



Sustainability Appraisal of the Publication Draft Herefordshire Minerals and Waste Local Plan Non-Technical Summary

Herefordshire Council

Final report

Prepared by LUC

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Chapter 1

Non-Technical Summary

1.1 This Non-Technical Summary (NTS) relates to the Sustainability Appraisal (SA) and Strategic Environmental Assessment (SEA) of the emerging Herefordshire Minerals and Waste Local Plan (MWLP). Although an integrated assessment of the Publication Draft MWLP has been undertaken, the abbreviation 'SA' is used throughout this document to refer to the SA and SEA of the Publication Draft MWLP.

1.2 This NTS describes how the SA process was used to assist in the preparation of the Publication Draft MWLP, as required by planning legislation and Government guidance. It includes a summary of all of the information required by the Strategic Environmental Assessment Directive [\[See reference 1\]](#), transposed into law in the UK by the SEA Regulations [\[See reference 2\]](#) (SI 2004, No. 1633).

Herefordshire Minerals and Waste Local Plan

1.3 Herefordshire Council is currently preparing a new Minerals and Waste Local Plan (Regulation 19 stage). Once adopted, the MWLP will replace the saved minerals and waste policies contained in the Herefordshire Unitary Development Plan. The MWLP covers the period up to 31 December 2041 and applies across the administrative area of Herefordshire.

1.4 The MWLP has been produced taking into account the National Planning Policy for Waste [\[See reference 3\]](#), Planning Practice Guidance on Minerals [\[See reference 4\]](#) and Waste [\[See reference 5\]](#), up-to-date evidence base studies (the minerals and waste need assessments were updated in 2019 and a

Strategic Flood Risk Assessment [SFRA] was prepared in 2019 [Level 1] and in 2020 [Level 2]) and ensuring close co-operation with neighbouring local authorities on cross-boundary issues.

1.5 It provides a clear vision, objectives and spatial strategy for minerals and waste up to 2041, consistent with that set out in the Herefordshire Local Plan Core Strategy 2011-2031 (adopted October 2015) [See reference 6] ensuring that it provides sufficient opportunities to meet the identified needs of the area for waste management and a steady and adequate supply of all economically significant minerals in the Plan area. The MWLP also presents the core principles for minerals and waste development, location-specific policies in relation to where minerals and waste development should be developed, and development management style policies addressing specific issues that each development proposal should address.

Sustainability Appraisal and Strategic Environmental Assessment

1.6 Sustainability Appraisal is a statutory requirement of the Planning and Compulsory Purchase Act 2004. It is designed to ensure that the plan preparation process maximises the contribution that a plan makes to sustainable development and minimises any potential adverse impacts. The SA process involves appraising the likely social, environmental and economic effects of the policies and proposals within a plan from the outset of its development.

1.7 This NTS relates to the full SA Report of the Publication Draft Herefordshire Minerals and Waste Local Plan (2020). The SA is being undertaken in stages alongside the preparation of the MWLP in order to provide sustainability guidance as the plan is developed.

1.8 SA must be carried out in accordance with Government guidance and (as an integrated SA and SEA process is being undertaken) must meet the requirements of the SEA Regulations.

Meeting the requirements of the SEA Regulations

Preparation of an environmental report

The environmental report will identify, describe and evaluate the likely significant effects on the environment of implementing the plan or programme, and reasonable alternatives taking into account the objectives and geographical scope of the plan or programme (Reg. 12). The information to be given is (from Schedule 2):

Table 1.1: The requirements of the SEA Regulations and where they have been met in this SA Report

SEA Regulations' Requirements	Covered in this SA Report
a) An outline of the contents, main objectives of the plan or programme, and relationship with other relevant plans and programmes.	Chapters 1 and 3 and Appendix A
b) The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme.	Chapter 3 and Appendix C
c) The environmental characteristics of areas likely to be significantly affected.	Chapter 3 and Appendix C
d) Any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any	Chapter 3 and Appendix C

SEA Regulations' Requirements	Covered in this SA Report
<p>areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC.</p>	
<p>e) The environmental protection, objectives, established at international, Community or national level, which are relevant to the plan or programme and the way those objectives and any environmental, considerations have been taken into account during its preparation.</p>	<p>Chapter 3 and Appendices A and C</p>
<p>f) The likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors. (Footnote: These effects should include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects).</p>	<p>Chapters 4, 5 and 6 and Appendices G, H and I</p>
<p>g) The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme.</p>	<p>Chapter 7</p>
<p>h) An outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information.</p>	<p>Chapter 2 and Appendices D and E</p>
<p>i) A description of measures envisaged concerning monitoring in accordance with Reg. 17.</p>	<p>Chapter 8</p>
<p>j) A non-technical summary of the information provided under the above headings.</p>	<p>A non-technical summary document has been prepared</p>

SEA Regulations' Requirements	Covered in this SA Report
	to accompany this SA Report.
<p>The report shall include the information that may reasonably be required taking into account current knowledge and methods of assessment, the contents and level of detail in the plan or programme, its stage in the decision-making process and the extent to which certain matters are more appropriately assessed at different levels in that process to avoid duplication of the assessment (Reg. 12(3)).</p>	<p>Addressed throughout this SA Report.</p>
<p>Consultation: a) Authorities with environmental responsibility, when deciding on the scope and level of detail of the information which must be included in the environmental report (Reg. 12(5)).</p>	<p>Consultation on the SA Scoping Report was undertaken between February and March 2017.</p>
<p>b) Authorities with environmental responsibility and the public, shall be given an early and effective opportunity within appropriate time frames to express their opinion on the draft plan or programme and the accompanying environmental report before the adoption of the plan or programme (Reg. 13).</p>	<p>Consultation on the SA of the MWLP Issues and Options Report was undertaken for 8 weeks between August 2017 and October 2017.</p> <p>Consultation on the SA of the Draft MWLP was undertaken in early 2019 for a six-week period.</p> <p>Consultation is being undertaken in relation to the Publication Draft Herefordshire Minerals and Waste Local Plan in January 2021, for a 6-week period. The current consultation document is accompanied by this SA Report.</p>
<p>c) Other EU Member States, where the implementation of the plan or programme is likely to have significant effects on the environment of that country (Reg. 14).</p>	<p>N/A</p>

SEA Regulations' Requirements	Covered in this SA Report
Provision of information on the decision: When the plan or programme is adopted, the public and any countries consulted under Reg. 14 must be informed and the following made available to those so informed: a) The plan or programme as adopted; b) A statement summarising how environmental considerations have been integrated into the plan or programme and how the environmental report, the opinions expressed and the results of consultations entered into have been taken into account, and the reasons for choosing the plan or programme as adopted, in the light of the other reasonable alternatives dealt with; and c) The measures decided concerning monitoring.	To be addressed after the MWLP is adopted.
Monitoring of the significant environmental effects of the plan's or programme's implementation (Reg. 17).	To be addressed after the MWLP is adopted.

Stage A: Scoping

1.9 The scoping stage of the SA involves understanding the social, economic and environmental baseline for the plan area as well as the sustainability policy context and key sustainability issues.

1.10 The SA process began in February 2017 with the production of a Scoping Report for the MWLP which contained a review of plans, programmes and environmental protection objectives; baseline information; key sustainability issues; and a SA Framework, comprising the SA objectives against which options, and subsequently, sites and policies would be appraised.

1.11 The 17 main SA objectives of the SA Framework for the MWLP are presented in the section below, along with their associated appraisal questions and which of the SEA topics they each cover. The wording of some of the objectives has been revised since the Scoping Report to take into account the suggestions of the statutory consultees. Additional sub-criteria for SA objectives 12: Biodiversity and Geodiversity and 15: Flooding have been included based on recommendations made by Natural England and the Environment Agency. Furthermore, as the SA Framework for the MWLP is broadly similar to that used in the SA of the Hereford Area Plan DPD, the recommendations made by Historic England to separate the SA objective relating to the historic and built environment into two distinct SA objectives has been incorporated in the SA Framework (now SA objective 6: Historic Environment and SA objective 7: Built Environment). In addition, reference to historic landscapes has been removed from SA objective 13: Landscape and is now considered in SA objective 6: Historic Environment.

Table 1.2: SA Framework for the Herefordshire Minerals and Waste Local Plan

SA Objective	Appraisal question	Theme	SEA topic covered
1. Support, maintain or enhance the provision of employment opportunities in the minerals and waste sectors.	1.1 Support the development and growth of the minerals and waste economy in Herefordshire and generate employment opportunities for local people.	Employment	Material assets [See reference 7], population
2. Maintain or enhance conditions that enable a sustainable economy and continued investment.	2.1 Encourage long-term investment in Herefordshire’s minerals and waste sectors. 2.2 Ensure a steady and adequate supply of minerals to meet the needs of society in accordance with national policy.	Employment	Material assets, population
3. Protect and improve the health of the people of Herefordshire and reduce disparities in health geographically and demographically.	3.1 Avoid or minimise adverse effects on human health and safety to acceptable levels from mineral and waste operations. 3.2 Provide opportunities to improve health and amenity through delivery of green infrastructure, enhanced public rights of way and improved access to recreation as part of the development and restoration of sites. 3.3 Avoid or minimise adverse effects on the quality and extent of existing recreational assets.	Healthy and Prosperous Communities	Population, human health
4. Reduce poverty and social inclusion by closing the gap between the most deprived	4.1 Provide opportunities for local people to access employment and skills in the minerals and waste sectors.	Healthy and Prosperous Communities	Population, human health

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SA Objective	Appraisal question	Theme	SEA topic covered
areas in the county and the rest of the county.			
5. Reduce road traffic, congestion and pollution, and promote sustainable modes of transport and efficient movement patterns in the county.	5.1 Reduce the vehicle kilometres travelled for the transportation of minerals and waste. 5.2 Promote the use of sustainable modes of transport. 5.3 Encourage the use of low emission vehicles for the transportation of waste and minerals.	Transport and Access	Material assets
6. Value, protect and enhance the county's historic environment and cultural heritage.	6.1 Conserve, protect and enhance designated and undesignated heritage assets in a manner appropriate to their significance, including the Hereford Area of Archaeological Importance, Conservation Areas, Scheduled Monuments, Registered Historic Parks and Gardens Listed Buildings, archaeological remains, and areas of historical heritage and cultural value e.g. locally listed buildings.	Built and Historic Environment	Cultural heritage, including architectural and archaeological heritage
7. Value, protect and enhance the character and built quality of settlements and neighbourhoods.	7.1 Prevent development which is inappropriate in scale, form or design to its setting or to its function or local area.	Built and Historic Environment	Material assets, soil
8. Move treatment of waste up the waste hierarchy.	8.1 Minimise disposal of waste to landfill from households, businesses etc. including hazardous waste. 8.2 Promote re-use, recovery and recycling of waste. 8.3 Deal with waste locally and/or through the best Practical Environmental Option.	Resource Consumption and Climate Change	Material assets

SA Objective	Appraisal question	Theme	SEA topic covered
	8.4 Promote sustainable waste management principles.		
9. Promote sustainable use of mineral resources.	9.1 Safeguard mineral resources from loss by permanent sterilisation. 9.2 Promote the most efficient use of mineral resources.	Resource Consumption and Climate Change	Material assets
10. Reduce Herefordshire's vulnerability to the impacts of climate change as well as its contribution to the problem.	10.1 Reduce the county's contribution to climate change by reducing greenhouse gas emissions from waste and mineral transportation and management activities. 10.2 Promote energy efficiency by encouraging the use of energy efficient buildings and plant, and the use of appropriate renewable or lower carbon energy sources on site.	Resource Consumption and Climate Change	Climatic factors
11. Promote effective restoration and appropriate after use of sites.	11.1 Provide for the restoration of land to an appropriate after-use including the creation of accessible greenspace at former waste and mineral sites.	Resource Consumption and Climate Change	Water, air, soil
12. Value, maintain, restore and expand county biodiversity and geodiversity.	12.1 Protect and enhance habitats of international, national, regional or local importance. 12.2 Protect international, national, regional or locally important terrestrial or aquatic species. 12.3 Maintain wildlife corridors and minimise fragmentation of ecological areas and green spaces. 12.4 Provide opportunities for enhancing biodiversity and achieve net gains in biodiversity, where possible as part of the development and restoration of a site.	Environmental	Biodiversity, fauna, flora

SA Objective	Appraisal question	Theme	SEA topic covered
	12.5 Maintain and improve geodiversity, avoid irreversible losses, and create, extend or enhance Local Geological Sites.		
13. Value, protect, enhance and restore the landscape quality of Herefordshire, including its rural areas and open spaces.	13.1 Value, enhance and protect natural environmental assets including AONB's, open spaces, parks and gardens and their settings. 13.2 Minimise the landscape and visual intrusion of waste and mineral facilities on sensitive and/or distinct landscapes.	Environmental	Landscape, fauna, flora
14. Value, protect and enhance the quality of watercourses and maximise the efficient use of water.	14.1 Protect and enhance the quality of watercourses. 14.2 Maximise the efficient use of water and protect the quality and quantity of ground and surface water from over abstraction.	Environmental	Water
15. Reduce the risk of flooding and the resulting detriment to public well-being, the economy and the environment.	15.1 Ensure minerals and waste development are not at risk of flooding both presently and taking into account climate change and do not increase the risk of flooding elsewhere. 15.2 Ensure flood risk reduction / improvements to the flood regime.	Environmental	Water
16. Minimise noise, light, and air pollution.	16.1 Minimise air, noise and light pollution from activities associated with mineral and waste developments and the potential for such pollution. 16.2 Help achieve the objectives of Air Quality Management Plans.	Environmental	Air
17. Value, protect and enhance soil quality and resources.	17.1 Provide opportunities to improve soil quality and minimise contamination of soils. 17.2 Avoid the loss of the best and most versatile agricultural land by prioritising the location of waste and mineral developments to previously developed sites in preference to greenfield locations.	Environmental	Soil

Stage B: Developing and refining options and assessing effects

1.12 Regulation 12 (2) of the SEA Regulations requires that:

“The (environmental or SA) report must identify, describe and evaluate the likely significant effects on the environment of -

(a) implementing the plan or programme; and

(b) reasonable alternatives, taking into account the objectives and the geographical scope of the plan or programme”

1.13 It should be noted that any alternatives considered to the plan need to be ‘reasonable’. This implies that alternatives that are not reasonable do not need to be subject to appraisal. Examples of unreasonable alternatives could include policy options that do not meet the objectives of the plan or national policy (e.g. the National Planning Policy Framework) or site options that are unavailable or undeliverable.

1.14 It also needs to be recognised that the SEA and SA findings are not the only factors taken into account when determining which options to take forward in a plan. Indeed, there will often be an equal number of positive or negative effects identified for each option, such that it is not possible to ‘rank’ them based on sustainability performance in order to select an option. Factors such as public opinion, deliverability and conformity with national policy will also be taken into account by plan-makers when selecting options for their plan.

Identification and appraisal of the options for the Herefordshire Minerals and Waste Local Plan

MWLP Issues and Options Report (August 2017)

1.15 The MWLP Issues and Options Report included consultation questions relating to a number of minerals and waste issues to be addressed by the MWLP. Not all of the consultation questions identified specific options for each issue (i.e. alternative ways that the MWLP could address the issue). Many of the consultation questions were just opinion-seeking questions and therefore were not subject to SA. The MWLP Issues and Options Report identified options (or reasonable alternatives as they are referred to in the SEA Regulations) for the Vision, strategic objectives and the approach for addressing minerals and waste development in Herefordshire. In total, 34 options (one option for the Vision, one option for the strategic objectives, 18 mineral-related options and 14 waste-related options) were presented in the MWLP Issues and Options Report.

1.16 The options proposed in the MWLP Issues and Options Report were subject to a detailed appraisal in the SA Report (August 2017) against the SA objectives which were developed at the scoping stage of the SA process.

Draft MWLP (December 2018)

1.17 The 2018 Draft MWLP included a Vision; 12 strategic objectives; seven mineral-related policies; seven waste-related policies; 28 mineral and waste site allocations; four Areas of Search; and, nine Strategic Employment Areas, which constituted the options for the Draft MWLP. These were developed from the policy approach options considered in the Issues and Options Report, as summarised above. The policies included in the Draft MWLP are listed below.

1.18 The policy and site options proposed in the Draft MWLP were subject to a detailed appraisal in the Sustainability Appraisal Report (December 2018) and are summarised in Chapter 2 of the 2020 SA Report.

Policies included in the Draft MWLP (December 2018)

Strategic policies

- MT2: Transport within sites
- SS8: Resource management
- OS4: Access to open space and recreation from minerals and waste development
- SD5: Site reclamation

Mineral-related policies

- M1: Mineral strategy
- M2: Safeguarding of mineral resources from sterilisation
- M3: The winning and working of sand and gravel
- M4: The winning and working of crushed rock (limestone)
- M5: The winning and working of building stone (sandstone)
- M6: Borrow pits
- M7: Unconventional hydrocarbons

Waste-related policies

- W1: Waste strategy
- W2: Solid waste management requirements

- W3: Agricultural waste management
- W4: Waste water management
- W5: Preferred locations for solid waste treatment facilities
- W6: Preferred locations for construction, demolition and excavation waste facilities
- W7: Waste management operational expectations

1.19 In addition to the policy options shown above, the SA of the 2018 Draft MWLP appraised 20 mineral site allocations; four Areas of Search; and two reasonable alternative mineral site allocations.

1.20 Recognising the advantages of working an area efficiently, sites for future sand and gravel and crushed rock extraction were proposed for allocation adjacent or near to existing consented sites. Sand and gravel reserves at Upper Lyde (M03); Shobdon (M04); and Wellington (M05) were all proposed to be allocated in the Draft MWLP. Crushed rock reserves at Leinthall (M07) and Perton (M10) quarries were both proposed to be allocated in the MWLP. The sand and gravel reserves at sites M03 and M05 and the crushed rock reserves at M07 and M10 were subdivided into individual parcels of land which identify the active part of the site as well as the proposed extensions (M03a-M03d, M05a-M05g, M07a, M07b, M10a and M10b). The SA appraised each parcel of land within these sites separately as not all of the parcels were proposed for allocation in the Draft MWLP, i.e. M03c and M05f, and therefore constitute reasonable alternatives to the preferred sites proposed for allocation in the Draft MWLP.

1.21 In addition, preferred areas of search were identified in the Draft MWLP for working sand and gravel and crushed rock (limestone) reserves in Herefordshire.

1.22 There are six building stone delves currently consented and active in Herefordshire, all of which would be suitable in principle to gain an extension of time to enable extraction to be completed: Callow Delve (M12); Black Hill Delve

(M13); Llandraw Delve (M16); Pennsylvani Delves (M17); Sunnybank Delve (M18); and, Westonhill Wood Delve (M20). Three of these sites would also be suitable, in principle, for a lateral extension or deepening of workings: Black Hill Delve (M13); Llandraw Delve (M16); and Westonhill Wood Delve (M20).

1.23 The Draft MWLP supported the delivery of waste treatment facilities at industrial estates and Strategic Employment Areas. The potential development of waste treatment facilities at each industrial area in Herefordshire was not subject to SA, as although they may be suitable for waste use, it would be inappropriate to allocate discrete plots within these estates as this type of location experiences a reasonably high level of plot turnover. However, the nine Strategic Employment Areas identified in the Herefordshire Core Strategy policy E1 have been appraised in their entirety as reasonable alternatives (i.e. not just individual plots within the wider strategic employment location) as they have good potential for co-location and could accommodate strategic waste facilities.

1.24 The Draft MWLP proposed the allocation of eight waste treatment sites: Leominster Household Waste Site (HWS) and Household Waste Recovery Centre (HWRC) (W05); Ledbury HWRC (W07); Kington HWRC (W10); Former Lugg Bridge Quarry (Physical Treatment) (W13); and, the Former City Spares Site (Car Breaker) (W19). The sustainable treatment of construction, demolition and excavation (CD&E) waste at active mineral workings and the disposal of inert waste at Upper Lyde Quarry, extension and adjacent sites (W43); Shobdon Quarry and extension (W44); and, Wellington Quarry, extension and adjacent sites (W45), were also proposed in the Draft MWLP.

1.25 The site allocations that were included in the 2018 Draft MWLP and subject to SA are listed below.

Site allocations proposed in the Draft MWLP (December 2018)

Mineral sites

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- M03a Upper Lyde Quarry (sand and gravel)
- M03b Land adjacent Upper Lyde Quarry (east) (sand and gravel)
- M03d Land north east of Upper Lyde Quarry (sand and gravel)
- M04 Shobdon Quarry (sand and gravel)
- M05a Wellington Quarry (sand and gravel)
- M05b Land adjacent Wellington Quarry (west) (sand and gravel)
- M05c Land adjacent Wellington Quarry (north west) (sand and gravel)
- M05d Land adjacent Wellington Quarry (Dinmore Manor Estate) (sand and gravel)
- M05g Land east of Wellington Quarry (sand and gravel)
- M07a Leinthall Quarry (crushed rock)
- M07b Land west of Leinthall Quarry (crushed rock)
- M10a Perton Quarry (crushed rock)
- M10b Land north west of Perton Quarry (crushed rock)
- M12 Callow Delve (building stone)
- M13 Black Hill Delve (building stone)
- M16 Llandraw Delve (building stone)
- M17 Pennsylvani Delves (building stone)
- M18 Sunnybank Delve (building stone)
- M20 Westonhill Wood Delve (building stone)
- Area of Search A
- Area of Search B
- Area of Search C
- Area of Search D

Waste sites

- W05 Leominster (HWS and HWRC)
- W07 Ledbury (HWRC)
- W10 Kington (HWRC)
- W13 Former Lugg Bridge Quarry (physical treatment)
- W19 City Spares MRS (car breaker)
- W43 Upper Lyde Quarry (M03)
- W44 Shobdon Quarry (M04) (mineral site – inert waste disposal)
- W45 Wellington Quarry (M05) (mineral site – inert waste disposal)

Strategic employment areas

- W58 Rotherwas Industrial Estate (Strategic employment area)
- W59 Westfields Trading Estate (Strategic employment area)
- W60 Three Elms Trading Estate (Strategic employment area)
- W61 Holmer Road, Hereford (Strategic employment area)
- W62 Leominster Enterprise Park (Strategic employment area)
- W63 Southern Avenue, Leominster (Strategic employment area)
- W64 Land between Little Marcle Road and Ross Road, Ledbury (Strategic employment area)
- W65 Model Farm, Ross-on-Wye (Strategic employment area)
- W66 Moreton Business Park, Moreton-on-Lugg (Strategic employment area)

Publication Draft MWLP (November 2020)

1.26 The Publication Draft MWLP (November 2020) has been amended since the SA of the Draft MWLP. The Publication Draft MWLP now covers a plan period to 2041, and policies (where relevant) have been updated to reflect this, the evolved baseline, and to incorporate the findings from relevant and supporting documents (e.g. the Position Statement on Development in the River Lugg Catchment Area [Herefordshire Council, 2020]; the Level 2 SFRA [WSP, 2020]).

1.27 The Publication Draft MWLP has included some updates to the strategic policies, minerals policies and waste policies as follows. The strategic policies have been renamed (SP1-4), and the names of some of the minerals and waste policies have been slightly amended. Their content has also been revised to make reference to restricting hydrocarbon extraction (M1), promoting circular economy (W1), recovery of phosphorus (W1, W4 and W7), updates to waste facility capacities (W2) and achieving nutrient neutrality or betterment within the River Wye SAC (W3 and W4).

1.28 The greatest change to policy between the 2018 Draft MWLP and the 2020 Publication Draft MWLP has been the removal of policy M7: Unconventional Hydrocarbons, due to the Government's moratorium on fracking (announced November 2019).

1.29 With the exception of updates relating to the plan period (2041), the Vision and Strategic Objectives in the Publication Draft MWLP remain unchanged from the Draft MWLP.

1.30 The Publication Draft MWLP proposes to allocate 14 minerals sites. This compares to 20 sites proposed for allocation in the Draft MWLP. The reduction in allocated minerals sites is largely due to the amalgamation of sites M03b and M03d to form site M03c (the site previously referred to as M03c in the SA of the Draft MWLP is not allocated but is assessed as a reasonable alternative) and M05a-g to form site M05 (although site M05f is not allocated but is assessed as

a reasonable alternative) The four preferred Areas of Search (A-D) remain the same in the Publication Draft MWLP as they were in the Draft MWLP. In addition, the Publication Draft MWLP proposes to allocate the same eight waste sites and nine Strategic Employment Areas that were allocated in the Draft MWLP.

1.31 A summary of the Council's reasons for the changes to policies and site allocations in the Publication Draft MWLP is provided in Appendices D and E of the SA Report.

1.32 The findings of the SA of the Publication Draft MWLP are presented in Chapters 4, 5, and 6 of the SA Report, and summarised further ahead in this NTS.

Stage C: Preparing the Sustainability Appraisal Report

1.33 The full SA Report and this NTS describes the process that has been undertaken to date in carrying out the SA of the MWLP. It sets out the SA findings of the Vision, strategic objectives, policies and site allocations included in the Publication Draft MWLP as well as the reasonable alternative site options considered, highlighting any likely significant effects (both positive and negative, and taking into account the likely secondary, cumulative, synergistic, short, medium and long-term and permanent and temporary effects), making recommendations for improvements and clarifications that may help to mitigate negative effects and maximise the benefits of the plan as it is drafted in full.

Stage D: Consultation on the Herefordshire Minerals and Waste Local Plan

1.34 The SA Scoping Report for the MWLP was published in February 2017 for a five-week consultation period with the statutory consultees. The SA of the MWLP Issues and Options Report was published in August 2017 for eight weeks. No consultation comments relating to the SA Report of the MWLP Issues and Options Report were received. The Draft MWLP and the SA Report were published in January 2019 for a six-week consultation period. The comments received in relation to the SA Scoping Report and SA of the Draft MWLP, and the response to these comments is included in Appendix K of the full SA Report.

1.35 Herefordshire Council is inviting comments on the Publication Draft MWLP and the SA Report which this NTS relates to. The NTS and SA Report are being published for consultation in January 2021, for a 6-week period. Consultation comments on both the Publication Draft MWLP and the SA Report will be taken into account in the next iteration of these documents.

Stage E: Monitoring the implementation of the Plan

1.36 Recommendations for monitoring the social, economic and environmental effects of implementing the Herefordshire Minerals and Waste Local Plan are presented in Chapter 8 of the full SA Report and are described further ahead in this NTS.

Sustainability Appraisal methodology

1.37 The policy and site options considered in preparing the Publication Draft MWLP as well as the Vision and strategic objectives, have been appraised against the 17 SA objectives in the SA Framework with colour-coded symbols being attributed to each option or element of the plan to indicate its likely sustainability effects on each SA objective (see Table 1.3).

Table 1.3: Key to symbols and colour coding used in the SA of the Herefordshire Minerals and Waste Local Plan

Colour coded symbols	Definition
++	The option or policy is likely to have a significant positive effect on the SA objective(s).
++/-	The option or policy is likely to have a mixed effect (significant positive and minor negative) on the SA objective(s).
+	The option or policy is likely to have a positive effect on the SA objective(s).
0	The option or policy is likely to have a negligible or no effect on the SA objective(s).
-	The option or policy is likely to have a minor negative effect on the SA objective(s).
--/+	The option or policy is likely to have a mixed effect (significant negative and minor positive) on the SA objective(s).
--	The option or policy is likely to have a significant negative effect on the SA objective(s).
?	It is uncertain what effect the option or policy will have on the SA objective(s), due to a lack of data.
+/-	The option or policy is likely to have a mixture of positive and negative effects on the SA objective(s).

1.38 Where a potential positive or negative effect is uncertain, a question mark has been added to the relevant symbol (e.g. +? or -?) and the symbol is colour coded as per the potential positive, negligible or negative effect (e.g. green, yellow, orange, etc.).

1.39 The likely effects of policies and site allocations need to be determined and their significance assessed, which inevitably requires a series of judgments to be made. This appraisal has attempted to differentiate between the most significant effects and other more minor effects through the use of the symbols shown above. The dividing line in making a decision about the significance of an effect is often quite small. Where either (++) or (--) has been used to distinguish significant effects from more minor effects (+ or -) this is because the effect of policy or site allocation on the SA objective in question is considered to be of such magnitude that it will have a noticeable and measurable effect taking into account other factors that may influence the achievement of that objective. However, effects identified are relative to the scale of proposals under consideration.

Assumptions applied during the SA

1.40 SA inevitably relies on an element of subjective judgement. However, in order to ensure consistency and transparency in the appraisal of the policies and sites, assumptions to help guide the approach to identifying minor and significant, positive or negative effects were developed and used in the appraisal. The assumptions were tailored to inform the policy assessment and the different types of minerals and waste site allocations and are presented in Appendix E of the full SA Report. For many SA objectives, the assumptions applied for the appraisal of site options relate to the proximity of the site option to other land uses or sensitive receptors, and Geographical Information Systems (GIS) data were used to determine potential effects.

Difficulties encountered and data limitations

1.41 It is a requirement of the SEA Regulations that consideration is given to any data limitations or other difficulties that are encountered during the SA process and these are outlined below.

1.42 This SA represents a strategic appraisal of the likely significant effects of the Publication Draft MWLP. It considers proposed mineral and waste policies and sites for Herefordshire. The assessment has been carried out at a high level, using a combination of pre-existing information, such as the Spatial Context and Sites Report (Hendeca, 2019), the Minerals Need Assessment Update (Hendeca, 2019), the Waste Need Assessment Update (Hendeca, 2019), spatial information in GIS, as well as from other specially commissioned assessments such as the HRA Screening Report (LUC, 2018), the HRA Appropriate Assessment Report (LUC, 2020) and the Level 1 SFRA (WSP, 2019) and Level 2 SFRA (WSP, 2020). However, the SA is not an Environmental Impact Assessment and so detailed information about sites' constraints has not been available during the site assessment process or to extrapolate from to inform the assessment of policies. Therefore, the effects identified in the SA are presented on the basis of best available desk-based information which is not the same as the assessment of effects through detailed empirical surveys such as ecological surveys, groundwater risk assessments, etc. Furthermore, the effects identified are often qualified with uncertainty. For example, uncertain effects may be identified where there is no information on the design or scale of the operation or the type of activities undertaken within a site.

1.43 A number of potential difficulties have arisen from the scope of this SA, including in particular the different types of sites that needed to be subject to appraisal and the need to ensure that this was done in a consistent manner. In order to address this issue, detailed assumptions relating to each of the SA objectives were developed and applied during the appraisal of site options. Different assumptions were prepared for new mineral and waste sites; active

mineral or operational waste sites; active mineral sites requiring a time extension; active mineral sites requiring a size extension; the disposal of inert waste at mineral sites; the areas of search; and the Strategic Employment Areas.

1.44 The HRA and SFRA were undertaken in parallel with the SA and it was necessary to revise the assessment of policies and sites to incorporate the findings of the HRA and SFRA.

1.45 The Environment Agency Flood Map for Planning (rivers and sea) does not include climate change allowances and primarily shows potential flooding from main rivers (catchments smaller than 3km² are not represented) which may result in smaller catchments with an associated flood risk not being identified.

1.46 Preliminary work on the SA began in February 2020 prior to the COVID-19 pandemic. This work was suspended in March 2020 and recommenced in September 2020.

1.47 No other specific data limitations or difficulties were encountered during the SA process.

Habitats Regulations Assessment

1.48 Under Article 6 (3) and (4) of the European Union Council Directive 92/43/EEC [See reference 8] on the conservation of natural habitats and of wild fauna and flora (more commonly known as the Habitats Directive) land-use plans, including Local Plans, are subject to Habitats Regulations Assessment (HRA). The Conservation of Habitats and Species Regulations 2017 [See reference 9] transposes the Habitats Directive into national law. The purpose of HRA is to assess the impacts of a land-use plan against the conservation objectives of a 'European site' [See reference 10] and to ascertain whether it would adversely affect the integrity of that site.

1.49 The HRA for the MWLP is being undertaken separately to the SA. A HRA Scoping Report was prepared by LUC on behalf of Herefordshire Council in August 2017 and related to the MWLP Issues and Options Report (April 2017). A HRA Screening Report was prepared in parallel with the SA of the Draft MWLP in November 2018 and the findings were taken into account in the SA where relevant (for example to inform judgements about the likely effects of potential development locations proposed in the MWLP on biodiversity).

1.50 The 2020 HRA Report includes a revised Screening Assessment in light of key changes and newly available information (e.g. issue of phosphates in the River Wye SAC) and detailed Appropriate Assessment. A high-level summary of the findings of the HRA Report are summarised below.

1.51 Key changes since the SA of the Draft MWLP include the removal of policy M7: Unconventional Hydrocarbons, due to the Government's moratorium on fracking (announced November 2019). Therefore, the effects identified in the 2018 HRA Screening Report in relation to this policy are no longer relevant and therefore reference to these has been removed within the 2020 HRA. Other minor changes include minor revision of site allocation boundaries, which were taken into account through the revised Screening Assessment.

HRA Screening of the Publication Draft MWLP

1.52 The following European sites were included as part of the HRA Screening Stage, to determine whether the Publication Draft MWLP will result in 'likely significant effects' either alone, or in-combination with other plans and projects:

- River Wye SAC (physical damage/loss of habitat; non-physical disturbance; air pollution; water quantity and quality; non-toxic contamination);
- River Clun SAC (air pollution; water quantity and quality);
- Wye Valley Woodlands SAC (air pollution);

- Wye Valley and Forest of Dean Bat Sites SAC (physical damage/loss of offsite habitat);
- Severn Estuary SPA (water quantity and quality);
- Severn Estuary Ramsar (water quantity and quality); and,
- Severn Estuary SAC (water quantity and quality);

1.53 Of the 17 policies in the Publication Draft MWLP, 11 policies were identified as unlikely to have significant effects on any of the European sites. Similarly, 29 out of the 35 sites (11 mineral site allocations; four Areas of Search; five waste site allocations; and, seven Strategic Employment Areas) proposed for allocation in the Publication Draft MWLP were identified as unlikely to have significant effects on any of the European sites. Whilst no policies or proposed site allocations in the Publication Draft MWLP were certain to result in a Likely Significant Effect (LSE), for some there is uncertainty and therefore, in line with the precautionary approach being applied in the HRA, until significant effects can be ruled out, for example following detailed consideration of each potential impact type, as detailed below, they are treated as giving rise to LSEs.

1.54 The screening assessment identified a lack of certainty as to whether the following policies and proposed site allocations in the Publication Draft MWLP would result in LSEs on European sites:

- M3: The winning and working of sand and gravel;
- M5: The winning and working of building stone (sandstone);
- W3: Agricultural waste management;
- W4: Wastewater management;
- W5: Preferred locations for solid waste treatment facilities;
- W6: Preferred locations for construction, demolition and excavation waste facilities;
- M05 Wellington Quarry;
- W45 Wellington Quarry (waste use at site M05);

- M12 Callow Delve;
- W05 Leominster;
- W13 Former Lugg Bridge Quarry;
- M20 Westonhill Wood Delve;
- W63 Southern Avenue, Leominster;
- W66 Moreton Business Park, Moreton-on- Lugg; and,
- Area of Search C.

1.55 The HRA Screening concluded that the Publication Draft MWLP could result in the following likely significant effects:

- River Wye SAC (physical damage/loss of habitat; non-physical disturbance; air pollution; water quantity and quality; and non-toxic contamination);
- Wye Valley and Forest of Dean Bat Sites SAC (physical damage and loss of offsite functionally linked habitat); and,
- Severn Estuary SPA, Ramsar and SAC (water quantity and quality).

1.56 Table 1.4 outlines the Publication Draft policies and sites likely to have significant effects on the River Wye SAC, Wye Valley and Forest of Dean Bat Sites SAC, and Severn Estuary SPA, Ramsar and SAC.

1.57 Therefore, Appropriate Assessment has been undertaken for the River Wye SAC, Wye Valley and Forest of Dean Bat Sites SAC, and Severn Estuary SPA, Ramsar and SAC to determine whether the Publication Draft MWLP will result in Adverse Effects on Integrity (AEoI) alone or in-combination with other plans or projects.

Table 1.4: Publication draft policies and sites likely to have significant effects on European sites

Publication draft policies and site allocations	River Wye SAC: Physical loss/damage to habitat	River Wye SAC: Non-physical disturbance	River Wye SAC: Water quantity and quality	River Wye SAC: Non-toxic contamination	Wye Valley and Forest of Dean Bat Sites SAC: Physical damage/loss of offsite habitat	Severn Estuary SPA, Ramsar and SAC: Water quantity and quality
M3: The winning and working of sand and gravel	X	X	X	X		X
M5: The winning and working of building stone (sandstone)			X			X
W3: Agricultural waste management			X			X
W4: Wastewater management			X			X
W5: Preferred locations for solid waste treatment facilities			X			X

Chapter 1 Non-Technical Summary

Publication draft policies and site allocations	River Wye SAC: Physical loss/damage to habitat	River Wye SAC: Non-physical disturbance	River Wye SAC: Water quantity and quality	River Wye SAC: Non-toxic contamination	Wye Valley and Forest of Dean Bat Sites SAC: Physical damage/loss of offsite habitat	Severn Estuary SPA, Ramsar and SAC: Water quantity and quality
W6: Preferred locations for construction, demolition and excavation waste facilities	X	X	X	X		X
Site M05/W45 Wellington Quarry	X	X	X	X		X
Site M12 Callow Delve			X		X	X
Site M20 Westonhill Wood Delve			X			X
Area of Search C	X	X		X		
Site W05 Leominster			X			X
Site W13 Former Lugg Bridge Quarry			X			X
Site W63 Southern Avenue, Leominster			X			X
Site W66 Moreton Business Park, Moreton-on-Lugg			X			X

Appropriate Assessment of the Publication Draft MWLP

River Wye SAC and Severn Estuary SPA, Ramsar and SAC

Habitat loss/damage and non-physical disturbance (River Wye SAC)

1.58 Wellington Quarry site allocations (M05 and W45) and Area of Search C, located immediately adjacent to the River Lugg component of the River Wye SAC, were identified as potentially supporting suitable habitat for otter associated with the River Wye SAC, and therefore site operations had the potential to impact otters through habitat loss and damage, or through non-physical disturbance.

1.59 Mitigation measures are recommended for inclusion within the Publication Draft MWLP including, site specific HRA, and a requirement for preparation of site-specific Ecological Mitigation Plans to protect the SAC.

1.60 The HRA concluded that providing the additional recommendations are included and implemented, the Publication Draft MWLP will not give rise to adverse effects on the integrity of the River Wye SAC, either alone or in-combination with other plans or projects as a result of habitat loss and damage or through non-physical disturbance.

Water quality and quantity (River Wye SAC and Severn Estuary SPA, Ramsar and SAC)

1.61 The HRA identified the potential for the Publication Draft MWLP to result in impacts to the River Wye SAC and downstream Severn Estuary SPA, Ramsar and SAC through changes in water quality and quantity as a result of sediment discharge and surface water run-off of that may be associated with minerals and waste sites. However, the primary pollutant risk to the River Wye SAC was identified as being increasing phosphate levels within the catchment.

1.62 Paragraph 5.4.5 in the MWLP includes general measures to mitigate water pollution such as cleaning of lorry wheels before they exit the site and good maintenance of bunds and stockpiles, as well as locating plant, machinery and haulage routes away from sensitive receptors. This measure should help to avoid general water pollution impacts relating to surface water run-off and sediment discharge.

1.63 The requirement for developments to achieve nutrient neutrality or betterment in relation to phosphate levels in the River Wye SAC, and in line with Natural England guidance, has been added to the Publication Draft. Crucially, agricultural waste management policies W3 and W4 and the Key Development Criteria for relevant minerals and waste site allocations include specific reference to achieving nutrient neutrality or betterment, achieving reductions in phosphate releases and to encourage phosphate recovery for beneficial uses. Furthermore, in relation to allocation sites M05 and W45 any abstraction should be managed through established licensing mechanisms authorised by the Environment Agency.

1.64 The HRA concluded that, in light of the existing safeguards provided, the Publication Draft MWLP will not give rise to adverse effects on the integrity of the River Wye SAC and Severn Estuary SAC, SPA and Ramsar, either alone or in-combination with other plans or projects as a result of changes in water quality or quantity.

Air pollution (River Wye SAC)

1.65 The HRA Screening identified the potential for ‘anaerobic digestion’ or ‘energy from waste’ facilities to affect the River Wye SAC through air pollution if proposals come forward within 10km of the SAC. However, any such proposal will need to obtain an Environmental Permit (EP), as regulated by the Environment Agency. This ensures that there is a requirement to demonstrate that they will avoid harm to the River Wye SAC (and other European sites).

1.66 The HRA concluded that, in light of the existing safeguards provided, the Publication Draft MWLP will not give rise to adverse effects on the integrity of the River Wye SAC, either alone or in-combination with other plans or projects as a result of air pollution associated with anaerobic digestion or energy from waste facilities.

Non-toxic contamination (River Wye SAC)

1.67 The potential for non-toxic contamination, for example through smothering from dust, was limited to the Wellington Quarry waste and minerals sites and Area of Search C because of their proximity to the River Wye SAC, and policies M3 and W6 which specifically focus minerals and waste operations to the Wellington Quarry sites.

1.68 Avoidance and mitigation measures already included in the Core Strategy were considered likely to considerably reduce the potential for adverse effects on integrity but additional recommendations were made to provide more certainty. This included recommendations to strengthen section 5.7 of the MWLP relating to Core Strategy policy SD1 including a commitment to assessing and mitigation effects on ecological receptors from dust.

1.69 Appendix A of the Publication Draft MWLP (Allocated Sites and the Key Development Criteria) also provide robust mitigation and avoidance safeguards including a requirement for site specific project level assessment.

1.70 The HRA concluded that providing the additional recommendations are included and implemented, the Publication Draft MWLP will not give rise to adverse effects on the integrity of the River Wye SAC, either alone or in-combination with other plans or projects as a result of non-toxic contamination.

Wye Valley and Forest of Dean Bat Sites SAC

Loss of functionally linked habitat

1.71 Proposed minerals allocation M12 Callow Delve in the Publication Draft MWLP was identified as having the potential to provide offsite but functionally linked habitat for the horseshoe bats associated with the Wye Valley and Forest of Dean Bat Sites SAC.

1.72 Appendix A of the Publication Draft MWLP (Allocated Sites and the Key Development Criteria) includes specific avoidance and mitigation safeguards, including the requirement for project level HRA which demonstrates how adverse effects on horseshoe bats will be avoided.

1.73 Therefore, the safeguards already included in the Publication Draft MWLP will ensure that adverse effects on the integrity of the Wye Valley and Forest of Dean Bat Sites SAC, as a result of damage and loss of off-site habitat, will be avoided, either alone or in-combination.

HRA recommendations and conclusion

1.74 The recommendations that are made in the HRA to provide certainty that adverse effects on European Sites will be avoided are outlined below. In summary, providing the existing mitigation measures provided by the Local Plan – Core Strategy policies and MWLP supporting text and Key Development Criteria are successfully implemented, along with the inclusion and

implementation of the additional recommendations listed above, the Publication Draft MWLP will not give rise to adverse effects on the integrity of European sites, either alone or in-combination with other plans or projects.

Summary of HRA recommendations

MWLP Appendix A: Key Development Criteria

- Commitment to site specific HRA for the Wellington Quarry minerals and waste site allocations including requirement for detailed protected species surveys for otter to determine any site-specific mitigation and protection measures such as timing of works and disturbance buffers.

MWLP – Policy M3

- Requirement for project-level/site specific HRA and targeted ecological survey for otter.

MWLP – paragraph 5.4.10

- Recommend inclusion of the following wording:

“A management strategy associated with a minerals or waste development should, where appropriate, include an Ecological Mitigation Plan which specifies working methods, timings and buffers within the development site required to protect vulnerable ecological features, including European Sites. The mitigation plan will include appropriate disturbance buffers, with the size and shape of the buffer defined on a site-by-site basis and dependent on the attributes of the feature. Such Ecological Mitigation Plans will also be required for new sites coming forward in Area of Search A where there is potential for operations to effect the River Wye SAC.”

MWLP – Section 5.7.6

- It is recommended that the wording of this section of the Publication Draft MWLP is strengthened, in line with the suggested replacement wording for paragraph 5.7.6:

“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. Dust can also cause adverse ecological impacts to sensitive sites.”

MWLP – Section 5.7.7

- It is recommended that the wording of this section of the Publication Draft MWLP is strengthened, in line with the suggested replacement wording for paragraph 5.7.7:

“5.7.7: A dust assessment will be required where fugitive dust emissions are likely to cause a nuisance or adverse ecological impact; 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.”

Sustainability context for Minerals and Waste Development in Herefordshire

Review of relevant plans, programmes and environmental protection objectives

1.75 The MWLP is not being prepared in isolation and is greatly influenced by other plans and programmes and by broader sustainability objectives. The Plan

needs to be consistent with international and national guidance and strategic planning policies and should contribute to the goals of a wide range of other programmes and plans. It must also conform to environmental protection legislation and the sustainability objectives established at the international, national and local levels.

1.76 Schedule 2 of the SEA Regulations requires:

(1) “an outline of the...relationship with other relevant plans or programmes”; and

(5) “the environmental protection objectives established at international, Community or Member State level, which are relevant to the plan and the way those objectives and any environmental considerations have been taken into account during its preparation”

1.77 It is necessary to review and develop an understanding of the environmental, social and economic objectives contained within international, national and local plans and programmes that are of relevance to the MWLP so that any potential links can be built upon and any inconsistencies and constraints addressed.

EU Exit

The European Union (Withdrawal) Act 2018 will end the supremacy of EU law in UK law, it will convert directly applicable EU legislation (in particular, EU Regulations and Decisions) as it stands at the moment of exit into domestic law, and will preserve legislation previously made in the UK to implement EU obligations.

The legislation will therefore generally have the same effect that it had before the UK left the EU, unless or until it is changed by Parliament.

1.78 One of the most significant developments in terms of the policy context for the MWLP has been the publication of the revised National Planning Policy Framework (NPPF) [See reference 11] in February 2019. The NPPF does not contain specific waste policies (contained in National Planning Policy for Waste [See reference 12]) however it does contain policies on the sustainable use of minerals. The NPPF states that planning policies should:

“Provide for the extraction of mineral resources of local and national importance, but not identify new sites or extensions to existing sites for peat extraction;

So far as practicable, 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, whilst aiming to source minerals supplies indigenously;

Safeguard mineral resources by defining Mineral Safeguarding Areas; and adopt appropriate policies so that known locations of specific minerals resources of local and national importance are not sterilised by non-mineral development where this should be avoided (whilst not creating a presumption that the resources defined will be worked);

Set out policies to encourage the prior extraction of minerals, where practicable and environmentally feasible, if it is necessary for non-mineral development to take place;

Safeguard existing, planned and potential sites for: the bulk transport, handling and processing of minerals; the manufacture of concrete and

concrete products; and the handling, processing and distribution of substitute, recycled and secondary aggregate material;

Set out criteria or requirements to ensure that permitted and proposed operations do not have unacceptable adverse impacts on the natural and historic environment or human health, taking into account the cumulative effects of multiple impacts from individual sites and/or a number of sites in a locality;

When developing noise limits, recognise that some noisy short-term activities, which may otherwise be regarded as unacceptable, are unavoidable to facilitate minerals extraction; and

Ensure that worked land is reclaimed at the earliest opportunity, taking account of aviation safety, and that high quality restoration and aftercare of mineral sites takes place”.

1.79 The NPPF is supported by Planning Practice Guidance which includes guidance on Minerals (DCLG, 2014) [\[See reference 13\]](#) and Waste (DCLG, 2015) [\[See reference 14\]](#). The Local Plan must be consistent with the requirements of the NPPF.

1.80 As stated above, the detailed waste planning policies are contained in National Planning Policy for Waste (DCLG, 2014) [\[See reference 15\]](#). The policies state that when preparing Local Plans, waste planning authorities should take account of a number of criteria including:

- Driving waste management up the waste hierarchy;
- Identifying the need for waste management facilities;
- Working jointly and collaboratively with other planning authorities to provide a network of facilities to deliver sustainable waste management; and,

- Identifying suitable sites and areas for waste management facilities in line with the proximity principle, giving priority to the re-use of previously developed land.

1.81 Also of particular relevance to the MWLP is the National Waste Management Plan for England (DEFRA, 2013) [See reference 16], prepared to fulfil the requirement of the Waste Framework Directive, which provides analysis of the current waste management situation in England and evaluates how it will support implementation of the objectives and provisions of the Waste Framework Directive.

1.82 Chapter 3 of the full SA of the Publication Draft MWLP summarises the relevant international and national policies, plans and programmes which should be taken into consideration during the preparation of the MWLP and its SA, as well as those plans and programmes which are of relevance at a regional and local level (Appendix A of the SA Report provides more detail about the relevant plans and programmes and their environmental protection objectives).

Baseline information

1.83 Schedule 2 of the SEA Regulations requires information to be provided on:

(2) The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan.

(3) The environmental characteristics of areas likely to be significantly affected.

(4) Any existing environmental problems which are relevant to the plan including, in particular, those relating to any areas of a particular

environmental importance, such as areas designated pursuant to Directives 79/409/EEC on the conservation of wild birds and the Habitats Directive.

1.84 The term ‘baseline information’ refers to the existing environmental, economic and social characteristics of the area likely to be affected by the Plan, and their likely evolution without implementation of the Plan. Baseline information provides the basis for predicting and monitoring the likely effects of a plan and helps to identify existing problems in the plan area.

1.85 The full baseline information is presented in Appendix C. The SEA Regulations only requires ‘environmental characteristics’ to be identified, therefore, to satisfy the requirements of SA, this has been extended to identify both social and economic baseline characteristics. Similarly, rather than only identifying ‘existing environmental problems’, to satisfy the requirements of SA, social and economic problems are also identified and are subsequently referred to as ‘key sustainability issues’ (described on pages 51-63 below). In order to satisfy the requirements of Schedule 2, the following information is presented for each baseline topic:

- Quantified information on the current state and characteristics of the topic within Herefordshire;
- Comparators and trends; and,
- Key sustainability issues.

1.86 Baseline information presented in the SA of the Draft MWLP Report has been revised and updated to make use of recently available information sources, most notably the Mineral and Waste Need Assessments Updates completed by Hendeca in 2019; the Strategic Flood Risk Assessments of the MWLP completed by WSP in 2019 and 2020; the Appropriate Assessment of the MWLP completed in 2020; and the Council’s Position Statement on Development in the River Lugg Catchment Area in March 2020.

1.87 A brief overview of the minerals and waste context plus environmental, social and economic characteristics of Herefordshire is outlined in the following paragraphs.

Minerals and waste context

1.88 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. The commercially exploitable minerals available for extraction from within Herefordshire include sand, gravel, crushed rock, and sandstone. Coal was formerly worked at two locations – Wyre Forest Coalfield and Forest of Dean Coalfield. There are currently eleven consented mineral workings in Herefordshire. There will be a need for additional reserves of sand and gravel to be permitted to meet demand from 2027 onwards. There may be a need for additional reserves of crushed rock during the lifetime of the MWLP to continue to meet demand from 2027 onwards. There are currently no industrial processes in Herefordshire which are known to produce secondary aggregates **[See reference 17]** . Recycled aggregates are currently being produced within Herefordshire, principally at the CD&E waste recovery facility at Former Lugg Bridge Quarry.

1.89 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 main county towns are the largest producers of waste, and this is generally reflected in the pattern of waste management facilities within Herefordshire. Anaerobic digestion and biological treatment facilities are dispersed around the county, reflecting its agricultural sector. According to the WNA 2019 **[See reference 18]**, consented facilities located in Herefordshire managed 460,000 tonnes of waste in 2018, compared to just over 300,000 in 2013. The single largest tonnage is municipal waste (principally wastes from households); representing 42% to 48% of the wastes managed at consented facilities in Herefordshire between 2015 and 2018. The second largest tonnage is formed by construction and demolition wastes (29%) followed

by agriculture and processing wastes (20% in 2018). All the other wastes added together still only comprise about 6% to 11% of all wastes managed at the consented facilities in Herefordshire.

1.90 The majority (90%) of waste received at consented facilities in Herefordshire originated in Herefordshire. There are 34 waste management facilities operating in Herefordshire.

Environmental characteristics

1.91 Herefordshire is a largely rural county and as such has a rich biodiversity offering. There are four sites of international importance for nature conservation within Herefordshire, which are designated pursuant to Directive 92/43/EEC [**See reference 19**]: the River Wye Special Area of Conservation (SAC); the Wye Valley Woodlands SAC; the Downton Gorge SAC; and, the River Clun SAC. There are three National Nature Reserves, seven Local Nature Reserves, 79 Sites of Special Scientific Interest, and 685 Local Wildlife Sites.

1.92 There are two designated AQMAs in Herefordshire – the Hereford AQMA and the Bargates Leominster AQMA.

1.93 There are a number of groundwater Source Protection Zones within Herefordshire to ensure that rivers and aquifers are protected from pollution and are principally located at the River Lugg and River Wye. Fluvial flooding (from rivers) is the largest single source of flooding in Herefordshire, based on notable flood events recoded from 1931 to 2018. The majority of fluvial flood risk in Herefordshire is associated with the main rivers that flow through the country, with the most extensive floodplains attributable to the River Teme, River Lugg, River Arrow, River Wye, River Frome, River Dore, River Leadon and Worm Brook. The second most common cause is flooding from surface water. There are limited records of groundwater flooding, and the majority of sewer flooding is generally in urban areas.

1.94 Herefordshire possesses a rich historic environment which is reflected in the number of designated heritage assets – the Hereford Area of Archaeological Importance; 64 Conservation Areas, two are listed on the Heritage at Risk Register; 5,938 Listed Buildings in Herefordshire, 34 of which are on the Heritage at Risk Register; 265 Scheduled Monuments, 25 of which are on the Heritage at Risk Register; and, 25 Registered Parks and Gardens, of which none are considered to be at risk.

1.95 The county has significant areas of landscape importance including the Wye Valley AONB and the Malvern Hills AONB, and areas of high landscape sensitivity around Hereford. The Shropshire Hills AONB lies almost adjacent to the north-western part of Herefordshire, near Leintwardine.

1.96 The majority of Herefordshire consists of grade 2 and grade 3 agricultural land.

Social characteristics

1.97 The latest population estimate for Herefordshire, the predicted mid-2019 population estimate was 192,800, of which 95,500 were male and 97,300 were female [See reference 20]. Just under a third of the county's resident's (61,400) live in Hereford city with one-fifth of the population living in the three largest market towns – including Ross (11,400 people) Leominster (12,200) and Ledbury (10,100). Just over half of the residents (100,500) live in areas classified as rural, with around two in five (80,300) living in the most rural 'village and dispersed [See reference 21]. The population projections for Herefordshire predict that the population will increase to 201,200 by 2031 [See reference 22]. Herefordshire is predicted to experience a demographic change with an increasing elderly population.

1.98 In 2019, Herefordshire contained 83,765 dwellings, of which 33,917 (40.5%) were located in Hereford City [See reference 23]. Approximately 68% of dwellings in Herefordshire are owner occupied, which is slightly higher than the West Midlands (64.9%) and England (63.3%) averages. The median house

price in Herefordshire in August 2020 was £247,163 [\[See reference 24\]](#). Herefordshire has the worst housing affordability ratio in the West Midlands [\[See reference 25\]](#).

1.99 Overall levels of deprivation are low in the county however, according to the English Indices of Deprivation 2019 [\[See reference 26\]](#), Herefordshire contains one Lower-layer Super Output Area (LSOA) in the 10% most deprived in the country (Herefordshire 017D within the Newton Farm ward). Eight LSOAs are within the 20% most deprived in the country (two within the Hinton & Hunderton ward and one within the Ross North, Leominster South, Leominster North and Rural, Leominster East, Red Hill and Newton Far) with an additional five LSOAs within the 30% most deprived in the country (one within the Central ward, one within the Bromyard West ward one within the Saxon Gate ward, one within the Red Hill ward, and one within the Newton Farm ward).

1.100 Life expectancies for both men and women are higher than the national average, at 83.7 years for women and 79.7 years for men [\[See reference 27\]](#). Health inequalities exist, as the average life expectancy for men in the least deprived areas is 9.5 years more than those in the most deprived areas. Women in the least deprived areas can expect to live 7.7 years longer than those in the most deprived areas [\[See reference 28\]](#).

1.101 There are over 100 publicly funded primary, secondary and special schools in Herefordshire [\[See reference 29\]](#). In September 2020, it is hoped that a new university will open in Hereford: the New Model in Technology and Engineering (NMiTE).

1.102 Herefordshire has a range of cultural and leisure opportunities, including Eastnor Castle and Hampton Court Castle, a number of houses and gardens to visit, as well as its characteristic market towns. There is a network of public rights of way (PROW) across the countryside including promoted routes such as the Wye Valley Walk and the Three Rivers Ride. The Offa's Dyke Path, a National Trail, passes through the county near Kington. National Cycle Network (NCN) routes 44, 46, 426 and 423 are present within the county. The county also contains Queenswood Country Park near Bodenham.

Economic characteristics

1.103 The latest labour market statistics [See reference 30] from July 2019 to June 2020 show that 98,300 people in Herefordshire were employed, accounting for 82.7% of the population, which is above the national average of 79.4%. The three main occupations in Herefordshire in the same period were professional occupations (19.2%), skilled trades and occupations (15.0%), associate professional and technical (15.5%) and managers, directors and senior officials (13.5%). The county's largest employment industries are wholesale and retail trade (repair of motor vehicles and motorcycles) (17.6%), and human health and social work activities (16.2%). The percentage of people employed in the motor vehicle repair and the human health and social work industry is higher in Herefordshire than in the West Midlands (16.7% and 13.6% respectively) and the UK as a whole (15.2% and 13.2% respectively). Conversely, the number of people employed in professional, scientific and technical activities (6.1%) is below the regional (7.0%) and national (8.7%) averages.

1.104 The proportion of people who are unemployed is 2.8% of the population which is the lower than the regional average (4.7%) and the national average (3.9%).

1.105 In 2015, 6.86 million people visited Herefordshire, 2.65m overnight visitors and 4.21m day visitors who between them contributed £442.81 m to the local economy. This supports about 6,688 full time equivalent jobs in the tourism industry. The main retail and cultural centre of Herefordshire is Hereford city, although market towns also play a key role.

1.106 The primary road network in Herefordshire generally radiates out from Hereford and Leominster. Hereford is a hotspot for congestion in the county, particularly around the main river crossing of the A49 and the bridge at St Martin's Street, which is controlled by traffic lights [See reference 31]. As part of the Hereford Transport Package, the City Link Road was opened in December 2017 in Hereford which links Commercial Road and Edgar Street.

There are no commercial airports within Herefordshire, with the nearest airports being at Birmingham and Cardiff. There are four train stations within Herefordshire at Hereford, Leominster, Colwall and Ledbury.

Key sustainability issues and likely evolution without the Plan

1.107 The set of key sustainability issues for Herefordshire presented in the SA of the Draft MWLP has been updated. It is also a requirement of the SEA Regulations that consideration is given to the likely evolution of the environment if the MWLP is not implemented. This analysis is presented below in relation to each of the key sustainability issues.

Mineral resources

Key sustainability issues

- There may be a need for additional reserves of sand and gravel working, crushed rock and building stone during the lifetime of the Minerals and Waste Local Plan to continue to meet demand. However, the scenarios presented in the MNA Update 2019 have produced varying forecasts of demand, reflecting the extent of uncertainties in minerals data.
- Recycled aggregates could have an increasingly important role to play in reducing reliance on imports of aggregates and supporting the delivery of the Circular Economy, particularly sand and gravel.
- The exploration, appraisal or extraction of hydrocarbons within the county is not reasonably expected to take place in the short to medium term and unlikely within the plan period.

Likely evolution of the issue without implementation of the Herefordshire Minerals and Waste Local Plan

- In the absence of the MWLP, which will allocate appropriate sites for mineral extraction, it is likely that there will be an insufficient supply of minerals in Herefordshire to meet demand, thereby increasing reliance on imports of aggregates. Furthermore, without the Plan, it is also likely that mineral developments will be sited in inappropriate locations resulting in negative social, economic and environmental effects.

Waste

Key sustainability issues

- Over the last four years there has been a notable increase in the capacity and waste inputs to consented facilities in Herefordshire. While there is a range of waste management collection, re-use and recycling capacity permitted in Herefordshire addressing a variety of wastes, there are no residual waste management facilities. As a result, there is a reliance on such facilities outside the county to process the proportion of 'local authority collected waste' that is not recycled, composted or reused.
- Waste generation is expected to increase if households (and population) are projected to grow. This has different impacts on the various waste streams identified in Herefordshire:
 - There is the risk of potential pressure on the current contracted capacity of the materials recovery facility at Norton to process additional LACW waste, particularly towards the end of the Plan period.
 - Additional commercial and industrial (C&I) waste management capacity may be required, although this could be provided within a single facility or through a small number of facilities operating on an industrial estate.
 - Assuming a 90% recovery target for non-hazardous Construction & Demolition (C&D) wastes, strategic locations for the future

management of non-hazardous construction and demolition (CD&E) waste will need to be considered.

- Based on the low level of generation, there would not appear to be a strategic need for agricultural wastes, low level radioactive waste and new hazardous waste management capacity within Herefordshire.
- There are no insurmountable constraints identified in the period up to 2041 in relation to wastewater.

Likely evolution of the issue without implementation of the Herefordshire Minerals and Waste Local Plan

- In the absence of the MWLP, which will allocate appropriate sites for sustainable waste management, it is likely that the current waste management facilities will reach full capacity, particularly in relation to LACW. Furthermore, without the Plan, it is also likely that waste and mineral developments will be sited in inappropriate locations resulting in negative social, economic and environmental effects.

Climate change

Key sustainability issues

- Herefordshire is likely to experience more extreme impacts as a result of climate change – wetter winters with greater incidences of flooding, and warmer, drier summers with greater incidences of low flow rivers (during the summer months). The predicted dry, hot summers will cause problems of low flows for some of the rivers in the area which will increase demand for water potentially affecting availability for minerals operations. Extreme weather events may also increase disruption to supply chains, infrastructure and transport of minerals and waste.
- However, climate change also presents a number of opportunities – milder winters should reduce the costs of heating homes and other buildings,

helping to alleviate fuel poverty and reducing the number of winter deaths from cold. In addition, UK agriculture and forestry may be able to increase production with warmer weather and longer growing seasons.

Likely evolution of the issue without implementation of the Herefordshire Minerals and Waste Local Plan

- Despite policies in the National Planning Policy Framework (NPPF), the National Planning Policy for Waste (NPPW) and the adopted Herefordshire Core Strategy, in the absence of the MWLP it is likely that contributions to climate change from minerals and waste developments in Herefordshire will not be appropriately controlled and mitigated.

Biodiversity and geodiversity

Key sustainability issues

- Herefordshire contains many areas of high ecological value including sites of international and national importance which are under pressure from farming, forestry and new development.
- Key environmental problems/threats identified in relation to European Sites likely to be affected by the MWLP include decreasing quality of water, habitat fragmentation, the spread of invasive species and diseases, pressure from public access, poor site and game management, structural deterioration of roost sites, siltation, physical modification, nitrogen deposition, inappropriate scrub control and undergrazing.
- In light of these pressures, there is a need for biodiversity net gain where any damages to biodiversity are balanced by at least equivalent gains for biodiversity.

Likely evolution of the issue without implementation of the Herefordshire Minerals and Waste Local Plan

- Although there is a high level of protection afforded to internationally and nationally designated nature conservation sites within the NPPF, the NPPW and the adopted Core Strategy (Policy LD2), the implementation of the MWLP can help to conserve biodiversity by directing mineral and waste developments away from sensitive locations. Furthermore, the MWLP can also help to enhance biodiversity (and achieve biodiversity net gain) through the restoration of land at former waste and mineral sites to an after-use including accessible greenspace. Without the MWLP it is more likely that environmental designations in the county could be adversely affected by poorly planned minerals and waste developments or with less stringent mitigation measures applied.

Air quality

Key sustainability issues

- Poor air quality is experienced in certain parts of Herefordshire due to high concentrations of nitrogen oxide, and two AQMAs have been declared in Hereford and Leominster.

Likely evolution of the issue without implementation of the Herefordshire Minerals and Waste Local Plan

- In the absence of the MWLP which will support sustainable transport measures and aim to reduce emissions from transport of waste and minerals, air quality in Herefordshire is more likely to be adversely affected as a result of less stringent mitigation or poorly planned minerals and waste developments.

Water resources and flooding

Key sustainability issues

- Significant improvements to water quality in the country are required to meet the target of 'Good Chemical Status' and 'Good Ecological Status' of rivers by 2027, as required by the Water Framework Directive. In Herefordshire, phosphate loss to watercourses is a particular issue in rural catchments with a high degree of agricultural activity, such as in the Wye catchment and Arrow, Lugg and Frome catchment, where all rivers in these catchments are failing to achieve good chemical status and the majority are not achieving good ecological status (mostly of moderate, poor or bad status) due to agriculture and land management processes. For the River Wye SAC, this means that it is not currently achieving its conservation objectives.
- Herefordshire is affected to varying degrees by fluvial and surface water flooding which is primarily associated with the River Wye. The effects of climate change may increase the incidence of flooding within the county.
- Although there are a number of Source Protection Zones in Herefordshire, groundwater is vulnerable to contamination and pollution from the storage, treatment and processing of waste and mineral exploitation.

Likely evolution of the issue without implementation of the Herefordshire Minerals and Waste Local Plan

- Policy SD3 of the adopted Core Strategy states that development proposals should not lead to the deterioration of EU Water Framework Directive water body status. Policy SS7 seeks to minimise the risk of flooding and to make use of sustainable drainage systems. There is an existing Nutrient Management Plan for the River Wye SAC, which sought to identify actions that would enable additional development (beyond existing wastewater discharge consents) to proceed. However, due to the phosphate targets still being exceeded this has been updated by new

documents published by the Council in March 2020 (Position Statement and FAQs on Development in the River Lugg Catchment Area, and a Guidance Note and Checklist relating to HRA and planning applications). Therefore, there is potential for phosphate levels associated with new development to be improved even without the MWLP. However, the MWLP incorporates the requirements of these documents in policy designed to help deliver nutrient neutrality or betterment within the River Wye and River Lugg catchments and should therefore help to improve phosphate levels. The MWLP will also take flooding into account in the allocation of sites for mineral and waste developments and so this issue will be less well addressed without the implementation of this document. Furthermore, in the absence of the MWLP, there is unlikely to be the opportunity to increase flood storage capacity through the restoration of mineral sites to artificial lakes.

Soil

Key sustainability issues

- The majority of Herefordshire consists of best and most versatile agricultural land, which could be lost to development.

Likely evolution of the issue without implementation of the Herefordshire Minerals and Waste Local Plan

- Policy SS7 of the adopted Core Strategy seeks to protect the best agricultural land where possible. The HWMLP will prioritise the co-location of similar or related facilities on existing waste and mineral sites or previously developed sites in preference to greenfield locations. Without the implementation of the HWMLP this issue would be less well addressed.

Historic environment

Key sustainability issues

- There are areas of significant historical importance in Herefordshire and aesthetic quality, settings and important views should be preserved and enhanced. These are continuously facing pressures for change.
- There are 34 Listed Buildings, 25 Scheduled Monuments, and two Conservation Areas on the Heritage at Risk Register.

Likely evolution of the issue without implementation of the Herefordshire Minerals and Waste Local Plan

- Policy LD4 of the adopted Core Strategy seeks to protect, conserve and enhance heritage assets and their settings. The MWLP offers the opportunity to allocate mineral and waste sites following consideration of their impacts on the historic environment through the SA. Without the implementation of the MWLP this issue may be less well addressed.

Landscape

Key sustainability issues

- The county has significant areas of landscape importance including the Wye Valley AONB and the Malvern Hills AONB, and areas of high landscape sensitivity around Hereford.

Likely evolution of the issue without implementation of the Herefordshire Minerals and Waste Local Plan

- There is a high level of protection afforded to nationally designated landscapes within the NPPF. Policy LD1 of the adopted Core Strategy seeks to conserve and enhance the natural, historic and scenic beauty of important landscapes and features. In the absence of the MWLP there is potential for new mineral and waste developments to be located in sensitive areas leading to negative impacts on valued landscapes.

Population

Key sustainability issues

- The age structure of the population currently shows a higher than average level of retired people. This will have implications for the economy, service provision, accommodation and health.
- Large proportion of the population living in rural areas.

Likely evolution of the issue without implementation of the Herefordshire Minerals and Waste Local Plan

- It is likely that the age structure and proportion of people living in rural areas will continue with or without the implementation of the MWLP as these issues are more likely to be addressed through policies in the adopted Core Strategy and other Local Plan documents.

Housing

Key sustainability issues

- There need for affordable housing, particularly in Hereford, due to average house prices being higher than the regional and national averages.

Likely evolution of the issue without implementation of the Herefordshire Minerals and Waste Local Plan

- The MWLP can ensure sufficient resources are available to meet housing requirements through extraction from existing and new minerals sites. Without the implementation of the MWLP this issue may be less well addressed.

Social inclusion and deprivation

Key sustainability issues

- While the overall level of deprivation is low in the county, there are pockets of high deprivation in Hereford City.
- A higher than average number of households are considered to be fuel poor in the county.

Likely evolution of the issue without implementation of the Herefordshire Minerals and Waste Local Plan

- The adopted Core Strategy contains policies for employment development which will help to address deprivation. The MWLP will allocate waste and mineral development sites which will provide opportunities for

employment. Without the implementation of the MWLP this issue may be less well addressed.

Health

Key sustainability issues

- Health inequalities exist in Herefordshire between the least and most deprived areas of the county.
- The population of Herefordshire performs generally better than the averages for nationally against the majority of health indicators. However, childhood obesity prevalence in Herefordshire is in line with the regional and national averages, and alcohol specific hospital stays and smoking levels for under 18s is worse than the average for England.

Likely evolution of the issue without implementation of the Herefordshire Minerals and Waste Local Plan

- The adopted Core Strategy contains policies relating to the health of the residents of Herefordshire. The MWLP aims to ensure that mineral and waste developments protect the health, wellbeing, safety and amenity of people and communities in and around Herefordshire. Without the implementation of the MWLP this issue may be less well addressed.

Culture, leisure and recreation

Key sustainability issues

- Herefordshire has a range of cultural and leisure opportunities, and many visitors to Herefordshire come for its countryside.

- Improve provision and access to recreational resources (be that to linear routes, open space, or recreational facilities).

Likely evolution of the issue without implementation of the Herefordshire Minerals and Waste Local Plan

- Policy OS1 of the adopted Core Strategy seeks to ensure there is a network of accessible, high quality open spaces and recreation facilities in Herefordshire. The MWLP aims to ensure that mineral and waste developments provide opportunities to improve health and amenity through delivery of green infrastructure, enhanced public rights of way and improved access to recreation as part of the development and restoration of sites. Without the implementation of the MWLP this issue may be less well addressed.

Economy and employment

Key sustainability issues

- 82.7% of the population of Herefordshire are employed which is just above the national average. Unemployment remains below regional and national averages. Gross weekly earnings remain lower than the regional and national averages.
- Reliance on traditional employment sectors and service, whereas Herefordshire has aspirations to attract business in technology and knowledge intensive sectors.
- Retaining skilled members of the population is an issue for the local economy, and there is a need to improve training levels to enhance the quality of the local workforce.

Likely evolution of the issue without implementation of the Herefordshire Minerals and Waste Local Plan

- Policy E1 in the adopted Core Strategy supports proposals which enhance employment provision and help diversify the economy of Herefordshire. In the absence of the MWLP, employment in the minerals and waste sectors within Herefordshire may further decrease.

Transport and accessibility

Key sustainability issues

- There is high reliance on private cars and traffic congestion in Hereford, putting additional strain on existing infrastructure. Severance and poor air quality resulting from queueing traffic has adverse impacts on journey times, and journey time reliability.

Likely evolution of the issue without implementation of the Herefordshire Minerals and Waste Local Plan

- In the absence of the MWLP which will aim to reduce emissions from transport of waste and minerals, traffic growth and congestion in Herefordshire may continue in certain areas and along particular routes. However, other non-minerals and waste related road traffic is likely to contribute more to overall traffic growth and congestion in the county.

Sustainability Appraisal findings of the mineral and waste site allocations and alternative site options

1.108 This section presents the SA findings for the appraisal of 14 proposed mineral site allocations, four potential Areas of Search, four reasonable alternative mineral site options considered but not allocated in the Publication Draft MWLP, eight proposed waste site allocations and nine Strategic Employment Areas, which were assessed against the SA Framework and assumptions presented in Appendix F of the full SA report.

1.109 Desk-based site assessments were undertaken for these sites which were appraised as ‘policy-off’, i.e. each site has been appraised firstly on its own merits without consideration to the potential mitigation and enhancement measures that might be available through policies in the Plan. The detailed SA matrices for the mineral site options that are proposed to be allocated are presented in Appendix G of the full SA Report, the detailed matrices for the reasonable alternative mineral site options that have not been allocated are presented in Appendix H of the full SA Report, and the detailed matrices for the proposed waste site allocations and Strategic Employment Areas are presented in Appendix I of the full SA Report.

1.110 Where a size extension of an active site is proposed (sites M13, M16 and M20), the effects on the SA objectives are uncertain as they will depend on which part of the site will be extended. Effects are uncertain for the four Areas of Search as they will depend on the specific type and scale of the mineral development and where it comes forward within the Area of Search, which will not be known until the planning application stage. Active and operational mineral and waste sites are allocated in the Publication Draft MWLP and, for consistency, were subject to SA, however, the effects identified may have already been addressed through conditions relating to the planning permissions. Detailed assessments of these sites through examination of existing planning conditions was not undertaken and therefore the effects

relating to these sites are also uncertain (with the exception of SA objectives 1, 2 and 4 which relate to maintaining employment levels and investment in the minerals and waste industries). Similarly, where a time extension of an active site is proposed (sites M12, M17 and M18), the effects are also uncertain as these may have been addressed through conditions relating to the existing planning permission.

1.111 Appendix D of the full SA Report presents an audit trail of the site options that have been assessed as reasonable alternatives and explains the Council's reasons for selecting or rejecting each one for inclusion in the Publication Draft MWLP. Chapter 6 of the full SA Report considers the effects of the Publication Draft MWLP as a whole summarising the sustainability effects for the MWLP Vision, strategic objectives, policies and site allocations as well as the potential cumulative, synergistic and secondary effects of implementing the plan. Chapter 7 of the full SA Report presents an overview of mitigation measures that will prevent, reduce and as fully as possible offset any significant adverse effects identified during the SA.

1.112 Since the Draft MWLP SA Report (2018), the boundaries and site referencing numbering for several sites has been revised. All changes are outlined in detail in Appendix D of the full SA Report. A high-level summary of the changes to the sites proposed for inclusion in the Publication Draft MWLP is provided below. Note that the site referencing numbering is only used to record assessments in the SA, the Plan refers to the site names only.

Table 1.5: Changes to sites since Draft and Publication Draft MWLP

Site name	Site ref. Draft MWLP	Site ref. Publication Draft MWLP
Land adjacent Upper Lyde Quarry (east)	M03b	M03c (sites b and d amalgamated into M03c)
Land north east of Upper Lyde Quarry	M03d	M03c (sites b and d amalgamated into M03c)
Shobdon Quarry	M04	M04 (boundary extended eastwards)
Wellington Quarry	M05a, M05b, M05c, M05d, M05e, M05g	M05 (sites a-g, excluding f, have been amalgamated into one site) (site area reduced)
Land north west of Perton Quarry	M10b	M10b (minor amendments to boundary – more accurate mapping of the site area)
Callow Delve	M12	M12 (minor amendments to boundary – more accurate mapping of the site area)
Llandraw Delve	M16	M16 (revised boundary – more accurate mapping of site area and to include access road)
Pennsylvania Delves	M17	M17 (minor amendments to boundary – more accurate mapping of the site area)
Former Lugg Bridge Quarry	W13	W13 (revised boundary to include access road)
Moreton Business Park, Moreton-on-Lugg	W66	W66 (site area reduced)

1.113 Table 1.6 provides an overview of the SA scores for the 14 proposed mineral site allocations and four potential Areas of Search. The mineral site options are likely to have mostly positive effects on the SA objectives that include SA objective 1: Employment, 2: Sustainable Economy, 4: Poverty and Equality, and 9: Mineral Resources. Significant positive effects are identified for SA objective 11: Restoration. Significant negative effects are identified for the majority of social and environmental SA objectives, with most significant effects likely to be experienced in relation to SA objective 3: Health, 5: Sustainable Transport, 7: Build Environment, 10: Climate Change, 12: Biodiversity and Geodiversity, 13: Landscape, 14: Water, 15: Flooding, 16: Pollution and 17: Soil.

1.114 Table 1.7 presents an overview of the SA scores for the four reasonable alternative mineral site options considered but not included in the Publication Draft MWLP. The mineral site options are likely to have mostly positive effects on the SA objectives that include SA objective 1: Employment, 2: Sustainable Economy, 4: Poverty and Equality, and 9: Mineral Resources. Significant positive effects are identified for SA objective 11: Restoration. Significant negative effects are identified for SA objective 3: Health, 5: Sustainable Transport, 6: Historic Environment, 7: Build Environment, 10: Climate Change, 12: Biodiversity & Geodiversity, 13: Landscape, 14: Water, 15: Flooding, 16: Pollution and 17: Soil.

1.115 Table 1.8 presents an overview of the SA scores for the eight proposed waste site allocations and nine Strategic Employment Areas. Positive effects are identified for SA objective 1: Employment, 2: Sustainable Economy, 4: Poverty and Equality, and 9: Mineral Resources. Significant positive effects are identified for SA objective 8: Waste and 11: Restoration. Significant negative effects are identified for SA objective 3: Health, 7: Built Environment, 12: Biodiversity & Geodiversity, 14: Water, 15: Flooding, 16: Pollution and 17: Soil.

Table 1.6: Summary of SA effects for the mineral site allocations

SA Objective	M03a	M03c	M04	M05	M07a	M07b	M10a	M10b	M12	M13	M16	M17	M18	M20	Area of Search A	Area of Search B	Area of Search C	Area of Search D
1: Employment	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
2: Sustainable Economy	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
3: Health	0	0	0	--?	--?	--?	-?	--?	0	0	0	0	0	-?	--?	--?	--?	--?
4: Poverty & Equality	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
5: Sustainable Transport	--/+	--/+	--/+	--?/+	--?	--	--?/+	--/+	--?	--?	--?/+	--?	--?	--?/+	--?/+?	--?/+?	--?/+?	--?/+?
6: Historic Environment	-?	-?	-?	-?	-?	-?	0	0	-?	-?	-?	-?	-?	-?	--?	--?	--?	--?
7: Built Environment	0	0	0	--?	--?	0	0	0	0	0	0	0	0	0	--?	--?	--?	--?
8: Waste Hierarchy	+?/-	+?/-	+?/-	+?/-	+?/-?	+?/-?	+?/-?	+?/-?	+?/-?	+?/-?	+?/-?	+?/-?	+?/-?	+?/-?	+?/-?	+?/-?	+?/-?	+?/-?
9: Minerals Resources	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
10: Climate Change	--/+	--/+	--/+	--?/+	--?	--	--?/+	--/+	--?	--?	--?/+	--?	--?	--?/+	--?/+?	--?/+?	--?/+?	--?/+?
11: Restoration	+++?	+++?	+++?/-?	+++?	+++?	+++?	+++?	+++?	+++?	+++?	+++?	+++?	+++?	+++?	+++?	+++?/-?	+++?	+++?/-?
12: Biodiversity & Geodiversity	-	-?	-?	--?	-?	-?	--?/+?	--?/+?	-?	--?	-?	-?	-?	-?	--?	--?	--?	--?
13: Landscape	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-?	-?	--?	--?
14: Water	0	0	--?	--?	0	0	0	0	-?	--?	--?	0	0	--?	--?	--?	--?	--?
15: Flooding	-?	-?	-?	--?	-?	-?	-?	-?	0	0	-?	0	0	-?	--?	--?	--?	0
16: Pollution	0	0	0	--?	0	0	0	0	0	0	0	0	0	0	--?	--?	--?	--?
17: Soil	--?	--?	--?	--?	-?	-?	0	0	-?	0	0	0	0	-?	--?	--?	--?	-?

Table 1.7: Summary of SA effects for reasonable alternative mineral site options

SA Objective	M03c	M05f	M22	M23
1: Employment	+	+	+	+
2: Sustainable Economy	+	+	+	+
3: Health	0	--?	-?	0
4: Poverty & Equality	+?	+?	+?	+?
5: Sustainable Transport	+/-	+/-	--	--/+
6: Historic Environment	-?	-?	--?	--?
7: Built Environment	0	--?	0	0
8: Waste Hierarchy	+?/-	+?/-	+?/-?	+?/-?
9: Minerals Resources	+	+	+	+
10: Climate Change	+/-	+/-	--	--/+
11: Restoration	++	+++?	+++?/-?	+++?
12: Biodiversity & Geodiversity	-?	-?	-?	--?
13: Landscape	0	0	--?	0
14: Water	0	-?	-?	--?
15: Flooding	0	0	-?	--?
16: Pollution	0	--?	0	0
17: Soil	--?	--?	-?	-?

Table 1.8: Summary of SA effects for the waste site allocations

SA Objective	W05	W07	W10	W13	W19	W43	W44	W45	W58	W59	W60	W61	W62	W63	W64	W65	W66
1: Employment	+	+	+	+	+	+	+	+	++?	++?	+	+	+	++?	+	+	++?
2: Sustainable Economy	+	+	+	+	+	+	+	+	++?	++?	+	+	+	++?	+	+	++?
3: Health	-?	--?	0	0	0	0	0	--?/+?	0?	0?	0?	0?	0?	0?	0?	0?	0?
4: Poverty & Equality	+	+	+	+	+	+	+	+	+	+	+	+	+	++?	+	+	+
5: Sustainable Transport	+/-?	+/-?	+/-?	+/-?	+/-	+/-	+/-	+/-	+	+	+	+	+	+	+	+	+
6: Historic Environment	0	0	0	0	0?	0	0	+	0?	0?	0?	0?	0?	0?	0?	0?	0?
7: Built Environment	--?	--?	--?	0	--?	0	0	+	0?	0?	0?	0?	0?	0?	0?	0?	0?
8: Waste Hierarchy	++?	++?	++?	++?	++?	+?/-	+?/-	+?/-	+	+	+	+	+	+	+	+	+
9: Minerals Resources	0	0	0	+	0	+	+	+	0?	0?	0?	0?	0?	0?	0?	0?	0?
10: Climate Change	+/-?	+/-?	+/-?	+/-?	+/-	+/-	+/-	+/-	+	+	+	+	+	+	+	+	+
11: Restoration	0?	0?	0?	0?	0?	++?	++?/-?	++?	0?	0?	0?	0?	0?	0?	0?	0?	0?
12: Biodiversity & Geodiversity	--?	0?	-?	--?	-?	+	+?/-?	--?/+?	0?	0?	0?	0?	0?	0?	0?	0?	0?
13: Landscape	-?	0	-?	0	-?	+	+	+	0?	0?	0?	0?	0?	0?	0?	0?	0?
14: Water	--?	--?	0	--?	-?	0	--?	--?	0?	0?	0?	0?	0?	0?	0?	0?	0?
15: Flooding	-?	-?	0	--?	-?	+?/-?	+?/-?	--?/+?	--?	-?	--?	--?	--?	--?	--?	-?	--?
16: Pollution	--?	--?	--?	0	0	0	0	--?	0?	0?	0?	0?	0?	0?	0?	0?	0?
17: Soil	-?	0	--?	-?	-?	+	+	+	0?	0?	0?	0?	0?	0?	0?	0?	0?

Sustainability Appraisal findings of the Publication Draft Herefordshire Minerals and Waste Local Plan policies

1.116 This section describes the SA findings of the Visions and the 12 strategic objectives with 17 policies proposed in the Herefordshire Minerals and Waste Local Plan (contained in chapters 4 – 7 inclusive).

1.117 The MWLP also contains Core Strategy Policies that are directly relevant to minerals and waste development (sustainable development policy – SS1; movement and transportation policies – SS4 and MT1; environmental quality and local distinctiveness policies – SS6, LD1, LD2, LD3 and LD4; climate change policy – SS7; open space policies OS1 and OS3; sustainable design and energy efficiency policy – SD1; renewable and low carbon energy generation policy – SD2; and, sustainable water management and water resources policy – SD3). These policies have previously been subject to SA in 2015 and were found ‘sound’ at the Examination. Therefore, the Core Strategy policies are not reassessed in the SA Report.

1.118 The SA matrices prepared for the policies are presented in Appendix J of the full SA report. Where policies have a spatial element i.e. they refer to specific mineral or waste sites, these have been appraised with reference to GIS data and the findings of the relevant site appraisals in Appendices H and I, where appropriate (relates to policies M3, M4, M5, W5 and W6).

1.119 Table 1.9 presents an overview of the SA scores of the Publication Draft MWLP policies. The policies are generally expected to have positive effects with significant positive effects identified for all SA objectives (except for SA objectives 1: Employment and 4: Poverty & Equality which will mostly experience minor positive effects). Significant negative effects are likely for SA

Chapter 1 Non-Technical Summary

objective 5: Sustainable Transport and 10: Climate Change for policies M3, M4 and M5.

1.120 Chapter 5 of the full SA Report describes the findings of the likely effects of the Publication Draft MWLP policies in more detail.

Table 1.9: Summary of the SA scores for the Publication Draft Herefordshire Minerals and Waste Local Plan policies

SA Objective	Vision	SO 1	SO 2	SO 3	SO 4	SO 5	SO 6	SO 7	SO 8	SO 9	SO 10	SO 11	SO 12	SP1	SP2	SP3	SP4	M1	M2	M3	M4	M5	M6	W1	W2	W3	W4	W5	W6	W7	
1: Employment	+	0	+	+	+	+	+	+	0	+	0	0	0	+	0	0	0	+	+	+	+	+	+	+	+	0	+	+	+	+	
2: Sustainable Economy	+	0	+	+	+	++	++	++?	+	+	0	0	0	+	0	0	0	+	+	++	++	++	+	+	+	0	+	+	+	+	
3: Health	+	++	+	+?/-?	+	+/-?	+?/-?	+?/-?	+?	+?/-?	+	+	+	+	++	+	+?	+/-?	-?	+?/-?	+?/-?	+?/-?	+?	+?	+?/-?	+	+	-?	-?	+	
4: Poverty & Equality	+	0	+	+	+	+	+	+	0	+	0	0	0	+	0	0	0	+	+	+	+	+	+	+	+	0	+	+	+	+	
5: Sustainable Transport	+/-	+?	+	+/-	+	+/-?	+/-?	+/-?	++	+?/-?	0	+?	0	+	+	++	+?	+/-?	-?	--?/+?	--?/+?	--?/+?	+?	+	+?/-?	+	0	+/-?	+/-?	+	
6: Historic Environment	+	+	+	+/-?	+	+/-?	+?/-?	+	+	+/-?	+	+	++	+	+	+	+	+/-?	-?	+?/-?	+?/-?	+?/-?	+?/-?	+?	+?	0	0	-?	-?	+	
7: Built Environment	+	+	+	+/-?	+	+/-?	+?/-?	+	+	+/-?	+	+	++	+	+	+	+	+/?	-?	+?/-?	+?/-?	+?/-?	+?/-?	+?	+?	0	0	-?	-?	+	
8: Waste Hierarchy	++	0	+	0	++	++	0	++	0	+	0	+	0	++	0	0	0	+/-	0	+?/-	+?/-	+?/-	+	++	++	+	+	++?	++?	++?	
9: Minerals Resources	++	0	++	++	++	+/-	+	+	0	-	0	+	0	++	0	+	+	++/-	++?	++	++	++	++	++	++	++	0	+	-?	-?	+
10: Climate Change	+	+?	+	+/-	+	+/-?	+/-?	+/-?	+	+?/-?	0	++	0	++	0	+	0	+/-?	-?	--?/+?	--?/+?	--?/+?	+?/-?	+	+?/-?	+	+	+?/-?	+?/-?	+	
11: Restoration	+	+	0	0	0	+?	+?	0	0	0	+?	+?	+?	0	++	+	++	0	0	++?	++?	++?	++	+?	+?	0	0	0?	++?	+	
12: Biodiversity & Geodiversity	+	+	+	+	+	+?/-?	+?/-?	+?/-?	+?	+/-?	+	+	++	+	+	+	+	+/-?	-?	+?/-?	+?/-?	+?/-?	+?/-?	+?	+?	+	+	-?	-?	+	

SA Objective	Vision	SO 1	SO 2	SO 3	SO 4	SO 5	SO 6	SO 7	SO 8	SO 9	SO 10	SO 11	SO 12	SP1	SP2	SP3	SP4	M1	M2	M3	M4	M5	M6	W1	W2	W3	W4	W5	W6	W7
13: Landscape	+	+	+	+/- ?	+	+/- ?	+?/ -?	+?/ -?	+?	+/- ?	+	+	++	+	++	+	+	+/- ?	-?	+?/ -?	+?/ -?	+?/ -?	+?/ -?	+?	+?	+	0	-?	-?	+?
14: Water	+	+?	+	-?	+	+/- ?	-?	+?/ -?	0	+/- ?	+	+	++	+	0	+	+	+/- ?	-?	+?/ -?	+?/ -?	+?/ -?	+?/ -?	+	0	++	++	-?	+?/ -?	+
15: Flooding	+	+?	+	+/- ?	0	+/- ?	+?/ -?	+?/ -?	0	+/- ?	+	+	++	0	+	+	+	+/- ?	-?	+?/ -?	+?/ -?	+?/ -?	+?/ -?	+?	+?	0	0	-?	-?	+?
16: Pollution	+	+?	+	-?	+	+/- ?	+/- ?	+/- ?	+	+?/ -?	0	++	0	+	+	+	0	+/- ?	-?	-?	-?	-?	+	+?	+?/ -?	+	+	-?	-?	+
17: Soil	+	+	+	+?/ -?	+	+?/ -?	+?/ -?	+?/ -?	0	+/- ?	+	+	++	+	+	+?	++ ?	+/- ?	-?	+?/ -?	+?/ -?	+?/ -?	-?	+	+	+	0	-?	-?	+?

Sustainability Appraisal findings of the Publication Draft Herefordshire Minerals and Waste Local Plan

1.121 This section outlines the potential total sustainability effects of the Publication Draft Herefordshire Minerals and Waste Local Plan (2020). By looking at Table 1.10, Table 1.11, and Table 1.12 which summarises all of the sustainability effects for the MWLP Vision; 12 strategic objectives; four strategic policies/general principles; six mineral-related policies; seven waste-related policies; 22 mineral and waste site allocations; four Areas of Search; and, nine Strategic Employment Areas, a judgement can be made regarding the potential effects of the Publication Draft MWLP on each SA objective. As previously stated, desk-based site assessments were appraised as ‘policy-off’, i.e. each site has been appraised firstly on its own merits without consideration to the potential mitigation and enhancement measures that might be available through policies in the Plan. Therefore, significant effects may have been identified during the site assessments but the policies of the Publication Draft MWLP may provide mitigation to avoid, reduce or offset these adverse effects. Where a size extension of an active site is proposed (sites M13, M16 and M20), the effects on the SA objectives are uncertain as they will depend on which part of the site will be extended. Effects are uncertain for the four Areas of Search as they will depend on the specific type and scale of the mineral development and where it comes forward within the Area of Search, which will not be known until the planning application stage. Active and operational mineral and waste sites are allocated in the Publication Draft MWLP and, for consistency, were subject to SA, however, the effects identified may have already been addressed through conditions relating to the planning permissions. Detailed assessments of these sites through examination of existing planning conditions was not undertaken and therefore the effects relating to these sites are also uncertain (with the exception of SA objectives 1, 2 and 4 which relate to maintaining employment levels and investment in the minerals and waste industries). Similarly, where a time extension of an active site is proposed (sites M12, M17 and M18), the

effects are also uncertain as these may have been addressed through conditions relating to the existing planning permission.

SA Objective 1 – Support, maintain or enhance the provision of employment opportunities in the minerals and waste sectors

1.122 Positive effects are identified for all mineral and waste sites in relation to SA objective 1: Employment as their allocation could have a direct effect on maintaining or increasing employment levels during site preparation, operation and restoration of mineral or waste sites. Minor positive effects are identified for 31 out of 35 site options as the majority of site proposals are unlikely to create a significant amount of new employment opportunities through their operation individually or cumulatively in the local area. Uncertain significant positive effects are expected for Strategic Employment Areas that are greater than 20ha in size (sites W58, W59, W63 and W66) as they are appropriate locations for larger scale/strategic waste management facilities which could generate numerous employment opportunities in Herefordshire.

1.123 The Vision, 12 strategic objectives, and 17 mineral and waste policies will also have minor positive effects for this SA objective as they support the generation of employment opportunities in the mineral and waste industries in Herefordshire. No significant positive effects are identified for any of the policies with regard to this SA objective.

1.124 No negative effects (minor or significant) were identified during the appraisal of sites and policies.

1.125 Overall, the Publication Draft Herefordshire Minerals and Waste Local Plan is therefore considered to have a minor positive effect on supporting, maintaining or enhancing the provision of employment opportunities in the minerals and waste sectors.

SA Objective 2 – Maintain or enhance conditions that enable a sustainable economy and continued investment

1.126 Minor positive effects are also expected for SA objective 2: Employment for 31 sites as the development of waste treatment facilities will maintain/enhance conditions that enable a circular economy and long-term investment in the waste sector while the allocation of mineral sites for extraction will ensure a steady and adequate supply of minerals to meet the needs of society and will encourage long-term investment in Herefordshire's minerals sector. As for SA objective 1, uncertain significant positive effects are identified for sites W58, W59, W63 and W66 as these sites, due to their size (>20ha), may significantly enhance investment in the waste industry if large scale/strategic waste management facilities were developed at these locations.

1.127 The majority of policies are expected to have minor positive effects on supporting a sustainable economy and continued investment in the minerals and waste industries. However, strategic objectives 5 (Economy), 6 (Supply of Minerals) and 7 (Waste Management) will have significant positive effects as they seek to ensure there is a steady supply of minerals and the adequate provision of waste management infrastructure which will encourage investment in the minerals and waste industries. Further significant positive effects are expected for policies M3: The Winning and Working of Sand and Gravel, M4: The Winning and Working of Crushed Rock (Limestone) and M5: The Winning and Working of Sandstone as these policies seek to ensure a supply of various minerals throughout the plan period which will significantly support economic growth in the minerals sector.

1.128 No negative effects (minor or significant) were identified during the appraisal of sites and policies.

1.129 Overall, the Publication Draft Herefordshire Minerals and Waste Local Plan is therefore considered to have a minor positive effect on maintaining or

enhancing conditions that enable a sustainable economy and continued investment.

SA Objective 3 – Protect and improve the health of the people of Herefordshire, and reduce disparities in health geographically and demographically

1.130 Of the 14 proposed minerals sites in the Publication Draft MWLP, four sites (M05, M07a, M07b and M10b) are expected to have uncertain significant negative effects in relation to SA objective 3: Health as they are within 100m of one or more sensitive receptors. Most often, these receptors are nearby residential areas in settlements. Uncertain significant negative effects are also identified for the four Areas of Search as they contain numerous sensitive receptors. Site W07 is expected to have an uncertain significant negative effect in relation to this SA objective as it is within 100m of the settlement of Leominster and a waste water treatment works facility which could have a cumulative adverse effect on the amenity of the community. The effect is uncertain as this has potentially been addressed through conditions relating to the existing planning permission for the site. Site W45 is expected to have a mixed effect (uncertain minor positive/uncertain minor negative) as it is within 100m of residential areas in the settlements of Wellington and Moreton on Lugg where the disposal of inert waste during the restoration of the site may have adverse effects on the amenity of the nearby communities, however, this effect is judged to be minor rather than significant and likely to be experienced in the short-term. No significant positive effects were identified during the appraisal of the sites. The majority of the remaining sites including the Strategic Employment Areas are expected to have negligible effects.

1.131 Strategic objective 1 (Health) will have a significant positive effect on this SA objective as it directly supports minerals and waste development that make an appropriate contribution to improving health, well-being and quality of life of

residents. Significant positive effects are also identified for policy SP2: Access to Open Space and Recreation from Minerals and Waste Development as it supports minerals and waste developments that optimise opportunities to improve public access to open spaces integrating green infrastructure as appropriate, which will benefit the health and amenity of local communities.

1.132 The majority of policies are expected to have minor positive effects as they support the long-term conservation and efficient use of minerals which may reduce adverse impacts on health and amenity incurred from the development of new mineral sites; the management of waste in accordance with the waste hierarchy and the use of alternatives to road transport which will reduce negative effects such as air and noise pollution; the delivery of green infrastructure as part of developments; and, the protection, conservation and enhancement of the county's natural, built, heritage and cultural assets which may improve health, wellbeing and quality of life. However, minor negative effects are expected in relation to five strategic objectives, five minerals policies and three waste policies (generally as part of mixed effects). These policies generally support mineral and waste developments which could have adverse effects on the amenity of local residents and communities depending on their proximity to extraction and waste sites, due to impacts such as greenhouse gas emissions, noise, vibration and light pollution during site preparation, operation and restoration. No significant negative effects were identified during the appraisal of policies.

1.133 Overall, the Publication Draft Herefordshire Minerals and Waste Local Plan is therefore considered to have a mixed effect (minor positive/minor negative) on protecting and improving the health of the people of Herefordshire, reducing disparities in health geographically and demographically.

SA Objective 4 – Reduce poverty and social inclusion by closing the gap between the most deprived areas in the county and the rest of the county

1.134 Encouraging investment in the minerals and waste industries has the potential to have a secondary impact on rates of deprivation through economic growth and job creation. All site allocations and the majority of policies are expected to have minor positive effects in relation to SA objective 4: Poverty and Equality. Site W63 is expected to have an uncertain significant positive effect as it would provide employment opportunities at larger scale/strategic waste management facilities thereby reducing employment deprivation. Furthermore, it would provide employment opportunities in one of the most deprived areas of Herefordshire. No significant positive effects were identified for any of the policies with regard to this SA objective. No significant negative effects were identified during the appraisal of sites and policies.

1.135 Overall, the Publication Draft Herefordshire Minerals and Waste Local Plan is therefore considered to have a minor positive effect on reducing poverty and social inclusion by closing the gap between the most deprived areas in the county and the rest of the county.

SA Objective 5 – Reduce road traffic, congestion and pollution, and promote sustainable modes of transport and efficient movement patterns in the county

1.136 Of the 14 proposed minerals sites in the Publication Draft MWLP, six sites are expected to have significant negative effects in respect to SA objective

5: Sustainable Transport (M07a, M07b, M12, M13, M17 and M18) while eight sites are expected to have significant negative effects as part of overall mixed effects. The significant effects are identified because these sites are either large (over 20ha) and are expected to generate high volumes of heavy goods vehicle traffic; are not within 250m of a main road thereby encouraging the use of local roads which may result in vehicles travelling slowly increasing the potential for traffic and pollutant deposition along those routes; or, are not within 800m of any sustainable transport links which will encourage private car use among employees. The minor positive effects identified for eight sites recognises the proximity to one or two sustainable transport links which will encourage employees of the mineral sites to use sustainable transport; or the site may use the Moreton-on-Lugg railhead to transport minerals using a more sustainable mode of transport than road-based travel (applicable to site M05 only). It is recognised that within all Areas of Search, there are areas which could be within 800m of numerous sustainable transport links thereby enabling sustainable travel by employees of minerals sites, leading to minor positive effects, however, there are also areas which could be more than 250m from a main road or more than 800m from a sustainable transport link, resulting in significant negative effects as well, which gives overall mixed effects (uncertain minor positive/uncertain significant negative) for the Areas of Search. Mixed effects (minor positive/minor negative) are identified for all waste site options because they are within close proximity to one or two sustainable transport links resulting in minor positive effects however, given the nature and size of the sites, minor negative effects are also identified due to the likelihood of local traffic generation. Uncertain minor positive effects are identified for all of the Strategic Employment Areas (sites W58-W66) as these may provide opportunities for symbiotic relationships between waste management, engineering, manufacturing and research industries which will help to reduce transport distances of waste.

1.137 A significant positive effect is identified for strategic objective 8 (Sustainable Transport) for this SA objective as it seeks to reduce the need to travel and lessen the harmful impacts from traffic growth, promote the use of alternatives to road transport and ensure that new development is served by sustainable transport networks. A significant positive effect is expected for policy SP3: Transport within Sites as it encourages the use of electric vehicles

to transport minerals or waste within sites and requires development proposals to design internal transport routes to provide cycle links or footpaths upon reclamation of the site (and earlier where practicable). Minor positive effects are expected for 11 policies and for 13 policies as part of mixed effects as they:

- Support the development of waste management facilities for reuse, recycling, recovery and the overall transition to a more circular economy, which has benefits for reducing traffic associated with new raw material extraction;
- Encourage symbiotic relationships between waste management, engineering, manufacturing and research industries which will help to reduce the transport distances of waste;
- Promote the long-term conservation of primary minerals, and the efficient use of minerals in new development including using recycled and secondary aggregates which will reduce road haulage activities if the recovered materials are sourced locally, thereby reducing road congestion in the county; and,
- Support safeguarding of transport infrastructure such as railheads which can facilitate the sustainable transport of minerals.

1.138 Significant negative effects (as part of mixed effects) are identified for policies M3: The Winning and Working of Sand and Gravel, M4: The Winning and Working of Crushed Rock, and M5: The Winning and Working of Sandstone while minor negative effects are identified (mostly as part of mixed effects) for ten policies. The negative effects generally relate to the likelihood that minerals and waste will be predominately transported by heavy goods vehicles to and from new sites which will result in increases in traffic generation and transport-related emissions.

1.139 Overall, the Publication Draft Herefordshire Minerals and Waste Local Plan is therefore considered to have a mixed effect (significant negative / minor positive) on reducing road traffic, congestion and pollution, and promoting sustainable modes of transport and efficient movement patterns in the county as significant negative effects are identified for six mineral sites; mixed effects (significant negative/minor positive) are identified for eight mineral sites, four

Areas of Search and three policies; mixed effects (minor positive/minor negative) are identified for all waste sites and 10 policies, with positive effects likely for the remaining policies.

SA Objective 6 – Value, protect and enhance the county’s historic environment and cultural heritage

1.140 Uncertain significant negative effects are identified for the Areas of Search in relation to SA objective 6: Historic Environment as these areas contain designated heritage assets that could be adversely affected by mineral extraction if development were to take place at sites either containing or adjacent to these assets or at sites that contribute to the setting of heritage assets. Uncertain minor negative effects are identified for all the mineral sites as adverse effects on buried archaeology in sandstone or sand and gravel deposits may be possible but are unknown in the absence of detailed site assessment work to draw from. No significant positive effects were identified during the appraisal of sites. Negligible effects are identified for all waste sites and Strategic Employment Areas, except for W45 which will have an uncertain minor positive effect as the restoration of the former quarry through the disposal of inert waste, may restore the local environment which contributes to the setting of nearby heritage assets, although this effect is uncertain.

1.141 Mostly minor positive or mixed effects (minor positive/minor negative) are identified for the policies, with the exception of strategic objective 12 (Environment) which will have a significant positive effect as it supports the protection, conservation and enhancement of historic assets. No significant negative effects were identified during the appraisal of policies.

1.142 Overall, the Publication Draft Herefordshire Minerals and Waste Local Plan is therefore considered to have a mixed effect (minor positive/minor negative) on valuing, protecting and enhancing the county’s historic environment and cultural heritage.

SA Objective 7 – Value, protect and enhance the character and built quality of settlements and neighbourhoods

1.143 Uncertain significant negative effects are expected with regard to SA objective 7: Built Environment for two mineral sites (M05 and M07a) and four waste sites (W05, W07, W10 and W19) as they are within close proximity (100m) of a settlement, and, as such, may have an adverse effect on the character of the area. Uncertain significant negative effects have also been identified in relation to all Areas of Search (A, B, C, and D), as each of these contains multiple settlements. It is uncertain where mineral extraction proposals will come forward, however, should they be within 100m of settlements, there is the potential for adverse effects on the character of the area. An uncertain minor positive effect is expected for site W45, as the restoration of the former quarry through the disposal of inert waste, could positively contribute to the character of nearby settlements Wellington and Moreton on Lugg. Negligible effects have been identified in relation to the 18 remaining sites and the nine Strategic Employment Areas. No significant positive effects were identified during the appraisal of sites.

1.144 Strategic objective 12 (Environment) is expected to have a significant positive effect on this SA objective as it seeks to conserve and promote the built environment by safeguarding the county's current stock of valued heritage and significant environmental assets from loss and damage, reversing negative trends, ensuring best condition and site betterment, as well as appropriately managing future assets. Minor positive or mixed effects (minor positive/minor negative) are identified for the majority of the policies. The positive effects primarily relate to promoting a circular economy which will reduce the need for extraction of raw minerals from sites within the county, which otherwise may adversely affect the character of settlements and neighbourhoods; the restoration of sites to open space and the incorporation of green infrastructure at developments which will contribute to the character of settlements; and, the use of building stone extracted from mineral sites in the county which will conserve and restore the built environment, thereby helping to maintain heritage

assets (e.g. Listed Buildings) and a distinctive sense of place. Uncertain minor negative effects are identified in relation to policy M2: Safeguarding of Mineral Resources and Associated Infrastructure from Sterilisation or Significant Adverse Effects as part of mixed effects, as safeguarding mineral resources may lead to more mineral extraction activities that could have an adverse impact on the character of settlements. Similarly, there may be potential adverse impacts, notably in relation to policies W5 and W6, on the character of settlements from the development of new waste management facilities at industrial or Strategic Employment Areas or at allocated sites.

1.145 Overall, the Publication Draft Herefordshire Minerals and Waste Local Plan is therefore considered to have a mixed effect (minor positive/minor negative) on valuing, protecting and enhancing the character and built quality of settlements and neighbourhoods.

SA Objective 8 – Move treatment of waste up the waste hierarchy

1.146 Uncertain significant positive effects are identified for waste site options W05, W07 and W10 in relation to SA objective 8: Waste Hierarchy as they are operational household waste recycling centres which process waste that would otherwise be landfilled. Site W13 is operational and recovers construction, demolition and excavation waste which, if expanded, would have a significant positive effect on the recovery of waste. An uncertain significant positive effect is expected for W19 as the site may provide energy recovery facilities, either biological (such as anaerobic digestion) or combustion with energy recovery (such as incineration or gasification) which would drive waste up the waste hierarchy.

1.147 Uncertain mixed effects (minor positive/minor negative) have been identified for all mineral site options and waste sites W43, W44 and W45 as these are either identified in the Publication Draft MWLP as appropriate locations for the disposal of inert waste following extraction or have the potential

to dispose of inert or landfill waste, depending on the type of restoration proposed, which is judged to have negative effects in terms of moving the treatment of waste up the waste hierarchy. The minor positive effects relate to mineral sites having the potential to accommodate CD&E waste recovery facilities as the same processing equipment may be shared. . Uncertain minor positive effects may be experienced for Strategic Employment Areas (sites W58-W66) as there may be opportunities for symbiotic relationships between waste management, engineering, manufacturing and research industries which would encourage reuse and recycling of waste and contribute to the circular economy.

1.148 Significant positive effects are identified for the Vision, strategic objectives 4 (Waste Hierarchy), 5 (Economy) and 7 (Waste Management) as they directly address this SA objective by promoting the management of waste in accordance with the circular economy and the adequate provision of waste management infrastructure in Herefordshire.

1.149 A significant positive effect is identified for policy SP1: Resource Management as it promotes a circular economy which improves resource efficiency and the reuse of waste. Significant positive effects are expected for policies W1: Waste Strategy, W2: Solid Waste Management Requirements, and W7: Waste Management Operations as these policies promote a circular economy, diverting waste from landfill, the recovery of materials from construction and demolition waste and the development of waste management facilities for reuse, recycling, recovery and also site reclamation. Significant positive effects are also identified for policies W5: Preferred Locations for Solid Waste Treatment Facilities and W6: Preferred Locations for Construction, Demolition and Excavation Waste Management Facilities as they support the operation and development of waste facilities that could promote improved waste management processes and move waste management up the waste hierarchy. Policy M3: The Winning and Working of Sand and Gravel, M4: The Winning and Working of Crushed Rock (Limestone) and M5: The Winning and Working of Sandstone are expected to have uncertain mixed effects (minor positive/minor negative) as these either identify appropriate locations for the disposal of inert waste following extraction or have the potential to dispose of inert or landfill waste, depending on the type of restoration proposed, which is

judged to have negative effects in terms of moving the treatment of waste up the waste hierarchy. The minor positive effects relate to mineral sites having the potential to accommodate CD&E waste recovery facilities. The remaining policies are generally expected to have minor positive effects on this SA objective. No significant negative effects were identified during the appraisal of policies or sites.

1.150 Overall, the Publication Draft Herefordshire Minerals and Waste Local Plan is therefore considered to have a mixed effect (significant positive/minor negative) on moving treatment of waste up the waste hierarchy.

SA Objective 9 – Promote sustainable use of mineral resources

1.151 Minor positive effects are expected for all mineral site options and Areas of Search assessed with regard to SA objective 9: Mineral Resources as the allocation of sites would provide a degree of protection to mineral resources from inappropriate non-mineral development, and would contribute to the supply of aggregates to meet the needs of society. Minor positive effects are also identified for sites W13, W43, W44 and W45 as these sites are either former quarries (W13) or involve inert waste disposal to restore quarries (W43, W44 and W45) which means that mineral resources at these sites would already have been extracted and could not be sterilised. Negligible effects are identified for sites W05, W07, W10 and W19 and for the Strategic Employment Areas.

1.152 The most significant positive effects are identified during the policy appraisals for this SA objective. Twelve significant positive effects are identified for the Vision and strategic objectives 2 (Efficient Use of Minerals), 3 (Safeguarding) and 4 (Waste Hierarchy) as they seek to safeguard mineral resources and promote resource efficiency which directly support the SA objective. A significant positive effect is identified for policy SP1: Resource Management as it promotes a circular economy which improves resource efficiency.

1.153 The majority of minerals policies are expected to have significant positive effects for this SA objective as policy M1: Mineral Strategy requires minerals to be worked sustainably; policies M2: Safeguarding of Minerals Resources and Associated Infrastructure from Sterilisation or Significant Adverse Effect, M3: The Winning and Working of Sand and Gravel, M4: The Winning and Working of Crushed Rock and M5: The Winning and Working of Sandstone provide protection to mineral resources from inappropriate non-mineral development; and policy M6: Borrow Pits promotes the efficient use of mineral resources by supporting the infill of borrow pits with unusable materials from civil engineering construction projects. These effects are uncertain for policy M2: Safeguarding of Minerals Resources and Associated Infrastructure from Sterilisation or Significant Adverse Effect as the policy states that minerals located on land which is needed for strategic development may be lost where the need for non-minerals development is greater than the need for the mineral resource. Additionally, the positive effect identified for policy M1: Mineral Strategy is also mixed with a minor negative effect as the policy promotes the working of new mineral sites. Additionally, significant positive effects are expected for policies W1: Waste Strategy and W2: Solid Waste Management Requirements as these policies promote the increased reuse of mineral resources, creating a market for recycled and secondary aggregate use.

1.154 The majority of remaining policies are expected to have either minor negative or negligible effects on this SA objective.

1.155 Overall, the Publication Draft Herefordshire Minerals and Waste Local Plan is therefore considered to have a significant positive effect on promoting the sustainable use of mineral resources.

SA Objective 10 – Reduce Herefordshire’s vulnerability to the impacts of climate change as well as its contribution to the problem

1.156 Of the 14 proposed minerals sites in the Publication Draft MWLP, six sites are expected to have significant negative effects in respect to SA objective 10: Climate Change (M07a, M07b, M12, M13, M17 and M18) while eight sites are expected to have significant negative effects as part of overall mixed effects. These sites are either large (over 20ha) and are expected to generate high volumes of heavy goods vehicle traffic resulting in the production of high levels of CO₂ or other greenhouse gas emissions; are not within 250m of a main road thereby encouraging the use of local roads which may result in vehicles travelling slowly increasing the potential for traffic and pollutant deposition along those routes; or, are not within 800m of any sustainable transport links which will encourage private car use among employees and increased transport emissions. The minor positive effects identified for eight sites recognises the proximity to one or two sustainable transport links which will encourage employees of the mineral sites to use sustainable transport thereby reducing transport emissions; or the site may use the Moreton-on-Lugg railhead to transport minerals using a more sustainable mode of transport than road-based travel (applicable to site M05 only). It is recognised that within all Areas of Search, there are areas which could be within 800m of numerous sustainable transport links thereby enabling sustainable travel by employees of minerals sites, leading to minor positive effects, however, there are also areas which could be more than 250m from a main road or more than 800m from a sustainable transport link, resulting in significant negative effects (overall mixed effects [uncertain minor positive/uncertain significant negative]). Mixed effects (minor positive/minor negative) are identified for all waste site options. Uncertain minor positive effects are identified for all of the Strategic Employment Areas (sites W58-W66) as these may provide opportunities for symbiotic relationships between waste management, engineering, manufacturing and research industries which will help to reduce transport distances of waste and associated emissions.

1.157 A significant positive effect is identified for strategic objective 11 (Climate Change) for this SA objective as it seeks to address the causes and impacts of climate change relating to minerals and waste development activity thereby reducing air pollution from greenhouse gas emissions. Policy SP1: Resource Management will also have a significant positive effect as it directs minerals and waste resources to contribute positively to addressing climate change through promoting a circular economy and managing waste in accordance with the Waste Hierarchy will reduce energy use, improve resource efficiency, and reduce carbon emissions.

1.158 In addition to the significant positive effects above, minor positive effects are expected for ten policies and for 13 policies as part of mixed effects as they:

- Support the development of waste management facilities for reuse, recycling, recovery and the overall transition to a more circular economy, which will reduce energy use and greenhouse gas emissions associated with the transportation of waste;
- Encourage symbiotic relationships between waste management, engineering, manufacturing and research industries which will help to reduce the transport distances of waste;
- Promote the long-term conservation of primary minerals, and the efficient use of minerals in new development including using recycled and secondary aggregates which will reduce the frequency of the transportation of raw materials to market, thereby reducing transport emissions;
- Support safeguarding of transport infrastructure such as railheads which can facilitate the sustainable transport of minerals;
- Support open space and green infrastructure provision which could also attenuate flooding thereby providing resilience to climate change;
- Support the recovery of energy which enables the resultant heat and power to be used, thereby reducing emissions from fossil fuel electricity generation; and,

- Restrict the extraction and use of coal for energy whereby the benefits will outweigh the impacts, including greenhouse gas emissions.

1.159 Significant negative effects (as part of mixed effects) are identified for policies M3: The Winning and Working of Sand and Gravel, M4: The Winning and Working of Crushed Rock, and M5: The Winning and Working of Sandstone while minor negative effects are identified (mostly as part of mixed effects) for ten policies. The negative effects generally relate to minerals and waste being predominately transported to and from new sites by heavy goods vehicles which will result in increases in transport-related emissions or from the release of carbon due to mineral extraction activities as soils and geological formations can store carbon in fairly inert forms.

1.160 Overall, the Publication Draft Herefordshire Minerals and Waste Local Plan is therefore considered to have a mixed effect (significant negative / minor positive) on reducing Herefordshire's vulnerability to the impacts of climate change as well as its contribution to the problem.

SA Objective 11 – Promote effective restoration and appropriate after use of sites

1.161 Significant positive effects are expected for all mineral site options, and waste sites options W43, W44 and W45 with regard to SA objective 11: Restoration, as the NPPF (2019) states that mineral sites should be reclaimed at the earliest opportunity, taking account of aviation safety, and that high quality restoration and aftercare of minerals sites takes place. These effects are uncertain dependent on the type of restoration proposed and eventually developed on sites, which will not be known until the planning application stage. The positive effects identified for sites M04, W44, Area of Search B and Area of Search D are combined with an uncertain minor negative effect as these sites are located within either the Shobdon Aerodrome Safeguarding Zone or Gloucestershire Safeguarding Zone and therefore have potential for adverse impacts on aircraft safety from bird-strike. The remaining waste sites and the

Strategic Employment Areas are expected to have uncertain negligible effects on this SA objective as the restoration of waste developments other than landfill sites could be undertaken, however this is not promoted in the NPPG on Waste and would be dependent on when the waste facility ceased to operate which could be any number of years. No significant negative effects were identified during the appraisal of sites.

1.162 Significant positive effects are expected for policies SP2: Access to Open Space and Recreation from Minerals and Waste Development and SP4: Site Reclamation as they support the restoration of sites to a beneficial after-use and to a high standard which incorporate open spaces and green infrastructure. Significant positive effects are also expected for mineral policies M3: The Winning and Working of Sand and Gravel, M4: The Winning and Working of Crushed Rock and M5: The Winning and Working of Sandstone, as the sites proposed for allocation in these policies will be restored to a high environmental standard, and for policy M6: Borrow Pits as it directly supports the effective restoration and appropriate after-use of borrow pits. Significant positive effects are expected for policy W6: Preferred Locations for Construction, Demolition and Excavation Waste Management Facilities as it supports restoration through the sustainable disposal of inert wastes at three of the operational quarries in Herefordshire. The majority of remaining policies will have minor positive effects on this SA objective. No negative effects (significant or minor) were identified during the appraisal of policies.

1.163 Overall, the Publication Draft Herefordshire Minerals and Waste Local Plan is therefore considered to have a significant positive effect on promoting effective restoration and appropriate after use of sites.

SA Objective 12 – Value, maintain, restore and expand county biodiversity and geodiversity

1.164 Sites M05, M20, W05 and W13 have all been identified as having uncertain significant negative effects with regard to SA objective 12: Biodiversity

& Geodiversity as they are located within 250m of either the River Wye SAC and/or the River Lugg SSSI. The SA assessment also identifies uncertain significant negative effects for site M13 as it is within 250m of the Black Mountains SSSI. An uncertain significant negative effect (as part of a mixed effect) is also identified for site W45 at Wellington Quarry as it is adjacent to the River Wye SAC and the River Lugg SSSI. Mixed effects (uncertain minor positive/uncertain significant negative) are identified for sites M10a and M10b as they either contain (as is the case for M10a) or are adjacent (as is the case for M10b) to the Perton Roadside Section Quarry SSSI. The negative effects are identified as these sites have the potential to affect biodiversity and geodiversity through habitat/geology damage/loss, fragmentation, and disturbance to species from noise, light, vibration and human presence. The uncertain minor positive effects are expected as extraction at M10a and M10b may expose more geological features at the SSSI making them visible and available for learning opportunities. The uncertain positive effects for sites W43, W44 and W45 (as part of a mixed effect) are identified as the sites are proposed for inert waste disposal following extraction which offers the potential to delivery biodiversity gains in the long term as restoration often involves the creation of species rich wetland or grassland habitats. Due to the extent of the Areas of Search, they all contain internationally, nationally or locally designated conservation sites and are therefore expected to have uncertain significant negative effects on this SA objective. The remaining sites are generally either expected to have uncertain minor negative or negligible effects on this SA objective.

1.165 The Screening Assessment in the HRA Report (LUC, 2020) also identifies for sites M05, M12, W45 and Area of Search C potential for significant effects on the River Wye SAC and potential for significant effects on the Wye Valley and Forest Dean Bat Sites SAC (for site M12 only) as a result of physical loss or damage to habitat/non-physical disturbance/non-toxic contamination (LSEs on water quality are addressed in SA objective 14: Water). The HRA concludes that adverse effects on the integrity of the River Wye SAC and Wye Valley and Forest of Dean Bat Sites SAC will be avoided, due to avoidance and mitigation measures already included within the Core Strategy and MWLP, and providing that the recommended mitigation measures outlined in the HRA Report are incorporated into the Publication Draft MWLP. The recommended

mitigation measures include requiring site-specific HRA for sites M05/W45 including detailed protected species surveys for otter; project-level/site-specific HRA and targeted ecological surveys for proposals within Area of Search C; and, Ecological Mitigation Plans and dust assessments for minerals and waste developments. The 2018 HRA Screening Report recommendation in relation to site M12 has been incorporated in the Key Development Criteria in Appendix A of the MWLP for this site and therefore the HRA Report (LUC, 2020) concludes that adverse effects on the integrity of the Wye Valley and Forest of Dean Bat Sites SAC, as a result of damage and loss of off-site habitat, will be avoided.

1.166 The only significant positive effect identified in the policy appraisal is for strategic objective 12 (Environment) as it seeks to conserve and promote the natural environment by safeguarding the county's current stock of significant environmental assets from loss and damage, reversing negative trends, as well as appropriately managing future assets. Minor positive effects are expected for the majority of policies as they support site restoration, beneficial after uses, the incorporation of green infrastructure, and the avoidance of adverse environmental impacts. However, some minor negative effects are also identified as the extraction of minerals and the development of waste facilities could have adverse impacts through habitat/geology damage/loss, fragmentation, and disturbance to species.

1.167 The HRA Report (LUC, 2020) identified a lack of certainty as to whether the following policies would result in LSEs on European sites (LSEs on water quality are addressed in SA objective 14: Water):

- Policy M3: The winning and working of sand and gravel (River Wye SAC – physical damage and loss of habitat, non-physical disturbance, and non-toxic contamination); and,
- Policy W6: Preferred locations for construction, demolition and excavation waste management facilities (River Wye SAC – physical loss of or damage to habitat, non-physical disturbance, non-toxic contamination).

1.168 The HRA concludes that adverse effects on the integrity of the River Wye SAC will be avoided, due to avoidance and mitigation measures already

included within the Core Strategy and MWLP, and providing that the recommended mitigation measures outlined in the HRA Report are incorporated into the Publication Draft MWLP (outlined above).

1.169 Overall, the Publication Draft Herefordshire Minerals and Waste Local Plan is therefore considered to have a mixed effect (minor negative/minor positive) on valuing, maintaining, restoring and expanding county biodiversity and geodiversity.

SA Objective 13 – Value, protect, enhance and restore the landscape quality of Herefordshire, including its rural areas and open spaces

1.170 Uncertain significant negative effects are identified for Areas of Search C and D in relation to SA objective 13: Landscape as they either contain part of the Wye Valley AONB, areas of open space, or areas identified as being of high sensitivity according to The Urban Fringe Sensitivity Analysis. The acceptability of any minerals extraction from these areas would need to be assessed against the minerals and other relevant policies of the MWLP. Uncertain minor negative effects are identified for Areas of Search A and B, and sites W05, W10 and W19 as these sites are located within Green Infrastructure Corridors and/or Enhancement Zones. Uncertain minor positive effects are expected for sites W43, W44 and W45 as the disposal of inert waste should restore the quality of the landscape at the former mineral sites. The remaining sites including the Strategic Employment Areas are expected to have negligible effects.

1.171 Strategic objective 12 (Environment) is expected to have a significant positive effect on this SA objective as it seeks to conserve and promote the natural environment, which is assumed to include the landscape, by safeguarding the county's current stock of environmental assets from loss and damage, reversing negative trends, ensuring best condition and site betterment, as well as appropriately managing future assets. A significant positive effect is also expected for policy SP2: Access to Open Space and Recreation from

Minerals and Waste Development as it supports the protection and enhancement of green infrastructure and open space as part of mineral and waste developments. The majority of policies are expected to have minor positive effects in relation to this SA objective as they support the restoration of former quarries thereby restoring landscape character and quality; promote the delivery of well-designed minerals and waste developments that reinforce local distinctiveness and are supported by green infrastructure, which will minimise the landscape and visual intrusion of waste and mineral facilities; and, encourage the efficient use of mineral reserves and the transitioning to a more circular economy which will reduce the rate of extraction of natural resources, and any associated impacts on the landscape. Some uncertain minor negative effects are expected and generally relate to potential impacts on landscape character and quality from mining and quarrying as these sites need to be worked where the resource lies which may be within a protected or sensitive landscape. Effects are uncertain and will depend on the location, scale, design and restoration of the mineral sites. No significant negative effects were identified during the appraisal of policies.

1.172 Overall, the Publication Draft Herefordshire Minerals and Waste Local Plan is therefore considered to have a mixed effect (minor positive/minor negative) on valuing, protecting, enhancing and restoring the landscape quality of Herefordshire, including its rural areas and open spaces.

SA Objective 14 – Value, protect and enhance the quality of watercourses and maximise the efficient use of water

1.173 Five minerals sites (M04, M05, M13, M16 and M20) and five waste sites (W05, W07, W13, W44 and W45) are expected to have uncertain significant negative effects with regard to SA objective 14: Water as they are either within 250m of rivers which have ‘bad’ or ‘fail’ ecological or chemical status, or are within 250m of a SSSI waterbody (but apply for sites M05 and M20). The effects for sites W05 and W13 are uncertain as they have potentially been considered

and addressed through existing planning conditions relating to the operational sites. The HRA Report (LUC, 2020) identifies that there is potential for the Publication Draft MWLP to result in impacts to the River Wye SAC and downstream Severn Estuary SPA, Ramsar, SAC through changes in water quality. The HRA Report identifies that site M05 (and W45), located at Wellington Quarry, adjacent to the River Wye SAC, shares direct hydrological connectivity with the River Wye SAC, either through sharing boundaries or via field drains (and therefore the Severn Estuary SAC, SPA and Ramsar site downstream). However, as these allocations relate to the extraction of sand and gravel (M05) and the disposal of inert waste (W45 only) which is non-reactive both chemically and biologically, the potential for activities at these sites to result in changes in water quality, including through phosphate released from movement of soil, which would be considered significant is low. There is also potential for dredging, dewatering and excavation below the water table in relation to the sand and gravel extraction proposed through site allocation M05 and for water usage that could impact on the water table in relation to the W45 inert waste allocation. However, as stated in the HRA Report it is likely that any potential impacts to water quantity would be avoided through abstraction licencing.

1.174 The HRA Report and Level 2 SFRA also state that site allocations W05, W13, W45, W63 and W66 have the potential to discharge into the River Lugg catchment in the event of flood, however, as stated in the HRA Report, it is likely that any adverse effects could be avoided.

1.175 An uncertain significant negative effect is also identified for site M20 as it is located 300m upslope from the River Wye SAC/SSSI (and therefore the Severn Estuary SPA, SAC and Ramsar site downstream) and the western edge of the site is situated immediately adjacent to a brook at Merbach which flows directly into the River Wye SAC/SSSI while the western edge of site M12 is situated immediately adjacent to Mally Brook which discharges into the River Wye SAC approximately 3.7km downstream. As a result, surface water run-off and sediment discharge has the potential to result in LSEs. However, as stated in the HRA Report, it is likely that any adverse impacts could be avoided with relative ease through a commitment to, and implementation of, appropriate mitigation safeguards including best practice working methods.

1.176 Uncertain significant negative effects are expected for Areas of Search A, B, C and D as they either contain or are within 250m of rivers which have 'bad' or 'fail' ecological or chemical status, are within 250m of a SSSI waterbody, or intersect SPZ1. The effects for developing in the Areas of Search are also uncertain as the exact location of sites is unknown at present. Area of Search A includes the Ridgemoor Brook in the south-east, and an unnamed tributary in the north-west. Area of Search B includes the Pinsley Brook, Curl Brook and River Arrow, and Area of Search D includes Pentalow Brook. All of these watercourses have either 'moderate' or 'poor' ecological status, and all have a failing chemical status.

1.177 Within Area of Search C there is a Source Protection Zone (SPZ1) which provides protection for the head works around abstraction boreholes. Moreton Brook, also within the Area of Search, has a 'bad' ecological status, and is failing in terms of chemical status, which could be potentially affected further should it have connectivity with a future minerals site. Additionally, Wellington Brook and the River Lugg is within the Area of Search and have a poor and moderate ecological status, respectively and are both failing in terms of their chemical status. The River Lugg SSSI is within the Area of Search. There is, therefore, potential for future sites to fall within or close to these areas, leading to a significant negative effect.

1.178 An uncertain minor negative effect is identified for waste site (W19), as it is either within 250m of rivers which have 'poor' or 'moderate' ecological or chemical status, or is between 250m and 1km of a SSSI waterbody. Negligible effects are identified for the remaining ten sites and the nine Strategic Employment Areas. No significant positive effects were identified during the appraisal of sites.

1.179 A significant positive effect was identified for strategic objective 12 (Environment) as it seeks to conserve and promote the natural environment by safeguarding the county's current stock of significant environmental assets from loss and damage, reversing negative trends, ensuring best condition and site betterment, as well as appropriately managing future assets. Further significant positive effects were identified for policies W3: Agricultural Waste Management

and W4: Wastewater Management as they promote wastewater management, enabling the treatment and reuse of water, outline that works undertaken should contribute to achieving nutrient neutrality, or betterment, within the River Wye SAC, and that wherever practical, phosphorus should be recovered for beneficial uses which would improve the chemical and ecological status of the watercourses in the catchment. The majority of policies are expected to have minor positive effects in relation to this SA objective as they support waste and mineral developments that avoid adverse impacts, such as upon watercourses. Some uncertain minor negative effects are expected and generally relate to potential impacts on water quality if waste and mineral sites have hydrological connectivity with designated or vulnerable waterbodies, or within Source Protection Zones, or require water resource use that may adversely affect water supply.

1.180 The HRA Report (LUC, 2020) identified a lack of certainty as to whether the following policies would result in LSEs on water quality in the River Wye SAC:

- Policy M3: The winning and working of sand and gravel;
- Policy M5: The winning and working of building stone (sandstone);
- Policy W3: Agricultural waste management;
- Policy W4: Wastewater management;
- Policy W5: Preferred locations for solid waste treatment facilities; and,
- Policy W6: Preferred locations for construction, demolition and excavation waste management facilities.

1.181 The HRA Report concluded that policies W3, W4, W6, M3 and M5 would not give rise to adverse effects on the integrity of the River Wye SAC and the Severn Estuary SAC, SPA and Ramsar as a result of changes in water quality and quantity due to the content of these policies and the Key Development Criteria for each allocated site which includes specific reference to achieving nutrient neutrality or betterment, achieving reductions in phosphate releases and encouraging phosphate recovery for beneficial uses.

1.182 Overall, the Publication Draft Herefordshire Minerals and Waste Local Plan is therefore considered to have a mixed effect (minor negative/minor positive) on valuing, protecting and enhancing the quality of watercourses and maximise the efficient use of water.

SA Objective 15 – Reduce the risk of flooding and the resulting detriment to public well-being, the economy and the environment

1.183 Mineral site M05, eight waste sites (W13, W45, W58, W60, W61, W62, W63, W64 and W66), and Areas of Search A-C are expected to have uncertain significant negative effects in relation to SA objective 15: Flooding as they are within Flood Zones 2, 3a or 3b or are likely to increase flood risk elsewhere. Nine mineral site allocations (M03a, M03c, M04, M07a, M07b, M10a, M10b, M13, M16, M20) and seven waste sites (W05, W07, W19, W43, W44, W59 and W65) are identified as having uncertain minor negative effects as they are within Flood Zone 1 but are at risk from other sources of flooding (e.g. surface water flooding due to site topography). Negligible effects are expected for sites M12, M17, M18, W10 and Area of Search D as they are located within Flood Zone 1 and are not at risk from other sources of flooding. Uncertain minor positive effects are identified for sites W43, W44 and W45 (as part of overall mixed effects) as the restoration of sites through the disposal of inert waste will help to increase permeable land cover in the county which will contribute towards flood attenuation. No significant positive effects were identified during the appraisal of sites.

1.184 The SFRA states that all sites assessed in the SFRA pass the Sequential Test and are appropriate for proposed development as set out in the MWLP, noting that a sequential approach may still need to be applied within sites to steer development to areas at lowest flood risk (sites M12, M17, M18 and the Areas of Search were not assessed in the SFRA, although it is not explained why). Where flood risk areas have been identified and the Exception Test is required, it is likely that this can be best managed through the appropriate

location of more vulnerable development in areas at lower flood risk and, where required, there are feasible mitigation measures that can be implemented to manage these risks without increasing flood risk elsewhere. The SFRA recommends mitigation measures including site-specific FRAs; detailed hydraulic modelling of nearby watercourses; and shallow infiltration and attenuated discharge to nearby watercourses. Nevertheless, in the absence of appropriate safeguards and mitigation measures outlined in the SFRA, the potential for the development of these sites to have a negative effect on this SA objective, cannot be excluded.

1.185 The only significant positive effect is identified for strategic objective 12 (Environment) as it seeks to conserve and promote the natural environment by safeguarding the county's current stock of significant environmental assets from loss and damage, reversing negative trends, ensuring best condition and site betterment, as well as appropriately managing future assets. Minor positive effects are generally recorded as restoring former mineral sites provides opportunities for water storage which can alleviate risks elsewhere and the protection/enhancement of green infrastructure can help to reduce adverse effects associated with flooding by providing increasing permeable land cover. Some uncertain minor negative effects for three policies and as part of mixed effects for 10 policies are likely as mineral sources may naturally occur in areas of flooding, or new waste facilities at industrial or Strategic Employment Areas may be located within a Flood Zone 3 area. No significant negative effects were identified during the appraisal of policies.

1.186 Overall, the Publication Draft Herefordshire Minerals and Waste Local Plan is therefore considered to have a mixed effect (minor negative/minor positive) on reducing the risk of flooding and the resulting detriment to public well-being, the economy and the environment.

SA Objective 16 – Minimise noise, light, and air pollution

1.187 Sites M05, W05, W07 and W10 are expected to result in uncertain significant negative effects in relation to SA objective 16: Pollution as, whilst they are not within an AQMA, they are within 100m of settlements which could result in adverse effects on sensitive receptors. All four Areas of Search are considered to have potential to result in significant negative effects given that there are sensitive receptors including schools, settlements and churches within these areas. There is, therefore, potential for future sites to fall within or close to these areas, leading to a significant negative effect, however, given that the acceptability of any minerals extraction from these areas would need to be assessed against the minerals and other relevant policies of the MWLP, and also that the location of sites within the Areas of Search are unknown at present, the effects are uncertain. The remaining sites will have a negligible effect on this SA objective. No significant positive effects were identified during the appraisal of sites.

1.188 Strategic objective 11 (Climate Change) will have a significant positive effect on this SA objective as it supports mineral and waste developments that help adapt to and mitigate the impacts of climate change, including reducing transport emissions, which will reduce air pollution. Generally the policies will have minor positive effects (19 policies, six as part of mixed effects) as they seek to conserve primary minerals and promote the efficient use of mineral reserves which will reduce the rate of extraction of natural resources and any associated impacts such as dust, noise, light and air pollution, as well as reduced transport emissions; promote a circular economy and manage waste in accordance with the Waste Hierarchy which will reduce greenhouse gas emissions (for example from the transportation of waste and raw materials, which also benefits air quality) ; support the provision of open spaces integrating green infrastructure as part of mineral and waste sites, including trees and hedgerows, which will assist in improving local air quality and may act as buffers for noise pollution from the activities undertaken at sites; and, support waste management facilities for energy recovery which enable the resultant

heat and power to be utilised, thereby reducing the need for fossil fuel usage and resultant emissions. Uncertain minor negative effects are also identified (usually as part of mixed effects) for 13 policies as these support the development of new waste facilities and the extraction of minerals which may result in some level of dust, noise, odour and air pollution. No significant negative effects were identified during the appraisal of policies.

1.189 Overall, the Publication Draft Herefordshire Minerals and Waste Local Plan is therefore considered to have a mixed effect (minor positive/minor negative) on minimising noise, light, and air pollution.

SA Objective 17 – Value, protect and enhance soil quality and resources

1.190 Four mineral sites proposed in the Publication Draft MWLP are expected to have uncertain significant negative effects in relation to SA objective 17: Soil as development on mainly (>50%) high quality Best & Most Versatile Agricultural Land (Grade 1, 2 and 3a) or on large areas of greenfield (>20ha) will result in that land being lost to other uses (M03a, M03c, M04, and M05). Uncertain significant negative effects are also identified for Areas of Search A, B and C as these areas comprise Grade 2 and Grade 3 Best and Most Versatile Agricultural Land. A significant negative effect is identified for site W10 as the Grade 2 agricultural land has already been lost as the site is an operational waste site.

1.191 Uncertain minor positive effects are identified for sites W43, W44 and W45 as these sites comprise mainly Grade 2 or 3a agricultural land. These sites are proposed as appropriate locations for the disposal of inert waste as part of the restoration of former mineral sites. Section 5 of The Town and Country Planning Act 1990 (as amended) requires mineral planning authorities to ensure that restoration meets the required standard (normally to the same physical characteristics as before). Therefore, positive effects are identified as restoration may safeguard the long-term potential of Best and Most Versatile

Agricultural Land and other soil resources, however, the effects are uncertain, and dependent on the type of restoration proposed and eventually developed on the sites, which will not be known until the planning application stage. The remaining sites are either expected to have minor negative or negligible effects on this SA objective.

1.192 A significant positive effect is expected for strategic objective 12 (Environment) as it seeks to conserve and promote the natural environment by safeguarding the county's current stock of significant environmental assets from loss and damage whilst also reversing negative trends and encouraging expansion where possible. Policy SP4: Site Reclamation is also expected to have an uncertain significant positive effect as site reclamation schemes have the potential to return sites to agricultural use, thereby safeguarding the long-term potential of Best and Most Versatile Agricultural Land and conserving soil resources. No significant negative effects were identified during the appraisal of policies. The remaining policies are generally expected to have minor positive effects or mixed effects (minor positive/minor negative) on this SA objective.

1.193 As the majority of significant negative effects are in relation to mineral sites which will be mitigated through policy SP4: Site Reclamation, overall the Publication Draft Herefordshire Minerals and Waste Local Plan is therefore considered to have a mixed effect (minor positive/minor negative) on valuing, protecting and enhancing soil quality and resources.

Changes in effects since Draft MWLP

1.194 The SA of the Draft MWLP identified an uncertain minor positive effect in relation to SA objective 15: Flooding, however this has been revised to a mixed effect (uncertain significant negative/minor positive) to take into account the detailed flooding assessments undertaken in the SFRA. The mitigation measures recommended in the SFRA will be taken into account in Chapter 7 of the full SA report.

Table 1.10: Summary of SA effects for proposed mineral site allocations in the Publication Draft MWLP

SA Objective	M03a	M03c	M04	M05	M07a	M07b	M10a	M10b	M12	M13	M16	M17	M18	M20	Area of Search A	Area of Search B	Area of Search C	Area of Search D
1: Employment	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
2: Sustainable Economy	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
3: Health	0	0	0	--?	--?	--?	-?	--?	0	0	0	0	0	-?	--?	--?	--?	--?
4: Poverty & Equality	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
5: Sustainable Transport	--/+	--/+	--/+	--?/+	--?	--	--?/+	--/+	--?	--?	--?/+	--?	--?	--?/+	--?/+?	--?/+?	--?/+?	--?/+?
6: Historic Environment	-?	-?	-?	-?	-?	-?	0	0	-?	-?	-?	-?	-?	-?	--?	--?	--?	--?
7: Built Environment	0	0	0	--?	--?	0	0	0	0	0	0	0	0	0	--?	--?	--?	--?
8: Waste Hierarchy	+?/-	+?/-	+?/-	+?/-	+?/-?	+?/-?	+?/-?	+?/-?	+?/-?	+?/-?	+?/-?	+?/-?	+?/-?	+?/-?	+?/-?	+?/-?	+?/-?	+?/-?
9: Minerals Resources	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
10: Climate Change	--/+	--/+	--/+	--?/+	--?	--	--?/+	--/+	--?	--?	--?/+	--?	--?	--?/+	--?/+?	--?/+?	--?/+?	--?/+?
11: Restoration	++?	++?	++?/-?	++?	++?	++?	++?	++?	++?	++?	++?	++?	++?	++?	++?	++?/-?	++?	++?/-?
12: Biodiversity & Geodiversity	-	-?	-?	--?	-?	-?	--?/+?	--?/+?	-?	--?	-?	-?	-?	--?	--?	--?	--?	--?
13: Landscape	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-?	-?	--?	--?
14: Water	0	0	--?	--?	0	0	0	0	-?	--?	--?	0	0	--?	--?	--?	--?	--?
15: Flooding	-?	-?	-?	--?	-?	-?	-?	-?	0	0	-?	0	0	-?	--?	--?	--?	0
16: Pollution	0	0	0	--?	0	0	0	0	0	0	0	0	0	0	--?	--?	--?	--?
17: Soil	--?	--?	--?	--?	-?	-?	0	0	-?	0	0	0	0	-?	--?	--?	--?	-?

Table 1.11: Summary of SA effects for proposed waste site allocations in the Publication Draft MWLP

SA Objective	W05	W07	W10	W13	W19	W43	W44	W45	W58	W59	W60	W61	W62	W63	W64	W65	W66
1: Employment	+	+	+	+	+	+	+	+	++?	++?	+?	+?	+?	++?	+?	+?	++?
2: Sustainable Economy	+	+	+	+	+	+	+	+	++?	++?	+?	+?	+?	++?	+?	+?	++?
3: Health	-?	--?	0	0	0	0	0	--?/+?	0?	0?	0?	0?	0?	0?	0?	0?	0?
4: Poverty & Equality	+?	+?	+?	+?	+?	+?	+?	+?	+?	+?	+?	+?	+?	++?	+?	+?	+?
5: Sustainable Transport	+/-?	+/-?	+/-?	+/-?	+/-	+/-	+/-	+/-	+?	+?	+?	+?	+?	+?	+?	+?	+?
6: Historic Environment	0	0	0	0	0?	0	0	+?	0?	0?	0?	0?	0?	0?	0?	0?	0?
7: Built Environment	--?	--?	--?	0	--?	0	0	+?	0?	0?	0?	0?	0?	0?	0?	0?	0?
8: Waste Hierarchy	++?	++?	++?	++?	++?	+?/-	+?/-	+?/-	+?	+?	+?	+?	+?	+?	+?	+?	+?
9: Minerals Resources	0	0	0	+	0	+	+	+	0?	0?	0?	0?	0?	0?	0?	0?	0?
10: Climate Change	+/-?	+/-?	+/-?	+/-?	+/-	+/-	+/-	+/-	+?	+?	+?	+?	+?	+?	+?	+?	+?
11: Restoration	0?	0?	0?	0?	0?	++?	++?/-?	++?	0?	0?	0?	0?	0?	0?	0?	0?	0?
12: Biodiversity & Geodiversity	--?	0?	-?	--?	-?	+?	+?/-?	--?/+?	0?	0?	0?	0?	0?	0?	0?	0?	0?
13: Landscape	-?	0	-?	0	-?	+?	+?	+?	0?	0?	0?	0?	0?	0?	0?	0?	0?
14: Water	--?	--?	0	--?	-?	0	--?	--?	0?	0?	0?	0?	0?	0?	0?	0?	0?
15: Flooding	-?	-?	0	--?	-?	+?/-?	+?/-?	--?/+?	--?	-?	--?	--?	--?	--?	--?	-?	--?
16: Pollution	--?	--?	--?	0	0	0	0	--?	0?	0?	0?	0?	0?	0?	0?	0?	0?
17: Soil	-?	0	--?	-?	-?	+?	+?	+?	0?	0?	0?	0?	0?	0?	0?	0?	0?

Table 1.12: Summary of SA effects for the policies in the Publication Draft MWLP

SA Objective	Vision	SO 1	SO 2	SO 3	SO 4	SO 5	SO 6	SO 7	SO 8	SO 9	SO 10	SO 11	SO 12	SP1	SP2	SP3	SP4	M1	M2	M3	M4	M5	M6	W1	W2	W3	W4	W5	W6	W7	
1: Employment	+	0	+	+	+	+	+	+	0	+	0	0	0	+	0	0	0	+	+	+	+	+	+	+	+	0	+	+	+	+	
2: Sustainable Economy	+	0	+	+	+	++	++	++	+	+	0	0	0	+	0	0	0	+	+	++	++	++ ?	+	+	+	0	+	+	+	+	
3: Health	+	++	+	+?/ -?	+	+/- ?	+?/ -?	+?/ -?	+?	+?/ -?	+	+	+	+	++	+	+?	+/- ?	-?	+?/ -?	+?/ -?	+?/ -?	+?	+?	+?/ -?	+	+	-?	-?	+	
4: Poverty & Equality	+	0	+	+	+	+	+	+	0	+	0	0	0	+	0	0	0	+	+	+	+	+	+	+	+	0	+	+	+	+	
5: Sustainable Transport	+/-	+?	+	+/-	+	+/- ?	+/- ?	+/- ?	++	+?/ -?	0	+?	0	+	+	++	+?	+/- ?	-?	-- ?/+ ?	-- ?/+ ?	-- ?/+ ?	+?	+	+?/ -?	+	0	+/- ?	+/- ?	+	
6: Historic Environment	+	+	+	+/- ?	+	+/- ?	+?/ -?	+?	+?	+/- ?	+	+	++	+	+	+	+	+/- ?	-?	+?/ -?	+?/ -?	+?/ -?	+?/ -?	+?	+?	0	0	-?	-?	+	
7: Built Environment	+	+	+	+/- ?	+	+/- ?	+?/ -?	+?	+?	+/- ?	+	+	++	+	+	+	+	+/- ?	-?	+?/ -?	+?/ -?	+?/ -?	+?/ -?	+?	+?	0	0	-?	-?	+	
8: Waste Hierarchy	++	0	+	0	++	++	0	++	0	+	0	+	0	++	0	0	0	+/-	0	+?/ -	+?/ -?	+?/ -?	+	++	++	+	+	++ ?	++ ?	++ ?	
9: Minerals Resources	++	0	++	++	++	+/-	+	+	0	-	0	+	0	++	0	0	0	++/ -	++ ?	++	++	++	++	++	++	++	0	+	-?	-?	+
10: Climate Change	+	+?	+	+/-	+	+/- ?	+/- ?	+/- ?	+	+?/ -?	0	++	0	++	0	+	0	+/- ?	-?	-- ?/+ ?	-- ?/+ ?	-- ?/+ ?	+?/ -?	+	+?/ -?	+	+	+?/ -?	+?/ -?	+	
11: Restoration	+	+	0	0	0	+?	+?	0	0	0	+?	+?	+?	0	++	+	++	0	0	++ ?	++ ?	++ ?	++	+?	+?	0	0	0?	++ ?	+	
12: Biodiversity & Geodiversity	+	+	+	+	+	+?/ -?	+?/ -?	+?/ -?	+?	+/- ?	+	+	++	+	+	+	+	+/- ?	-?	+?/ -?	+?/ -?	+?/ -?	+?/ -?	+?	+?	+	+	-?	-?	+	
13: Landscape	+	+	+	+/- ?	+	+/- ?	+?/ -?	+?/ -?	+?	+/- ?	+	+	++	+	++	+	+	+/- ?	-?	+?/ -?	+?/ -?	+?/ -?	+?/ -/ -	+?	+?	+	0	-?	-?	+	

SA Objective	Vision	SO 1	SO 2	SO 3	SO 4	SO 5	SO 6	SO 7	SO 8	SO 9	SO 10	SO 11	SO 12	SP1	SP2	SP3	SP4	M1	M2	M3	M4	M5	M6	W1	W2	W3	W4	W5	W6	W7
14: Water	+	+	+	-?	+	+/- ?	-?	+?/ -?	0	+/- ?	+	+	++	+	0	+	+	+/- ?	-?	+?/ -?	+?/ -?	+?/ -?	+?/ -?	+	0	++	++	-?	+?/ -?	+
15: Flooding	+	+	+	+/- ?	0	+/- ?	+?/ -?	+?/ -?	0	+/- ?	+	+	++	0	+	+	+	+/- ?	-?	+?/ -?	+?/ -?	+?/ -?	+?/ -?	+	+	0	0	-?	-?	+
16: Pollution	+	+	+	-?	+	+/- ?	+/- ?	+/- ?	+	+?/ -?	0	++	0	+	+	+	0	+/- ?	-?	-?	-?	-?	+	+	+?/ -?	+	+	-?	-?	+
17: Soil	+	+	+	+?/ -?	+	+?/ -?	+?/ -?	+?/ -?	0	+/- ?	+	+	++	+	+	+	++ ?	+/- ?	-?	+/-	+/-	+/-	-	+	+	+	0	-?	-?	+

Duration of effects

Short-term effects of the Publication Draft MWLP

1.195 The impacts of the Publication Draft MWLP in the short-term are mostly related to the initial impacts of commencing minerals extraction and the development of waste facilities. These will include the removal of vegetation, soil, and provision of infrastructure required. Such works could have negative impacts on biodiversity, health and wellbeing, amenity of local communities (possible disruption to rights of way, traffic flows, noise generation, vibration, dust etc.), soil quality, and the landscape. However, these impacts are temporary in nature and some may be minimised through good design, adherence to the policies in the Publication Draft MWLP or reversed through restoration measures in the medium to long-term.

Medium-term effects of the Publication Draft MWLP

1.196 Medium-term positive impacts relate to the employment and economic benefits of the waste and minerals sites. Negative impacts in the medium-term include the implications of operational minerals extraction sites and waste management facilities on health and wellbeing, and the amenity of local communities (e.g. noise, dust, odour, increased traffic etc.), and on landscape quality. However, these impacts should be avoided or mitigated through good practices by the minerals and waste operators, and adherence to the policies in the Publication Draft MWLP when planning proposals are assessed and determined by Herefordshire Council.

Long-term effects of the Publication Draft MWLP

1.197 Long-term, permanent benefits that would result from the Publication Draft MWLP include the provision of sufficient mineral and waste developments to meet Herefordshire's needs, potential flood alleviation, habitat creation and biodiversity enhancement, recreation enhancement opportunities through the restoration of former mineral sites, or the incorporation and preservation of important geological features within mineral sites. Long-term, permanent negative impacts of the Publication Draft MWLP are potentially: loss of habitats, areas of Best & Most Versatile Agricultural Land; climate change implications of the energy required to operate facilities and vehicle movements to and from mineral and waste sites; and, the disturbance and/or removal of archaeological remains. However, there may also be some long-term, permanent positive impacts for biodiversity and landscape through the creation of new habitats, and enhancement of landscape through well designed and implemented restoration of former mineral sites; and long term, permanent positive impacts for the historic environment as sites may benefit our understanding of the local archaeology which is found during minerals operations, and aggregates and building stone, for example, could also make a positive contribution towards local vernacular. Further long-term positive impacts may also include reduced consumption of resources and improvements, in terms of air quality and greenhouse gases, through co-locating waste facilities and reduced volumes of landfilled waste through recovery and recycling of waste.

Secondary, cumulative and synergistic effects

1.198 Secondary (or indirect) effects are effects that are not a direct result of a policy or site allocation but occur away from the original effect or as a result of a complex pathway. Cumulative effects occur where two or more insignificant impacts combine to form a significant impact. Synergistic effects occur as the result of interactions between individual effects producing a total effect greater than the sum of each of the individual effects. Secondary, cumulative or synergistic effects may be either positive or negative.

1.199 The secondary, cumulative and synergistic effects of the policies and site allocations in the Publication Draft MWLP are summarised in the following paragraphs.

1.200 Encouraging investment in the minerals and waste industries has the potential to have a secondary impact on rates of deprivation through economic growth and job creation. Furthermore, the restoration of former mineral sites (Upper Lyde Quarry, Shobdon Quarry, Wellington Quarry, Leinthall Quarry, Perton Quarry, Callow Delve, Black Hill Delve, Llandraw Delve, Pennsylvani Delve, Sunnybank Delve and Westonhill Wood Delve) as required by NPPF (2019) would have secondary positive impacts on investment in the county and consequently employment opportunities in Herefordshire.

1.201 There is potential for long-term adverse effects on the amenity of local communities where mineral workings, which tend to be clustered as adjacent permissions to be worked sequentially, are located (e.g. Upper Lyde Quarry, Wellington Quarry, Leinthall Quarry or Perton Quarry). Furthermore, sites which are within close proximity of a sensitive receptor and another mineral or waste site could also have a cumulative adverse effect on the amenity of the community, for example, site W07 is within 100m of residential areas and a waste water treatment works facility. Indirectly there may also be positive impacts on human health, wellbeing and amenity resulting from the creation of high-quality habitats and landscapes that contribute to a high quality of life for present and future generations where after-use schemes are publicly accessible. There could be potential for cumulative negative effects on local air quality when waste management facilities are combined with other facilities within existing industrial estates or Strategic Employment Areas. There could also be potential negative cumulative effects from noise at mineral sites that are in close proximity, for example, the currently operational sites at Wellington Quarry (M05) and Upper Lyde Quarry (M03) are within 1.7km of each other. Effects may be particularly experienced at the settlement of Moreton on Lugg.

1.202 Minerals extraction and waste treatment requires the transport of minerals and materials which will commonly be road based. Where waste road transport passes through urban areas it is likely to have a cumulative adverse

effect on exacerbating congestion and air quality problems, particularly where new waste facilities may be located at Strategic Employment Areas W59, W60, W61, W62 and W63, as these are within close proximity to an AQMA. As the mineral sites are located in rural areas where traffic volumes are commonly low, the cumulative effects on the road network may be disproportionately large where sites are in close proximity due to the low capacity of rural roads. Furthermore, depending on the type of restoration proposed for sites, there may be secondary impacts from an increase in visitor numbers to an area which is likely to increase traffic volumes and transport emissions. Potential positive synergistic impacts may be experienced from the co-locating of waste facilities due to reduced waste transport distances and from the clustering of mineral sites as adjacent permissions to be worked sequentially which presents an opportunity to use the same equipment for processing of aggregate. The processes associated with the extraction of minerals and the treatment of waste may also have cumulative adverse effects on air quality and GHG emissions.

1.203 Safeguarding minerals from inappropriate development through policies M2: Safeguarding of Minerals Resources and Associated Infrastructure from Sterilisation or Significant Adverse Effect, M3: The Winning and Working of Sand and Gravel, M4: The Winning and Working of Crushed Rock and M5: The Winning and Working of Sandstone would reduce the need to import minerals from outside the county, which would have positive secondary impacts on achieving self-sufficiency as well as on congestion and greenhouse gas emissions. Although there is little or no secondary aggregate production in Herefordshire, the use of recycled aggregates will also have positive secondary benefits as it reduces demand for the extraction of primary minerals. Similarly, the allocation of new waste management infrastructure and the promotion of the reuse, recovery and recycling of waste through policies W1: Waste Strategy, W2: Solid Waste Management Requirements, W5: Preferred Locations for Solid Waste Treatment Facilities, W6: Preferred Locations for Construction, Demolition and Excavation Waste Management Facilities and W7: Waste Management Operations will also have positive secondary impacts on achieving self-reliance, reducing the need to identify sites for landfill (either within or outside of the county), and reducing greenhouse gas emissions from the transport of waste further afield for processing. Policies W1: Waste Strategy, W3: Agricultural Waste Management and W7: Waste Management Operations

support proposals for anaerobic digestion and incineration with energy recovery which results in landfill avoidance and enables the resultant heat and power to be used, thereby resulting in secondary positive effects on air quality through energy production that offsets/replaces consumption of fossil fuels but also potential secondary negative effects on air quality from the release of emissions from incineration (although it should be noted that emissions from incineration are controlled under the Waste Incineration Directive and therefore secondary negative effects are unlikely).

1.204 Positive synergistic effects may be experienced in relation to the Strategic Employment Areas as there may be opportunities for symbiotic relationships between waste management, engineering, manufacturing and research industries which will contribute to the circular economy at a materials level.

1.205 Secondary positive effects may be experienced in the built and historic environments as the Publication Draft MWLP provides a mechanism to ensure that there is a steady and adequate supply of natural stone for the conservation and restoration of buildings, including designated historic buildings, which will help to maintain heritage assets and a distinctive sense of place.

1.206 Secondary positive effects may be experienced at mineral sites as extraction may expose more geological features making them visible and available for learning opportunities. Positive secondary impacts may be experienced as the restoration of mineral sites offers the potential to deliver biodiversity gains in the long term, however, many sites are restored to wetland and grassland habitats which can attract large numbers of species that may in certain circumstances pose a hazard to aircraft. There may be negative secondary impacts from the development of mineral sites within an Aerodrome Safeguarding Zone (i.e. M04, W44, Area of Search B and Area of Search D) as there is potential for adverse impacts on aircraft safety from bird-strike. The positive and negative secondary impacts will depend on the type of restoration proposed and eventually developed on the sites. There is also potential negative cumulative impacts from quarries that are clustered at the same location as these may have adverse effects on biodiversity through habitat fragmentation or species disturbance. Conversely, there may be potential for

positive cumulative impacts resulting from habitat restoration schemes at these sites which may collectively improve habitat connectivity. Finally, although policies SP2: Access to Open Space and Recreation from Minerals and Waste Development and SP4: Site Reclamation seek to enhance and restore the landscape, they can also benefit biodiversity and the water and soil environments, even though this is not the primary purpose of these policies.

1.207 Mineral extraction is proposed at several sites in the same localities, for example at Upper Lyde Quarry, Leinthall Quarry and Perton Quarry. Phasing of sites should be considered to reduce cumulative adverse effects on the landscape, biodiversity and geodiversity, the water and soil environments, the historic environment, the road network, and the amenity of local communities. Works and restoration of existing sites should be completed prior to development starting on new sites to ensure no negative cumulative impacts are experienced.

1.208 There may be potential negative cumulative effects on flood risk and water resources through changing surface water drainage patterns and the loss of permeable surfaces to minerals extraction and waste developments, particularly where sites are located in proximity to each other. Following restoration, particularly at mineral sites clustered at the same location, there is potential for positive cumulative effects in relation to flood alleviation through the provision of additional flood storage.

1.209 The loss of agricultural land at site W10 as the site has been developed and the potential temporary loss of Best & Most Agricultural Land at seven mineral sites, in addition to sites in three Areas of Search, would cumulatively add to the loss of agricultural land in the UK. However, the loss is considered to be small in relation to the overall agricultural land lost in the UK per annum to development.

Mitigation and recommendations

1.210 It is a requirement of the SEA Regulations that consideration is given to “the measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme”.

1.211 Proposals for minerals and waste development will be assessed not just in relation to the MWLP but also against all parts of the Development Plan. 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.

1.212 The following paragraphs identify the MWLP and Local Plan – Core Strategy policies that are expected to provide mitigation for the potential significant negative effects identified for the site allocations and other MWLP policies (in Chapters 4, 5 and 6). Note that only those SA objectives for which potential significant negative effects were identified are addressed, therefore six of the SA objectives (SA objectives 1: Employment, 2: Sustainable Economy, 4: Poverty and Equality, 8: Waste Hierarchy, 9: Mineral Resources and 11: Restoration) are not included in the following paragraphs as they are unlikely to be significantly negatively affected by the policies or site allocations in the Herefordshire Minerals and Waste Local Plan.

1.213 It is also noteworthy that some SA objectives, namely 6: Historic Environment and 13: Landscape are recording precautionary significant negative effects due to the constraints identified in the broad Areas of Search. These effects are uncertain as the specific location of future minerals sites in these areas will not be known until planning applications come forward.

1.214 Furthermore, beyond the mitigation provided in the MWLP and Herefordshire Core Strategy, minerals and waste developments will be subject to The Town and County Planning (Environmental Impact Assessment)

Regulations 2017 which will identify likely significant effects (both alone and cumulatively) on the environment at a site-level. Mineral working and waste management will also require an Environmental Permit, the applications for which will include consideration of potential impacts from the operations of such developments. Water discharge activities, groundwater discharge activities and emissions of greenhouse gases, are permitted through the Environmental Permitting Regime. Dust and noise are subject to control under several statutes, including the Environment Protection Act 1990 and the Environment Act 1995.

1.215 The mitigation measures provided by policies in the Local Plan – Core Strategy and MWLP will be implemented at the planning application stage when further detail regarding the location, type and scale of waste facility and mineral extraction will be known. Mitigation may include planning conditions requiring: noise and dust impact assessments; air quality assessments; ecological assessments; hydrological/hydrogeological assessments; flood risk assessments; landscape and visual impact assessments; separation distances/buffer zones between the development and sensitive receptors; phasing of sites to minimise adverse effects on the environment and local communities; routing agreements and/or travel plans to control and alleviate the effects of traffic movements; archaeological evaluation and watching briefs; or the incorporation of green infrastructure and high quality restoration of sites.

1.216 A number of recommendations were made in the previous SA of the Draft MWLP in terms of including additional policies which were broadly based around the supporting text included in the MWLP. However, it is now recognised that the MWLP policies and supporting text, including the Key Development Criteria for allocated sites in Appendix A, together with the Core Strategy policies generally provide sufficient mitigation to prevent, reduce and offset potential significant adverse effects. Some recommendations are still outlined where relevant.

1.217 Chapter 5: Strategic Policy and General Principles of the Publication Draft MWLP describes existing Core Strategy policies that are directly relevant to minerals and waste development, as well as proposing additional policies of a strategic nature applicable to minerals and waste development. Within this

chapter the Publication Draft MWLP provides an explanation of how mineral and waste developments should seek to mitigate impacts on the natural, built and historic environments, as well as on the health and amenity of communities.

SA Objective 3 – Protect and improve the health of the people of Herefordshire, reduce disparities in health geographically and demographically

1.218 Uncertain significant negative effects are identified for four mineral site allocations (M05, M07a, M07b and M10b), four Areas of Search and two waste site allocations (W07 and W45) as these are either within 100m of sensitive receptors or, in the case of the Areas of Search, contain sensitive receptors which could be adversely affected by noise, vibration, dust or light pollution. There is also potential for cumulative adverse effects from sites that are clustered at the same location (e.g. Wellington Quarry, Leinthall Quarry or Perton Quarry) or from sites that are near a sensitive receptor and another mineral or waste site (e.g. site W07). The following policies in the Core Strategy, policies and supporting text in the MWLP, and Key Development Criteria for the allocated sites provide mitigation for these effects on SA objective 3: Health.

1.219 Policy SD1: Sustainable Design and Energy Efficiency of the Core Strategy applies to minerals and waste developments and requires planning proposals to safeguard residential amenity for existing and proposed residents; and to ensure that new development does not contribute to, or suffer from, adverse impacts arising from noise, light or air contamination, land instability or cause ground water pollution. Core Strategy policy SS6: Environmental quality and local distinctiveness requires proposals to consider their impact on local amenity, including light pollution, air quality and tranquillity.

1.220 Policy SP2: Access to Open Space and Recreation from Minerals and Waste Development in the Publication Draft MWLP supports the provision of outdoor facilities, such as Public Rights of Way, and the incorporation of green infrastructure which will contribute to the amenity and health of local communities.

1.221 For the description of Core Strategy policy SS6: Environmental quality and local distinctiveness, Chapter 5: Strategic Policy and General Principles of the Publication Draft MWLP provides an explanation of how mineral and waste developments should seek to mitigate impacts on local amenity, air quality and tranquillity. It states that all applications will be expected to incorporate robust measures to ensure that proposed developments do not cause unacceptable adverse impacts 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;
- 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.

1.222 It also states that 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.

1.223 The Key Development Criteria for the allocated sites in the Publication Draft MWLP require applications to:

- Demonstrate optimum phasing of the site, including how existing infrastructure will be used (to include at least site access and processing equipment) and reclamation at the earliest opportunity. A proliferation of ancillary infrastructure will not be permitted (sites M03a, M03c, M04, M05, M07a, M07b, M10a, M10b);
- Deliver priorities of the Herefordshire Green Infrastructure Strategy during operation and reclamation phases (all mineral sites, W13);
- Demonstrate the level of effect on residential amenity at nearby properties (M03a, M03c, M04, M18, M20, W44, W43);
- Demonstrate the level of effect on the amenity, health and safety and environment of nearby sensitive properties (schools, housing, medical facility, hotel, picnic site) (M05, W59, W60, W61, W62, W63, W64, W45);
- Footpaths crossing sites may require diversion or a non-working buffer such that the amenity value and connectivity of the footpaths are maintained (M05, W45); and,
- Demonstrate effect on air quality, particularly within the Hereford AQMA (W59, W61).

Recommendation:

The Key Development Criteria for sites M07b Leinthall Quarry and M10b Perton Quarry should be updated to 'demonstrate the level of effect on

residential amenity at nearby properties' (i.e. at Leinthall Earls, Upper Dormington, Dormington).

1.224 Through the implementation of the above policies, the supporting text in the MWLP, the Key Development Criteria for the allocated sites, and the above recommendation, there will be no residual significant negative effect in relation to SA objective 3: Health.

SA Objective 5 – Reduce road traffic, congestion and pollution, and promote sustainable modes of transport and efficient movement patterns in the county

1.225 Of the 14 minerals site allocations in the Publication Draft MWLP, six sites are expected to have significant negative effects in respect to SA objective 5: Sustainable Transport (M07a, M07b, M12, M13, M17 and M18) while the remaining eight mineral sites and the four Areas of Search are expected to have significant negative effects as part of overall mixed effects, as these sites are either large (over 20ha) and are expected to generate high volumes of heavy goods vehicle traffic; are not within 250m of a main road thereby encouraging the use of local roads which may result in vehicles travelling slowly increasing the potential for traffic and pollutant deposition along those routes. or, are not within 800m of any sustainable transport links which will encourage private car use among employees. Significant negative effects (as part of mixed effects) are also identified for policies M3: The Winning and Working of Sand and Gravel, M4: The Winning and Working of Crushed Rock and M5: The Winning and Working of Sandstone. The negative effects generally relate to minerals and waste being predominantly transported by heavy goods vehicles which will result in increases in traffic generation and transport-related emissions. There may also be cumulative adverse effects on exacerbating congestion problems where waste road transport passes through urban areas, particularly where new

waste facilities may be located at Strategic Employment Areas W59, W60, W61, W62 and W63, as these are within close proximity to an AQMA. As the mineral sites are located in rural areas where traffic volumes are commonly low, the cumulative effects may be disproportionately large where sites are in close proximity due to the low capacity of rural roads. Furthermore, depending on the type of restoration proposed for sites, there may be secondary impacts from an increase in visitor numbers to an area which is likely to increase traffic volumes. The following policies in the Core Strategy, policies and supporting text in the MWLP and Key Development Criteria for the allocated sites provide mitigation for these effects on SA objective 5: Sustainable Transport.

1.226 Policy SP3: Transport within Sites in the Publication Draft MWLP requires applications for minerals and waste development to demonstrate the arrangements for the transport of minerals, waste or other materials within the site which minimise the potential for adverse impacts, including GHG emissions and optimises the opportunities for green infrastructure. It supports the use of electric powered vehicles as an alternative to the use of conveyors and/or pipelines required to move material within sites.

1.227 Core Strategy policy SS4: Movement and Transportation requires new developments to be designed and located to minimise the impacts on the transport network; ensuring that journey times and the efficient and safe operation of the network are not detrimentally impacted. Furthermore, where practicable, development proposals should be accessible by and facilitate a genuine choice of modes of travel, including walking, cycling and public transport.

1.228 Policy MT1: Traffic Management, Highway Safety and Promoting Active Travel of the Core Strategy requires development proposals to demonstrate that the strategic and local highway network can absorb the traffic impacts of the development without adversely affecting the safe and efficient flow of traffic on the network or that traffic impacts can be managed to acceptable levels to reduce and mitigate any adverse impacts from the development. It also encourages active travel; the protection of existing local and long-distance footways, cycleways and bridleways; and well-designed, safe layouts. Where

traffic management measures are introduced, they should be designed to respect the character of the surrounding area including its landscape character.

1.229 Chapter 5: Strategic Policy and General Principles of the Publication Draft MWLP states that development proposals should consider the whole life of the site at the application stage which will enable a sustainable transport strategy to be put in place at the earliest opportunity. It supports the incorporation of green infrastructure into developments to offset carbon emissions caused by minerals and waste related traffic and the incorporation of cycle links or footpaths upon reclamation of the site. It also states that 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 where feasible. Chapter 8: Delivery, Implementation and Monitoring states that, 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.

1.230 The Key Development Criteria for the allocated sites in the Publication Draft MWLP require applications to:

- Demonstrate the level of effect on the road network and that vehicles can access and leave sites safely (M03a, M03c, M05, M12, M17, M13, M16, M20, W61, W43, W45);
- Implement a non-working buffer to ensure railway safety is maintained (M05, W45); and,
- Demonstrate the potential to use rail network for the transport of materials and that the proposal does not prevent future use of the rail infrastructure (W66).

1.231 Through the implementation of the above policies, the supporting text in the MWLP, and the Key Development Criteria for the allocated sites, there will be no residual significant negative effect in relation to SA objective 5: Sustainable Transport.

SA Objective 6 – Value, protect and enhance the county’s historic environment and cultural heritage

1.232 Uncertain significant negative effects are identified for the Areas of Search in relation to SA objective 6: Historic Environment as these areas contain designated heritage assets that could be adversely affected by mineral extraction if development were to take place at sites either containing or adjacent to these assets or at sites that contribute to the setting of heritage assets. The following policies in the Core Strategy, supporting text in the MWLP, and Key Development Criteria for the allocated sites provide mitigation for these effects on SA objective 6: Historic Environment.

1.233 Planning applications for mineral extraction in the Areas of Search will be assessed against Core Strategy policy LD4: Historic Environment and Heritage Assets which requires development proposals to protect, conserve, and where possible enhance heritage assets and their settings; to record and advance the understanding of the significance of any heritage assets to be lost; and, where appropriate to improve the understanding of and public access to the heritage asset.

1.234 For the description of Core Strategy policy LD4: Historic Environment and Heritage Assets, Chapter 5: Strategic Policy and General Principles of the Publication Draft MWLP provides an explanation of how mineral and waste developments should seek to protect and enhance the historic environment. The Publication Draft MWLP states that mineral and waste development proposals should include a clear strategy for enhancing the historic environment. 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. It also states that 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.

1.235 Policy SS6: Environmental quality and local distinctiveness of the Core Strategy also seeks to conserve and enhance historic environment and heritage assets, especially Scheduled Monuments and Listed Buildings.

1.236 The Key Development Criteria for the allocated sites in the Publication Draft MWLP require applications to:

- Demonstrate the potential for archaeological remains in sites, through desk-based assessment and/or field evaluation. Mitigation will include recording, protection or recovery of any assets (M04, M03a, M03c, M05, M10a, M10b, M13, M20, W58, W62, W63, W64, W65, W66, W13, W19, W44, W43, W45); and,
- Demonstrate the level of effect on heritage assets and their settings (M05, M07a, M07b, M20, W60, W62, W63, W65, W66, W05, W45).

Recommendation:

The Key Development Criteria relating to the historic environment should be cross-checked with the SA findings for each site and updated accordingly.

1.237 Through the implementation of the above policies, the supporting text in the MWLP, the Key Development Criteria for the allocated sites, and the above recommendation, there will be no residual significant negative effect in relation to SA objective 6: Historic Environment.

SA Objective 7 – Value, protect and enhance the character and built quality of settlements and neighbourhoods

1.238 Uncertain significant negative effects are expected with regard to SA objective 7: Built Environment for two mineral sites (M05 and M07a), four waste sites (W05, W07, W10 and W19) and all Areas of Search (A, B, C, and D) as they are within close proximity (100m) of a settlement, and, as such, may have an adverse effect on the character of an area. The following policy provides mitigation for these effects on SA objective 7: Built Environment.

1.239 Core Strategy policy SD1: Sustainable design and energy efficiency requires new developments to be designed to maintain local distinctiveness and to respect the scale, height, proportions and massing of surrounding development, whilst making a positive contribution to the character of an area.

1.240 Through the implementation of the above policy, there will be no residual significant negative effect in relation to SA objective 7: Built Environment.

SA Objective 10 – Reduce Herefordshire’s vulnerability to the impacts of climate change as well as its contribution to the problem

1.241 Of the 14 minerals site allocations in the Publication Draft MWLP, sites are expected to have significant negative effects in respect to SA objective 10: Climate Change (M07a, M07b, M12, M13, M17 and M18) while the remaining eight mineral sites and the four Areas of Search are expected to have significant negative effects as part of overall mixed effects as these sites are either large (over 20ha) and are expected to generate high volumes of heavy goods vehicle traffic resulting in the production of high levels of CO₂ or other

greenhouse gas emissions; are not within 250m of a main road thereby encouraging the use of local roads which may result in vehicles travelling slowly increasing the potential for traffic and pollutant deposition along those routes; or, are not within 800m of any sustainable transport links which will encourage private car use among employees and increased transport emissions.

Depending on the location of the development, indirect greenhouse gas emissions may also arise as a consequence of development on high carbon soils (e.g. in the Areas of Search). Significant negative effects (as part of mixed effects) are identified for policies M3: The Winning and Working of Sand and Gravel, M4: The Winning and Working of Crushed Rock and M5: The Winning and Working of Sandstone. The negative effects generally relate to minerals and waste being predominantly transported by heavy goods vehicles which will result in increases in transport-related emissions. The following policies in the Core Strategy, and policies and supporting text in the MWLP provide mitigation for these effects on SA objective 10: Climate Change.

1.242 Policy SP1: Resource Management in the Publication Draft MWLP directs minerals and waste resources to contribute positively to addressing climate change through promoting a circular economy and managing waste in accordance with the Waste Hierarchy will reduce energy use and greenhouse gas emissions associated with its transportation.

1.243 Policy SP3: Transport within Sites in the Publication Draft MWLP requires applications for minerals and waste development to demonstrate the arrangements for the transport of minerals, waste or other materials within the site which minimise the potential for adverse impacts, including GHG emissions and optimises the opportunities for green infrastructure. It supports the use of electric powered vehicles as an alternative to the use of conveyors and/or pipelines required to move material within sites.

1.244 Policy SP4: Site Reclamation in the Publication Draft MWLP requires mineral sites and greenfield sites for waste use to be reclaimed, at the earliest opportunities, to a beneficial after-use. It supports proposals that deliver landscape scale benefits and green infrastructure appropriate to its location.

Site reclamation may focus on flood storage which would alleviate risks of flooding elsewhere.

1.245 Core Strategy policy SS7: Addressing climate change requires development proposals to include measures which will mitigate their impact on climate change. At a strategic level, this will include designing developments to reduce carbon emissions and use resources more efficiently; focusing development to the most sustainable locations; promoting the use of decentralised and renewable or low carbon energy, where appropriate; and, protecting the best agricultural land, where possible. For the description of policy SS7, the Publication Draft MWLP states that 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. Buildings and plant should 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). Site reclamation also provides opportunities to address climate change by enabling the movement of wildlife and flood storage to alleviate risks elsewhere.

1.246 The Key Development Criteria for the allocated sites in the Publication Draft MWLP require applications to:

- Deliver priorities of the Herefordshire Green Infrastructure Strategy during operation and reclamation phases (all mineral sites, W13);
- Demonstrate effects on air quality, particularly within the Hereford AQMA (W59, W61);
- Demonstrate that the site will be safe in the event of a flood; risk is not increased on site or elsewhere; and where possible, flood risk is decreased. Flood alleviation should be considered in designing site reclamation (M04, W44, M05, W45, M12, M20, W59, W61, W62, W63, W64, W66, W13); and,
- Undertake a site-specific flood risk assessment to demonstrate compliance with a Local Development Order (W58).

Recommendation:

The Key Development Criteria for the allocated sites should be updated to reflect the key recommendations outlined in the Level 2 SFRA (2020).

1.247 Through the implementation of the above policies, the supporting text in the MWLP, the Key Development Criteria for the allocated sites, and the above recommendation, there will be no residual significant negative effect in relation to SA objective 10: Climate Change.

SA Objective 12 – Value, maintain, restore and expand county biodiversity and geodiversity

1.248 Sites M05, M20, W05 and W13 have all been identified as having uncertain significant negative effects with regard to SA objective 12: Biodiversity & Geodiversity as they are located within 250m of either the River Wye SAC and/or the River Lugg SSSI. The SA assessment also identifies uncertain significant negative effects for site M13 as it is within 250m of the Black Mountains SSSI. An uncertain significant negative effect (as part of a mixed effect) is also identified for site W45 at Wellington Quarry as it is adjacent to the River Wye SAC and the River Lugg SSSI. Mixed effects (uncertain minor positive/uncertain significant negative) are identified for sites M10a and M10b as they either contain (as is the case for M10a) or are adjacent (as is the case for M10b) to the Perton Roadside Section Quarry SSSI. The Screening Assessment in the HRA Report (LUC, 2020) also identifies for sites M05, M12, W45 and Area of Search C potential for significant effects on the River Wye SAC and potential for significant effects on the Wye Valley and Forest Dean Bat Sites SAC (for site M12 only) (LSEs on water quality are addressed in SA objective 14: Water).

1.249 Furthermore, the Screening Assessment in the HRA Report identified a lack of certainty as to whether the following policies would result in LSEs on European sites (LSEs on water quality are addressed in SA objective 14: Water):

- Policy M3: The winning and working of sand and gravel (River Wye SAC – physical damage and loss of habitat, non-physical disturbance, and non-toxic contamination); and,
- Policy W6: Preferred locations for construction, demolition and excavation waste management facilities (River Wye SAC – physical loss of or damage to habitat, non-physical disturbance, non-toxic contamination).

1.250 There may also be negative secondary impacts from the development of mineral sites within an Aerodrome Safeguarding Zone (i.e. M04, W44, Area of Search B and Area of Search D) as there is potential for adverse impacts on aircraft safety from bird-strike and potential negative cumulative impacts from quarries that are clustered at the same location as these may have adverse effects on biodiversity through habitat fragmentation or species disturbance. The following Core Strategy policies, policies and supporting text in the MWLP, Key Development Criteria for the allocated sites, and HRA Report recommendations, provide mitigation for these effects on SA objective 12: Biodiversity & Geodiversity.

1.251 Policy LD2: Biodiversity and geodiversity of the Core Strategy requires development proposals to conserve, restore and enhance biodiversity and geodiversity assets, through the:

- Retention and protection of nature conservation sites and habitats, and important species in accordance with their status as follows:
 - Development that is likely to harm sites and species of European Importance will not be permitted;
 - Development that would be liable to harm Sites of Special Scientific Interest or nationally protected species will only be permitted if the conservation status of their habitat or important physical features can

be protected by conditions or other material considerations are sufficient to outweigh nature conservation considerations;

- Development that would be liable to harm the nature conservation value of a site or species of local nature conservation interest will only be permitted if the importance of the development outweighs the local value of the site, habitat or physical feature that supports important species;
- Development that will potentially reduce the coherence and effectiveness of the ecological network of sites will only be permitted where adequate compensatory measures are brought forward;
- Restoration and enhancement of existing biodiversity and geodiversity features on site and connectivity to wider ecological networks; and,
- Creation of new biodiversity features and wildlife habitats.

1.252 It also states that, where appropriate, the Council will work with developers to agree a management strategy to ensure the protection of, and prevention of adverse impacts on, biodiversity and geodiversity features.

1.253 For the description of Core Strategy policy LD2: Biodiversity and geodiversity, the Publication Draft MWLP states that 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. Site reclamation will be expected to contribute at a landscape scale towards achieving nationally identified habitats of principal importance, taking account of the attributes of the site and of nearby areas, to support coherent and resilient networks of habitats that link the site with relevant ecological features in the wider landscape. Management strategies associated with a minerals or waste development may include a buffer within the development site to protect vulnerable features. Minerals and waste development proposals will also 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 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;
- Incorporating geodiversity considerations into site management plans to protect and maintain exposures;
- Providing information to support understanding, interpretation and enjoyment of the features; and,
- Creating links beyond the site boundary into the wider landscape.

1.254 Policy SP4: Site Reclamation in the Publication Draft MWLP requires mineral sites and greenfield sites for waste use to be reclaimed, at the earliest opportunities, to a beneficial after-use. The supporting text states that reclamations schemes should take account of the proximity and purpose of airfields and be designed accordingly. Chapter 5 of the MWLP provides further explanation of Core Strategy policy SD1: Sustainable design and energy efficiency stating that 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.

1.255 The HRA Report (LUC, 2020) concludes that adverse effects on the integrity of the River Wye SAC and Wye Valley and Forest Dean Bat Sites SAC will be avoided, due to avoidance and mitigation measures already included within the Core Strategy and MWLP, and providing that the recommended mitigation measures outlined in the HRA Report are incorporated into the Publication Draft MWLP. The recommended mitigation measures include requiring site-specific HRA for sites M05/W45 including detailed protected species surveys for otter; project-level/site-specific HRA and targeted ecological surveys for proposals within Area of Search C; and, site-specific Ecological Mitigation Plans and dust assessments for minerals and waste developments.

1.256 The Key Development Criteria for the allocated sites in the Publication Draft MWLP require applications to:

- Demonstrate the level of effect on geodiversity and incorporate mitigation measures as appropriate. Mitigation will include recording, protection or recovery of any assets (M04, M03, M05, M07, M10, M13, M20, W44, W43, W45);
- Design site to deliver a net gain in biodiversity and providing enhancement for priority bird species (M04, M03, M05, M07, M10, M12, M17, M18, M13, M16, M20, W58, W59, W60, W61, W62, W63, W64, W65, W66, W19, W10, W07, W05, W19, W44, W43, W45);
- Undertake an Appropriate Assessment to demonstrate likely significant effects on the River Wye SAC. Demonstrate nutrient neutrality or betterment in the River Wye SAC (M03, W43, M05, W45, M10, M12, M20, W58, W59, W60, W61, W62, W63, W65, W66, W19, W10, W05, W19);
- Demonstrate nutrient neutrality or betterment in the River Wye SAC (M04, W44);
- Demonstrate nutrient neutrality or betterment in the Wye Valley Woodlands SAC and Wye Valley & Forest of Dean Bat Sites SAC (M12); and,
- Demonstrate the level of effect on the River Lugg SSSI (M03, M05, M10, W62, W63, W05, W19, W43, W45) / River Teme SSSI and River Lugg (M07) / Caeiron Meadow SSSI and Pikes Farm Meadows SSSI (M17, M18) / Black Mountains SSSI (M13) River Wye SSSI (W58, M20).

Recommendation:

The policies and supporting text in the MWLP and Key Development Criteria for the allocated sites should be updated to reflect the key recommendations outlined in the HRA Report (2020). The Key Development Criteria relating to biodiversity and geodiversity should be cross-checked with the SA findings for each site and updated accordingly.

1.257 Through the implementation of the above policies, the supporting text in the MWLP, the Key Development Criteria for the allocated sites, and the above recommendation, there will be no residual significant negative effect in relation to SA objective 12: Biodiversity and Geodiversity.

SA Objective 13 – Value, protect, enhance and restore the landscape quality of Herefordshire, including its rural areas and open spaces

1.258 Uncertain significant negative effects are identified for Areas of Search C and D in relation to SA objective 13: Landscape as they either contain part of the Wye Valley AONB, areas of open space, or areas identified as being of high sensitivity according to The Urban Fringe Sensitivity Analysis. There are also potential cumulative adverse effects on landscape character and quality where several sites are proposed in the same locality. The following Core Strategy policies, policies and supporting text in the MWLP, and the Key Development Criteria for the allocated sites provide mitigation for these effects on SA objective 13: Landscape.

1.259 Planning applications for mineral extraction in the Areas of Search will be assessed against Core Strategy policy LD1: Landscape and townscape which requires development proposals to conserve and enhance the natural, historic and scenic beauty of important landscapes and features, including Areas of Outstanding Natural Beauty, nationally and locally designated parks and gardens, and conservation areas. The policy also requires proposals to demonstrate that character of the landscape has positively influenced the design and scale of the development. Proposals should also incorporate new landscape schemes to ensure development integrates appropriately into its surroundings. For the description of policy LD1, the Publication Draft MWLP outlines a number of mitigation measures that could minimise impacts on the landscape from mineral and waste developments including:

- Protecting, enhancing or creating views;

- Interpretation boards at publicly accessible areas to enable greater understanding of the landscape, 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 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.

1.260 For the description of Core Strategy policy SD1: Sustainable design and energy efficiency, Chapter 5: Strategic Policy and General Principles of the Publication Draft MWLP states that the Council will expect proposals to incorporate best practice measures to minimise the effects of visual intrusion and care should be taken to ensure that screening measures are appropriate and are not, in themselves, a source of visual intrusion.

1.261 Other policies which planning applications will be assessed against include:

- Policy LD3: Green Infrastructure of the Core Strategy which requires development proposals to protect, manage and plan for the preservation of existing and delivery of new green infrastructure;
- Policy SP4: Site Reclamation of the Publication Draft MWLP which supports site reclamation schemes that deliver landscape scale benefits and/or integrated green infrastructure appropriate to its location; and,
- Policy SP2: Access to Open Space and Recreation from Minerals and Waste Development of the Publication Draft MWLP which supports the protection and enhancement of green infrastructure and open space as part of mineral and waste developments.

1.262 The Key Development Criteria for the allocated sites in the Publication Draft MWLP require applications to:

- Deliver priorities of the Herefordshire Green Infrastructure Strategy during operation and reclamation phases. Design sites to incorporate key features of the landscape character (all mineral sites, W13);
- Design sites to incorporate key features of the landscape character (all waste sites); and,
- Demonstrate the level of effect on the surrounding landscape (W62, W63, W64, W65, W66, W19, W10).

1.263 Through the implementation of the above policies, the supporting text in the MWLP, the Key Development Criteria for the allocated sites, there will be no residual significant negative effect in relation to SA objective 13: Landscape.

SA Objective 14 – Value, protect and enhance the quality of watercourses and maximise the efficient use of water

1.264 The SA identified uncertain significant negative effects for sites M04, M05, M13, M16, M20, W05, W07, W13, W44, W45 and all four Areas of Search. The Screening Assessment in the HRA Report (LUC, 2020) identified that, due to hydrological connectivity, LSEs for sites M05/W45, M20, M12, W05, W63, W66 and Area of Search C on water quality and quantity at the River Wye SAC, Severn Estuary SAC, SPA and Ramsar and Wye Valley and Forest Dean Bat Sites SAC, cannot be ruled out in the absence of appropriate safeguards and mitigation measure. The Screening Assessment in the HRA Report also identified a lack of certainty as to whether the following policies would result in LSEs on water quality in the River Wye SAC and Severn Estuary SPA, SAC, Ramsar:

- Policy M3: The winning and working of sand and gravel;
- Policy M5: The winning and working of building stone (sandstone);
- Policy W3: Agricultural waste management;

- Policy W4: Wastewater management;
- Policy W5: Preferred locations for solid waste treatment facilities; and,
- Policy W6: Preferred locations for construction, demolition and excavation waste management facilities.

1.265 There may also be potential negative cumulative effects on water resources through changing surface water drainage patterns, particularly where sites are located in proximity to each other. The following Core Strategy policies, policies and supporting text in the MWLP, Key Development Criteria for the allocated sites, and HRA Report recommendations, provide mitigation for these effects on SA objective 14: Water.

1.266 Policy SD3: Sustainable water management and water resources of the Core Strategy requires development proposals to reduce flood risk; to avoid an adverse impact on water quality; to protect and enhance groundwater resources; and, to provide opportunities to enhance biodiversity, health and recreation.

1.267 For the description of Core Strategy policy SD3: Sustainable water management and water resources, the Publication Draft MWLP states that proposals for minerals extraction and waste management should ensure protection of water resources, particularly when river abstraction and/or groundwater sources may be affected. The potential for impact on water quantity, quality and flow should be assessed through hydrological and hydrogeological assessments to establish the base line position and ensure operations are appropriately designed, monitored and managed. The Council will seek to avoid:

- 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.

1.268 Policies W3: Agricultural Waste Management and W4: Wastewater Management promote wastewater management, enabling the treatment and reuse of water, outline that works undertaken should contribute to achieving nutrient neutrality, or betterment, within the River Wye SAC, and that wherever practical, phosphorus should be recovered for beneficial uses which would improve the chemical and ecological status of the watercourses in the catchment.

1.269 The HRA Report (LUC, 2020) concludes that adverse effects on the integrity of the River Wye SAC and Wye Valley and Forest Dean Bat Sites SAC will be avoided, due to avoidance and mitigation measures already included within the Core Strategy, the MWLP and Key Development Criteria for each allocated site which includes specific reference to achieving nutrient neutrality or betterment, achieving reductions in phosphate releases and encouraging phosphate recovery for beneficial uses.

1.270 The Key Development Criteria for the allocated sites in the Publication Draft MWLP require applications to:

- Demonstrate any contamination on site will be identified and remediated, particularly with reference to protection of drinking water (W58, W19);
- Demonstrate how any pathways for contamination of the Source Protection Zones will be identified and avoided (W62, W63, W65);
- Demonstrate potential risks to the water environment as glaciofluvial sand and gravel deposits represent a secondary aquifer in hydraulic continuity with watercourses (M04, M03, M05, W44, W43, W45);
- Demonstrate potential risks to the water environment as site located within the hard rock of the Silurian Aymestry Limestone Formation / St. Maughans sandstone bedrock formation, classified as a secondary aquifer (M07, M10, M13, M16);

- Demonstrate potential risks to the water environment and private drinking water supply as site located within Brownstones formation, classified as a secondary aquifer and adjacent to a groundwater spring Source Protection Zone for public drinking water supply (M12);
- Demonstrate potential risks to the water environment and drinking water supply as site located within secondary aquifer of the Devonian (M20);
- Demonstrate the level of effect on water quality and hydrology in Pinsley Brook (M04, W44) / River Monnow (M13, M16) / Widemarsh Brook and Yazor Brook (W59, W60) / River Leadon (W64, W05) / Wellington Brook and Moreton Brook (W66, M05, W45) / Little Lugg River (W13) / River Lugg SSSI (M03, M05, M10, W62, W63, W05, W19, W43, W45) / River Teme SSSI and River Lugg (M07) / River Wye SSSI (W58, M20);
- Undertake an Appropriate Assessment to demonstrate likely significant effects on the River Wye SAC. Demonstrate nutrient neutrality or betterment in the River Wye SAC (M03, W43, M05, W45, M10, M12, M20, W58, W59, W60, W61, W62, W63, W65, W66, W19, W10, W05, W19);
- Demonstrate nutrient neutrality or betterment in the River Wye SAC (M04, W44); and,
- Demonstrate nutrient neutrality or betterment in the Wye Valley Woodlands SAC and Wye Valley & Forest of Dean Bat Sites SAC (M12).

Recommendation:

The policies and supporting text in the MWLP and Key Development Criteria for the allocated sites should be updated to reflect the key recommendations outlined in the HRA Report (2020). The Key Development Criteria relating to the water environment should be cross-checked with the SA findings for each site and updated accordingly. The supporting text in Chapter 5 of the MWLP should be updated to refer to the protection of Source Protection Zones and designated waterbodies.

1.271 Through the implementation of the above policies, the supporting text in the MWLP, the Key Development Criteria for the allocated sites, and the above recommendation, there will be no residual significant negative effect in relation to SA objective 14: Water.

SA Objective 15 – Reduce the risk of flooding and the resulting detriment to public well-being, the economy and the environment

1.272 Mineral site M05, eight waste sites (W13, W45, W58, W60, W61, W62, W63, W64 and W66), and Areas of Search A-C are expected to have uncertain significant negative effects in relation to SA objective 15: Flooding as they are within Flood Zones 2, 3a or 3b or are likely to increase flood risk elsewhere. The SFRA states that all sites assessed in the SFRA pass the Sequential Test and are appropriate for proposed development as set out in the MWLP, noting that a sequential approach may still need to be applied within sites to steer development to areas at lowest flood risk (sites M12, M17, M18 and the Areas of Search were not assessed in the SFRA). Where flood risk areas have been identified and the Exception Test is required, it is likely that this can be best managed through the appropriate location of more vulnerable development in areas at lower flood risk and, where required, there are feasible mitigation measures that can be implemented to manage these risks without increasing flood risk elsewhere. The SFRA recommends mitigation measures including site-specific FRAs; detailed hydraulic modelling of nearby watercourses; and shallow infiltration and attenuated discharge to nearby watercourses. The following Core Strategy and MWLP policies provide mitigation for these effects on SA objective 15: Flooding.

1.273 Policy SP4: Site Reclamation supports site reclamation schemes which have the potential to create wetland habitats, thereby providing flood storage.

1.274 Policy SD3: Sustainable water management and water resources requires development proposals to reduce flood risk; to avoid an adverse

impact on water quality; to protect and enhance groundwater resources; and, to provide opportunities to enhance biodiversity, health and recreation. It also states that developments will be located in accordance with the Sequential Test and Exception Test (where appropriate).

1.275 The Key Development Criteria for the allocated sites in the Publication Draft MWLP require applications to:

- Demonstrate that the site will be safe in the event of a flood; risk is not increased on site or elsewhere; and where possible, flood risk is decreased. Flood alleviation should be considered in designing site reclamation (M04, W44, M05, W45, M12, M20, W59, W61, W62, W63, W64, W66, W13); and,
- Undertake a site-specific flood risk assessment to demonstrate compliance with a Local Development Order (W58).

Recommendation:

The Key Development Criteria for the allocated sites should be updated to reflect the key recommendations outlined in the Level 2 SFRA (2020).

1.276 Through the implementation of the above policies, the supporting text in the MWLP, the Key Development Criteria for the allocated sites, and the above recommendation, there will be no residual significant negative effect in relation to SA objective 15: Flooding.

SA Objective 16 – Minimise noise, light, and air pollution

1.277 Sites M05, W05, W07, W10 and W45 are expected to result in uncertain significant negative effects in relation to SA objective 16: Pollution as, whilst

they are not within an AQMA, they are within 100m of settlements which could result in adverse effects on sensitive receptors. All four Areas of Search are considered to have potential to result in significant negative effects given that there are sensitive receptors including schools, settlements and churches within these areas. There could be potential for cumulative negative effects on local air quality where waste management facilities are combined with other facilities within existing industrial estates or Strategic Employment Areas or potential negative cumulative effects from noise at mineral sites that are in close proximity. The following Core Strategy policies, supporting text in the MWLP, and Key Development Criteria for the allocated sites provide mitigation for these effects on SA objective 16: Pollution.

1.278 Policy SD1: Sustainable design and energy efficiency of the Core Strategy applies to minerals and waste developments and requires planning proposals to ensure that new development does not contribute to, or suffer from, adverse impacts arising from noise, light or air contamination. Core Strategy policy SS6: Environmental quality and local distinctiveness requires proposals to consider their impact on residential and local amenity, including light pollution and air quality.

1.279 For the description of Core Strategy policy SS6: Environmental quality and local distinctiveness, Chapter 5: Strategic Policy and General Principles of the Publication Draft MWLP provides an explanation of how mineral and waste developments should seek to mitigate impacts on local amenity, air quality and tranquillity. It states that all applications will be expected to incorporate robust measures to ensure that proposed developments do not cause unacceptable adverse impacts 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;
- Phasing so the development moves away from sensitive receptors;

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- 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.

1.280 It also states that 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.

1.281 The Key Development Criteria for the allocated sites in the Publication Draft MWLP require applications to:

- Demonstrate that lighting will be kept to the minimum required to ensure safe working conditions on site (M07, M10, M12, M17, M18, M13, M16, M20);
- Demonstrate the level of effect on residential amenity at nearby properties (M03, M04, M18, M20, W44, W43);
- Demonstrate the level of effect on the amenity, health and safety and environment of nearby sensitive properties (schools, housing, medical facility, hotel, picnic site) (M05, W59, W60, W61, W62, W63, W64, W45); and,
- Demonstrate effect on air quality, particularly within the Hereford AQMA (W59, W61).

Recommendation:

The Key Development Criteria for sites M07b Leinthall Quarry and M10b Perton Quarry should be updated to 'demonstrate the level of effect on residential amenity at nearby properties' (i.e. at Leinthall Earls, Upper Dormington, Dormington).

1.282 Through the implementation of the above policies, the supporting text in the MWLP, the Key Development Criteria for the allocated sites, and the above recommendation, there will be no residual significant negative effect in relation to SA objective 16: Pollution.

SA Objective 17 – Value, protect and enhance soil quality and resources

1.283 Four mineral sites proposed in the Publication Draft MWLP are expected to have uncertain significant negative effects in relation to SA objective 17: Soil as development on mainly (>50%) high quality Best and Most Versatile Agricultural Land (Grade 1, 2 and 3a) or on large areas of greenfield (>20ha) will result in that land being lost to other uses (M03a, M03c, M04 and M0). Uncertain significant negative effects are identified for Areas of Search A, B and C as these areas comprise Grade 2 and Grade 3 Best and Most Versatile Agricultural Land. A significant negative effect is identified for site W10 as the Grade 2 agricultural land has already been lost as this is an operational sites. There may also be potential negative cumulative effects on the soil environment from the loss of Best and Most Versatile Agricultural Land to minerals extraction and waste developments. The following Core Strategy policies, and policies and supporting text in the MWLP provide mitigation for these effects on SA objective 17: Soil.

1.284 Policy SP4: Site Reclamation in the Publication Draft MWLP supports site reclamation schemes which have the potential to return sites to agricultural use, thereby safeguarding the long-term potential of Best and Most Versatile Agricultural Land and conserving soil resources.

1.285 Policy SS7: Addressing climate change of the Core Strategy supports the protection of best agricultural land, where possible. The supporting text states that “areas of lower quality agricultural land will be utilised in preference to the best and most versatile agricultural land, in accordance with the National Planning Policy Framework (Para 112), where possible” (p.44).

1.286 For the description of Core Strategy policy LD2: Biodiversity and geodiversity, Chapter 5: Strategic Policy and General Principles of the Publication Draft MWLP provides an explanation of how mineral and waste developments should protect and conserve soil resources. According to the Publication Draft MWLP, planning applications should consider the following 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; and,
- Whether alternative land of lower agricultural value has considerations which outweigh the adverse impact upon agricultural land quality.

1.287 It also states that the protection of the original soils removed prior to mineral extraction should always be a priority. Furthermore, 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.

Reclamation schemes should incorporate remediation activities and after-use proposals that optimise the storage and use of best and most versatile soils.

1.288 The supporting text in the MWLP for Core Strategy policy SD1: Sustainable design and energy efficiency states that 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 which can assist with stability and bring environmental benefit. 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.

1.289 Through the implementation of the above policies and the supporting text in the MWLP, there will be no residual significant negative effect in relation to SA objective 17: Soil.

Monitoring

1.290 A number of suggested indicators for monitoring the potential significant effects of implementing the Plan are set out below. Where possible, the indicators proposed draw from those in the monitoring framework presented in the Publication Draft MWLP. However, additional indicators have been proposed where no relevant indicators are included in the Publication Draft MWLP (shown in italics).

1.291 The data used for monitoring in many cases will be provided by outside bodies. Information collected by other organisations (e.g. the Environment Agency) can also be used as a source of indicators. It is therefore recommended that the Council continues the dialogue with statutory environmental consultees and other stakeholders that has already been commenced, and works with them to agree the relevant sustainability effects to be monitored and to obtain information that is appropriate, up to date and reliable.

Table 1.13: Proposed Monitoring Framework for the Herefordshire Minerals and Waste Local Plan

SEA Objective	Proposed monitoring indicators
<p>3. Protect and improve the health of the people of Herefordshire and reduce disparities in health geographically and demographically.</p>	<p>Included in the Publication Draft MWLP:</p> <ul style="list-style-type: none"> ■ Record of new public access to outdoor spaces and impact on open spaces and rights of way. <p>Not included in the Publication Draft MWLP:</p> <ul style="list-style-type: none"> ■ The number and % of minerals and waste approvals that were for operational ‘improvements’ to existing sites to mitigate adverse effects on public health and/or enhance local amenity. ■ The number and % of minerals and waste applications refused where concerns over public health acted as part of the reason for refusal. ■ The number and % of minerals and waste approvals that included conditions concerning noise, hours of operations, traffic and lighting. ■ The number and % of minerals and waste applications refused on cumulative impact grounds. ■ The number and % of minerals and waste applications refused on more general health and amenity grounds.
<p>5. Reduce road traffic, congestion and pollution, and promote sustainable modes of transport and efficient movement patterns in the county.</p>	<p>Included in the Publication Draft MWLP:</p> <ul style="list-style-type: none"> ■ Record of on-site transport methods and associated green infrastructure. ■ Record of materials and/or energy recovered and indication of final destination. <p>Not included in the Publication Draft MWLP:</p> <ul style="list-style-type: none"> ■ The number and % of minerals and waste applications refused on transport grounds.

SEA Objective	Proposed monitoring indicators
	<ul style="list-style-type: none"> ■ The number and % of minerals and waste permissions that included non-road based transport. ■ The number and % of minerals and waste approvals that included conditions concerning air pollution control. ■ The number and % of minerals and waste permissions that included one or more of the following highway conditions: restricted vehicle numbers; restricted tonnages; restricted routings; and highway mitigation measures – the need for wheel washing, lorry sheeting etc. ■ Number of minerals and waste planning applications granted contrary to the advice of Highways England.
<p>6. Value, protect and enhance the character and built quality of settlements and neighbourhoods and the county’s historic environment and cultural heritage.</p>	<p>Included in the Publication Draft MWLP:</p> <ul style="list-style-type: none"> ■ Record of reclamation achieved and associated green infrastructure, including those relevant to historic context. <p>Not included in the Publication Draft MWLP:</p> <ul style="list-style-type: none"> ■ Number and % of minerals and waste applications refused on historic grounds. ■ Number and % of all consented minerals and waste applications that included conditions related to archaeology. ■ Number and % of Listed Buildings and Scheduled Ancient Monuments on Buildings at Risk Register (Historic England). ■ Number of minerals and waste planning applications granted contrary to the advice of Historic England.
<p>7. Value, protect and enhance the character and built quality of settlements and neighbourhoods.</p>	<p>Included in the Publication Draft MWLP:</p> <ul style="list-style-type: none"> ■ Record of reclamation achieved and associated green infrastructure, including those relevant to historic context. <p>Not included in the Publication Draft MWLP:</p> <ul style="list-style-type: none"> ■ Number of minerals and waste applications refused on townscape sensitivity/character grounds per annum.

SEA Objective	Proposed monitoring indicators
<p>10. Reduce Herefordshire’s vulnerability to the impacts of climate change as well as its contribution to the problem.</p>	<p>Included in the Publication Draft MWLP:</p> <ul style="list-style-type: none"> ■ Record of on-site transport methods and associated green infrastructure. ■ Data from Economic Development Team to indicate circular economy type activity. ■ Record of materials and/or energy recovered and indication of final destination. <p>Not included in the Publication Draft MWLP:</p> <ul style="list-style-type: none"> ■ The number and % of minerals and waste permissions that included non-road based transport. ■ The number and % of minerals and waste approvals that included conditions concerning air pollution control. ■ The number and % of minerals and waste applications consented that include low carbon energy initiatives/sources.
<p>12. Value, maintain, restore and expand county biodiversity and geodiversity.</p>	<p>Included in the Publication Draft MWLP:</p> <ul style="list-style-type: none"> ■ Record of reclamation achieved and associated green infrastructure, including those relevant to historic context. <p>Not included in the Publication Draft MWLP:</p> <ul style="list-style-type: none"> ■ Number and % of minerals and waste applications refused on biodiversity and geodiversity grounds. ■ Number of minerals and waste planning applications granted contrary to the advice of Natural England. ■ Condition status of River Wye and River Lugg SAC/SSSIs (Natural England).
<p>13. Value, protect, enhance and restore the landscape quality of Herefordshire, including its</p>	<p>Included in the Publication Draft MWLP:</p> <ul style="list-style-type: none"> ■ Record of reclamation achieved and associated green infrastructure, including those relevant to historic context.

SEA Objective	Proposed monitoring indicators
rural areas and open spaces.	<p>Not included in the Publication Draft MWLP:</p> <ul style="list-style-type: none"> ■ Number and % of minerals and waste applications refused in AONB. ■ Number of minerals and waste applications refused on landscape sensitivity/character grounds per annum. ■ Number of minerals and waste planning applications granted contrary to the advice of Natural England.
14. Value, protect and enhance the quality of watercourses and maximise the efficient use of water.	<p>Included in the Publication Draft MWLP:</p> <ul style="list-style-type: none"> ■ Record of waste management practice(s) presented and water quality assessments of the River Wye and River Lugg. <p>Not included in the Publication Draft MWLP:</p> <ul style="list-style-type: none"> ■ The number and % of minerals and waste applications refused on water quality/safeguarding grounds. ■ The number and % of minerals and waste approvals that included conditions concerning water pollution control. ■ Number of minerals and waste planning applications granted contrary to the advice of Natural England and/or Environment Agency.
15. Reduce the risk of flooding and the resulting detriment to public well-being, the economy and the environment.	<p>Not included in the Publication Draft MWLP:</p> <ul style="list-style-type: none"> ■ The number and % of minerals and waste applications refused on flooding grounds. ■ The number and % of minerals and waste approvals that included conditions to mitigate flood risk. ■ The number and % of minerals and waste applications refused/consented in flood risk zones 2b and 3. ■ Number of minerals and waste planning applications granted contrary to the advice of the Environment Agency.

SEA Objective	Proposed monitoring indicators
16. Minimise noise, light, and air pollution.	<p>Not included in the Publication Draft MWLP:</p> <ul style="list-style-type: none"> ■ The number and % of minerals and waste approvals that included conditions concerning noise, hours of operations, traffic and lighting. ■ The number and % of minerals and waste approvals that included conditions concerning air pollution control.
17. Value, protect and enhance soil quality and resources.	<p>Not included in the Publication Draft MWLP:</p> <ul style="list-style-type: none"> ■ The number and % of minerals and waste approvals on Grade 1, 2 or 3a agricultural land.

Conclusion

1.292 The policies and site allocations included in the Publication Draft MWLP have been subject to a detailed appraisal against the SA objectives which were developed at the Scoping stage of the SA process.

1.293 The Publication Draft MWLP provides well-reasoned proposed policies and a clear guide to minerals and waste development based on sound sustainable development principles. In general, the Publication Draft MWLP has been found to have a wide range of positive and significant positive effects on the SA objectives, although a notable proportion of negative and significant negative effects have also been identified, mainly in relation to the allocation of particular minerals and waste sites. However, many of these effects are uncertain, as the likelihood of and severity of these effects will depend very much on the exact location, scale and design of minerals and waste developments pursued. In addition, many potential positive effects expected will depend on how well policy requirements from the Core Strategy and other policies within the MWLP are implemented, and the type of restoration achieved at minerals and waste sites.

1.294 The SA has inevitably had to make assumptions in coming to judgements of the effects of the Publication Draft MWLP. Our assumption with respect to effects, cumulative or otherwise, is on the basis of the intention of the Publication Draft MWLP (i.e. what it is trying to achieve). Past experience suggests that, when considering development proposals, there will often be tensions when applying different policies, and deciding where weight should apply. Despite the application of policies (and subsequent conditions) to planning decisions, there may still be some residual adverse effects during delivery of minerals and waste sites (e.g. increases in HGV movements). This highlights the importance of monitoring the potential significant effects identified once the MWLP is adopted.

Next steps

1.295 This SA Report will be available for consultation alongside the Publication Draft MWLP in January 2021 for a 6-week period.

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January 2021

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- 6 Herefordshire Council (2015) Herefordshire Local Plan – Core Strategy 2011-2031 (adopted 2015), available at: https://www.herefordshire.gov.uk/downloads/download/123/adopted_core_strategy
- 7 ‘Material assets’ is listed as one of the topics to be considered in the SEA, but there is no clear definition of what this topic should cover in the SEA Directive or Regulations, and it has been variously defined in different SEA reports as relating to natural resources, e.g. minerals, or built infrastructure, e.g. transport infrastructure. For the purposes of this SEA, the material assets topic is assumed to include resources such as water, minerals and waste, as well as built infrastructure, including transport and waste infrastructure, but also economic and employment infrastructure and interests.
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