waste on agricultural land to confer benefit) which would mainly relate to materials such as paper pulp and sewage sludge, which are both commonly used to improve the condition of soil.
- U1 (Use of waste in construction) which would mainly relate to the use of hardcore/road planings/woodchip to improve tracks.
- U8 (Use of waste for a specified purpose) which would mainly relate to using tyres to weight down cover sheeting or the use of paper or woodchip as bedding.

### Summary of Capacity Operating in Herefordshire

3.3.21 Permitted capacity within the county is limited to facilities that offer transfer with basic treatment or provide biological treatment; there is no residual waste treatment or disposal capacity such as MBT, RDF production, incineration (with or without energy recovery) or landfill. This means there is a reliance on such facilities that are located outside of Herefordshire, including a significant proportion of strategic capacity that has been jointly procured with Worcestershire County Council to manage LACW (section 6.2).

3.3.22 Over the last four years there has been a notable increase in the capacity and waste inputs to permitted facilities. This is predominately driven by:

- an increase in biological treatment and anaerobic digestion facilities, with permitted capacity increasing by approximately 800kt and waste inputs by 115kt;
- the permitting and increased operation of a physical treatment facility at Lugg Bridge Quarry, with a capacity of 250kt and an input of 100kt.

3.3.23 In 2018, there was permitted capacity of 1,793,472 tonnes provided across facilities that actually received 463,209 tonnes.

3.3.24 Whilst there are a significant number (approximately 1,600) of locations with exemptions across Herefordshire:

- the majority are On a farm exemptions which cover many everyday on-farm activities, such as burning waste in the open, spreading waste on agricultural land to confer benefit, deposit of waste from dredging of inland waters etc;
- there are a small number of non-farm exemptions, which provide some treatment capacity for C&I and CD&E wastes; and
- there are over 1000 locations with U1 exemptions (use of waste in construction); these do provide important capacity for CD&E wastes but cannot be considered as guaranteed capacity.



## 4. Waste Arisings

### 4.1 Local Authority Collected Waste ('LACW')

- 4.1.1 In 2014, Defra's Waste Statistics team split LACW into 'waste from households' and 'waste not from households' for statistical purposes, to provide a harmonised UK indicator with a comparable calculation in each of the four UK countries.
- 4.1.2 Whilst 'waste from households' is the Government's statistical measure it does not truly reflect waste generated by households as it excludes CD&E waste collected at CA sites that will predominately be generated by householders.
- 4.1.3 Therefore, when considering LACW arisings and forecasts, it can be useful to consider waste generated by households discretely from other LACW such as trade waste and parks waste etc.

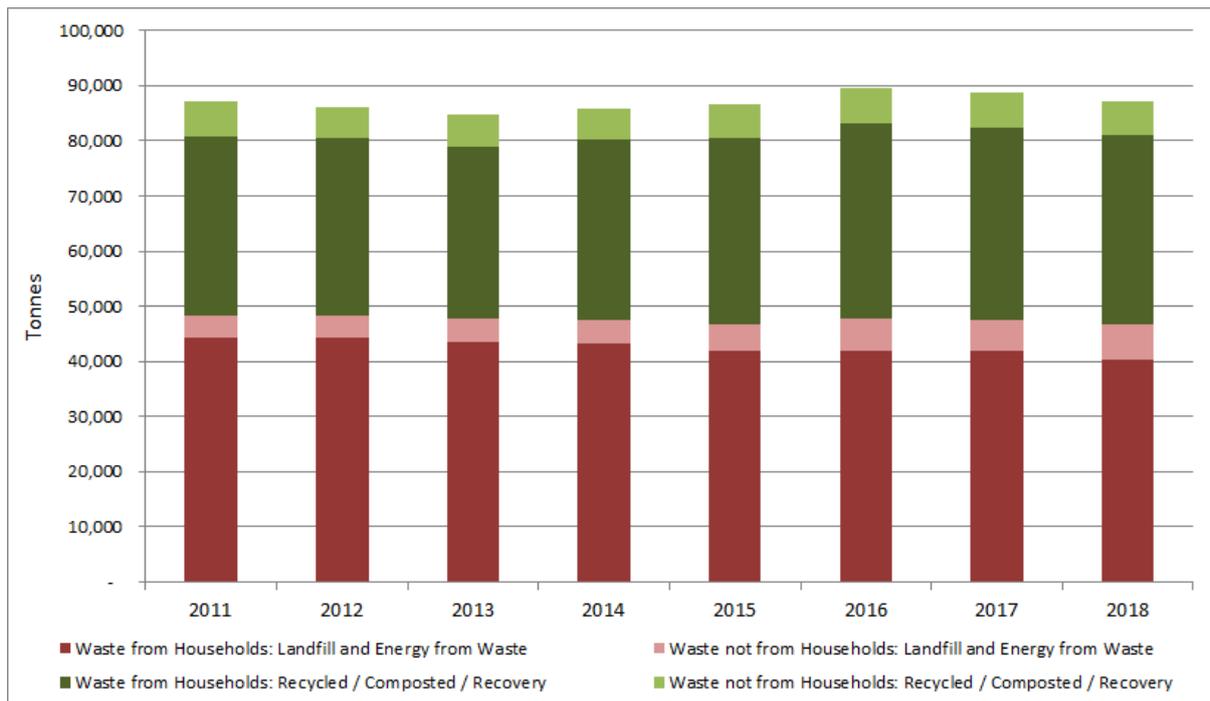
#### LACW arisings in Herefordshire

- 4.1.4 In 2016, approximately 89,650 tonnes of LACW was produced in Herefordshire, of which 77,350 tonnes was 'waste from households'. This is consistent with LACW growth scenarios 2 and 4a (section 5.2).
- 4.1.5 By 2017, approximately 88,870 tonnes of LACW was produced in Herefordshire, of which 76,750 tonnes was 'waste from households'. This is a slight reduction in both the LACW and 'waste from households' arisings compared to 2016.
- 4.1.6 2018 saw a further reduction in the amount of LACW produced in Herefordshire, with approximately 87,050 tonnes produced, of which 74,850 tonnes was 'waste from households'. The reduction was due to a decrease in residual waste (both at the kerbside and Household Waste Recycling Centres (HWRC)) and garden waste, rubble and scrap metal collected at HWRC. These reductions are slightly offset by an increase in the tonnages of residual commercial waste collected.
- 4.1.7 So, whilst 2016 arisings sit between the LACW growth scenarios 2 and 4a, and scenarios 1 and 4 (section 5.2), 2018 arisings are slightly below the LACW growth scenarios 2 and 4a, which are the lowest forecasts.
- 4.1.8 Table 4.1 and Figure 4.1 show Herefordshire's LACW arisings broken down into 'waste from households' and 'waste not from households' and the generic waste management method used, during years 2011 to 2018.
- 4.1.9 LACW has a good dataset available and it is useful to consider previous years to inform assumptions about potential future arisings. Table 4.1 also summarises the number of households and waste generation rates for those years based on data published by the Ministry for Housing, Communities and Local Government (MHCLG, formerly DCLG). This is useful information in considering future arisings.
- 4.1.10 However, the responsibility for household projections subsequently transferred to the Office for National Statistics (ONS), which published its first projections at the end of September 2018. Therefore, Table 4.1 also includes waste generation rates based on the ONS household projections. The ONS household projections are fractionally lower than the MHCLG projections, which means the resultant waste generation rates are fractionally higher.

**Table 4.1 LACW arisings, Herefordshire, 2011 to 2018**

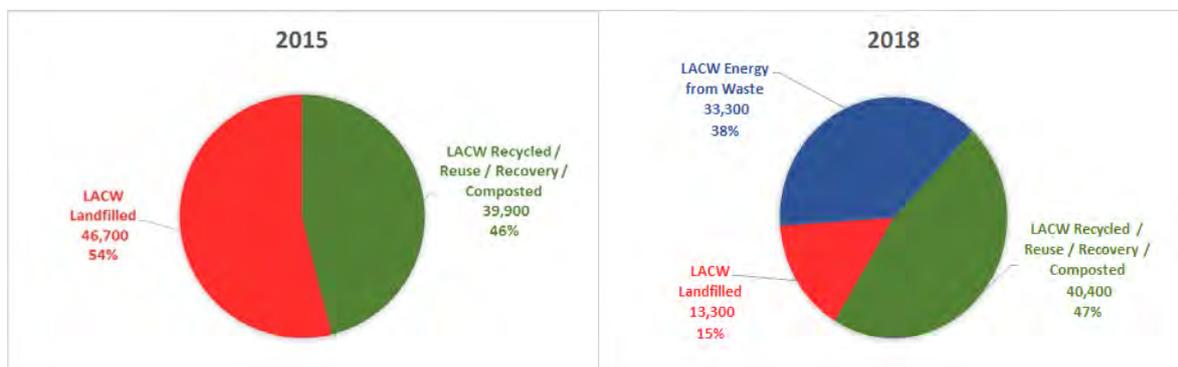
Description		2011	2012	2013	2014	2015	2016	2017	2018	row
Waste from households <sup>a</sup>	Recycled / composted / recovery	32,454	32,054	31,210	32,610	33,717	35,325	34,883	34,426	1
	Landfill and Energy from Waste	44,399	44,335	43,563	43,251	42,039	42,033	41,870	40,429	2
	<b>Total waste from households</b>	<b>76,854</b>	<b>76,389</b>	<b>74,773</b>	<b>75,861</b>	<b>75,755</b>	<b>77,358</b>	<b>76,753</b>	<b>74,855</b>	3
Waste not from households <sup>a</sup>	Recycled / composted / recovery	6,395	5,713	5,732	5,592	6,212	6,464	6,430	6,000	4
	Landfill and Energy from Waste	3,133	3,367	3,452	3,636	3,933	5,808	5,688	6,190	5
	<b>Total waste not from households</b>	<b>9,528</b>	<b>9,079</b>	<b>9,184</b>	<b>9,228</b>	<b>10,145</b>	<b>12,273</b>	<b>12,118</b>	<b>12,190</b>	6
<b>Total LACW</b>		<b>87,184</b>	<b>86,146</b>	<b>84,723</b>	<b>85,800</b>	<b>86,631</b>	<b>89,631</b>	<b>88,871</b>	<b>87,045</b>	7
Total waste generated by households <sup>b</sup>		83,337	82,180	80,548	81,470	81,984	83,841	83,164	80,777	8
MHCLG Number of households <sup>c</sup>		78,454	79,215	79,829	80,526	81,244	81,961	82,653	83,388	9
Waste from households per household (tonnes/household)		0.980	0.964	0.937	0.942	0.932	0.944	0.929	0.898	10
LACW per household (tonnes/household)		1.111	1.087	1.061	1.065	1.066	1.094	1.075	1.044	11
Waste generated by households per household (tonnes/household)		1.062	1.037	1.009	1.012	1.009	1.023	1.006	0.969	12
ONS Number of households <sup>d</sup>		78,192	78,865	79,328	79,944	80,463	81,102	81,570	82,047	13
Waste from households per household (tonnes/household)		0.983	0.969	0.943	0.949	0.941	0.954	0.941	0.912	14
LACW per household (tonnes/household)		1.115	1.092	1.068	1.073	1.077	1.105	1.090	1.061	15
Waste generated by households per household (tonnes/household)		1.066	1.042	1.015	1.019	1.019	1.034	1.020	0.985	16
<b>Notes:</b>										
a:Tonnage data source, Herefordshire Council										
b: LACW excluding trade waste collected by the local authority and other municipal wastes collected by the local authority (e.g. parks and gardens waste, fly tipping etc.)										
c: Ministry for Housing, Communities and Local Government (MHCLG) Household projections (formerly DCLG)										
d: ONS Household projections in England: 2016-based, accessed October 2019										

**Figure 4.1 LACW arisings, Herefordshire, 2011 to 2018**



4.1.11 Figure 4.1 is not able to show the shift in the management routes used for Herefordshire’s LACW since the EnviRecover Facility started operating in 2017. For information, this is shown in Figure 4.2.

**Figure 4.2 LACW management methods, Herefordshire, 2015 and 2018**



4.1.12 The trend in the annual LACW arisings in Herefordshire is consistent with the trend in LACW arisings at the England level, with total arisings dropping to a low point in 2013 followed by a gradual increase and a long period of relative stabilisation.

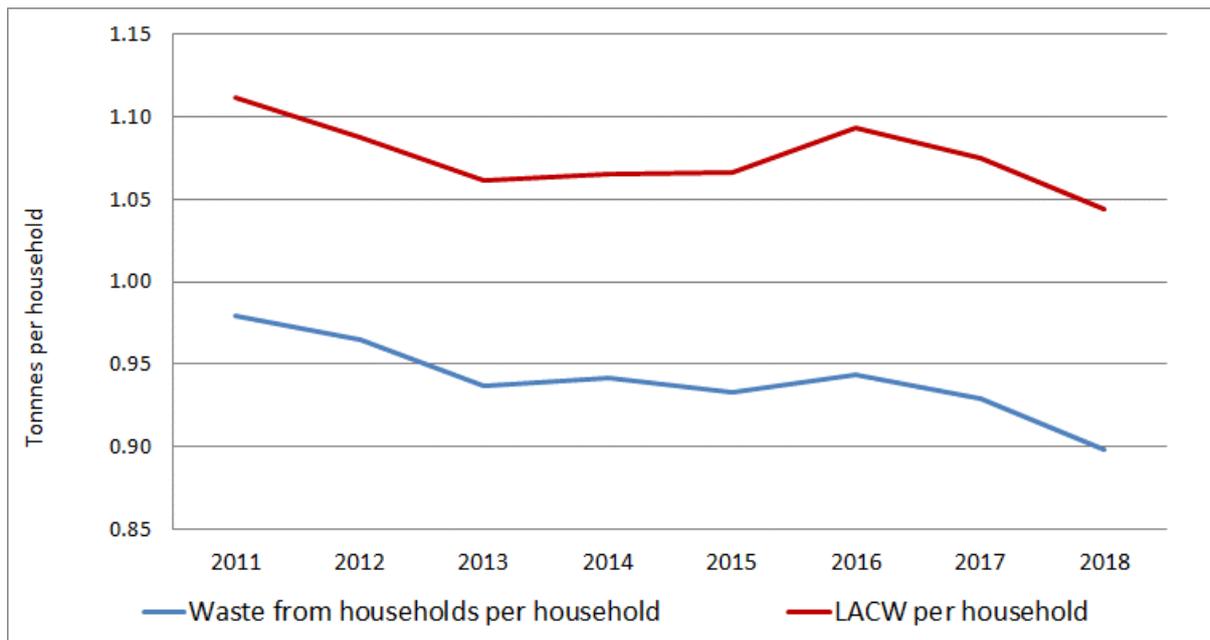
4.1.13 Waste generated could be expected to increase if households (and population) are projected to grow. However, economic growth and changing consumption habits will also influence waste production. Therefore, the two key influences on waste arisings are:

- the number of households (and to a lesser extent population) the growth of which could result in an increase in total household waste arisings; and
- the state of the economy, as economic decline and growth directly affect public consumption, purchasing habits and changes in consumption patterns, which may lead to an increase or decrease in per capita or per household waste generated.

4.1.14 Table 4.1 and Figure 4.3 show that both ‘waste from households’ per household and LACW per household have stayed relatively constant over the last seven years, with no significant shifts up or down. However, overall waste generation is showing a slight decrease. This would suggest that, historically, waste generation in Herefordshire is more closely linked to a change in the number of households rather than economic growth. A growth in LACW per household would indicate that economic growth had a greater influence.

4.1.15 A greater upturn is experienced in 2016 in LACW per household, which would imply economic growth is having an influence on LACW in Herefordshire. However, from 2017 the data shows waste generation levels reverting to those seen in years 2013 to 2015, with continued reduction in 2018.

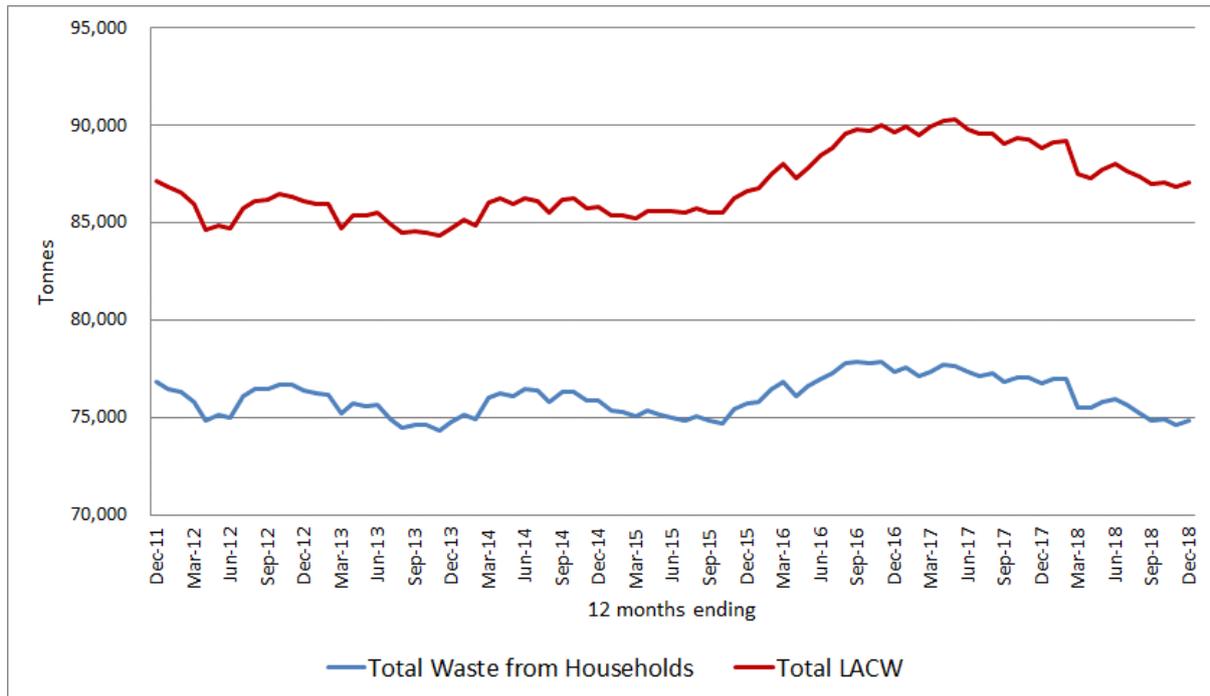
**Figure 4.3 Trends in LACW and waste from households per household, Herefordshire, 2011 to 2018**



4.1.16 Whilst annual waste arising data provide an indication of the trends, using a rolling 12-month tonnage helps to take account of seasonal variations and provides a clearer understanding of trends. Figure 4.4 provides the rolling 12-month tonnage data<sup>10</sup> for total LACW arisings using monthly data from December 2011 to December 2018 inclusive.

<sup>10</sup> Each data point presents the tonnage for the preceding 12 months, so that each data point represents a full year's tonnage.

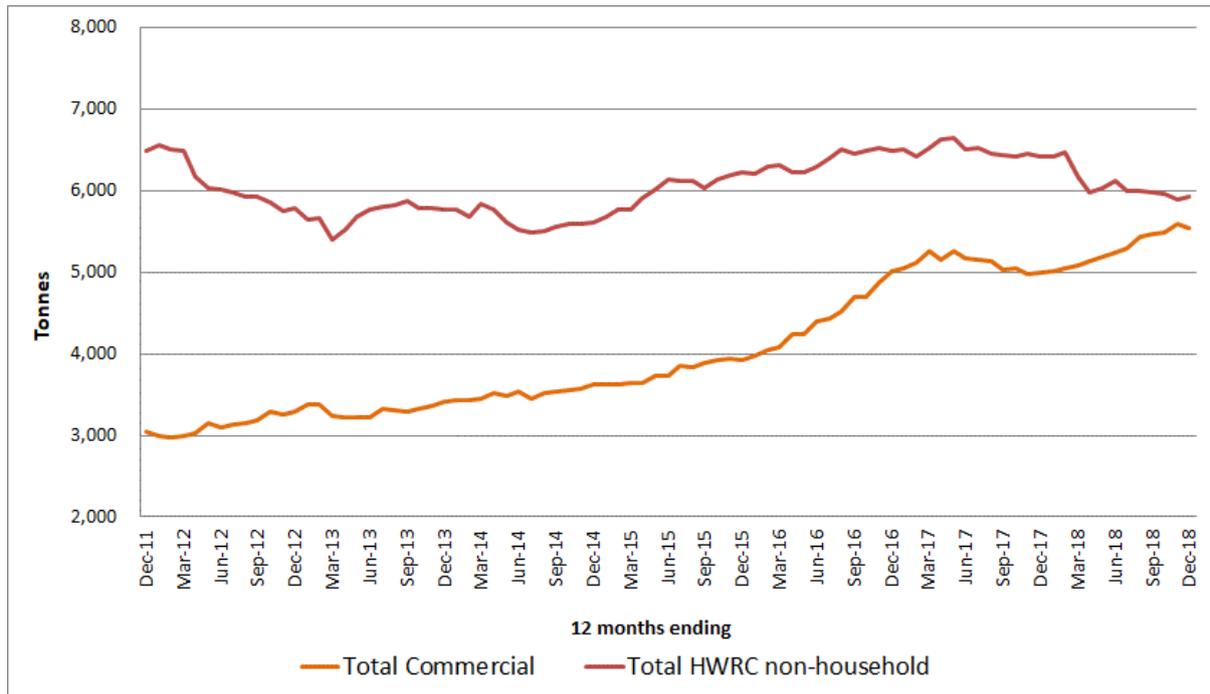
**Figure 4.4 Total LACW and 'waste from households', rolling 12-month tonnage, Herefordshire, December 2011 to December 2018**



4.1.17 Figure 4.4 shows a notable increase in Total LACW from September 2015 to September 2016, which then appears to stabilise through the first half of 2017. This is followed by a gradual reduction toward the end of 2017, and a more substantial drop by March 2018. Between August 2016 and August 2017, there have been some minor decreases in most elements of the LACW stream. However, there was a reduction in the 'waste from households' in the first two quarters of 2018.

4.1.18 However, as shown in Figure 4.5, the commercial waste element of LACW continued to grow until the end of 2016, before stabilising during 2017 and then rising again during 2018.

**Figure 4.5 Total commercial and non-household CA site waste arisings, rolling 12-month tonnage, Herefordshire, December 2011 to December 2018**



## 4.2 Commercial and Industrial (C&I) waste

### Introduction

4.2.1 Over recent years C&I waste arisings estimates made at the national level have not been broken down to the regional or individual WPA level. Therefore C&I waste arisings need to be estimated using a number of datasets. The approach used in this Waste Need Assessment is based on the methodology developed by Defra in 2014<sup>11</sup> that takes account of revisions made by Defra since 2014.

4.2.2 However, it should be noted that the Defra methodology was designed to estimate arisings at the national level and so did not need to consider the origin of the waste. Therefore, the methodology has been adapted for use at the WPA level but the basic steps remain similar.

4.2.3 The method calculates the total amount of C&I waste by adding up:

- inputs to permitted facilities with Herefordshire as the origin and adjusting for waste handled through transfer stations and from waste management facilities;
- incineration inputs; and
- inputs to exemption facilities;

and subtracting LACW, CD&E waste, hazardous and agricultural wastes.

<sup>11</sup> Methodology to Estimate Waste Generation by the Commercial and Industrial Sector in England, Defra, 2014

## **Inputs to permitted facilities**

- 4.2.4 Operators of permitted waste facilities are requested to provide information on the 'origin' of the waste accepted at their sites. Where data is supplied, the entry is normally completed showing the town or county where the waste came from.
- 4.2.5 However, where operators do not provide accurate information on the origin of waste, the WDI reports the origin as 'Not Codeable'; where possible, 'Not Codeable' waste is assigned to the region of origin. Having considered wastes identified as originating in Herefordshire, there is a need to consider the potential tonnage of 'Not Codeable' waste that can reasonably be assumed to have been generated in Herefordshire.
- 4.2.6 The WDI data for 2013 to 2018 were used to identify wastes received at permitted facilities which have the origin of waste identified as Herefordshire. The data were extracted by LoW 6-digit waste code (i.e. the classification codes for individual wastes) and by receiving site. Table 4.2 summarises the data extracted to show the quantities of waste received by sites in England with the origin identified as Herefordshire.

**Table 4.2 Waste received at permitted facilities in England with Herefordshire origin 2013 to 2018 by LoW Chapter heading  
(rounded to nearest 10 tonnes)**

LoW Chapter	Chapter Description	Tonnes					
		2013	2014	2015	2016	2017	2018
01	Mine and Quarry Wastes	-	-	-	-	-	2
02	Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing, food preparation and processing	30,130	38,620	95,970	121,710	134,170	126,020
03	Wastes from wood processing and the production of panels and furniture, pulp, paper and cardboard	180	220	270	250	5	3
04	Wastes from the leather, fur and textile industries	-	-	3	-	-	-
06	Wastes from inorganic chemical processes	8	30	2	40	3	5
07	Wastes from organic chemical processes	1	1	1	30	100	60
08	Wastes from the manufacture, formulation, supply and use (MFSU) of coatings (paints, varnishes and vitreous enamels), adhesives, sealants and printing inks	255	150	250	350	600	480
09	Wastes from the photographic industry	23	20	7	2	<1	-
10	Wastes from thermal processes	7	40	90	150	120	80
11	Wastes from chemical surface treatment and coating of metals and other materials, non-ferrous hydro-metallurgy	997	80	220	60	1,580	1,670
12	Wastes from shaping and physical and mechanical surface treatment of metals and plastics	363	150	330	550	550	580
13	Oil wastes and wastes of liquid fuels (except edible oils, and those in chapters 05, 12 and 19)	1,880	1,630	1,100	1,190	1,750	1,730
14	Waste organic solvents, refrigerants and propellants (except 07 and 08)	121	20	20	30	100	110
15	Waste packaging, absorbents, wiping cloths, filter materials and protective clothing not otherwise specified	1,683	2,040	2,220	2,230	2,080	1,670
16	Wastes not otherwise specified in the list	6,865	24,760	11,570	14,990	13,790	15,050

LoW Chapter	Chapter Description	Tonnes					
		2013	2014	2015	2016	2017	2018
17	Construction and demolition wastes (including excavated soil from contaminated sites)	104,462	111,710	72,960	77,750	122,140	143,930
18	Wastes from human or animal health care and/or related research (except kitchen and restaurant wastes not arising from immediate health care)	1,299	420	360	450	410	300
19	Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use	63,090	43,030	52,350	81,330	25,900	32,620
20	Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions	178,997	182,600	209,590	221,940	231,140	236,460
Total		390,360	405,520	447,310	523,050	534,440	560,770
Tonnage rounded to nearest 10 tonnes, unless the tonnage was less than 10 tonnes, for which the tonnage rounded to the nearest 1 tonne							

4.2.7 There are three notable differences between the 2015 and 2016 datasets:

- Under LoW Chapter 2, 28,000 tonnes of waste with LoW code 02 07 04, 'materials unsuitable for consumption or processing from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa)', was sent to Netheridge Sewage Treatment Works in Gloucestershire. It is possible that this is a one-off arising.
- An additional 29,000 tonnes were reported under LoW Chapter 19. The change is predominantly due to the increase in the following waste types; however, they will be filtered out at the next stage:
  - LoW code 19 07 03 (+2,000 tonnes), non-hazardous landfill leachate;
  - LoW code 19 12 02 (+4,650 tonnes), ferrous metal from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified;
  - LoW code 19 12 09 (+8,900 tonnes), minerals (for example sand, stones) from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified, which is likely to be from the processing of CD&E wastes;
  - LoW code 19 12 12 (+11,675 tonnes), other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11 (for example sorting, crushing, compacting, pelletising), which is potentially from increased processing of wastes at transfer stations.
- An additional 11,700 tonnes were reported under LoW Chapter 20, which will partly be as a result of the increase in LACW and some potential double counting of that waste when handled through transfer stations.

4.2.8 There are also some notable differences between the 2016 and 2017 datasets:

- Under LoW Chapter 2, the tonnage report against LoW code 02 07 04, 'materials unsuitable for consumption or processing from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa)' was not a one-off arising. In 2017, 28,670 tonnes with LoW code 02 07 04, were sent to Netheridge Sewage Treatment Works in Gloucestershire.
- An additional 12,500 tonnes were reported under LoW Chapter 02, which is made up of some increase and decrease across the sub-sectors covered under LoW Chapter 02. The predominant change was an increase of 18,000 tonnes in the 'waste from agriculture, horticulture, aquaculture, forestry, hunting and fishing' which was off-set by reductions in the wastes from:
  - the preparation and processing of meat, fish and other foods of animal origin (-1,300 tonnes);
  - fruit, vegetables, cereals, edible oils, cocoa, coffee, tea and tobacco preparation and processing; conserve production; yeast and yeast extract production, molasses preparation and fermentation (-3,150 tonnes); and
  - the dairy products industry (-1,250 tonnes).

The increases in the 'waste from agriculture, horticulture, aquaculture, forestry, hunting and fishing' are principally from the two waste streams LoW code 02 01 03 'plant-tissue waste' (+10,600 tonnes) and LoW code 02 01 03 'animal faeces, urine and manure' (+ 7,500 tonnes).

Both of these waste streams are likely to be handled through on-farm anaerobic digestion systems (for which there has been a significant increase in capacity over the last 5 years) and would not normally contribute to C&I waste arisings.

- An additional 44,400 tonnes were reported from the under LoW Chapter 17, C&D waste. The change is predominantly due to the increase in the following waste types; however, they will be filtered out at the next stage:
  - LoW code 17 01 07 (+9,400 tonnes), non-hazardous mixtures of concrete, bricks, tiles and ceramics;
  - LoW code 17 05 04 (+27,700 tonnes), non-hazardous soil and stones;
  - LoW code 17 08 02 (+3,150 tonnes), non-hazardous gypsum-based construction materials minerals; and
  - LoW code 17 09 04 (+3,500 tonnes), non-hazardous mixed construction and demolition wastes.
- A reduction of 55,400 tonnes reported under LoW Chapter 19. The change is predominantly due to the reduction in two waste types; however, they will be filtered out at the next stage:
  - LoW code 19 12 09 (-7,500 tonnes), minerals (for example sand, stones) from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified, which is likely to be related to the processing of CD&E wastes;
  - LoW code 19 12 12 (-42,000 tonnes), other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11 (for example sorting, crushing, compacting, pelletising), which is potentially from a change in coding by transfer stations processing of wastes.

4.2.9 There are also a number of changes between the 2017 and 2018 datasets:

- Under LoW Chapter 2, there was a reduction of just over 8,000 tonnes in the total amount of waste reported under LoW Chapter 02, which again is made up of some increases and decreases across the sub-sectors covered under LoW Chapter 02:
  - a 10,000 tonne reduction in 'waste from agriculture, horticulture, aquaculture, forestry, hunting and fishing', which reversed half the increase seen between 2016 and 2017;
  - an increase of 4,700 tonnes reported from 'fruit, vegetables, cereals, edible oils, cocoa, coffee, tea and tobacco preparation and processing; conserve production; yeast and yeast extract production, molasses preparation and fermentation';
  - an increase of 6,000 tonnes in 'wastes from the dairy products industry'; and
  - an 8,700 tonne reduction in tonnes in 'wastes from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa)'.
- An additional 21,800 tonnes were reported the under LoW Chapter 17, C&D waste. The change is predominantly due to the increase in two waste types, much of which was received at Lugg Bridge Quarry; again, they will be filtered out at the next stage:
  - LoW code 17 01 07 (+16,300 tonnes), non-hazardous mixtures of concrete, bricks, tiles and ceramics; and

- LoW code 17 09 04 (+7,400 tonnes), non-hazardous mixed construction and demolition wastes.
  - There were also increases in the wastes reported under LoW Chapter 19 and LoW Chapter 20; 6,700 tonnes and 5,300 tonnes respectively
- 4.2.10 The next step aims to isolate the C&I waste fraction by filtering the data to remove:
- waste coded under LoW sub-chapter 02 01 'Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing', to exclude agricultural waste;
  - waste coded under LoW Chapter 17 'Construction and demolition wastes (including excavated soil from contaminated sites)' to exclude CD&E waste;
  - waste coded under LoW Chapter 19 'Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use' to prevent the double counting of wastes handled at waste management facilities; and
  - waste deposited at Leominster HWRC & WTS, Rotherwas HWRC, WTS & MRF and Ledbury, Ross on Wye, Bromyard HWRC and Kington HWRC, as this is predominately household waste with the exception of commercial waste collected by Herefordshire Council which needs to be factored back into the estimates and CD&E waste received at HWRC (which would have been filtered out under LoW Chapter 17).
- 4.2.11 For the years 2013 to 2015, these steps reduced the tonnage by approximately 250,000 to 270,000 tonnes. Using the 2016 data, these steps reduced the tonnage by approximately 300,000 tonnes, for 2017 the tonnage was reduced by approximately 310,000 tonnes and for 2018 the tonnage was reduced by approximately 325,000 tonnes.

## **Waste Transfer Stations**

- 4.2.12 There is a significant risk of double counting waste handled through waste transfer stations. Not least, depending on how waste is handled, the outgoing waste may or may not be assigned the same waste code. In addition, the sites receiving waste from a waste transfer station may assign the waste a different code(s) to that used by the waste transfer station.
- 4.2.13 An example of this is highlighted by the potential double counting of LACW handled through the Mercia Waste Management facilities. In 2015, approximately 47,600 tonnes of LACW was sent from Mercia Waste Management facilities in Herefordshire to Severn Waste Services' Hill and Moor Landfill, Pershore, coded under LoW Chapter 20. However, the waste received at the Hill and Moor Landfill from Herefordshire was recorded as:
- 39,500 tonnes under LoW code 19 12 12, which related to the waste received from the waste transfer station; and
  - 8,100 tonnes under LoW 20 03 01 which related to the waste received from the HWRC.
- 4.2.14 So, whilst Step 3 above would have prevented the double counting of the waste coded under LoW Chapter 19, the waste coded under LoW Chapter 20 could be double counted. Therefore, a more detailed review of waste handled through waste transfer stations is needed.
- 4.2.15 Annex H summarises the key tonnages that need to be discounted to prevent double counting based on the detailed review. However, it should be noted that due to the

complexity of C&I waste flows it is not possible to definitively identify all potential occurrences of double counting.

4.2.16 As highlighted above, commercial waste collected by Herefordshire Council needs to be factored back into the estimate of C&I waste arisings. The commercial waste tonnages collected, which would be coded under LoW Chapter 20, were:

- 3,409 tonnes in 2013;
- 3,619 tonnes in 2014;
- 3,916 tonnes in 2015;
- 5,020 tonnes in 2016;
- 4,910 tonnes in 2017; and
- 5,530 tonnes in 2018.

### **Metals Recycling Sites**

4.2.17 Metals recycling site/vehicle dismantlers generally use LoW codes 19 12 02 and 19 12 03 for the ferrous metal and non-ferrous metal removed from sites, however a combination of other codes are also used to describe the metals and components removed. In addition, small vehicle dismantlers often send their processed scrap metal to larger metals recycling site for bulking and onward shipment for recovery.

4.2.18 A detailed review of the waste removed from metals recycling site/vehicle dismantlers in 2013 highlighted 5,560 tonnes of waste that would not have been excluded by removing LoW Chapter 17 & 19 wastes as part of the initial analysis. However, the processes at metals recycling site/vehicle dismantlers generate additional waste streams, for example when a car is dismantled components within the car such as oils, lead-acid batteries etc. are separated as individual waste streams. In addition, 90 tonnes were transferred to another facility in Herefordshire which means it is likely to be double counted twice.

4.2.19 A detailed review of the waste removed from metals recycling site/vehicle dismantlers in 2014 highlighted 4,260 tonnes of waste that would not have been excluded by removing LoW Chapter 17 & 19 wastes as part of the initial analysis. In addition, 130 tonnes were transferred to another facility in Herefordshire which means it is likely to be double counted twice. There also appeared to be a data entry error with 5,600 tonnes of lead-acid batteries being removed from P & T Moore Vehicle Dismantlers, when the site only received 1,700 tonnes of waste in total. It is assumed that the figure had been entered as kilograms i.e. 5.6 tonnes, which would be consistent with the other tonnes of this material removed from the site.

4.2.20 The detailed review of the waste removed from metals recycling site/vehicle dismantlers in 2015 highlighted 5,640 tonnes of waste that would not have been excluded by removing LoW Chapter 17 & 19 wastes as part of the initial analysis. In addition, 310 tonnes were transferred to another facility in Herefordshire which means it is likely to be double counted twice.

4.2.21 The detailed review of the waste removed from metals recycling site/vehicle dismantlers in 2016 highlighted 5,650 tonnes of waste that would not have been excluded by removing LoW Chapter 17 & 19 wastes as part of the initial analysis. In addition, 360 tonnes were transferred to another facility in Herefordshire, which means it is likely to be double counted twice.

- 4.2.22 The detailed review of the waste removed from metals recycling site/vehicle dismantlers in 2017 highlighted 3,600 tonnes of waste that would not have been excluded by removing LoW Chapter 17 & 19 wastes as part of the initial analysis. In addition, 440 tonnes were transferred to another facility in Herefordshire, which means it is likely to be double counted twice.
- 4.2.23 The detailed review of the waste removed from metals recycling site/vehicle dismantlers in 2018 highlighted 5,960 tonnes of waste that would not have been excluded by removing LoW Chapter 17 & 19 wastes as part of the initial analysis. In addition, 420 tonnes were transferred to another facility in Herefordshire, which means it is likely to be double counted twice.

## **Estimated C&I waste arisings managed through permitted facilities in England with Herefordshire identified as origin**

- 4.2.24 In collating the data from the analysis, it was noticed that in 2017 there was a significant tonnage of waste (9,550 tonnes) coded under LoW 20 01 08 'biodegradable kitchen and canteen waste', when in previous years less than 500 tonnes of waste were attributed to this LoW code. LoW 20 01 08 is normally used for separately collected food waste, and as Herefordshire Council does not collect separated food waste for households, the source of this waste was investigated further.
- 4.2.25 The waste was received at Cumberlow Green Farm (Permit No. EPR/QP3097NT) a composting facility in Buntingford, Hertfordshire. This indicated a potential error in the coding of the origin of the waste.
- 4.2.26 WDF was used to determine if any local authorities use Cumberlow Green Farm for the treatment of organic waste. In 2016 (the last full calendar year available in WDF) the data from WDF showed that the local authorities of Hertfordshire sent 29,800 tonnes of food and garden wastes to Cumberlow Green Farm, which is comparable to the 30,470 tonnes of food and garden wastes reported in the WDI 2016 with Herefordshire as the origin.
- 4.2.27 This would suggest that a proportion of the waste received at Cumberlow Green Farm has been incorrectly coded to Herefordshire as opposed to Hertfordshire in the WDI 2017. Therefore, waste received at Cumberlow Green Farm with an origin of Herefordshire has been excluded from the data.
- 4.2.28 Similarly, in 2018, there was a significant increase in the tonnage of waste reported under LoW Chapter 20 with its origin reported as Herefordshire.
- 4.2.29 Pearce Recycling Company Ltd (Permit No. EPR/FP3394SL), which operates a MRF in St Albans, Hertfordshire, was identified as receiving 16,600 tonnes of LoW 20 01 01 (paper and cars) and LoW 20 01 38 (non-hazardous wood waste) from Herefordshire. This indicated a potential error in the coding of the origin of the waste.
- 4.2.30 Again, WDF was used to determine if any local authorities use Pearce Recycling. The data for Q1 of 2018 showed that Hertfordshire County Council sent approximately 3,200 tonnes of paper, card and wood to Pearce Recycling. This would suggest waste has been incorrectly coded to Herefordshire as opposed to Hertfordshire in the WDI 2018. Therefore, waste received at Pearce Recycling with an origin of Herefordshire has been excluded from the data.
- 4.2.31 Table 4.3 draws together the analysis above to provide an estimate of the C&I waste arisings managed through permitted facilities in England with Herefordshire identified as the origin, concluding an interim total of 148,300 tonnes in 2017 and 158,000 tonnes in 2018. This indicates growth in the C&I waste arisings over the study period.

**Table 4.3 Estimated C&I waste arisings managed through permitted facilities in England with Herefordshire identified as the origin, 2013 to 2018**

LoW Chapter	Chapter Description	Tonnes					
		2013	2014	2015	2016	2017	2018
02	Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing, food preparation and processing	29,900	18,460	40,830	68,890	63,370	65,520
03	Wastes from wood processing and the production of panels and furniture, pulp, paper and cardboard	180	220	270	250	10	-
04	Wastes from the leather, fur and textile industries	-	-	3	-	-	-
06	Wastes from inorganic chemical processes	8	30	2	40	-	-
07	Wastes from organic chemical processes	1	1	1	30	100	60
08	Wastes from the MFSU of coatings (paints, varnishes and vitreous enamels), adhesives, sealants and printing inks	250	150	250	350	600	480
09	Wastes from the photographic industry	23	20	7	2	-	-
10	Wastes from thermal processes	7	40	90	150	120	80
11	Wastes from chemical surface treatment and coating of metals and other materials, non-ferrous hydro-metallurgy	1,000	80	220	60	1,580	1,670
12	Wastes from shaping and physical and mechanical surface treatment of metals and plastics	360	150	330	550	550	580
13	Oil wastes and wastes of liquid fuels (except edible oils, and those in chapters 05, 12 and 19)	1,870	1,630	1,100	1,190	1,750	1,690
14	Waste organic solvents, refrigerants and propellants (except 07 & 08)	120	20	20	30	100	110
15	Waste packaging, absorbents, wiping cloths, filter materials and protective clothing not otherwise specified	1,680	2,040	2,210	2,110	2,080	1,670
16	Wastes not otherwise specified in the list	6,860	24,750	11,430	14,830	13,640	14,820
18	Wastes from human or animal health care and/or related research (except kitchen & restaurant wastes not arising from immediate health care)	1,300	420	360	450	410	300
20	Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions	56,970	45,010	52,090	63,010	67,580	77,420
Total following exclusion of LoW Sub-chapters 0201, Chapters 17 and 19, LACW, the estimated double counted wastes passing through WTS and mis-coded origins		100,530	93,010	109,210	151,930	151,900	164,400
Potential double counting at metal recycling sites		-5,560	-4,260	-5,640	-5,650	-3,600	-5,960
<b>Estimated C&amp;I waste arisings managed through permitted facilities in England with Herefordshire identified as origin (rounded to nearest 1,000 tonnes)</b>		<b>95,000</b>	<b>89,000</b>	<b>104,000</b>	<b>146,000</b>	<b>148,000</b>	<b>158,000</b>
Chapter tonnages rounded to nearest 10 tonnes unless the tonnage is less than 10 tonnes, for which the tonnage is rounded to the nearest tonne.							

- 4.2.32 The 2016 and 2017 estimated arisings for C&I waste show a notable increase from that at 2015. Part of this increase is due to 28,000 to 29,000 tonnes of materials unsuitable for human consumption or processing from the production of alcoholic and non-alcoholic beverages being sent to a wastewater treatment facility.
- 4.2.33 In 2018, the quantity handled at waste water treatment plants has reduced to approximately 19,800 tonnes and despite this reduction the estimated arisings for C&I waste has increased by 10,000 tonnes to 158,000 tonnes. The 10,000 tonne increase is predominantly due to the increase in LoW Chapter 20 wastes, which was driven by increases in the following waste streams:
- LoW 200140 code 'metals' (+4,100 tonnes) which can be prone to double counting due to movements between MRS;
  - LoW code 20 02 01 'biodegradable waste' (+1,500 tonnes)
  - LoW code 20 03 01 'mixed municipal waste' (+3,000 tonnes);
  - LoW code 20 03 04 'septic tank sludge' (+3,800 tonnes), which could potentially be due to the requirement to prevent discharges from septic tanks directly to a surface water. If a septic tank discharges directly to surface water, it must be replaced or upgraded by 1 January 2020. So, the increase in septic tank sludge could relate to the emptying of old septic tanks prior to replacement.
- 4.2.34 However, there has been a steady increase in the quantity of waste, with origins in the West Midlands, handled through permitted facilities between 2013 and 2018 (Table 4.5 below). This suggests that overall waste arisings are increasing, which is potentially linked to the improvement in the economy as it recovers from the recession.
- 4.2.35 Consequently, if the C&I waste estimate for forecasting purposes is assumed to be waste managed through permitted facilities minus the materials unsuitable for consumption or processing handled at waste water treatment plants (28,670 tonnes in 2017 and 19,800 tonnes in 2018) the estimates would be:
- 120,000 tonnes (rounded to the nearest 1,000 tonnes) in 2017; and
  - 138,000 tonnes (rounded to the nearest 1,000 tonnes) in 2018.

### **'Not Codeable' waste**

- 4.2.36 The origin of waste is normally recorded at the sub-region or WPA level, however when the origin of the waste is not known to this level the term 'Not Codeable' is used and the origin attributed to the region of origin. This means that wastes can be identified as arising in the West Midlands but 'Not Codeable' to a sub-region or WPA level. This in turn means that there is the potential for wastes that arise in Herefordshire to be included in the 'Not Codeable' wastes at the West Midlands level.
- 4.2.37 'Not Codeable' tonnages within the WDI can be significant and therefore need to be considered.
- 4.2.38 Table 4.4 presents the tonnage of waste with the origin identified as the West Midlands, along with the tonnage from the West Midlands that could not be coded to the sub-region or WPA levels.

**Table 4.4 Quantity of 'Not Codeable' waste in West Midlands, 2013 to 2018**

	Description	Tonnes					
		2013	2014	2015	2016	2017	2018
1	Origin identified as the West Midlands	12,827,289	14,148,269	15,884,277	17,172,672	18,461,852	17,592,373
2	'Not Codeable' to sub-region or WPA level	3,944,825	3,574,756	4,633,702	5,270,077	5,825,810	5,625,866
3	Percentage 'Not Codeable'	30.8%	25.3%	29.2%	30.7%	30.7%	32.0%

4.2.39 The figures show that for waste with the origin identified as the West Midlands, 25% to 32% of the waste cannot be attributed to the sub-region or WPA level. Therefore, if Herefordshire is typical of the region as a whole in this regard, the C&I waste estimates for Herefordshire could be 25% to 32% higher as a result of the 'Not Codeable' data at the West Midlands level within the WDI. This is equivalent to 20,000 to 45,000 tonnes waste, depending on which year is being considered.

4.2.40 However, as highlighted in paragraphs 3.1.12/13 there appears to have been an apparent improvement in reporting by the sites in Herefordshire, which could mean the amount of attributed to 'West Midlands - WPA not codeable' could be an overestimate, which in turn could lead to an overestimate of C&I arisings.

#### **Waste handled at exempt facilities**

4.2.41 Section 3.2 summarises the exempt activities registered in Herefordshire with the detailed analysis of the potential contribution from different exemptions set out in Table 3.8. The contribution to the C&I waste estimates is summarised in Table 4.5.

**Table 4.5 Potential C&I waste quantities handled through exempt facilities in 2018**

Exemption	Contribution to the C&I waste estimates	Number of Contributing Exemptions	Estimate C&I waste managed through exemption (tonnes)
D7 - Burning waste in the open	10 tonnes annum per exemption	38	380
T4 - Preparatory treatments (baling, sorting, shredding etc)	5,000 tonnes annum per contributing exemption	1	5,000
T23 - Aerobic composting and associated prior treatment	250 tonnes annum per exemption	6	1,500
U4 - Burning of waste as a fuel in a small appliance	10 tonnes annum per exemption	13	130
U8 - Use of waste for a specified purpose	50 tonnes per annum per exemption	13	650
<b>Total</b>			<b>7,660</b>

## Waste sent directly to permitted facilities in Wales

- 4.2.42 Waste sent from Herefordshire directly to permitted facilities in Wales are not captured in the 2013 to 2015 WDI data. To provide an understanding of the waste potentially sent directly to permitted facilities in Wales for the WNA 2017, data from the 2011 and 2012 WDI (which included Welsh data) were reviewed.
- 4.2.43 Since the WNA 2017 was published, Natural Resources Wales ('NRW') has published waste permit returns for 2013 to 2018, which provides comparable data to the Environment Agency's WDI. This Assessment has consequently analysed the data from 2011 to 2018 to provide an understanding of the waste potentially sent directly to permitted facilities in Wales. This is presented in Table 4.6.
- 4.2.44 The data highlight that there are some potential issues with the coding of waste, particularly in years 2014 and 2015, with notable quantities coded under LoW 20 03 01 (mixed municipal waste). A detailed review of the waste received at permitted facilities in Wales and the waste removed from permitted facilities in Herefordshire highlighted the following points:
- The quantities and waste types removed from facilities in Herefordshire do not match the quantities and waste types received at facilities in Wales. There are a number of potential reasons for this, e.g. some wastes may be sent to facilities not covered by the Natural Resources Wales permit returns (e.g. exempt sites) the receiving site may use different LoW codes, the receiving site may not code the origin of the waste or code it incorrectly. This means it is difficult to actually determine waste potentially sent directly to permitted facilities in Wales.
  - In 2016, over 70% of the waste removed from permitted facilities in Herefordshire was from the Eastside Recycling Facility and was predominantly coded under LoW Chapter 19. 5,150 tonnes of waste under LoW Chapter 20 was removed from facilities in Herefordshire and identified with Wales as the destination; however only 4,460 tonnes of waste was received at permitted facilities in Wales under LoW Chapter 20 with the origin identified as Herefordshire.
  - In 2015, almost 22,000 tonnes of waste from the Eastside Recycling Facility and Quickskip (Hereford) Transfer Station was coded as LoW 20 03 01, as opposed to under LoW Chapter 19. In addition, 3,350 tonnes of biodegradable garden and park wastes (LoW 20 02 01) was sent to Wales from the Rotherwas Household HWRC/Transfer Station/MRF. So, whilst these wastes have been accounted for through the assessment as wastes received at permitted facilities in England, there is a risk of double counting them as they have been coded under Chapter 20.
  - In 2014, 6,280 tonnes of waste under LoW Chapter 20 was removed from facilities in Herefordshire and identified with Wales as the destination; however, 13,070 tonnes of waste were received at permitted facilities in Wales under LoW Chapter 20 with the origin identified as Herefordshire. Equally 35,490 tonnes of waste under LoW Chapter 19 was removed from facilities in Herefordshire and identified with Wales as the destination; however only 7,570 tonnes of waste were received at permitted facilities in Wales under LoW Chapter 19 with the origin identified as Herefordshire.
  - In the 2018 NRW Waste Permit Returns Data Interrogator, there are over 18,300 tonnes of waste with its origin as Herefordshire, which is sent to a Clinical Waste Transfer Station in Newport. This is the first time since 2013 and 2014 that waste has been reported as being

sent to a Clinical Waste Transfer Station in Wales from Herefordshire. A detailed review of this data highlighted the following information:

- the total tonnage was sent to a single facility Summerleaze Pet Crematorium, operated by Time Right Limited (Permit Number CP3595SX);
- the waste sent from Herefordshire consisted of:
  - 37 tonnes of waste coded under LoW Chapter 9 - Photographic Industry Wastes;
  - 100 tonnes of waste coded under LoW Chapter 15 - Waste Packaging; Absorbents, Wiping Cloths Etc N.O.S.;
  - 16,925 tonnes of waste coded under LoW Chapter 18 - Human and Animal Health Care Waste; and
  - 1,281 tonnes of waste coded under LoW Chapter 20 – Municipal Wastes.
- a total of just under 345,000 tonnes of waste were reported as being accepted at the Summerleaze Pet Crematorium in 2018.
- The NRW permitted wastes sites database<sup>12</sup> indicates that the permitted capacity of the Summerleaze Pet Crematorium is 1,950 tonnes per annum. Based on this information, it has been concluded that the waste received tonnages in the 2018 NRW Waste Permit Returns Data Interrogator are incorrect and that it is most likely the figures have been reported in kilograms as opposed to tonnes. This would mean that the figures are overstated by a factor of 1,000. Consequently, the tonnages in the 2018 data for waste received at Summerleaze Pet Crematorium from Herefordshire have been adjust accordingly with the tonnage being 18.3 tonnes.

**Table 4.6 Waste sent to permitted facilities in Wales from Herefordshire, 2011 to 2018**

LoW Chapter	Tonnes							
	2011	2012	2013	2014	2015	2016	2017	2018
02: Agriculture and food processing wastes	0.04	20	1,191	0.001	30	66	1,138	7,876
03: Furniture, paper and cardboard manufacturing wastes	-	-	-	-	0.01	0.04	-	-
06: Inorganic chemical process waste	207	8	15	6	7	5	2	10
07: Wastes from organic chemical processes	-	7	-	-	-	-	-	0.2
08: Paints, adhesives, sealants and ink manufacturing waste	-	0.4	0.3	1	0.3	1	1	4
09: Photographic industry wastes	0.05	0.001	0.004	-	0.001	-		0.04
10: Thermal Processes Waste								
11: Chemical surface treatment and coating of metals waste	565	654	505	1,622	1,226	884	556	684
12: Shaping and physical treatment of metals and plastics	66	28	36	307	78	43	115	39

<sup>12</sup> <https://naturalresources.wales/evidence-and-data/maps/find-details-of-permitted-waste-sites/?lang=en>  
[27.11.2019@14:44]

LoW Chapter	Tonnes							
	2011	2012	2013	2014	2015	2016	2017	2018
13: Oil wastes and wastes of liquid fuels	189	124	237	451	239	12	91	90
14: Organic solvent, refrigerant and propellant waste	1	0.01	1	0.5	2	-		3
15: Waste packaging; absorbents, wiping cloths etc not otherwise specified.	8	3	11	11	8	149	74	318
16: Wastes not otherwise specified in the list	448	720	1,377	249	162	111	50	548
17: Construction and demolition wastes	19	1	373	1,495	359	212	626	3,360
18: Human and animal health care waste	55	33	51	369	13	-		17
19: Waste and water treatment wastes	18,295	15,810	5,051	7,569	2,438	10,437	21,658	31,371
20: Municipal wastes	1,441	419	1,227	13,070	27,444	4,464	2,939	1,259
<b>Total</b>	<b>21,293</b>	<b>17,827</b>	<b>10,074</b>	<b>25,151</b>	<b>32,007</b>	<b>16,385</b>	<b>27,250</b>	<b>45,581</b>
<b>Total minus LoW Chapters 17 and 19</b>	<b>2,980</b>	<b>2,016</b>	<b>4,650</b>	<b>16,087</b>	<b>29,210</b>	<b>5,735</b>	<b>4,966</b>	<b>10,851</b>

- 4.2.45 Wastes coded under LoW Chapters 17 (CD&E waste) and 19 (wastes from waste management facilities) received at permitted facilities in Wales with the origin identified as Herefordshire need to be discounted because they are not C&I waste or have already been considered in the wastes received at sites in Herefordshire. In addition, the data for 2014 and 2015 potentially needs to be discounted due to the issues with the coding of waste highlighted above.
- 4.2.46 Applying these steps to the data results in a range of 2,000 to 6,000 tonnes of waste that may have been sent directly to permitted facilities in Wales between 2011 and 2017. Given the uncertainty prevalent in the data, it is assumed that 4,000 tonnes (the midpoint in that range) of waste arising in Herefordshire was sent directly to Wales in 2014 and 2015.
- 4.2.47 However, in 2018 there was a notable increase in the estimated waste arisings from Herefordshire sent directly to Wales, to almost 11,000 tonnes. The increase was predominately due to an increase of 6,700 tonnes in the waste reported under LoW Chapter 02: Agriculture and food processing wastes. Almost 5,000 tonnes of the increase were wastes sent to Grosmont Lagoon at Grosmont Wood Farm near Abergavenny which is a non-hazardous waste transfer station permitted in May 2017. The site is operated by Whites Recycling Ltd, which specialise in liquid waste management and recycling to agricultural land of a variety of liquid wastes, such as food manufacture process liquid and brewery sludge.

## C&I waste arisings estimates for Herefordshire

4.2.48 Having undertaken the steps described above to analyse the available data, Table 4.7 summarises the estimated C&I waste arisings estimated for Herefordshire for years 2013 to 2018.

**Table 4.7 Estimated C&I waste arisings, Herefordshire, 2013 to 2018**

	Description	Tonnes					
		2013	2014	2015	2016	2017	2018
1	Estimated C&I waste arisings managed through permitted facilities in England with Herefordshire identified as origin	95,000	89,000	104,000	118,000	120,000	138,000
2	'Not Codeable' waste	0 to 29,300	0 to 22,500	0 to 30,400	0 to 36,200	0 to 36,800	0 to 44,200
3	Waste handled at exempt facilities	8,000	8,000	8,000	8,000	8,000	8,000
4	Waste sent directly to permitted facilities in Wales	4,650	4,000	4,000	5,740	4,960	10,850
<b>5</b>	<b>Total (rounded to nearest 1,000 tonnes)</b>	<b>108,000 to 137,000</b>	<b>101,000 to 124,000</b>	<b>116,000 to 146,000<sup>a</sup></b>	<b>132,000 to 168,000</b>	<b>133,000 to 170,000</b>	<b>157,000 to 201,000</b>
<sup>a</sup> The reference to 115,000 to 145,000 tonnes in the WNA 2017 was erroneous; the correct tonnage is stated here							

## Review of C&I waste arisings in Herefordshire against national data

- 4.2.49 Due to the calculation necessary to estimate C&I waste generation in Herefordshire, it was considered useful to review relevant national waste data sources.
- 4.2.50 The estimated C&I waste arisings for England in 2012 was 43.8 million tonnes<sup>13</sup>. However, in December 2016, Defra<sup>14</sup> published a statistical notice to summarise waste estimates for the UK which have been calculated for European reporting purposes (the December 2016 Notice).
- 4.2.51 The December 2016 Notice presents a revised estimate for 2012 along with estimates for 2013 and 2014 based on a revised methodology. The revised estimates are:
- England 2012: 24.4 million tonnes of C&I waste
  - England 2013: 21.9 million tonnes of C&I waste
  - England 2014: 19.8 million tonnes of C&I waste
- 4.2.52 The December 2016 Notice states that the changes are due to the removal of tonnages that were likely to have been double counted. However, no further explanation is provided in the Notice. Initial discussions with Defra about the changes in methodology advise that:
- due to the uncertainty over the quantity of waste potentially handled through exemptions and the potential for such wastes to be subsequently handled at permitted facilities, Defra has decided to exclude waste handled through exemptions from the new estimates; and
  - the tonnage handled through HWRC may not have been excluded resulting in the potential for double counting of some household waste; therefore, all HWRC tonnages have also been excluded. However, around 15% of waste received at HWRC is sent to transfer stations and would have been excluded from the previous estimates, which means that the exclusion of all HWRC tonnages is likely to overestimate any double counting.
- 4.2.53 The estimates for Herefordshire set out in Table 4.7 exclude waste received at HWRC and, due to the limited number of non-farm exemptions, the tonnage handled at exempt sites is unlikely to significantly distort the estimates.
- 4.2.54 Based on the current waste data reporting systems and the uncertainty over the total generation levels, the evidence base for quantifying the contributions from different business sectors is limited.
- 4.2.55 The Office for National Statistics (ONS) holds data on enterprises/local units<sup>15</sup> by SIC, employment size band and local authority, which can be used to give a broad indication of the number of enterprise/local units in Herefordshire compared to England.
- 4.2.56 The ONS data indicates that 0.45% of local units in England are in Herefordshire; if it is assumed that C&I waste is directly proportional to the number of local units, arisings in Herefordshire would equate to:

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<sup>13</sup> Defra, Digest of Waste and Resources Statistics, 2016 (March 2016)

<sup>14</sup> Defra, UK statistics on Waste Notice, December 2016

<sup>15</sup> Local units identify each location in which a company operates. E.g. Marks and Spencers - all stores, food stores, warehouses and offices at different locations will be separately identified and the number of employees at each reported.

- between 89,000 to 110,000 tonnes of the C&I waste arising in England between 2013 and 2015, based on Defra’s revised methodology (December 2016); or
- approximately 195,000 tonnes of the C&I waste arisings in England based on the 2014 methodology.

4.2.57 However, in October 2018 Defra published a further revised figure for C&I waste arisings in England<sup>16</sup>. The C&I arisings estimate for England in 2016 was 33.1 million tonnes. Applying the proportion of local units, as above, to the latest Defra estimate would equate to a C&I waste arising for Herefordshire of 149,000 tonnes, which is in approximately the mid-point of the Herefordshire-specific analysis above of 2016.

4.2.58 In March 2019 Defra published an estimate for the C&I waste arisings for England in 2017<sup>17</sup>. The C&I waste arisings estimate for England in 2017 was 37.9 million tonnes. Again, applying the proportion of local units, as above, to the latest Defra estimate would equate to a C&I waste arising for Herefordshire of 170,000 tonnes, which is close to the mid-point of the Herefordshire-specific analysis for 2018.

4.2.59 In the March 2019 publication Defra states '*2017 figures are not completely directly comparable with earlier years. Caution should generally be exercised in interpreting apparent year-on-year changes in the C&I data, owing to inherent uncertainties in the underlying data and methodology*'.

4.2.60 Therefore, given the uncertainty over the national C&I waste estimates and the lack of granularity at a region or county level, the estimates resulting from the Herefordshire-specific analysis provide a range of tonnages to forecast future C&I waste arisings.

4.2.61 It should also be noted that, historically, waste generation has been linked to economic growth; however, the latest Defra estimates suggest that the correlation between economic growth and waste growth in the C&I sector may no longer exist. Until there is a better understanding of the revised Defra methodology (December 2016) it would be prudent to base future estimates on the assumption that the link between economic growth and waste growth remains, as this would provide a 'worst case' assessment.

## 4.3 Construction, Demolition and Excavation Waste (CD&E waste)

### Introduction

4.3.1 The construction and demolition sector produces the largest amount of waste in the UK. However, the data on CD&E waste is limited and historically estimates of arisings have been based on industry surveys. In addition, there has been limited new research on CD&E waste arisings since 2010 and information published over the last few years has only been at the national level (UK or England). Furthermore, significant quantities of CD&E waste are not managed at permitted waste facilities which mean the data in the WDI only provides a limited picture of CD&E waste arisings and management.

<sup>16</sup> Defra, UK Statistics on Waste, 9th October 2018

<sup>17</sup> Defra, UK Statistics on Waste, 7th March 2019

## CD&E waste arisings in Herefordshire

- 4.3.2 The last national study to break down CD&E waste estimates to the region and sub-regional level was the CLG Report, Survey of Arisings and Use of Alternatives to Primary Aggregates in England, 2005 Construction, Demolition and Excavation Waste (February 2007).
- 4.3.3 The report provided an estimate of the CD&E waste arisings in Herefordshire and Worcestershire for 2005, which is summarised in Table 4.8. Unfortunately, the estimates were not disaggregated to the Herefordshire level.

**Table 4.8 CD&E waste arisings, Herefordshire and Worcestershire, 2005**

row	Description	Tonnes
1	Estimated production of recycled graded aggregate	404,814
2	Estimated production of recycled ungraded aggregate	374,770
3	Estimated production of recycled soil (excluding topsoil)	69,349
4	Estimated tonnage of unprocessed CDEW entering licensed landfill for engineering, capping, disposal	335,602
5	Estimated weight of waste materials (mainly excavation waste) used on registered exempt sites	155,157
6	<b>Total</b>	<b>1339,692</b>

Source: Survey of Arisings and Use of Alternatives to Primary Aggregates in England, 2005 Construction, Demolition and Excavation Waste, CLG (February 2007).

- 4.3.4 A report prepared for the West Midlands Regional Assembly, West Midlands Waste Facilities Phase 2: Future Capacity Requirements<sup>18</sup> in 2004, did provide an estimate for C&D wastes in Herefordshire of 351,000 tonnes per annum of the period up to 2007. The estimate was based on the relative levels of housing development in the West Midlands region.
- 4.3.5 A further report for the West Midlands Regional Assembly, A Study into Future Landfill Capacity in the West Midlands<sup>19</sup>, provided estimates for the cumulative construction and demolition waste arisings for the period 2002/03 to 2025/26. The cumulative estimates for Herefordshire ranged from 6,250,585 tonnes to 7,423,664 tonnes for the period, which is equivalent to an average annual tonnage of between 260,000 and 310,000 tonnes.

## National CD&E waste arisings estimates

- 4.3.6 To provide some context to the uncertainty over C&E waste arisings, estimates at the national level set out below are the estimates published by Defra between 2015 and 2019.

*Defra, Digest of Waste and Resources Statistics, January 2015 and March 2016*

- 4.3.7 The March 2016 Digest of Waste and Resources Statistics (at Figure 2.1 of that Digest) provides an estimate of all waste arisings in the UK between 2004 and 2012, with CD&E waste estimated to be in the region of 100 million tonnes in 2012. The data behind that Figure are summarised in Table 4.9.

<sup>18</sup> West Midlands Waste Facilities Phase 2: Future Capacity Requirements. Report for West Midlands Regional Assembly, Shropshire County Council (2004)

<sup>19</sup> A Study into Future Landfill Capacity in the West Midlands Report for West Midlands Regional Assembly, Scott Wilson (May 2007)

**Table 4.9 CD&E waste arisings, Digest of Waste and Resources Statistics, March 2016**

Year	Waste Arisings (million tonnes)
2004	99.2
2006	109.5
2008	101.0
2010	102.2
2012	100.2

- 4.3.8 This data, different from later data estimates set out below, *includes* excavation waste and dredging spoils. Another point to note is that whilst the 2010 and 2012 figures are produced on a consistent basis; the older figures are less well documented so there is uncertainty over the consistency with the 2010 and 2012 estimates.
- 4.3.9 The March 2016 Digest continues the headline tonnage data presented in the January 2015 Digest; however, this earlier source also includes an estimated waste generation per capita, of 1,573kg per capita in 2012, based on the UK CD&E estimate of 100.2 million tonnes.
- 4.3.10 However, in mid-December Defra published an updated UK Statistics on Waste Notice (Table 4.11), which again revised the methodology used to estimate CD&E waste arisings, which resulted in new estimates for CD&E waste arisings in the UK.

*Defra, UK Statistics on Waste Notice, August 2016 and December 2016*

- 4.3.11 In August 2016, Defra published a Statistics on Waste Notice to summarise waste estimates for the UK calculated for European reporting purposes; this data is reproduced in Table 4.10. It provides data on non-hazardous construction and demolition waste for both the UK and England for 2010 to 2012. These figures *exclude* excavation waste and dredging spoils, so are a subset of the data reported in the Digest of Waste and Resources Statistics.
- 4.3.12 In addition, the August 2016 Statistics on Waste Notice states '*Accurately quantifying C&D waste is challenging and whilst the absolute tonnage figures are subject to a relatively high level of uncertainty, there is not a significant impact on the final recovery rate.*'

**Table 4.10 Non-hazardous Construction and Demolition Waste, UK and England, 2010 to 2012, Statistics on Waste Notice, August 2016**

Year	UK			England		
	Generation (000 tonnes)	Recovery (000 tonnes)	Recovery rate (%)	Generation (000 tonnes)	Recovery (000 tonnes)	Recovery rate (%)
2010	45,419	39,129	86.2%	39,832	35,480	89.1%
2011	47,067	40,622	86.3%	41,152	36,754	89.3%
2012	44,786	38,759	86.5%	38,938	34,714	89.2%

Source: UK Statistics on Waste Notice, August 2016, Figures exclude excavation waste

4.3.13 In December 2016, a revised Statistics on Waste Notice was published, presenting a revised set of estimates for 2010 to 2012, along with estimates for 2013 and 2014 calculated using a revised methodology. These data are reproduced in Table 4.11.

4.3.14 The revised estimates show an estimated increase in non-hazardous construction and demolition wastes (again, excluding excavation waste and dredging spoils):

- 2010: +4.1 million tonnes;
- 2011: +2.9 million tonnes;
- 2012: +6.4 million tonnes.

**Table 4.11 Non-hazardous Construction and Demolition Waste, UK and England, 2010 to 2014, Statistics on Waste Notice, December 2016**

Year	UK			England		
	Generation (000 tonnes)	Recovery (000 tonnes)	Recovery rate (%)	Generation (000 tonnes)	Recovery (000 tonnes)	Recovery rate (%)
2010	49,499	43,378	87.6%	43,912	39,729	90.5%
2011	49,995	43,803	87.6%	44,080	39,934	90.6%
2012	51,178	45,322	88.6%	45,331	41,278	91.1%
2013	51,930	46,622	89.8%	46,267	42,140	91.1%
2014	54,960	49,436	89.9%	49,109	44,887	91.4%

Source: UK Statistics on Waste Notice, December 2016, Figures exclude excavation waste

*Defra, Digest of Waste and Resource Statistics – 2017 and 2018 Editions, March 2017/May2018*

4.3.15 Defra did release Digests of Waste and Resource Statistics in 2017 and 2018, but these did not contain information relevant to estimating CD&E waste arisings in Herefordshire.

Defra, UK Statistics on Waste Notice, March 2019

4.3.16 In March 2019 Defra published revised CD&E waste estimates from 2010 to 2016<sup>20</sup>; these data are reproduced in Table 4.12.

**Table 4.12 Non-hazardous Construction and Demolition Waste, UK and England, 2010 to 2016, UK Statistics on Waste Notice, March 2019**

Year	UK			England		
	Generation (million tonnes)	Recovery (million tonnes)	Recovery rate (%)	Generation (million tonnes)	Recovery (million tonnes)	Recovery rate (%)
2010	59.2	53.1	89.7%	53.6	49.4	92.2%
2011	60.2	55.0	91.4%	54.9	50.8	92.5%
2012	55.8	50.8	91.1%	50.5	46.4	92.0%
2013	57.1	52.0	91.2%	51.7	47.6	92.0%
2014	61.5	56.3	91.5%	55.9	51.7	92.4%
2015	63.8	58.1	91.1%	57.7	53.3	92.3%
2016	66.2	60.2	91.0%	59.6	55.0	92.1%

Source: Defra UK Statistics on Waste Notice, March 2019, Figures exclude excavation waste and hazardous C&D waste estimates.

4.3.17 In the statistics notice Defra highlights that *'Revisions made to all figures, in line with updates made to underlying Mineral Products Association data. This has increased absolute tonnages for both generation and recovery by 10-20% each year in comparison to previously published figures, but had little impact on the recovery rate, which has remained around 90% throughout the timeseries'*.

### Summary of Defra CD&E waste estimates

4.3.18 Table 4.13 presents the collation of the Defra CD&E waste estimates for England and UK between 2010 and 2016 using both the data in the March 2019 UK Statistics on Waste Notice and the accompanying statistical data set<sup>21</sup>, which covers the waste generation and management figures for the whole of the UK compiled for EU reporting purposes. The table also provides an estimation of waste generation per capita for each element: non-hazardous C&D waste; hazardous C&D waste; and excavation waste and dredging spoils.

4.3.19 The data indicates that CD&E waste generation is increasing and that the total tonnage estimates are greatly influenced by the levels of excavation waste and dredging spoils.

4.3.20 The waste per capita estimates have increased from those used in the WNA 2017 due to the increased arising estimates published by Defra in March 2019:

- England CD&E waste per capita estimate for 2014 has increased from 1,980kg/capita to 2,151kg/capita (+171kg/capita); and
- UK CD&E waste per capita estimate for 2014 has increased from 1,864kg/capita to 2,017kg/capita (+153kg/capita).

<sup>20</sup> Defra, UK Statistics on Waste, 7th March 2019

<sup>21</sup> <https://www.gov.uk/government/statistical-data-sets/env23-uk-waste-data-and-management#history> [27.11.2019@14:55]

**Table 4.13 Summary of Defra CD&E waste data, England and UK, 2010 to 2016**

	England	2010	2011	2012	2013	2014	2015	2016
1	Non-hazardous C&D generation ('000 tonnes)	53,600	54,900	50,500	51,700	55,900	57,700	59,600
2	Hazardous C&D generation ('000 tonnes)	566		744		620		684
3	Excavation waste/dredging spoils ('000 tonnes)	47,436		48,856		60,297		60,014
<b>4</b>	<b>Total CD&amp;E waste generation ('000 tonnes)</b>	<b>101,602</b>		<b>100,100</b>		<b>116,817</b>		<b>120,298</b>
5	Population ('000) <sup>a</sup>	52,642,500	53,107,200	53,493,700	53,865,800	54,316,600	54,786,300	55,268,100
6	Non-hazardous C&D kg per capita	1,018	1,034	944	960	1,029	1,062	1,078
7	Hazardous C&D kg per capita	11		14		11		12
8	Excavation waste/dredging spoils kg per capita	901		913		1,110		1,086
<b>9</b>	<b>Total CD&amp;E waste kg per capita</b>	<b>1,930</b>		<b>1,871</b>		<b>2,151</b>		<b>2,177</b>
	UK	2010	2011	2012	2013	2014	2015	2016
10	Non-hazardous C&D generation ('000 tonnes)	59,200	60,200	55,800	57,100	61,500	63,800	66,200
11	Hazardous C&D generation ('000 tonnes)	688		924		743		801
12	Excavation waste/dredging spoils ('000 tonnes)	59,022		57,397		68,041		69,196
<b>13</b>	<b>Total CD&amp;E waste generation ('000 tonnes)</b>	<b>118,911</b>		<b>114,121</b>		<b>130,284</b>		<b>136,196</b>
14	Population ('000) <sup>b</sup>	62,759,500	63,285,100	63,705,000	64,105,700	64,596,800	65,110,000	65,648,100
15	Non-hazardous C&D kg per capita	943	951	876	891	952	988	1,008
16	Hazardous C&D kg per capita	11		15		11		12
17	Excavation waste/dredging spoils kg per capita	940		901		1,053		1,054
<b>18</b>	<b>Total CD&amp;E waste kg per capita</b>	<b>1,895</b>		<b>1,791</b>		<b>2,017</b>		<b>2,075</b>

<sup>a</sup> ONS England population mid-year estimate, accessed 22<sup>nd</sup> October 2019

<https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/timeseries/enpop/pop>

<sup>b</sup> ONS United Kingdom population mid-year estimate, accessed 22<sup>nd</sup> October 2019

<https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/timeseries/ukpop/pop>

## CD&E waste arisings estimates for Herefordshire

- 4.3.21 The published data highlights the limited information on which to base CD&E waste arisings estimates and whilst the historical data for Herefordshire provides an indication of the levels of CD&E waste, it does not reflect the impacts of the recession or changes in CD&E waste management practices.
- 4.3.22 The 2019 Defra estimates are the first national estimates for CD&E wastes that have been published since the WNA 2017 and consequently the analysis of arisings has been updated to reflect the revised estimates and the new national estimates for 2016.
- 4.3.23 Herefordshire's population in 2016 was 189,500<sup>22</sup> which would give an estimated CD&E waste arising of:
- 412,000 tonnes (rounded) in 2016, based on the England CD&E waste per capita estimates of 2,177kg/capita; or
  - 393,000 tonnes (rounded) in 2016, based on the UK CD&E waste per capita estimates of 2,075kg /capita.
- 4.3.24 Table 4.14 provides a breakdown of these estimates by the headline CD&E waste streams.

**Table 4.14 CD&E waste generation estimates, Herefordshire, 2016**  
(rounded to nearest 1,000 tonnes)

	CD&E waste stream	England kg/capita	Estimate arisings (tonnes)	UK kg/capita	Estimate arisings (tonnes)
1	Non-hazardous C&D	1,078	204,000	1,008	191,000
2	Hazardous C&D	12	2,000	12	2,000
3	Excavation waste/dredging spoils	1,086	206,000	1,054	200,000
4	Total	2,177	412,000	2,075	393,000

Based on a population of 189,500 in 2016 for Herefordshire.

- 4.3.25 Whilst Table 4.14 relies upon national averages, the estimates can be related back to Herefordshire by using population data. The estimates could still overestimate the CD&E waste generated in Herefordshire in 2016, which may be below the national average particularly in relation to the excavation waste and dredging spoils.
- 4.3.26 The WNA 2017 estimated Herefordshire's CD&E arising to be in a range of 357,000 to 379,000 tonnes for 2016, depending on whether the England or UK estimates of kg/capita are used. This compares to a range of 393,000 to 412,000 tonnes for 2016 based on the revised Defra estimates. This equates to a 9% to 10% increase in the previous estimate which is consistent with the change in the Defra estimates.

<sup>22</sup> [https://understanding.herefordshire.gov.uk/population/Spreadsheet '2018-mid-year-population-estimates-for-herefordshire'](https://understanding.herefordshire.gov.uk/population/Spreadsheet%20'2018-mid-year-population-estimates-for-herefordshire') [23.10.2019@16:15]

## 4.4 Agricultural Waste

### Published agricultural waste data

- 4.4.1 There is limited published data on agricultural waste, with this assessment relying upon Defra estimates of agricultural waste generated for reporting under the EC Waste Framework Directive and EC Waste Statistics Regulations.
- 4.4.2 Table 4.15 shows the Defra estimates of the waste produced by the agriculture, forestry and fishing sector for 2010, 2012 and 2014. However, there is no breakdown by the three sectors or below the England level. In addition, these estimates relate to non-natural agricultural waste. There are no published estimates of naturally occurring agricultural waste, which is managed on farms.

**Table 4.15 Estimates of waste produced by the agriculture, forestry and fishing sector, England, 2010, 2012 and 2014**

	EWC-STAT description	Tonnes		
		2010	2012	2014
1	Used oils	21,571	22,067	20,591
2	Chemical wastes	103,009	95,281	105,708
3	Health care & biological wastes	1,021	1,015	1,025
4	Metallic wastes, mixed	954	4,254	4,449
5	Paper & cardboard wastes	5,843	5,678	5,629
6	Rubber wastes	21,798	10,696	11,316
7	Plastic wastes	82,291	82,293	82,268
8	Discarded equipment	9	9	10
9	Discarded vehicles	31,071	38,798	26,742
10	Batteries & accumulators' wastes	3,110	3,176	3,363
11	Animal & mixed food waste	14,348	14,169	14,109
12	Household & similar wastes	478	777	777
13	Mixed & undifferentiated materials	2,986	8,947	11,711
14	Other mineral wastes		21,293	19,919
15	Mineral waste from waste treatment & stabilised waste	20,919		
16	Total waste generation	309,409	308,454	307,617

Source: Defra, UK Statistics on Waste, December 2016  
<https://www.gov.uk/government/statistical-data-sets/env23-uk-waste-data-and-management>

- 4.4.3 In the Defra UK Statistics on Waste Notice March 2019 and the accompanying statistical data set<sup>23</sup>, the data on the waste produced by the agriculture, forestry and fishing sector was updated, to include estimates for 2016. In addition, the 2016 Notice did not include data for discarded vehicles, with the tonnages for discarded vehicles excluded from the figures for 2010, 2012 and 2014. Consequently, revised total generation figures for those years were

<sup>23</sup> <https://www.gov.uk/government/statistical-data-sets/env23-uk-waste-data-and-management#history> [27.11.2019@15:12]

provided, that simply excluded the discarded vehicles tonnages for those years. For completeness the revised datasets are presented in Table 4.16.

**Table 4.16 Estimates of waste produced by the agriculture, forestry and fishing sector, England, 2010, 2012, 2014 and 2016**

	EWC-STAT description	Tonnes			
		2010	2012	2014	2016
1	Used oils	21,571	22,067	20,591	20,514
2	Chemical wastes	103,009	95,281	105,708	109,003
3	Health care & biological wastes	1,021	1,015	1,025	1,005
4	Metallic wastes, mixed	954	4,254	4,449	4,578
5	Paper & cardboard wastes	5,843	5,678	5,629	5,638
6	Rubber wastes	21,798	10,696	11,316	11,738
7	Plastic wastes	82,291	82,293	82,268	82,266
8	Discarded equipment	9	9	10	<1
9	Batteries & accumulators' wastes	3,110	3,176	3,363	3,488
10	Animal & mixed food waste	14,348	14,169	14,109	13,122
11	Household & similar wastes	478	777	777	779
12	Mixed & undifferentiated materials	2,986	8,947	11,711	12,063
13	Other mineral wastes		21,293	19,919	19,872
14	Mineral waste from waste treatment & stabilised waste	20,919			0
15	Total waste generation	278,337	269,656	280,874	284,067

Source: Defra UK Statistics on Waste Notice, March 2019,  
<https://www.gov.uk/government/statistical-data-sets/env23-uk-waste-data-and-management>

4.4.4 Defra also publishes information on the number of commercial agricultural holdings and the area farmed by county/unitary authority, which can be used as a means of proportioning the estimated arisings to an administrative level. This is presented in Table 4.17.

**Table 4.17 Commercial agricultural holdings and the area farmed, Herefordshire and England, 2010, 2013 and 2016**

	2010			2013			2016		
	England	H'shire	%	England	H'shire	%	England	H'shire	%
Number of holdings	105,449	2,649	2.51%	102,836	2,664	2.59%	106,853	2,812	2.63%
Farmed area (hectares)	8,887,289	172,246	1.94%	9,086,480	182,470	2.01%	9,120,623	176,862	1.94%

Source: Defra, Structure of the agricultural industry in England and the UK at June Spreadsheet 'structure\_june\_eng\_county\_01oct19' accessed 23<sup>rd</sup> October 2019  
<https://www.gov.uk/government/statistical-data-sets/structure-of-the-agricultural-industry-in-england-and-the-uk-at-june>

- 4.4.5 If it is assumed that the amount of waste generated is proportional to the number of commercial agricultural holdings or area farmed, it would mean that between 2% and 2.6% of the non-natural agricultural waste would be produced in Herefordshire. For 2016, this equates to 5,700 to 7,400 tonnes of non-natural agricultural waste, which compares to 6,000 to 8,000 tonnes of non-natural agricultural waste estimated in the WNA 2017.
- 4.4.6 Waste coded under LoW sub-chapter 02 01 'Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing' which is handled at permitted facilities can be extracted from the WDI. The data were extracted by LoW 6-digit waste code (i.e. the classification codes for individual wastes) and by receiving site. The extracts from the WDI for the quantities of waste coded under LoW sub-chapter 02 01 received at sites in England with the origin identified as Herefordshire are summarised in Table 4.18.

**Table 4.18 Waste coded under LoW sub-chapter 02 01 received at permitted facilities in England with Herefordshire origin, 2013 to 2018**

LoW code	Description	Tonnes					
		2013	2014	2015	2016	2017	2018
02 01 01	Sludges from washing and cleaning	147	2,719	1,360	597	455	739
02 01 02	Animal-tissue waste	-	-	0.8	-		2
02 01 03	Plant-tissue waste	-	840	21,262	20,423	31,039	19,606
02 01 04	Waste plastics (except packaging)	-	-	2.6	2	1	0
02 01 06	Animal faeces, urine and manure (including spoiled straw), effluent, collected separately and treated off-site	63	16,150	31,746	31,118	38,605	39,090
02 01 07	Wastes from forestry	-	-	0.1	-		
02 01 08*	Agrochemical waste containing hazardous substances	0.02	11	3	0.1	0.04	0.1
02 01 09	Agrochemical waste other than those mentioned in 02 01 08		136				
02 01 10	Waste metal	15	266	701	531	578	814
02 01 99	Wastes not otherwise specified		33	68	147	118	247
<b>Total</b>		<b>224</b>	<b>20,156</b>	<b>55,144</b>	<b>52,818</b>	<b>70,795</b>	<b>60,498</b>

For hazardous wastes the six-digit codes in the LoW have an asterisk (\*) next to them.

- 4.4.7 The data show that there has been a significant increase in the waste received at permitted facilities, which will be as a result of the development of on-farm anaerobic digestion systems (section 3.1) being used to treat plant-tissue waste and animal faeces, urine and manure.
- 4.4.8 Historically these wastes would have been managed by methods such as spreading on land and would not have been captured in waste management data. Table 4.18 does not reflect the total quantity of natural agricultural waste generated in Herefordshire, only that which enters a permitted facility.
- 4.4.9 In addition, wastes such as packaging, discarded vehicles and oils etc. would be captured under LoW Chapters 13, 15 and 16 and included in the C&I wastes estimates; it is not possible to identify the generating sector.
- 4.4.10 In 2015, of the waste coded under LoW sub-chapter 02 01 received at permitted facilities in Herefordshire, 65% had origins identified as Herefordshire and 34% had origins identified as the West Midlands but not codeable to the WPA level.
- 4.4.11 In 2016, 88% had origins identified as Herefordshire, with all but 250 tonnes having origins identified as Staffordshire or the West Midlands, but not codeable to the WPA level.
- 4.4.12 By 2017 and 2018, over 95% had origins identified as Herefordshire, with the remainder predominantly from the West Midlands.

## **4.5 Hazardous Waste**

- 4.5.1 The HWI for 2011 to 2018 were used to identify the hazardous waste that arose in Herefordshire. Table 4.19 summarises the hazardous waste arisings by LoW Chapter heading.

**Table 4.19 Hazardous waste arising, Herefordshire, 2011 to 2018 (including transfer stations)**

LoW Chapter	Tonnes							
	2011	2012	2013	2014	2015	2016	2017	2018
01: Mining and Minerals	-	-	-	-	0.2	-	-	-
02: Agricultural and Food Production	1	1	0.04	0.8	2.7	0.4	4	2
03: Wood and Paper Production	-	27	-	22	27	9	1	19
05: Petroleum, Gas and Coal Processing Wastes	-	-	-	-	-	0.4	1	1
06: Inorganic Chemical Processes	303	71	149	124	87	95	6	6
07: Organic Chemical Processes	1	-	0.2	1.6	1.2	1	-	0.2
08: MFSU Paints, Varnish, Adhesive and Inks	867	831	759	729	665	589	655	783
09: Photographic Industry	11	10	11	8.6	8.0	5	3	3
10: Thermal Process Waste (inorganic)	5	6	4.6	0.7	0.9	5	3	3
11: Metal Treatment and Coating Processes	1,782	2,122	1,772	1,238	1,321	1,384	1,419	1,578
12: Shaping/Treatment of Metals and Plastics	138	131	248	116	77	158	95	82
13: Oil and Oil/Water Mixtures	2,096	2,281	1,891	2,273	1,718	1,927	1,790	2,040
14: Solvents	94	60	78	62	59	59	114	111
15: Packaging, Cloths, Filter Materials	285	220	280	332	326	217	263	242
16: Not Otherwise Specified	3,828	3,550	3,567	1,209	1,238	1,672	4,364	5,082
17: CD&E waste and Asbestos	1,432	1,132	1,137	2,547	4,765	1,160	800	2,040
18: Healthcare	743	649	464	469	432	424	406	343
19: Waste/Water Treatment Industry	8	7	5.9	9.1	10	73	11	7
20: Municipal Wastes	1,012	1,028	642	361	328	352	288	307
<b>Total</b>	<b>12,607</b>	<b>12,125</b>	<b>11,009</b>	<b>9,500</b>	<b>11,066</b>	<b>8,130</b>	<b>10,224</b>	<b>12,648</b>

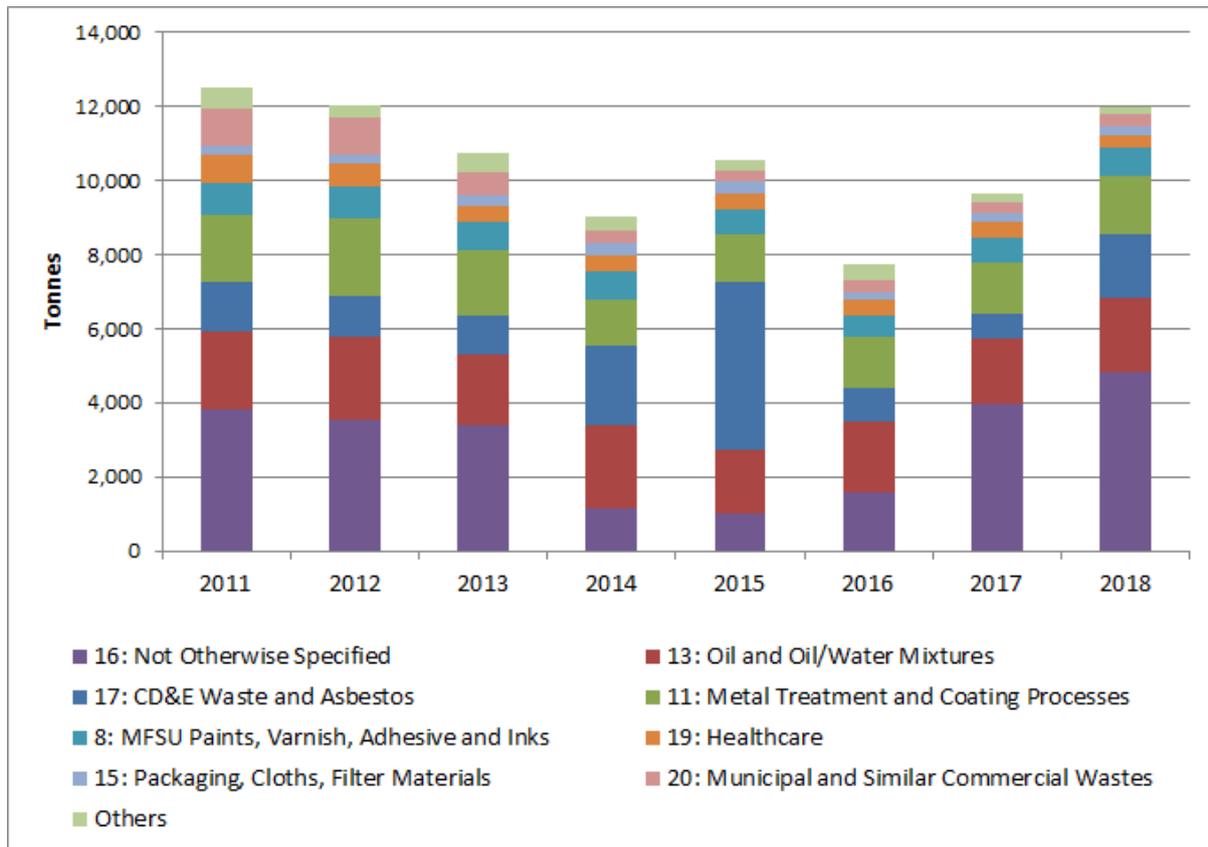
4.5.2 However, the figures need to be adjusted to take account of waste handled through transfer stations in Herefordshire, which is the principal type of hazardous waste facility in the county with the exception of metal recycling/vehicle de-polluting sites. Table 4.20 presents the hazardous waste arisings for Herefordshire from 2011 to 2018, excluding waste arising and deposited at transfer stations in Herefordshire.

**Table 4.20 Hazardous waste arising, Herefordshire, 2011 to 2018 (excluding waste arising and deposited at transfer stations in Herefordshire)**

LoW Chapter	Tonnes							
	2011	2012	2013	2014	2015	2016	2017	2018
01: Mining and Minerals	-	-	-	-	0.2	-	-	-
02: Agricultural and Food Production	1.0	0.7	0.0	0.2	2.7	0.4	4.2	2.1
03: Wood and Paper Production	-	27	-	22	27	8.7	0.8	19
05: Petroleum, Gas and Coal Processing Wastes	-	-	-	-	-	0.4	0.6	1.5
06: Inorganic Chemical Processes	303	71	149	124	87	95	5.5	5.9
07: Organic Chemical Processes	1.4	-	0.2	1.6	1.2	1.0	-	0.2
08: MFSU Paints, Varnish, Adhesive and Inks	867	831	756	728	665	587	655	782
09: Photographic Industry	11	10	11	8.6	8.0	5.1	2.7	2.6
10: Thermal Process Waste (inorganic)	4.6	5.7	4.6	0.7	0.9	5.3	2.8	2.9
11: Metal Treatment and Coating Processes	1,782	2,122	1,772	1,238	1,321	1,384	1,419	1,578
12: Shaping/Treatment of Metals and Plastics	138	131	248	116	77	158	95	82
13: Oil and Oil/Water Mixtures	2,093	2,280	1,880	2,251	1,709	1,921	1,759	2,010
14: Solvents	94	60	78	62	59	59	114	111
15: Packaging, Cloths, Filter Materials	282	218	279	331	324	216	263	241
16: Not Otherwise Specified	3,819	3,519	3,405	1,130	1,015	1,580	3,978	4,808
17: CD&E waste and Asbestos	1,370	1,077	1,048	2,177	4,512	876	647	1,711
18: Healthcare	743	649	464	468	429	414	406	343
19: Waste/Water Treatment Industry	8.4	7	5.9	9.1	10	73	11	6.8
20: Municipal Wastes	1,001	1,021	637	340	316	343	282	302
<b>Total</b>	<b>12,520</b>	<b>12,028</b>	<b>10,739</b>	<b>9,006</b>	<b>10,565</b>	<b>7,727</b>	<b>9,646</b>	<b>12,009</b>

4.5.3 Figure 4.6 presents the data from Table 4.20.

**Figure 4.6 Hazardous waste arising, Herefordshire, 2011 to 2018**



4.5.4 The data show that hazardous waste arisings decreased between 2011 and 2014, believed to be mainly due to the reduction in waste coded under LoW Chapter 16 'Not Otherwise Specified' (which includes end of life vehicles, WEEE, batteries etc.). There was a small increase between 2014 and 2015, followed by a further decrease in 2016. This was mainly driven by the increases/decreases in hazardous waste generated from construction and demolition activities. In 2017, the arisings increased again, with the increase driven by a notable increase in LoW Chapter 16 'Not Otherwise Specified', back to the levels seen in years 2011 to 2013. In 2018, there was a further increase driven by:

- a further increase in LoW Chapter 16 'Not Otherwise Specified' (namely end-of-life vehicles LoW code 16 01 04\*); and
- what would appear to be a one-off large arising of 1,137 tonnes of a construction and demolition waste LoW code 17 03 01\* bituminous mixtures containing coal tar.

4.5.5 A more detailed analysis of the specific wastes streams highlights that over the last 7 years the hazardous waste arisings have been dominated by 12 wastes types, which have made up between 70% to 80% of the hazardous waste generated in the county.

4.5.6 These waste streams are summarised in Table 4.21 and show that:

- Prior to 2014, there was processing of waste electrical and electronic equipment, which has now ceased, hence the reduction in LoW code 16 02 15\* 'Hazardous components removed from discarded equipment (WEEE)'.

- There has been a change in the types of wastes generated from chemical surface treatment and coating of metals and other materials (LoW Chapter 11), which would suggest that some treatment processes have been added at the point of production to neutralise some of the acid wastes generated.
- During 2014 and 2015, there was an increase in the hazardous waste produced by the construction and demolition sector (LoW codes 17 05 03\* and 17 06 05\*). The generation of hazardous C&D waste is dependent on the nature of the developments being undertaken at any one time e.g. demolition of building containing asbestos or the removal of contaminated soils etc. Therefore, the quantities of hazardous C&D waste can fluctuate significantly year on year, as highlighted by the generation of LoW code 17 03 01\* bituminous mixtures containing coal tar in 2018 (as mentioned in paragraph 4.4.4).
- Over the last four years, generation levels across 9 of the 12 waste streams are relatively constant. The exceptions are:
  - hazardous C&D waste (LoW codes 17 05 03\* and 17 06 05\*), discussed above; and
  - end-of-life vehicles (LoW code 16 01 04\*) where there has been a significant increase in 2017 and 2018.

**Table 4.21 Main hazardous waste types, Herefordshire, 2011 to 2018**

LoW Code	Description	Tonnes							
		2011	2012	2013	2014	2015	2016	2017	2018
08 03 12*	Waste ink containing hazardous substances	678	609	626	602	492	425	400	526
11 01 05*	Pickling acids	1,211	1,738	1,550	728	613	852	871	815
11 01 11*	Aqueous rinsing liquids containing hazardous substances	128	24	48	473	444	486	411	388
13 02 05*	Mineral-based non-chlorinated engine, gear and lubricating oils	1,184	1,282	1,022	1,084	940	1,260	1,060	1,217
13 05 08*	Mixtures of wastes from grit chambers and oil/water separators	339	210	239	280	151	172	292	325
16 01 04*	End-of-life vehicles	85	186	1,038	511	532	1,042	3,508	4,309
16 02 15*	Hazardous components removed from discarded equipment (WEEE)	2,011	2,502	1,565	1	1	0.2	0.001	2
16 06 01*	Lead batteries	1,106	436	372	282	343	202	497	432
17 05 03*	Soil and stones containing hazardous substances	179	42	8	750	3,232	40	254	17
17 06 05*	Construction materials containing asbestos	1,151	869	929	1,309	1,296	870	368	720
18 01 03*	Healthcare wastes whose collection and disposal is subject to special requirements in order to prevent infection	723	628	451	449	412	410	387	318
20 01 35*	Discarded electrical and electronic equipment	708	625	436	309	279	327	211	19

## Hazardous wastes management

4.5.7 Table 4.22 and Figure 4.7 provide the breakdown of the generic waste management methods used to manage the hazardous waste arisings in Herefordshire between 2015 and 2018, with the breakdown of generic waste management methods by LoW Chapter heading for 2015 to 2018 provided in Annex I, to show the comparison of management method and generic waste type.

**Table 4.22 Breakdown of generic hazardous waste management methods, 2015 to 2018**

	Generic Waste Management Method	2015		2016		2017		2018	
		Tonnes	%	Tonnes	%	Tonnes	%	Tonnes	%
1	Incineration with energy recovery	17	0.2%	18	0.2%	36	0.3%	69	0.5%
2	Incineration without energy recovery	78	0.7%	38	0.5%	21	0.2%	8	0.1%
3	Landfill	1,145	10.8%	817	10.6%	614	6.0%	584	4.6%
4	Recovery	2,681	25.4%	3,564	46.1%	6,070	59.4%	7,036	55.6%
5	Rejected	7	0.1%	2	0.03%	2	0.02%	110	0.9%
6	Transfer prior to disposal	696	6.6%	691	8.9%	797	7.8%	801	6.3%
7	Transfer prior to recovery	1,484	14.0%	1,145	14.8%	1,259	12.3%	2,351	18.6%
8	Treatment	4,458	42.2%	1,451	18.8%	1,425	13.9%	1,690	13.4%

4.5.8 The data shows that the management method is driven by the proportion of different waste types generated each year. For example, in 2015 the proportion of 'treatment' was highest due the quantity of hazardous C&D waste sent for treatment, where in 2017 and 2018 the proportion of 'recovery' was highest due the quantity of end-of-life vehicles.

4.5.9 The variations generally relate to the levels of recovery and treatment with the other management methods remaining broadly consistent from one year to the next.

**Figure 4.7 Breakdown of generic hazardous waste management methods, 2015 to 2018**



4.5.10 Table 4.23 and Figure 4.8 provide the breakdown of the regions of deposit for hazardous waste arisings in Herefordshire between 2015 and 2018.

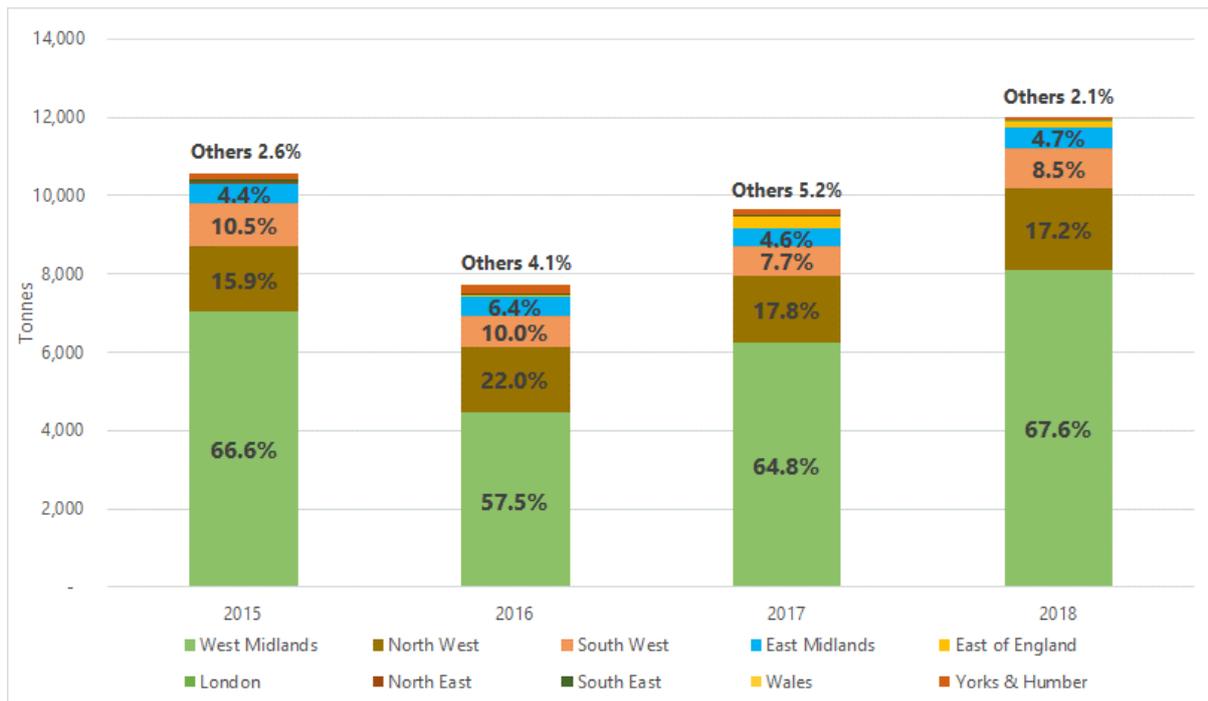
**Table 4.23 Hazardous waste by deposit region, 2015 to 2018**

	Deposit Region	2015		2016		2017		2018	
		Tonnes	%	Tonnes	%	Tonnes	%	Tonnes	%
1	East Midlands	467	4.4%	496	6.4%	447	4.6%	563	4.7%
2	East of England	19	0.2%	53	0.7%	324	3.4%	152	1.3%
3	London	4	0.0%	5	0.1%	3	0.0%	7	0.1%
4	North East	13	0.1%	4	0.1%	5	0.0%	3	0.0%
5	North West	1,678	15.9%	1,697	22.0%	1,713	17.8%	2,064	17.2%
6	South East	82	0.8%	20	0.3%	11	0.1%	20	0.2%
7	South West	1,113	10.5%	769	10.0%	741	7.7%	1,017	8.5%
8	Wales	n/r	-	n/r	-	3	0.0%	n/r	-
9	West Midlands	7,032	66.6%	4,447	57.5%	6,246	64.8%	8,113	67.6%
10	Yorks & Humber	157	1.5%	235	3.0%	154	1.6%	70	0.6%

4.5.11 The data highlight that approximately 60% to 70% of hazardous waste was deposited in the West Midlands.

4.5.12 The quantities sent to each region, other than the West Midlands, remain broadly consistent from one year to the next, with the West Midlands accommodating the variations in the tonnages generated in Herefordshire.

**Figure 4.8 Hazardous waste by deposit region, 2015 to 2018**



## 4.6 Radioactive waste

- 4.6.1 Radioactive waste is not 'controlled waste' under UK legislation; however, WPA should plan for the sustainable management of low level radioactive waste.
- 4.6.2 The Environment Agency regulates the disposal of radioactive waste. In 2016, two organisations within Herefordshire held permits (known as authorisations) that allow the accumulation and disposal of radioactive waste. However, by 2018 there was only one active authorisation.
- 4.6.3 For completeness, details of the organisations holding authorisations in 2016, 2018 and 2019 are included in Table 4.24. However, the need for future treatment/disposal capacity for radioactive waste is not considered in this assessment as materials are normally, and most appropriately, managed at the national level.

**Table 4.24 Authorisations in Herefordshire for the keeping and use of radioactive material and/or disposal of radioactive waste**

Organisation	Location	Permission No.	Approved	Active in 2016	Active in 2018	Active in 2019
Wye Valley NHS Trust	Hereford County Hospital, Stonebow Road, Hereford, HR1 2ER	BF6973	06/05/1999	Yes	Yes	Yes
		BW8623	01/01/2004	Yes	Yes	Yes
Sequani Ltd	Bromyard Road Industrial Estate, Ledbury, HR8 1LH	CE5429	10/11/2010	Yes	No	No
		CE5437	10/11/2010	Yes	No	No
Source: Environment Agency Public Registers, accessed 21 <sup>st</sup> November 2016, 31 <sup>st</sup> October 2018 and 8 <sup>th</sup> October 2019 <a href="https://environment.data.gov.uk/public-register/view/search-radioactive-substances-permits">https://environment.data.gov.uk/public-register/view/search-radioactive-substances-permits</a>						

## 4.7 Summary of estimates for waste generated in Herefordshire

4.7.1 Table 4.25 provides a summary of the estimated waste arisings in Herefordshire between 2015 and 2018.

**Table 4.25 Estimated waste generation in Herefordshire, 2015 to 2018**

row	Waste Stream	2015 (tonnes)	2016 (tonnes)	2017 (tonnes)	2018 (tonnes)
1	LACW	86,600	89,650	88,870	87,050
2	C&I waste	116,000 to 146,000 <sup>a</sup>	132,000 to 168,000	133,000 to 170,000	157,000 to 201,000
3	CD&E waste <sup>b</sup>	357,000 to 379,000 <sup>c</sup>	393,000 to 412,000 <sup>d</sup>	393,000 to 412,000	393,000 to 412,000
4	Agricultural waste (non-natural) <sup>e</sup>	6,000 to 8,000	5,700 to 7,400	6,000 to 8,000	6,000 to 8,000
5	<b>Total (rounded to nearest 100 tonnes)<sup>f,g</sup></b>	<b>565,000 to 619,600</b>	<b>620,400 to 677,100</b>	<b>620,900 to 678,900</b>	<b>643,100 to 708,100</b>
6	Hazardous waste <sup>h</sup>	10,500	7,750	9,650	12,000

**Notes:**

<sup>a</sup> The reference to 115,000 to 145,000 tonnes in the WNA 2017 was erroneous, the correct tonnages are stated here. The total for 2015 is also corrected.

<sup>b</sup> In March 2019 Defra published revised estimates for CD&E wastes which increases national CD&E wastes estimates by between 10% and 20%.

<sup>c</sup> Estimate from WNA 2017.

<sup>d</sup> Estimate based on 2016 Defra estimates.

<sup>e</sup> In March 2019 Defra published 2016 data, which excluded discarded vehicles from the total generations figure for agricultural waste (non-natural). This change is reported for that year in this table, but otherwise the higher estimated arising is used.

<sup>f</sup> The total has been updated from the WNA 2017 and WNA Update 2018 to recognise that hazardous wastes are a subset of the other waste streams.

<sup>g</sup> For CD&E waste and Agricultural waste in 2017 and 2018, where the most recent estimates are based on 2016 data, the highest values from 2015 or 2016 have been used to estimate the total arisings for 2017 and 2018

<sup>h</sup> Hazardous wastes are reported for information only. Within the Assessment they are assumed as a subset of the other waste streams

- 4.7.2 This Waste Need Assessment indicates:
- an increase of 55,000 to 58,000 tonnes from 2015 to 2016, predominantly as a result of the revised estimate for C&I and CD&E wastes;
  - followed by an increase of 500 to 1,900 tonnes from 2016 to 2017; and
  - finally, an increase of 22,000 to 29,000 tonnes between 2017 and 2018, again predominantly as a result of the revised estimate for C&I and CD&E wastes.
- 4.7.3 With the exception of the increase in CD&E wastes, based on Defra's revised estimates, these are not significant increases and are reflective of the different tonnage that may be received into any one facility across different years. It is important to remember that the available data can only be used to give a broad understanding of wastes generated in Herefordshire; it is generally not possible to be certain or specific.

#### **Difference between tonnage managed through permitted facilities and estimated arisings**

- 4.7.4 Of greater interest to plan making is consideration of the difference in tonnage between the amount of waste that was managed through permitted facilities and the estimated arisings. Table 3.2, line 16) identifies that permitted facilities in Herefordshire accepted 416,097 tonnes of waste in 2016; most of which (86%) originated in Herefordshire. In 2017, the permitted facilities accepted 443,498 tonnes (Table 3.2, line 16) 88% of which originated in Herefordshire. In 2018, permitted facilities accepted 463,209 tonnes (Table 3.2, line 16) 90% of which originated in Herefordshire.
- 4.7.5 This indicates a difference of some 200,000 tonnes (across all three years) between the wastes managed within Herefordshire and the wastes estimated to have arisen.
- 4.7.6 This may be due to a number of reasons including: data imprecision; wastes going directly out of Herefordshire; double counting of wastes at waste transfer stations; and exclusion of the exempt activities.



## 5. Waste Forecasts

### 5.1 Local Authority Collected Wastes (LACW)

- 5.1.1 As previously identified, future waste arisings are primarily linked to two main factors:
- the state of the economy; and
  - changes in household numbers.
- 5.1.2 In addition, there are several policy and regulatory initiatives designed to impact on future waste generation, including:
- producer responsibility initiatives for packaging, recently extended to other products, e.g. batteries, electrical goods and electronic equipment and vehicles;
  - waste prevention initiatives (e.g. light-weighting of packaging within industry and commerce) and national and local campaigns to encourage the public to use food and resources more efficiently and to reduce the waste they generate;
  - possible effects of end-markets for recycled materials; and
  - increased collections and services for recycling and composting.
- 5.1.3 Therefore, when selecting long-term growth/reduction rates there is a need to consider:
- potential reduction in the rate of waste growth (or absolute reduction in waste arisings) as a result of the factors described above;
  - factors that have, or will, distort trend analysis such as a change of collection systems, legislation (e.g. Landfill Tax) or seasonal factors (e.g. exceptionally dry years result in lower levels of garden waste); and
  - the elements of the waste stream to be included or excluded in the trend analysis to ensure consistency (e.g. exclusion of commercial waste collected by the Council and fly-tipped waste).
- 5.1.4 To forecast waste from households up to 2041, the trends in the waste generated per household were used to produce a number of waste growth scenarios, which were then combined with household projections provided by the Department for Communities and Local Government (now named the MHCLG).
- 5.1.5 To forecast the remainder of LACW, future non-household waste generation needed to be factored into the estimates. The non-household waste stream predominantly comprised commercial waste and non-household CD&E waste collected at HWRC. Figures 4.4 and 4.5 show that whilst the HWRC non-household waste fraction has remained relatively constant over the past 12 months (it is still equivalent to the 2011 tonnage) the commercial waste fraction has steadily increased since 2011 up to the end of 2016, since when it has stayed relatively constant.
- 5.1.6 Table 5.1 presents the series of waste per household growth scenarios originally used in the WNA 2017, to provide an estimate of future waste from households, along with assumptions about the non-household waste fraction.

5.1.7 There are a number of factors, in addition to those presented above, which will affect the quantities of non-household waste collected by local authorities in the future. These include:

- number, type of businesses and productivity/levels of waste generated;
- level of commercial waste service a local authority wishes to deliver;
- number of small and medium enterprises (SME) in different local authorities;
- nature and drivers of business types e.g. what their business activities are and the type of waste they generate;
- policy drivers, such as packaging e.g. light-weighting of packaging; and
- private sector waste collection companies seeking to maintain market share of commercial waste collections.

5.1.8 Due to the number of variables in the above factors, it is difficult to forecast any significant increase or decrease in the quantity of non-household waste collected by local authorities. It has therefore been assumed that the tonnage of non-household waste will remain constant within a scenario.

**Table 5.1 LACW growth scenarios**

Scenario	Waste per household assumptions	Non-household assumptions
1	Static waste from households per household based on the average of annual arisings over the period 2013 to 2015 of 0.937 tonnes/household.	Waste not from households remains static at 2015 level of 10,875 tonnes per annum.
2	Static waste from households per household based on the 12 months ending August 2016 of 0.95 tonnes per household.	Waste not from households remains static at the 12 months ending August 2016 level of 11,775 tonnes per annum.
3	To reflect the growth over the 12 month period ending August 2016, waste from households per household increases by 1.9% per annum from the 12 months ending August 2016 figure of 0.95 tonnes per household up to 2020, then static.	Waste not from households remains static at the 12 months ending August 2016 level of 11,775 tonnes per annum.
3a	Same as Scenario 3, but with waste from households per household continuing to increase beyond 2020 but at half the rate of the period up to 2020, i.e. 0.95% per annum.	Waste not from households remains static at the 12 months ending August 2016 level of 11,775 tonnes per annum.
4	This scenario, uses the waste generated by households (i.e. include CD&E wastes) and applies a waste per household figure of 1.01 tonnes to the DCLG household projections, which is based on the average in annual arisings over the period 2013 to 2015.	Remaining non-household waste remains static at 4,650 tonnes per annum.
4a	Same as Scenario 4 but based on 12 months ending August 2016, using a figure of 1.03 tonnes per household.	Same as Scenario 4 but based on 12 months ending August 2016, with the remaining non-household waste static at 5,250 tonnes per annum.

- 5.1.9 The resulting LACW forecasts are presented in Table 5.2 and Figure 5.1, up to 2035. Figure 5.1 includes historic LACW arisings back to 2005/06<sup>24</sup>, not least to highlight the impact of the recession on LACW and to show the predicted forecasts in context with previous years.
- 5.1.10 Paragraph 4.1.4 highlights that the 2016 LACW actual arisings are consistent with LACW growth scenarios 2 and 4a, with the figure sitting at the midpoint of the forecasts for 2016. However, the 2017 actual arisings data shows a small reduction in the overall arisings. Consequently, the forecast arisings sit between the LACW growth scenarios 2 and 4a, and scenarios 1 and 4.
- 5.1.11 In 2018, there was a further reduction in actual arisings of total LACW, being fractionally higher than the 2015 arisings but sitting just below the LACW growth scenarios 1 and 4 based on ONS household projections. Although there has been a reduction in LACW arisings in 2017 and 2018, it would be prudent to see if the arisings reduce further or stabilise before revising the forecasts used for waste planning purposes.
- 5.1.12 However, an additional growth scenario has been added in Table 5.3 and Figure 5.2 to show the impact of applying the average annual growth in LACW between 2013 and 2018 of 0.5% per annum (Scenario 5).
- 5.1.13 In addition, the waste forecasts for the ONS household projections has been extended to 2041. As the scenarios are mainly driven by housing growth, the forecasts based on the ONS household projections are lower than those based on the MHCLG household projections, by between 2,000 and 2,400 tonnes by 2035.
- 5.1.14 The forecasts based on the ONS household projections have been used as the ONS data is the most recent dataset. The figures show that if household waste generation rates do not increase from either the 2015 tonnages or mid-2016 estimates, LACW could increase to between 98,8500 to 101,700 tonnes per annum (Scenarios 1, 2 and 4) by 2041, driven only by the increasing number of households.
- 5.1.15 However, if the higher growth in waste experienced between August 2015 and August 2016 is factored into the forecasts, either as short term increases up to 2020 (Scenario 3) or prolonged growth up to 2041 (Scenario 3a), total LACW could increase to between 110,000 to 131,500 tonnes per annum by 2041.
- 5.1.16 When, the average growth between 2013 and 2018 is considered, (the new Scenario 5) the total LACW could increase to 98,500 tonnes by 2041, which is broadly consistent with Scenarios 1, 2 and 4. Hence, it is confirmed to be prudent to see if the arisings reduce further or stabilise before revising the forecasts used for waste planning purposes.

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<sup>24</sup> Defra Local Authority Collected and Household Waste Statistics

Table 5.2 LAGW forecast based on MHCLG household projections, Herefordshire, 2016 to 2035 (rounded to nearest 100 tonnes)

Scenario	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
1	86,600	87,700	88,300	89,000	89,700	90,400	91,000	91,600	92,300	92,900	93,500	94,100	94,700	95,200	95,800	96,300	96,800	97,300	97,800	98,200	98,600
2	86,600	89,600	90,300	91,000	91,700	92,400	93,000	93,600	94,300	94,900	95,500	96,100	96,700	97,300	97,900	98,400	98,900	99,400	99,900	100,300	100,700
3	86,600	91,100	93,300	95,600	97,900	100,300	101,000	101,700	102,400	103,100	103,800	104,500	105,100	105,800	106,400	106,900	107,500	108,000	108,500	109,000	109,500
3a	86,600	91,100	93,300	95,600	97,900	100,300	101,900	103,400	105,000	106,600	108,300	109,900	111,500	113,100	114,800	116,400	118,000	119,600	121,200	122,800	124,400
4	86,600	87,400	88,100	88,900	89,600	90,300	91,000	91,700	92,400	93,000	93,700	94,300	95,000	95,600	96,200	96,700	97,300	97,800	98,300	98,800	99,200
4a	86,600	89,700	90,400	91,100	91,900	92,600	93,300	94,000	94,700	95,400	96,100	96,700	97,400	98,000	98,600	99,200	99,700	100,200	100,700	101,200	101,700

Figure 5.1 LAGW forecast based on MHCLG household projections, Herefordshire, 2016 to 2035 (rounded to nearest 100 tonnes)

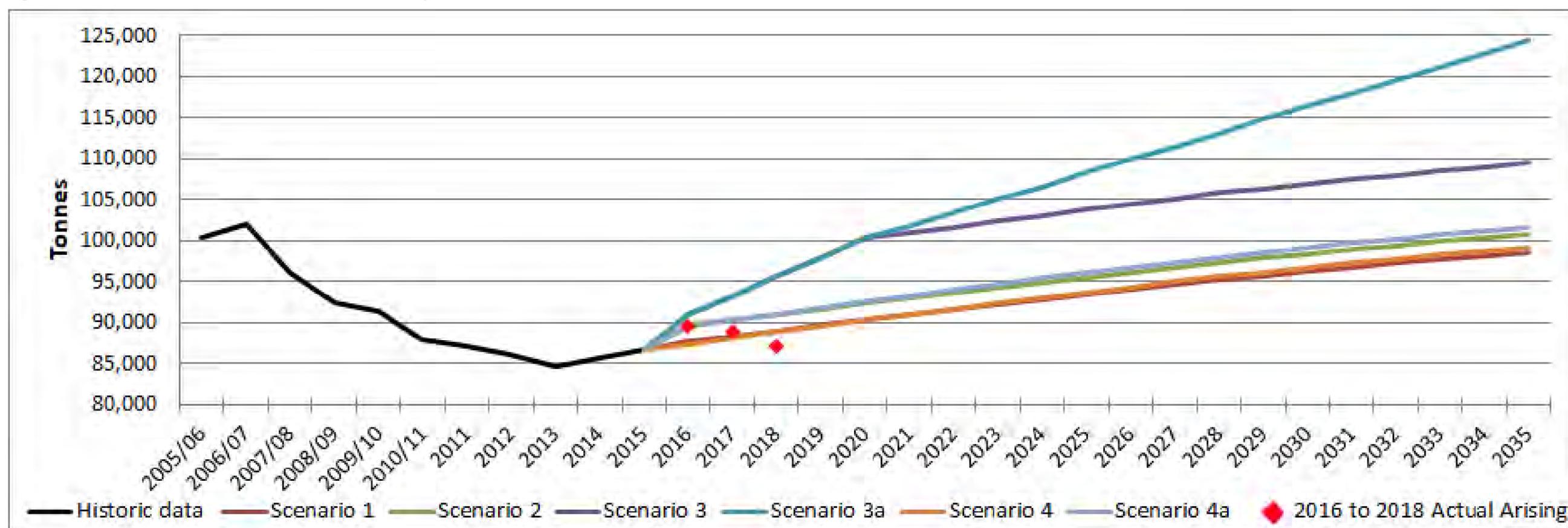
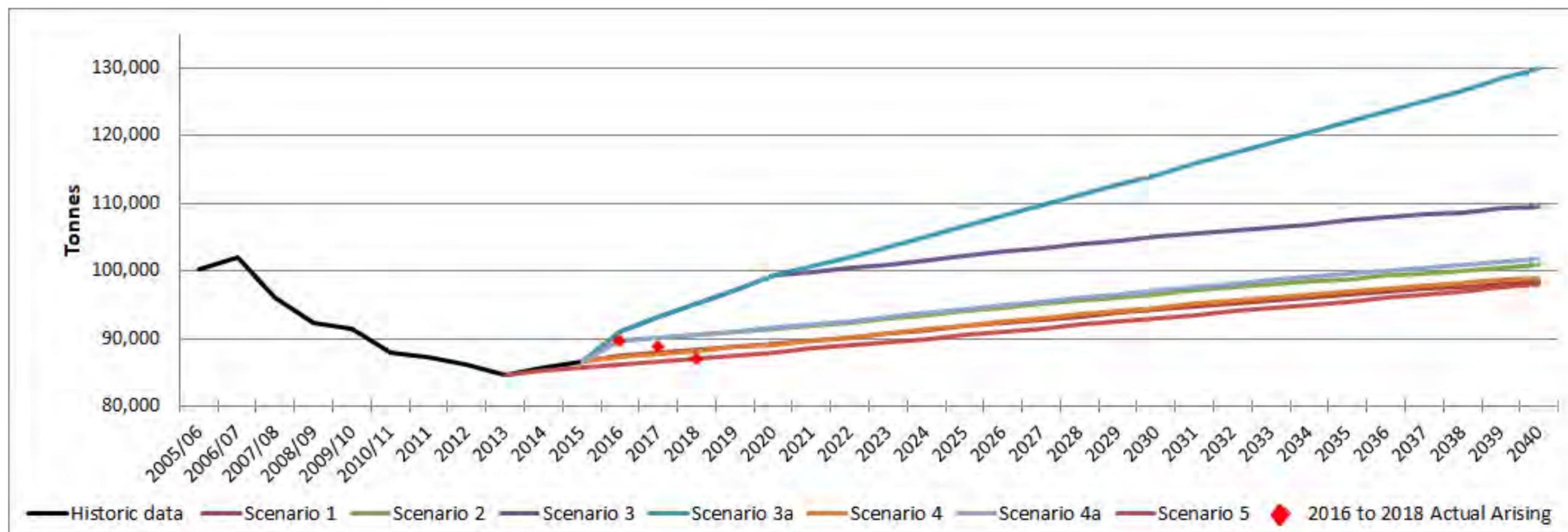


Table 5.3 LAGW forecast based on ONS household projections, Herefordshire, 2016 to 2041 (rounded to nearest 100 tonnes)

Scen	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
1	86,600	87,400	87,900	88,300	88,800	89,200	89,600	90,200	90,700	91,300	91,800	92,300	92,800	93,300	93,800	94,300	94,700	95,200	95,600	96,100	96,500	96,900	97,300	97,700	98,000	98,400	98,800
2	86,600	89,600	90,100	90,500	91,000	91,400	91,800	92,400	93,000	93,500	94,100	94,600	95,100	95,600	96,100	96,600	97,100	97,500	98,000	98,400	98,800	99,300	99,600	100,000	100,400	100,800	101,100
3	86,600	91,100	93,100	95,100	97,200	99,300	99,800	100,400	101,000	101,600	102,200	102,800	103,300	103,900	104,500	105,000	105,500	106,000	106,500	106,900	107,400	107,900	108,300	108,700	109,200	109,500	110,000
3a	86,600	91,100	93,100	95,100	97,200	99,300	100,600	102,100	103,600	105,100	106,600	108,100	109,600	111,200	112,700	114,200	115,800	117,300	118,900	120,400	122,000	123,600	125,100	126,700	128,300	129,900	131,500
4	86,600	87,200	87,700	88,200	88,700	89,100	89,600	90,200	90,800	91,400	91,900	92,500	93,000	93,600	94,100	94,600	95,100	95,600	96,100	96,500	97,000	97,400	97,800	98,200	98,600	99,000	99,400
4a	86,600	89,600	90,100	90,600	91,100	91,600	92,000	92,600	93,200	93,800	94,400	95,000	95,500	96,100	96,600	97,100	97,700	98,100	98,600	99,100	99,500	100,000	100,400	100,900	101,300	101,700	102,100
5	85,644	86,109	86,576	87,045	87,500	88,000	88,500	89,000	89,500	90,000	90,500	91,000	91,500	92,000	92,500	93,000	93,500	94,000	94,500	95,000	95,500	96,000	96,500	97,000	97,500	98,000	98,500

Figure 5.2 LAGW forecast based on ONS household projections, Herefordshire, 2016 to 2041 (rounded to nearest 100 tonnes)



## 5.2 Commercial and Industrial Waste (C&I waste)

- 5.2.1 If future C&I waste arisings are assumed to be predominantly linked to the number and types of businesses within Herefordshire, economic growth forecasts can be used as a means of estimating future C&I waste arisings.
- 5.2.2 However, as with any form of forecasting, predicting economic performance over a 20 year period is difficult due to the range of external factors that affect economic growth. In addition, as highlighted previously, the quality and lack of granularity of C&I waste data means it is not possible to produce estimates for the waste produced by different sectors and businesses, which could then be applied to the business profile of the county. This means that any C&I waste forecast needs to be viewed as a broad estimate, which should be reviewed periodically.

### Herefordshire economic growth forecasts

- 5.2.3 There are no publicly available economic growth forecasts specifically for Herefordshire. Whilst national and regional forecasts could be applied, the Council's 'Facts and Figures about Herefordshire'<sup>25</sup> website states that '*Herefordshire's economic output is low compared to regionally and nationally when measured per head of population*'. Therefore, applying national or regional forecasts is likely to result in an overestimate of future waste arisings.
- 5.2.4 GVA<sup>26</sup> forecasts specific to Herefordshire and Worcestershire were obtained from Experian for the WNA 2017. These forecasts are considered more likely to better reflect the potential economic growth in Herefordshire but could again result in overestimates if the economic growth in Worcestershire is stronger than in Herefordshire.
- 5.2.5 At the Herefordshire level, the Economic Development Strategy, Invest Herefordshire: Herefordshire's Economic Vision, December 2016, includes an aim for economic growth of an '*increase GVA per head by 10% in real terms, from £19,500 to £21,500 by 2031 (at 2015 prices)*'. This level of growth is equivalent to an average annual growth of 0.65% in GVA.
- 5.2.6 Herefordshire Council<sup>27</sup> now reports that in 2017, '*Herefordshire's Gross Value Added (a measure of the value of the economy) was £3,878 million; representing 8% growth since 2016 and the third highest annual growth of all the West Midlands local authority areas*'.
- 5.2.7 In addition, the Marches Local Enterprise Partnership (LEP), which covers Shropshire, Herefordshire and Telford & Wrekin, published a Strategic Economic Plan<sup>28</sup> ('SEP') in 2019. The vision of the SEP is to grow the economy from £8.78 billion 2016 to 23.8 billion by 2038, which is equivalent to an average annual growth of 2.3% per annum in GVA. However, SEP Evidence Base<sup>29</sup> (October 2018) reports that the GVA growth between 2014 and 2016 was only 0.9%, which highlights the ambitious nature of the SEP. In addition, the SEP Evidence

<sup>25</sup> <https://factsandfigures.herefordshire.gov.uk/about-a-topic/economy/productivity-and-gross-value-added.aspx> [27.11.2019@16:12]

<sup>26</sup> Gross Value Added (GVA) measures the contribution to the economy of each individual producer, industry or sector in the United Kingdom and is a headline measure used to monitor economic performance.

<sup>27</sup> <https://understanding.herefordshire.gov.uk/economy-place/topics-relating-to-the-economy/> [29.11.2019@16:18]

<sup>28</sup> [https://www.marcheslep.org.uk/download/economic\\_plans/strategic-economic-plan-update-2019/The-Marches-LEP-Strategic-Economic-Plan-2019.pdf](https://www.marcheslep.org.uk/download/economic_plans/strategic-economic-plan-update-2019/The-Marches-LEP-Strategic-Economic-Plan-2019.pdf) [30.11.2019@16:19]

<sup>29</sup> [https://www.marcheslep.org.uk/download/economic\\_plans/strategic-economic-plan-update-2019/The-Marches-SEP-Evidence-Base.pdf](https://www.marcheslep.org.uk/download/economic_plans/strategic-economic-plan-update-2019/The-Marches-SEP-Evidence-Base.pdf) [30.11.2019@16:21]

Base highlights the change in the UK GVA between 2014 and 2016 as 2.2%, which would appear to reinforce the view that *'Herefordshire's economic output is low compared to regionally and nationally when measured per head of population'*.

- 5.2.8 The Experian GVA forecasts are now around two years old. However, recognising the ongoing economic uncertainty caused by Brexit, it is not considered that any greater degree of certainty would be achieved by seeking an update on these forecasts from Experian. Therefore, the Experian GVA forecasts have been retained and used again in this Assessment.
- 5.2.9 If it is assumed that businesses and therefore C&I waste will grow in line with GVA, these economic growth forecasts can be used to develop scenarios to estimate future C&I waste arisings. It is recognised that the Experian GVA forecasts only run to 2037; for the period 2038 to 2041, the percentage GVA growth between 2034 and 2037 has been used.
- 5.2.10 Due to the lack of certainty in the available data, this WNA has been undertaken using the same scenarios presented in the WNA 2017, but separately using the data from 2015, 2017 and 2018, extended to 2041. Tables 5.4 to 5.6 present the scenarios considered individually for each year.

**Table 5.4 C&I waste growth scenarios based on 2015 C&I waste estimates**

Scenario	Basis	Forecast Starting Point <sup>a</sup>
1a	C&I waste growth in line with Hereford and Worcestershire GVA forecast	Lower 2015 C&I waste estimate 116,000 tonnes
1b	C&I waste growth in line with the Invest Herefordshire GVA growth target of 10% by 2031 (equivalent to an average annual growth of 0.65%)	
2a	C&I waste growth in line with Hereford and Worcestershire GVA forecast	Higher 2015 C&I waste estimate 146,000 tonnes
2b	C&I waste growth in line with the Invest Herefordshire GVA growth target of 10% by 2031 (equivalent to an average annual growth of 0.65%)	

<sup>a</sup> The references to 115,000 to 145,000 tonnes in the WNA 2017 was erroneous, the correct tonnages are stated here.

**Table 5.5 C&I waste growth scenarios based on 2017 C&I waste estimates**

Scenario	Basis	Forecast Starting Point
1a	C&I waste growth in line with Hereford and Worcestershire GVA forecast	Lower 2017 C&I waste estimate 133,000 tonnes
1b	C&I waste growth in line with the Invest Herefordshire GVA growth target of 10% by 2031 (equivalent to an average annual growth of 0.65%)	
2a	C&I waste growth in line with Hereford and Worcestershire GVA forecast	Higher 2017 C&I waste estimate 170,000 tonnes
2b	C&I waste growth in line with the Invest Herefordshire GVA growth target of 10% by 2031 (equivalent to an average annual growth of 0.65%)	

**Table 5.6 C&I waste growth scenarios based on 2018 C&I waste estimates**

Scenario	Basis	Forecast Starting Point
1a	C&I waste growth in line with Hereford and Worcestershire GVA forecast	Lower 2018 C&I waste estimate (157,000 tonnes)
1b	C&I waste growth in line with the Invest Herefordshire GVA growth target of 10% by 2031 (equivalent to an average annual growth of 0.65%)	
2a	C&I waste growth in line with Hereford and Worcestershire GVA forecast	Higher 2018 C&I waste estimate 201,000 tonne)
2b	C&I waste growth in line with the Invest Herefordshire GVA growth target of 10% by 2031 (equivalent to an average annual growth of 0.65%)	

5.2.11 The resulting C&I waste forecasts are presented in Table 5.7 (for 2015 estimates), Table 5.8 (for 2017 estimates) and Table 5.9 (for 2018 estimates). These tables are presented graphically at Figure 5.3 (for 2015 estimates), Figure 5.4 (for 2017 estimates) and Figure 5.5 (for 2018 estimates)

**Table 5.7 C&I waste estimates based on 2015 C&I waste estimate, Herefordshire, 2015 to 2041 (rounded to nearest 1,000 tonnes)**

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	
C&I sectors GVA forecast (£millions) <sup>a</sup>	10,892	11,101	11,212	11,379	11,569	11,787	12,027	12,295	12,586	12,860	13,128	13,378	13,625	13,871	14,111	14,363	14,626	14,891	15,156	15,418	15,685	15,956	16,233	n/a	n/a	n/a	n/a	
GVA forecast % growth		1.9%	1.0%	1.5%	1.7%	1.9%	2.0%	2.2%	2.4%	2.2%	2.1%	1.9%	1.8%	1.8%	1.7%	1.8%	1.8%	1.8%	1.8%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	
Invest Herefordshire GVA growth target <sup>b</sup>	0.65%																											
Scenario 1a	116,000	118,000	119,000	121,000	123,000	126,000	128,000	131,000	134,000	137,000	140,000	142,000	145,000	148,000	150,000	153,000	156,000	159,000	161,000	164,000	167,000	170,000	173,000	176,000	179,000	182,000	185,000	
Scenario 1b	146,000	149,000	150,000	153,000	155,000	158,000	161,000	165,000	169,000	172,000	176,000	179,000	183,000	186,000	189,000	193,000	196,000	200,000	203,000	207,000	210,000	214,000	218,000	221,000	225,000	229,000	233,000	
Scenario 2a	116,000	117,000	118,000	118,000	119,000	120,000	121,000	121,000	122,000	123,000	124,000	125,000	125,000	126,000	127,000	128,000	129,000	130,000	130,000	131,000	132,000	133,000	134,000	135,000	136,000	136,000	137,000	
Scenario 2b	146,000	147,000	148,000	149,000	150,000	151,000	152,000	153,000	154,000	155,000	156,000	157,000	158,000	159,000	160,000	161,000	162,000	163,000	164,000	165,000	166,000	167,000	168,000	169,000	171,000	172,000	173,000	

<sup>a</sup>. Hereford and Worcestershire GVA forecast for C&I sectors (Source: Experian ©)  
<sup>b</sup>. Invest Herefordshire GVA growth target of 10% by 2031 (equivalent to an average annual growth of 0.65%)

**Table 5.8 C&I waste estimates based on 2017 C&I waste estimate, Herefordshire, 2017 to 2041 (rounded to nearest 1,000 tonnes)**

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	
C&I sectors GVA forecast (£millions) <sup>1</sup>		11,101	11,212	11,379	11,569	11,787	12,027	12,295	12,586	12,860	13,128	13,378	13,625	13,871	14,111	14,363	14,626	14,891	15,156	15,418	15,685	15,956	16,233	n/a	n/a	n/a	n/a	
GVA forecast % growth				1.5%	1.7%	1.9%	2.0%	2.2%	2.4%	2.2%	2.1%	1.9%	1.8%	1.8%	1.7%	1.8%	1.8%	1.8%	1.8%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%		
Invest Herefordshire GVA growth target <sup>2</sup>	0.65%																											
Scenario 1a			133,000	135,000	137,000	140,000	143,000	146,000	149,000	153,000	156,000	159,000	162,000	165,000	167,000	170,000	173,000	177,000	180,000	183,000	186,000	189,000	193,000	196,000	199,000	203,000	206,000	
Scenario 1b			170,000	173,000	175,000	179,000	182,000	186,000	191,000	195,000	199,000	203,000	207,000	210,000	214,000	218,000	222,000	226,000	230,000	234,000	238,000	242,000	246,000	250,000	255,000	259,000	264,000	
Scenario 2a			133,000	134,000	135,000	136,000	136,000	137,000	138,000	139,000	140,000	141,000	142,000	143,000	144,000	145,000	146,000	147,000	148,000	148,000	149,000	150,000	151,000	152,000	153,000	154,000	155,000	
Scenario 2b			170,000	171,000	172,000	173,000	174,000	176,000	177,000	178,000	179,000	180,000	181,000	183,000	184,000	185,000	186,000	187,000	189,000	190,000	191,000	192,000	194,000	195,000	196,000	197,000	199,000	

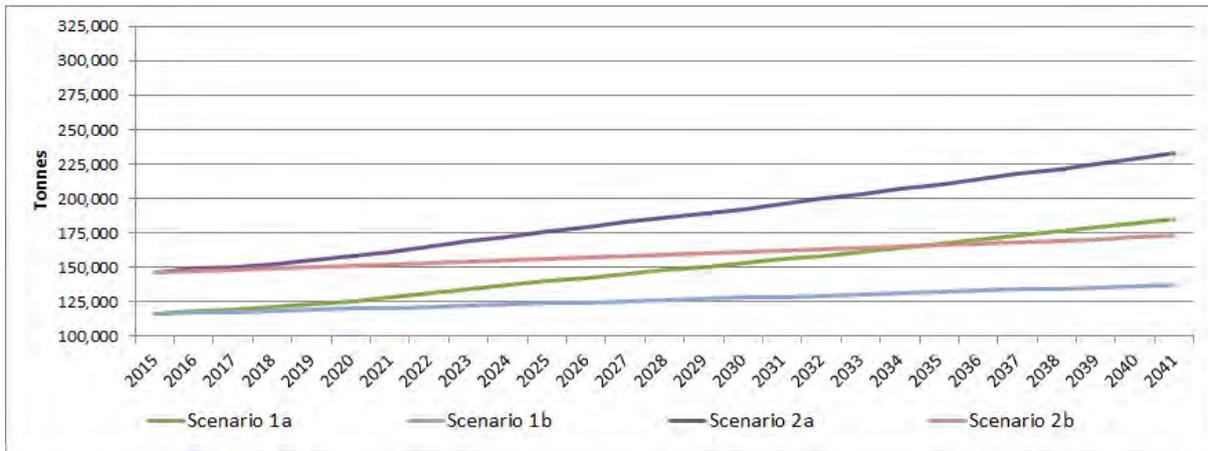
1. Hereford and Worcestershire GVA forecast for C&I sectors (Source: Experian ©)  
2. Invest Herefordshire GVA growth target of 10% by 2031 (equivalent to an average annual growth of 0.65%)

**Table 5.9 C&I waste estimates based on 2018 C&I waste estimate, Herefordshire, 2018 to 2041 (rounded to nearest 1,000 tonnes)**

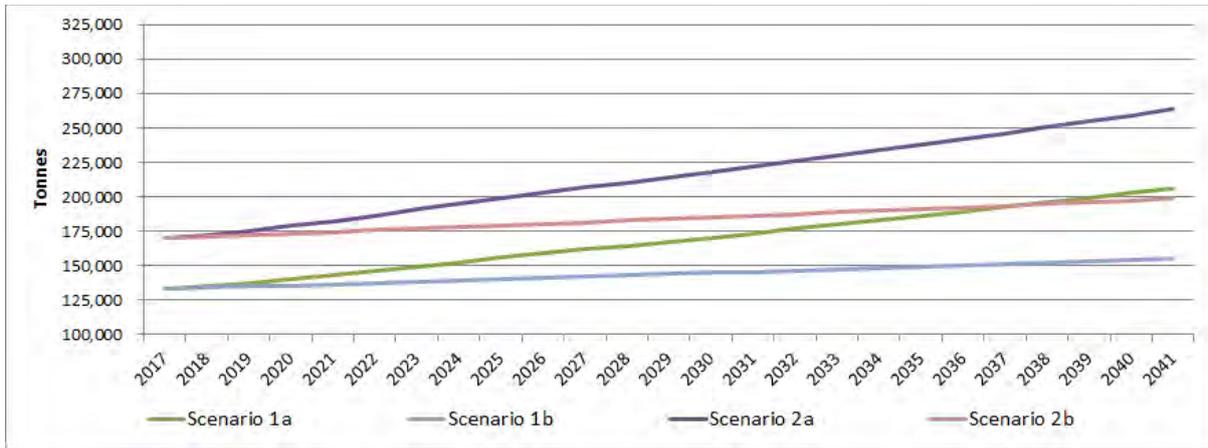
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	
C&I sectors GVA forecast (£millions) <sup>1</sup>		11,101	11,212	11,379	11,569	11,787	12,027	12,295	12,586	12,860	13,128	13,378	13,625	13,871	14,111	14,363	14,626	14,891	15,156	15,418	15,685	15,956	16,233	n/a	n/a	n/a	n/a	
GVA forecast % growth				1.5%	1.7%	1.9%	2.0%	2.2%	2.4%	2.2%	2.1%	1.9%	1.8%	1.8%	1.7%	1.8%	1.8%	1.8%	1.8%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%		
Invest Herefordshire GVA growth target <sup>2</sup>	0.65%																											
Scenario 1a				157,000	160,000	163,000	166,000	170,000	174,000	177,000	181,000	185,000	188,000	191,000	195,000	198,000	202,000	205,000	209,000	213,000	216,000	220,000	224,000	228,000	232,000	236,000	240,000	
Scenario 1b				201,000	204,000	208,000	212,000	217,000	222,000	227,000	232,000	236,000	241,000	245,000	249,000	254,000	258,000	263,000	268,000	272,000	277,000	282,000	287,000	292,000	297,000	302,000	307,000	
Scenario 2a				157,000	158,000	159,000	160,000	161,000	162,000	163,000	164,000	165,000	166,000	168,000	169,000	170,000	171,000	172,000	173,000	174,000	175,000	176,000	178,000	179,000	180,000	181,000	182,000	
Scenario 2b				201,000	202,000	204,000	205,000	206,000	208,000	209,000	210,000	212,000	213,000	214,000	216,000	217,000	219,000	220,000	222,000	223,000	224,000	226,000	227,000	229,000	230,000	232,000	233,000	

1. Hereford and Worcestershire GVA forecast for C&I sectors (Source: Experian ©)  
2. Invest Herefordshire GVA growth target of 10% by 2031 (equivalent to an average annual growth of 0.65%)

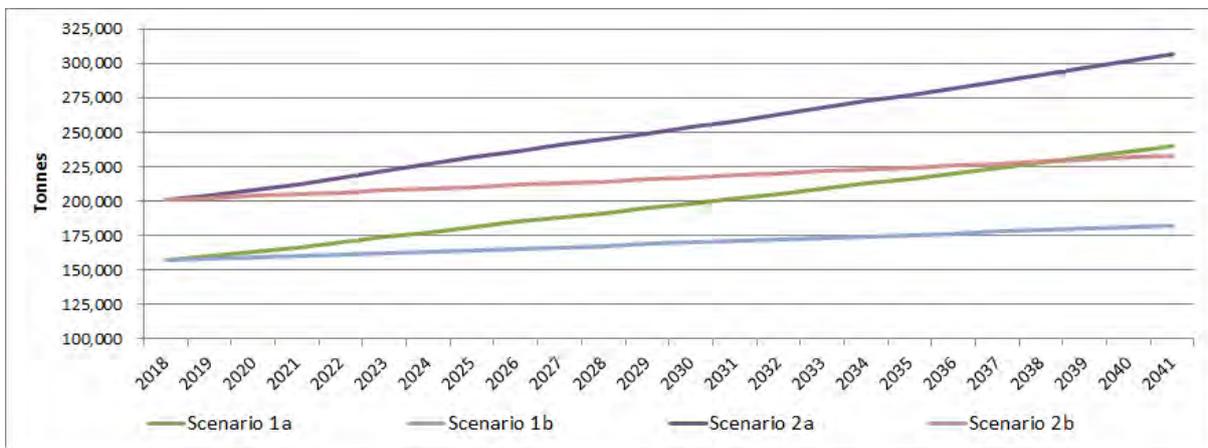
**Figure 5.3 C&I waste estimates 2015 to 2041, based on 2015 data**



**Figure 5.4 C&I waste estimates 2017 to 2041, based on 2017 data**



**Figure 5.5 C&I waste estimates 2018 to 2041, based on 2018 data**



- 5.2.12 For the purposes of assessing future capacity demand it is concluded that a range of C&I waste arisings between Scenarios 1a and 2b should be used, taking account of the estimated arisings calculated for 2015 to 2018, which is equivalent to between 185,000 and 233,000 tonnes by 2041. Scenarios 1a and 2b appear to be the more realistic forecasts, with 1b and 2a potentially acting as outliers.
- 5.2.13 It would be beneficial to keep these waste forecasts under review as the MWLP is developed. However, the C&I waste forecasts to be taken into assessing future capacity need are:
- Scenario 1a, using 2015 data, to give a minimum tonnage; and
  - Scenario 2b, using 2017 data, to give a medium tonnage.
  - Scenario 2b, using 2018 data, to give a maximum tonnage.

### **5.3 Construction, Demolition and Excavation Waste (CD&E waste)**

- 5.3.1 To forecast future CD&E waste arisings, the link between CD&E waste and construction sector growth, based on the Hereford and Worcestershire GVA data as gained from Experian, has been used. Two scenarios have been considered:
- Scenario 1: Growth based on Hereford and Worcestershire construction sector GVA growth and a baseline figure of 357,000 tonnes in 2015 (based on original 2014 UK waste per capita estimates); and
  - Scenario 2: Growth based on Hereford and Worcestershire construction sector GVA growth and a baseline figure of 379,000 tonnes in 2015 (based on original 2014 England waste per capita estimates).
- 5.3.2 The Experian GVA forecasts are now around two years old. However, recognising the ongoing economic uncertainty caused by Brexit, it is not considered that any greater degree of certainty would be achieved by seeking an update on these forecasts from Experian. Therefore, the Experian GVA forecasts have been retained and used again in this Assessment. It is recognised that the Experian GVA forecasts only run to 2037; for the period 2038 to 2041, the percentage GVA growth between 2036 and 2037 has been used.
- 5.3.3 The resulting forecasts are presented in Table 5.10. The forecasts have been broken down into the key elements of the CD&E waste stream based on relative proportions estimated in 2014 and assuming that these remain constant.

**Table 5.10 CD&E waste forecast, Herefordshire, 2016 to 2041 (rounded to nearest 1,000 tonnes)**

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	
Hereford and Worcestershire construction sector GVA (£ millions) <sup>a</sup>	937.4	923.0	919.8	920.1	929.4	945.0	962.8	982.3	1002.4	1021.4	1041.5	1060.6	1077.8	1093.1	1106.7	1120.1	1133.9	1147.8	1161.5	1174.9	1189.4	1204.5	1219.8	n/a	n/a	n/a	n/a	
Hereford and Worcestershire construction sector GVA growth		-1.5%	-0.3%	0.0%	1.0%	1.7%	1.9%	2.0%	2.0%	1.9%	2.0%	1.8%	1.6%	1.4%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	
1	Non-hazardous C&D	163,000	160,000	160,000	160,000	162,000	164,000	167,000	171,000	174,000	178,000	181,000	184,000	187,000	190,000	192,000	195,000	197,000	200,000	202,000	204,000	207,000	209,000	212,000	215,000	218,000	220,000	223,000
	Hazardous C&D	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
	Excavation waste/ dredging spoils	192,000	189,000	188,000	188,000	190,000	194,000	197,000	201,000	205,000	209,000	213,000	217,000	221,000	224,000	227,000	229,000	232,000	235,000	238,000	241,000	244,000	247,000	250,000	253,000	256,000	259,000	263,000
	<b>Total</b>	<b>357,000</b>	<b>351,000</b>	<b>350,000</b>	<b>350,000</b>	<b>354,000</b>	<b>360,000</b>	<b>366,000</b>	<b>374,000</b>	<b>381,000</b>	<b>389,000</b>	<b>396,000</b>	<b>403,000</b>	<b>410,000</b>	<b>416,000</b>	<b>421,000</b>	<b>426,000</b>	<b>431,000</b>	<b>437,000</b>	<b>442,000</b>	<b>448,000</b>	<b>454,000</b>	<b>459,000</b>	<b>465,000</b>	<b>471,000</b>	<b>477,000</b>	<b>482,000</b>	<b>489,000</b>
2	Non-hazardous C&D	173,000	170,000	170,000	170,000	172,000	174,000	178,000	181,000	185,000	189,000	192,000	196,000	199,000	202,000	204,000	207,000	209,000	212,000	214,000	217,000	220,000	222,000	225,000	228,000	231,000	234,000	237,000
	Hazardous C&D	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
	Excavation waste/ dredging spoils	204,000	201,000	200,000	200,000	202,000	206,000	210,000	214,000	218,000	222,000	227,000	231,000	235,000	238,000	241,000	244,000	247,000	250,000	253,000	256,000	259,000	262,000	265,000	269,000	272,000	276,000	279,000
	<b>Total</b>	<b>379,000</b>	<b>373,000</b>	<b>372,000</b>	<b>372,000</b>	<b>376,000</b>	<b>382,000</b>	<b>390,000</b>	<b>397,000</b>	<b>405,000</b>	<b>413,000</b>	<b>421,000</b>	<b>429,000</b>	<b>436,000</b>	<b>442,000</b>	<b>447,000</b>	<b>453,000</b>	<b>458,000</b>	<b>464,000</b>	<b>469,000</b>	<b>476,000</b>	<b>482,000</b>	<b>487,000</b>	<b>493,000</b>	<b>500,000</b>	<b>506,000</b>	<b>513,000</b>	<b>519,000</b>

<sup>a</sup> Source: Experian ©

310

5.3.4 However, as highlighted previously Defra revised its CD&E waste estimates, with the effect of increasing the total CD&E waste estimates by between 10% and 20%. Therefore, the scenarios have been re-run using a revised 2016 baseline figure:

- Scenario 1a: Baseline figure of 393,000 tonnes in 2016 (based on 2016 England waste per capita estimates); and
- Scenario 2a: Baseline figure of 412,000 tonnes in 2016 (based on 2016 England waste per capita estimates).

5.3.5 The resulting forecasts are presented in Table 5.11. The forecasts have been broken down into the key elements of the CD&E waste stream based on relative proportions estimated in 2016 and assuming that these remain constant.

5.3.6 Both sets of estimates are presented in Figure 5.6 and show that the net impact of the revised Defra figures is to increase the forecast estimates by approximately 55,000 tonnes by 2041.

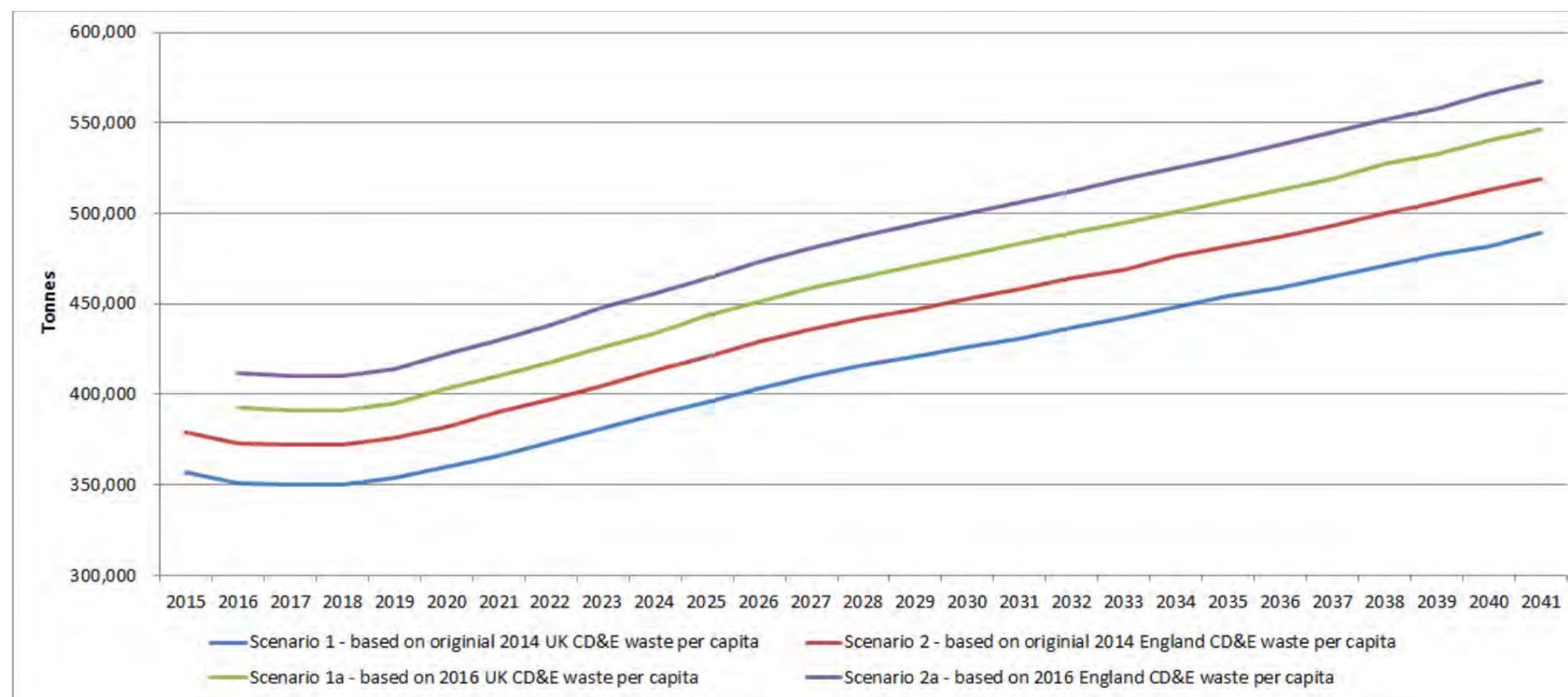
5.3.7 As highlighted above, the forecasts could overestimate future CD&E waste generation in Herefordshire, particularly in relation to excavation waste and dredging spoils. It might be considered unlikely, given the rural nature of Herefordshire, that approximately 200,000-250,000 tonnes of excavation waste would be produced every year. Therefore, as with the C&I waste forecasts, it is recommended that the CD&E waste forecasts are kept under review as the MMWP is developed.

**Table 5.11 Revised CD&E waste forecast based on updated Defra CD&E waste estimates, Herefordshire, 2016 to 2041 (rounded to nearest 1,000 tonnes)**

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Hereford and Worcestershire construction sector GVA (£ millions) <sup>a</sup>	937.4	923.0	919.8	920.1	929.4	945.0	962.8	982.3	1002.4	1021.4	1041.5	1060.6	1077.8	1093.1	1106.7	1120.1	1133.9	1147.8	1161.5	1174.9	1189.4	1204.5	1219.8	n/a	n/a	n/a	n/a
Hereford and Worcestershire construction sector GVA growth		-1.5%	-0.3%	0.0%	1.0%	1.7%	1.9%	2.0%	2.0%	1.9%	2.0%	1.8%	1.6%	1.4%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%
1 Non-hazardous C&D		191,000	190,000	190,000	192,000	196,000	199,000	203,000	207,000	211,000	216,000	219,000	223,000	226,000	229,000	232,000	235,000	238,000	240,000	243,000	246,000	249,000	252,000	256,000	259,000	262,000	265,000
Hazardous C&D		2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
Excavation waste/ dredging spoils		200,000	199,000	199,000	201,000	205,000	209,000	213,000	217,000	221,000	226,000	230,000	234,000	237,000	240,000	243,000	246,000	249,000	252,000	255,000	258,000	261,000	264,000	268,000	271,000	275,000	278,000
<b>Total</b>		<b>393,000</b>	<b>391,000</b>	<b>391,000</b>	<b>395,000</b>	<b>403,000</b>	<b>410,000</b>	<b>418,000</b>	<b>426,000</b>	<b>434,000</b>	<b>444,000</b>	<b>451,000</b>	<b>459,000</b>	<b>465,000</b>	<b>471,000</b>	<b>477,000</b>	<b>483,000</b>	<b>489,000</b>	<b>495,000</b>	<b>501,000</b>	<b>507,000</b>	<b>513,000</b>	<b>519,000</b>	<b>527,000</b>	<b>533,000</b>	<b>540,000</b>	<b>546,000</b>
2 Non-hazardous C&D		204,000	203,000	203,000	205,000	209,000	213,000	217,000	222,000	226,000	230,000	234,000	238,000	242,000	245,000	248,000	251,000	254,000	257,000	260,000	263,000	266,000	270,000	273,000	276,000	280,000	284,000
Hazardous C&D		2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
Excavation waste/ dredging spoils		206,000	205,000	205,000	207,000	211,000	215,000	219,000	224,000	228,000	232,000	237,000	241,000	244,000	247,000	250,000	253,000	256,000	259,000	262,000	265,000	269,000	272,000	276,000	279,000	283,000	286,000
<b>Total</b>		<b>412,000</b>	<b>410,000</b>	<b>410,000</b>	<b>414,000</b>	<b>422,000</b>	<b>430,000</b>	<b>438,000</b>	<b>448,000</b>	<b>456,000</b>	<b>464,000</b>	<b>473,000</b>	<b>481,000</b>	<b>488,000</b>	<b>494,000</b>	<b>500,000</b>	<b>506,000</b>	<b>512,000</b>	<b>519,000</b>	<b>525,000</b>	<b>531,000</b>	<b>538,000</b>	<b>545,000</b>	<b>552,000</b>	<b>558,000</b>	<b>566,000</b>	<b>573,000</b>

<sup>a</sup> Source: Experian ©

**Figure 5.6 CD&E waste forecasts, Herefordshire, 2016 to 2041**



## 5.4 Agricultural Waste

- 5.4.1 Future waste arisings will be dictated by the nature of agricultural activity within Herefordshire. However, as highlighted in the River Wye SAC Nutrient Management Plan, Evidence base and options appraisal<sup>30</sup>, it is not possible to predict the future when it comes to agriculture in the River Wye catchment.
- 5.4.2 In the WNA 2017, the range for non-natural agricultural waste was 6,000 to 8,000 tonnes. However, using the most recent Defra data, for 2016, slightly reduces the estimated range to 5,700 to 7,400 tonnes, predominately due to the exclusion of discarded vehicles from the total generations figure by Defra.
- 5.4.3 Therefore, for prudence, it is assumed that the non-natural agricultural waste will remain in the range 6,000 to 8,000 tonnes and that the amount of natural agricultural waste which is managed at permitted facilities will be dictated by the development of on-farm AD systems.
- 5.4.4 Between 2014 and 2016, there were six planning permissions granted for AD systems. These are not listed as permitted facilities in the 2015 EA WDI, and so have the potential to increase the AD capacity in the county in the future. There were no new AD sites accepting waste in 2016 but two new sites accepted waste in 2017 and a further site in 2018.

## 5.5 Hazardous Waste

- 5.5.1 The analysis of hazardous waste arisings highlights that over the last couple of years generation levels of hazardous wastes have, on the whole, been relatively constant and that the trend in arisings is now mainly affected by the level of hazardous waste produced by the construction and demolition sector.
- 5.5.2 Therefore, based on this analysis of the arisings between 2011 and 2018, it is estimated that the annual hazardous waste arising in the future will be in the range 8,000 to 12,000 tonnes, with the actual tonnage being dependent on the quantity of contaminated soil and asbestos containing waste generated by the construction and demolition sector.
- 5.5.3 In addition, the generation levels of different waste streams are relatively small and are unlikely to warrant the development of specialist waste treatment capacity.

## 5.6 Summary of Waste Forecasts

- 5.6.1 This WNA has sought to incorporate any relevant fresh evidence to forecast future waste arisings and compare the data from 2015, 2017 and 2018.
- 5.6.2 Consequently, the forecasts based on each dataset are presented:
- Table 5.12 summarises the waste forecasts for Herefordshire for years 2020, 2025, 2030, 2035 and 2041 based on the 2015 data, used in the WNA 2017. These forecasts have not been extended to 2041 because the LACW forecasts were based on the DCLG/ MHCLG household projections at the time, which did not extend to 2041;

<sup>30</sup> <https://www.gov.uk/government/publications/nutrient-management-plan-river-wye> [13.11.2019@10:54]

- Table 5.13 summarises the waste forecasts for Herefordshire for years 2020, 2025, 2030, 2035 and 2041 based on the updated 2017 data (where it was available) and as reported in the WNA Update 2018; and
- Table 5.14 summarises the waste forecasts for Herefordshire for years 2020, 2025, 2030, 2035 and 2041 based on the 2018 data, which includes analysis based on new Defra estimates for CD&E and agricultural wastes. For this it should be noted that the baseline figures are based on the most recent Defra dataset, which is for 2016.

**Table 5.12 Summary of waste forecasts for years 2020, 2025, 2030 and 2035, based on 2015 data**

Waste Stream		Tonnes (rounded to nearest 1,000 tonnes)						
		Baseline	Forecast					
		2015	2020	2025	2030	2035	2041	
Local authority collected waste		86,600	90,300 to 100,300	93,500 to 108,300	96,300 to 116,400	98,600 to 124,400	n/a	1
Commercial and industrial waste		116,000 to 146,000	126,000 to 151,000	140,000 to 156,000	153,000 to 161,000	166,000 to 167,000	n/a	2
Construction, demolition and excavation waste	Total	357,000 to 379,000	360,000 to 382,000	396,000 to 421,000	426,000 to 453,000	454,000 to 482,000	n/a	3
	Non-hazardous C&D	163,000 to 173,000	164,000 to 174,000	181,000 to 192,000	195,000 to 207,000	207,000 to 220,000	n/a	4
Agricultural waste (non-natural)		6,000 to 8,000	6,000 to 8,000					5
Hazardous waste (subset of other waste streams)		10,500	9,000 to 12,000					6

**Table 5.13 Summary of waste forecasts for years 2020, 2025, 2030, 2035 and 2041, based on 2017 data**

Waste Stream		Tonnes (rounded to nearest 1,000 tonnes)						
		Baseline	Forecast					
		2017	2020	2025	2030	2035	2041	
Local authority collected waste		88,900	89,100 to 99,300	91,800 to 106,600	94,300 to 114,200	95,500 to 122,000	98,800 to 131,500	1
Commercial and industrial waste		133,000 to 170,000	140,000 to 173,000	156,000 to 179,000	170,000 to 185,000	186,000 to 191,000	186,000 to 191,000	2
Construction, demolition and excavation waste	Total	357,000 to 379,000	360,000 to 382,000	396,000 to 421,000	426,000 to 453,000	454,000 to 482,000	489,000 to 519,000	3
	Non-hazardous C&D	163,000 to 173,000	164,000 to 174,000	181,000 to 192,000	195,000 to 207,000	207,000 to 220,000	223,000 to 237,000	4
Agricultural waste (non-natural)		6,000 to 8,000	6,000 to 8,000					5
Hazardous waste (subset of other waste streams)		9,500	8,000 to 12,000					6

**Table 5.14 Summary of waste forecasts for years 2020, 2025, 2030, 2035 and 2041, based on 2018 data**

Waste Stream		Tonnes (rounded to nearest 1,000 tonnes)						
		Baseline	Forecast					
		2018	2020	2025	2030	2035	2041	
Local authority collected waste		87,000	88,000 to 99,300	90,500 to 106,600	93,000 to 114,200	95,500 to 122,000	98,500 to 131,500	1
Commercial and industrial waste		157,000 to 201,000	163,000 to 204,000	181,000 to 210,000	198,000 to 217,000	216,000 to 224,000	233,000 to 240,000	2
Construction, demolition and excavation waste	Total	393,000 to 412,000	403,000 to 422,000	444,000 to 464,000	477,000 to 500,000	507,000 to 531,000	546,000 to 573,000	3
	Non-hazardous C&D	191,000 to 204,000	196,000 to 209,000	216,000 to 230,000	232,000 to 248,000	246,000 to 263,000	265,000 to 284,000	4
Agricultural waste (non-natural)		5,700 to 7,400	6,000 to 8,000					5
Hazardous waste (subset of other waste streams)		12,000	8,000 to 12,000					6

- 5.6.3 Largely due to data constraints, a difference in tonnage is not seen in the CD&E or agricultural waste streams between the 2015 and 2017 data. However, the 2018 does reflect the most recent Defra estimates for the CD&E or agricultural waste streams.
- 5.6.4 LACW data confirms that, overall, there has been a slight increase in waste generated between 2015 and 2018, which incorporates an increase in 2016 followed by decreases in 2017 and 2018. Whilst the 2018 arisings sit just below the LACW growth scenarios 1 and 4 based on ONS household projections, it has been considered prudent to retain the existing growth scenarios to see if the arisings reduce further or stabilise before revising the forecasts used for waste planning purposes. However, the lower end of the LACW growth scenarios have been adjusted in the 2018 forecasts to reflect the fractionally lower minimum tonnage resulting from Scenario 5. The variations within the forecast scenario for 2015 and 2017 are due to the 2017 forecast being based on more recent ONS household projections as opposed to the MHCLG household projections.
- 5.6.5 C&I waste forecasts grow in line with the uplift in the estimated arisings calculated for 2017 and 2018.
- 5.6.6 Hazardous waste continues to remain in the range identified in the WNA 2017.



## 6. Capacity Needs

### 6.1 Introduction

6.1.1 The different waste streams considered within this Assessment can have quite different management methods and expectations, particularly in relation to recycling and recovery targets. This section considers the policy relevant to each waste stream to consider future waste management capacity requirements.

### 6.2 Local Authority Collected Waste (LACW)

6.2.1 At the national level (England) there are two principal targets relating to the management of LACW:

- recycling and composting of household waste: 50% by 2020
- recovery<sup>31</sup> of municipal waste: 75% by 2020.

6.2.2 These are national targets but are not formally cascaded down to local authorities. The Waste Strategy for Herefordshire and Worcestershire: Managing Waste for a Brighter Future<sup>32</sup> does reflect these targets and seeks to exceed them through achieving a more challenging recovery target of recovering value from a minimum of 78% of municipal waste by 2015. Whilst this target was not achieved in 2015 or 2016, it was met since 2017 as the EnviRecover Facility commenced operating.

6.2.3 Recycling and recovery targets are still to be set for the period beyond 2020. The WNA 2017 relied upon the concurrent European Commission proposals set out in the EU Circular Economy Package (CEP) of:

- a preparation for re-use and recycling (including composting/anaerobic digestion) target of 60% of municipal waste<sup>33</sup> by 2025;
- a preparation for re-use and recycling (including composting/anaerobic digestion) target of 65% of municipal waste by 2030;
- a gradual limitation on landfilling of municipal waste, to 10% by 2035; and
- a requirement for the separate collection of bio-waste<sup>34</sup> for recycling (although no date is specified in the proposals).

6.2.4 Recognising the June 2016 decision to leave the European Union, it was unclear whether these targets would be adopted in the UK. However, in the absence of any future proposal for England at the time, they were used to consider future management capacity requirements for LACW.

<sup>31</sup> Recovery encompasses reuse, recycling, composting and energy recovery.

<sup>32</sup> The Joint Municipal Waste Management Strategy for Herefordshire and Worcestershire 2004 - 2034, First review August 2011

<sup>33</sup> As explained in section 2.1 of this report, the term municipal waste is wider than LACW and includes wastes from other sources that is comparable to household waste in nature, composition and quantity. Consequently, this target would apply to a proportion of C&I waste.

<sup>34</sup> Bio-waste means biodegradable garden and parks waste, food and kitchen waste from households, restaurants, caterers and retail premises and comparable waste from food processing plants.

- 6.2.5 These recycling targets were later softened, with several countries, including the UK, recognising that they may not be achievable. In Spring 2018, following much debate between Member States, the European Commission and representatives of the European Parliament, agreement was reached on the revisions to the Waste Framework Directive and the Landfill Directive, including the following targets:
- a preparation for re-use and recycling (including composting/anaerobic digestion) target of 55% of municipal waste by 2025;
  - a preparation for re-use and recycling (including composting/anaerobic digestion) target of 60% of municipal waste by 2030;
  - a preparation for re-use and recycling (including composting/anaerobic digestion) target of 65% of municipal waste by 2035;
  - a gradual limitation on landfilling of municipal waste, to 10% by 2035;
  - a requirement for the separate collection of textiles and hazardous waste from households, by 2025; and
  - a requirement for the separate collection of bio-waste for recycling by 2024.
- 6.2.6 The UK government had previously signalled that these measures will be incorporated within UK legislation, even after the UK leaves the EU. The RWS (the latest national waste strategy) confirms the Government's intention to adopt the targets in the EU CEP stating, in Section 6.1.1:
- 'The EU (Withdrawal) Act 2018 will ensure existing EU environmental law continues to have effect in UK law after we leave the EU, providing businesses and stakeholders with maximum certainty. This includes any commitments from the Circular Economy Package (CEP) in relation to waste and recycling that are part of UK legislation when we leave.'*
- 6.2.7 Consequently, Table 6.1 presents the potential future capacity required to manage Herefordshire's LACW using the targets set out in the EU CEP, which means reducing the recycling and composting targets for 2025 (from 60% to 55%) and 2030 (65% to 60%) whilst retaining 65% recycling and composting by 2035. In addition, the maximum allowed landfill has also been adjusted to reflect a more gradual reduction i.e. a maximum of 20% by 2025, 15% by 2030 and again retaining the 10% by 2035.
- 6.2.8 Two scenarios are used to consider the residual waste fraction (i.e. that remaining after recycling):
- assuming that the maximum allowable level of landfill is fully utilised; and
  - assuming that all residual LACW is sent directly to a residual waste treatment facility.

**Table 6.1 Forecast LACW waste management requirement (rounded to nearest 100 tonnes)**

Description	2020	2025	2030	2035	2041	
<b>LACW Forecasts</b>						
Minimum	88,000	90,500	93,000	95,500	98,500	1
Maximum	99,300	106,600	114,200	122,000	131,500	2
<b>Recycling and composting</b>						
Potential recycling and composting targets	50%	55%	60%	65%	65%	3
Recycling and composting capacity requirement						
Minimum (tonnes)	44,000	49,800	55,800	62,100	64,000	4
Maximum (tonnes)	49,700	58,600	68,500	79,300	85,500	5
<b>Landfill</b>						
Maximum allowed landfill assuming 75% municipal waste recovery by 2020 and gradual limitation to 2035 target	25%	20%	15%	10%	10%	6
Landfill capacity requirement						
Minimum (tonnes)	22,000	18,100	14,000	9,600	9,900	7
Maximum (tonnes)	24,800	21,300	17,100	12,200	13,200	8
<b>Residual treatment requirement</b>						
Minimum assuming maximum allowed landfill is utilised (tonnes)	22,000	22,600	23,200	23,800	24,600	9
Maximum assuming maximum allowed landfill is utilised (tonnes)	24,800	26,700	28,600	30,500	32,800	10
Minimum assuming no LACW direct to landfilled (tonnes)	44,000	40,700	37,200	33,400	34,500	11
Maximum assuming no LACW direct to landfilled (tonnes)	49,600	48,000	45,700	42,700	46,000	12

## Increased recycling

- 6.2.9 Consultation responses have sought a reduction in waste growth and increased recycling rates. A reduction in waste growth is not considered appropriate, as the MWLP is principally a land use document, seeking to provide opportunities for new development. Increased recycling levels have been considered, with the consequent capacity requirements.
- 6.2.10 It is worth remembering that the LACW management routes are already potentially higher than has been ratified by the European Commission. However, a further scenario of 70% recycling and composting and a maximum of 5% residual waste to landfill by 2030 has been modelled, and the results reported in Table 6.2.

**Table 6.2 Forecast LACW management requirement, high recycling & composting (rounded to nearest 100 tonnes)**

Description	2020	2025	2030	2035	2041	
<b>LACW Forecasts</b>						
Minimum	88,000	90,500	93,000	95,500	98,500	1
Maximum	99,300	106,600	114,200	122,000	131,500	2
<b>Recycling and composting</b>						
Potential recycling and composting targets	50%	65%	70%	70%	70%	3
Recycling and composting capacity requirement						
Minimum (tonnes)	44,600	59,700	66,000	67,600	69,000	4
Maximum (tonnes)	49,700	69,300	79,900	85,400	92,100	5
<b>Landfill</b>						
Maximum allowed landfill assuming 75% municipal waste recovery by 2020 and gradual limitation to 5% landfill by 2035	25%	10%	5%	5%	5%	6
Landfill capacity requirement						
Minimum (tonnes)	22,300	9,200	4,700	4,800	4,900	7
Maximum (tonnes)	24,800	10,700	5,700	6,100	6,600	8
<b>Residual treatment requirement</b>						
Minimum assuming maximum allowed landfill is utilised (tonnes)	22,200	22,900	23,600	24,100	24,600	9
Maximum assuming maximum allowed landfill is utilised (tonnes)	24,800	26,600	28,600	30,500	32,800	10
Minimum assuming no LACW direct to landfilled (tonnes)	44,500	32,100	28,300	28,900	29,500	11
Maximum assuming no LACW direct to landfilled (tonnes)	49,600	37,300	34,300	36,600	39,400	12

6.2.11 This scenario indicates an increased demand for recycling/composting capacity of c.10,000 tonnes over years 2020 and 2025, which drops to c.5,000 to 6,000 tonnes over the later years of the plan period, with consequent reductions in landfill and residual waste management capacity. This recycling/composting capacity demand is not considered to be significant in plan making terms.

## Potential future LACW management capacity demand

- 6.2.12 Table 3.1 identifies that permitted capacity within the county is limited to facilities that offer transfer with basic treatment or provide biological treatment; there is no residual waste treatment or disposal capacity such as MBT, RDF production, incineration (with or without energy recovery) or landfill.
- 6.2.13 However, Herefordshire Council has historically worked with Worcestershire County Council to manage effectively the authorities' LACW jointly. This collaboration has resulted in the production of a Joint Municipal Waste Management Strategy and joint procurement of strategic waste management capacity, namely:
- a materials recovery facility (MRF) at Norton, near Worcester. The EnviroSort Facility has a permitted capacity of 105,000 tonnes per year; and
  - an energy from waste (EfW) facility at Hartlebury, near Stourport. The EnviRecover Facility has a permitted capacity of 200,000 tonnes per year and became operational in 2017.
- 6.2.14 Consequently, whilst these facilities are not located in Herefordshire, long term capacity is available to manage Herefordshire's LACW; the contract is live until 2024, with the potential for a five-year extension. At the end of the contract period, the facilities revert to the two authorities; EnviRecover to shared ownership and EnviroSort to Worcestershire County Council. The use of these facilities for waste generated within both Worcestershire and Herefordshire has been considered carefully through the planning process and there is no planning reason why this should change throughout the plan period, or after.
- 6.2.15 Conclusions in relation to future LACW management capacity focus on the following:
- **Management of separately collected bio-waste:** Currently, the only form of bio-waste separately collected for composting is the garden waste collected at HWRC. Therefore, if the separate collection of bio-waste for recycling becomes a requirement, capacity would be necessary to handle separately collected food and garden waste.
    - Based on the assumption above of a 50:50 between recycling and composting, by 2035 there could be 31,000 to 39,500 tonnes of bio-waste to manage, which could increase to 32,000 to 42,750 tonnes by 2041. The type and size of biological treatment capacity would depend on how the bio-waste is collected e.g. separate food and garden waste or mixed food and garden waste.
    - There is currently significant capacity at biological treatment facilities in Herefordshire (not including on-farm AD systems) 334,000 tonnes between 2015 and 2018, of which approximately 106,000 tonnes was utilised in 2015, 78,000 tonnes in 2016, 60,000 tonnes in 2017 and 49,000 tonnes in 2018. This would suggest there should be sufficient capacity to handle the increase in bio-waste, although this will be dependent on the design/configuration of the biological treatment facilities.
  - **Sufficient MRF capacity:** It is not possible to accurately predict the future composition of LACW due to the limited data currently available, that composition changes with time and that policy evolves over time. Consequently, the proportion of material that will need to be recycled or composted to achieve a 65% recycling and composting target is not clear. If it is assumed that there will a 50:50 split between recycling and composting, by 2035 there could be 31,000 to 39,500 tonnes of material to be recycled, which could increase to 32,000 to 42,750 tonnes by 2041.

- However, it is uncertain how much material would need to be handled at a MRF with proposed policy changes encouraging greater source separation. It is possible more materials will be collected separately and sent directly (or via transfer station) to reprocessors, for example the scrap metal, cardboard, timber etc. Also materials will continue to be collected at HWRC. The current split between kerbside and HWRC recycling is approximately 70:30. If this split is maintained, between 22,500 and 30,000 tonnes<sup>35</sup> of additional material from Herefordshire may need to be handled through a MRF by 2041.
- There may be pressure on the current contracted MRF capacity by the end of the plan period, depending on the amount of recyclable material sent to the EnviroSort Facility from Worcestershire. It is also dependent on the configuration of the EnviroSort Facility, which is likely to change over the plan period.
- **Sufficient EfW Facility capacity by 2030:** The EnviRecover Facility capacity is 230,000 tonnes per annum. If it is assumed that this equates to 35% of the LACW generated, because 65% of the waste will be recycled or composted by 2030, this would be equivalent to a total LACW arising of approximately 575,000 tonnes, across both Herefordshire and Worcestershire.
- Currently, Herefordshire and Worcestershire generate a total of just 390,000 tonnes per annum<sup>36</sup>. Even with growth in LACW arisings and assuming a 65% recycled or composted rate is achieved, there should remain sufficient capacity to handle the residual LACW generated by 2041. There would need to be a growth of 1.6% per annum in LACW arisings for the 230,000 tonne capacity at the EnviRecover Facility to be exceeded by 2041, if the 65% recycled or composted rate is achieved.

## 6.3 Commercial and Industrial Waste (C&I waste)

- 6.3.1 There are no specific targets for the management of C&I waste. Beyond 2020, the European Commission proposes to set recycling and recovery targets for municipal waste (section 6.2). Recognising that the Commission's use of the term 'municipal waste' includes wastes from other sources that is comparable to household waste in nature, composition and quantity, some C&I waste would become subject to these targets.
- 6.3.2 Given the nature of current data capture systems and the inability to track flows of C&I waste, it is not possible to quantify accurately either the C&I fraction of municipal waste, or how much is recycled or recovered at the national level, let alone at the Herefordshire level.
- 6.3.3 As with LACW, EU CEP targets have been used to assess future management capacity requirements for non-hazardous C&I waste. Whilst this may overestimate the recycling/recovery requirement and underestimate the landfill need, as a municipal waste target would only apply to the waste comparable to household waste in nature, composition and quantity, it is likely that the Landfill Tax will continue to drive other C&I wastes away from landfill.

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<sup>35</sup> 70% of the 32,000 to 42,750 tonnes of waste assumed to be recycled.

<sup>36</sup> Defra, LACW Statistic, 2018/19

- 6.3.4 It is assumed that hazardous C&I waste will be handled through specialist hazardous waste management facilities (section 6.6). Table 6.3 presents the potential future capacity required to manage Herefordshire's non-hazardous C&I waste.
- 6.3.5 Again, two scenarios are used to consider the residual waste fraction (i.e. that remaining after recycling):
- assuming that the maximum allowable level of landfill is fully utilised; and
  - assuming that all residual C&I waste is sent directly to a residual waste treatment facility.

### **Increased recycling**

- 6.3.6 As with the LACW waste capacity requirements, a further scenario of 70% recycling and composting and a maximum of 5% to landfill by 2030 has been modelled and the results are presented in Table 6.4.
- 6.3.7 This increased recycling scenario indicates an increased demand of 8,300 to 9,500 tonnes of recycling/composting capacity, and consequent reductions in landfill and residual waste manage capacity.

**Table 6.3 Forecast C&I waste management requirement (rounded to nearest 1,000 tonnes)**

Description	2020	2025	2030	2035	2041	
<b>C&amp;I Forecasts</b>						
Minimum (Scenario 1a) using 2015 data	126,000	140,000	153,000	167,000	185,000	1
Medium (Scenario 2b) using 2017 data	173,000	179,000	185,000	191,000	199,000	2
Maximum (Scenario 2b) using 2018 data	204,000	210,000	217,000	224,000	233,000	3
<b>Recycling and composting</b>						
Potential recycling and composting targets	50%	55%	60%	65%	65%	
Recycling and composting capacity required						
Minimum (tonnes)	63,000	77,000	91,800	108,600	120,300	4
Medium (tonnes)	86,500	98,500	111,000	124,200	129,400	5
Maximum (tonnes)	102,000	115,500	130,200	145,600	151,500	6
<b>Landfill</b>						
Maximum allowed landfill assuming 75% C&I waste recovery by 2020 and gradual limitation to 2035 target	25%	20%	15%	10%	10%	
Landfill capacity required						
Minimum (tonnes)	31,500	28,000	23,000	16,700	18,500	7
Medium (tonnes)	43,300	35,800	27,800	19,100	19,900	8
Maximum (tonnes)	51,000	42,000	32,600	22,400	23,300	9
<b>Residual treatment requirement</b>						
Minimum assuming maximum allowed landfill is utilised	31,500	35,000	38,200	41,700	46,200	10
Medium assuming maximum allowed landfill is utilised	43,200	44,700	46,200	47,700	49,700	11
Maximum assuming maximum allowed landfill is utilised	51,000	52,500	54,200	56,000	58,200	12
Minimum assuming no C&I waste direct to landfilled	63,000	63,000	61,200	58,400	64,700	13
Medium assuming no C&I waste direct to landfilled	86,500	80,500	74,000	66,800	69,600	14
Maximum assuming no C&I waste direct to landfilled	102,000	94,500	86,800	78,400	81,500	15

**Table 6.4 Forecast C&I waste management requirement, high recycling and composting (rounded to nearest 1,000 tonnes)**

Description	2020	2025	2030	2035	2041	
<b>C&amp;I Forecasts</b>						
Minimum (Scenario 1a) using 2015 data	126,000	140,000	153,000	167,000	185,000	1
Medium (Scenario 2b) using 2017 data	173,000	179,000	185,000	191,000	199,000	2
Maximum (Scenario 2b) using 2018 data	204,000	210,000	217,000	224,000	233,000	3
<b>Recycling and composting</b>						
Potential recycling and composting targets	50%	65%	70%	70%	70%	
Recycling and composting capacity required						
Minimum (tonnes)	63,000	91,000	107,100	116,900	129,500	4
Medium (tonnes)	86,500	116,400	129,500	133,700	139,300	5
Maximum (tonnes)	102,000	136,500	151,900	156,800	163,100	6
<b>Landfill</b>						
Maximum allowed landfill assuming 75% C&I waste recovery by 2020 and gradual limitation to 2035 target	25%	10%	5%	5%	5%	
Landfill capacity required						
Minimum (tonnes)	31,500	14,000	7,700	8,400	9,300	7
Medium (tonnes)	43,300	17,900	9,300	9,600	10,000	8
Maximum (tonnes)	51,000	21,000	10,900	11,200	11,700	9
<b>Residual treatment requirement</b>						
Minimum assuming maximum allowed landfill is utilised	31,500	35,000	38,200	41,700	46,200	10
Medium assuming maximum allowed landfill is utilised	43,200	44,700	46,200	47,700	49,700	11
Maximum assuming maximum allowed landfill is utilised	51,000	52,500	54,200	56,000	58,200	12
Minimum assuming no C&I waste direct to landfilled	63,000	49,000	45,900	50,100	55,500	13
Medium assuming no C&I waste direct to landfilled	86,500	62,600	55,500	57,300	59,700	14
Maximum assuming no C&I waste direct to landfilled	102,000	73,500	65,100	67,200	69,900	15

## Potential future C&I waste management capacity demand

- 6.3.8 Recognising the lack of clarity available within the C&I waste data sets, forecasting the future level of new waste management capacity cannot be precise.
- 6.3.9 This Assessment suggests that to meet the assumed recycling and composting targets, across the whole of the C&I waste stream, would require 92,000 to 130,000 tonnes of capacity at 2030 (Table 6.3, rows 4 and 6) which would increase to a maximum demand of 151,500 tonnes at 2041 (Table 6.3, row 6). Comparing this to the calculated requirement at 2020 would indicate a requirement for an additional c.30,000<sup>37</sup> to 60,000<sup>38</sup> tonnes of recycling/composting capacity (by 2030 and 2041 respectively).
- 6.3.10 If the higher recycling and composting targets are applied, requires 107,000 to 152,000 tonnes of capacity at 2030 (Table 6.4, rows 4 and 6) which would increase to a maximum demand of 163,000 tonnes at 2041 (Table 6.4, row 6). Again, comparing this to the calculated requirement at 2020 would indicate a requirement for an additional c.44,000<sup>39</sup> to 66,500<sup>40</sup> tonnes of recycling/composting capacity (by 2030 and 2041 respectively).
- 6.3.11 Section 3.1 (Table 3.3) identifies that there is, potentially, unused capacity within Herefordshire that would be sufficient to accommodate this additional requirement:
- transfer with basic treatment (84,000 tonnes in 2018);
  - metal recycling (132,000 tonnes in 2018); and
  - biological treatment capacity (285,000 tonnes in 2018).
- 6.3.12 Consequently, no additional capacity is required to handle the increased levels of recycling and compost needed to achieve the targets, even the higher rates. However, the ability of the existing facilities to treat additional materials for recycling and biological treatment will depend on the nature of the material diverted from the residual waste and any physical constraints at the sites (i.e. facilities not being able to handle waste up to their permit limit).
- 6.3.13 There is no residual waste treatment or disposal capacity such as MBT, RDF production, energy from waste or landfill facilities. The treatment/disposal of residual C&I waste is reliant on facilities outside Herefordshire. Consequently, if Herefordshire is to achieve equivalent self-sufficiency in managing its residual C&I wastes, additional capacity will need to be delivered.
- 6.3.14 Furthermore, that capacity will need to incorporate the wastes calculated to otherwise be disposed to landfill. Table 6.3 (rows 13 and 15) indicates that 61,200 to 86,800 tonnes of residual C&I waste treatment/disposal capacity could be required by 2030, if the assumed

<sup>37</sup> Table 6.3 (row 4) identifies a minimum of 91,800 tonnes of capacity required at 2030, an increase of 28,800 tonnes on 2020. Row 6 identifies a maximum of 130,200 tonnes at 2030, an increase of 28,200 tonnes. This gives the lower calculated increase of c.30,000 at 2030.

<sup>38</sup> Table 6.3 (row 4) identifies a minimum of 120,300 tonnes of capacity required at 2041, an increase of 57,300 tonnes on 2020. Row 6 identifies a maximum need for 151,500 tonnes at 2041, an increase of 49,500 tonnes on 2020. This gives the upper range of c.60,000 at 2041.

<sup>39</sup> Table 6.4 (row 4) identifies a minimum of 107,100 tonnes of capacity required at 2030, an increase of 44,100 tonnes on 2020. Row 6 identifies a maximum of 151,900 tonnes at 2030, an increase of 49,900 tonnes. This gives the lower calculated increase of c.44,000 at 2030.

<sup>40</sup> Table 6.4 (row 4) identifies a minimum of 129,500 tonnes of capacity required at 2030, an increase of 66,500 tonnes on 2020. Row 6 identifies a maximum of 163,100 tonnes at 2041, an increase of 61,100 tonnes. This gives the lower calculated increase of c.66,500 at 2041.

targets are applied to the whole C&I waste stream; at 2041 the level of demand would be between 64,700 and 81,500 tonnes (there is a decrease in residual demand because recycling has increased).

- 6.3.15 Whilst the remaining potential capacity requirement is not insignificant, it is not particularly large; such capacity could be provided within a single facility or through a small number of facilities operating on an industrial estate. This would be the case even if increased recycling/composting targets are applied.

## 6.4 Construction, Demolition and Excavation Waste (CD&E waste)

- 6.4.1 Article 11(2)(b) of the European Waste Framework Directive<sup>41</sup> sets a target to recover at least 70% of non-hazardous C&D Waste by 2020. This is a national target, but it is not formally cascaded down to local authorities. In December 2016, Defra reported that this target is already being met within the UK, with a recovery rate of over 90% for each year between 2010 and 2014<sup>42</sup>.
- 6.4.2 Beyond 2020 recovery targets for CD&E waste are still to be set. The European Commission's current proposals do not make any change to the current recovery target for non-hazardous construction and demolition waste but do require Member States to '*take measures to promote sorting systems for construction and demolition waste and for at least the following: wood, aggregates, metal, glass and plaster*'.
- 6.4.3 In considering future capacity requirements for CD&E waste, the following assumptions have been made:
- Clean uncontaminated excavation wastes will be predominately be used for backfilling, which is defined as a recovery operation where suitable waste is used for reclamation purposes in excavated areas or for engineering purposes in landscaping or construction instead of other non-waste materials which would otherwise have been used for that purpose.
  - Hazardous C&D waste will be handled through specialist hazardous waste management facilities (section 6.5).
  - At least 70% of non-hazardous C&D waste will be recovered per annum during the plan period.
- 6.4.4 Based on these assumptions the potential future waste treatment capacity required to handle Herefordshire's CD&E waste is summarised in Tables 6.5 and 6.6. There is a high level of uncertainty associated with CD&E wastes estimates and forecasts, which is explained in section 4.4

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<sup>41</sup> Directive 2008/98/EC

<sup>42</sup> UK Statistics on Waste, Defra, December 2016

**Table 6.5 Forecast waste management capacity required for forecast non-hazardous CD&E waste based on 2015 waste arisings estimates (tonnes)**

Description	2020	2025	2030	2035	2041	
<b>Backfilling capacity of excavation waste / dredging spoils</b>						
Minimum	194,000	213,000	229,000	244,000	263,000	1
Maximum	206,000	227,000	244,000	259,000	279,000	2
<b>Non-hazardous C&amp;D forecasts</b>						
Minimum	164,000	181,000	195,000	207,000	223,000	3
Maximum	174,000	192,000	207,000	220,000	237,000	4
<b>Non-hazardous C&amp;D recovery</b>						
Assumed recovery target of 70% for non-hazardous C&D waste	70%	70%	70%	70%	70%	
Recovery capacity required						
Minimum (tonnes)	114,800	126,700	136,500	144,900	156,100	5
Maximum (tonnes)	121,800	134,400	144,900	154,000	165,900	6
Maximum required if the current UK recovery rate of 90% for non-hazardous C&D is maintained	90%	90%	90%	90%	90%	
Recovery capacity required						
Minimum (tonnes)	147,600	162,900	175,500	186,300	200,700	7
Maximum (tonnes)	156,600	172,800	186,300	198,000	213,300	8
<b>Non-hazardous C&amp;D landfill</b>						
Maximum allowed landfill assuming 70% of non-hazardous C&D is recovered	30%	30%	30%	30%	30%	
Landfill capacity required						
Minimum (tonnes)	49,200	54,300	58,500	62,100	66,900	9
Maximum (tonnes)	52,200	57,600	62,100	66,000	71,100	10
Maximum required if the current UK recovery rate of 90% for non-hazardous C&D is maintained	10%	10%	10%	10%	10%	
Landfill capacity required						
Minimum (tonnes)	16,400	18,100	19,500	20,700	22,300	11
Maximum (tonnes)	17,400	19,200	20,700	22,000	23,700	12

**Table 6.6 Forecast waste management capacity required for forecast non-hazardous CD&E waste based on 2018 waste arisings estimates (tonnes)**

Description	2020	2025	2030	2035	2041	
<b>Backfilling capacity of excavation waste / dredging spoils</b>						
Minimum	205,000	226,000	243,000	258,000	278,000	1
Maximum	211,000	232,000	250,000	265,000	286,000	2
<b>Non-hazardous C&amp;D forecasts</b>						
Minimum	196,000	216,000	232,000	246,000	265,000	3
Maximum	209,000	230,000	248,000	263,000	284,000	4
<b>Non-hazardous C&amp;D recovery</b>						
Assumed recovery target of 70% for non-hazardous C&D waste	70%	70%	70%	70%	70%	
Recovery capacity required						
Minimum (tonnes)	137,200	151,200	162,400	172,200	185,500	5
Maximum (tonnes)	146,300	161,000	173,600	184,100	198,800	6
Maximum required if the current UK recovery rate of 90% for non-hazardous C&D is maintained	90%	90%	90%	90%	90%	
Recovery capacity required						
Minimum (tonnes)	176,400	194,400	208,800	221,400	238,500	7
Maximum (tonnes)	188,100	207,000	223,200	236,700	255,600	8
<b>Non-hazardous C&amp;D landfill</b>						
Maximum allowed landfill assuming 70% of non-hazardous C&D is recovered	30%	30%	30%	30%	30%	
Landfill capacity required						
Minimum (tonnes)	58,800	64,800	69,600	73,800	79,500	9
Maximum (tonnes)	62,700	69,000	74,400	78,900	85,200	10
Maximum required if the current UK recovery rate of 90% for non-hazardous C&D is maintained	10%	10%	10%	10%	10%	
Landfill capacity required						
Minimum (tonnes)	19,600	21,600	23,200	24,600	26,500	11
Maximum (tonnes)	20,900	23,000	24,800	26,300	28,400	12

6.4.5 Section 3.1 identifies that there is treatment/recovery capacity available for handling CD&E waste, with annual permitted capacity (in 2016) of:

- 58,000 tonnes for the deposit of waste to land (recovery);
- 75,000 tonnes of soil production; and
- approximately 100,000 tonnes of physical treatment capacity, although it should be noted that one site with 75,000 tonnes of permitted capacity has accepted less than 200 tonnes per annum for the last 3 years.

- 6.4.6 By 2018, both the deposit of waste to land (recovery) and soil production sites had closed. Instead, a CD&E physical treatment facility had opened with a permitted capacity of 250,000 tonnes per annum, which received approximately 100,000 tonnes in 2018.
- 6.4.7 However, it is difficult to isolate the treatment capacity required for CD&E waste as some of the CD&E waste will be:
- handled at facilities that also receive LACW and C&I waste e.g. household, commercial and industrial transfer stations;
  - handled at exempt facilities/sites; or
  - processed at the site of production by mobile screening, crushing and grading equipment.
- 6.4.8 In terms of exemption facilities/sites, there are over 320 U1 exemptions (Use of waste in construction) registered in Herefordshire in 2016, which can be an outlet for CD&E wastes. By 2018, the number of U1 exemptions increased to 1,025. However, these exemptions cannot be considered as a guaranteed capacity to manage CD&E wastes because:
- some exemptions could be short term but remain on the register for 3 years; or
  - in terms of on farm exemptions (which account for over 96.5% of the U1 exemptions) the need for material may be periodic, e.g. for the repair of farm tracks, and the exemption has been registered just in case material is required.
- 6.4.9 If it is assumed that half the U1 exemptions are active in any given year and the tonnage received at each exemption ranges from 100 to 500 tonnes, the registered exemptions could provide between 50,000 to 250,000 tonnes of recovery capacity. As highlighted in section 5.4, it is considered unlikely, given the rural nature of Herefordshire, that arisings in the region of 200,000 tonnes (the upper end of the range) of excavation waste would be produced every year.
- 6.4.10 Based on this assessment the following capacity demand for CD&E waste should be considered:
- Recovery (including recycling and re-use): 185,000 to 250,000 tonnes per annum by 2041, based on the most recent Defra estimate, through permitted and exempt facilities/sites. This is potentially covered by the existing facilities and exemptions, for example the use of waste under U1 exemptions would be considered as recovery and over 100,000 tonnes is handled at permitted physical treatment and waste transfer/treatment facilities.
  - Landfill: 20,000 to 85,000 tonnes per annum, depending on the level of recovery achieved.
  - For any developments that will generate significant quantities of excavation waste, the developer would need to demonstrate that there is sufficient capacity to handle the proposed arisings e.g. through backfilling or quarry restoration.
- 6.4.11 It is likely that some thought will need to be given to identifying strategic locations for the future management of non-hazardous CD&E waste.

## 6.5 Agricultural Waste

- 6.5.1 It is estimated that small quantities of non-natural agricultural waste are generated in Herefordshire, between 6,000 to 8,000 tonnes. This waste will consist of materials such as

used oils, scrap metal, paper, cardboard and plastic wastes etc. much of which will be captured in the C&I waste estimates. These wastes will be coded under LoW Chapters 13, 15 and 16 and consequently the agricultural element cannot be differentiated.

- 6.5.2 Future waste arisings will be dictated by the nature of agricultural activity within Herefordshire. However, as highlighted in the River Wye SAC NMP, it is not possible to predict the future when it comes to agriculture in the River Wye catchment.
- 6.5.3 Therefore, it is assumed that the non-natural agricultural waste will remain in the range of 6,000 to 8,000 tonnes and that the amount of natural agricultural waste that is managed at permitted facilities will be dictated by the development of on-farm AD systems. Between 2013 and 2018, the number of on-farm AD systems increased from one to ten sites, with a combined permitted capacity of 479,500 tonnes in 2018 and an input of 66,300 tonnes.
- 6.5.4 If manures and slurries are not used appropriately within a farm, there is the potential for over-application of nitrogen and other minerals, and also for potential impacts upon water resources. On-farm AD systems provide a method of managing such materials and the digestate produced has a lower biological oxygen demand that can be used as a more uniform, easily calibrated fertiliser than the original untreated manure<sup>43</sup>.
- 6.5.5 The very low tonnages forecast to arise indicate that agricultural wastes should continue to be appropriately managed by the private sector; the MWLP does not need to identify strategic locations for its management.

## 6.6 Hazardous Waste

- 6.6.1 Small quantities of hazardous waste are generated within Herefordshire, 10,500 tonnes in 2015, 8,000 tonnes in 2016 and 12,000 tonnes in 2018 (a very small fraction of the 4 million tonnes consigned in England)<sup>44</sup>.
- 6.6.2 Whilst there is a legal requirement for England to have in place a range of facilities for the recovery of hazardous wastes, this is a national requirement that is not cascaded down to local authorities. The Government considers that the waste industry has the expertise necessary to determine where infrastructure should be located and the most appropriate technologies to use<sup>45</sup>. In part, this recognises that there is a need to account for economies of scale, as treatment facilities will only be economically viable above a certain capacity. Whilst this principle holds true across all waste management facilities, it is particularly relevant to hazardous waste, as this is normally generated in very small tonnages at any one location. Furthermore, the cumulative effect of a number of smaller facilities, may, in some cases, be larger than those for one large facility<sup>46</sup>.
- 6.6.3 The National Policy Statement for Hazardous Waste: A framework document for planning decisions on nationally significant hazardous waste infrastructure was published in June 2013 ('the Hazardous Waste NPS'). It sets out policy for nationally significant infrastructure projects that comprise:

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<sup>43</sup> Defra, Anaerobic Digestion Strategy and Action Plan, 2011

<sup>44</sup> Waste Management Plan for England, December 2013

<sup>45</sup> Principle 2 of the Strategy for Hazardous Waste Management in England, 2010

<sup>46</sup> National Policy Statement for Hazardous Waste: A framework document for planning decisions on nationally significant hazardous waste infrastructure, Defra, June 2013

- final recovery/disposal hazardous waste facilities with a permitted hazardous waste throughput capacity in excess of 30,000 tonnes per annum; or
- hazardous waste landfill or deep storage facility with a permitted hazardous waste throughput or acceptance capacity in excess of 100,000 tonnes per annum; or
- alterations to existing plant with an increase in capacity of 30,000 tonnes per annum or 100,000 tonnes for landfill.

6.6.4 The Hazardous Waste NPS does not preclude the provision of smaller scale facilities and applications for developments below the thresholds will continue to be considered by waste planning authorities under the existing planning system. However, the policy set out in the NPS may be a material consideration when determining any such application.

6.6.5 In conclusion, there would not appear to be a need for the MWLP to identify strategic locations for the management of hazardous waste within Herefordshire. Due to the location of the county, it is unlikely to be a destination chosen for a nationally significant infrastructure project, whilst smaller facilities should be capable of being accommodated on industrial estates and similar locations.

## **6.7 Summary of Capacity Requirements**

6.7.1 Table 6.7 summarises the key capacity requirements concluded from the assessment for each waste stream.

**Table 6.7 Summary of key points from capacity need assessment**

Waste Stream	Capacity Need Assessment – Key Points
<b>LACW</b>	<p>Permitted capacity within the county is limited to facilities that offer transfer with basic treatment or provide biological treatment. There is no residual waste treatment or disposal capacity such as MBT, RDF production, incineration (with or without energy recovery) or landfill. Herefordshire Council has historically worked with Worcestershire County Council to manage effectively the authorities' LACW. This collaboration has resulted in the production of a Joint Municipal Waste Management Strategy and joint procurement of strategic waste management capacity. Whilst these facilities are not located in Herefordshire, long term capacity is available to manage Herefordshire's LACW (through the EnviSort and EnviRecover Facilities).</p> <p>If the separate collection of bio-waste for recycling becomes a requirement, capacity would be necessary to handle separately collected food and garden waste, calculated to be in the region of 32,000 to 42,750 tonnes by 2041. There is currently significant capacity at biological treatment facilities in Herefordshire, which should offer sufficient capacity to handle separately collected local authority collected bio-waste.</p> <p>This Assessment calculates an additional 22,500 to 30,000 tonnes of material that may require handling through a MRF. This additional tonnage may place some pressure on the EnviroSort Facility, depending on how it is configured and how much waste is sent to it from Worcestershire. The EnviRecover Facility is considered to have sufficient capacity throughout the plan period. The available capacity at these sites should be monitored to understand any pressure points on this capacity, particularly towards the end of the plan period.</p> <p>This Assessment concludes that there will be sufficient capacity to manage LACW though the plan period, with no immediate demand for new facilities.</p>
<b>C&amp;I waste</b>	<p>Permitted capacity within the county is limited to facilities that offer transfer with basic treatment, metal recycling and biological treatment capacity. There is no residual waste treatment or disposal capacity such as MBT, RDF production, energy from waste or landfill facilities. The treatment and disposal of residual C&amp;I waste is reliant on facilities outside Herefordshire.</p> <p>This Assessment suggests that by 2030, depending on the levels of recycling and composting achieved 30,000 to 44,000 tonnes of additional recycling/composting capacity would be required, potentially increased to 60,000 to 65,000 tonnes by 2041. However, it has also been identified that there is a substantial amount of unused capacity at permitted sites already operating within Herefordshire.</p> <p>If Herefordshire is to achieve equivalent self-sufficiency in managing its residual C&amp;I wastes, additional capacity will need to be delivered to manage residual C&amp;I waste. This capacity will need to incorporate the wastes calculated to, otherwise, be disposed to landfill, resulting in a need for 61,200 to 86,800 tonnes by 2030 or 64,700 and 81,500 tonnes by 2041.</p> <p>However, this conclusion is made on the recognised uncertainties inherent with the data.</p>

Waste Stream	Capacity Need Assessment – Key Points
<b>CD&amp;E waste</b>	<p>Permitted capacity within the county is focussed on the recovery of CD&amp;E wastes, with limited disposal options.</p> <p>Based on this assessment the following capacity demand for CD&amp;E waste should be considered:</p> <p>Recovery (including recycling and re-use): 195,000 to 250,000 tonnes per annum by 2041 through permitted and exempt facilities /sites, although this is potentially covered by the existing facilities and exemptions, for example the use of waste under U1 exemptions would be considered as recovery, and over 100,000 tonnes is handled at permitted physical treatment and waste transfer/treatment facilities.</p> <p>Landfill: 20,000 to 85,000 tonnes per annum, depending on the level of recovery achieved; and</p> <p>However, this conclusion is made on the recognised uncertainties inherent with the data.</p>
<b>Agricultural waste (non-natural)</b>	<p>It is estimated that small quantities of non-natural agricultural waste are generated in Herefordshire, between 6,000 to 8,000 tonnes. Based on this level of generation, non-natural agricultural wastes should continue to be appropriately managed by the private sector, and likely within the C&amp;I waste stream.</p> <p>On-farm anaerobic digestion provides a method of managing natural agricultural wastes, including manures and slurries.</p>
<b>Hazardous waste</b>	<p>Small quantities of hazardous waste are generated within Herefordshire, estimated at 10,500 tonnes in 2015, 8,000 tonnes in 2016 and 12,000 tonnes in 2018 (a very small fraction of the 4 million tonnes consigned in England).</p> <p>In general, hazardous waste treatment and disposal facilities are considered at a national level because of the need to account for economies of scale. This is reflected in the Hazardous Waste NPS which requires final recovery/disposal hazardous waste facilities with capacity in excess of 30,000 tonnes per annum to be considered as nationally significant infrastructure projects.</p> <p>Therefore, based on the small quantities generated in Herefordshire, there would not appear to be a need for the MWLP to identify strategic locations for the management of hazardous waste within Herefordshire. Due to the location of the county, it is unlikely to be a destination chosen for a nationally significant infrastructure project, whilst smaller facilities should be capable of being accommodated on industrial estates and similar locations.</p>



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<b>Meeting:</b>	<b>General scrutiny committee</b>
<b>Meeting date:</b>	<b>Monday 28 September 2020</b>
<b>Title of report:</b>	<b>Task and finish group report - waste management strategic review</b>
<b>Report by:</b>	<b>Chair of waste task and finish group</b>

## Classification

Open

## Decision type

This is not an executive decision

## Wards affected

(All Wards);

## Purpose

To consider the Task and Finish Group's report on waste management strategic review.

## Recommendation(s)

That:

- (a) the committee considers the task and finish group's report at appendix 1; and
- (b) the committee submits the findings and recommendations to the executive for consideration.

## Alternative options

1. The recommendations proposed in the Group's report represent the Group's findings. If there are any additional recommendations that the committee wishes to make these can be considered at the meeting.

## Key considerations

2. General scrutiny committee established a task and finish group on 29 November 2019 to carry out a waste management strategic review.
3. As a Unitary Authority the council has statutory functions as both a Waste Collection Authority (WCA) and Waste Disposal Authority (WDA).
4. The waste collection contract expires on 1 November 2023, there is no further option to extend.
5. The waste disposal contract is a joint contract with Worcestershire County Council, it will expire on 10 January 2024 but has a 5 year extension option (if triggered it will extend it to 10 January 2029).
6. Alongside current contracts ending, the government's Resource and Waste Strategy for England 2018 promises the greatest change to waste policy in a generation, including a more consistent approach to waste management with the rest of Europe, Scotland and Wales. The impact of these changes will be significant in terms of resourcing, performance and cost. Practical implications are also significant, including likely changes to waste composition, new fleet requirements, waste treatment needs and of course the public expectation and acceptance of changes to the service.
7. The review focuses on how the council can best deliver its waste management service in light of expected changes resulting from the Resource and Waste Strategy 2018 and the council's own ambitions outlined in the County Plan.
8. The group's report is attached at appendix 1. The committee is asked to agree the recommendations for submission to the executive for consideration.

## Community impact

9. In accordance with the adopted code of corporate governance, Herefordshire Council is committed to promoting a positive working culture that accepts and encourages constructive challenge and recognises that a culture and structure for scrutiny are key elements for accountable decision making, policy development and review.
10. The recommendations contribute to the following priorities in the County Plan: Reduce the amount of household waste per person (kg) per year and preparing for changes proposed in Resource and Waste Strategy for England 2018.

## Environmental Impact

11. The findings and recommendations in this review support the council's [environmental policy commitments](#) in aiming to:
  - Make efficient use of natural resources
  - Minimise waste
  - Reduce greenhouse gas emission from our own activities and encourage reduction in partner organisations and those of the wider community
  - Raise awareness of, mitigate against, and adapt to climate change
  - Prevent and reduce pollution and protect our environment
  - Promote links between environmental sustainability, economic growth and wellbeing

12. It strongly supports the **County Plan's** ambitions for Herefordshire to:
  - Protect and enhance our environment and keep Herefordshire a great place to live
  - Support an economy which builds on the county's strengths and resources
13. The review makes recommendations to bring about a more sustainable circular economy where resources (materials) are kept in use for as long as possible. The recommendations (if enacted) will bring about the greatest positive impact for climate change of any initiative currently under consideration by Herefordshire Council. Furthermore the council waste management service are critical in supporting the County's economy, providing an essential service to businesses and other organisations, particularly small to medium sized enterprises, (SMEs).
14. The recommendations agreed by the committee will be sent to the executive. If agreed by the executive a full assessment of the Environmental Impact of implementing changes to our waste management service will be undertaken to be considered by Cabinet as the appropriate decision maker.

## **Equality duty**

15. Under section 149 of the Equality Act 2010, the 'general duty' on public authorities is set out as follows:

A public authority must, in the exercise of its functions, have due regard to the need to -

  - (a) eliminate discrimination, harassment, victimisation and any other conduct that is prohibited by or under this Act;
  - (b) advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it;
  - (c) foster good relations between persons who share a relevant protected characteristic and persons who do not share it.
16. If the committee agrees with the findings of the task and finish group, the report will need to be considered by the executive and, depending on their decision, due regard will need to be given to the public sector equality duty.

## **Resource implications**

17. The recommendations agreed by the committee will be sent to the executive. In considering their response an assessment of resource implications will be undertaken.

## **Legal implications**

18. The functions of the general scrutiny committee include the powers to make reports or recommendations to the executive with respect to the discharge of any functions which are the responsibility of the executive and to make reports or recommendations to council or the cabinet on matters which affect the authority's area or the inhabitants of that area.

## **Risk management**

19. The recommendations agreed by the committee will be sent to the executive. In considering its response the executive will need to assess any risks arising from the recommendations.

## **Consultees**

20. None

## **Appendices**

- Appendix 1 – Report of the Task and Finish Group – Waste, a Strategic Review.
- Appendix 2 – Waste Collection Options Assessment 2019

## **Background papers**

- None identified.

# GENERAL SCRUTINY COMMITTEE

## TASK AND FINISH GROUP

# WASTE, A STRATEGIC REVIEW



**September 2020**

# The Waste Task and Finish Group



## **Councillor Paul Symonds (Chair)**

Cllr Symonds, a resident of Ross on Wye has a wealth of local government experience. Managing waste, highways and environmental health services for a number of local authorities across England.



## **Councillor Jenny Bartlett**

Cllr Bartlett has spent 30 years working as a professional cartographer in the civil service, private sector, local authorities and utilities. As a community artist she has worked with Leominster in Bloom on the town banners and the Leominster in Stitches projects.



## **Councillor Jennie Hewitt**

Cllr Hewitt for Golden Valley North has worked as a primary art teacher in the local community. She is passionate about working to address climate change, protect the environment and restore and protect biodiversity. Prosperity without harm.



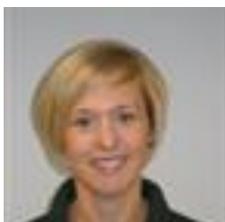
## **Councillor Kath Hey**

Cllr Hey has been closely involved in the care and development of young people she has worked to make a difference to her home city of Hereford.



## **Councillor Elissa Swinglehurst**

Cllr Swinglehurst's experience includes planning appeals, flooding litigation and drafting a Neighbourhood Development Plan. She has a huge passion for her local area and works tirelessly to help protect our communities, natural habitats and resources.



## **Nicola Percival, Waste Operations Team Leader**

Nicola is passionate about resource management and has many years of experience from developing, procuring and managing waste services through to promoting and educating the use of them across diverse communities.



## **Kenton Vigus, Waste Disposal Team Leader**

Kenton is an experienced local authority waste manager with experience of developing waste strategy and policy, procurement and service management in Rutland, Lincolnshire and Herefordshire.

## Introduction

How we produce, manage and view waste needs to change. The recent Resource and Waste Strategy 2018 outlines how England will make changes to move away from a make, use and dispose approach towards a circular economy.

Herefordshire Council is uniquely positioned to embrace this change and significantly contribute to a more sustainable future for its residents and future generations.

Herefordshire Council has a bold ambition outlined in its new County Plan:

*“Respecting our past, shaping our future – we will improve the sustainability, connectivity and wellbeing of our county by strengthening our communities, creating a thriving local economy and protecting and enhancing our environment”.*

The Council’s waste management service can contribute to this ambition. It is the only service which every resident uses, it is essential in supporting our communities every day. It supports the economy and business and is a source of job creation and economic opportunity. Recycling, treating and disposing of waste more effectively and tackling waste crime reduces emissions, safeguards resources and protects our natural environment.

In November 2019 General Overview and Scrutiny Committee established a Task and Finish Group to consider how we provide the council’s waste management service in future.

This report sets out the findings of the group and the recommended actions to the council.

# Contents

<b>Glossary</b>	<b>5</b>
<b>1. REVIEW PURPOSE</b>	<b>6</b>
<b>2. KEY CONSIDERATION</b>	<b>7</b>
2.1. Member Briefings	7
2.2. The Waste Task and Finish Group	8
2.3. The Waste Management Service	9
2.4. Waste Collection & Treatment Methodology	11
2.5. Service Delivery Options	13
2.6. Comparison of Services Elsewhere	13
2.7. Resources and Waste Strategy	16
2.8. Local Aspirations	18
<b>3. OUR VISION</b>	<b>20</b>
<b>4. OUR RECOMMENDATIONS</b>	<b>21</b>
4.1. Priorities	21
4.2. Objectives	21
4.2.1. Treating Waste as a Resource	22
4.2.2. Prioritising Public Acceptance	24
4.2.3. Maximising Reuse	26
4.2.4. Environmental Objectives	28
4.2.5. Social Value Objectives	29
4.2.6. Economic Objectives	32
4.3. Service Options	34
4.3.1. Waste Collection Options	35
4.3.2. Household Recycling Centres Options	43
4.3.3. Waste treatment and Disposal Options	44
4.3.4. Management of the Service	46
<b>5. NEXT STEPS</b>	<b>47</b>
<b>6. SUMMARY FINDINGS &amp; RECOMMENDATIONS</b>	<b>49</b>

## APPENDICIES

APPENDIX 1	RISKS
APPENDIX 2	SUMMARY TABLE OF RECOMMENDATIONS
APPENDIX 3	WASTE COLLECTION OPTIONS ASSESSMENT (2019)

## Glossary

<b>AD</b>	Anaerobic Digestion facility, a process where bacteria breakdown organic material in the absence of air. Commonly used to treat food waste to create syngas (methane) and digestate (organic residue).
<b>AWC</b>	Alternate Weekly Collection, the council's current method of collecting waste, residual one week then recycling the next.
<b>EFW</b>	Energy from Waste facility, accepts residual waste from household and commercial collections for incineration. Waste is burnt to generate steam to power steam turbine and create electrical power. Also capable of distributing heat (hot water) to local area
<b>EPRS</b>	Extended Producer Responsibility Scheme, measures detailed in the RWS 2018 that will make packaging producers responsible for (the cost of) dealing with packaging waste, similar to producer responsibility for end of life vehicles and electronic equipment.
<b>EU-CEP</b>	European Union Circular Economy Package, a set of measures to be implemented by EU member states to bring about a more circular economy, the UK Government has recently re-committed (August 2020) to implementing the same measure in the UK as required in Europe.
<b>HRC</b>	Household Recycling Centre, often known as a Household Waste Recycling Centre or Civic Amenity Site. A place where residents may deposit their own household waste.
<b>MRF</b>	Materials Recovery Facility, a place where mixed materials are sent to be sorted and segregated. Also commonly referred to as a Materials Reclamation Facility or Material Facility.
<b>RWS 2018</b>	Resource and Waste Strategy 2018. The government's strategy for how England manages resources and waste to bring about a more circular economy.
<b>Waste-TFG</b>	The Waste Task and Finish Group, established by the council's General Overview and Scrutiny Committee to undertake a Strategic Review of the Council's waste management service.
<b>WTS</b>	Waste Transfer Station, facility where waste is taken to for storage and segregation prior to onward transport to another waste management facility.

## 1. REVIEW PURPOSE

There are three main driving forces behind the need to review the council's waste management service, these are:

1. Our existing waste collection and disposal arrangements are **due to expire** at the end of 2023 and start of 2024 respectively.

There is an option to extend our joint disposal (Waste Management Services) contract by up to 5 years to January 2029. This would also extend our partnership arrangements with Worcestershire County Council. There is no further extension option for the Waste Collection Contract which will expire in November 2023.

2. Changes to waste policy are expected in the wake of the **Resource and Waste Strategy 2018** and progress through parliament of the **Environment Bill 2019-20**.

New policy and legislation will influence everything from packaging design & production to how local authorities provide their waste management services. Significantly this will see the requirement for councils to provide weekly food waste collections to all households from 2023 and make it available to businesses for a charge.

3. The council has the ambition to make sweeping changes to bring about a more sustainable county. Resource management, production and waste are significant contributors to carbon emissions\*. By making changes to how materials are used in production, minimising use of raw materials, discouraging waste, maximising reuse, recycling and recovery we will be able to bring about large reductions in carbon emissions in response to the **Climate and Ecological Emergency**.

*\*Zero Waste Scotland (ZWS) believe these factors alone to contribute to 84% of total carbon emissions in Scotland, there is no reason to believe the contribution of these factors in England is any less significant ([See ZWS Corporate Plan](#)).*

The review seeks to understand current arrangements and likely future demands of the service alongside the council's own aspirations for environmental protection, resource efficiency and carbon reduction.

Through a process of evidence & information gathering, learning from the experience of others and considering the needs and aspirations of the council the Waste-TFG have considered what the objectives for future improvements should be and different options for providing the service in future. The findings have informed the recommendations in this report.

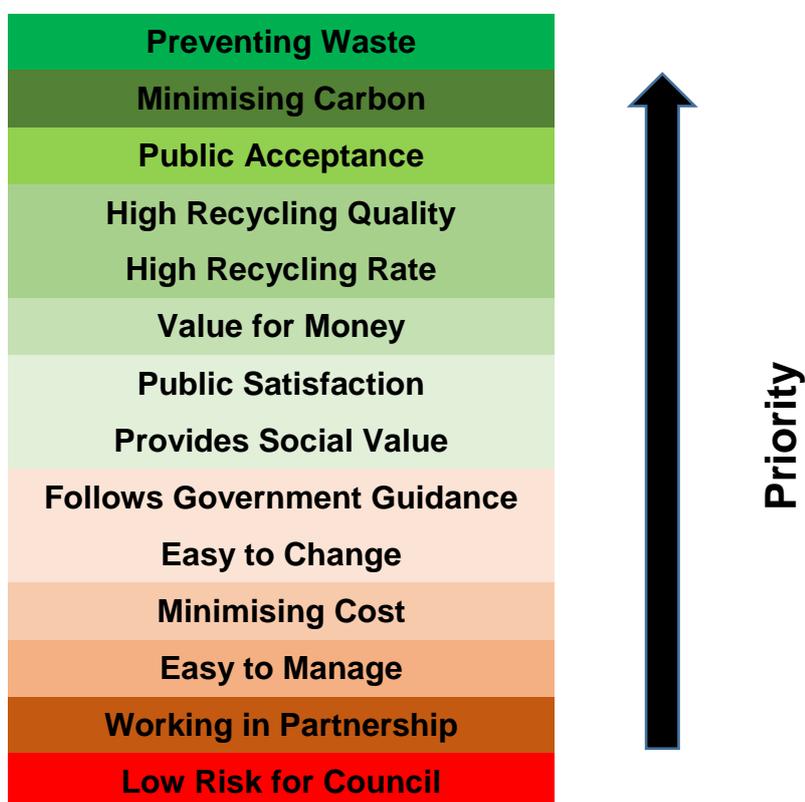
## 2. KEY CONSIDERATIONS

### 2.1. Member Briefings

In September 2019 the waste management team held two member briefing sessions to introduce the team and the service to councillors, many of whom were new to the organisation following the May 2019 elections. Members were taken through the government's Resource and Waste Strategy 2018 and what this could mean for the service and the council in future years. Some key comments from members at the briefings are captured below:

- There is confusion over what people can put in their bin
- Can we do more to encourage business waste reduction
- We need to tackle unnecessary plastics
- Household waste sites need to promote the reduce, reuse, recycle message
- Need to explore options for making use of the materials we collect more locally
- Waste composition in 5-7 years' time might be very different to now.
- We are in 4th most rural county, does the government's policy fit well with us?
- Can we combine or tailor the service for the differences between rural & urban?
- Water fountains in towns would help reduce need for plastic bottles
- Can we use electric vehicles for smaller rounds or urban rounds?
- Source separation will cause congestion in town due to the amount of time to collect
- Education is really important.

Overall 23 members took part in the briefings, at the end of each of the each sessions they were asked to rank their priorities for future delivery of the service, the combined result is provided here.



Overall members at the briefings felt our service should prioritise the prevention of waste, minimisation of carbon emissions and public acceptance. The least important were ease of

management for the council, working in partnership with others and the risks to the council. The task and finish group have considered these priorities in the findings and recommendations detailed in this report.

## 2.2. General Overview and Scrutiny Task and Finish Group

Consideration of the need for a review our waste management arrangements was made at the November 2019 General Overview and Scrutiny Committee (GOSC). The need for a strategic review of our service arrangements with contracts coming to their end and changes to policy expected was accepted. As a result, a cross party member Task and Finish Group (TFG) was established to work with officers to explore options, provide findings and make recommendations to the executive on how the council should approach these challenges.

Five members representing five political groups form the group with support for the Waste Operations Team Leader and Waste Disposal Team Leader. Details of the members of the Waste-TFG can be found at the front of this report.

## 2.3. The Waste Management Service

As a Unitary Authority, Herefordshire Council has a statutory obligation to collect, recycle and treat waste produced by residents in its area. These obligations are enshrined in law, particularly the Environmental Protection Act 1990, providing a basis for what services are to be provided and how. The law requires local authorities to:

- Collect household waste from residents in its area
- Separately collect recyclable materials from households including paper, metals, plastics and glass
- Provide a commercial waste and recycling collection service
- Provide places where residents may take their household waste.

In Herefordshire the council fulfils its obligations by providing the following services to residents:

- Fortnightly collection of mixed dry recycling from green wheeled bins
- Fortnightly collection of residual waste from black wheeled bins
- Bulky waste collection
- Clinical waste collection
- 6 Household waste & recycling centres
- A commercial waste and recycling collection service

The waste collection service is simple, residents are provided with two wheeled bins, one for mixed dry recycling (paper, cardboard, plastic containers, tins, cans and glass containers) the other wheeled bin for general (residual) waste. Each bin is collected fortnightly or on an alternating weekly basis, hence this is termed Alternate Weekly Collection. The process is simply illustrated in Table 1.

	Householder	Collection	Waste Transfer	Processing	Outputs
WEEK 1 Recycling				 40% to Recycling	Separated materials 

<b>WEEK 2</b> <b>General Waste</b>				 40% to EFW	<b>Electricity</b> 
				 20% to Landfill	<b>Gas Flare</b> 

Table 1. Herefordshire's current Alternate Weekly Collection (AWC) service. Recycling is collected one week from each property and residual general waste the next week. Each waste stream is thus collected every fortnight meaning the same vehicle can be used to collect mixed recyclable materials one week and then the general (residual) waste the next.

Our services are provided through two **outsourced\*** service contracts with private waste management companies.

\*See section on **service delivery options**, page 14

### Waste Collection Contact

**Provider:** FCC Environment Ltd.  
**Services:** Collection of recycling and residual waste, bulky collection, clinical waste and commercial waste and recycling collection  
**Commenced:** 2 November 2009  
**Expires:** 1 November 2023  
**Value:** £4m per annum

On expiry of the contract the council will retain waste collection depots located in Hereford and Leominster. These may be utilised for the continued provision of the waste collection service or be used for another purpose if not required.

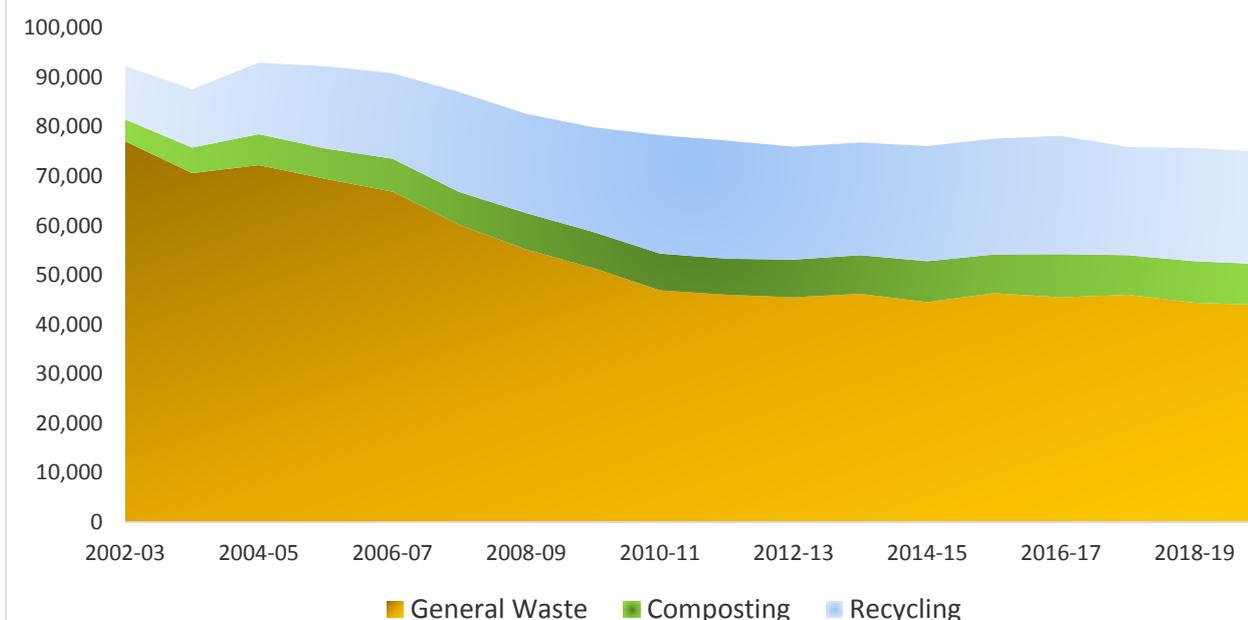
The current service of Alternate Weekly Collection (AWC) was introduced in 2014 after a contract variation was agreed. Prior to this service the council provided a fortnightly collection of mixed recycling (from a green wheeled bin) and weekly collection of general waste in black sacks.

### Waste Management Services Contract (Joint with Worcestershire CC)

**Provider:** Mercia Waste Management Ltd.  
**Services:** Waste transport and treatment (transfer stations, household recycling centres, energy from waste, materials recovery, materials handling, composting, landfill, waste transport)  
**Commenced:** Jan 1999  
**Expires:** Jan 2024 (5 year extension option)  
**Value:** £11m per annum

At the end of the contract the intention is that assets and operational resources transfer back to the councils. These are allocated to each of the two councils WCC and HC depending on the location of the asset and any sharing agreement. On expiry of the

Herefordshire Household Waste 2003 to 2020



current contract the transfer of the following assets will be made to Herefordshire Council (or appointed operator):

- Residual Waste Transfer Station Compactor Units and weighbridges in Hereford (x2) and Leominster (x1)
- Recyclable Waste Transfer Station and site office in Hereford
- 6 Household Recycling Centres
- A share (24.2%) in the Energy from Waste facility in Hartlebury near Stourport in Worcestershire.

The performance of the service has been relatively consistent since the introduction of kerbside recycling in 2009. Residents in Herefordshire currently generate 75,000 tonnes of household waste per annum. **41% sent for recycling and composting which compares unfavourably with the highest performing local authorities** (highlighted in Table 4) who achieve recycling rates around 60%. Even with the opening of an Energy from Waste facility in 2017, 20% of Herefordshire’s waste continues to be sent to Landfill. The amount of household waste produced in Herefordshire has fallen from 92,000 tonnes in 2002 to 75,000 tonnes in 2019/20 a decline of 18%.

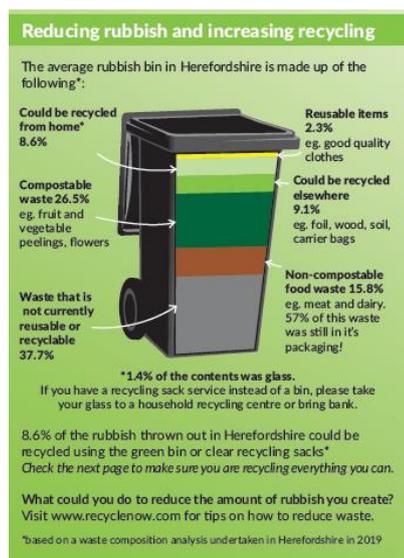
Household Waste Data	2002-03	2006-07	2010-11	2015-16	2019-20	
Waste Collected (e.g. from bins)	No data	No data	57,564	54,343	51,858	
Waste deposited at HRCs	No data	No data	20,787	23,269	23,195	
Whole Service (Collection and HRCs)	Dry Recycling	10,816	17,319	24,006	23,476	22,746
	Composting	4,433	6,657	7,400	7,794	8,311
	General (Residual)	77,092	66,862	46,944	46,342	43,937
Total Household Waste	92,341	90,838	78,351	77,612	74,993	
Recycling Rate	16.5%	26.4%	40.1%	40.3%	41.4%	

Table 2 household recycling, composting and general waste arising in Herefordshire since 2002

The recent impact of COVID-19 has seen disruption to normal services from March 2020 on, there have been temporary closures of household recycling centres and an increase in

Figure 1 Herefordshire's household recycling, composting and general waste arising since 2002

collected household waste. Although all services are now operating (from July 2020) it is likely there will be noticeable consequence on service performance in 2020-21.



An analysis of our residual waste (waste presented in black bins) was carried out in 2019. Only 8.6% of the contents was recycling items that could have been put into the green recycling bin. This is a **reduction from 12.4%** from a similar analysis carried out in 2011. This suggests that Herefordshire residents are good at separating waste for recycling at the home.

The most significant finding of the analysis was the amount of compostable waste (suitable for home composting) and food waste (suitable for food waste treatment). These two components made up over 40% of our residual waste. **Another finding was that over 57% of the food waste component was food still in its original packaging.**

The **simplicity of the current service**, both from the point of view of the user and in terms of practical delivery, is **recognised as a strength** by the Waste-TFG. Each household is provided with two wheeled bins, presented for collection on the same day and time on alternating weeks and no requirement to separate recycling out into different bags, boxes or bins. The service utilises a relatively small fleet of vehicles for the size of the county (20 household rounds). The vehicles are commonplace single compartment refuse collection vehicles.

Understanding that changes are almost certain to be required in future, the Waste-TFG have considered future requirements, compared the key options for delivering the service, service provision elsewhere and our own experience, needs and aspirations.

## 2.4. Waste Collection and Treatment Methodology

The analysis below provides a description of common collection methodology.

Collection Methodology	Description
Kerbside Sort	Recyclable materials are separated by residents into different containers and collected separately at the same time in different compartments on the collection vehicle, called a kerbsider. Materials are commonly presented by residents in 2, 3 or 4 60-90 litre boxes for collection. Crews can further sort, if required, into a greater number of compartments on the vehicle to gain a high degree of separation. Often further sorting is required, for example for plastics and metals before material is sent to on to re-processors.
Co-mingled Collection	All recyclable materials are placed by residents into one container for collection at the same time. This is Herefordshire's current recycling collection methodology.
Two Stream	Recyclable materials are separated into two different containers by residents to be collected by one or two different vehicles at the same or different times. For example paper and card in one container, plastics, and metals and glass in the other. You could have more than two streams.
Food Waste	Food waste is normally collected separately, but in one example above it is co-collected with garden waste. Commonly it is presented weekly by residents in small caddies that are collected

	by a dedicated vehicle or a separate compartment (pod) on a collection vehicle.
Garden Waste	Where provided separate collection is usually from a wheeled bin collected on a fortnightly basis. It can be seasonal with no service provided in winter months. Councils may make a charge for collection but may not for the treatment cost.
Frequency	Frequency can vary between different waste types and the type and size of container provided to store it prior to collection.
Container Types	Wheeled bins, boxes, reusable sacks and single use plastic sacks are all common for recycling collections. Wheeled bins and single use plastic sacks are common for residual waste. Caddies (around 20-30 litres) are common for food waste collection.

Table 3. Examples of waste collection methodology

The collection methodology in turn can influence options used for treating the material collected.

### ***Recyclable Treatment***

For mixed recycling collections (currently provided by Herefordshire Council) a sorting facility is required to separate the mixed materials back out into different material types. Here a range of mechanical and manual sorting techniques are employed. These are called by a number of names but the most commonly used is Materials Recovery Facility or MRF.

You can have simple MRF's separating out 2 or 3 different material types or complex ones sorting out many different material types. The more materials the more complex the sorting requirement and greater the likelihood of cross contamination and poorer recycling quality.

### ***Storage and Separation***

Where materials are separately collected they can be delivered straight to market. As it is uncommon for recyclable material re-processors or merchants to be located conveniently, materials are often stored in large warehouses. Materials may be stored loose or bailed ready for transport to market.

### ***Residual Waste Treatment***

For residual waste the most common treatment methods are Energy from Waste and Landfill, Mechanical Biological Treatment and Alternative treatment technologies are less common but have been used where councils have made a decision to avoid both Landfill and Energy from Waste.

### ***Anaerobic digestion***

Where food waste is separately collected it can be treated via anaerobic digestion. In this process bacteria are encouraged to digest food waste in the absence of oxygen to create methane gas. This can be extracted and used to generate power or exported to the gas grid. A residue or digestate is produced that can be applied to land to offset fertilizer use.

### ***Composting (Windrow and In-Vessel)***

Used for the composting of garden waste and treatment of food waste, however for the latter this needs to be in an enclosed area or container to prevent odour issues. Unlike anaerobic digestion no gas and thus no power is produced but it is a low tech and low cost treatment.

## 2.5. Service Delivery Options

As well as how the service is practically provided there are also many options for how local authorities may deliver waste management services. A summary is

Delivery Options	Description
In House Service	Practical service delivery is managed and provided by the council. This could be through direct employees of the council or through an arm's length operating company.
Outsourced	The service is provided by a third party for example a private company or non-profit making organisation.
Partnership	The council provides a service in partnership with a third party. It is different to an outsourced service in that practical and financial risks and benefits may be shared. For example a private operator and the council could be joint shareholders in the operation of an energy from waste plant.
Integrated	The whole service is provided by a single provider. This could be for a waste disposal service only or for a combined waste collection and disposal service. There are examples of both in table 1.
Aggregation/ Disaggregation	Where services are either combined together or split up into different service types. This could join up services of a similar nature or split up those which have different management and operational requirements. This can have benefits of creating efficiencies or encouraging competition from smaller, local and specialist suppliers
Combination	A mix of some or all of the above

*Table 4 Examples of different approaches for providing waste management services*

To help with their understanding and inform recommendations the Waste-TFG have sought to best understand the many options available to Herefordshire Council. This has been hampered somewhat by the COVID 19 crises, meaning much research has had to be carried out through desk based study and correspondence.

## 2.6. Comparison with Services Elsewhere

The waste management service is a large practical service, encompassing customer management, logistics, fleet management, asset management, engineering and materials handling. The redesign and commissioning of such a service is complex, there are many options for what services are provided and how they are delivered.

The Waste-TFG has considered a range of services provided elsewhere, focussing on those local authorities that have similar rural characteristics to Herefordshire. The Waste-TFG have also focussed on local authorities that:

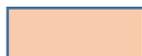
- Are Unitary Councils like Herefordshire
- Services are already aligned to expected future requirements
- Are in the top 10 Unitary Councils in terms of recycling performance
- Have rural Characteristics (only Milton Keynes has been excluded)
- Report costs less than those of Herefordshire Council

Table 3 provides an analysis of the nature, performance and cost (both overall and per household) of services provided elsewhere. These are colour coded to indicate those authorities providing either a kerbside recycling sort, twin stream recycling or co-mingled recycling style of service. This is useful for comparing different service options later in this report.

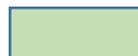
Kerbside Sort



Twin Stream



Comingled



Unitary	Household No.	Service Provided	How Delivered	Cost (pa)	Recycling Rate
Herefordshire	85,000	Fortnightly Mixed Recycling Fortnightly Residual	Waste Collection Contract (£4m) Waste Disposal Contract (£11m)	£15m (£176 per household)	41.3%
East Riding	155,000	Fortnightly Mixed Recycling Fortnightly Garden and Food Waste Fortnightly Residual	Residual Waste Treatment Contract MRF Contract HWRC Contract Organics Contract In House Collection (£9m)	£21m (£135 per household)	64.8%
Dorset Waste Partnership  DWP CEASED TO EXIST END 18/19	201,000	Fortnightly Mixed Recycling Fortnightly Glass Weekly Food Waste Fortnightly Residual Waste Fortnightly Garden (Charge)	DWP running services on behalf of Dorset's local authorities In house collection (£9m) Residual Waste Treatment Contract (£11m) HRC, WTS, Haulage, MRF (£9m)	£30m (£149 per household)	59.6%
Cheshire West and Chester	156,000	Weekly Kerbside Sort Weekly Food Waste Fortnightly Garden Fortnightly Residual Waste	Waste Collection and Recycling Contract (£7.9m) Residual Treatment Contract (£6.5m) HWRC Contract (£2.5m)	£15.5m (£99 per household)	59.0%
Isle of Wight	71,000	Fortnightly mixed recycling Fortnightly paper and card Weekly Food Waste Fortnightly Textile Fortnightly Garden (Charge) Fortnightly Residual Waste	Integrated Waste Collection and Disposal Contract (£9m)	£9m (£127 per household)	55.7%
North Somerset Council	96,000	Weekly Kerbside Sort (inc textiles) Weekly Food Waste Fortnightly Garden (Charge) Fortnightly Residual Waste	Collection & HWRC contract (£7m) Disposal & WTS contract (£4.5m) MBT (£1.7m) (West of England Waste Partnership)	£14.6m (£152 per household)	58.7%
Bath & North East Somerset	82,000	Weekly Kerbside Sort Weekly Food Waste Fortnightly Residual Waste Fortnightly Garden (Charge)	(West of England Waste Partnership)	£14.5m (£177 per household)	58.7%
South Gloucestershire Council	117,000	Weekly Kerbside Sort Weekly Food Waste Fortnightly Residual Waste Fortnightly Garden (Charge)	(West of England Waste Partnership) Collection & Disposal contract	£18m (£154 per household)	57.8%

Rutland County Council	17000	Fortnightly mixed recycling Fortnightly residual Fortnightly garden (Charge)	Integrated contract for KS collections, transport, streets & ground maintenance Separate contracts for treatment of recyclables, compostable and residual	£2.9m (£170 per household)	56%
North Lincolnshire Council	75000	Fortnightly Kerbside Sort Fortnightly Residual Waste Fortnightly garden		£13.2m (£176 per household)	55.6%

Table 5. Comparison of Unitary Councils with food waste collection and similar characteristics to Herefordshire (source Defra waste stats 2018/19, Revenue Outturn (RO5) 2018/19 and respective council financial reports) Only Milton Keynes in the 10 top ten are excluded as a non-rural authority.

The analysis illustrates that all three main types of recycling collection methodologies are represented in the top performing (for recycling) Unitary Councils. 7 of 9 provide a weekly food waste collection and the remaining two have extensive garden waste collection services.

In the year the data was gathered North Lincolnshire, Cheshire West & Chester, and East Riding all provided a free garden waste collection service. Rutland had recently decided to introduce a charge. Free provision of garden waste can make a significant contribution to recycling performance. Garden waste is heavy and for residents it is simpler and more convenient to use a free council collection than avoiding the waste or composting it at home. Making a charge however continues to encourage avoiding garden waste and/or home composting.

The cost of service provided (per household) in each Unitary Council all tend to be lower or at least equivalent to Herefordshire's current service cost's. It should be highlighted that all of the council listed provide additional services to Herefordshire, whether it be food waste collection and/or free or chargeable garden waste collections.

## 2.7. Resource and Waste Strategy 2018 and the Environment Bill

The Resource and Waste Strategy 2018 (RWS 2018) introduces a raft of measures to adopt a circular economy approach. It is a strategy for England reflecting already enacted policy changes in Scotland and Wales.

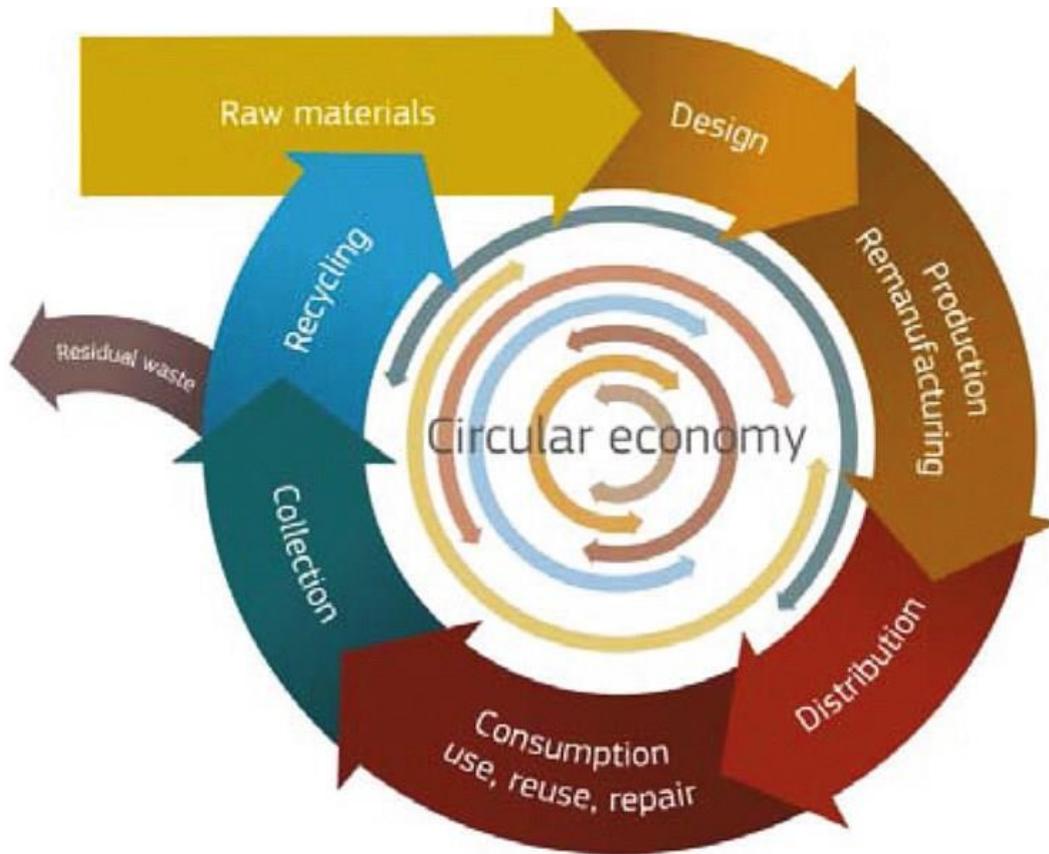


Figure 2 the Circular Economy

The strategy is broadly in line with the EU Circular Economy Package which has been in development for some years, if enacted in full it will mean our waste policy, legislation and targets will remain aligned to with those in Europe.

The implementation of new policies is expected in 2023. The timetable provided in *figure 2* outlines the government's expectations on when policies will be transposed to legislation and implemented. For local authorities the key year is 2023 when we expect to see the implementation of requirements for separate food waste collection, extended producer responsibility and deposit return schemes. How this schedule will be impacted by the COVID-19 pandemic is unknown.

The key measures in the Resource and Waste Strategy are:

- Extension of producer responsibility for packaging producers, meaning they will pay for the cost of dealing with packaging waste
- Possible bans for plastic materials where sustainable alternatives exist
- Consistent recycling collections (all local authorities collecting the same materials)
- Compulsory weekly food waste collection
- Separate garden waste collection
- Initiatives to encourage urban recycling
- Initiatives to tackle waste crime

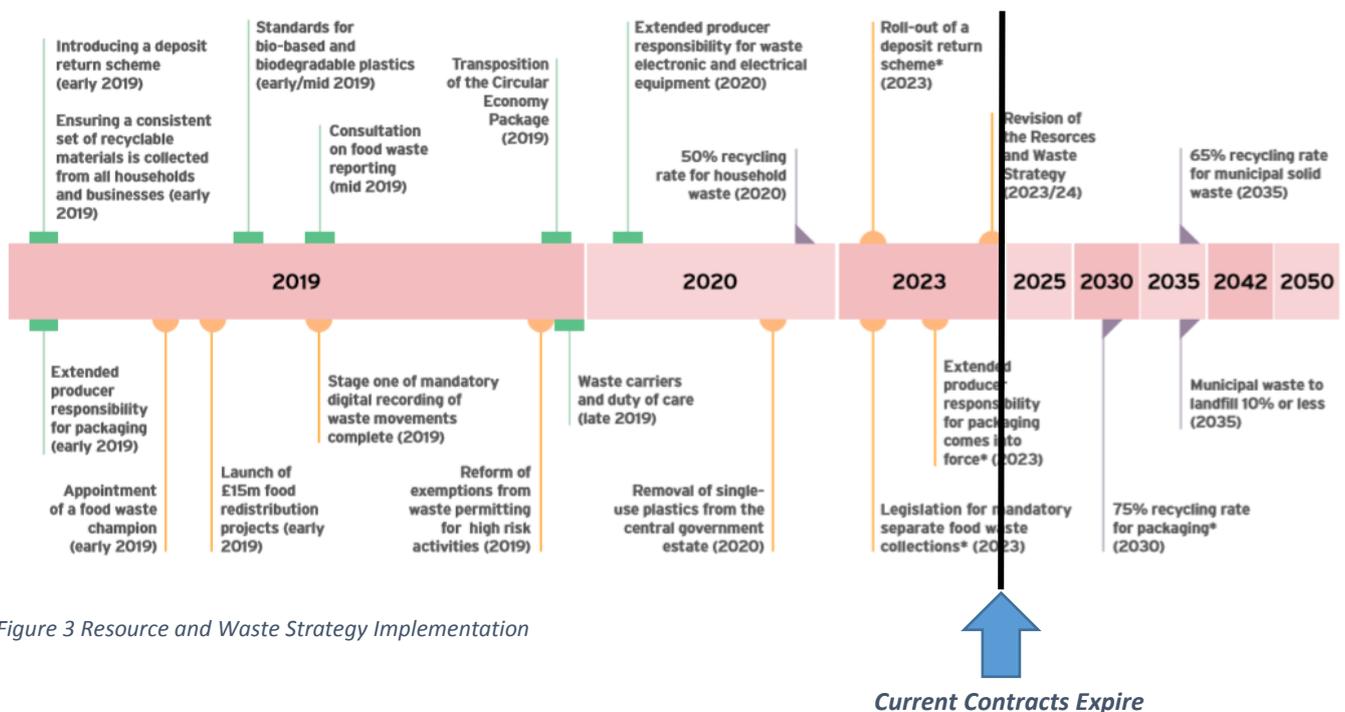


Figure 3 Resource and Waste Strategy Implementation

The Environment Bill making its way through Parliament is expected to make required changes to legislation to enact or enable these measures to be implemented. No targets are set within the bill, however we anticipate the following targets as these are consistent with the EU Circular Economy Package (EU-CEP):

- a preparation for re-use and recycling (including composting/anaerobic digestion) target of 55% of municipal waste by 2025;
- a preparation for re-use and recycling (including composting/anaerobic digestion) target of 60% of municipal waste by 2030;
- **a preparation for re-use and recycling (including composting/anaerobic digestion) target of 65% of municipal waste by 2035 (RWS 2018 Target);**
- a gradual limitation on landfilling of municipal waste, to 10% by 2035;

The RWS 2018 included the target to recycle and compost 65% of municipal waste (household and household like commercial waste) by 31 March 2035, mirroring the target in the EU-CEP.

If adopted, it is not clear how these targets will flow down to local authorities, the national target of 50% recycling and composting by 31 March 2020 is a national target, however in the past there have been statutory recycling targets imposed on local authorities.

## 2.8. Local Aspirations

Herefordshire Council recently produced its County Plan 2020-24 setting out what it plans to achieve in the four years of the plan. The focus is on three areas, the Environment, Communities and the Economy. The waste management service contributes to all these aims directly contributing the plan objectives highlighted below:



# Our ambition for Herefordshire

## Environment

Protect and enhance our environment and keep Herefordshire a great place to live

Minimise waste and increase reuse, repair and recycling

Build understanding and support for sustainable living

Invest in low carbon projects

Identify climate change action in all aspects of council operation

Seek strong stewardship of the county's natural resource

## Community

Strengthen communities to ensure everyone lives well and safely together

Ensure all children are healthy, safe and inspired to achieve

Ensure that children in care, and moving on from care, are well supported and make good life choices

## Economy

Support an economy which builds on the county's strengths and resources

Develop environmentally sound infrastructure that attracts investment

Use council land to create economic opportunities and bring higher paid jobs to the county

Invest in education and the skills needed by employer

Protect and promote our heritage, culture and natural beauty to enhance quality of life and support tourism

Spend public money in the local economy wherever possible

Herefordshire Council's Principles:

- Partnership**     *We collaborate to maximise our strengths and resources*
- Resilience**     *We use resources wisely so Herefordshire is fit for future generations*
- Integrity**     *We make decisions based on evidence and work with respect, openness and accountability*
- Democracy**     *We strengthen local democracy, decision making and service delivery and involve more young people*
- Engagement**     *We listen to and learn from our communities and help people connect through culture, creativity and care.*

A strong theme of the county plan is to meet the challenge of climate change and ecological harm. Declaring a **Climate and Ecological Emergency** Herefordshire Council has agreed to:

- Accelerate a reduction of emissions and aspire to become carbon neutral by 2030/31.
- Deliver an updated carbon management plan and associated action plan for Council emissions by April 2020.
- Work with strategic partners, residents and local organisations to develop a revised countywide CO2 reduction strategy aspiring for carbon neutrality by 2030.
- Use 100% renewably sourced energy where this provides the best carbon reduction return on investment.

We know that waste management activities are a significant contributor to carbon emissions. Zero Waste Scotland estimate that waste management activities contribute over 12 million of Scotland's total 76 million tonnes of emissions ([view source](#)). This is equivalent to the combined emissions from all transport and domestic energy use in Scotland. It is reasonable to assume these estimates are applicable to other parts of the country including Herefordshire. Zero Waste Scotland estimate a further 52 million tonnes of emissions arise from the use of materials in the making of products. Here too, good waste management practice can help create a more circular economy, reducing, reusing and recycling materials so that they stay in use for longer, offsetting use of raw materials and reducing carbon emissions.

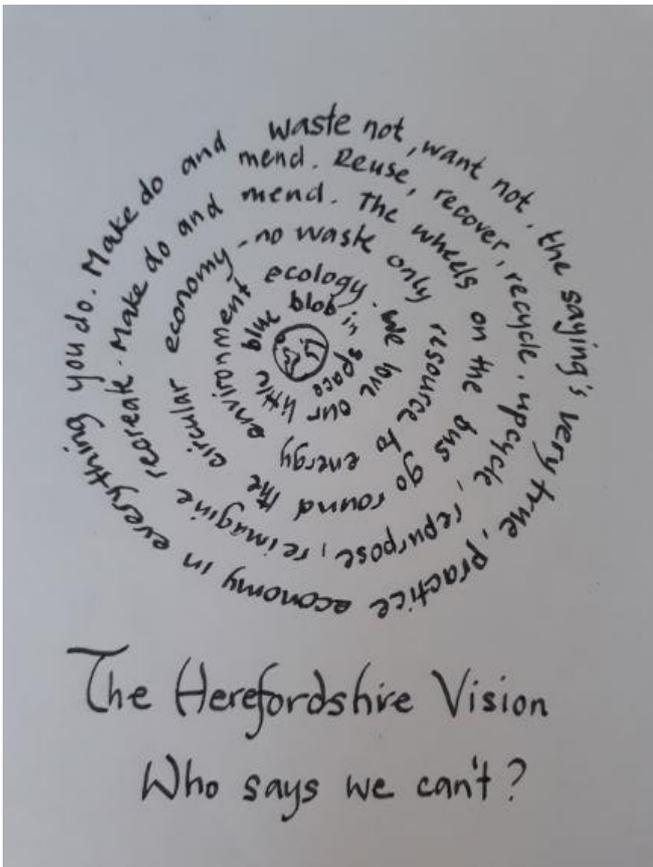
By making positive changes to our waste management service we can bring about a more circular economy for Herefordshire. We can reduce use of natural resources, make sure materials are in use for longer by creating opportunities for re-use and recycling. If data highlighted by Zero Waste Scotland is accepted, we can make perhaps the single biggest contribution to the council's objective for the county to be carbon neutral by 2030.

### 3. OUR VISION

The Waste Task and Finish group quickly expressed the need for us to no longer think of unwanted materials as waste but as a resource.

We have created a vision for the management of waste in Herefordshire, which encompasses the views of the Waste-TFG on how waste needs to be seen and managed in future.

Waste not, want not...we value resources and their use. We will reduce resource consumption and embrace the circular economy to maximise the life of products and materials. We treat the materials we collect as resources not waste.



## 4. OUR RECOMMENDATIONS

**All the recommendations in this report are considered essential.**

### 4.1. Priorities

Throughout the process key themes have emerged as priorities for the Waste-TFG, these are:

#### 1. Treat Waste as a Resource

We must treat waste as a resource, adopt a circular economy, maximising reuse, recycling and recovery of waste to protect natural resources and minimise carbon emissions relating to waste management activities.

#### 2. Prioritise Public Acceptance

Evolution of the current service has been very successful in promoting public participation, evidenced by the reduction in suitable recyclable material remaining in residual waste. We must make sure that the services we provide are user friendly to maximise proper use of the service, and the amount and quality of recyclable material gathered. We should consider different approaches to waste collection for certain housing types, such as flats and communal developments to maximise participation.

#### 3. Maximise Reuse

We must consider how we can maximise the reuse of useful materials, particularly at Household Recycling Centres. Currently too much useful material is lost. We should facilitate opportunities for materials to be extracted from the waste stream, for them to be reused and re-purposed by businesses, charitable organisations and the wider community.

### Recommendation 1

**The council adopts the three priorities of TREATING WASTE AS A RESOURCE, PRIORITISING PUBLIC ACCEPTANCE and MAXIMISING REUSE as corporate priorities for waste management.**

Adopting these principles as part of our county plan will provide leadership and direction for future decisions. The principles highlight the need for a more efficient circular economy, using our natural resources wisely as well as council resources, whilst reflecting the need to ensure our service are accessible and user friendly.

Measurement of our success in meeting these priorities will be through monitoring and reporting our recycling rate, diversion from landfill, participation rate (for recycling) and amount of waste diverted for re-use.

## 4.2. Objectives

### 4.2.1. Treating Waste as a Resource

In the future we will need to adopt a circular economy approach using resources efficiently and reducing the amount of waste we create. A circular economy will see us keeping resources in use as long as possible, so we extract maximum value from them. We will seek to reuse, recycle, recover and repurpose materials whenever we can, giving them a new lease of life and preventing them from becoming a waste. The Waste-TFG consider the following objectives are appropriate for enabling the council to achieve this, and have included recommendations alongside these objectives that would allow the council to meet them.

We will:

- **Prevent waste through investing in measures, campaigns and initiatives to educate, incentivise and encourage the public to reduce waste.**
  - We could limit residual capacity further to encourage residents to use existing and future recycling services. ([See WRAP](#) research on impact of limiting residual capacity)
  - Support residents to reduce the amount of food waste generated; making the most of the food they buy, encouraging smarter shopping, planning meals and using up leftovers
  - Continue to provide advice and support to those composting at home to reduce the amount of garden waste generated
  - Link in with national and local initiatives such as Love Food Hate Waste, and the Herefordshire Carbon Plan (Food Alliance). To enhance work we do, enable the community to be involved and support positive outcomes in reducing food waste and its impact on the environment.

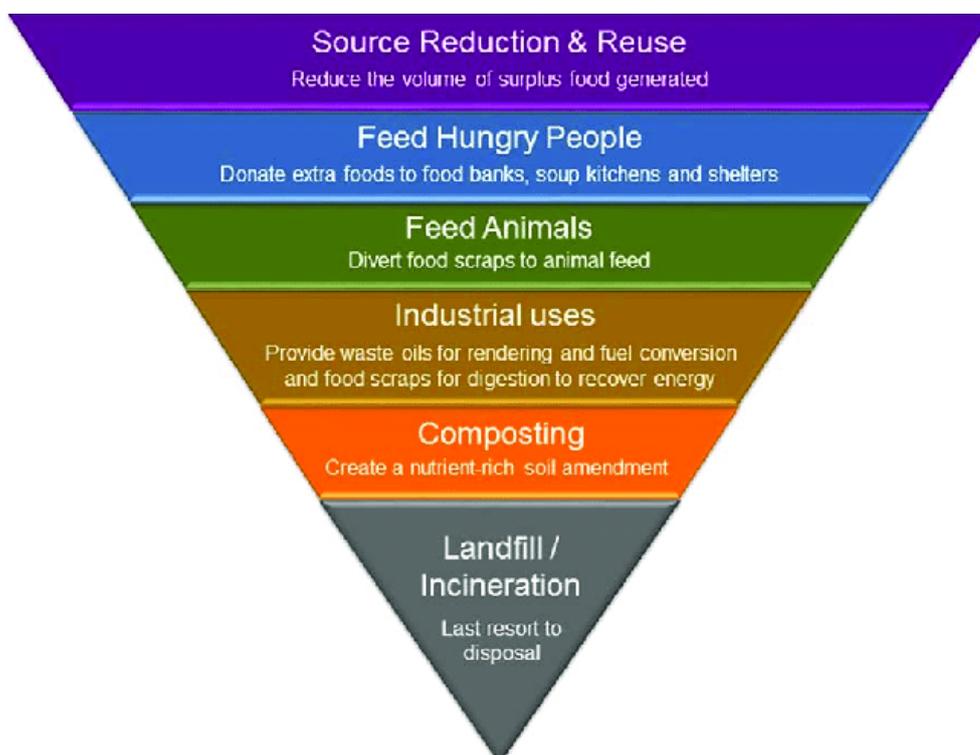


Figure 4 The food Waste hierarchy listing desired actions and behaviours with the most important at the top and least desired action at the bottom.

## Recommendation 2

The council allocates resource to prevent waste from households, restricting residual capacity and investing in waste prevention campaigns and home & community composting initiatives.

Preventing waste will help both residents and the council save money. Residents through food waste prevention initiatives that help people to buy only what they need and the council as it will not need to pay for the cost of collecting and treating the waste avoided.

In recent years the council has been successful at reducing waste, particularly general residual household waste. This has resulted in a saving of over £500,000 per annum since 2011.

In terms of resource a dedicated member of staff with a small budget to manage waste prevention initiatives and waste communications in support of the service is recommended.

**The council should set a target to reduce the amount of non-recyclable waste from 530 kg per house per annum (19/20) to 400 kg per house per annum by 2030**

- **Maximise the quality and quantity of recycled materials to improve market opportunities and income generation potential**
  - Work with re-processors, considering material types and quality requirements to ensure we have secure markets for the materials we collect
  - Continue to investigate recycling opportunities for new material streams, both at Household Recycling Centres and the kerbside where reliable markets are available
  - Consider new collection systems and technologies that actively encourage residents to segregate more of their waste for recycling
  - Opportunities for using materials locally are actively explored. We work closely with partner organisations such as NMITE to develop reuse (repair and upcycling) capacity and encourage material re-processing to be established locally to turn waste into useful products minimising use of natural resources.



Figure 5 Swedish up-cycling mall (left) and Studio Mirai in Leominster (right)

### Recommendation 3

**The council prioritises the quality of recyclable material to increase its value and marketability. Secondly the council continually reviews and invests in increasing the quantity of material sent for recycling.**

We must ensure that the recyclable materials we collect can be treated as a resource. We should design services that will encourage better quality materials to be collected so we are more likely to find outlets for them to use as a resource to turn into new products.

After quality we need to consider the best approach to maximise the quantity of materials collected for recycling. We can do this by ensuring our services are accessible and easy to use but also through investigating new opportunities and technologies that make the collection and recycling of materials possible. Our service needs to remain flexible enough to be able to accommodate these opportunities.

**The council should adopt, as a minimum, targets to allow us to achieve the Resource and Waste Strategy 2018 objective of 65% recycling and composting by 2035:**

- **To recycle or compost 60% of household waste by 2025**
- **To recycle or compost 60% of both household and commercial waste by 2030**
- **To recycle or compost 65% of both household and commercial waste by 2035**

#### ○ **Adopt a zero waste to landfill approach**

- Only send waste to landfill where there is no other viable alternative, this may include inert residues from recycling and recovery treatment processes and hazardous wastes such as cement bonded asbestos.

### Recommendation 4

**The council adopts a zero waste to landfill policy, sending only waste that cannot be recycled or recovered. This will minimise loss of resource and minimise harmful emissions, such as carbon and leachate.**

The Resource and Waste Strategy 2018 sets an ambition to eliminate food waste to landfill by 2030. It also includes a longer term target of limiting municipal waste to landfill to a maximum of 10%. **In 2019/20 we sent 20% of our waste to landfill.** The Waste-TFG consider that with our shared Energy from Waste Facility we should be doing better to avoid landfill. In order to consider waste as a resource only waste for which there is no other alternative should be sent to landfill

**The council should adopt a target of no more than 1% of household waste to be sent to landfill from 2025.**

#### 4.2.2. Prioritising Public Acceptance

It is essential that the services we provide are user friendly and accessible to everyone. Herefordshire is a predominantly rural authority with large areas of sparse population. However this is in stark contrast to the urban areas of Hereford and the market towns. We must ensure our service reflects this, carefully considering our services so we can provide a high quality, easy to understand and accessible service. We will:

- **Ensure waste management services are user friendly and accessible to all**

- Consult with the public and business customers on proposed changes to the service to encourage their input into how they are provided to help ensure they are accessible and user friendly.
- Provide tailored solutions where the nature of housing and access can pose waste collection problems and create barriers to participation in recycling services. This can include town centres, communal developments and difficult to access rural areas where typical issues are limited waste storage, lack of suitable presentation points and poor access for normal refuse collection vehicles. By considering different solutions (alternative vehicles, containers, collection frequencies, communal recycling, etc.) we can maximize participation and compliance.
- Provide assisted collection services to support vulnerable less able bodied people to access our waste management services.
- Reconfigure our Household Recycling Centres to prioritise reuse and recycling opportunities, making sure they are accessible, user friendly and operatives provide quality assistance and guidance to residents.

## **Recommendation 5**

**The council ensures services are accessible and easy to use for all. Providing practical alternative solutions where possible/appropriate so that all residents and business customers can reasonably access them and be encouraged to manage waste safely and in accordance with our service.**

The Waste-TFG consider public acceptance a key factor in the design of any services we provide. We must ensure that the public are included in the process of delivering any changes to our service through effective engagement and consultation. This does not mean that only the collection method residents prefer will be adopted, but that their preferences will be taken into account, balanced with financial and environmental impacts.

Through learning from our own experiences and those of other Local Authorities we can also consider what approaches may work best for Herefordshire residents and business customers.

Although we may need to consider different approaches in different areas of the county (such as town centres & communal developments) we want the service to be as consistent as possible from the user's perspective.

**Participation rate will be measured and monitored for different housing types and demographics to inform where use of the service could be improved and the success of those improvements measured.**

- **Communicate service information to residents and businesses so they can make best use of the services**
  - Provide an education service so that we can raise awareness of the importance of proper use of our services and benefits of reducing, reusing and recycling waste.
  - Provide up to date and simple guidance to residents and business customers on the council's website, through social media and printed guides.
  - Respond to customer enquiries and provide written and verbal assistance to help residents and businesses manage their waste safely, legally and to deliver better environmental outcomes.

## Recommendation 6

**The council allocates resource to provide effective communication initiatives with residents and businesses to promote proper use of the service and to help maximise waste reduction, reuse and recycling.**

Alongside ensuring we have an accessible and user friendly service the Waste-TFG consider that effective communication is essential to help our residents and business customers use it in the right way. Effective communication will help reduce problems relating to the provision of the service and encourage better quality and quantity of recycling, reducing cost and increasing revenue.

Communication and education initiatives can be provided efficiently and effectively sharing resource used to provide waste prevention campaigns and initiatives.

### 4.2.3. Maximising Reuse

Opportunities for reuse are currently provided through textile banks and re-use containers located at Household Recycling Centres. Charity shops also provide an essential means of reusing many materials and these are supported by the council with a limited number of disposal permits to allow free disposal at the councils waste transfer stations. However the task and finish group see the potential for much more. Developing opportunities for reuse is a clear priority for the group particularly through the council's Household Recycling Centres service where useful materials are currently being wasted.

The Waste-TFG found that re-use initiatives have the potential to help deliver social value across a range of areas. Making materials available for re-use and supporting people and organisations to facilitate re-use of materials can provide opportunities for learning and development, offer employment opportunities as well as support disadvantaged people on low incomes. Two case studies are illustrated below to highlight both the resource management benefits and social value of re-use initiatives.

The current pre-booking system at HRCs has been very effective in managing demand which avoids queuing and gives time for operatives to advise customers on reuse options. This system should be retained and HRC staff trained to help minimise residual waste.

To maximise re-use we will:

- **Develop reuse opportunities throughout the service to maximise the amount of useful material made available for re-use**
  - Separate and make materials available for community use to increase opportunities for reuse and recycling
  - Maximise the quantity and quality of reuse of materials from Household Recycling Centres
  - Provide a "scrap store" facility to enable organisation to access materials for arts, crafts and other useful purposes and to support educational establishments.
  - Where possible the council re-use materials and/or distribute useful and needed materials (such as furniture and household goods) to organisations that can use them.
  - Enable the community, business, voluntary and charity groups to increase amount of waste diverted for re-use and recycling.

- The council should take advantage of current restrictions on service provision that have had the effect of creating capacity at the council HRCs. With less visits being made these facilities are quieter providing the opportunity for efforts to be made to separate materials for re-use. This could be achieved by re-tasking existing contractor's staff.

## Recommendation 7

**The council designs new services to expand reuse opportunities through both the household collection service and the Household Recycling Centres. Existing opportunities to extract reusable materials are explored and implemented.**

The Waste-WFG believe that there are many social and commercial opportunities to be explored with reuse. A modest resource could help extract valuable materials so that they can be repaired, repurposed, upcycled and reused. Any costs will be recovered from savings in waste disposal cost, generating income from the materials and added social value.

In the short term the council develops a re-use facility to enable suitable items and materials to be diverted from waste (see case studies below). Such initiatives will very likely support the council's objectives and indicators being considered as part of its **corporate social value framework**.

**The council should adopt a target to increase the current levels of reuse of 20 tonnes per annum to 500 tonnes per annum by 2025**

## Case Study 1 – Reuse in Leicestershire, Leicester and Rutland



### Laying the foundations to double re-use

How research provided the catalyst for a new approach to re-use in Leicestershire, Leicester City and Rutland

**Three neighbouring local authorities – Leicestershire County Council, Leicester City Council and Rutland County Council – were increasingly conscious that more could be done to drive re-use in their region. Though there was some bulky waste re-use taking place, via a number of routes, no-one was certain how much waste was being diverted from landfill, nor how much more could be diverted.**

**WRAP support helped answer these questions. Detailed research identified that over 1,390 tonnes of bulky items were being diverted into re-use by local furniture re-use organisations – but also that there was potential to almost double this in four years. With this target in mind, the local authorities, working with the third sector and waste contractors, agreed an action plan to achieve that level of re-use. The first actions in this plan took place in Summer 2013.**

*"The process of developing the Re-use Action Plan has been invaluable in bringing together the different stakeholders required to increase re-use and develop a more sustainable re-use sector. It will provide a road map for how we can all work together."*

James O'Brien, Team Manager - Programme Co-ordination,  
Leicestershire County Council

#### At a glance

- Quantified current levels of re-use across the region
- Identified potential to double the volume diverted from landfill
- Delivered a comprehensive action plan involving all parties – local authorities, private sector, third sector
- Advised local furniture re-use organisations on how to increase their capacity
- Established a local re-use network, which has now been appointed to supply re-usable items to the Leicestershire Welfare Provision service (Social Fund)
- Working towards setting up a WEEE repair facility



The three local authorities hope to nearly double re-use from ca. 1390 tonnes to ca. 2600 tonnes by 2017/18.

## Case Study 2 – Reuse in Surrey



# Increasing re-use by combining resources

How the Surrey Reuse Network enables its members to make a bigger impact on waste than they could do alone

Since receiving the backing of Surrey County Council as part of its resource-led waste strategy, the Surrey Reuse Network has gone from strength to strength.

As a co-ordinated network, it is able to share resources and win large-scale local authority contracts for bulky waste collection. It is also now the primary supplier of goods to Surrey's Local Assistance Scheme (LAS), the new crisis fund for people in real hardship, and making a sizeable contribution to the Council's target of diverting 2,000 tonnes of furniture and white goods from landfill through re-use in the community.

Each of the individual Furniture Re-use Organisations (FROs) involved has seen their own returns increase, meaning they can help more people in need.

*"After three years, the SRN has achieved more than we expected. Some members have doubled their incomes, increased tonnages and significantly increased the number of people they assist."*

Alex Green, Social Purpose Group. Interim Manager of the SRN

### At a glance

- Formally established in 2010; now a registered charity and company limited by guarantee
- Currently diverting ca.600 tonnes of furniture from landfill each year – up 22% in 2012-13 compared to 2011-12
- By combining resources, the FROs have been able to set up a single 0800 number and online booking system for collections, run joint communications campaigns and win local authority contracts
- Re-use shop leased to SRN achieved turnover of £30k+ in first six months
- Assisting over 5,000 low-income households, and offering volunteering/ work-based training opportunities to 400 people a year
- Benefited from invest to save approach from Surrey County Council



### 4.2.4. Environmental Objectives

Waste management activities are a significant contributor to carbon emissions, Zero Waste Scotland believe this contribution is 15% of Scotland's total carbon emissions.

The service relies on large HGV vehicles to provide the service. Given the quantity of waste to be collected there are no real alternatives to HGV vehicles to facilitate the collection and movement of waste. However we can limit the impact of these large vehicle movements through a range of measures such as:

- Ensuring waste and recycling collection rounds are optimised
- Using in cab technology and round management systems to assist crews in reducing missed collections and helping to plan routes.
- Exploring the use of and incorporating alternative fuel vehicles such as electric and hydrogen fuel cell into the fleet where practical, for example by using smaller alternative fuel vehicles in difficult to access areas.

With waste treatment and disposal we should encourage local re-processing, to accept, re-use, recycle and treat materials more locally. We should also make sure that those accepting and processing waste on our behalf are doing so without risking any environmental harm, including where waste is sent overseas.

- **Reduce carbon emissions and environmental impact of the council's waste management service**
  - Encourage local options for treatment of waste to reduce impact of transporting waste long distances and create opportunities for using materials closer to the place of production

- Minimise impact of council waste management service on pollution, ensuring strict adherence to environmental compliance through contractual conditions monitoring and enforcement.
- Identify and tackle waste crime to deter fly-tipping, littering and encourage legal compliance
- Ensure that strict measures to minimise potential threats to the environment are in place with any arrangements for handling materials collected through the waste management service (e.g. contract conditions). Compliance with these conditions is monitored and enforced by council monitoring and enforcement teams.
- Ensure that anyone accepting our waste provides a full audit trail of where materials are sent for final processing doing all we can to ensure that our waste is not causing harm once out of the council's control.

## Recommendation 8

**The council will research and seek to develop and continually improve services to minimise carbon emissions and other environmental impacts of the waste management service.**

The best data available suggests that avoiding the production of goods and materials from raw materials is the best way to avoid carbon emissions. The Waste-TFG believe the best way we can support global and our own ambitions to reduce the impacts of carbon emission is to reduce waste and discourage the consumption of goods and materials **and thus avoid the damaging need for production.**

We should also explore and seek to provide our waste management services in the most efficient ways possible that reduce our carbon emissions. This can include making sure our waste collection rounds are optimised to minimise fuel use, using alternative fuels for our waste fleets and investing in renewable power sources at waste treatment facilities.

We will work collaboratively with those engaged in work to meet our target of NET zero emissions by 2030 to identify, measure and consider way to reduce the impact of waste management activities. This includes the Energy and Active travel Team, Climate and Ecological Emergency steering group, and Climate Change Task and Finish Group.

**The council should measure existing carbon emissions from both operational and embedded sources (e.g. from sale and transport of recyclables) of the service and adopt an achievable target to reduce them.**

### 4.2.5. Social Value Objectives

The waste management service has many opportunities for providing added social value. The waste service is multi-disciplinary in nature encompassing, logistics, facility management, engineering design, materials handling, staff management, IT systems and more. There is a wealth of learning and career opportunities it can offer including HGV drivers, staff management, ICT and data handling, financial management, operation and maintenance, construction and engineering.

It is important, and a requirement for the council to consider how to provide social benefits through the service it provides. The Waste-TFG consider the waste management service can provide many opportunities for social value, these include:

- Ensuring good access to our service for vulnerable and disadvantaged people. Considering the needs of those who may struggle to participate in waste and recycling services.

- Making materials available to people and organisations that help to bring about positive social value outcomes (for example through community re-use projects)
- Provide learning and career opportunities for young and vulnerable people through offering apprenticeship and training positions.
- Provide specific support to care leavers to help find a route to work, with information, guidance and opportunities.
- Work with care providers to raise waste awareness of resource management issues with young people to encourage them to participate in recycling schemes in adult life.
- Supporting waste and resource organisations that help vulnerable people (such as social enterprises)
- Providing education services to schools
- Developing syllabus with NMITE to stimulate ideas, initiatives and provide skills to support the local resource and waste management sector.

The council is currently considering objectives and indicators to include within its [corporate social value framework](#). It is currently a requirement to consider how social value can be provided and enhanced through public procurement regulations. However the council will need to ensure that any future service meets, or better exceeds, any objectives set out in the developing corporate social value framework.

The Waste-TFG consider the following objectives are important to help provide added social value in future:

- Establish apprenticeship and trainee schemes to encourage people into jobs across the waste management service areas.
- Support community recycling and/or reuse social enterprises that support vulnerable people
- Develop education programmes with educational establishments, schools, colleges and NMITE to incorporate resource and waste management into the syllabus at all stages of a young person's development, and to encourage new generations to consider careers in resource and waste management.
- Support a community larder "too good to go" with local food businesses for food nearing its perishable date.

## Recommendation 9

**Ensure the service contributes meets or exceeds the objectives set out in the council's developing Corporate Social Value Framework.**

The Waste-TFG have identified many opportunities for how the waste management service can contribute to providing social value through a range of initiatives to a wide range of people and communities.

**Recommendation 7** highlights the many opportunities provided through re-use initiatives, but there exists further opportunities across the service (note case study on Llanfoist).

To support both the social objectives and benefit the ongoing delivery of the service an apprenticeship or trainee scheme could help encourage people to choose a career in waste. Amongst other things this could help tackle a national shortage of HGV drivers.

The council should provide an apprenticeship and/or training scheme within its waste management service to provide young people an opportunity and career route into the waste management service. Key service providers will be required to provide trainee/apprenticeship schemes to provide opportunities for people to learn skills to fill key job roles such as HGV drivers.

## **WASTE-TFG CASE STUDY**

### **Llanfoist Reuse and Education Centre (Monmouthshire County Council)**

Prior to the outbreak of COVID-19 and restrictions the Waste-TFG had planned a visit to see the reuse service provided by Monmouthshire County Council at its Llanfoist Household Waste Recycling Centre near Abergavenny.

Cllr Swinglehurst took an opportunity to see the facility in August and reported back to the group on how it worked and the benefits of the service.

#### **REUSE SHOP**

Monmouthshire opened a reuse shop in June 2019. Re-purposing an old site office and re-locating it at the Household Waste Recycling Centre. The shop has been provided as part of Monmouthshire's commitment to tackle climate change.

Members of the public bring things to the site and staff/volunteers actively intercept at the recycling centre. Staff working at the recycling centre are trained to maximise reuse and are able to buy at a discount from the reuse side so there is incentive for them to extract items. The reuse site is split between outdoors (crochery, garden things, waterproof stuff) and a medium size shed (indoor things, pictures, trinkets, some furniture, textiles).

The shop is only open 1 day a week (on a day when the recycling centre is closed). Visitors can buy items for just a few pounds, on average it re-uses 1.5 tonnes of material each month and makes an average of £600 each day it is open. Profit is donated to tree planting schemes across Monmouthshire.

#### **HOMEMAKERS**

A bulky collection and house clearance service is operated by a charity in association with the council. Household goods are collected for a charge (£180 for a van sized house clearance) and then sorted into reusable items (for sale or distribution), recycling (such as scrap metal) and waste. Small items are sold on eBay, high value furniture is sold (similarly to St Michaels Hospice) but serviceable low value furniture and appliances are made available to disadvantaged and vulnerable people for a nominal fee of £5 and even delivered.

#### **EDUCATION CENTRE**

Llanfoist also has an education centre that works with schools not only educating the young about the impact of waste on the environment but also showing them that Monmouthshire Council are doing something about it. Any schools, including those in Herefordshire are welcome at this facility.

#### **Conclusions:**

- This service has been simple to set up and is low cost to run, volunteers, charities are encouraged to get involved and it achieves positive outcomes for the council in terms of cost, environmental impact and social value.
- A business case should be drawn up as a matter of urgency with the view to providing a similar service in Herefordshire. This should be managed by the council to seamlessly combine all elements of the service to provide social, environmental and economic benefits. It can link into council social services supporting those going into care as well providing vulnerable people the means to source basic household items.
- To minimise costs use should be made of redundant but serviceable portable classrooms, containers and offices when they become available rather than paying substantial costs for them to be removed from premises when they are no longer required.

## 4.2.6. Economic Objectives

The view of the Waste-TFG is that the council needs to do more to support businesses and other organisations with their waste. Herefordshire has a diverse range of businesses with a varying degree of needs in respect of the waste we produce.

Providing an increased range of commercial waste and recycling services, including commercial recycling centres, will help support businesses in Herefordshire and our wider economy. The council should seek to recover the full cost of providing these services through customer charges but minimise its own costs and thus the charges made.

- **Provide commercial waste and recycling services to non-households (businesses, charities and non-profit making organisations) to support our economic development.**
  - Provide the same recycling and reuse opportunities to businesses as households.
  - Provide commercial recycling centres (at at our larger sites in Hereford and Leominster) to provide a place where businesses may take their waste, particularly where a commercial collection may not be appropriate.
  - Focus on small and medium sized enterprises, who may struggle more than large businesses to source and fund appropriate waste management services
  - Recover the cost of providing non-household services as described and permitted by relevant legislation.

### Recommendation 10

**The council should provide the same opportunities for non-household waste as it does for household waste. The same materials will be collected for recycling and commercial recycling centres will be provided. The council will recover costs as described and permitted by relevant legislation.**

The Waste-TFG believe the council should provide services that are accessible, user friendly and flexible to meet the varied needs of businesses and other non-household entities in Herefordshire. Providing cost effective solutions will help improve compliance, reducing waste crime and the cost of dealing with it.

**The council should adopt a target to provide at least one commercial recycling centre by 2025.**

The Waste-TFG highlight the scale and significance of the decision that needs to be made in how this service is provided. This decision is conservatively valued at £150m based on current rates over a 10 year service period. The options assessment (detailed later in the report) indicates we should expect costs per household between £160 and £180 per household for providing this service (based on current rates and provision of a free garden waste collection service). The comparison Table 3 supports this assessment with rates of between £100 and £180 per household and an average of £150 per household, with most council's offering a chargeable instead of free garden waste collection service.

However the reader should note that there remain considerable variation between councils in the cost of providing the waste management services. To ensure we provide value for money the council must ensure it explores and considers its options carefully and acts adopts best practice solutions that are cost effective and preferably tried and tested elsewhere.

- **Provide value for money to the taxpayer**

- Investigate and understand best practice elsewhere to ensure our services deliver the best balance of quality, cost and performance.
- Carry out detailed financial assessments of service choices (e.g. different collection methods) and delivery options (e.g. in house, external provide, partnership) to inform decision making and avoid bias.
- Provide resource for to support the waste management service to plan and commission these services within a reasonable timeframe to deliver cost effective services for the council its residents and businesses.

## **Recommendation 11**

**The council will ensure it provides value for money to the taxpayer by undertaking a detailed business case on preferred service options as part of any commissioning process encompassing the best approach to achieve cost effective services that provide value for money to the taxpayer**

With a decision of a value in the region of £150m the Waste-TFG believe that a well thought through and considered approach is more likely to result in not only better quality, but also better value for money. We must ensure that our services reflect both best practice and best value through understanding and assessing our option, undertaking a business case and through comparison with services provided by other Local Authorities.

The council should periodically benchmark their waste management service to compare costs and performance with other councils providing similar services as well as those we aspire to provide. This will indicate if service costs are reasonable or not.

### 4.3. Service Options

Our existing arrangements to provide our waste management service expire at the end of 2023/start of 2024. With changes to government policy expected to be introduced from 2023. In order to meet future requirements change will be required.

At the time of writing this report the council has a little over three years to plan, design and implement new services which comply with the council's statutory obligations.

The challenge for Herefordshire Council is that although the Resource and Waste Strategy 2018 and the Environment Bill provide a vision for what will be expected in future detail on specific requirements is not yet clear. The lack of detail creates uncertainty for local authorities who in designing service will need to ensure that they are compliant with evolving policy and any legal obligations.

✓ What we do know is that:

- We will be expected to provide a weekly food waste collection service for every household and offer this as a commercial service to businesses.
- We will be required to collect garden waste separately
- The government's preferred approach is that we collect different recyclables separately to increase their quality
- The governments preferred approach is that no waste stream is collected less than every fortnight
- There is likely to be income arising from Extended Producer Responsibility Schemes (EPRS) requiring packaging producers to fund the costs of dealing with packaging waste
- There will be deposit return schemes for all drinks containers up to 3 litres.
- We should expect any additional NET costs of service provision to be met with government funding
- Our current services expire at the end of 2023 and we MUST have services in place to replace them.

✗ What we don't know is:

- Whether or not we will be allowed to make a charge for garden waste collection or if it will be free to households
- How much flexibility there will be on collecting separate recyclable materials (as currently exists)
- Whether there will be flexibility on frequency of collection for different waste streams
- What income to local authorities will be generated through EPRS and how it will be paid
- What the impact of deposit return schemes will be, particularly in loss of high value recycling income to local authorities
- How the government will fund NET costs (capital grants, revenue funding, funding of transition costs, etc.)
- When exactly it will be required to provide new services (legislation will usually include a transition period)
- Our social value objectives (being developed in the Corporate Social value Framework)

**Ensuring flexibility throughout the design and commissioning of the service is going to be essential to react to developing policy** and as further clarity on requirements becomes evident. Engaging with government, through both Defra and local authority networks will be essential to gain intelligence and review plans to as necessary.

What is clear is that policy changes are going to have the greatest impact on waste collection services. Practically it is difficult to consider what changes to the waste disposal service are required without first understanding what materials you are collecting and how. Furthermore no significant changes to Household Recycling Centres (HRC) are considered in the RWS 2018. As such this report focuses on changes to the collection service (as does the RWS 2018).

## Recommendation 12

**The council will ensure flexibility during the design and provision of the service so that changes can be more easily made to accommodate requirements.**

The Waste-TFG recognise that we are yet to receive specific details on the future policy. **This presents a risk that the council could design a service which is not compliant** with our statutory requirements. To mitigate this risk the council must be able to modify its approach during the design phase to ensure compliance with policy and legislative requirements.

In designing our service we must also make sure we do not restrict flexibility. This can be achieved by ensuring a holistic approach to service design where waste treatment and disposal services flex to the needs of the waste collection service. This could include avoiding long contracts that restrict the council to any particular approach for an extended period of time.

The Waste-TFG are also keen to explore introducing changes gradually over time to give residents and business customers time to adjust to new services. This may be also be beneficial to align service provision with promised government funding to support the delivery of the service.

### 4.3.1. Waste Collection Options

The government in developing their RWS 2018 considered three different options for providing waste collection services, these are summarised in Table 6. Although there are innumerable alternatives and service combinations for providing waste collection services, these options represent three distinct approaches that are often used to distinguish the style of waste collection provided by local authorities in the UK.

<b>Scheme 1</b> Kerbside Sort Recycling	<b>Scheme 2</b> Two Stream Recycling	<b>Scheme 3</b> Comingled Recycling
<b>Recycling:</b> <i>Materials are presented weekly for collection in three streams and separated into four compartments on the vehicle</i> <b>Residual Waste:</b> <i>Collected fortnightly from a wheeled bin</i> <b>Food Waste:</b> <i>Collected weekly on same vehicle as recycling</i> <b>Garden Waste:</b> <i>Collected fortnightly from a wheeled bin</i>	<b>Recycling:</b> <i>Materials are presented for collection in two streams both collected fortnightly</i> <b>Residual Waste:</b> <i>Collected fortnightly from a wheeled bin</i> <b>Food Waste:</b> <i>Collected weekly by separate vehicle</i> <b>Garden Waste:</b> <i>Collected fortnightly from a wheeled bin</i>	<b>Recycling:</b> <i>Materials presented mixed together in one stream (co-mingled) collected fortnightly</i> <b>Residual Waste:</b> <i>Collected fortnightly from a wheeled bin</i> <b>Food Waste:</b> <i>Collected weekly by separate vehicle</i> <b>Garden Waste:</b> <i>Collected fortnightly from a wheeled bin</i>

Table 6 Waste collection options considered in the Resource and Waste Strategy 2018

To consider Herefordshire Council's options the Waste-TFG have considered three similar approaches to those in the RWS 2018.

The RWS 2018 options were reviewed and adjusted by current waste collection operatives, drivers and managers to factor local knowledge, experience and expertise. These adjustments

reflected practical considerations from those providing the service to provide more flexible, reliable and cost effective solutions. Two main adjustments were made:

**1. Weekly collection of food by separate vehicle assumed for all three options.**

The RWS 2018 assumed food waste would be collected alongside weekly recycling in its Scheme 1 (Kerbside Sort). Our waste collection staff do not believe this method to be practical as it would require vehicles with 5 compartments, long collection times per property and low payloads. Inevitably one compartment will fill faster than others requiring the vehicle to empty its load when others compartments are only partially filled. Scheme 1 also assumes the disposal point for each material is the same which is rarely the case if co-collecting dry recycling with food waste.

A collection by separate vehicle will be more efficient with quicker collection, full loads and ability to use any disposal point. The benefit of being able to bolt on at a later date or more easily terminate this service means it provides much greater flexibility.

**2. Alternate Three Weekly Collection (ATWC) with two stream recycling assumed for Option 2.**

This option explores the impact of restricting residual capacity further. This has been proven to encourage greater participation and performance in recycling and food waste collection services. It should also be noted that with provision of a weekly food waste collection the **amount of residual waste will reduce**. The choice to combine with two stream recycling was from discussions with waste collection staff who were keen to be able to utilise single compartment refuse collection vehicles (RCVs). In this option the same vehicles can be used to collect three different streams of waste:

- Week 1: Paper and Cardboard
- Week 2: Plastic containers, tins, cans, glass bottles & jars
- Week 3: Residual Waste

This permits greater flexibility and delivers efficiencies by reducing the number of vehicles needed to carry out the service. A similar service has recently been adopted in Aberdeenshire.

Following these discussion the final options were provided to a consultant to undertake a waste collection options assessment, the options are described in Table 7. The options include both the costs of collecting recycling and waste as well as the anticipated treatment and disposal costs. They exclude costs associated with the provision of the Household Recycling Centre service as no significant policy changes are expected for this service (an estimate of these costs is included to allow comparison with other council services in Table 3).

	<i>Option 1</i> Comingled Recycling	<i>Option 2</i> Two Stream Recycling	<i>Option 3</i> Kerbside Sort Recycling
<b>What bin lorries could look like...</b>			
<b>General (Residual) Collection</b>	Fortnightly Collection	Three Weekly Collection	Fortnightly Collection
<b>Recycling Collection</b>	Materials presented mixed together in one stream (comingled) collected fortnightly	Materials are presented for collection in two streams each collected every three weeks (alternating on the third week with residual)	Materials are presented weekly for collection in three streams and separated into four compartments on the vehicle
<b>Food Waste</b>	Weekly collection by separate vehicle	Weekly collection by separate vehicle	Weekly collection by separate vehicle
<b>Garden Waste</b>	Fortnightly Collection by separate vehicle	Fortnightly Collection by separate vehicle	Fortnightly Collection by separate vehicle
<b>No. Containers per Household</b>	4+1 (kitchen caddy)	5+1 (kitchen caddy)	6+1 (kitchen caddy)
<b>What Collection Schedule could look like</b>	Week 1		
	Week 2		
	Week 3		
	Week 4		

Table 7 Herefordshire Waste Collection Options, assessed in 2019

The relative resource requirements, performance and cost of each option was assessed by our consultant to help inform the council's service decisions. A summary of the resource requirements, cost and performance output of the assessment is provided in Table 8.

It should be noted that excluding the Household Recycling Centre (HRC) service from the assessment means that costs cannot be directly compared to other council services in Table 3. Based on previous assessments the cost of providing the HRC service should be in the region of £2m per annum. A more pessimistic value of £2.5 million per annum has been used to estimate the cost per household including HRC costs. This allows a representative comparison with costs of services elsewhere listed in Table 3. It should be noted that our assessments result in costs at the high end of those of services provided elsewhere, it should provide confidence that the assessment is both realistic and achievable (based on current rates).

		<i>Option 1</i> Comingled Recycling	<i>Option 2</i> Two Stream	<i>Option 3</i> Kerbside Sort
<b>SECTION 1 – Resource Requirements</b>				
Number of vehicles and operational staff needed to provide the service				
<b>Fleet Requirement</b>	Residual	19	18	9
	Recycling			25
	Food Waste	21	22	21
	Garden Waste	8	8	8
	<b>TOTAL</b>	<b>48</b>	<b>48</b>	<b>63</b>
<b>Drivers and Loaders</b>		126	127	174
<b>SECTION 2 – Performance of household recycling and residual collection</b>				
Expected household waste arising and performance				
Residual		24,401	20,987	26,193
Recycling		16,756	18,132	16,756
Food		5,311	7,085	5,311
Garden		16,387	16,387	16,387
Contamination		3,211	3,475	1,420
<b>Total Collected</b>		<b>66,066</b>	<b>66,066</b>	<b>66,067</b>
Dry Recycling Rate		25%	27%	25%
<b>Recycling Rate</b>		<b>58%</b>	<b>63%</b>	<b>58%</b>
<b>SECTION 3 – Costs for recycling and residual waste collection and treatment</b>				
Operational costs for recycling and residual waste are presented so the costs of continuing the existing Comingled Recycling (AWC) service (column 1) can be compared to alternative options of Two Stream (ATWC) or Kerbside Sort. Costs of food waste and garden waste are excluded and separately illustrated.				
Residual Waste Collection		£2,078,705	£1,458,007	£2,078,787
Recycling Collection		£2,078,705	£2,877,545	£4,078,736
<b>SUB TOTAL</b>		<b>£4,157,410</b>	<b>£4,335,552</b>	<b>£6,157,523</b>
Residual Treatment Cost		£2,398,617	£2,063,052	£2,574,790
Recycling Cost		£368,628	-£76,000	-£1,084,428
Storage and Transfer		£219,992	£219,992	£226,264
Waste Transport		£188,564	£187,774	£193,941
<b>SUB TOTAL</b>		<b>£3,175,801</b>	<b>£2,394,818</b>	<b>£1,910,567</b>
<b>TOTAL</b>		<b>£7,333,211</b>	<b>£6,729,448</b>	<b>£8,068,090</b>
<b>SECTION 4 – Costs for food waste and garden waste collection and treatment</b>				
Operational costs of storing, transfer, recycling, treatment and disposal of food and garden waste collected. This is separately illustrated as these represent new services the council does not currently provide, thus they represent the greatest impact on additional cost and improved performance.				
Note: The option of supplying caddy liners has been excluded.				
Food Waste Collection		£2,058,219	£2,146,613	£2,058,219
Garden Waste Collection		£1,684,144	£1,684,144	£1,684,144
<b>SUB TOTAL</b>		<b>£3,742,363</b>	<b>£3,830,757</b>	<b>£3,742,363</b>
Food Treatment Cost		£138,086	£184,210	£138,086
Garden Treatment Cost		£309,950	£309,950	£309,950
<b>SUB TOTAL</b>		<b>£448,036</b>	<b>£494,160</b>	<b>£448,036</b>
<b>TOTAL FOOD &amp; GARDEN</b>		<b>£4,190,399</b>	<b>£4,324,917</b>	<b>£4,190,399</b>
<b>SECTION 5 – Total Service costs for collection and respective treatment of wastes collected.</b>				
Total operational costs for providing the household recycling and waste collection service and associated storage, transfer, transport and treatment. Cost per household is provided for comparison with Table 3. Cost per household + £3m (for HRC and management costs is also provided to allow more direct comparison)				
<b>TOTAL SERVICE COSTS</b>		<b>£11,523,610</b>	<b>£11,054,365</b>	<b>£12,258,489</b>
<b>Cost per Household</b>		<b>£137</b>	<b>£131</b>	<b>£145</b>
<i>Per Household (including HRCs)</i>		<i>£172</i>	<i>£167</i>	<i>£181</i>

Table 8 Analysis of waste collection service options cost and performance

## Analysis of Waste Collection Options:

The consultant's report (*Waste Options Assessment 2019*), provided as an appendix to this report, provides further detail and analysis on the relative resource requirements, performance and cost of the different options. However to help best understand the key features and differences between the three options and the reasons for them are summarised in Table 9.

Key Features & Differences	<i>Option 1</i> Comingled Recycling	<i>Option 2</i> Two Stream Recycling	<i>Option 3</i> Kerbside Sort Recycling
<b>Collection Methodology</b>	<ul style="list-style-type: none"> <li>Option 1 represents an “as is” service with additional service for the collection of food waste and garden waste bolted on.</li> <li>Fleet size minimised through collecting the least number of waste streams</li> <li>Least change for householders</li> </ul>	<ul style="list-style-type: none"> <li>Option 2 represents a modification of the existing service where the current collection frequency is extended from every two weeks to three weeks to allow for an additional waste stream to be collected on the third week. Additional services for the collection of food waste and garden waste are bolted on</li> <li>Fleet size minimised by reducing collection frequency</li> </ul>	<ul style="list-style-type: none"> <li>Option 3 represents a fundamental change in how recycling is collected utilising different recycling collection vehicles (kerbsiders) to allow for the separate collection of multi materials from each household.</li> <li>Large fleet required due to number of waste streams and reduced capacity of each vehicle</li> <li>Greatest change for householders</li> </ul>
<b>Recycling</b>	<ul style="list-style-type: none"> <li>Residents provided with one bin to put all their recycling in, no separation is required.</li> <li>Recycling is presented on the same day every two weeks (same day as general waste on the alternate weeks)</li> <li>Unavoidable cross contamination from mixing with other materials (e.g. glass shards, plastic and paper fragments, container residues, etc.)</li> <li>Avoidable contamination from user accidentally or deliberately putting in waste that are not accepted.</li> <li>Volatile cost of Materials Recovery Facility gate fees, due to volatile markets for recyclable materials</li> <li>Restricted markets for poorer quality materials</li> </ul>	<ul style="list-style-type: none"> <li>Residents provided with two bins. One for paper and card the other for glass containers, plastic containers, tins and cans.</li> <li>One recycling bin is presented one week, the other the next and residual waste the third.</li> <li>Residents are provided with more recycling capacity (two bins collected in a three week period instead of one every two weeks)</li> <li>Unavoidable cross contamination is reduced</li> <li>Avoidable contamination may not be reduced</li> <li>Volatile markets for recyclable materials</li> <li>More sustainable markets due to moderate improvement in quality.</li> </ul>	<ul style="list-style-type: none"> <li>Residents provided with three boxes collected weekly. One for paper and card, one for glass bottles and jars the other for plastics and cans.</li> <li>Residents are provided with the most recycling capacity of all options</li> <li>Cross contamination is minimal</li> <li>Further inspection and sorting by recycling crews eliminates obvious contamination</li> <li>Minimal further sorting and separation required</li> <li>Volatile markets for recyclable materials</li> <li>Most sustainable markets due to better quality materials</li> </ul>
<b>Food Waste</b>	<ul style="list-style-type: none"> <li>Residents provided with a small kitchen caddy, and a larger caddy for presenting each week.</li> <li>Getting people to participate in service can be difficult</li> <li>Relatively low yields mean high cost of collection</li> </ul>	<ul style="list-style-type: none"> <li>Residents provided with a small kitchen caddy, and a larger caddy for presenting each week.</li> <li>People encouraged to participate by restricting residual capacity</li> <li>Relatively low yields mean high cost of collection</li> </ul>	<ul style="list-style-type: none"> <li>Residents provided with a small kitchen caddy, and a larger caddy for presenting each week.</li> <li>Getting people to participate in service can be difficult</li> <li>Relatively low yields mean high cost of collection</li> </ul>

Table 9 Key features of each option

Table 10 provides a qualitative assessment to illustrate the strengths and weaknesses of each option. This highlights how each option best fulfils the outcomes (priorities and objectives) desired by the Waste-TFG and other key criteria.

Criteria		<i>Option 1</i> Comingled Recycling	<i>Option 2</i> Two Stream Recycling	<i>Option 3</i> Kerbside Sort Recycling
Our Priorities	<b>Treating Waste as a Resource</b>	Material collected are the lowest quality of the options presented. Materials must be sent to a comingled MRF for further sorting and separation with more limited market options.	Improved quality due to further separation into two streams. Greater capacity and flexibility to change materials accepted for recycling. Less complex sorting requirements and greater market opportunities.	Best quality material due to separation at kerbside and ability of crews to reject materials. Least sorting requirement and greatest market opportunities with the potential to stimulate local re-processing.
	<b>Prioritising Public Acceptance</b>	Simplest service for the resident, one bin for all recyclable materials.	Requirement to store another bin and separate recycling into two streams	High degree of separation and effort of resident required. Storage of three boxes
	<b>Maximising Reuse Opportunities</b>	Limited options for further waste streams to be accepted as number of materials to be sorted out is high.	Twin stream increases opportunities for additional materials to be introduced in either recycling bin.	Multi stream provides best opportunity for additional materials to be collected as crews are able to sort at kerbside (e.g. batteries, WEEE, textiles, spectacles).
Our Objectives	<b>Environmental (Vehicles)</b>	Fleet size minimized, less transport impact and carbon emissions.	Fleet size minimized, less transport impact and carbon emissions	Most vehicles greatest carbon emissions and transport impact.
	<b>Environmental (Resource)</b>	Relative poor quality of recycling materials not in use for as long.	Improved material quality and quantity.	Best quality recycling keeping materials in use longer.
	<b>Social Value Objectives</b>	Improved opportunities for employment, training and skills.	Improved opportunities for employment, training and skills.	Most opportunities for employment, training and skills. More opportunities for local reprocessing and reuse
	<b>Economic Objectives</b>	Moderate cost of service to council	Lowest cost service to council	Highest costs service to council
Other Criteria	<b>Legal Compliance (Frequency of collection)</b>	Fortnightly collection	Three weekly frequency of collection presents risk of non-compliance	Governments preferred option very likely to be compliant.
	<b>Legal Compliance (Recycling Quality)</b>	Does not meet requirement to improve recycling quality	Improves recycling quality	Governments preferred option very likely to be compliant.
	<b>Practical Service Delivery</b>	Least change required and best understood. Utilises current vehicle types and design. Use of wheeled bins means waste is stored safely and required minimal manual handling on collection.	Some change required. Utilises current vehicle types and design. Use of wheeled bins means waste is stored safely and required minimal manual handling on collection. Moderate increased number of bins. More complex collection schedule.	Introduces multiple boxes creating storage, collection and manual handling difficulties. Collection times will be increased requiring more staff and vehicles to service. High demand for and cost if replacement boxes Multi compartment approach likely to result in some compartments filling up quicker than others.
	<b>Flexibility of Service</b>	Once procured it will be difficult to make changes to the type and number of vehicles without incurring significant additional cost. New materials may be added for recycling but this may be restricted by treatment/sorting methodology.	Once procured it will be difficult to make changes to the type and number of vehicles without incurring significant additional cost. New materials may be added for recycling but this may be restricted by treatment/sorting methodology.	Once procured it will be difficult to make changes to the type and number of vehicles without incurring significant additional cost. The range of materials accepted for recycling may more easily be altered due to the number of containers and ability of collection crews to sort materials at kerbside. Often kerbside vehicles can be reconfigured

Table 10. Qualitative analysis of options against key criteria

## In summary:

**Option 1** represents an “as is” service with a food waste and garden waste collection bolted on. It is most favourable in terms that it requires the least change for both our residents, operational staff and the council. However it is most disadvantageous in terms of resource management due to the loss in quality from collecting dry recycling together in one container. This not only reduces the value of the material collected but presents a risk that markets for those materials may be difficult to source.

**Option 2** is a modification of the existing service that would allow the introduction of a second recycling wheeled bin. It is favourable in that it would allow paper and cardboard to be separated from other dry recyclable to improve the quality of both streams. Users are also encouraged to separate materials for recycling by reducing the frequency of residual collection to three weeks. Retaining wheeled bins for the collection of dry recycling means existing type vehicles can be used to provide the service. It is disadvantageous in that collection frequencies for residual waste are reduced to every three weeks but recycling is collected on the other two. The government have indicated a preference that no waste stream should be collected less frequently than every two weeks. This option would also require each household to accommodate an additional wheeled bin for the storage a second dry recyclable waste stream.

**Option 3** is the governments preferred approach. It would mean collection of the highest quality of recyclable material maximising the value of the recyclable material collected and minimise risk of loss of market. It is disadvantageous in that it will require a wholesale change to how the service is currently provided, moving from wheeled bins for recycling to a box or bag collection service. This not only requires a much larger fleet of vehicles and more staff but introduces manual handling concerns that do not currently exist with staff requiring to repeatedly bend down to lift boxes or bags for sorting and emptying.

Each option has different strengths and weaknesses. Option 2 performs best both in terms of the amount of material sent for recycling and lowest cost. Option 3 provides the highest quality recycling and is in alignment with the governments preferred option in the RWS 2018. Option 1 would require the least change and thus likely to be easier to implement and gain public acceptance.

On balance the Waste TFG believe that options 2 and 3 are best able to fulfil the priorities, objectives and recommendations outlined in this report. Both options will result in improved quality of materials for recycling, improving opportunities for treating them as a resource in line with the circular economy approach. The Waste-TFG also believe Herefordshire Council needs to be brave if it wishes to fulfil its aspirations to be a leader in tackling climate change.

### **Recommendation 13**

**Options 2 and 3 are progressed to public consultation with feedback and preferences used to inform the council’s decision on its preferred approach. Progressing Option 1 is not recommended.**

The Waste-TFG understand that no option is without merit or risk however both option 2 and 3 best fulfil the priorities, objectives and recommendations of this report. Option 2 as the best performing option and Option 3 as the governments preferred approach in the RWS 2018.

The council should consult with residents, business users and key stakeholders to obtain their views on these two approach to providing the service. The consultation should highlight future requirements and the need to change and ask for views on how best those changes can be delivered.

The Waste-TFG feel at this stage it is critical to obtain public feedback on future approach. The consultation should be clear that change is required and explain the reasons for it to bring forward views on how best to make the changes required.

To help inform the consultation selection of preferred waste collection option and subsequent service design the Waste-TFG have highlighted a number of key requirements that should feature in any future service.

## **Recommendation 14**

**In designing a new service the council should ensure it incorporates features that will enable it to meet the objectives and recommendations detailed in this report:**

1. Design of the service enables the collection of high quality materials for recycling to ensure they are useful, valuable and in use for as long as possible to help protect natural resources in accordance with circular economy values.
2. The service is designed from the outset to be capable of meeting a 65% recycling and composting target for all the waste collection by the council.
3. Residual (general waste) capacity should be restricted in order to encourage the use of recycling and food waste collection, for example by smaller bin size or reduced collection frequency.
4. Reasonable and practical alternative collection options are provided to households where the nature of development makes it challenging to accommodate the standard collection service. For example providing different containers and or an increased frequency of collection.
5. Flexibility of service should be built in where possible, for example:
  - a. By ensuring waste treatment and disposal arrangements dovetail with those for waste collection, for instance by aligning contract periods. This will ensure that treatment and disposal arrangements do not constrain opportunities to make changes to waste collection services.
  - b. By having more flexible shorter term contractual arrangements with a range of providers to more easily flex to changes in materials collected for recycling.
6. A charge for garden waste collections should be made if permitted (to continue to encourage those residents able to do so, to compost at home).
7. The same opportunities provided for householders for recycling will be offered to commercial (trade waste) customers at a charge
8. Social value will be maximised through re-use initiatives, education and training.
9. The service will incorporate effective communications and initiatives to support provision of the service and encourage positive public behaviours to benefit the service (e.g. waste prevention, proper use of recycling services).

### 4.3.2. Household Recycling Centre Options

Around 30,000 tonnes a third of waste managed by the council is accepted at the 6 councils Household Recycling Centres (HRCs). The range of waste streams accepted for recycling encourages much higher recycling performance than through the kerbside service with all HRCs in Herefordshire recycling over 70% of the waste received.

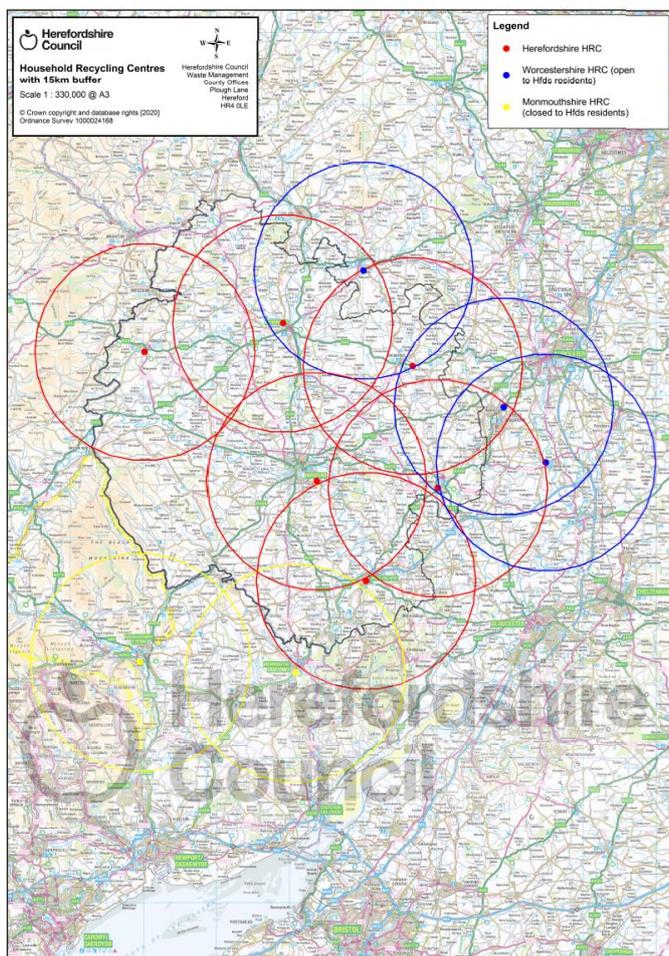


Figure 6 The Household Recycling Centre service

The service satisfies the council's duty (under s51 of the Environmental Protection Act 1990) to provide places where residents in its area may deposit their household waste.

Future policy requires few changes to the Household Recycling Centre service however the Waste-TFG recognise the importance of this service in meeting both anticipated national policy and local ambitions. The Waste-TFG have made two recommendations relating to HRC service provision that will bring about increased resource recovery but also support local business:

#### **Recommendation 7**

***The council designs new services to expand reuse opportunities through both the household collection service and the Household Recycling Centres. Existing opportunities to extract reusable materials are explored and implemented.***

#### **Recommendation 10**

***The council shall provide the same opportunities for non-household waste as it does for household waste. The same waste collection services will be provided to businesses as they are to households and commercial recycling centres will be provided. The council will recover costs as described and permitted by relevant legislation.***

Household Recycling Centres provide great opportunities for providing social value, particularly through re-use initiatives highlighted earlier in the report. We must design services so that re-use organisation are encouraged to be a part of the provision of this service. The Waste-TFG have considered that one way to achieve this would be to consider the HRC service as a separate service, potentially run in house or in partnership in a way that those involved in re-use and delivering social value are not excluded.

A further consideration of the Waste-TFG was the design and layout of these facilities. It was felt that the layout and signage of the site should be improved to encourage separation of recyclable material as much as possible and discourage disposal of useful materials to waste. The council should use the opportunity of providing new services to make these changes.

### 4.3.3. Waste Treatment and Disposal Options

Similarly to HRCs, this report does not have a focus on waste treatment and disposal options. This can only be considered once the council has determined what materials it is going to collect from households.

What is clearer in the RWS 2018, and from progress through parliament of the Environment Bill, is that weekly collection of food waste and separate collection of garden waste is very likely to be required. This requirement will facilitate the need for additional services, the council does not currently provide which will generate new waste streams requiring treatment.

#### Recommendation 15

**The council commissions a piece of work to understand what changes to its disposal service will be required to best manage the materials arising from the waste collection service options detailed in the analysis above.**

A better understanding of the changes required to existing waste treatment and disposal service will inform requirements to support the delivery of the waste collection options outlined in this report. As a priority the council should seek to understand what changes are required to:

- **Waste Transfer Stations**, to understand how best materials collected could be accepted and stored for onward transport to treatment facilities elsewhere, and what required changes to existing transfer stations would be required, and:-
- **Waste Treatment Facilities**, to understand current waste treatment methods and capacity, what waste treatment facilities are required, and if there are any opportunities for developing more effective and resource efficient solutions for dealing with the materials collected.
- A full **analysis of potential markets** for materials arising from the new service and opportunities for local processing to be commission alongside public consultation to inform decision on preferred approach.

The requirement for a weekly collection of food waste will generate up to 7,000 tonnes of household waste plus additional food waste from commercial collection the council will provide. This will require treatment capacity for at least 10,000 tonnes of food waste. Anaerobic digestion (AD) is the most favourable means of treating food waste highlighted by government in its RWS 2018. Although there are a number of AD facilities located in Herefordshire, these are dedicated for the treatment of agricultural waste and energy crops.

The Waste-TFG are mindful that many AD facilities were developed on the back of incentives, such as feed in tariffs, the benefit of which are likely to come to an end. The Waste-TFG are keen to investigate if there are any opportunities for any existing agricultural facilities could be converted to food waste treatment as well as wider consideration of the alternatives of developing our own AD facility or using existing facilities out of county.

### **Recommendation 16**

**An early study is undertaken to evaluate if any existing AD facilities could be utilised for the treatment of food waste in Herefordshire.**

The Waste-TFG recognise that Anaerobic Digestion facilities are likely to be required to treat food waste collected in Herefordshire. Although there are a number of options such as developing our own facility, using existing out of county facilities, the option of converting an existing agricultural facility may be advantageous.

A study engaging with existing operators would reveal if there is any appetite and possibility for this. The Waste-TFG believe this could also provide added incentives in discouraging the use of energy crops to as feedstock.

As for residual waste a zero waste to landfill policy (Recommendation 4) should be adopted. It is anticipated that any residual waste arising from the service in future will be sent and treated by Herefordshire's Energy from Waste facility it shares with Worcestershire County Council in Hartlebury, Worcestershire.

### **Recommendation 17**

**The council should seek to agree an approach with Worcestershire County Council on how their joint Energy from Waste (EFW) facility will be managed and operated to the mutual benefit of both council's on expiry or extension of existing arrangements**

Even if the council were able to meet or exceed the governments expected target of 65% recycling by 2035 there will remain a need to treat residual waste arising from Herefordshire's waste management service.

Energy from Waste (Incineration) remains the only reasonable alternative to landfill for residual waste treatment so sending waste to our own shared EFW is expected. However the Waste-TFG wish to see the plant optimised by generating heat as well as power and other options to maximise the efficiency of the facility explored and implemented where advantageous to the two councils both financially and environmentally (through reducing the impact of residual waste treatment on climate change).

Any excess tonnage capacity created from increased recycling should be sold to generate commercial revenue for the two councils.

#### 4.3.4. Management of the Service

The council's waste management team is currently comprised of 8 staff working under a head of service with responsibility for Environment, Climate Change and Waste. The team have a predominantly operational role managing contractors, dealing with service requests and managing the council trade waste, bulky waste and clinical waste collection service.

The waste collection contract is a master a servant style contract providing a service as specified by the council to provide vehicles and staff to collect waste from domestic properties and trade waste customers. The contractor has no strategic and only limited administrative responsibilities for the service.

The disposal service is a management contract where the contractor is required to make suitable arrangements for the treatment and disposal of waste delivered to it by the council. The service is managed by Worcestershire County Council on our behalf. The contractor has no strategic responsibility and has only limited administrative responsibilities for the service.

The decision the council must make on the future of this service is conservatively valued at £150m based on current rates and a 10 year contract. We currently rely on one officer with intermittent consultant support to deliver this. The Council's Waste Disposal Team Leader, who acts as the main contract officer for waste disposal and has lead on future strategy, is due to leave the council in October 2020 which presents a significant loss of knowledge at a key time.

The scale and significance of the work ahead should not be underestimated and time is now a critical factor.

#### **Recommendation 18**

##### **Waste Management Team is augmented with required staff and resource to plan, commission and implement new services and manage our new arrangements.**

The Waste-TFG consider it is essential to replace our Waste Disposal Team Leader as soon as possible and to create 3 new posts. A Waste Strategy Officer to provide support to the current post in developing the contract(s) and researching collection and disposal options. A Waste Communications Officer to lead the process of public engagement. They will need to be supported by an Administration Officer.

These new posts are required no later than 1st April 2021 and will need to be in place until at least 31st December 2025 to allow for bedding in of the redesigned waste collection services. The cost of these new posts is insignificant in terms of contract value and the financial and reputational impacts of getting this decision wrong. They will also be significantly less than the cost of bringing in consultants to bail us out at the 11th hour if we continue to rely on a single officer to deliver this.

Further resource is likely to be required to appoint legal, financial and technical advisers as required, particularly in support during any procurement. Investing in building the capability in the team will however minimise the need for expensive consultants as well build a more capable team to manage and continue to develop the service.

## 5. NEXT STEPS

The task ahead is to plan, design and implement a new waste management service. A clear plan with resourcing strategy is required to map out how the authority is going to achieve this.

Typically large scale waste management commissioning projects (to provide new services and/or waste treatment infrastructure) require a minimum of three years to complete successfully. The more time and resource an authority invests the better chance the outcome will deliver favourable outcomes in terms of quality, performance and cost.

As highlighted in **Service Management**, above, time is now a critical factor. In particular based on anticipated time required to consult and determine preferred approach the council will have around a year and a half to design its service in preparation for procuring it. With **local elections** scheduled in May 2023 the council must ensure it leaves sufficient time for service providers to mobilise (e.g. it could take a year to procure a new fleet).

A list of key tasks and suggested timings is provided in Table 11.

Target End	November 2020	March 2021	May 2021	December 2021	December 2022	Start November 2023
Length	3 Months	3 Months	2 Months	6 Months	1 Years	10 Months
Action	Considering Options	Public Consultation	Select Preferred Option(s)	Design Service and Produce Strategy	Commission / Procure Service	Mobilise and Implement
Key Tasks	Complete Strategic Review Report to General Overview and Scrutiny Report to Cabinet	Consult on key options with public and key stakeholders to inform preferred service options	Report to Cabinet to approve approach	Design service and produce strategy for how it will be delivered Report to cabinet to approve strategy Research and pilot services as required	Commission new services whether that be by procuring private service contractors or providing the service in house or a mix of the two.	Minimum 9 Month mobilisation period to enable providers to resource new service



**WE ARE HERE**

Table 11 Key tasks and milestones in implementing a new service

This report is a critical element of the “considering options” phase to determine what service the council’s wishes to provide in future. Following completion of this Strategic Review the recommendations within will be put to the council to inform next steps. It is anticipated that a public consultation exercise will follow to obtain service user’s (residents and businesses) and key stakeholder’s views on key service options.

The Waste-TFG is very keen to ensure that public engagement happens at an early stage and continues throughout the process of developing the service. It is hoped that this will foster a collective approach and increase awareness public acceptance of the changes that will be required.

The results of consultation will inform the council’s decision on its preferred service options to take forward into a service design and strategy development phase. Here detailed work is required to ensure the service can be delivered to meet the recommended priorities of treating waste and a resource, prioritising public acceptance and maximising re-use opportunities.

The significance and scale of the challenge ahead is huge. The findings and recommendations in this report clearly identify that the challenge cannot be ignored or delayed further. To do so will place an essential and critical council service at risk. To ensure the council stands a chance of having a new service in place on expiry of existing arrangements adequate resources must be allocated to the Waste Management Team. Initially this should support carrying out a public consultation exercise and commence the planning and design of new services.

## 6. SUMMARY OF FINDINGS AND RECOMMENDATIONS

This report conveys the findings and recommendations of the Waste task and Finish Group, established by the General Overview and Scrutiny Committee (GOSC) to undertake a Strategic Review of the council's Waste Management Service.

It is hoped that the findings and recommendations within can be agreed by GOSC and be presented to the executive to provide direction and inform the council's progress in responding to the challenges presented by the approaching expiry of existing arrangements and new government policy.

What is clear to the Waste-TFG is the scale of the task ahead. The Waste Management Service is a significant and essential statutory service which Herefordshire Council must provide for all its residents and offer to its businesses. It is a vital element in our everyday lives and for our economy to thrive.

The government also consider resource and waste management a priority, recently confirming its commitment to implementing equivalent measures set out in the EU circular Economy Package. This will mean a once in a generation transformation of our waste management service which we must be equipped to deal with if we want to avoid significant negative implications for the council as well as make the best of the opportunities this brings.

The council is ambitious, it wishes to bring about changes that help protect and enhance our environment, make best use of our resources to keep Herefordshire a great place to live. We now have a once in a generation opportunity to take our waste management service to a new level and meet this challenge.

*"We must be brave!"*

Next steps:

1. Report to be presented to General Overview and Scrutiny Committee on **Monday 28 September 2020**
2. Agreed findings and recommendations to be presented to Cabinet on **29 October 2020** to recommend approval and initial implementation strategy (to include initial public consultation on key service options)
3. Public consultation carried out and report on findings and recommended approach to providing new service to be presented to Cabinet in **April 2021**.

The Waste-TFG has provided a cross-party view on our future Waste Management Service options developing a balanced and pragmatic set of recommendations that will allow us to meet future requirements and our own aspirations as a council. We believe the establishment of a permanent cross party member working group would continue to benefit and support the council in meeting the challenge ahead. It can do this by:

- Aiding the development and carrying out of public consultation
- Keeping all political groups informed and included in the process
- Providing political and policy support and guidance to officers (linking with other council priorities and actions that officers may be unaware of).
- Bringing a different perspective
- Providing oversight, being a critical friend
- Identifying gaps and flagging required corrective actions

## **Recommendation 19**

**The council should maintain the Waste-TFG as a cross party member group to provide oversight and support to officers until implementation of new services in early 2024.**

A cross party member working group will help include political groups throughout the process of planning, commissioning and implementing new services. It can help provide support to officers in offering balanced views and guidance. This group should help to re-enforce the governance processes of the council to ensure that decisions are made in the best interest of the council and its residents.

## APPENDIX 1 RISKS

There are significant and potentially severe financial, practical and reputational risks associated with getting this wrong. Worst case scenario is total failure of the service and termination of high value contracts. High profile cases in Greater Manchester (Waste Disposal), Allerdale (Waste Collection) and Derby (Waste Treatment) in recent years highlight the risk. These situations tend to be acrimonious resulting in lengthy litigation and costs to both the council and service provider. Adequate resourcing to plan, design and commission services as well as informed decision making will minimise this risk.

Table 12 provides a list of key risks that currently exist. Risks should be regularly reviewed throughout the planning, commissioning and implementation phase to identify new risks and put in place appropriate measures to control them.

Key Risks	Likelihood	Severity	Implications	Mitigation
Not enough time to complete required work	Moderate	High	Not sufficient time to fully consider all key options and implications of different service choices. This will inevitably result in rushed and not fully thought through commissioning process.	Do not delay in resourcing and ensure effective decision making processes are in place. Consider a single Commissioning Manger with delegated responsibility (as advised by DEFRA in early 2018)
No strategy for commissioning new service	Moderate	High	Without a resourced strategy for putting new service in place there is no certainty that the council will be able to deliver its obligations as both Waste Collection Authority and Waste Disposal Authority in time for expiry of existing arrangements	The council does not delay to adequately resource the planning, development and commissioning of new services. Staff are recruited and resources allocated to undertake the work (Recommendation 18)
Service is not compliant with legal requirements	Low	High	Council will be in breach of statutory obligations Potential government intervention Damage to councils reputation Potential high cost to make compliant (negotiating with incumbent contractor or new service)	Ensure flexibility through the design and commissioning process to reflect that policy is still in development and legislative requirements are yet to be finalised. Engagement with government on developing policy and likely requirements Effective governance in place to take informed and timely decisions and corrective action. Option 1 is not pursued as an option.
Carbon emissions not minimised	Moderate	High	The service is a significant contributor to the county's total carbon emissions. It is likely that requirements are going to directly result in increased carbon emissions due to additional vehicles and additional waste produced from garden waste collections. No measure of current emissions or expected emissions	Indirect carbon savings from improved resource management will be achieved from preventing waste and maximising reuse and recycling. Consideration of how best to provide collections to minimise use of vehicles, introduce low carbon technologies and recover energy from residual waste are required to minimise the services impact on climate change. The carbon (climate change) The Energy and Active Travel Team provide support to measuring current emissions and assess impact of changes.
Poor Value for Money	Moderate	High	Lack of effective commissioning strategy and poor/slow decision making leads to higher service costs than expected.  Taxpayers required to fund avoidable costs meaning less funds for other council services	The council does not delay to adequately resource the planning, development and commissioning of new services. Effective governance in place to take informed and timely decisions and corrective action.

Poor Quality and Performance of the services	Moderate	High	Lack of effective commissioning strategy and poor decision making leads to poor service design, quality and performance of services, resulting public dissatisfaction. Potential dispute (if private contractor) or stress on council staff providing the service. Need to re-commission failed services is not uncommon resulting in high unplanned costs	The council does not delay to adequately resource the planning, development and commissioning of new services. Effective governance in place to take informed and timely decisions and corrective action. Strong council management team able to understand service options and take actions to bring about best outcomes for council.
Volatility of recycling markets, availability and prices	High	Moderate	Reduced income and value for money Loss of market require changes to materials accepted through recycling schemes Customer dissatisfaction and confusion Reputational damage Possible contractual disputes (e.g. if changes mean provider(s) cannot comply with conditions)	Recycling services designed to accept core materials as priority Quality of materials is prioritised to maximise market opportunities and value Flexibility to allow changes to accepted recyclable materials without incurring unreasonable costs. Decisions on any new materials to be accepted are based on a sustainable market being available and not on public/political demand.
Availability of HGV (all vehicles above 3.5t) drivers for larger fleet	Moderate	Moderate	A shortage of HGV drivers nationally could result in difficulties recruiting and retaining enough qualified staff to provide the service	Consideration of a mix of multi compartments where practical and smaller 3.5t vehicles may help reduce the requirement for HGV drivers. Support of local training programmes, internal training opportunities to encourage a greater number of qualified staff.
Health and Safety Implications of Service	Moderate	Moderate	Physical demands of service leads to poor health of waste collection and disposal operatives. Changes to services will place additional physical demands on crews particularly increased risk of repetitive strain injury from bending down to collect food waste containers and recycling boxes (where used). With a kerbside sort crews may also be required to handle materials, sorting them into different compartments on the vehicle. This will expose staff to injury from sharp materials.	Where practical we should consider use of wheeled bins for collecting both waste and recycling to minimise manual handling risks.  Include manual handling training and physiotherapy support for operational staff to reduce sickness and long term ill-effects.

Table 12 Analysis of key risks and possible mitigation

**APPENDIX 2 SUMMARY TABLE OF RECOMMENDATIONS**

<b>No.</b>	<b>Recommendation</b>	<b>Reason for recommendation</b>
1	The council adopts the three priorities of TREATING WASTE AS A RESOURCE, PRIORITISING PUBLIC ACCEPTANCE and MAXIMISING REUSE as corporate priorities for waste management.	Adopting these principles as part of our county plan will provide leadership and direction for future decisions. The principles highlight the need for a more efficient circular economy, using our natural resources wisely as well as council resources, whilst reflecting the need to ensure our service are accessible and user friendly. Measurement of our success in meeting these priorities will be through monitoring and reporting our recycling rate, diversion from landfill, participation rate (for recycling) and amount of waste diverted for re-use.
2	The council allocates resource to prevent waste from households, restricting residual capacity and investing in waste prevention campaigns and home & community composting initiatives.	Preventing waste will help save both residents and the council save money. Residents through food waste prevention initiatives that help people to buy only what they need and the council as it will not need to pay for the cost of collecting and treating the waste avoided. In recent years the council has been successful at reducing waste, particularly general residual household waste. This has resulted in a saving of over £500,000 per annum since 2011. In terms of resource a dedicated member of staff with a small budget to manage waste prevention initiatives and waste communications in support of the service is recommended. <b>The council should set a target to reduce the amount of non-recyclable waste from 530 kg per house per annum (19/20) to 400 kg per house per annum by 2030</b>
3	The council prioritises the quality of recyclable material to increase its value and marketability. Secondly the council continually reviews and invests in increasing the quantity of material sent for recycling.	We must ensure that the recyclable materials we collect can be treated as a resource. We should design services that will encourage better quality materials to be collected we are more likely to find outlets for them to use as a resource to turn into new products. After quality we need to consider the best approach to maximise the quantity of materials collected for recycling. We can do this be ensuring our services are accessible and easy to use but also through investigating new opportunities and technologies that make the collection and recycling of materials possible. Our service needs to remain flexible enough to be able to accommodate these opportunities. The council should adopt, as a minimum, targets to allow us to achieve the Resource and Waste Strategy 2018 objective of 65% recycling and composting by 2035: <ul style="list-style-type: none"> <li>• <b>To recycle or compost 60% of household waste by 2025</b></li> <li>• <b>To recycle or compost 60% of both household and commercial waste by 2030</b></li> <li>• <b>To recycle or compost 65% of both household and commercial waste by 2035</b></li> </ul>
4	The council adopts a zero waste to landfill policy, sending only waste that cannot be recycled or recovered. This will minimise loss of resource and minimise harmful emissions, such as carbon and leachate.	The Resource and Waste Strategy 2018 sets an ambition to eliminate food waste to landfill by 2030. It also includes a longer term target of limiting municipal waste to landfill to a maximum of 10%. In 2019/20 we sent 20% of our waste to landfill. The Waste-TFG consider that with our shared Energy from Waste Facility we should be doing better to avoid landfill. In order to consider waste as a resource only waste for which there is no other alternative should be sent to landfill <b>The council should adopt a target of no more than 1% of household waste to be sent to landfill from 2025.</b>

5	<p>The council ensures services are accessible and easy to use for all. Providing practical alternative solutions where beneficial so that all residents and business customers can reasonably access them and be encouraged to manage waste safely and in accordance with our service.</p>	<p>The Waste-TFG consider public acceptance a key factor in the design of any services we provide. We must ensure that the public are included in the process of delivering any changes to our service through effective engagement and consultation. This does not mean that only the collection method residents prefer will be adopted, but that their preferences will be taken into account, balanced with financial and environmental impacts.</p> <p>Through learning from our own experiences and those of other Local Authorities we can also consider what approaches may work best for Herefordshire residents and business customers.</p> <p>Although we may need to consider different approaches in different areas of the county (such as town centres &amp; communal developments) we want the service to be as consistent as possible from the user's perspective.</p> <p>Participation rate will be measured and monitored for different housing types and demographics to inform where use of the service could be improved and the success of those improvements measured.</p>
6	<p>The council allocates resource to provide effective communication initiatives with residents and businesses to promote proper use of the service and to help maximise waste reduction, reuse and recycling.</p>	<p>After ensuring we have an accessible and user friendly service the Waste-TFG consider that effective communication is essential to help our residents and business customers use it in the right way. Effective communication will help reduce problems relating to the provision of the service and encourage better quality and quantity of recycling, reducing cost and increasing revenue.</p>
7	<p>The council designs new services to expand reuse opportunities through both the household collection service and the Household Recycling Centres. Existing opportunities to extract reusable materials are explored and implemented.</p>	<p>The Waste-WFG believe that there are many social and commercial opportunities to be explored with reuse. A modest resource could help extract valuable materials so that they can be repaired, repurposed, upcycled and reused. Any costs will be recovered from savings in waste disposal cost, generating income from the materials and added social value.</p> <p>In the short term the council develops a re-use facility to enable suitable items and materials to be diverted from waste (see case studies below). Such initiatives will very likely support the council's objectives and indicators being considered as part of its corporate social value framework.</p> <p><b>The council should adopt a target to increase the current levels of reuse of 20 tonnes per annum to 500 tonnes per annum by 2025</b></p>
8	<p>The council will research and seek to develop and continually improve services to minimise carbon emissions and other environmental impacts of the waste management service.</p>	<p>The best data available suggests that avoiding the production of goods and materials from raw materials is the best way to avoid carbon emissions. The Waste-TFG believe the best way we can support global and our own ambitions to reduce the impacts of carbon emission is to reduce waste and discourage the consumption of goods and materials and thus avoid the damaging need for production.</p> <p>We should also explore and seek to provide our waste management services in the most efficient ways possible that reduce our carbon emissions. This can include making sure our waste collection rounds are optimised to minimise fuel use, using alternative fuels for our waste fleets and investing in renewable power sources at waste treatment facilities.</p> <p>We will work collaboratively with those engaged in work to meet our target of NET zero emissions by 2030 to identify, measure and consider way to reduce the impact of waste management activities. This includes the Energy and Active travel Team, Climate and Ecological Emergency steering group, and Climate Change Task and Finish Group.</p> <p><b>The council should measure existing carbon emissions from both operational and embedded sources (e.g. from sale and transport of recyclables) of the service and adopt an achievable target to reduce them.</b></p>

9	Ensure the service contributes meets or exceeds the objectives set out in the council's developing Corporate Social Value Framework.	<p>The Waste-TFG have identified many opportunities for how the waste management service can contribute to providing social value through a range of initiatives to a wide range of people and communities. Recommendation 7 highlights the many opportunities provided through re-use initiatives, but there exists further opportunities across the service.</p> <p>To support both the social objectives and benefit the ongoing delivery of the service an apprenticeship or trainee scheme could help encourage people to choose a career in waste. Amongst other things this could help tackle a national shortage of HGV drivers.</p> <p>The council should provide an apprenticeship and/or training scheme within its waste management service to provide young people an opportunity and career route into the waste management service. Key service providers will be required to provide trainee/apprenticeship schemes to provide opportunities for people to learn skills to fill key job roles such as HGV drivers.</p>
10	The council should provide the same opportunities for non-household waste as it does for household waste. The same materials will be collected for recycling and commercial recycling centres will be provided. The council will recover costs as described and permitted by relevant legislation.	<p>The Waste-TFG believe the council should provide services that are accessible, user friendly and flexible to meet the varied needs of businesses and other non-household entities in Herefordshire. Providing cost effective solutions will help improve compliance, reducing waste crime and the cost of dealing with it.</p> <p><b>The council should adopt a target to provide at least one commercial recycling centre by 2025.</b></p>
11	The council will ensure it provides value for money to the taxpayer by undertaking a detailed business case on preferred service options as part of any commissioning process encompassing the best approach to achieve cost effective services that provide value for money to the taxpayer	<p>With a decision of a value in the region of £150m the Waste-TFG believe that a well thought through and considered approach is more likely to result in not only better quality, but also better value for money. We must ensure that our services reflect both best practice and best value through understanding and assessing our option, undertaking a business case and through comparison with services provided by other Local Authorities. The council should periodically benchmark their waste management service to compare costs and performance with other councils providing similar services as well as those we aspire to provide. This will indicate if service costs are reasonable or not.</p>
12	The council will ensure flexibility during the design and provision of the service so that changes can be more easily made to accommodate requirements.	<p>The Waste-TFG recognise that we are yet to receive specific details on the future policy. This presents a risk that the council could design a service which is not compliant with our statutory requirements. To mitigate this risk the council must be able to modify its approach during the design phase to ensure compliance with policy and legislative requirements.</p> <p>In designing our service we must also make sure we do not restrict flexibility. This can be achieved by ensuring a holistic approach to service design where waste treatment and disposal services flex to the needs of the waste collection service. This could include avoiding long contracts that restrict the council to any particular approach for an extended period of time.</p> <p>The Waste-TFG are also keen to explore introducing changes gradually over time to give residents and business customers time to adjust to new services. This may be also be beneficial to align service provision with promised government funding to support the delivery of the service.</p>

13	Options 2 and 3 are progressed to public consultation with feedback and preferences used to inform the council's decision on its preferred approach. Progressing Option 1 is not recommended.	<p>The Waste-TFG understand that no option is without merit or risk however both option 2 and 3 best fulfil the priorities, objectives and recommendations of this report. Option 2 as the best performing option and Option 3 as the governments preferred approach in the RWS 2018.</p> <p>The council should consult with residents, business users and key stakeholders to obtain their views on these two approach to providing the service. The consultation should highlight future requirements and the need to change and ask for views on how best those changes can be delivered.</p>
14	In designing a new service the council should ensure it incorporates features that will enable it to meet the objectives and recommended detailed in this report	<ol style="list-style-type: none"> <li>1. Design of the service enables the collection of high quality materials for recycling to ensure they are useful, valuable and in use for as long as possible to help protect natural resources in accordance with circular economy values.</li> <li>2. The service is designed from the outset to be capable of meeting a 65% recycling and composting target for all the waste collection by the council.</li> <li>3. Residual (general waste) capacity should be restricted in order to encourage the use of recycling and food waste collection, for example by smaller bin size or reduced collection frequency.</li> <li>4. Reasonable and practical alternative collection options are provided to households where the nature of development makes it challenging to accommodate the standard collection service. For example providing different containers and or an increased frequency of collection.</li> <li>5. Flexibility of service should be built in where possible, for example: <ol style="list-style-type: none"> <li>a. By ensuring waste treatment and disposal arrangements dovetail with those for waste collection, for instance by aligning contract periods. This will ensure that treatment and disposal arrangements do not constrain opportunities to make changes to waste collection services.</li> <li>b. By having more flexible shorter term contractual arrangements with a range of providers to more easily flex to changes in materials collected for recycling.</li> </ol> </li> <li>6. A charge for garden waste collections should be made if permitted (to continue to encourage those residents able to do so, to compost at home).</li> <li>7. The same opportunities provided for householders for recycling will be offered to commercial (trade waste) customers at a charge</li> <li>8. Social value will be maximised through re-use initiatives, education and training.</li> <li>9. The service will incorporate effective communications and initiatives to support provision of the service and encourage positive public behaviours to benefit the service (e.g. waste prevention, proper use of recycling services).</li> </ol>

15	The council commissions work to understand what changes to its disposal service will be required to best manage the materials arising from the waste collection service options.	<p>The council commissions a piece of work to understand what changes to its disposal service will be required to best manage the materials arising from the waste collection service options detailed in the analysis above. A better understanding of the changes required to existing waste treatment and disposal service will inform requirements to support the delivery of the waste collection options outlined in this report. As a priority the council should seek to understand what changes are required to:</p> <ul style="list-style-type: none"> <li>• Waste Transfer Stations, to understand how best materials collected could be accepted and stored for onward transport to treatment facilities elsewhere, and what required changes to existing transfer stations would be required, and:-</li> <li>• Waste Treatment Facilities, to understand current waste treatment methods and capacity, what waste treatment facilities are required, and if there are any opportunities for developing more effective and resource efficient solutions for dealing with the materials collected.</li> <li>• A full analysis of potential markets for materials arising from the new service and opportunities for local processing to be commission alongside public consultation to inform decision on preferred approach.</li> </ul>
16	An early study is undertaken to evaluate if any existing AD facilities could be utilised for the treatment of food waste in Herefordshire.	<p>The Waste-TFG recognise that Anaerobic Digestion facilities are likely to be required to treat food waste collected in Herefordshire. Although there are a number of options such as developing our own facility, using existing out of county facilities, the option of converting an existing agricultural facility may be advantageous. A study engaging with existing operators would reveal if there is any appetite and possibility for this. The Waste –TFG believe this could also provide added incentives in discouraging the use of energy crops to as feedstock.</p>
17	The council should seek to agree an approach with Worcestershire County Council on how their joint Energy from Waste (EFW) facility will be managed and operated to the mutual benefit of both council's on expiry or extension of existing arrangements	<p>Even if the council were able to meet or exceed the governments expected target of 65% recycling by 2035 there will remain a need to treat residual waste arising from Herefordshire's waste management service. Energy from Waste (Incineration) remains the only reasonable alternative to landfill for residual waste treatment so sending waste to our own shared EFW is expected. However the Waste-TFG wish to see the plant optimised by generating heat as well as power and other options to maximise the efficiency of the facility explored and implemented where advantageous to the two councils both financially and environmentally (through reducing the impact of residual waste treatment on climate change). Any excess tonnage capacity created from increased recycling should be sold to generate commercial revenue for the two councils.</p>
18	Waste Management Team is augmented with required staff and resource to plan, commission and implement new services and manage our new arrangements.	<p>The Waste-TFG consider it is essential to replace our Waste Disposal Team Leader as soon as possible and to create 3 new posts. A Waste Strategy Officer to provide support to the current post in developing the contract(s) and researching collection and disposal options. A Waste Communications Officer to lead the process of public engagement. They will need to be supported by an Administration Officer. These new posts are required no later than 1st April 2021 and will need to be in place until at least 31st December 2025 to allow for bedding in of the redesigned waste collection services. The cost of these new posts is insignificant in terms of contract value and the financial and reputational impacts of getting this decision wrong. They will also be significantly less than the cost of bringing in consultants to bail us out at the 11th hour if we continue to rely on a single officer to deliver this. Further resource is likely to be required to appoint legal, financial and technical advisers as required, particularly in support during any procurement. Investing in building the capability in the team will however minimise the need for expensive consultants as well build a more capable team to manage and continue to develop the service.</p>

19	The council should maintain the Waste-TFG as a cross party member group to provide oversight and support to officers until implementation of new services in early 2024.	A cross party member working group will help include political groups throughout the process of planning, commissioning and implementing new services. It can help provide support to officers in offering balanced views and guidance. This group should help to re-enforce the governance processes of the council to ensure that decisions are made in the best interest of the council and its residents.
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**APPENDIX 3 WASTE COLLECTION OPTIONS ASSESSMENT (2019)**  
PROVIDED AS SEPARATE DOCUMENT



The background features large, abstract, curved shapes in shades of green and purple. A large green shape curves from the top left towards the bottom right. A purple shape is on the left side, and another purple shape is at the bottom. A dark purple shape is at the bottom right.

**Waste and recycling collection service  
options modelling – Herefordshire Council**

19-Jul-19

## Acknowledgements:

*Frith Resource Management would like to thank the essential contributions from waste management officers at Herefordshire Council throughout these modelling phases, in particular we would like to thank Kenton Vigus, Nicola Percival and Rebecca Evison.*

## Disclaimer:

*Frith Resource Management Ltd (FRM) is an independent waste and resource management consultancy providing advice in accordance with the project brief. FRM has taken all reasonable care and diligence in the preparation of this report to ensure that all facts and analysis presented are as accurate as possible within the scope of the project. However no guarantee is provided in respect of the information presented, and FRM is not responsible for decisions or actions taken on the basis of the content of this report.*

## Executive Summary

Frith Resource Management (FRM) has been engaged to undertake a waste collection services review for Herefordshire Council. At present Herefordshire performs below average in terms of recycling performance against other Unitary Authorities, however this is driven by the lack of organic waste collection services rather than householder participation in the collection schemes in place.

This report presents the findings from the modelling work carried out by FRM which assessed the comparative costs and anticipated performance of the following household waste collection systems (those elements in **bold** represent changes to the current collection system).

Scenario	Collection Stream	Frequency	Capacity (l)
<b>Baseline</b> <i>As current</i>	Residual waste	Fortnightly	180l wheeled bin
	Dry recycling (Commingled)	Fortnightly	240l wheeled bin
	Food waste	<i>No separate food collection</i>	
	Garden waste	<i>No formal garden collection service<sup>1</sup></i>	
<b>Option 1</b> <i>Current AWC + food + garden</i>	Residual waste	Fortnightly	180l wheeled bin
	Dry recycling (Commingled)	Fortnightly	240l wheeled bin
	<b>Food waste</b>	<b>Weekly</b>	<b>Kitchen caddy and 23l bin</b>
	<b>Garden waste (free)</b>	<b>Fortnightly</b>	<b>240l wheeled bin</b>
<b>Option 2</b> <i>Alternate Three Weekly (ATWC) + food + garden</i>	Residual waste	<b>Three weekly (week 1)</b>	180l wheeled bin
	Dry recycling <b>(Twin stream, paper and card out)</b>	<b>Three weekly (week 2) Cans, plastic, glass</b>	<b>180l wheeled bin</b>
		<b>Three weekly (week 3) Paper and card</b>	240l wheeled bin
	<b>Food waste</b>	<b>Weekly</b>	<b>Kitchen caddy and 23l bin</b>
	<b>Garden waste (free)</b>	<b>Fortnightly</b>	<b>240l wheeled bin</b>
<b>Option 3</b> <i>Kerbside sort + food + garden</i>	Residual waste	Fortnightly	180l wheeled bin
	Dry recycling	<b>Weekly</b>	<b>3x 50l boxes</b>
	<b>Food waste</b>	<b>Weekly</b>	<b>Kitchen caddy and 23l bin</b>
	<b>Garden waste (free)</b>	<b>Fortnightly</b>	<b>240l wheeled bin</b>

The assessment applied industry standard collection modelling tools and also included a high-level appraisal of costs associated with subsequent recycling, treatment and disposal, to provide an indicative total net cost of each system, to facilitate comparison between options.

<sup>1</sup> Householders can purchase sacks and present garden waste to be collected with residual waste, however this is not considered a formal service as the garden waste does not go for recycling.

This table provides a comparison of the results across all options. All alternatives have a significantly greater cost, than the baseline. This is primarily because of the introduction of a dedicated food waste collection, and a free garden waste collection service in all alternative options. Similar collection systems have been referenced within the recent Government National Resources and Waste Strategy.

	Indicative Whole System Cost	Total number of vehicles required	Kerbside recycling rate <sup>2</sup>	Indicative annual cost increase relative to baseline
<b>Baseline (current service)</b>	<b>£7,962,501</b>	19	32%	-
<b>Option 1</b>	<b>£11,966,108</b>	48	52%	c. £4 million
<b>Option 2</b>	<b>£11,496,216</b>	48	57%	c. £3.5 million
<b>Option 3</b>	<b>£12,700,988</b>	63	52%	c. £4.7 million

In all alternative systems additional vehicles are required. In each option, 8 collection vehicles are estimated to be required to collect the separate garden waste tonnage, and 21 or 22 vehicles are required to collect the food tonnage. The difference in vehicle numbers between the alternative options is largely driven by the collection of the dry recycling and residual waste. The same total number of vehicles is required for Option 1 and 2, where a saving in 1 vehicle for the recycling and residual system in Option 2 is offset by the need for an additional vehicle to collect the increased food waste arising.

In all alternative scenarios the kerbside recycling rate increases substantially against the baseline. Again, this is driven by the introduction of a food and garden waste collection service. Option 2 is the preferred option when comparing the anticipated recycling rate. It is also the least cost of the alternative collection systems, albeit whilst still a significant increase in costs above the baseline. Collecting two-stream recycling, via an alternate three-weekly collection, with the introduction of a food waste and garden waste collection scheme results in an estimated 'kerbside recycling rate' of 57%. This modelled high performance is enhanced by the restricted residual capacity (180l wheeled bin collected every three weeks, as opposed to every two weeks as at present). Three weekly collections are evident in increasing numbers of Councils in the UK to manage both performance and cost.

Both Option 1 and Option 3 result in a recycling rate of 52%. The main differential between these two options is the level of contamination reported. Option 1 has the highest dry recycling contamination tonnage, which can be typical of a commingled collection. Whilst Option 3 however, results in the lowest contamination rate of the modelled options and therefore is likely to yield higher quality recycling.

The implications of system changes would also need to be investigated in the light of the residual waste treatment contract and procurement of adequate recycling and organic waste treatment capacity.

<sup>2</sup> The total Council recycling rate would also include the waste flows from the Household Waste Recycling Centres, Bring Banks and other household waste streams not collected via the standard kerbside collection service. Therefore, for example, if a system in this report shows a +5% uplift in 'kerbside recycling rate', it would be envisaged that this would be a lower uplift in the total Council recycling rate (e.g. it could be +2, +3 or +4% depending on other factors within the Council).

## Contents

<b>Executive Summary</b> .....	3
<b>Contents</b> .....	5
<b>1 Introduction</b> .....	7
1.1 Introduction to the scope and aims of the project.....	7
<b>2 Background</b> .....	8
2.1 Study area.....	8
2.2 Summary of current waste collection system.....	8
<b>3 High level overview of recycling performance</b> .....	10
3.1 Introduction.....	10
3.2 All-UK comparison.....	10
3.3 Comparison with similar collection services.....	12
3.4 Summary.....	15
<b>4 Methodology</b> .....	16
4.1 Introduction – What is KAT modelling?.....	16
4.2 Alternative Options.....	18
4.3 KAT Modelling.....	20
4.3.1 Modelling the baseline.....	20
4.3.2 Assumptions.....	20
4.3.3 Modelling Alternate Options.....	21
<b>5 KAT modelling results</b> .....	21
5.1 Baseline Service.....	21
5.1 Option 1 – Introducing separate food waste collection and free garden.....	22
5.2 Option 2 – Alternate three weekly collection, food waste and free garden waste.....	24
5.3 Option 3 – Kerbside sort, weekly food, free garden.....	26
5.4 Recycling Rates.....	27
5.5 Other considerations.....	28
5.6 Total Collection Cost.....	29
5.7 Gate fee assessment.....	30
5.8 Total net costs.....	31

6 Comparison of headline results across all options. ....	33
Appendix A – KAT Outputs.....	34
Appendix B – Total Costs Net of Treatment .....	38
Appendix C – Food Waste ‘ready reckoner’.....	41
Appendix D – Garden waste tonnage .....	42

Figure 1: Household waste sent for reuse, recycling and composting, UK Unitary Authorities 2017/18 (Source: WasteDataFlow Q100 UAs) .....	11
Figure 2: Household waste sent for reuse, recycling and composting, England 2017/18, UAs not collecting food waste (Source: WasteDataFlow Q100 UAs) .....	13
Figure 3: Household waste sent for reuse, recycling and composting, UK 2017/18, UAs with commingled dry recycling & not collecting food waste (Source: WasteDataFlow Q100 WCAs) .....	14

Table 1: Outline of alternative scenarios .....	7
Table 2: Herefordshire's current waste collection system .....	8
Table 3 Herefordshire Recycling performance .....	8
Table 4 Herefordshire Waste Composition Analysis.....	9
Table 5: Herefordshire Council’s current collection service as applied as comparator characteristics in benchmarking .....	10
Table 6: Collection systems provided by Isle of Anglesey and Conwy CBC .....	11
Table 7: Collection services provided by Rutland County Council.....	13
Table 8 Alternative option assumptions .....	18
Table 9: Baseline annualised collection costs.....	21
Table 10: Baseline vehicle and crew requirements .....	21
Table 11. Baseline vehicle and crew requirements as modelled in KAT.....	22
Table 12 Option 1 annualised collection costs .....	22
Table 13 Option 1 vehicle requirements .....	23
Table 14 Option 1 crew requirements.....	23
Table 15 Option 2 annualised collection costs .....	25
Table 16 Option 2 vehicle requirements .....	25
Table 17 Option 2 crew requirements.....	25
Table 18 Option 3 annualised collection costs .....	26
Table 19 Option 3 vehicle requirements .....	27
Table 20 Option 3 crew requirements.....	27
Table 21. Kerbside recycling performance (All options).....	28
Table 22. Recycling rate (All options), garden waste HWRC recycling contribution netted off. ....	28
Table 23: Cost of compostable caddy liners .....	29
Table 24. Total Collection Cost .....	29
Table 25 Annual Treatment costs .....	30
Table 26 Total (net) costs.....	31
Table 27 Comparison of headline results across all scenarios.....	33

# 1 Introduction

## 1.1 Introduction to the scope and aims of the project

Frith Resource Management (FRM) has been engaged to undertake a waste services review for Herefordshire County Council. The council requires an assessment of the expected performance and associated costs of three different waste management collection options.

An inception meeting was held on 24<sup>th</sup> June 2019. Three options were proposed for modelling, in addition to the baseline service. These are shown in Table 1 below. Changes from the baseline (current service) are highlighted in **bold**.

Table 1: Outline of alternative scenarios

Scenario	Collection	Frequency	Capacity (l)
<b>Baseline</b> <i>As current</i>	Residual	Fortnightly	180l wheeled bin
	Dry (Commingled)	Fortnightly	240l wheeled bin
	Food waste	<i>No separate food collection</i>	
	Garden waste	<i>No formal garden collection service<sup>3</sup></i>	
<b>Option 1</b> <i>Current AWC + food + garden</i>	Residual	Fortnightly	180l wheeled bin
	Dry (Commingled)	Fortnightly	240l wheeled bin
	<b>Food waste</b>	<b>Weekly</b>	<b>Kitchen caddy and 23l bin</b>
	<b>Garden waste (free)</b>	<b>Fortnightly</b>	<b>240l wheeled bin</b>
<b>Option 2</b> <i>Alternate Three Weekly (ATWC) + food + garden</i>	Residual	<b>Three weekly (week 1)</b>	180l wheeled bin
	Dry <b>(Twin stream, paper and card out)</b>	<b>Three weekly (week 2)</b> Cans, plastic, glass	180l wheeled bin
		<b>Three weekly (week 3)</b> Paper and card	240l wheeled bin
	<b>Food waste</b>	<b>Weekly</b>	<b>Kitchen caddy and 23l bin</b>
	<b>Garden waste (free)</b>	<b>Fortnightly</b>	<b>240l wheeled bin</b>
<b>Option 3</b> <i>Kerbside sort + food + garden</i>	Residual	Fortnightly	180l wheeled bin
	Dry	<b>Weekly</b>	<b>3x 50l boxes</b>
	<b>Food waste</b>	<b>Weekly</b>	<b>Kitchen caddy and 23l bin</b>
	<b>Garden waste (free)</b>	<b>Fortnightly</b>	<b>240l wheeled bin</b>

<sup>3</sup> Householders can purchase sacks and present garden waste to be collected with residual waste, however this is not considered a formal service as the garden waste does not go for recycling.

## 2 Background

### 2.1 Study area

Herefordshire County Council is a predominantly rural Unitary Authority (UA) with the fourth lowest population density in England.<sup>4</sup> The main urban areas are Hereford, Leominster, Kington, Ledbury and Ross-on-Wye, and are located across the County. The current estimated population of Herefordshire is 189,300<sup>5</sup> and the county covers an area of c. 842 square miles.

### 2.2 Summary of current waste collection system

The current waste collection system in Herefordshire is outlined in Table 2 below. The system has an alternate weekly collection (AWC) of residual waste and recycling. There is no separate garden waste collection scheme from the kerbside, however householders can present (purchased) garden waste sacks to be presented and co-collected with the residual waste. This does not currently contribute to the County's recycling rate as the material is disposed of at the Energy from Waste plant or landfill.

Food waste is not currently separately collected across the County, although waste composition analysis provided to FRM by Herefordshire for this project has identified that over 13,000 tonnes is potentially available for collection from the residual stream (see Table 4). As shown in Table 3, Herefordshire's recycling rate peaked in 2016/17 at 41.2% but has been generally steady between 38.6% and 41.2% since 2012/13.

Table 2: Herefordshire's current waste collection system

	Residual	Kerbside Dry recycling
Tonnage	32,925	18,882
Households	85,096	85,096
Frequency	Fortnightly	Fortnightly
Bin size	180l wheeled bin	240l wheeled bin
Vehicles used	26t RCV, 18t RCV, Narrow access	26t RCV, 18t RCV, Narrow access

Table 3 Herefordshire Recycling performance<sup>6</sup>

Household waste sent for recycling and composting (%)					
2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
39.7%	38.6%	40.0%	40.0%	<b>41.2%</b>	39.8%

<sup>4</sup> <https://understanding.herefordshire.gov.uk/population/>

<sup>5</sup> Herefordshire Council (2018) The Population of Herefordshire. PDF

<sup>6</sup> DEFRA (2017/18) MSW statistics, based on Local Authority reported data for WasteDataFlow.

Recent waste composition information was provided by Herefordshire CC and it was agreed that the data shown in Table 4 would be applied in the options modelling.

Table 4 Herefordshire Waste Composition Analysis

Material	Residual (%)	Dry recycling
Paper	6.05%	42.43%
Card	2.35%	11.45%
Plastic Film	6.23%	0%
Dense Plastic	5.45%	8.72%
Textiles	3.46%	0%
Misc Combustible	12.82%	0%
Misc Non-Combustible	8.35%	0%
Glass	1.46%	21.09%
Ferrous Metal	1.18%	3.79%
Non-ferrous Metal	1.30%	1.26%
Garden waste	6.80%	0%
Putrescibles	41.51%	0%
Non-putrescible Food	1.43%	0%
Fines	1.50%	0%
Other wastes	0.08%	0%
WEEE	0.03%	0%
Contamination	N/A	11.26% (contamination)
<b>Total</b>	100% (32,925 tonnes)	100% (18,882 tonnes)

### 3 High level overview of recycling performance

#### 3.1 Introduction

This section summarises, at a high level, the performance of Herefordshire Council’s (hereon ‘Herefordshire’) recycling rates compared to others, based on published data. Information was taken from WasteDataFlow<sup>7</sup> and WRAP’s Local Authority portal<sup>8</sup>. The charts in this section show Herefordshire’s recycling rate performance, firstly against all Unitary Authorities (UA) in the UK, and then further analysed against those UAs providing comparable services to the Council, as follows:

*Table 5: Herefordshire Council’s current collection service as applied as comparator characteristics in benchmarking*

	Collection	Frequency	Container	Comments
Herefordshire County Council	Residual	Fortnightly	180l WHB	<ul style="list-style-type: none"> <li>• Out-sourced service</li> <li>• Garden waste is collected if presented with residual collection but sent to landfill.</li> </ul>
	Dry (commingled)	Fortnightly	240l WHB	
	Food waste	No separate food collection		
	Garden	No dedicated garden collection*		

WasteDataFlow was used to determine the UAs in the UK and the percentage of household waste sent for reuse, recycling or composting (referred to as ‘household waste recycling rate’), as reported for 2017/18. WRAP’s Local Authority portal scheme search was used to narrow the comparison to UAs providing similar household collection services to that of Herefordshire and summarised in Table 5.

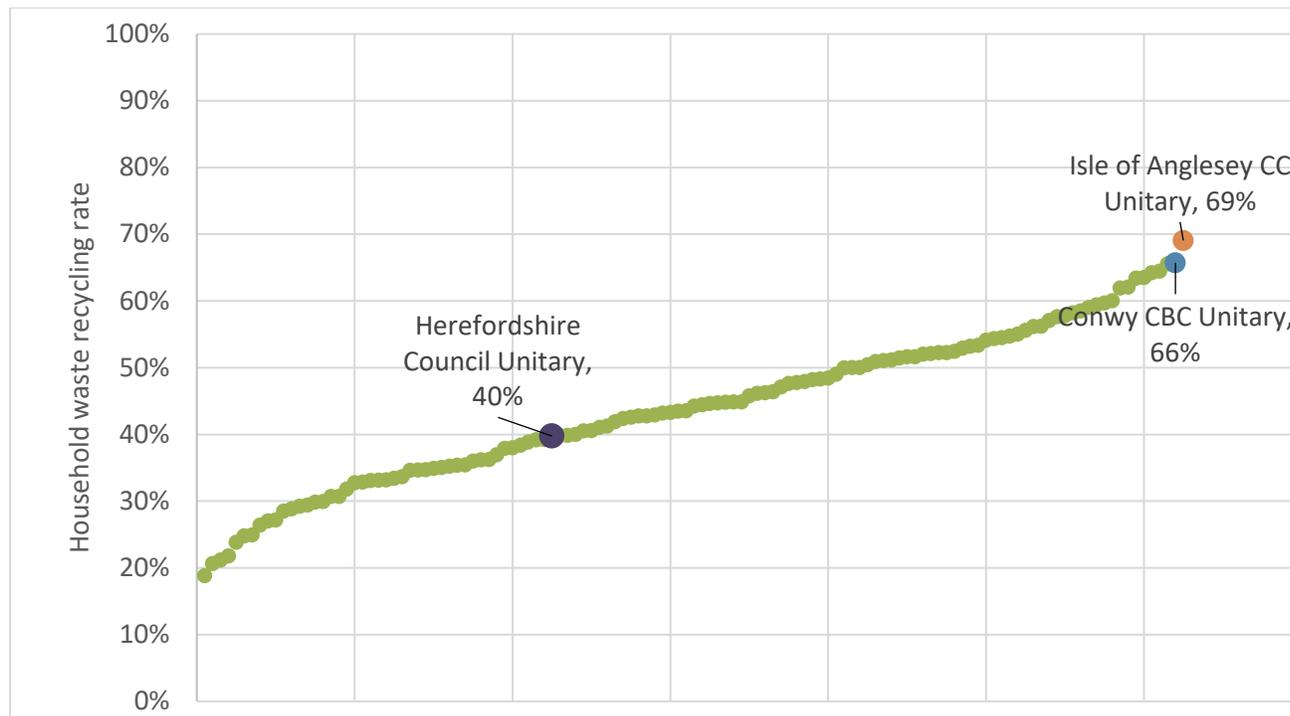
#### 3.2 All-UK comparison

Figure 1 shows the household waste recycling rate for all UK Unitary Authorities, based on 2017/18 data. When compared to all UK unitary authorities Herefordshire currently perform below average (44%). However, it is important to note that the current collection system is not taken into account here.

<sup>7</sup> <http://www.wastedataflow.org/>

<sup>8</sup> [laportal.wrap.org.uk/](http://laportal.wrap.org.uk/)

Figure 1: Household waste sent for reuse, recycling and composting, UK Unitary Authorities 2017/18 (Source: WasteDataFlow Q100 UAs)



The two highest performing UAs (Isle of Anglesey) achieved a recycling rate of 69% and 66% respectively in 2017/18. According to information from WRAP’s LA portal and the websites of the respective local authorities, the following services are provided:

Table 6: Collection systems provided by Isle of Anglesey and Conwy CBC

	Collection	Frequency	Container	Comments
Isle of Anglesey CC	Residual	3-weekly	240l WHB	<ul style="list-style-type: none"> <li>Outsourced service</li> </ul>
	Dry (Multi-stream)	Weekly	1 x 38l box, 2 x 55l boxes	
	Food waste	Weekly	Kitchen caddy, kerbside caddy	
	Garden waste	Fortnightly	240l WHB	
Conwy CBC	Residual	4-weekly	240l WHB	<ul style="list-style-type: none"> <li>In-house service except for outsourced garden</li> <li>Residents must purchase garden waste sacks to present at kerbside</li> </ul>
	Dry (Multi-stream)	Weekly	1 x 44l box, 2 x 55l boxes	
	Food waste	Weekly	Kitchen caddy, kerbside caddy	
	Garden waste	Fortnightly	Reusable sacks	

There are notable differences in service collection to that provided by Herefordshire and the highest performing UA's. These include a reduced bin collection frequency for residual waste collection, the collection of food waste, and the multi-stream collection of recycling. Collecting food waste, as a national generalisation provides c.5% increase in recycling rate<sup>9</sup>.

Interestingly, of the top 10 recycling rates across UK unitary authorities, 9 are Welsh. This high performance could be attributed to the Welsh Collections Blueprint introduced in May 2011 through the Welsh Assembly Government's 'Towards Zero Waste' Strategy. Under this, the Welsh Government recommend a service profile which results in increased rates of high-quality recycling and considerable cost savings. The Blueprint's model recommends, amongst others, the weekly collection of source-segregated dry recycling, weekly separate food waste collection and reduced capacity residual (either through smaller bin capacity, or reduced collection frequency).

The highest performing English Unitary Authority is East Riding of Yorkshire (64%) where the Council operate a commingled recycling collection and free mixed food and garden alongside the residual collection, all operated on a fortnightly basis.

Of the ten authorities with the highest recycling rates the UK, eight out of the ten have in-house service arrangements and two outsource their collection and disposal services (Isle of Anglesey CC and Bridgend CBC).

### 3.3 Comparison with similar collection services

#### *No food waste collection*

According to WRAP local authority data<sup>10</sup>, 41% of local authorities in the UK do not provide a food waste collection service, including Herefordshire. Of those that do provide a service, 39% provide a separate food waste collection while 14% collect food mixed with garden and 6% provide a combination of both schemes<sup>11</sup>. The draft Resources and Waste Strategy for England proposes that all councils in England should have separate food waste collections from 2023.

Removal of those authorities which provide a separate food waste service from Figure 1 gives the data presented in Figure 2. This shows that Herefordshire, in comparison to other UAs not collecting food waste, performs slightly above average (which is 36%) but still has some margin for improvement.

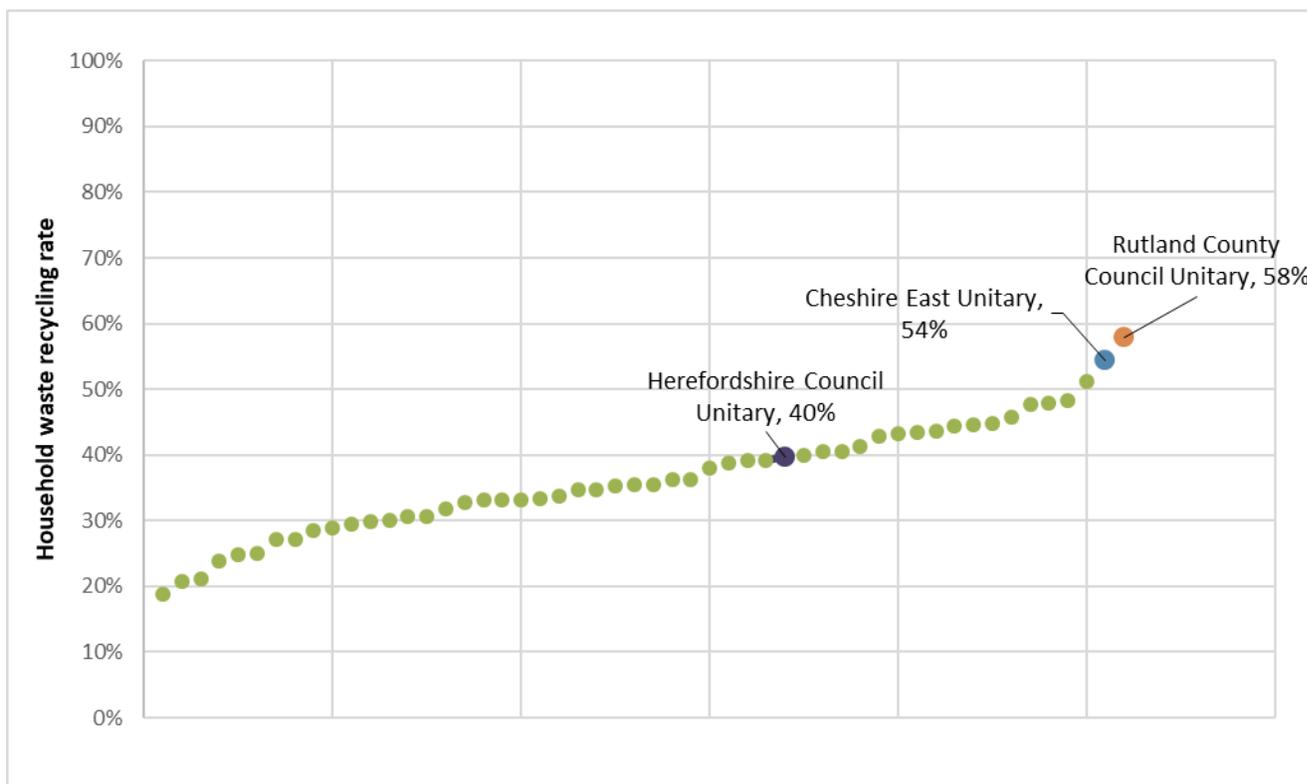
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<sup>9</sup> This will vary according to socio-demographics and the specific food and residual waste collection systems employed

<sup>10</sup> WRAP LA Portal 2018/19 Local authority statistics. Available here: <http://laportal.wrap.org.uk/Statistics.aspx>

<sup>11</sup> WRAP LA Portal (2018/2019) Local Authorities collecting food waste.

Figure 2: Household waste sent for reuse, recycling and composting, England 2017/18, UAs not collecting food waste (Source: WasteDataFlow Q100 UAs)



When comparing Herefordshire’s service to those higher performing UAs without food waste collection, the difference in collection service from Herefordshire, is that Rutland and Cheshire provide a service where garden waste is collected at no additional cost to the household. Herefordshire, at present, do not have a formal garden waste collection service. Householders can present garden waste for collection with residual waste, however this does not attribute to the recycling rate as it is currently sent for disposal at the Energy from Waste plant, or landfill. Also, of note, Rutland County Council’s waste collection service is currently outsourced.

The collection systems operated by the top two performing authorities in this analysis (Rutland and Cheshire East) are summarised in table 7 below.

Table 7: Collection services provided by Rutland County Council

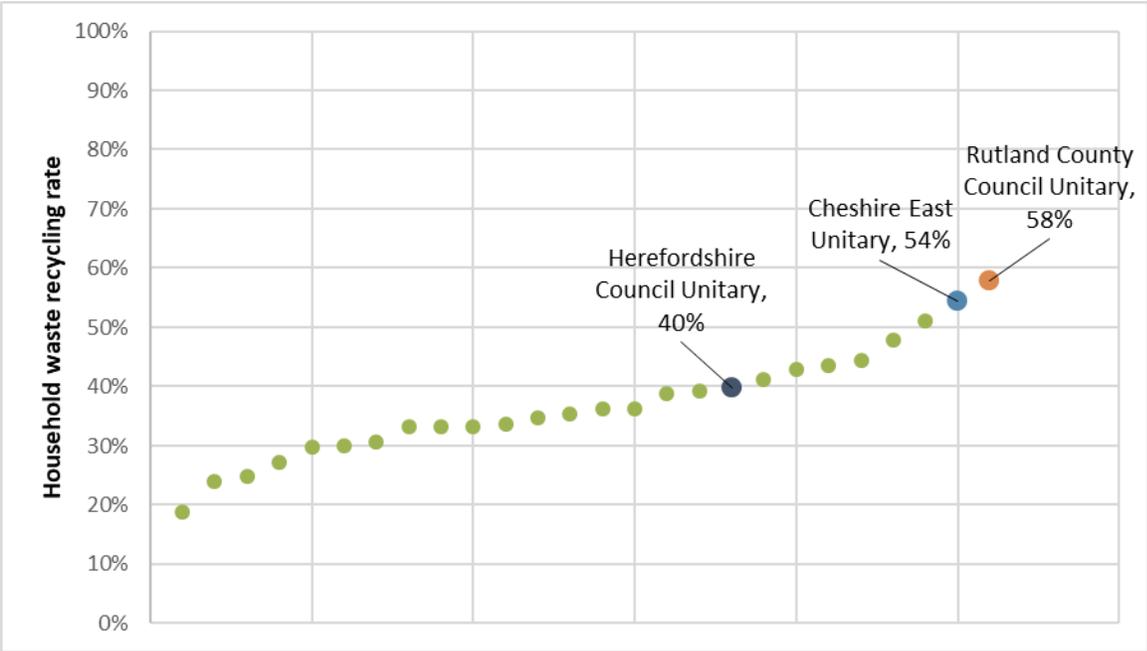
	Collection	Frequency	Container	Comments
Rutland County Council	Residual	Fortnightly	240l WHB	<ul style="list-style-type: none"> <li>Charged garden waste subscription (£35/household/annum) introduced April 2018</li> </ul>
	Dry (commingled)	Fortnightly	240l WHB	
	Food waste	No separate food waste		
	Garden waste (charged)	Fortnightly	240l WHB	
	Residual	Fortnightly	240l WHB	

	Collection	Frequency	Container	Comments
Cheshire East Unitary	Dry (commingled)	Fortnightly	240l WHB	
	Food waste	No separate food waste		
	Garden waste	Fortnightly	240l WHB	

*Dry recycling*

For further analysis, the list of UAs was subsequently filtered by those that provide fully commingled (single stream) dry recycling collections, as delivered by Herefordshire. Figure 3 demonstrates that Herefordshire performs above average (which in this case is 37%) and performs generally well against others offering a similar dry recycling collection, whilst not collecting food. Again, Rutland CC and Cheshire East Council are the top performers.

Figure 3: Household waste sent for reuse, recycling and composting, UK 2017/18, UAs with commingled dry recycling & not collecting food waste (Source: WasteDataFlow Q100 WCAs)



In 2017/18, 96% of local authorities (WCAs and UAs) in the UK provided a garden waste collection scheme (this includes collections where food or card waste may be co-collected with garden waste); 53% of which has an annual charge to householders<sup>12</sup>. Herefordshire do not currently have a formal garden waste collection service. There is only one UA that provides a similar service (i.e. no food, no garden, commingled recycling). This authority is Westminster City Council and considering the differing demographics of the areas a comparison of performance is not necessary.

<sup>12</sup> WRAP LA Portal 2018/19 Local authority statistics (reporting 2017/18 data) <http://laportal.wrap.org.uk/Statistics.aspx>

It is evident that if Herefordshire separately collected garden waste (either through a charged kerbside scheme or more so via a free scheme) and sent this for composting that it would be among the higher performing Unitary Authorities in the country.

### 3.4 Summary

A high-level analysis of published household waste recycling rate data for 2017/18 shows that Herefordshire performs below average against all other UAs. When compared against Unitary Authorities with similar collection systems Herefordshire performed higher than the average, suggesting that participation and use of the collection systems in place is well established in Herefordshire. There is however margin for improvement when comparing against the highest performing UAs, and this would notably be a factor of adding further collection services from the kerbside.

The best performing UAs adopt a combination of collection services that will be explored within this modelling assessment. Of particular note, the UAs with a higher recycling performance than Herefordshire offer food waste collections, operate separate garden waste collections / composting services (modelled in all alternative scenarios) and restrict residual waste capacity (Option 2).

## 4 Methodology

### 4.1 Introduction – What is KAT modelling?

The Kerbside Analysis Tool (KAT) was utilised to provide a comparative assessment of cost and operational requirements for the baseline (current) service and three proposed alternative collection scenarios specified by the council.

The three alternative collection scenarios and key assumptions were agreed by the Council prior to modelling. A KAT data request proforma was originally completed by Council Officers to provide operational detail and costs to facilitate initial modelling of the current service. Further clarifications were provided by officers on request.

Key information gathered via the KAT proforma, included:-

- Number and type of vehicles
- Length of working day (averaged for task and finish)
- Number of crew / driver contribution to loading
- Average time taken to drive to key points (e.g. from depot to start of round, from end of round to tip)
- Round size
- Participation and set out (usually an estimate)
- Contamination rate
- Capital costs
- Financing costs
- Driver / loader salary
- Standing costs
- Running costs
- Overheads (management / depot)

This information allows KAT to model a Baseline service which reflects the current collection operations in Herefordshire.

### What is KAT?

The Kerbside Analysis Tool (KAT) is an Excel based tool developed by the Waste & Resources Action Programme (WRAP) for the purposes of developing indicative and comparative costs between alternate collection systems. It is a peer reviewed model and the industry standard tool for collection systems.

FRM staff have developed >200 KAT models for some 75 different local authorities to provide comparative costs and performance of alternative collection systems. These have included all of the configurations within this project Options 1, 2 and 3. KAT alone however requires further detail to be added to provide 'whole system costs' and to present costs in a format that are appropriate, for example, to align to budgets. FRM have therefore also utilised KAT results within a more comprehensive costing spreadsheet for these purposes in around half of the models developed. This approach has been utilised in Herefordshire.

The baseline models are designed to reflect the current service operation, at time of analysis, and are therefore a modelled representation of the service. All cost elements are **annualised**, including existing bins, vehicles etc. This approach allows a 'like for like' comparison against alternative collection systems but would not be reflective of the differential capital investment required to install a new system straight away. In order to calculate actual costs of an alternative system that takes account of existing infrastructure and vehicles a more bespoke analysis should be undertaken including practical aspects of service implementation (e.g. swapping bins for different elements of the service, transferring/ selling redundant vehicles etc.).

The model results for alternative scenarios, where local data is more limited, remain a good comparative indicator of the direction and magnitude of cost and performance change anticipated through service changes, and are based on industry experience or other guidance / models as appropriate.

Please note that the costs identified by KAT for each scenario are annualised as noted above and the recycling rates outlined within this section are 'kerbside recycling rates' of the core<sup>13</sup> kerbside service rather than the total recycling rate of the Council<sup>14</sup>. The focus of this report is on the collection of the waste, however the costs of managing the collected waste (e.g. recycling costs / revenues and disposal costs) is reflected in the net 'total system' modelling included in Section 5.8 of this report. The implications of these costs and revenue can alter the cheapest / most expensive options overall.

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<sup>13</sup> This does not include 'niche' elements of the collection service such as bring banks, bulky waste and certain specialist collections such as potentially from flats or clinical waste.

<sup>14</sup> The total Council recycling rate would also include the waste flows from the Household Waste Recycling Centres, Bring Banks and other household waste streams not collected via the standard kerbside collection service. Therefore, for example, if a system in this report shows a +5% uplift in 'kerbside recycling rate', it would be envisaged that this would be a lower uplift in the total Council recycling rate (e.g. it could be +2, +3 or +4% depending on other factors within the Council).

## 4.2 Alternative Options

The key assumptions for each of the alternative options are outlined in Table 8 below. The options which have been agreed incorporate potential service changes highlighted within the recently published National Resources and Waste Strategy. Some of these changes are currently being consulted on, which include mandatory separate food waste collections, consistent recycling collections and free garden waste collections.

Table 8 Alternative option assumptions

Options	Collection
<p><b>Option 1 –</b></p> <ul style="list-style-type: none"> <li>• <i>Dry recycling- as per current service</i></li> <li>• <i>Residual- as per current service</i></li> <li>• <i>Food - weekly collection</i></li> <li>• <i>Garden- free fortnightly collection</i></li> </ul>	<p><b>Dry recycling –</b> as per current service</p> <p><b>Residual –</b> as per current service</p> <p><b>Food waste</b></p> <ul style="list-style-type: none"> <li>• ‘Low’ yield as per WRAP ready reckoner (5,311 tonnes/annum)<sup>15</sup></li> <li>• Dedicated 7.5 tonne food waste vehicles</li> <li>• Assume 1 crew member + driver</li> <li>• Set out – 45%<sup>16</sup></li> <li>• Participation – 55%<sup>17</sup></li> <li>• 23l bucket and kitchen caddy (inc. annual provision of compost sacks)</li> <li>• No compaction on vehicle</li> </ul> <p><b>Garden waste</b></p> <ul style="list-style-type: none"> <li>• 16,387 tonnes per annum (based on average of similar authorities operating a similar service, see Appendix D)</li> <li>• 240l bin</li> <li>• 26T Refuse Collection Vehicle (RCV)</li> <li>• Set out: 60%</li> <li>• Participation: 70%</li> <li>• Assume 95% of garden waste occurring in the residual stream contributes to this tonnage (2,127 tonnes using the waste composition analysis data) and the remaining 14,260 tonnes (the majority) comes from a combination of the HWRC, the Biffa collection and as ‘new material’ entering the Council collections.</li> </ul>

<sup>15</sup> The WRAP ready reckoner for food waste yields<sup>15</sup> was applied to calculate the total tonnage of food waste collected. The ready reckoner formula is based on indices of deprivation and is the most accurate data set available to estimate projected food waste tonnages

<sup>16</sup> Set out is the percentage of households putting out receptacles on a typical collection day

<sup>17</sup> Participation is the percentage of households participating over three collection cycles, i.e. those using the system. These estimates are informed by WRAP food waste collection trials.

Options	Collection
<p><b>Option 2 –</b></p> <ul style="list-style-type: none"> <li>• <i>Dry recycling- two stream collection - three weekly with residual.</i></li> <li>• <i>Week 1: Paper and card, Week 2: plastic glass, metals</i></li> <li>• <i>Residual- Three weekly collection (Week 3)</i></li> <li>• <i>Food - weekly collection</i></li> <li>• <i>Garden- free fortnightly collection</i></li> </ul>	<p><b>Dry recycling</b></p> <ul style="list-style-type: none"> <li>• Paper and card collected separately in a 240l wheeled bin</li> <li>• Plastic, glass, metals collected separately in a 180l wheeled bin</li> <li>• Single bodied as per baseline 20m<sup>3</sup> (not sharing vehicles)</li> <li>• Increase dry recycling capture by + 5%<sup>18</sup></li> <li>• +2% participation (97%)</li> <li>• Partial compaction on vehicle</li> </ul> <p><b>Residual – three weekly frequency (tonnages reduced as per the impacts on dry and organic waste separation)</b></p> <p><b>Food waste</b></p> <ul style="list-style-type: none"> <li>• ‘Medium’ yield as per WRAP ready reckoner (7,085 tonnes)</li> <li>• Dedicated 7.5 tonne food waste vehicles</li> <li>• Set out – 55%</li> <li>• Participation – 65%</li> <li>• Assume 1 crew member + driver</li> <li>• 23l bucket and kitchen caddy (inc. annual provision of compost sacks)</li> <li>• No compaction on vehicle</li> </ul> <p><b>Garden waste</b></p> <ul style="list-style-type: none"> <li>• 16,387 tonnes per annum (based on average of similar authorities operating a similar service see Appendix D)</li> <li>• 240l bin</li> <li>• 26T RCV</li> <li>• Assume 95% of garden waste occurring in the residual stream contributes to this tonnage (2,127 tonnes using the waste composition analysis data) and the remaining 14,260 tonnes (the majority) comes from a combination of the HWRC, the Biffa collection and as ‘new material’ entering the Council collections.</li> </ul>
<p><b>Option 3 -</b></p> <ul style="list-style-type: none"> <li>• <i>Dry recycling- weekly kerbside sort collection</i></li> <li>• <i>Residual- as current service</i></li> <li>• <i>Food - weekly collection</i></li> </ul>	<p><b>Dry recycling</b></p> <ul style="list-style-type: none"> <li>• 3x 50l boxes</li> <li>• Kerbside sort vehicle, 5 streams/compartments (80% utilisation)<sup>19</sup> <ol style="list-style-type: none"> <li>1. Paper</li> </ol> </li> </ul>

<sup>18</sup> The capture of materials is the percentage of available materials separated by the householder, also known as recognition rate

<sup>19</sup> ‘Utilisation’ is a reflection of how full on average each of the compartments on the vehicle are before it has to tip.

Options	Collection
<ul style="list-style-type: none"> <li><i>Garden-free fortnightly collection</i></li> </ul>	<ol style="list-style-type: none"> <li>Card</li> <li>Plastic bottles + Pots, trays and tubs (PTT)</li> <li>Steel and aluminium Cans</li> <li>Glass</li> </ol> <ul style="list-style-type: none"> <li>No change to participation (95%)</li> <li>Contamination – KAT default 2%.</li> </ul> <p><b>Residual</b> – as per baseline</p> <p><b>Food waste</b> – ‘Low’ yield as per WRAP ready reckoner (5,311 tonnes)</p> <ul style="list-style-type: none"> <li>Dedicated 7.5 tonne food waste vehicles</li> <li>Set out – 45%</li> <li>Participation – 55%</li> <li>Assume 1 crew member + driver</li> <li>23l bucket and kitchen caddy (inc. annual provision of compost sacks)</li> <li>No compaction on vehicle</li> </ul> <p><b>Garden waste</b></p> <ul style="list-style-type: none"> <li>16,387 tonnes per annum (based on average of similar authorities operating a similar service see Appendix D)</li> <li>240l bin</li> <li>26T RCV</li> <li>Assume 95% of garden waste occurring in the residual stream contributes to this tonnage (2,127 tonnes using the waste composition analysis data) and the remaining 14,260 tonnes (the majority) comes from a combination of the HWRC, the Biffa collection and as ‘new material’ entering the Council collections.</li> </ul>

### 4.3 KAT Modelling

#### 4.3.1 Modelling the baseline

FRM firstly modelled the baseline using the information provided in the KAT proforma by Herefordshire to derive the current operation. Any results which required moderation were addressed in discussion with officers at Herefordshire Council. Local operational factors can influence the averages applied in any modelling exercise including smaller / narrow access vehicles.

#### 4.3.2 Assumptions

Modelling alternative Options requires due consideration of the effects of service changes, in this regard, there are two approaches which FRM adopt. These are, using theoretical modelling / industry data (e.g. WRAP or KAT assumptions / other published information) or actual performance data

gathered from the authorities operating the proposed collection systems. Both were applied through this exercise and agreed with the client.

#### 4.3.3 Modelling Alternate Options

The KAT model is specifically designed for the purpose of modelling alternative collection options, calibrated against current performance and cost and the results are included in section 5.

## 5 KAT modelling results

A detailed breakdown of collection results is highlighted in Appendix A and a summary is included in sections 5.1 – 5.6. The additional costs and revenue of managing the collected wastes and recyclables is included in section 5.7 and a total net system cost presented in section 5.8.

### 5.1 Baseline Service

As outlined below the total annualised collection cost of Herefordshire’s current collection service, according to the KAT modelling is c. £3.9m. The current kerbside (core collection only) recycling rate is 32%. The collection service operates with 20 RCVs of varying size. KAT only allows for one type of collection vehicle to be modelled for each service. Therefore, based on the current total vehicle capacity, nineteen, 20m<sup>3</sup> RCVs were modelled to deliver the AWC recycling and residual collection system, which reflects the available capacity from twenty different sized vehicles in the Herefordshire fleet. Table 10 illustrates the current vehicles and operatives and Table 11 shows the modelled vehicles as applied in KAT, it should be noted that an additional driver has been allocated to appropriately account for salary costs versus actuals.

Table 9: Baseline annualised collection costs

<b>Total gross collection cost</b>	<b>c. £3.9 million</b>
<b>Kerbside recycling rate<sup>20</sup></b>	<b>32%</b>

Table 10: Baseline vehicle and crew requirements

	<b>Drivers</b>	<b>Loaders</b>	<b>Vehicles</b>
<b>26t RCV</b>	1	2	12
<b>18t RCV</b>	1	1	6
<b>12t RCV</b>	1	1	1
<b>7.5t RCV</b>	1	1	1
<b>Total</b>	20	32	20

<sup>20</sup> Note that this is not the total Local Authority Recycling rate which also includes the performance of Bring Banks, the HWRC and other collection activity, but is purely the performance of the main collection systems from households

Table 11. Baseline vehicle and crew requirements as modelled in KAT.

	Drivers	Loaders	Vehicles
20m <sup>3</sup> RCV	20	38	19
<b>Total</b>	20	38	

### 5.1 Option 1 – Introducing separate food waste collection and free garden

Option 1 models the current collection service but with the addition of a weekly food waste collection service and a free fortnightly garden waste collection.

Each household being provided with a small kitchen caddy and a 23l bin. The food waste would be collected in 7.5T specialist food waste collection vehicles.

The WRAP ready reckoner for food waste yields was applied to calculate the total tonnage of food waste collected. The ready reckoner formula is based on indices of deprivation and is the most accurate data set available to estimate projected food waste tonnages. Calculations are outlined in Appendix C. For this option we assumed a ‘low yield’ of 5,311 tonnes. Based on evidence from WRAP food waste collection trials a set out rate of 45% and a participation rate of 55% was applied. The food waste yields calculated by the WRAP ready reckoner have been cross checked against residual waste compositional analysis data provided by Herefordshire to ensure that there is sufficient food waste in the residual mix available.

The implementation of a separate food waste collection service, using the modelled assumption would be estimated to cost Herefordshire c. £2m per annum as highlighted in Table 12 below.

Option 1 also models a free fortnightly garden waste collection.

Table 12 Option 1 annualised collection costs

<b>Annualised recycling and residual collection cost</b>	£4,157,409
<b>Annualised organics (garden waste) collection cost</b>	£1,684,144
<b>Annualised food waste collection costs</b>	£2,058,219
<b>Total gross collection cost</b>	<b>£7,899,722</b>
<b>Kerbside recycling rate<sup>21</sup></b>	52%

<sup>21</sup> Note that this is not the total Local Authority Recycling rate which also includes the performance of Bring Banks, the HWRCs and other collection activity, but is purely the performance of the main collection systems from households

The implementation of a separate food waste collection and a free garden waste collection significantly increases the 'kerbside' recycling performance from 32% to 58% as food waste is being diverted from the residual waste stream and is sent for either digestion or specialist composting. However, it is assumed that some of this garden waste has been diverted from the HWRC stream (as already composted), so the table above deducts the recycling contribution from this element (as it is already being realised by the Council), hence the 'kerbside recycling rate' reduced to 52%.

The estimated food waste yield is a factor of the residual waste capacity and socio-demographics of the authority.

In this option, it is assumed that the recycling and residual waste collection systems will operate as per the current service and will continue to share vehicles. There is no modelled change to the number of vehicles and collection crew required for this service, this is despite a lower tonnage collected on the residual waste as a result of the food waste collection (in particular).

As outlined in Table 13 below the implementation of a dedicated food waste collection and separate garden waste collection will result in the requirement of 29 additional vehicles, combination of 26T RCV's and dedicated 7.5T food waste vehicles. The number of vehicles required for the joint residual and recycling service does not reduce in this service option, 48 vehicles are required to operate the service. 51 drivers<sup>22</sup> and 75 loaders<sup>23</sup> (crew members) would be required to operate the service.

This scenario does not provide any cost savings to the Council from the collection activity, an additional £3.7m is modelled as required to operate this system, with the total annualised collection cost at c. £7.9million.

Table 13 Option 1 vehicle requirements

	Recycling	Residual	Garden	Food	Total
20m <sup>3</sup> RCV	19	-	-	-	19
26m <sup>3</sup> RCV	-	-	8	-	8
7.5t Food waste vehicle	-	-	-	21	21
				<b>Total</b>	<b>48</b>

Table 14 Option 1 crew requirements

	Recycling	Residual	Garden	Food	Total
Drivers	20	9	22		51
Loaders	38	16	21		75

<sup>22</sup> As the current service (baseline) is delivered by a range of vehicles sizes we have added an additional driver for each service i.e. 1 additional driver for the recycling and residual waste collection (as vehicles are shared across the service), 1 for the garden waste collection and 1 for the food waste collection system (3 additional drivers in total increasing the total number of drivers from 48 to 51).

<sup>23</sup> We have assumed that the driver of the food waste collection vehicle will contribute 50% of their time to collection i.e. the number of food waste loaders is 1.5

## 5.2 Option 2 – Alternate three weekly collection, food waste and free garden waste.

Option 2 models an alternate three weekly recycling and residual waste service as illustrated in Table 1 above. Over a three-week period, recycling will be collected via two streams (paper and card separate from other dry recyclables) in weeks 1 and 2 (week 1 Paper and Card, and week 2 Plastics, Glass and Metals respectively), and residual waste will be collected in week 3. Residual waste is modelled to be collected in a 180l bin, which is the current bin size provided. However, this is a reduction in total residual waste capacity as the collection frequency has reduced from two weeks to three weeks i.e. previously residents would have been provided with 90l a week, a three-week collection provides residents with 60l a week.

Food waste is separately collected once a week, and a fortnightly free garden waste collection service is operated.

Due to the residual waste capacity restriction a 5% increase was applied to the set out and capture rate from the baseline for the dry recycling streams. An increase of 2% was applied in terms of participation, as the current participation rate for Herefordshire is already particularly high (95%).

Each household would be provided with a small kitchen caddy and a 23l bin. The food waste would be collected in 7.5T specialist food waste collection vehicles. With regards to food waste, due to the residual waste capacity restriction, a 'medium' yield of 7,085 tonnes was assumed as per the WRAP ready reckoner. The rationale being that residents will be incentivised to participate in the food waste collection due to limited space within the residual waste bin.

When compared to Option 1, the total number of vehicles required to operate the alternate three weekly collection system for the dry recycling and residual waste service has decreased by 1 vehicle from 19 vehicles to 18 vehicles. In this option, when evaluating the costs, it is assumed that the recycling and residual waste services will not share vehicles<sup>24</sup> however, there may be an additional cost saving opportunity whereby vehicles are shared across the services, as currently happens in Herefordshire. The increased capture of food waste results in the requirement of 1 additional dedicated food waste vehicles from 21 to 22 when compared to Option 1. The total number of vehicles is the same as option 1, 48 vehicles are required to operate the service. With regards to crew, 2 additional drivers are required to operate the service compared to Option 1. This is due, in part, to the fact that the residual and recycling vehicles are no longer shared and the dry recycling is collected over two weeks via two streams (paper and card week 1 and plastics, glass and metals week 2) as highlighted in Table 17 below.

In each collection system, of each scenario, the number of drivers required has been increased by 1 driver to allow for an additional driver where more, smaller vehicles are required. This is to appropriately account for salary costs versus actuals. See Section 5.1.

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<sup>24</sup> It is possible that further savings might be achieved through sharing of vehicles, however the Option 2 KAT model appears quite efficient in terms of utilising each vehicle.

This scenario does not provide any cost savings to the Council, an additional £4m is modelled as required to operate this system, with the total annualised collection cost at c. £8.15million as highlighted in Table 15 below.

However, the residual waste capacity restriction increases the kerbside recycling rate from 32% (current service) to 57%, an increase of 25%, after the garden waste contribution from the HWRC is taken into account.

Table 15 Option 2 annualised collection costs

<b>Annualised recycling collection cost</b>	£2,877,545
<b>Annualised organics (garden waste) collection cost</b>	£1,684,144,
<b>Annualised food waste collection costs</b>	£2,146,613
<b>Annualised residual waste collection cost</b>	£1,458,007
<b>Total gross collection cost</b>	<b>£8,166,309</b>
<b>Kerbside recycling rate<sup>25</sup></b>	57%

Table 16 Option 2 vehicle requirements

	<b>Recycling (A – paper &amp; card)</b>	<b>Recycling (B – plastic, glass, metals)</b>	<b>Residual</b>	<b>Garden</b>	<b>Food</b>	<b>Total</b>
20m <sup>3</sup> RCV	6	6	6	-	-	18
26m <sup>3</sup> RCV	-	-	-	8	-	8
7.5t Food waste vehicle	-	-	-	-	22	22
					<b>Total</b>	<b>48</b>

Table 17 Option 2 crew requirements

	<b>Recycling (A – paper &amp; card)</b>	<b>Recycling (B – plastic, glass, metals)</b>	<b>Residual</b>	<b>Garden</b>	<b>Food</b>	<b>Total</b>
Drivers <sup>26</sup>	7	7	7	9	23	53
Loaders	12	12	12	16	22	74

<sup>25</sup> Note that this is not the total Local Authority Recycling rate which also includes the performance of Bring Banks, the HWRCs and other collection activity, but is purely the performance of the main collection systems from households

<sup>26</sup> As mentioned above an additional driver has been added for each collection service.

### 5.3 Option 3 – Kerbside sort, weekly food, free garden

Option 3 models a weekly kerbside sort system for dry recycling, free fortnightly garden waste collection, and a weekly food waste collection. The dry recycling is collected in 3, 50 litre boxes, paper and card collected in one box, plastics and metals collected in another box, and glass bottles collected in the third box. The recycling is collected on a side loading, 5 compartment 21m<sup>3</sup> kerbsider vehicle, separate compartments for:

- Glass
- Cans and plastic
- Card and;
- Paper

It was assumed that the vehicle will have 80% utilisation, which is a reflection of compartments filling differentially, i.e. when one compartment is full the vehicle needs to tip. No increase was applied to the participation rate, however the contamination rate was reduced from the current contamination rate of 12% to 2% (KAT default for kerbside sort). It is widely assumed that when provided with opportunity to sort recycling at the kerbside, householders will generally sort their recycling with better efficiency, reducing the amount of non-target material entering the recycling system. For this reason, there is a slight increase in residual tonnage as the previous ‘contamination’ material moves to this stream.

A ‘low’ yield of food waste has been assumed to be captured via this scenario, as calculated by the WRAP ready reckoner, at 5,311 tonnes. This is lower than Option 2 because the residual waste capacity has not been restricted.

The estimated annualised cost of collection is c. £9.9million (Table 18) an additional £5.7million compared to the cost of the current service. This is due to the number of kerbsider vehicles (25) required to operate the dry recycling service. 9 collection vehicles are required to operate the residual waste vehicle requirement. As per Option 1, 8 and 21 vehicles are required for the garden and food waste collection service respectively.

As outlined in Table 19 a total of 63 vehicles are required to operate the service, which would require 107 loaders (see Table 20). This is an increase of 69 from the current service.

Table 18 Option 3 annualised collection costs

<b>Annualised recycling collection cost</b>	£4,078,736
<b>Annualised organics (garden waste) collection cost</b>	£1,684,144
<b>Annualised food waste collection costs</b>	£2,058,219
<b>Annualised residual waste collection cost</b>	£2,078,787
<b>Total gross collection cost</b>	<b>£9,899,886</b>

<b>Kerbside recycling rate<sup>27</sup></b>	<b>52%</b>
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Table 19 Option 3 vehicle requirements

	<b>Recycling</b>	<b>Residual</b>	<b>Garden</b>	<b>Food</b>	<b>Total</b>
Side loading, lift, 21m <sup>3</sup>	25	-	-	-	<b>25</b>
20m <sup>3</sup> RCV	-	9	-	-	<b>9</b>
26m <sup>3</sup> RCV	-	-	8	-	<b>8</b>
7.5t Food waste vehicle	-	-	-	21	<b>21</b>
				<b>Total</b>	<b>63</b>

Table 20 Option 3 crew requirements

	<b>Recycling</b>	<b>Residual</b>	<b>Garden</b>	<b>Food</b>	<b>Total</b>
Drivers	26	10	9	22	<b>67</b>
Loaders	50	20	16	21	<b>107</b>

This scenario does not provide any cost savings to the Council, an additional £5.7m is modelled as required to operate this system, with the total annualised collection cost at c. £9.9million.

## 5.4 Recycling Rates

Table 21 below illustrates the total tonnages collected across each Option, and the corresponding recycling rate. It is important to note here, that the kerbside recycling is artificially elevated as a proportion of the garden waste is assumed to come from the HWRCs across Herefordshire, (where it is already being recycled in the current service). It is assumed that 24% of the garden waste collected in Options 1 – 3 (3,989 tonnes) will be diverted away from the HWRC to the free kerbside garden waste collection service. Therefore, Table 22 illustrates the adjusted recycling rate taking this into account, approximately 6% of the kerbside recycling uplift is due to the diversion of garden waste from HWRC's to the kerbside collection. Option 2 continues to result in the highest recycling rate, this is because the residual waste capacity has been restricted from 90l a week to 60l a week. It was therefore assumed that the capture of dry recyclables and food waste increased, the total amount of waste sent for recycling increases from 16,756 tonnes in the baseline (current service) to 24,848 in Option 2.

<sup>27</sup> Note that this is not the total Local Authority Recycling rate which also includes the performance of Bring Banks, the HWRCs and other collection activity, but is purely the performance of the main collection systems from households

Table 21. Kerbside recycling performance (All options)

	Baseline	Option 1	Option 2	Option 3
Total Dry Recycling	16,756	16,756	18,132	16,756
Total Food	0	5,311	7,085	5,311
Total Garden	0	16,387	16,387	16,387
Total Contamination	2,126	3,211	3,475	1,420
Total Residual	32,925	24,401	20,987	26,193
Total	51,807	66,066	66,066	66,067

Dry Recycling Rate	32%	25%	27%	25%
Kerbside Recycling Rate	32%	58%	63%	58%

Table 22. Recycling rate (All options), garden waste HWRC recycling contribution netted off.

	Baseline	Option 1	Option 2	Option 3
Total Dry Recycling	16,756	16,756	18,132	16,756
Total Food	0	5,311	7,085	5,311
Total Garden	0	12,398	12,398	12,398
Total Contamination	2,126	3,211	3,475	1,420
Total Residual	32,925	24,401	20,987	26,193
	51,807	66,066	66,066	66,067

Recycling rate %, net of HWRC garden waste	32%	52%	57%	52%
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## 5.5 Other considerations

### **Kitchen caddy liners**

Herefordshire also requested if the cost of liners could be modelled to provide an insight into the additional cost of providing liners to all households served with the food waste collection service. Research has shown that the cost of compostable caddy liners varies. We have assumed a cost of 5p per liner and that each household would be provided with 2 liners a week, a total of 104 liners per year. This equates to a cost of £5.20 per household per year, a total cost of £442,499 for the year.

Table 23: Cost of compostable caddy liners

<b>Liners £/annum</b>	
Cost per liner	0.05
Liners per household per year	104
Cost per household/annum	£5.2
Total cost/annum	£442,499

### 5.6 Total Collection Cost

The total collection cost of all options is summarised in Table 24 and included in detail in Appendix A. The implementation of a separate food waste collection will cost Herefordshire between c. £2million and c. £2.15 million per annum dependent on the degree of uptake and, in these options, whether a restriction is applied to the residual waste collection service. Where a restriction has been applied to the residual waste collection it has been assumed that more food waste will be captured within the separate collection.

It is assumed that the same tonnage of garden waste will be collected in each scenario at a cost of c. £1.7million to the Council.

Table 24. Total Collection Cost

	Baseline	Option 1	Option 2	Option 3
<b>Annual Operating Costs</b>				
Vehicle operating costs (labour, vehicle standing, vehicle running and fuel)	£2,679,618	£5,265,531	£5,306,603	£6,868,588
Vehicle capital costs	£561,588	£1,019,500	£999,806	£1,225,505
Container Costs	£535,079	£877,566	£1,116,976	£844,190
Overheads	£375,147	£737,174	£742,924	£961,602
<b>Annual gross collection costs</b>	<b>£4,151,432</b>	<b>£7,899,772</b>	<b>£8,166,309</b>	<b>£9,899,886</b>
<b>Annual gross collection costs + liners</b>	<b>£4,151,432</b>	<b>£8,342,271</b>	<b>£8,608,808</b>	<b>£10,342,385</b>

## 5.7 Gate fee assessment

To understand the annual net collection and treatment cost, the potential income revenue and associated treatment costs from each of the Options is shown in Table 25 (a negative figure represents an income, whilst a positive represents a cost). The annual treatment costs presented below were calculated using the output tonnage information from the KAT model, applying industry published data on material prices and gate fees. Further details are shown in Appendix B.

Table 25 Annual Treatment costs

	Price (£/t)	Baseline (Commingled)	Option 1 (Commingled)	Option 2 (ATWC)	Option 3 (Kerbside sort)
Transfer	£3.50	£173,882	£219,992	£219,070	£226,264
Haulage Fee	£3.00	£149,042	£188,564	£187,774	£193,941
Gate Fees (Revenue)		£251,628	£816,664	£417,512	-£636,392
<i>Dry Recycling (Total)<sup>28</sup></i>		£368,628	£368,628	-£76,648	-£1,084,428
<i>Cans: Aluminium: baled</i>	-£700.20				-£166,578
<i>Cans: Steel</i>	-£108.72				-£77,800
<i>Glass: Mixed</i>	-£12.60				-£50,176
<i>Mixed papers: domestic</i>	-£21.33			-£184,142	£0
<i>Paper: News &amp; Pams</i>	-£78.48			-£43,042	-£628,750
<i>KLS card</i>	-£50.76			-£6,917	-£96,515
<i>Non-corrugated card</i>	-£50.76				-£13,228
<i>Plastic bottles: Coloured PET</i>	-£27.00				£0
<i>Plastic bottles: Mixed bottles</i>	-£32.85				-£38,891
<i>Plastic: other dense</i>	-£27.00				-£12,490
<i>Co-mingled DMR<sup>29</sup></i>	£22.00	£368,628	£368,628	-£76,648	
<i>Garden waste composting<sup>30</sup></i>	£25.00	0	£309,950	£309,950	£ 309,950
<i>Food Waste Treatment<sup>31</sup></i>	£26.00	£0	£138,086	£184,210	£138,086
<i>Revenue from garden waste sacks</i>		-£117,000			
Residual Waste Treatment <sup>32</sup>	£98.00	£3,236,517	£2,398,617	£2,063,052	£2,574,790
<b>Total</b>		<b>£3,811,069</b>	<b>£3,623,837</b>	<b>£2,887,408</b>	<b>£2,358,603</b>

<sup>28</sup> Average Let's Recycle Material Price (Jan-May 2019) minus 10% to account for smaller buying power

<sup>29</sup> WRAP (2018) MRF Gate Fee Report

<sup>30</sup> WRAP (2018) MRF Gate Fee Report

<sup>31</sup> WRAP (2018) MRF Gate Fee Report

<sup>32</sup> WRAP (2018) MRF Gate Fee Report

## 5.8 Total net costs

Table 26 **Error! Reference source not found.** shows the modelled total net costs of each option once the annual collection and net treatment costs have been combined.

Table 26 Total (net) Indicative costs

	Baseline (Current service)	Option 1 (Current service + food and garden)	Option 2 (Alternate three weekly + food and garden)	Option 3 (Kerbside sort)
Annual gross collection cost (incl. cost of liners)	£4,151,432	£8,342,271	£8,608,808	£10,342,385
Transfer costs	£173,882	£219,992	£219,070	£226,264
Haulage costs	£149,042	£188,564	£187,774	£193,941
Gate fee for recycling	£368,627	£368,627	-£76,648	-£1,084,428
Food Waste Treatment	£0	£138,086	£184,210	£138,086
Garden Waste Treatment	0	£309,950	£309,950	£309,950
Residual Waste Treatment	£3,236,517	£2,398,617	£2,063,052	£2,574,790
Whole System costs	<b>£7,962,501</b>	<b>£11,966,108</b>	<b>£11,496,216</b>	<b>£12,700,988</b>

The Baseline has the lowest net collection cost at c. £7.9million, this is because the service has the lowest gross collection cost, with no food or garden waste collection service.

Option 1 is the second most cost effective alternative service (+ c.£470k more expensive than Option 2). Changes have not been made to the dry recycling and residual waste collections and these are directly comparable to the Baseline. The increase in collection and treatment (c.£4m) is due to the introduction of a separate food and garden waste collection service. It is assumed that vehicles will continue to share across the recycling and residual service in this option.

Option 2 has the lowest total net cost of all the alternative collection options with a separate food waste collection and free garden waste collection service. Although there is an increase in gross collection cost (+£4.5m to the Baseline), the increased diversion from the residual waste stream and material revenue gained from a separate paper and card system offsets this to become the most cost-effective option for collecting food and garden waste. A material income revenue of £76k is assumed for this option based

on the high proportion of paper and card found within Herefordshire current recycling composition and the overall net cost difference versus the baseline service is +£3.5m per annum.

Option 3 has the highest total net cost of all the options modelled. This is due to the high collection costs associated with operating a kerbside collection scheme (+£4.7m to the Baseline) and despite over £1m of material income estimated for this system via recyclate revenue, the system as a whole is the most expensive of the options assessed (+£4.7m to the Baseline).<sup>33</sup>

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<sup>33</sup> The price per tonne is based on Lets Recycle Material price (-10%) to allow for market presence.

## 6 Comparison of headline results across all options.

The summary table below (Table 27) contains a comparison of the results across all options. All options have a greater cost, in collection terms, than the baseline. This is mainly due to the introduction of both a dedicated food waste collection, and a free garden waste collection service in all alternative options.

Table 27 Comparison of headline results across all scenarios

	<b>Whole System Cost</b>	<b>Total number of vehicles required</b>	<b>Kerbside recycling rate<sup>34</sup></b>	<b>Indicative cost increase relative to baseline</b>
<b>Baseline</b>	<b>£7,962,501</b>	19	32%	-
<b>Option 1</b>	<b>£11,966,108</b>	48	52%	c. £4 million
<b>Option 2</b>	<b>£11,496,216</b>	48	57%	c. £3.5 million
<b>Option 3</b>	<b>£12,700,988</b>	63	52%	c. £4.7 million

In all alternative systems additional vehicles are required. In each option, 8 collection vehicles are required to collect the separate garden waste tonnage. The difference in vehicle numbers between the alternative options is largely driven by the collection of the dry recycling and residual waste. The same total number of vehicles is required for Option 1 and 2, where a saving in 1 vehicle for the recycling and residual system in Option 2 is offset by the need for an additional vehicle to collect the increased food waste tonnage.

In all alternative scenarios the kerbside recycling rate increases substantially against the baseline. Again, this is driven by the introduction of a food and garden waste collection service. Option 2 is the preferred option when comparing the anticipated recycling rate. It is also the least cost of the alternative collection systems, albeit whilst still a significant increase in costs above the baseline. Collecting two-stream recycling, via an alternate three-weekly collection, with the introduction of a food waste and garden waste collection scheme results in a recycling rate of 57%. This high performance is estimated due to the restricted residual capacity (180l wheeled bin collected every three weeks, as opposed to every two weeks as at present).

Both Option 1 and Option 3 result in a recycling rate of 52%. The main differential between these two options is the level of contamination reported. Option 1 has the highest dry recycling contamination tonnage, which can be typical of a commingled collection. Whilst Option 3 however, results in the lowest contamination rate of the modelled options and therefore is likely to yield higher quality recycling.

<sup>34</sup> The total Council recycling rate would also include the waste flows from the Household Waste Recycling Centres, Bring Banks and other household waste streams not collected via the standard kerbside collection service. Therefore, for example, if a system in this report shows a +5% uplift in 'kerbside recycling rate', it would be envisaged that this would be a lower uplift in the total Council recycling rate (e.g. it could be +2, +3 or +4% depending on other factors within the Council).

## Appendix A – KAT Outputs

		Baseline	Option 1	Option 2	Option 3
Type of collection	Dry recycling	Kerbside commingled or single stream	Kerbside commingled or single stream	Kerbside commingled or single stream	Kerbside sorted (more than 2 streams)
		select from list	select from list	Kerbside commingled or single stream	select from list
	Dry recycling	select from list	Kerbside commingled or single stream	Kerbside commingled or single stream	Kerbside commingled or single stream
		select from list	Kerbside commingled or single stream	Kerbside commingled or single stream	Kerbside commingled or single stream
	Food waste	select from list	Kerbside commingled or single stream	Kerbside commingled or single stream	Kerbside commingled or single stream
		select from list	Kerbside commingled or single stream	Kerbside commingled or single stream	Kerbside commingled or single stream
Garden waste	Refuse collection	Refuse collection	Refuse collection	Refuse collection	
Collection frequency	Dry recycling	once a week	once a week	every 3 weeks	once a week
	Dry recycling	select from list	select from list	every 3 weeks	select from list
	Food waste	select from list	once a week	once a week	once a week
	Garden waste	select from list	every fortnight	every fortnight	every fortnight
	Refuse	once a week	once a week	every 3 weeks	every fortnight
Collection Vehicle	Dry recycling	RCV, 20m3	RCV, 20m3	RCV, 20m3	side loading, lift, 21m3
		select from list	select from list	RCV, 20m3	select from list
	Food waste	select from list	Dedicated food 7.5T GVW	Dedicated food 7.5T GVW	Dedicated food 7.5T GVW
		select from list	RCV, 26m3	RCV, 26m3	RCV, 26m3
	Refuse	RCV, 20m3	RCV, 20m3	RCV, 20m3	RCV, 20m3
Number of households served	Dry recycling	85,096	85,096	85,096	85,096
	Dry recycling	0	0	85,096	0
	Food waste	0	85,096	85,096	85,096
	Garden waste	0	85,096	85,096	85,096
	Refuse	85,096	85,096	85,096	85,096
Percentage set out	Dry recycling	90%	90%	90%	90%
	Dry recycling	select from list	select from list	90%	select from list
	Food waste	select from list	45%	55%	45%
	Garden waste	select from list	60%	60%	60%
	Refuse	90%	90%	90%	90%
	Dry recycling	select from list	select from list	select from list	select from list
	Dry recycling	select from list	select from list	select from list	select from list

		Baseline	Option 1	Option 2	Option 3
Percentage set out (2nd stream)	Food waste	select from list	select from list	select from list	select from list
	Garden waste	select from list	select from list	select from list	select from list
Average participation	Dry recycling	95%	95%	97%	95%
	Dry recycling	100%	100%	97%	100%
	Food waste	100%	55%	65%	55%
	Garden waste	100%	70%	70%	70%
Average capture	Dry recycling	100%	62%	67%	62%
	Dry recycling	100%	100%	67%	100%
	Food waste	100%	55%	63%	55%
	Garden waste	100%	820%	820%	820%
Tonnes collected excluding contamination	Dry recycling	16,756	16,756	10,975	16,756
	Dry recycling	0	0	7,157	0
	Food waste	0	5,311	7,085	5,311
	Garden waste	0	16,387	16,387	16,387
	Refuse	32,925	24,401	20,987	26,193
Tonnes of contamination collected	Dry recycling	2,126	2,126	1,393	335
	Dry recycling	0	0	908	0
	Food waste	0	266	354	266
	Garden waste	0	819	819	819
Tonnes of biodegradable material collected	Dry recycling	10,174	10,174	10,975	10,174
	Dry recycling	0	0	0	0
	Food waste	0	5,311	7,085	5,311
	Garden waste	0	16,387	16,387	16,387
Number of collection vehicles required	Dry recycling	18.4	18.4	6.0	24.4
	Dry recycling	0.0	0.0	6.0	0.0
	Food waste	0.0	20.7	21.2	20.7
	Garden waste	0.0	7.9	7.9	7.9
	Refuse	18.1	17.9	6.0	9.0
Collection limited by weight or volume	Dry recycling	volume	volume	volume	volume
	Dry recycling	volume	volume	volume	volume
	Food waste	volume	weight	weight	weight
	Garden waste	volume	volume	volume	volume
	Refuse	weight	weight	weight	weight
Number of loads collected per vehicle per day	Dry recycling	1.9	1.9	1.3	1.5
	Dry recycling	1.0	1.0	1.8	1.0
	Food waste	1.0	0.3	0.5	0.3
	Garden waste	1.0	0.6	1.0	1.0
	Refuse	1.3	1.0	1.3	1.1

		Baseline	Option 1	Option 2	Option 3
Number of households passed per vehicle per day	Dry recycling	924	924	944	698
	Dry recycling	0	0	944	0
	Food waste	0	821	804	821
	Garden waste	0	1,076	1,076	1,076
	Refuse	940	952	943	943
Number of households collected from per vehicle per day	Dry recycling	832	832	850	629
	Dry recycling	0	0	850	0
	Food waste	0	369	442	369
	Garden waste	0	645	645	645
	Refuse	846	857	849	849
Pass rate	Dry recycling	117	117	120	92
	Dry recycling	0	0	120	0
	Food waste	0	93	91	93
	Garden waste	0	122	122	122
	Refuse	119	121	119	119
Productive time	Dry recycling	474	474	474	454
	Dry recycling	510	510	474	510
	Food waste	510	530	530	530
	Garden waste	510	530	530	530
	Refuse	474	474	474	474
Non productive time	Dry recycling	111	111	111	131
	Dry recycling	75	75	111	75
	Food waste	75	55	55	55
	Garden waste	75	55	55	55
	Refuse	111	111	111	111
Percentage of targeted materials collected	Dry recycling	76%	59%	67%	59%
	Dry recycling	0%	0%	61%	0%
	Food waste	0%	30%	41%	30%
	Garden waste	0%	574%	574%	574%
Annual cost for containers	Dry recycling	£244,053	£244,053	£244,053	£210,678
	Dry recycling	£0	£0	£239,411	£0
	Food waste	£0	£98,434	£98,434	£98,434
	Garden waste	£0	£244,053	£244,053	£244,053
	Refuse	£291,026	£291,026	£291,026	£291,026
Total capital cost of containers	Dry recycling	£1,565,766	£1,565,766	£1,565,766	£506,321
	Dry recycling	£0	£0	£1,535,983	£0
	Food waste	£0	£354,850	£354,850	£354,850
	Garden waste	£0	£1,565,766	£1,565,766	£1,565,766
	Refuse	£1,565,766	£1,565,766	£1,565,766	£1,565,766

		Baseline	Option 1	Option 2	Option 3
Annual capital cost of collection vehicles	Dry recycling	£0	£0	£177,344	£501,578
	Dry recycling	£0	£0	£177,344	£0
	Food waste	£0	£207,123	£216,986	£207,123
	Garden waste	£0	£250,789	£250,789	£250,789
	Refuse	£561,588	£561,588	£177,344	£266,016
Are vehicles used for more than one collection	Dry recycling	Yes, for refuse	Yes, for refuse	No	No
	Dry recycling	select from list	select from list	No	select from list
	Food waste	select from list	No	No	No
	Garden waste	select from list	No	No	No
	Refuse	Yes, for collection A	Yes, for collection A	No	No
Total capital cost of vehicles	Dry recycling	£0	£0	£990,000	£2,800,000
	Dry recycling	£0	£0	£990,000	£0
	Food waste	£0	£1,156,239	£1,211,298	£1,156,239
	Garden waste	£0	£1,400,000	£1,400,000	£1,400,000
	Refuse	£3,135,000	£3,135,000	£990,000	£1,485,000
Annual vehicle operating costs	Dry recycling	£0	£0	£888,920	£2,953,053
	Dry recycling	£0	£0	£900,022	£0
	Food waste	£0	£1,537,422	£1,606,309	£1,537,422
	Garden waste	£0	£1,043,248	£1,043,248	£1,043,248
	Refuse	£2,679,618	£2,684,861	£868,103	£1,334,864
Annual overheads	Dry recycling	£0	£0	£124,449	£413,427
	Dry recycling	£0	£0	£126,003	£0
	Food waste	£0	£215,239	£224,883	£215,239
	Garden waste	£0	£146,055	£146,055	£146,055
	Refuse	£375,147	£375,881	£121,534	£186,881
Annual gross collection cost	Dry recycling	£244,053	£244,053	£1,434,766	£4,078,736
	Dry recycling	£0	£0	£1,442,779	£0
	Food waste	£0	£2,058,219	£2,146,613	£2,058,219
	Garden waste	£0	£1,684,144	£1,684,144	£1,684,144
	Refuse	£3,907,379	£3,913,356	£1,458,007	£2,078,787

## Appendix B – Total Costs Net of Treatment

	Baseline	Option 1	Option 2	Option 3
<b>Annual Operating Costs</b>				
Vehicle operating costs (labour, vehicle standing, vehicle running and fuel)	£2,679,618	£5,265,531	£5,306,603	£6,868,588
Vehicle capital costs	£561,588	£1,019,500	£999,806	£1,225,505
Container Costs	£535,079	£877,566	£1,116,976	£844,190
Overheads	£375,147	£737,174	£742,924	£961,602
<b>Annual gross collection costs</b>	<b>£4,151,432</b>	<b>£7,899,772</b>	<b>£8,166,309</b>	<b>£9,899,886</b>
<b>Annual gross collection costs + liners</b>	<b>£4,151,432</b>	<b>£8,342,271</b>	<b>£8,608,808</b>	<b>£10,342,385</b>
		<b>£4,190,839</b>	<b>£4,457,376</b>	<b>£6,190,953</b>
<b>Additional Costs</b>				
Liner cost	£0.00	£442,499.20	£442,499.20	£442,499.20
<b>Treatment Costs</b>				
Transfer costs	£173,882	£219,992	£219,070	£226,264
Haulage fee	£149,042	£188,564	£187,774	£193,941
Gate Fees	£251,628	£816,664	£417,512	£-636,392
<i>Dry Recycling</i>	£368,627	£368,627	£-76,648	£-1,084,428
<i>Garden waste composting (HWRCs)</i>	0	£ 309,950	£ 309,950	£ 309,950
<i>Food Waste Treatment</i>	£0	£138,086	£184,210	£138,086
<i>Revenue from garden waste sacks</i>	£-117,000			
Residual Waste Treatment/Disposal (EfW)	£3,236,517	£2,398,617	£2,063,052	£2,574,790
<b>Total Treatment Cost</b>	<b>£3,811,069</b>	<b>£3,623,837</b>	<b>£2,887,408</b>	<b>£2,358,603</b>
<b>Total Cost</b>	<b>£7,962,501</b>	<b>£11,966,108</b>	<b>£11,496,216</b>	<b>£12,700,988</b>
Difference from baseline	£0	£4,003,607	£3,533,715	£4,738,488



Average material price 2019 Lets Recycle (Jan- May 2019) - 10%

Average material price 2019 Lets Recycle (Jan- May 2019) minus 10%

		Baseline	Option 1	Option 2	Option 3
	Materials	Commingled	Commingled	Twin-stream	Kerbside sort
	Paper: News & Pams			-£43,042.15	-£628,750.37
	KLS card			-£6,916.58	-£96,515.06
	Non-corrugated card				-£13,228.06
	Plastic bottles: Coloured PET				£0.00
	Plastic bottles: Mixed bottles				-£38,891.12
	Plastic: other dense				-£12,490.20
£22.00	Commingled DMR	£368,627.60	£368,627.60	-£76,648.35	
£26.00	Food Waste Treatment (AD)	£0.00	£138,086.00	£184,210.00	£138,086.00
£25.00	Garden Waste Treatment (OWC)	£0.00	£309,950.00	£309,950.00	£309,950.00
	Garden Waste Income	-£117,000.00			
	Gate Fees Total	£251,627.60	£816,663.60	£417,511.65	-£636,392.14
£98	Residual Waste Treatment EfW	£3,236,516.59	£2,398,617.22	£2,063,051.71	£2,574,789.99
£3.50	Transfer (All tonnage)	£173,882.41	£219,991.76	£219,070.01	£226,264.44
£3.00	Haulage (All tonnage)	£149,042.07	£188,564.37	£187,774.30	£193,940.95
	<b>Total Treatment Costs</b>	<b>£3,811,068.67</b>	<b>£3,623,836.95</b>	<b>£2,887,407.68</b>	<b>£2,358,603.25</b>

## Appendix C – Food Waste ‘ready reckoner’

### Food waste ‘ready reckoner’<sup>35</sup>

For areas with fortnightly residual waste collection (i.e. alternate weekly collection): = **2.1614 – (% Social Groups D and E X 2.2009) ± 0.40 kg/hh/week.**

### Calculation for expected yield of food waste (kg/hh/week).

				kg/hh/week		
A	B	C	D	E		
LA	Social Grade D & E 2011 (%)		(BXC)	Medium (C-D)	High (E+0.4)	Low (E-0.4)
Herefordshire	25.5%	2.1614	0.55	1.60	2.00	1.20

### Tonnage calculation

LA	Number of households	Medium	High	Low
Herefordshire	85,096	7,085	8,858	5,311

= 2.1614 – (% Social Groups D & E x 2.2009) +/- 0.4 kg/hh/week

= 2.1614 – (25.5% x 2.2009) +/- 0.4 = 1.600171 kg/hh/week

Minimum yield = **1.200171 kg/hh/week** (5,311 tonnes per annum)

Maximum yield = **2.00171 kg/hh/week** (8,858 tonnes per annum)

<sup>35</sup> Household food waste collections guide, Section 3: How much food waste can be collected for recycling? WRAP 2016

## Appendix D – Garden waste tonnage

Local Authority	Rurality	No. HHs	Garden waste collected per HH (kg)	Garden waste collected (tonnes)	Residual waste per HH kg	BVPI82b (comparator) – numerator 'Household Waste Sent For Composting'	BVPI82a (comparator) – numerator 'Household Waste Sent For Dry Recycling'	HH waste sent for reuse, recycling or composting	% of garden in total recycling	NI192 (comparator) – Percentage HH waste sent for Reuse, Recycling or Composting	Collection
Allerdale DC	5	46,780	151.60	7,092	590.75	7,423.35	6,922.91	14,346.26	52%	34.2%	Garden only
Braintree	6	64,060	175.94	11,271	460.68	15,639.62	13,234.20	28,873.82	54%	49.5%	Garden only
Copeland	5	33,530	139.76	4,686	509.60	4,686.40	3,669.99	8,356.39	56%	32.8%	Garden only
Daventry	6	34,900	281.29	9,817	476.41	11,215.00	6,521.89	17,736.89	63%	51.7%	Garden only
Derbyshire Dales DC	6	33,580	219.03	7,355	312.56	15,865.65	7,145.00	23,010.65	69%	60.3%	Garden only
North West Leicestershire	5	43,190	242.72	10,483	515.66	11,092.37	7,758.98	18,851.35	59%	45.9%	Garden only
Wealden DC	6	68,530	218.56	14,978	432.20	15,865.65	15,304.97	31,170.62	51%	51.3%	Garden only
Wellingborough	5	34,700	160.46	5,568	516.40	5,488.19	11,215.00	16,703.19	33%	41.4%	Garden only
West Lancashire	5	49,180	171.13	8,416	502.52	9,247.70	9,235.50	18,483.20	50%	42.9%	Garden only

			Estimates								
Herefordshire (WCA + WDA)	5	85,096	192.58		545.16	7,978.52				39.80%	
Herefordshire WCA Only	33359.29	85,096	192.58		392.01	0	18,913.97	18,913.97		36.18%	No Food No garden
Frith Estimates					Estimate	16,387.47	18,882.00	35,269.47	46%		

The following assumptions have been regarding the garden waste collection tonnage. It is assumed that 95% of the garden waste occurring the residual stream contributes to the 16,387 tonnage. It is assumed that 25% of the garden waste tonnage is diverted from the HWRC.

Garden waste	
Garden waste to move into collections from residual HWRCs	2127
New material	10271
<b>Total calculated garden waste</b>	<b>16387</b>

Garden waste estimate:  $192.58 \times 85,096 = 16,387.47$   
 Recycling tonnage as reported by Council (exc. Garden) = 18,882  
 Total = 35,269.47 % of total which is garden = 46



# Waste, a Strategic Review



445

**September 2020**

# Introduction and Purpose of Review

Our waste management service is a statutory service with requirements set out in legislation. It is provided to and used by every household (and resident) in Herefordshire.

There are three main drivers for this review:

1. Arrangements for providing the service expire in 3 years at the end of 2023
2. The Resource and Waste Strategy 2018 labelled a “once in a generation policy change” will have significant implications on how the waste management service is provided from 2023
3. The Council is ambitious in wishing to tackle the climate and ecological emergency

# Our Vision

Waste not, want not...we value resources and their use. We will reduce resource consumption and embrace the circular economy to maximise the life of products and materials. We treat the materials we collect as resources not waste.

# Future Requirements

- Resource and Waste Strategy (for England) 2018 intends to bring about a more circular economy, it includes measures to:
  - Extension of producer responsibility for packaging producers, meaning they will pay for the cost of dealing with packaging waste
  - Possible bans for plastic materials where sustainable alternatives exist
  - Consistent **recycling collections** (all local authorities collecting the same materials)
    - 65% Recycling Target by 2035
  - Compulsory weekly **food waste** collection
  - Separate **garden waste** collection
  - Initiatives to encourage urban recycling
  - Initiatives to tackle waste crime

# Future Requirements

- Implementation

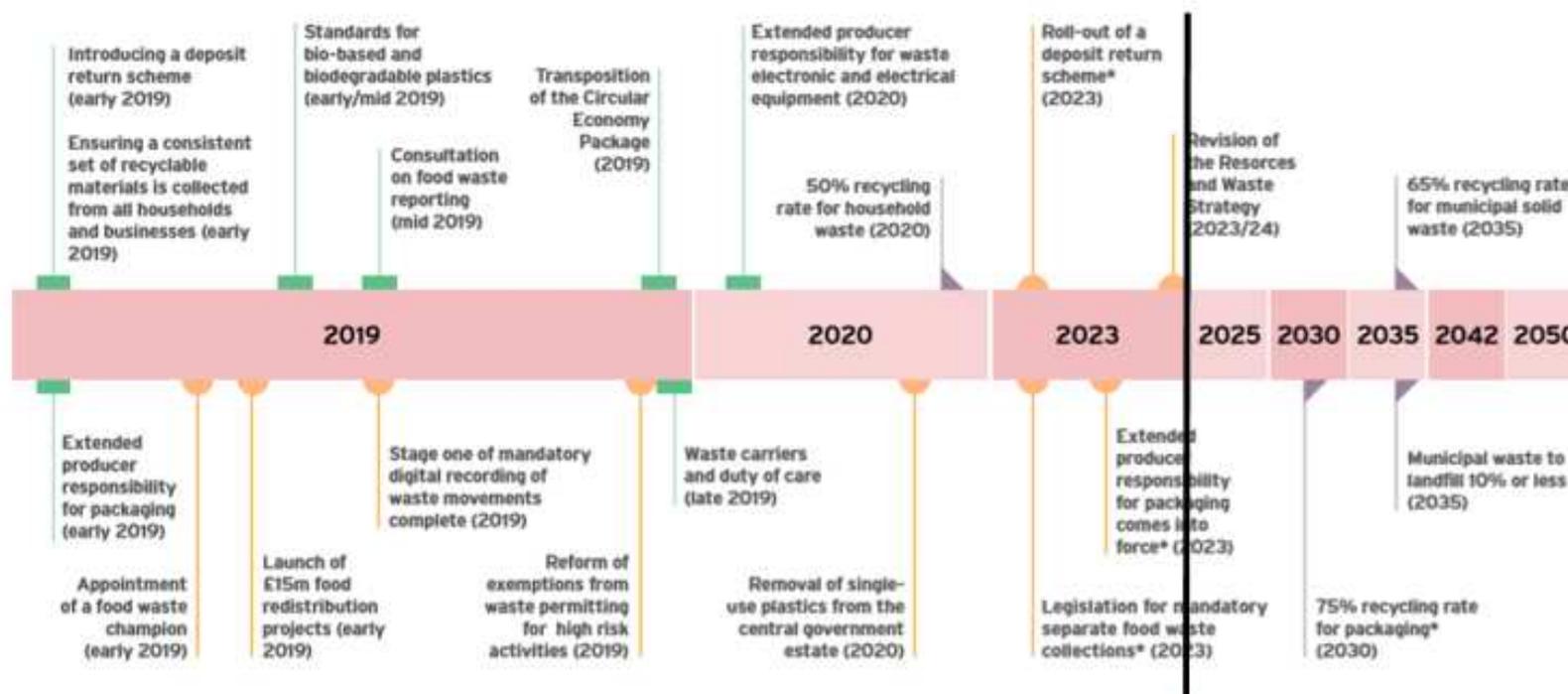


Figure 3 Resource and Waste Strategy Implementation

Current Contracts Expire

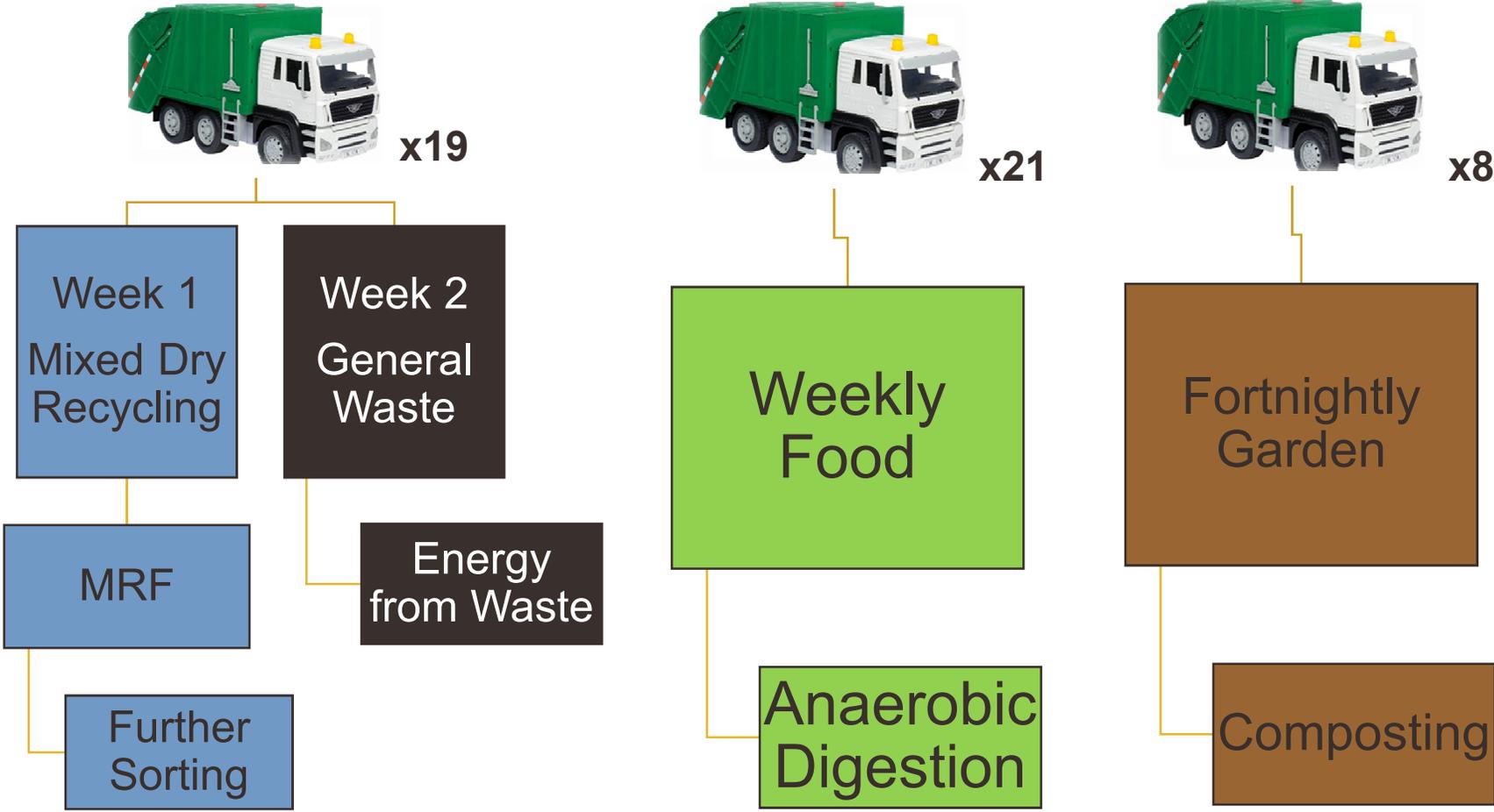
# Service Options

- Three waste collection options have been considered in report



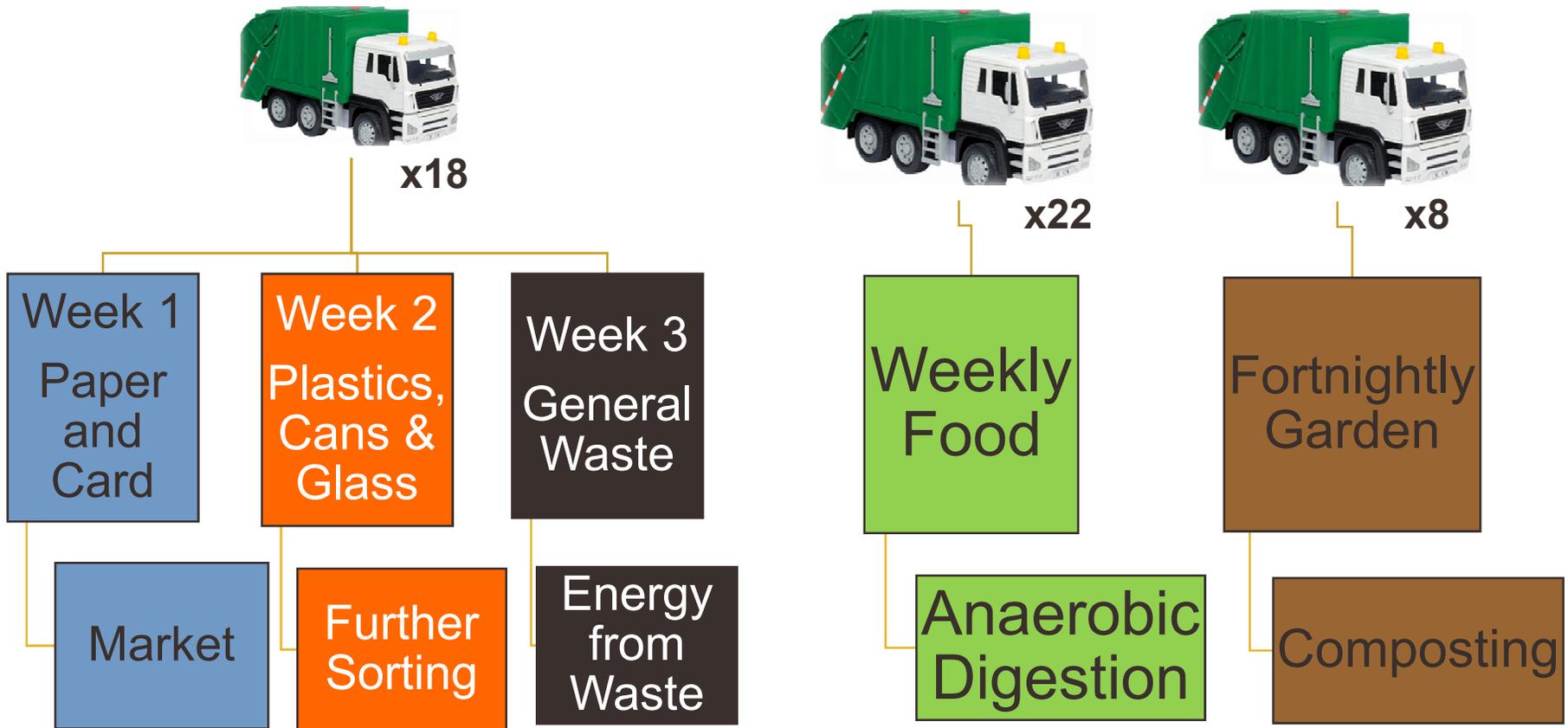
# Option 1 (As is + Food + Garden)

451

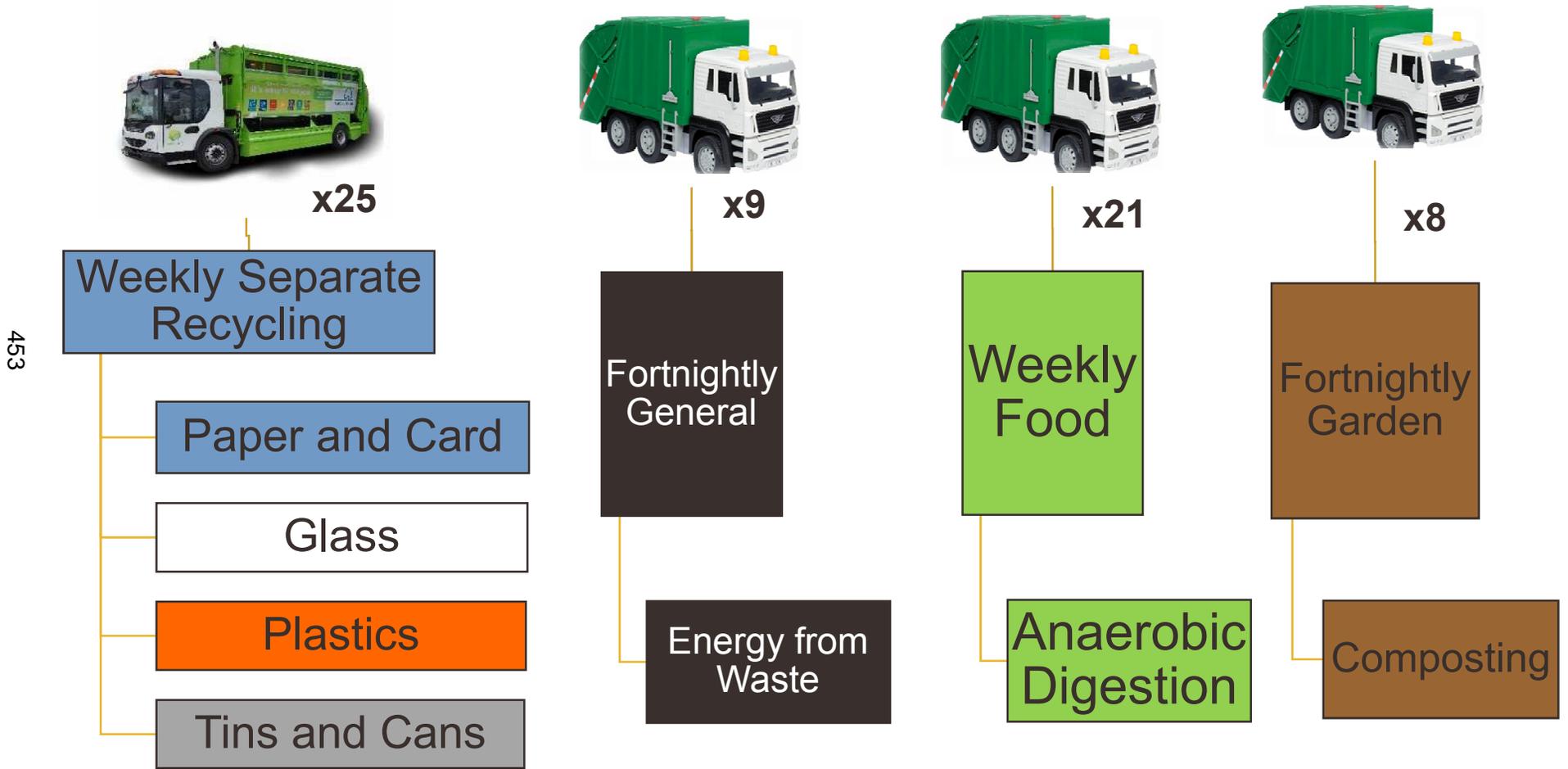


# Option 2 (Three weekly + Food + Garden)

452



# Option 3 (Kerbside Sort + Food + Garden)



# Key Findings (Service Options)

Resourcing and Performance		Option 1 Comingled Recycling	Option 2 Two Stream	Option 3 Kerbside Sort
<b>SECTION 1 – Resource Requirements</b>				
Number of vehicles and operational staff needed to provide the service				
Fleet Requirement	Residual	19	18	9
	Recycling			25
	Food Waste	21	22	21
	Garden Waste	8	8	8
	<b>TOTAL</b>	<b>48</b>	<b>48</b>	<b>63</b>
<b>Drivers and Loaders</b>		126	127	174
<b>SECTION 2 – Performance of household recycling and residual collection</b>				
Expected household waste arising and performance				
Residual		24,401	20,987	26,193
Recycling		16,756	18,132	16,756
Food		5,311	7,085	5,311
Garden		16,387	16,387	16,387
Contamination		3,211	3,475	1,420
<b>Total Collected</b>		<b>66,066</b>	<b>66,066</b>	<b>66,067</b>
Dry Recycling Rate		25%	27%	25%
<b>Recycling Rate</b>		<b>58%</b>	<b>63%</b>	<b>58%</b>

# Key Findings (Service Options)

	Option 1 Comingled Recycling	Option 2 Two Stream	Option 3 Kerbside Sort
<b>SECTION 3 – Costs for recycling and residual waste collection and treatment</b>			
Operational costs for recycling and residual waste are presented so the costs of continuing the existing Comingled Recycling (AWC) service (column 1) can be compared to alternative options of Two Stream (ATWC) or Kerbside Sort. Costs of food waste and garden waste are excluded and separately illustrated.			
Residual Waste Collection	£2,078,705	£1,458,007	£2,078,787
Recycling Collection	£2,078,705	£2,877,545	£4,078,736
<b>SUB TOTAL</b>	<b>£4,157,410</b>	<b>£4,335,552</b>	<b>£6,157,523</b>
Residual Treatment Cost	£2,398,617	£2,063,052	£2,574,790
Recycling Cost	£368,628	<b>-£76,000</b>	<b>-£1,084,428</b>
Storage and Transfer	£219,992	£219,992	£226,264
Waste Transport	£188,564	£187,774	£193,941
<b>SUB TOTAL</b>	<b>£3,175,801</b>	<b>£2,394,818</b>	<b>£1,910,567</b>
<b>TOTAL</b>	<b>£7,333,211</b>	<b>£6,729,448</b>	<b>£8,068,090</b>
<b>SECTION 4 – Costs for food waste and garden waste collection and treatment</b>			
Operational costs of storing, transfer, recycling, treatment and disposal of food and garden waste collected. This is separately illustrated as these represent new services the council does not currently provide, thus they represent the greatest impact on additional cost and improved performance.			
Note: The option of supplying caddy liners has been excluded.			
Food Waste Collection	£2,058,219	£2,146,613	£2,058,219
Garden Waste Collection	£1,684,144	£1,684,144	£1,684,144
<b>SUB TOTAL</b>	<b>£3,742,363</b>	<b>£3,830,757</b>	<b>£3,742,363</b>
Food Treatment Cost	£138,086	£184,210	£138,086
Garden Treatment Cost	£309,950	£309,950	£309,950
<b>SUB TOTAL</b>	<b>£448,036</b>	<b>£494,160</b>	<b>£448,036</b>
<b>TOTAL FOOD &amp; GARDEN</b>	<b>£4,190,399</b>	<b>£4,324,917</b>	<b>£4,190,399</b>
<b>SECTION 5 – Total Service costs for collection and respective treatment of wastes collected.</b>			
Total operational costs for providing the household recycling and waste collection service and associated storage, transfer, transport and treatment. Cost per household is provided for comparison with Table 3. Cost per household + £3m (for HRC and management costs is also provided to allow more direct comparison)			
<b>TOTAL SERVICE COSTS</b>	<b>£11,523,610</b>	<b>£11,054,365</b>	<b>£12,258,489</b>
<b>Cost per Household</b>	<b>£137</b>	<b>£131</b>	<b>£145</b>
<i>Per Household (inc. HRCs)</i>	<i>£172</i>	<i>£167</i>	<i>£181</i>

# Service Options

Criteria		<i>Option 1</i> Comingled Recycling	<i>Option 2</i> Two Stream Recycling	<i>Option 3</i> Kerbside Sort Recycling
<b>Our Priorities</b>	Treating Waste as a Resource	Lowest quality	Moderate quality	Highest quality
	Prioritising Public Acceptance	Least change for residents	Moderate change	Most change
	Maximising Reuse Opportunities	Limited option to include more materials	Some options to include more materials	Options to include more materials (e.g. textiles)
<b>Our Objectives</b>	Environmental Impact (Vehicles)	Smallest fleet	Smallest fleet	Largest fleet
	Environmental Impact (Resource)	Low quality materials	Moderate quality	High quality better opportunities for closed loop recycling
	Social Value Objectives	Moderate employment and local re-processing opportunities	Moderate employment and local re-processing opportunities	Greatest employment and local re-processing opportunities
	Economic Objectives	Moderate cost	Lowest cost	Highest cost
<b>Other Criteria</b>	Legal Compliance (Frequency of collection)	Likely to comply	Least likely to comply	Most likely to comply
	Legal Compliance (Recycling Quality)	Lowest quality	Moderate quality	Highest quality
	Practical Service Delivery	Least change for service	Moderate change	Greatest change
	Flexibility of Service	Limited once configured	Limited once configured	Limited once configured

456

# Comissioning

<b>Start</b>	August 2020	December 2020	April 2021	June 2021	January 2022	January 2023
<b>End</b>	November 2020	March 2021	May 2021	December 2021	December 2022	November 2023
<b>Length</b>	3 Months	3 Months	2 Months	7 Months	1 Year	10 Months
<b>Action</b>	Considering Options	Public Consultation	Select Preferred Option(s)	Design Service and Produce Strategy	Commission / Procure Service	Mobilise and Implement
<b>Key Tasks</b>	Complete Strategic Review Report to General Overview and Scrutiny Report to Cabinet	Consult on key options with public and key stakeholders to inform preferred service options	Report to Cabinet to approve approach	Design service and produce strategy for how it will be delivered Report to cabinet to approve strategy Research and pilot services as required	Commission new services whether that be by procuring private service contractors or providing the service in house or a mix of the two.	Minimum 9 Month mobilisation period to enable providers to resource new service



WE ARE HERE

457

# Key Recommendations

- Treat waste as a resource to bring about a circular economy approach
- Prioritise public acceptance, consult and engage with our customers including them in this journey
- Maximise re-use, particularly through our Household Recycling Centres to prevent loss of valuable resources.
- ACT NOW with staff and resource to avoid further delay and significant risk of poor outcomes (cost, quality and performance)
- Progress options 2 and 3 to public consultation to inform decisions on preferred approach.

# Key Risks

## Further Delay

- Commissioning timescales are already tight. Further delay will restrict ability to fully consider options and approaches resulting in poor decisions and undesirable outcomes.

## Lack of resourcing and commissioning strategy

- Failing to appreciate the scale of the work required, appoint suitable staff to undertake the work and allocate resource will mean the council will be unable to put in place new services on expiry of current arrangements.

# ACTIONS

- **Accept the recommendations in this report**

To inform decision making and ensure the best possible outcomes for the council and its residents

- **Act Now**

To avoid further delay and reduce risk of poor decisions being made

- **Appoint staff and allocate resource to do the work**

To ensure we have the capability and capacity to do this well

# Closing remarks, review of recommendations and questions





<b>Meeting:</b>	<b>General scrutiny committee</b>
<b>Meeting date:</b>	<b>Monday 28 September 2020</b>
<b>Title of report:</b>	<b>Work programme</b>
<b>Report by:</b>	<b>Democratic Services Officer</b>

## Classification

Open

## Decision type

This is not an executive decision

## Wards affected

(All Wards);

## Purpose

To review the committee's work programme.

## Recommendation(s)

That:

- (a) the draft work programme as set out at appendix A to the report be approved subject to any amendments the committee wishes to make; and
- (b) the committee determines any other matter in relation to the appointment of task and finish groups, their chairmanship and any special responsibility allowance or the undertaking of a spotlight review.

## Alternative options

1. It is for the committee to determine its work programme to reflect the priorities facing Herefordshire. The committee needs to be selective and ensure that the work programme is focused, realistic and deliverable within existing resources.

## Key considerations

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Further information on the subject of this report is available from  
Tim Brown, Tel: 01432 260239, email: [tbrown@herefordshire.gov.uk](mailto:tbrown@herefordshire.gov.uk)

2. The work programme needs to focus on the key issues of local concern and be manageable. It must also be ready to accommodate urgent items or matters that have been called-in.
3. Should committee members become aware of any issue they think should be considered by the Committee they are invited to discuss the matter with the chairperson, vice-chairperson and the statutory scrutiny officer.
4. The draft work programme is attached at appendix A.
5. The Committee on 23 July 2019 authorised the statutory scrutiny officer, following consultation with the chairperson and vice-chairperson, to add items to the work programme where it is necessary to ensure their timely consideration where there is no scheduled meeting to approve their inclusion.

## **Constitutional Matters**

### **Task and Finish Groups**

6. A scrutiny committee may appoint a task and finish group for any scrutiny activity within the committee's agreed work programme. A committee may determine to undertake a task and finish activity itself as a spotlight review where such an activity may be undertaken in a single session; the procedure rules relating to task and finish groups will apply in these circumstances.
7. The relevant scrutiny committee will approve the scope of the activity to be undertaken, the membership, chairperson, timeframe, desired outcomes and what will not be included in the work. A task and finish group will be composed of a least 2 members of the committee, other councillors (nominees to be sought from group leaders with un-affiliated members also invited to express their interest in sitting on the group). This may include, as appropriate, co-opted people with specialist knowledge or expertise to support the task. In appointing a chairman of a task and finish group the committee will also determine, having regard to the advice of the council's monitoring officer and statutory scrutiny officer, whether the scope of the activity is such as to attract a special responsibility allowance.
8. The Committee is asked to determine any matters relating to the appointment of a task and finish group and the chairperson and any special responsibility allowance or undertaking a spotlight review including co-option (see below).

### **Task and finish group – update**

9. The committee established a task and finish group to undertake a waste management strategic review on 29 November 2019. The group's final report appears elsewhere on the agenda for the 28 September meeting.
10. A task and finish group on the climate emergency was established in January 2020. This group is aiming to report to the committee in November 2020.

### **Suggestions for scrutiny**

11. Suggestions for scrutiny are invited from members of the public through the council's website, accessible through the link below. Any suggestions received are referenced in Appendix B.

[https://www.herefordshire.gov.uk/info/200148/your\\_council/61/get\\_involved/4](https://www.herefordshire.gov.uk/info/200148/your_council/61/get_involved/4)

### **Tracking of recommendations made by the committee**

12. A schedule of recommendations and action in response is attached at appendix C.

### **Forward plan**

13. The constitution states that scrutiny committees should consider the forward plan as the chief source of information regarding forthcoming key decisions. Forthcoming decisions can be viewed under the forthcoming decisions link on the council's website:

<http://councillors.herefordshire.gov.uk/mgdelegateddecisions.aspx?XXR=0&DAYS=28&RP=0&K=0&DM=0&HD=0&DS=1&META=mgdelegateddecisions&V=0>

### **Suggestions for scrutiny from members of the public**

14. Suggestions for scrutiny are invited from members of the public through the council's website, accessible through the link below. Any suggestions received are reference in Appendix A.

[https://www.herefordshire.gov.uk/info/200148/your\\_council/61/get\\_involved/4](https://www.herefordshire.gov.uk/info/200148/your_council/61/get_involved/4)

## **Community impact**

15. In accordance with the adopted code of corporate governance, Herefordshire Council is committed to promoting a positive working culture that accepts and encourages constructive challenge and recognises that a culture and structure for scrutiny are key elements for accountable decision making, policy development and review. Topics selected for scrutiny should have regard to what matters to residents.

## **Environmental Impact**

- 16 Herefordshire Council provides and purchases a wide range of services for the people of Herefordshire. Together with partner organisations in the private, public and voluntary sectors we share a strong commitment to improving our environmental sustainability, achieving carbon neutrality and to protect and enhance Herefordshire's outstanding natural environment.
- 17 The topics selected for scrutiny will take environmental impact into account.

## **Equality duty**

- 18 Under section 149 of the Equality Act 2010, the 'general duty' on public authorities is set out as follows:

A public authority must, in the exercise of its functions, have due regard to the need to -

- (a) eliminate discrimination, harassment, victimisation and any other conduct that is prohibited by or under this Act;
- (b) advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it;

- (c) foster good relations between persons who share a relevant protected characteristic and persons who do not share it.
19. The public sector equality duty (specific duty) requires us to consider how we can positively contribute to the advancement of equality and good relations, and demonstrate that we are paying 'due regard' in our decision making in the design of policies and in the delivery of services. As this is a decision on back office functions, we do not believe that it will have an impact on our equality duty.
20. The topics selected for scrutiny need to have regard to equality and human rights issues.

## Resource implications

21. The costs of the work of the committee will have to be met within existing resources. It should be noted the costs of running scrutiny can be subject to an assessment to support appropriate processes.

## Legal implications

22. The council is required to deliver an overview and scrutiny function. The development of a work programme that is focused and reflects priorities facing Herefordshire will assist the committee and the council to deliver the scrutiny function.

## Risk management

Risk / opportunity	Mitigation
There is a reputational risk to the council if the scrutiny function does not operate effectively.	The arrangements for the development of the work programme should help to mitigate this risk.

## Consultees

23. The work programme is reviewed at every committee meeting. The Chairperson and statutory scrutiny officer also review the work programme periodically throughout the municipal year.
24. The work programme is also reviewed annually and is open to influence by members of the public, local partners and local members. The next annual work programming meeting is provisionally scheduled for 1 October, 2020.

## Appendices

Appendix A – Draft work programme

Appendix B - Suggestions for scrutiny - September 2020

Appendix C – Schedule of recommendations made and response

## Background papers

None identified

## Draft General Scrutiny Committee Work programme 2020/21

Meeting/items	Purpose	Invitees	Type of Scrutiny	Notes
TBC				
Flooding	To review the response to the flooding in the County in Winter 2019/Spring 2020 and proposed action plan to ensure measures in place to provide enhanced resilience for Autumn/Winter 2020.		Policy Review and Development	
Covid	To review the response to the Covid 19 pandemic in the County in 2020 and the proposed recovery plan to ensure measures in place to provide enhanced resilience in time for Autumn/Winter 2020.			
<b>12 October 2020</b>				
Hereford Transport Package		Cabinet Member Infrastructure and transport Director Economy and Place	Pre-decision scrutiny	
<b>29 November 2020</b>				
Report of Task and Finish Group – Climate Emergency	To consider the Group's report	Cabinet member – Environment Economy and Skills	Task and Finish	

		Director Economy and Place Head of Environment Climate Emergency and Waste Services Principal Sustainability & Climate Change Officer		
Noted that flexibility needs to retained within the work programme to consider Pre-Decision Call in items/post Decision call-in.				
TBC				
<ul style="list-style-type: none"> <li>NMiTE</li> </ul>	To review progress with the Scheme	Leader Cabinet Member Finance and Corporate Services Other Cabinet members as appropriate Chief Finance Officer Director Economy and Place		
<ul style="list-style-type: none"> <li>Sustainable Transport</li> </ul>	To explore planned and implemented sustainable transport measures.	Cabinet member Infrastructure	Task and Finish	Scoping statement to be prepared

		Director Economy and Place		
TBC				
Public Realm Service Provision (Council contract arrangements with Balfour Beatty Living Places – and stakeholder communication)	To explore how Councils communicate effectively with the public, explaining service levels, costs and delivery that can be expected under the contract, performance measures in place, and evidence that the contract is delivering to the required standard within the agreed framework. Consider results of customer satisfaction performance data Ways of improving feedback to the public – so that they know when they can expect work that has been requested and can track delivery.	Cabinet Member Infrastructure  Cabinet Member – commissioning, procurement and assets  Director Economy and Place	Policy Development and Review	
<b>Unscheduled</b>				
Police and Crime Commissioner	Need to specify what is to be considered	Police and Crime Commissioner Cabinet Member – housing regulatory services and community safety  Director		Suggested Performance indicator - killed and seriously injured on roads is one possible topic.
• Waste Disposal	To consider review of waste disposal contract	Cabinet member – commissioning, procurement and assets	Policy Development and Review	Waste Disposal Contract review in preparation for end of current contract in 2023 Timescale dependent

				upon commissioning programme
Budget and Policy Framework items to be scheduled			Policy Development and Review	
<ul style="list-style-type: none"> <li>Minerals and Waste Plan</li> </ul>	(28 September 2020)			
<ul style="list-style-type: none"> <li>Hereford Area Plan</li> </ul>				
<ul style="list-style-type: none"> <li>Rural Areas Development Plan Document</li> </ul>				
<ul style="list-style-type: none"> <li>Core Strategy</li> </ul>				
<ul style="list-style-type: none"> <li>Community Safety remit</li> </ul>				
<ul style="list-style-type: none"> <li>LEP Annual Report</li> </ul>				

Briefing notes	
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Suggestions for scrutiny

Subject	Suggested by	Type of Scrutiny	Service comment	Notes
<b>Purchase of Maylords Shopping Centre</b>	Public	Holding to account	tbc	Decision 18 May 2020 <a href="http://councillors.herefordshire.gov.uk/ieDecisionDetails.aspx?ID=6849">http://councillors.herefordshire.gov.uk/ieDecisionDetails.aspx?ID=6849</a>
<b>Repairs to the B4224 between Fownhope and Mordiford.</b>	Fownhope Parish Council	Holding to account	tbc	



## Schedule of General Scrutiny Committee recommendations made and action in response (May 2019 on)

Meeting	item	Recommendations	Action	Status
23 July	Gambling Policy 2019-22 Review	<p><b>RESOLVED TO RECOMMEND TO THE EXECUTIVE THAT:</b></p> <p><b>a) Officers review the wording in Para 1.1 of the policy to ensure it places clear emphasis on promoting compliance with the principles set out in the Act, and make clear that it is not about promoting gambling;</b></p> <p><b>b) Officers include a glossary of terms to cover all technical and legal terms set out in the report before it goes on to cabinet and full Council;</b></p> <p><b>c) a sentence be added to the policy document to highlight where people can be directed to apply for a license;</b></p> <p><b>d) a new category (i) be added to the itemised list in para 15.6 to include training in child protection and child safeguarding;</b></p>	<p>Done</p> <p>Done</p> <p>Done</p> <p>(We don't recommend it's mandatory because it's not proportionate to the evidence locally but we can make licensees aware of the risks to CYP and the</p>	Completed

		<p>e) <b>officers look at all of the suggested various changes to wording of the policy suggested in bullet point 7 above and update the policy to ensure there is clarity in the phraseology used.</b></p> <p>f) <b>the various references to children and young persons should – for consistency – be changed to children and young people throughout the policy document.</b></p> <p>g) <b>officers revise the wording to highlight that the gambling policy is ‘reviewed’ every three years and to add clarity to the reference of policy review from ‘time to time’ – with the additional context that this will happen when/if there are changes to legislation during the three year period;</b></p> <p>h) <b>officers remove the reference to ‘the governance team’ in para 4.5 of the policy;</b></p>	<p>training opportunities that are available.)</p> <p>The phraseology used within the Policy reflects the terms used within the Act and the use of different terminology within the policy may cause confusion).</p> <p>(the term children and young persons is the term used within the Act and again may cause confusion if different terms are used within the policy) .</p> <p>Done</p> <p>Done</p>	
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		<p>i) officers state clearly what the deadline timeframes are in para 5.2.</p> <p>j) grounds for a review of a premises license as set out at section 18 of the policy should also include any breaches to the principles that the licensing authority, upholds in overseeing and this policy and any related enforcement action; and</p> <p>k) details on rights of appeal should be included in the policy document.</p>	<p>Done</p> <p>Done</p> <p>Done</p>	
9 September 2019	Call-in of cabinet member decision on hereford transport package and south wye transport package	<p><b>RESOLVED: That the decision be referred back to the cabinet member to reconsider, and in doing so:</b></p> <p><b>The cabinet member seeks clarification from the funders, of both the South Wye Transport Package and the Hereford Transport Package, of the funding implications of a review and ensures that both projects are not interdependent of each other;</b></p> <p><b>Ongoing planned activity, programmed in to take place during</b></p>	<p>THAT, having regard to the recommendations made by General Scrutiny Committee on 9 September 2019:</p> <p>(a) a review of the South Wye Transport Package be undertaken to determine next steps, and work on the Southern Link Road and active travel measures (the scope of which will be determined in a further report and be subject to the agreement of funders to draw down funding or provision being made within the capital programme) is continued whilst the review is undertaken;</p>	Complete

		<p><b>the pause, continues while the review is underway;</b></p> <p><b>The cabinet member hosts a time limited series of ‘open days’ with parish councils, businesses and members of the public to ensure their views are taken into account on all of the evidence under consideration as part of the review; and</b></p> <ul style="list-style-type: none"> <li><b>That all council, and council contractors, contact databases, as far as is practicable, are kept up to date ahead of contacting members of the public</b></li> </ul>	<p>(b) a review of the bypass project to determine next steps be undertaken, and work on the Hereford Transport package active travel measures and the other bypass work as listed below is continued whilst the review is undertaken;</p> <p>Phase 2a consultation report completion £12,000</p> <p>Geophysical survey report completion £3,000</p> <p>Ground Investigation Report (GIR) completion £6,000</p> <p>Walking and Cycling (WCHAR) assessment completion £5,000</p> <p>Traffic Modelling £22,000</p> <p>Large Local Major Bid completion £18,000</p> <p>(c) discussions continue with funding organisations to clarify the</p>	
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			<p>funding implications of a review and to seek to minimise the risk of loss of any secured funding;</p> <p>(d) consultation with parish councils, businesses and members of the public be included within the scope of the review;</p> <p>(e) the acting director for economy and place be authorised to take all operational decisions necessary to scope the review work for both road schemes within a budget of £50k (Southern Link Road) and £70k (Hereford By-pass) to inform a further decision in this calendar year on the scope of the review to be undertaken; and</p> <p>(f) the acting director for economy and place be authorised to take all operational decisions necessary to undertake the bypass work listed in recommendation (b) above within a budget envelope of £66,000 and to approve variance between the activities within a tolerance of £5,000.</p>	
22 October 2019		<p><b>RESOLVED:</b></p> <p><b>(a) to recommend to the executive that:</b></p>	<p>(i) Noted – The LEP is working to support the local authority climate emergency strategies and has allocated resource to support this.</p>	

		<ul style="list-style-type: none"> <li><b>i. the LEP be encouraged to declare a climate emergency as a priority;</b></li> <li><b>ii. the LEP be encouraged to raise its profile through engagement with Parish and Town Councils and business forums;</b></li> <li><b>iii. the LEP be requested to focus on promoting available schemes to the market towns; and</b></li> </ul> <p><b>(b) provision be made in the Committee’s work programme for an annual report from the LEP.</b></p>	<p>The Marches LEP Senior Energy Officer is supporting each of the Local Authorities with the implementation of their climate emergency strategies alongside his work to develop an action plan to implement the Marches Energy Strategy.</p> <p>(ii) Noted – this is a priority for 2020/21 and being led by the Chair.</p> <p>(iii) Noted. Available schemes are currently being promoted through the Marches Growth Hub <a href="https://www.marchesgrowthhub.co.uk/">https://www.marchesgrowthhub.co.uk/</a>.</p> <p>The Marches LEP is also represented on the Boards for the Towns Funding which Hereford and Telford are eligible to bid for <a href="https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/843843/20191031_Towns_Fund_prospectus.pdf">https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/843843/20191031_Towns_Fund_prospectus.pdf</a> and the Historic England town fund which Leominster and Oswestry are seeking to access <a 121="" 741="" 837"="" 841="" href="https://historicengland.org.uk/services-skills/heritage-action-&lt;/a&gt;&lt;/p&gt; &lt;/td&gt; &lt;td data-bbox="></a></p>
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			<p>zones/regenerating-historic-high-streets/</p> <ul style="list-style-type: none"> <li>• The LEP will continue to lobby government for funding for market towns in line with the agreed priorities set out in the Strategic Economic Plan 2019.</li> </ul> <p>(b) Included</p>	
29 November 2019	2020/21 Budget and Corporate Plan Proposals	<p><b>RESOLVED: That</b></p> <p><b>(a) In relation to the draft corporate plan:</b></p> <p><b>I. Specific emphasis is given to investment and commitment to high quality members of staff in delivering the corporate plan;</b></p> <p><b>II. the wording and presentation of the ambition for Herefordshire and the corporate plan as a whole be reviewed; and</b></p> <p><b>III. the corporate plan should address the needs of the county as a whole including the market towns and their environs;</b></p> <p><b>(b) in relation to the 2020/21 budget</b></p> <p><b>I. any business cases reflect current association with business partners and any current government funding available;</b></p>	<p>(as stated at para 63 of budget report to Cabinet 30 January 2020)</p> <p>i (The detailed business cases will include reference to the matters</p>	

		<p><b>II. consideration be given to a specific budget for measures to address the climate emergency;</b></p> <p><b>III. the feasibility of allocating a ring fenced sum for highway maintenance to the market towns should be explored;</b></p> <p><b>IV. during development of business cases consideration be given to whether greater community use could be made of educational facilities; and</b></p> <p><b>V. the following recommendations of the Adults and Wellbeing and Children and Young People Scrutiny Committees be considered</b></p> <p><b>Adults and Wellbeing Scrutiny Committee – 18 November 2019</b></p> <p><b>1. The committee welcomes the proposed areas for investment which support prevention and the strengths based agenda.</b></p> <p><b>2. Acknowledging that the lack of specific details in the outline business cases was due to the timing constraints and early sight of potential projects coming forward, the committee</b></p>	<p>raised by the committee and will form part of the decision to spend against the investment proposal.</p> <p>li This is for cabinet to consider further at this meeting.</p> <p>lii This is for cabinet to consider further at this meeting.</p> <p>Iv The detailed business cases will include reference to the matters raised by the committee and will form part of the decision to spend against the investment proposal</p> <p>v</p> <p>Noted</p> <p>The detailed business cases will include reference to the matters raised by the committee and will</p>	
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		<p>would be pleased if attention can be given to the matters it has raised and for deeper levels of detail to be provided in the next iterations of the business cases.</p> <p>3. That terminology and language be used consistently, using Plain English.</p> <p>Children and Young People Scrutiny Committee – 25 November 2019</p> <p>RESOLVED: That the committee:</p> <ul style="list-style-type: none"> <li>• Supports the planned investments for looked after children, edge of care and improving social care services and requests further information is submitted to the committee regarding proposals for these services; and</li> <li>• Asks that a report concerning the dental health initiatives is provided to the committee setting out key performance indicators for the proposals.</li> </ul>	<p>form part of the decision to spend against the investment proposal</p> <p>Agreed, later papers include a glossary of terms.</p>	
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<p>20 January 2020</p>	<p>Review Of Budget And Corporate Plan Proposals For 2020/21</p>	<p><b>RESOLVED: That</b></p> <p><b>(a) in relation to the draft corporate plan: reference be included to protecting and enhancing our local health care services with the inclusion of key performance indicators to underpin this commitment;</b></p> <p><b>(c) the presentation of the till receipt as at p7 of the Plan be reviewed to ensure it is an accurate representation of the actual spend;</b></p> <p><b>(d) the plan explains where the council is paying less than it did in the previous financial year;</b></p> <p><b>(e) the plan at p15 includes success measures – to consider additional focus on resources to improve infrastructure and community resilience in market towns;</b></p> <p><b>(f) that the committee receives a briefing note on the progress on broadband roll out;</b></p> <p><b>(g) the corporate plan is reworded on page 7 to reflect that the figure of £46m is revised to ensure it reflects the compensation paid to the tenants; and it is made clear that £46m is not enough to fund 1000 new homes and that further borrowing is being proposed of up to a further £100m;</b></p> <p><b>(h) the corporate plan is reworded on page 18 – to say ‘spend more locally’ and on page 19 – rather than say</b></p>	<p>(Report to cabinet 30 January 2020)</p> <p>(para 24) The recommendations from the scrutiny committees have been incorporated into the latest draft Corporate Plan.</p>	
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