AGENDA

Environment Scrutiny Committee

Date:	**Monday, 24th September, 2007**
Time:	**9.30 a.m.**
Place:	**The Council Chamber, Brockington, 35 Hafod Road, Hereford**
Notes:	Please note the **time, date** and **venue** of the meeting.

For any further information please contact:

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County of Herefordshire District Council

HEREFORDSHIRE COUNCIL

AGENDA

for the Meeting of the Environment Scrutiny Committee

To: Councillor RI Matthews (Chairman)
Councillor KG Grumbley (Vice-Chairman)

Councillors JHR Goodwin, JW Hope MBE, MAF Hubbard, TW Hunt, MD Lloyd-Hayes, PM Morgan, AT Oliver, A Seldon and PJ Watts

		Pages
1.	**APOLOGIES FOR ABSENCE** To receive apologies for absence.	
2.	**NAMED SUBSTITUTES (IF ANY)** To receive details any details of Members nominated to attend the meeting in place of a Member of the Committee.	
3.	**DECLARATIONS OF INTEREST** To receive any declarations of interest by Members in respect of items on the Agenda.	
4.	**MINUTES** To approve and sign the Minutes of the meeting held on 19th June 2007.	1 - 10
5.	**SUGGESTIONS FROM MEMBERS OF THE PUBLIC ON ISSUES FOR FUTURE SCRUTINY** To consider suggestions from members of the public on issues the Committee could scrutinise in the future.	
6.	**CALL-IN OF CABINET DECISION ON ROTHERWAS ARCHAEOLOGY: OPTIONS FOR THE PRESERVATION OF THE RIBBON AND COMPLETION OF THE ROTHERWAS ACCESS ROAD** To consider the Cabinet decision on the preservation of the Rotherwas Ribbon and completion of the Rotherwas Access Road.	11 - 70

PUBLIC INFORMATION

HEREFORDSHIRE COUNCIL'S SCRUTINY COMMITTEES

The Council has established Scrutiny Committees for Adult Social Care and Strategic Housing, Childrens' Services, Community Services, Environment, and Health. A Strategic Monitoring Committee scrutinises corporate matters and co-ordinates the work of these Committees.

The purpose of the Committees is to ensure the accountability and transparency of the Council's decision making process.

The principal roles of Scrutiny Committees are to

- Help in developing Council policy
- Probe, investigate, test the options and ask the difficult questions before and after decisions are taken
- Look in more detail at areas of concern which may have been raised by the Cabinet itself, by other Councillors or by members of the public
- "call in" decisions - this is a statutory power which gives Scrutiny Committees the right to place a decision on hold pending further scrutiny.
- Review performance of the Council
- Conduct Best Value reviews
- Undertake external scrutiny work engaging partners and the public

Formal meetings of the Committees are held in public and information on your rights to attend meetings and access to information are set out overleaf

PUBLIC INFORMATION

Public Involvement at Scrutiny Committee Meetings

You can contact Councillors and Officers at any time about Scrutiny Committee matters and issues which you would like the Scrutiny Committees to investigate.

There are also two other ways in which you can directly contribute at Herefordshire Council's Scrutiny Committee meetings.

1. Identifying Areas for Scrutiny

At the meeting the Chairman will ask the members of the public present if they have any issues which they would like the Scrutiny Committee to investigate, however, there will be no discussion of the issue at the time when the matter is raised. Councillors will research the issue and consider whether it should form part of the Committee's work programme when compared with other competing priorities.

Please note that the Committees can only scrutinise items which fall within their specific remit (see below). If a matter is raised which falls within the remit of another Scrutiny Committee then it will be noted and passed on to the relevant Chairman for their consideration.

2. Questions from Members of the Public for Consideration at Scrutiny Committee Meetings and Participation at Meetings

You can submit a question for consideration at a Scrutiny Committee meeting so long as the question you are asking is directly related to an item listed on the agenda. If you have a question you would like to ask then please submit it **no later than two working days before the meeting** to the Committee Officer. This will help to ensure that an answer can be provided at the meeting. Contact details for the Committee Officer can be found on the front page of this agenda.

Generally, members of the public will also be able to contribute to the discussion at the meeting. This will be at the Chairman's discretion.

(Please note that the Scrutiny Committees are not able to discuss questions relating to personal or confidential issues.)

Remits of Herefordshire Council's Scrutiny Committees

Adult Social Care and Strategic Housing

Statutory functions for adult social services including:
Learning Disabilities
Strategic Housing
Supporting People
Public Health

Children's Services

Provision of services relating to the well-being of children including education, health and social care.

Community Services Scrutiny Committee

Libraries
Cultural Services including heritage and tourism
Leisure Services
Parks and Countryside
Community Safety
Economic Development
Youth Services

Health

Planning, provision and operation of health services affecting the area
Health Improvement
Services provided by the NHS

Environment

Environmental Issues
Highways and Transportation

Strategic Monitoring Committee
Corporate Strategy and Finance
Resources
Corporate and Customer Services
Human Resources

The Public's Rights to Information and Attendance at Meetings

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- Inspect minutes of the Council and all Committees and Sub-Committees and written statements of decisions taken by the Cabinet or individual Cabinet Members for up to six years following a meeting.

- Inspect background papers used in the preparation of public reports for a period of up to four years from the date of the meeting. (A list of the background papers to a report is given at the end of each report). A background paper is a document on which the officer has relied in writing the report and which otherwise is not available to the public.

- Access to a public Register stating the names, addresses and wards of all Councillors with details of the membership of Cabinet and of all Committees and Sub-Committees.

- Have a reasonable number of copies of agenda and reports (relating to items to be considered in public) made available to the public attending meetings of the Council, Cabinet, Committees and Sub-Committees.

- Have access to a list specifying those powers on which the Council have delegated decision making to their officers identifying the officers concerned by title.

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COUNTY OF HEREFORDSHIRE DISTRICT COUNCIL

BROCKINGTON, 35 HAFOD ROAD, HEREFORD.

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COUNTY OF HEREFORDSHIRE DISTRICT COUNCIL

MINUTES of the meeting of Environment Scrutiny Committee held at The Council Chamber, Brockington, 35 Hafod Road, Hereford on Tuesday, 19th June, 2007 at 10.00 a.m.

Present: **Councillor RI Matthews (Chairman)**
Councillor KG Grumbley (Vice Chairman)

Councillors: JHR Goodwin, JW Hope MBE, MAF Hubbard, TW Hunt, MD Lloyd-Hayes, PM Morgan, AT Oliver, SJ Robertson and PJ Watts

In attendance: **Councillors: WLS Bowen, GFM Dawe, PJ Edwards, JG Jarvis (Cabinet Member - Environment and Strategic Housing), J Stone and DB Wilcox (Cabinet Member – Highways and Transportation)**

1. APOLOGIES FOR ABSENCE

There were no apologies.

2. NAMED SUBSTITUTES

There were no named substitutes.

3. DECLARATIONS OF INTEREST

There were no declarations of interest.

4. MINUTES

RESOLVED: That the Minutes of the meeting held on 12th March 2007 be approved and signed by the Chairman.

The Chairman took the opportunity to thank the previous Chairman (Councillor JHR Goodwin) and Vice-Chairman (Councillor WLS Bowen) for their work with the Committee.

5. SUGGESTIONS FROM MEMBERS OF THE PUBLIC ON ISSUES FOR FUTURE SCRUTINY

A member of the public suggested the Committee should look at the apparent insufficient allocation of funding for highway maintenance in rural areas.

The Chairman thanked the member of the public for the suggestion and anticipated that this line of questioning would be raised during later agenda items.

6. INTRODUCTION BY CABINET MEMBER (HIGHWAYS AND TRANSPORTATION)

The Chairman introduced Councillor D.B. Wilcox, Cabinet Member (Highways and Transportation).

The Cabinet Member (Highways and Transportation) briefly outlined the various

elements within his Cabinet portfolio and highlighted forthcoming issues concerning: Flood Alleviation works, particularly at Ross-on-Wye and the Environment Agency works in the vicinity of Belmont roundabout, Hereford; the provision of an outer distribution road; Integrated Transport in relation to the Local Transport Plan (LTP2); various consultation including the Edgar Street Grid and further improvements to highway maintenance.

Responding to a comment that many pot holes in the road were the result of bad draininge the Cabinet Member (Highways and Transportation) reported that remedial action was taken in line with the agreed programme and available funding.

Questioned on how the outer distribution road would be paid for and whether less costly sustainable works would be undertaken in the interim to key roads in the City the Committee noted that the LTP set out how the investment and management of schemes would be prioritised. As the Council its self was unlikely to be able to fund an outer distribution road funding was likely to come from a variety of sources. Further questioned on the Rotherwas contract the Committee were informed that the contract had not been signed. Any contribution from potential developers would be considered as part of the planning process.

The Chairman read out six questions received from a member of the public (Mr M Wyness) concerning the Rotherwas relief road which relate to agenda item 9 – Capital Budget Monitoring – the questions together with the Council's response is set out at Appendix 1 to these minutes.

Questioned on the use of green field sites to the south of the City and public consultation thereon, the Director of Environment undertook to respond to the member directly.

The Chairman thanked the Cabinet Member (Highways and Transportation) for his introduction. A further opportunity to question the Cabinet Member would be provided at the September meeting.

7. INTRODUCTION BY CABINET MEMBER (ENVIRONMENT AND STRATEGIC HOUSING)

The Chairman introduced Councillor J.G. Jarvis, Cabinet Member (Environment and Strategic Housing).

The Cabinet Member (Environment and Strategic Housing) briefly outlined the various elements within his Cabinet portfolio in relation to this Committee and highlighted a number of issues that would need attention namely: waste management both in terms of reducing waste and the increasing cost of dealing with it and various planning issues particularly in relation to the Edgar Street Grid and polytunnels. He also invited the Committee's opinion on where the scrutiny of Strategic Housing should sit as this was now within his portfolio.

The Committee noted that the Strategic Housing element of the portfolio could be scrutinised by either this committee from a planning or road building aspect or by Adult Social Care and Strategic Housing Scrutiny Committee from the point of view of housing allocations; homelessness and the provision of affordable housing. The Committee noted that any change to the Council's Constitution would be made at Council.

In relation to waste management the Committee appreciated that the subject had many complex aspects and a lot of work would need to be done particularly in

educating the public in the need for change.

The Chairman thanked the Cabinet Member (Environment and Strategic Housing) for his introduction. A further opportunity to question the Cabinet Member would be provided at the September meeting.

8. GOOD ENVIRONMENTAL MANAGEMENT (GEM) - REVIEW

The Committee reviewed the Council's environmental performance during 2006/07, particularly in relation to the corporate Environment Strategy & ISO 14001, to ensure that it continued to improve overall.

The Sustainability Manager presented the Council's performance against corporate Environment Strategy objectives (appendix 1 to the report) and highlighted the good partnership working, both internally and externally, and the Council's commitment to reduce the amount of waste per person both in the County and by the Council's work force.

The Committee scrutinised the report and debated issues concerning: Safer Routes to Schools and the provision of footpaths in rural areas; the number of staff cycling to work; the balance between the environmental benefit and the additional cost of increased recycling; the economic limitations of further rolling-out the kerbside collection scheme; difficulties experienced with the Trade Waste scheme; the robustness of implementing Travel Plans and the need to continually educate in the delivery of them; the increased number of Eco-Schools; the problems associated with the clearance of litter and graffiti; the apparent increase in nitrogen dioxide levels in Hereford and Market Towns noting the difficulty in obtaining robust baseline figures, and the difficulty encountered when dealing with seemingly conflicting policy issues e.g. conservation and emission reductions compared to house and road building schemes.

RESOLVED: that the report be noted.

9. CAPITAL BUDGET MONITORING

The Committee were advised on the final outturn position for the 2006-07 Environment Capital Programme and noted the agreed programme for 2007-08.

The Management Accounting Manager reported upon the outturn position for the Environment Capital Programme for 2006-07 as detailed in appendix 1 to the report. He further reported that the total of the Capital Programme had increased to £13,197,000 from £12,301,000 and elaborated upon the areas of net increase as detailed in the report.

He also reported that the Capital Programme for 2007-08, set out at appendix 2 to the report, had increased to £27,004,000 due to additional Local Transport Plan (LTP) funding, DEFRA funding for the Ross Flood Alleviation Scheme and AWM funding for the Rotherwas Access Road scheme.

On scrutinising the report the Committee noted that:

- Over the course of the year a number of changes may be made to the budget depending on how projects were progressing thereby ensuring the maximum use of capital funding. The Rotherwas Access Road project was ahead of schedule and therefore the expenditure profile had been adjusted to reflect this.

- While there was a degree of flexibility to move finance between budgets (virement) many of the transportation schemes were governed by the Local Transport Plan grant funding for which annual reports were submitted to government.
- The Environment General Capital Working Group was comprised of officers who, following consultation with the Cabinet Member and Director of Environment, regularly reviewed the overall spending position against the delivery of projects.
- Planning permission had now been granted for the Crematorium project and work on site was anticipated to start later this year.
- The underspend on SRTS (Safer Routes to Schools) (inc 20 mph zones) had occurred due to delays in the consultation process for a small number of schemes.
- Questioned on the financing of the Rotherwas Access Road the Committee were reminded of the response given at Council on 9th February 2007: "the *funding model for procuring the Rotherwas Access Road does not rely solely on receipt of s106 development money. It is as part of the wider Rotherwas Futures scheme. The funding package will include external contributions from Advantage West Midlands (AWM), Local Transport Plan funding, capital receipts generated as the regeneration project progresses and the Council will seek to optimise funding contributions from external sources with the balance being met from within the Council's prudential borrowing limits".*
- While School Travel Plans were in existence greater prominence needed to be given to them to ensure their implementation.

Six questions from a member of the public had been submitted, as referred to earlier, and these, together with the Council's response, are set out at appendix 1 to these minutes.

RESOLVED: That the report be noted.

10. REVENUE BUDGET MONITORING

The Committee were advised on the final revenue outturn position for the Environment Directorate for 2006/07 and discussed the outline agreed budget for 2007-08, and considered the emerging budget pressures.

The Director of Environment and the Management Accounting Manager reported that in overall terms the Environment Directorate had underspent by £274,000, which represented a variance of 1.1% against agreed budget. The report summarised the variances against budget and a summary of the final revenue outturn variances was set out at appendix 2 to the report. It was reported that there would be pressures in all service areas arising from the Council decision not to allow inflationary uplifts on non-staff costs, however, services were expected to manage their budgets within these constraints. The Management Accounting Manager highlighted that reduction in the road maintenance budget was partly addressed by an increase in capital funding through the Local Transport Plan (LTP) Grant.

On scrutinising the report the Committee noted:

- It was commented that there appeared to be a disparity between the maintenance of rural roads and footpaths compared to urban areas which, it was suggested may warrant further scrutiny. The Head of Highways and Transportation reported that the maintenance budget was split 20/80% in favour of rural highways.
- Responding to questioning concerning the overspend on Concessionary

Fares - £258,000 with 2007-08 being forecast to be higher – the Committee noted that in effect there were two elements to the scheme. In relation to the Disabled and Elderly the Government funding had been topped up by the Council to alleviate a number of anomalies identified in the scheme. The potential take up of the Over 60s Fares scheme had been more popular than originally estimated.

- Substantial support was already given to sustain rural bus routes. However, the Committee noted that the Government were currently reviewing the level of financial support given to transport and therefore the result of the review could adversely affect public transport subsidy in Herefordshire.

RESOLVED: That the report be noted.

11. ENVIRONMENT DIRECTORATE PLAN: OUTTURN FOR 2006/07 PERFORMANCE INDICATORS

The Committee considered the achievement of targets included in the Environment Directorate Plan for the year April 2006 to March 2007.

Details of actual achievement against each of the targets were shown in Appendix 1 to the report.

The Director of Environment and the Improvement Manager reported that the 2007-10 Directorate Plan reflected actions being taken during the current year (2007-08) to bring those few indicators, indicated in the report, where targets were not achieved back on track. The Committee noted that longer-term targets for 2009-10, together with interim milestone targets for years 2007-08 and 2008-09 were being developed.

On scrutinising the report the Committee noted that while Indicators 39 and 40 indicated in real terms an improvement in highway cleanliness, the Committee expressed the view that public perception, particularly in rural areas, was that standards of cleanliness had fallen. The Committee noted comments concerning the apparent effectiveness of Parish Lengthsman schemes in relation to highway cleanliness.

It was further noted that Indicators 68 – 71 (conservation areas) were new targets and included last year. The stated targets had been based on the best evidence at the time and while the targets had not been achieved, actual performance had not fallen.

RESOLVED: That the report be noted

12. SAFETY ON TRUNK ROADS

The Committee were advised on the background and developments regarding safety on trunk roads within Herefordshire.

The Head of Highways and Transportation reported that in 1989 responsibility for trunk roads had passed from local authorities to the Highways Agency. While responsibility for safety matters on the trunk road network rested with the Highways Agency accident statistics for trunk roads within the County were included in Herefordshire's figures for the purpose of the key performance indicators. He further reported that liaison between the Council and the Highways Agency had improved

with quarterly meetings taking place. As a result some success had been achieved with a number of safety improvements being made with more planned.

The Committee noted the improvement works underway at Ashton near Leominster and noted that while Ward Members had not been consulted about the diversion route, a number of alternative routes had been considered and the one now being used, while not perfect, had been considered the safest and most expedient in the circumstances. The Committee hoped the police would be monitoring the traffic movements in the area.

RESOLVED: That the report be noted.

13. SCRUTINY REVIEW GROUP - HOUSEHOLD WASTE RECYCLING IN HEREFORDSHIRE

The Committee were advised of progress on the Scrutiny Review of Household Waste Recycling in Herefordshire and considered the Committees membership on the Review Group.

The Chairman of the Review Group, Councillor K G Grumbley, reported the background to the review. He reported that while a draft report by the Review Group had been compiled and submitted to the Committee in March 2007, the Committee had decided that in view of the then awaited outcome of the Government's Review of the National Waste Strategy the report had been held in abeyance until the Review Group could consider the implications of the Government's review. He suggested that rather than restart the review with new members, Councillor P Edwards be appointed to work with him to assess the implications of the Government Review and report the findings of the scrutiny review to the Committee at its September meeting.

The Chairman of the Review, Councillor K G Grumbley commented that, as noted from earlier discussion, waste management was a complex and potentially very expensive service and suggested that the Cabinet Member (Environment & Strategic Housing) consider holding a seminar to inform Members of the issues and implications for Herefordshire.

The Cabinet Member (Environment & Strategic Housing) agreed that a Members seminar on Waste Management should be held.

RESOLVED

THAT;

a) Councillor KG Grumbley, Chairman of the Review Group and Councillor P Edwards be appointed to complete the Scrutiny Review in accordance with the Scoping Statement;

b) The resultant draft report of the Review Group be included for consideration in the Committee work programme for the September 2007 meeting; and

c) **The Cabinet Member (Environment & Strategic Housing) host a Members seminar on Waste Management as soon as possible.**

14. SCRUTINY REVIEW GROUP - DRAFT TRAVELLERS POLICY

Members were advised of progress on the Scrutiny Review of the Council's

Travellers' Policy.

The Head of Environmental Health and Trading Standards reported the background to the Scrutiny Review of the Traveller's Policy (Chaired by Councillor W.L.S. Bowen) and highlighted that while work on the review was nearing completion further work was needed to take account of the outcome of a recent review undertaken across the West Midland Region into Traveller Site need. He also reported that as a result of the elections there had been a change in the Committee membership and therefore suggested that the Committee consider its membership on the Review.

RESOLVED:
That

a) **Councillor WLS Bowen continue as Chairman of the Review Group together with Councillors: T Hunt, P Morgan and JB Williams; and**
b) **the findings of the Review Group be included for consideration in the Committee work programme for the September 2007 meeting.**

15. COMMITTEE WORK PROGRAMME

The Committee considered its work programme.

The Head of Policy Performance and the Senior Researcher reported on the results of the Herefordshire Satisfaction Survey. They explained that there was a statutory requirement to undertake a series of surveys every three years with questions tightly prescribed by the Department of Communities & Local Government. This involved a postal survey of Herefordshire residents aged 18 and over and asked for views about living in Herefordshire and council provided services. In 2006 over 2,100 responses were received from 4,200 randomly selected households. They highlighted a number of ways the results of the survey can assist the Committee in prioritising its work programme.

The Democratic Services Officer reported upon the Committee work programme, a copy of which was set out at appendix 1. Appendix 2 to the report set out ongoing issues on which the Committee expected actions or outcomes.

The Chairman suggested that within the next few days Members contact the Democratic Services Officer with suggested issues for future scrutiny following which the Chairman and the Vice-Chairman would consult the Director of Environment concerning the prioritisation of issues for the work programme.

The Chairman suggested that future meetings commence at 9.30 am.

RESOLVED: that

a) **Members submit suggested issues for future scrutiny and the Chairman and Vice-Chairman following consultation with the Director of Environment determine the draft work programme; and**
b) **Future meetings of the Committee commence at 9.30 am.**

The meeting ended at 1.06 p.m. **CHAIRMAN**

APPENDIX 1

Questions and Council Response referred to at Minutes number 6 and 9

1. **How much money is Council short for the Rotherwas relief road and where in details is the balance coming from?**

   Monies will be provided from the Rotherwas Futures Model and from the following sources.

- Advantage West Midlands,
- Prudential Borrowings,
- Highways Local Transport Plan Allocations,
- Existing Capital Receipts, and,
- Future Capital Receipts.

2. **Is Council putting up rents (at unprecedented rates) at the Rotherwas state to help pay for the Rotherwas relief road.**

   The answer to this question is no.

3. **How can Council justify spending so much money on the Rotherwas relief road, the benefits of which have yet to be proved, when there is not enough money for basic traffic calming at the County's schools and other places of danger like the store at Bartestree.**

   The Council has committed to the Rotherwas Futures project to regenerate the estate and support further development and job creation. The majority of the funding for the scheme comes through economic development channels (AWM) and has so far not affected the level of funding available for LTP schemes to address Safer Routes to School etc. In the absence of the Rotherwas Futures project and Rotherwas Access Road, the same AWM funding would not be available for Safer Routes to School schemes for the County's schools.

4. **On the awarding of planning gain against Bloor Homes at the Bullinghope development, how can the Council justify its decision to spend this money on a multi-million pound road for distant industrial estate that will in no way benefit the Bullinghope housing development? Guidelines say that planning gain must benefit the housing development and local area.**

   The Bullinghope site offers the opportunity to secure funding for the Rotherwas Access Road. The Inspector at the UDP Inquiry accepted that this is a legitimate interest and that the Access Road would be a necessary accompaniment of housing development at Bullinghope. Further promotion of industrial development on the Estate is a key priority for the Council.

5. **Is Council going to make taxpayers foot the bill for security (as announced by Roger Phillips) for McAlpine at the Rotherwas relief road construction site?**

   Any security costs will have to paid for by the taxpayer.

6. **How can Council justify allowing the Bullinghope estate to pass planning in order to get planning gain for the Rotherwas relief road, when the UDP, which has other more suitable sites for housing, was ignored?**

   The UDP Inspector increased the overall strategic dwelling requirement for the County from 11,700 to 12,200 dwellings for the Plan period in line with the Regional Spatial Strategy. An additional allocation is required to meet this revised figure. The Bullinghope site offers the opportunity to help ensure that the strategic housing requirement is appropriately met. Its allocation and development will serve to provide new housing in a Greenfield location to the south of Hereford, well related to employment provision at Rotherwas.

CALL-IN OF CABINET DECISION ON ROTHERWAS ARCHAEOLOGY: OPTIONS FOR THE PRESERVATION OF THE RIBBON AND COMPLETION OF THE ROTHERWAS ACCESS ROAD

Report By: Director of Corporate and Customer Services

Wards Affected

County-wide

Purpose

1. To consider the Cabinet decision on the preservation of the Rotherwas Ribbon and completion of the Rotherwas Access Road which has been called in by three Members of the Committee: Councillors M.D. Lloyd-Hayes, AT Oliver, and MAF Hubbard.

Reason For Call-In

2. In accordance with Standing Order 7.3.1 and the Scrutiny Committee Rules set out at Appendix 2 of the Constitution, the Cabinet's decision on 6th September, 2007 on this issue has been called in for consideration by this Committee.

3. The stated reasons for the call-in are:

- The Report and Cabinet decision do not give sufficient consideration to the implications that arise if English Heritage decide to Schedule the Site early next year.

- The Report and Cabinet decision fail to give sufficient consideration to the timescale by which the extent of the find could be established. This would allow more precise consideration of the practicality and cost of diverting the Road to the North or South.

- The Cabinet Member for Environment has taken it upon himself to evaluate the potential cultural, scientific, educational and Visitor potential of the Archaeology. If the Community Services Scrutiny Committee do not call it in it will fall to the Environment Scrutiny Committee to probe the extremely limited and only anecdotally supported considerations of this crucial area of concern.

- The Report and Cabinet decision give no consideration to the possibility of funding from national and international bodies that would enable various options to be exercised without disproportionate cost to the County.

- The Environment Scrutiny Committee is meant to scrutinise PROCESS as well as POLICY. There is a great deal of public concern (and concern by Members) about the whole way this matter has been handled. Both Councillor Matthews and Councillor Edwards addressed this point eloquently at the Cabinet meeting.

The failure to produce the Peer Review of procedures in time (commented on by Cllr Phillips) is only the latest example in a long history of concerns.

- A large part of the public of Herefordshire will find it incredible if such a major decision does not receive attention from Environment Scrutiny Committee which is meant to safeguard them from unsatisfactory and inadequate decisions.

4. The draft decision notice (Ref No: 2007.CAB.070KEY), together with the report to Cabinet on 6 September are appended to the report.

5. It is for the Committee to decide whether it wishes to accept the decision of Cabinet or to refer the decision back to Cabinet for further consideration and if so what recommendations to Cabinet it wishes to make.

BACKGROUND PAPERS

- None

COUNTY OF HEREFORDSHIRE DISTRICT COUNCIL Reference No: 2007.CAB.070KEY

WRITTEN STATEMENT OF A KEY DECISION
CABINET

ITEM:	**ROTHERWAS ARCHAEOLOGY:OPTION FOR PRESERVATION OF THE RIBBON AND COMPLETION OF THE ROTHERWAS ACCESS ROAD**
Members Present:	Councillors: RJ Phillips (Leader), LO Barnett, AJM Blackshaw, H Bramer, JP French (Deputy Leader), JA Hyde, JG Jarvis, DB Wilcox.
Date of Decision:	6th September 2007
Exempt:	No
Confidential	No
This is a key decision because It is significant in terms of its effect on communities living or working in Herefordshire in an area comprising one or more wards	
A notice was served in accordance with section 15 of the Local Authorities (Executive Arrangements) (Access to Information) Regulation 2000	
Urgent Decision:	No
Purpose:	To approve the recommendation that the appropriate approach to completion of the Rotherwas Access Road in the context of the advice received from English Heritage as to the best method of preserving the archaeological remains that the Rotherwas access Road be completed and the Rotherwas Ribbon be preserved in accordance with Option F of this report.
Decision:	**THAT the Rotherwas Access Road be completed and the Rotherwas Ribbon be preserved in accordance with Option F of this report.**
Reasons for the Decision:	Option F will ensure completion of the road to the original time scale at the lowest cost whilst preserving the Rotherwas Ribbon in a manner approved by English Heritage.
Options Considered:	1. Consideration has been given to diverting the course of the road, suspending the construction of the road for 6 months and to stopping the construction all together. In addition to the financial considerations outlined below, consideration must also be given to planning implications. Options other than F and G would require further planning consents. 2. The Council's contractor Owen Williams, has been asked to give indicative costs to 7 options that each seek to preserve the archaeology by deploying the preservation solutions as well as a 6 options that would determine completion (or otherwise) of the road. Cost estimates and details for options A-E may be found at appendix (e) and (f) but are summarised as follows:

	A. Diversion of the road to the South £9M appendix (e) B. Diversion of the road to the North £7M appendix (e) C. Creation of a bridge £10M appendix (e) D. Creation of a tunnel £110M appendix (e) E. Abandoning the road £6M appendix (f) F. Continuation of the road on its proposed course £445k G. Suspending the construction of the road for 6 months £430k (plus additional costs according to which option is subsequently chosen). 3. English Heritage has previously advised that, while acknowledging the wishes of the Council that more opportunities needed to be given to the public to view the monument, that part of the structure already revealed must be covered up soon. To that end the works to implement the preservation part of the solution have already begun. These works are entirely reversible (by design) and provide adequate protection for the foreseeable future. 4. Options A – E present the Council with very serious financial challenges that, should any of these options be approved, would require the entire capital programme and medium term financial management strategy to be revised. Cabinet would need to consider whether or not diversion of the road in these options represented good value for money when placed alongside other needs of the County. 5. Option G would, from indicative costs, add £430,000 to the overall cost of the road in addition to whatever final option were chosen. It is also likely that the overall cost would rise for inflation and, it should be noted, that any delay will be likely to damage, delay or inhibit the aims of the Rotherwas Futures project. 6. Accordingly, the recommendation of this report is that the Cabinet approve option F – continuation of the road along its proposed course over the design solution recommended by English Heritage.

HEREFORDSHIRE COUNCIL

ROTHERWAS ARCHAEOLOGY:OPTIONS FOR PRESERVATION OF THE RIBBON AND COMPLETION OF THE ROTHERWAS ACCESS ROAD

PORTFOLIO RESPONSIBILITY: ENVIRONMENT AND STRATEGIC HOUSING

CABINET **6TH SEPTEMBER 2007**

Wards Affected

All wards

Purpose

To approve the recommendation that the appropriate approach to completion of the Rotherwas Access Road in the context of the advice received from English Heritage as to the best method of preserving the archaeological remains that the Rotherwas access Road be completed and the Rotherwas Ribbon be preserved in accordance with Option F of this report.

Key Decision

This is a key decision because it is likely to be significant in terms of its effect on communities living or working in Herefordshire in an area comprising one or more wards.

Recommendation

THAT the Rotherwas Access Road be completed and the Rotherwas Ribbon be preserved in accordance with Option F of this report.

Reasons

Option F will ensure completion of the road to the original time scale at the lowest cost whilst preserving the Rotherwas Ribbon in a manner approved by English Heritage.

Considerations

1. In the Cabinet Report of 7th September 2006, Rotherwas Access Road, the decision was taken to implement the Rotherwas Access Road scheme.

Planning Policy Guidance PPG16 and English Heritage

2. Planning Guidance PPG16 sets out very clearly the Secretary of State's policy on archaeological remains on land, and how they should be preserved or recorded both in an urban setting and in the countryside.

3. The Council considers it has rigorously followed the guidance offered by PPG16 and also the Design Manual for Roads and Bridges adopted by the Highways Agency. Confirmation of compliance with PPG16 has been sought through an independent review being undertaken by officers of the Association of Local Government Archaeological Officers. A copy of the report arising from this review may be found at appendix (a).

4. The results and details of the archaeological investigations to date may be found at appendix (b) – Interim Statement on the Archaeological Discovery at Rotherwas.

5. English Heritage has been involved with the Rotherwas access road since being consulted during the planning process and since the initial discovery of the Ribbon (see Recent Chronology below).

6. Our consultants, Owen Williams, have worked closely with scientific advisors from English Heritage to design an engineering solution that will provide long-term protection for the Ribbon. English Heritage is content that the solution we have designed (through our consultants) will protect the Ribbon for future generations. English Heritage confirms this protection will be effective whether or not the construction of the road continues directly over the Ribbon. A copy of the letter from English Heritage to the Director of Environment dated 14th August 2007 may be found at appendix (c). Full details of the technical solution may be found at appendix (d) – Archaeology Method Statement and (d)(i) Protection Drawing 550370.

7. The implementation of the protection solution is underway. This does not prejudice any decision that may be made by Cabinet in respect of this report. (see 13. below).

Recent Chronology

8. In April of this year renewed and additional archaeological investigations were commenced along the route of the road. On 24th April the first indications of a Bronze Age feature became apparent.

9. On 8th May English Heritage visited the site with Dr Keith Ray MBE (the Council's archaeologist) and manager of Herefordshire's Archaeological Team.

10. On 16th May a meeting of the (construction) project team and Dr Ray was held and it was decided to consider preserving the site in situ. Archaeologists were asked to extend the excavation under the area alongside the road route.

    a. An article was published in Herefordshire Matters (May to August edition) announcing the find.

    b. On 13th June a meeting with project team was held confirming potential significance of the site and Dr Ray received an initial design to preserve the site in situ. Dr Ray asked for protection to commence in early July. The possibility of a press conference and open afternoon discussed.

    c. On 4th July a national press conference was held and on 9th July English Heritage made a further visit.

    d. On 6th July, following great public interest in the site, a decision was made to hold an open week between 16th and 21st July. Following exceptionally bad weather at the end of that week a decision was made to cancel the visits in order to protect the site. A decision was also made to implement the protective covering solution as soon as site conditions allowed.

e. The Council, in the meeting of 27th July 2007, passed the following motion:

(a) The Council resolves to ensure that no irreversible action be taken that would prejudice the preservation or the potential for access, if appropriate, to what as currently advised is a site of archaeological importance.

(b) That Council notes that work on the construction of the Rotherwas Relief Road in that area is currently suspended (NB some works are being undertaken to protect the site) and that Cabinet be asked to address the issue of the appropriate approach to completion of the Rotherwas Relief Road in the context of the advice to be received from English Heritage as to the best method of preserving the archaeological remains.

(c) Council requests Cabinet to address the issue of the financial consequences of the delay to date on the Rotherwas Relief Road, as part of the fuller considerations, and to quantify the financial impact of further delays and make recommendations to Council as to how those issues might be addressed within the Council's budget.

(d) That Council be invited to note that any decision made by Cabinet on this issue would be a key decision within the Constitution and will therefore be liable to call-in for scrutiny. If Scrutiny express any significant concerns about the action proposed by Cabinet, which action will only be taken on the advice of English Heritage, and Cabinet is minded to proceed without addressing those concerns then the Leader gives an undertaking to approach the Chairman to call a special meeting of Council.

Options

11. Consideration has been given to diverting the course of the road, suspending the construction of the road for 6 months and to stopping the construction all together. In addition to the financial considerations outlined below, consideration must also be given to planning implications. Options other than F and G would require further planning consents.

12. The Council's contractor Owen Williams, has been asked to give indicative costs to 7 options that each seek to preserve the archaeology by deploying the preservation solutions as well as a 6 options that would determine completion (or otherwise) of the road. Cost estimates and details for options A-E may be found at appendix (e) and (f) but are summarised as follows:

A. Diversion of the road to the South	£9M	appendix (e)
B. Diversion of the road to the North	£7M	appendix (e)
C. Creation of a bridge	£10M	appendix (e)
D. Creation of a tunnel	£110M	appendix (e)
E. Abandoning the road	£6M	appendix (f)
F Continuation of the road on its proposed course	£445k	
G. Suspending the construction of the road for 6 months	£430k	

(plus additional costs according to which option is subsequently chosen)

13. English Heritage has previously advised that, while acknowledging the wishes of the Council that more opportunities needed to be given to the public to view the monument, that part of the structure already revealed must be covered up soon. To that end the works to implement the preservation part of the solution have already begun. These works are entirely reversible (by design) and provide adequate protection for the foreseeable future.

14. Options A – E present the Council with very serious financial challenges that, should any of these options be approved, would require the entire capital programme and medium term financial management strategy to be revised. Cabinet would need to consider whether or not diversion of the road in these options represented good value for money when placed alongside other needs of the County.

15. Option G would, from indicative costs, add £430,000 to the overall cost of the road in addition to whatever final option were chosen. It is also likely that the overall cost would rise for inflation and, it should be noted, that any delay will be likely to damage, delay or inhibit the aims of the Rotherwas Futures project.

16. Accordingly, the recommendation of this report is that the Cabinet approve option F – continuation of the road along its proposed course over the design solution recommended by English Heritage.

Further Investigations, Tourism, Education and Heritage

17. The Cabinet are asked to note that an application for funding has been made to English Heritage to allow further investigation of the presumed course of the Ribbon both North and South of the original course of the access road. A meeting between the Director and the owner of land adjacent to the road took place on 14 August and the land owner has expressed willingness, subject to appropriate compensation, for these investigations to take place.

18. Should these investigations reveal more of the Ribbon, or other significant archaeology, then a further report will be brought to Cabinet setting out, in detail, the results of the investigation.

19. Depending on 18. above, Cabinet may wish to ask for further reports to be brought forward to consider in more detail any relevant options relating to tourism, education and heritage. An initial proposal for archaeological evaluation of the Ribbon at Rotherwas Industrial Estate may be found at appendix (g). This proposal is currently being considered by the Environment Directorate and Cabinet Member for Environment and Strategic Housing.

20. It is important to note that the investigations carried out to date include a highly detailed record of the Ribbon so far revealed including stereoscopic photography, drawings, measurements and scientific analysis. It is believed that this detailed record will help the archaeological world understand better what the Ribbon may have been and what it may have been used for. Plans will be developed to allow for virtual rendition of the Ribbon on line and for an exhibition in the Hereford Museum.

Financial Implications

If the Cabinet choose any of the options A-E then the impact on the medium term financial management strategy is considerable. Other, yet to be determined capital projects, would have to be stopped and a revised strategy taken back to full Council for approval.

The Council Motion specifically asks Cabinet to address the costs of delays to date. As this report is being written the contractor has now indicated that the costs of delays up to early October will amount to approximately £50,000. Depending on progress of the rest of the project, and any other delays, this figure may change.

There is a contingency sum built into the contract which, depending on the final cost, may be sufficient to pay for the delay, additional works necessary to date and implementation of option F.

Risk Management

In essence, this report is concerned with managing risks relating to archaeological preservation, completion of a major infrastructure project and the Council's financial position. Accordingly there is no separate consideration of risk management in this report.

Alternative Options

The alternative options are contained in the body of this report

Appendices

(a) Independent Review of Herefordshire Council's Adherence to PPG16 (to follow)

(b) Interim Statement on the Archaeological Discoveries

(c) Letter from English Heritage to Director of Environment

(d) Archaeology Method Statement

   i. Protection Drawing 550370

(e) Alternative Options to Avoid Archaeology

(f) Termination Clause Report

(g) Proposal for Archaeological Evaluation of the Ribbon at Rotherwas Industrial Estate

Background Papers

None

Appendix a

Rotherwas Access Road: Peer Review of Procedures Undertaken by Herefordshire County Council

1. **Scope of questions asked**
I have been asked to assess whether the procedures of Herefordshire County Council in respect of the Rotherwas Access Road have been undertaken in accordance with the principles of statutory planning guidance on archaeology and planning, Planning Policy Guidance Note 16: Archaeology and Planning, known generally as PPG 16.

2. **The key principles of PPG 16**
These can be summarised as the following:

2.1 The preservation of archaeological remains *in situ* (PARIS) is a material consideration in the planning process. This principle was codified in case law in the 1980s. The presence of archaeological remains that are worthy of preservation *in situ* can be a reason for amending or even refusing a planning application. Therefore, the archaeological implications of all development proposals need to be assessed before determination in order to determine whether PARIS is an issue.

2.2 PPG 16 emphasises the importance and benefit of early consideration of archaeological issues in the planning process. In particular, pre-determination archaeological assessment – including field evaluation - is encouraged to consider the impact of development proposals on the archaeological heritage and in particular to establish whether PARIS is likely to be an issue.

2.3 Mitigation of the impact of development on archaeology can be secured by planning conditions for investigation and subsequent post-excavation and publication.

3. Issues considered regarding the Rotherwas Access Road based on evidence supplied

3.1 The scope and scale of the pre-determination archaeological assessment.

3.1.1 Once a preferred route is chosen, the purpose of a pre-determination (or pre-application) archaeological assessment should be to provide sufficient information for the LPA to determine a planning application. In particular, it should determine if there are archaeological remains present which will be affected by the proposal (including off-site impacts such as compounds, haul roads and diverted services), that are worthy of preservation *in situ* and which therefore could be a reason for amending or refusing the planning application**.**

3.1.2 It is acknowledged that it is generally not possible to identify the presence of all important archaeological remains potentially worthy of preservation *in situ* without sampling all of the areas that will be impacted by a planning proposal. The aim of the archaeological evaluation should therefore be to maximise the opportunity to reveal such remains and minimise as much as possible the risks that such remains will be present, but not identified by the evaluation.

3.1.3It is also acknowledged that there will be many reasons, especially limitation of access to land, which influence whether a pre-determination archaeological evaluation may not identify all archaeological remains that might be thought worthy of preservation *in situ.* In this respect, road schemes – where the applicant usually does not own the land – are very different to most of the planning applications that local authority archaeological advisors have to deal with.

3.1.5It is nonetheless important that the results of the evaluation and the advice by the local authority archaeologists to the LPA, combine to provide a critical assessment of the risks from the proposal in terms of PARIS, including the limitations of the evaluation process such as problems of access, ground conditions etc.

3.1.6The pre-determination archaeological assessment for the preferred route of the Rotherwas Access Road was undertaken in the late 1980s and in 2002, and comprised fieldwalking, geophysical survey, augering and trial-trenching. The ten archaeological trial-trenches excavated in 2002 comprised c.0.5 -1% sample of the route (it was not possible to calculate the precise proportion).

3.1.7 Questions:

It seems clear from the documentation that there were difficulties with gaining access to land for archaeological investigation both pre- and post-determination. The following questions are asked to gain specific details on this issue:

1. What efforts were made to undertake a more extensive pre-determination evaluation by trial-trenching?
2. Were there any problems with achieving a more extensive evaluation such as refusal of access to the land?
3. The specification for the evaluation in 2002, mentions that 25 trenches were to be dug (page 9, point 2). Was this number reduced because of problems with gaining access to land and if so, which areas were affected?
4. Were there any particular problems with undertaking pre-determination evaluation of the area of the important early prehistoric discovery?
5. Were the potential risks of PARIS if access was not obtained for trial-trenching made clear to the LPA at any stage?

3.2 Making appropriate provision for the unexpected discovery of archaeological remains worthy of preservation *in situ.*

3.2.1 The brief for the post-determination archaeological investigation issued by Herefordshire County Council (21/5/2004) does not make specific reference to procedures/measures to be put in place in the event of unexpected discoveries which might warrant preservation *in situ.* It is however clear from the variations in the archaeological specifications produced by the Archaeology Service for Worcestershire County Council, that discussions did take place and that additional provision was made.

3.2.2 It is also clear that meetings and extensive discussions and negotiations did take place concerning the conservation of the important early prehistoric discovery. These seem to have resulted in a satisfactory outcome in terms of mitigation.

3.2.3 Questions:

1. What procedures for review and amendment of the programme of work were followed to take account of the new discoveries made that might be worthy of preservation *in situ*?

2. Were there any additional written instructions issued by Herefordshire County Council regarding procedures for dealing with unexpected archaeological remains that might be worthy of preservation *in situ*?

4. Preliminary Conclusions

4.1 Based upon the documents received, it is clear that in almost all respects the guidance within PPG 16 was adhered to. Pre-determination assessment was carried out; appropriate provisions for archaeological mitigation were put in place by the LPA; archaeological remains worthy of preservation *in situ* and preservation by record have been identified and adequately dealt with according to relevant Government and Institute of Field Archaeologists (IFA) guidance and standards. In particular, the ability of Herefordshire County Council to achieve a scheme for the preservation *in situ* of the archaeological remains to the north of Camp Farm is to be commended and is an example of best practice.

4.2 There may however have been some scope for improvement in procedures for the areas mentioned below, depending on the answers to the above questions. It should be emphasised that these observations are made only on the basis of the evidence supplied and with the full benefit of hindsight. In addition, in my experience, these are issues which are present for most - if not all – local authority road scheme developments.

1. The risk of finding important archaeology at a late stage in the development process would, in all likelihood, have been reduced by a more extensive pre-determination archaeological evaluation. However,

the constraints on access to the land (see question 3.1.7 above) and the ability to interpret the important archaeology found to the north of Camp Farm, from evaluation evidence alone will both need to be taken into account in making any conclusions on this issue.

2. It would have been useful if a risk assessment of the likelihood of the presence of archaeology worthy of preservation *in situ* being present within the areas affected by the proposals had been produced as part of the pre-determination archaeological evaluation and advice to the LPA. Even if it were not possible to assess such risks with any certainty, the application of the precautionary principle may have been beneficial. It would also have enabled the potential for achieving engineering solutions to PARIS encountered on the route post-determination to be considered at an earlier stage in the development process.

3. It may also have been useful in terms of clarity and understanding for all parties concerned if procedures for dealing with the eventuality of finding archaeological remains worthy of preservation *in situ* had been included within the project brief or in supporting documentation (if this had not already been done – see questions 4.2.3. above). These could have included procedures for review and obtaining independent advice on the significance of any remains found from English Heritage and appropriate academic specialists. Whilst this would probably have not affected the outcome with respect to the archaeological remains found, it might have speeded up the decision making process and have avoided some of difficulties in terms of relations with English Heritage.

Dr Stewart Bryant B.Sc, MA, PhD, FSA, MIFA.
Head of Historic Environment
Hertfordshire County Council

Interim Statement on the Archaeological Discoveries at Rotherwas March to July 2007 by Ian Bapty[1], Keith Ray[2], Simon Sworn[3] and Simon Woodiwiss[4].

1.0 Herefordshire Council is constructing a new access road to link Rotherwas industrial estate, to the south-east of the city, to the A49 Trunk Road between Hereford and Ross-on-Wye to the south. Following a PPG16 archaeological assessment which began in 2002 in tandem with the road planning process, an archaeological field project in mitigation of the impacts of road construction on the historic environment has been underway since October 2006, undertaken by staff of Worcestershire Historic Environment and Archaeological Service. This latter project has unfolded through all the stages that would be expected for an infrastructure project, briefed and monitored by the Council's archaeological advisors among the staff of Herefordshire Archaeology, the county archaeological service.

The archaeological recording work being undertaken in advance of works immediately to the south of the industrial estate itself, and at the eastern end of the access road, has involved several stages of work. Significant discoveries were made late in 2006. Excavation of a former watercourse produced deep peat deposits with initial radiocarbon dates of Bronze Age to Medieval. To the east of this, excavation of a series of pits, tree-throws and associated features producing ceramic and lithic finds spanning the period at least c.3200-2000BC. Among such features were eight post-holes defining a circular timber-framed building. One feature comprised a sequence of intercutting pits cumulatively 3m in diameter. The first of these pits contained sherds of mid-late fourth millennium decorated bowl pottery, the second sherds of Grooved Ware vessels of Durrington Walls tradition, and the third sherds of decorated Beaker. Sherds thought to be of plain Beaker vessels were found in association with the circular building. This settlement was located on a relatively level area at mid-slope down a gently sloping hillside at the foot of steep sided hills overlooking the Wye floodplain from the south.

2.0 *Discovery, excavation and description of the Rotherwas Ribbon*

A ditch containing Romano-British pottery and other finds was located at the eastern limit of the open area excavation of 2006, and concern was then voiced that remains of a settlement of this period might lie within the road corridor to the east of this point. As a result, a further area was stripped at the very beginning of the construction programme for the road in April 2007 so that any such settlement could be investigated well in advance of the construction programme here. The strip revealed no trace of further Romano-British activity, but further pits and slight features were found to contain prehistoric material.

Excavation of sections across the Romano-British ditch deposits indicated that it had been cut through a sequence of colluvial deposits filling a hollow, and through an earlier stone surface, itself sealed beneath this sequence of silt deposits. It was then decided that the silt overlying the structure should be removed in order better to define the extent and nature of the surface before any further investigation through it took place.

[1] Herefordshire Archaeology, Herefordshire Council
[2] Herefordshire Archaeology, Herefordshire Council
[3] Worcestershire Historic Environment and Archaeology Service
[4] Worcestershire Historic Environment and Archaeology Service

At the same time as multi-facetted visual recording of the revealed surface took place, a further extension of excavation was requested to the north within an area to be covered by screening bunds beside the new road. While the impression had been gained from the initial uncovering of a 50m long area of the surface that it might form a crescent shape, the investigation of a further 15m long area transformed its apparent character. Instead of narrowing to form the other end of a crescent, the surface turned through ninety degrees not once but twice as it further descended the slope. It was also apparent that the feature extended north and south beyond the limit of the excavation.

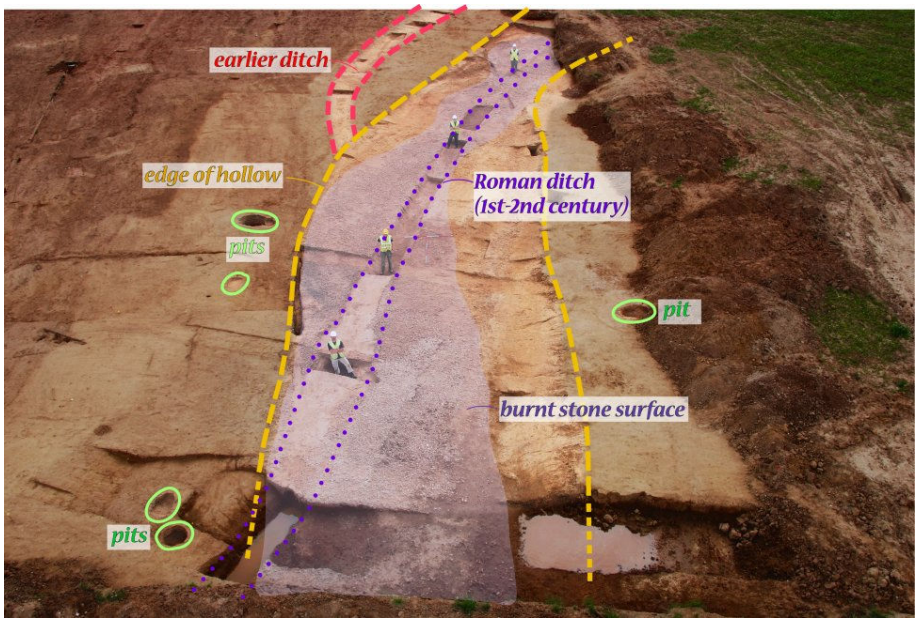
The stone surface comprises a layer of cracked cobbles including a significant element of evenly dispersed quartz. Topographically, the surface also shows marked undulations, and from a vantage-point down-slope the combination of curves and shifting surface profile mean the Rotherwas Ribbon (as it has become known) superficially takes on a decidedly serpentine aspect. Limited intrusive examination of the surface (via trenches cuts across it at an early stage of the excavation before a decision to preserve *in situ* had been taken) revealed some areas where the upper stone surface overlay a secondary lower stone surface, with a silt horizon between the two.

Features spatially associated with the structure include pits filled with burnt/fire-shattered stones and an isolated sub-circular area also made up of shattered stone fragments. Close to one of the pits, a shallow trough-shaped hollow filled with burnt stone and fragmentary charcoal debris extends into/across the stone surface. At the southern end of the excavated area the Ribbon also cuts an earlier undated ditch.

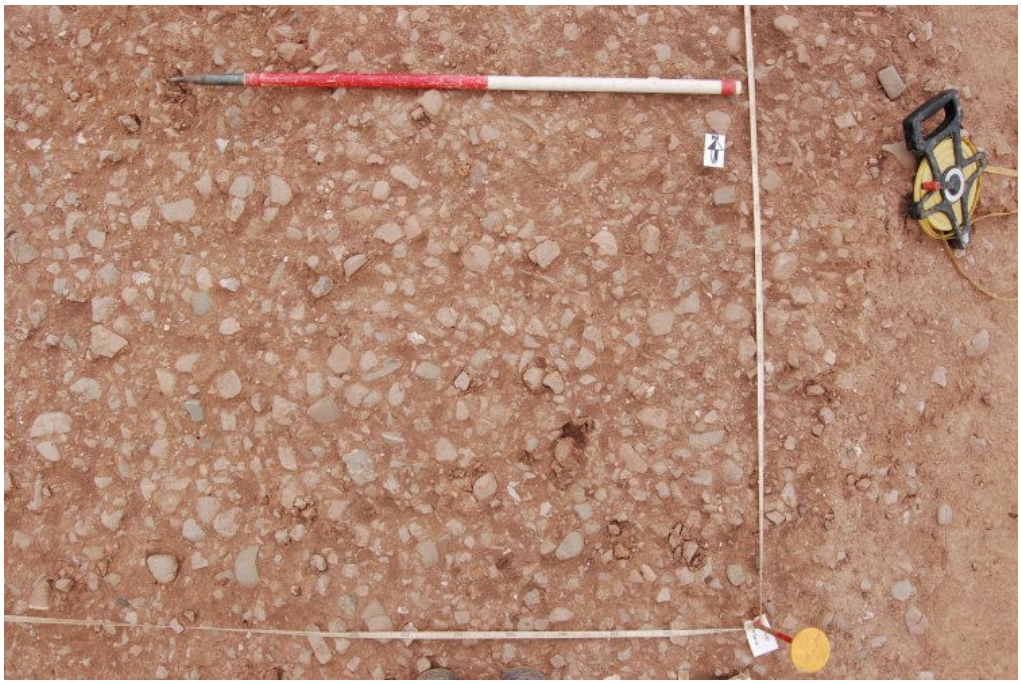
No cultural material was directly recovered from the limited investigation of the Ribbon matrix (limited by the decision to aim to preserve the feature *in situ*), although 9 sherds of pottery, 55 pieces of flint and 239 fragments of bone were recovered from the silts immediately above the stone surface.

Within the standard excavation and recording processes, a full sampling programme was undertaken including a column sample taken from above the stone surface at the northern edge of the excavation. In addition, samples of the cracked stone have been sent to Neil Linford (English Heritage AML) for magnetic susceptibility tests in order to assess whether or not the stone has been subject to artificial heating/burning.

The following photographs aim to present the feature and give some idea of its character.



Annotated overview of the Rotherwas Ribbon (Photo Copyright WHEAS)



Detail of the Ribbon surface (Photo Copyright WHEAS))

Partial section through the Ribbon surface (Photo Copyright WHEAS)

General view of the Ribbon looking south (Photo Copyright WHEAS)

3.0 *Dating*

The dating of the Ribbon has been broadly established through relative stratigraphy. The Romano-British ditch (dated by pottery from the lower fills) which follows a similar alignment to the Ribbon is cut through the stone surface and the overlying silts, and must be a considerably later feature than the Ribbon. The significant quantities of (probably mainly residual) cultural material from the silt layer immediately above the stone surface included a flintwork assemblage (55 pieces)

with diagnostic Bronze Age forms. The earlier ditch cut by the Ribbon did not produce dating material. The Ribbon can therefore be broadly (but securely) dated to the Neolithic or Early Bronze Age, though no more precise attribution within that broad date range is yet possible. The presence of significant proven Neolithic activity in the area immediately to the west, and the reasonable conjecture that the earlier ditch is also likely to be of Neolithic date, could be taken to further support the case that the Ribbon does have Neolithic origins, although this is a purely circumstantial supposition at this stage.

4.0 *Nature of the Ribbon*

The process of discovery of the Ribbon in an immediate spatial context of significant multi-period cultural activity combined with the results of the detailed eight week long archaeological investigation of the physical and structural characteristics of the monument, has, in the professional experience and opinion of Worcestershire Historic Environment and Archaeology Service (and the project monitors from the Herefordshire Council Archaeology Service) consistently informed the view that it is wholly, or in large degree, a product of intentional human action. At a basic level of observation, it was clear from the point of its first identification that the Ribbon was of completely different character to the natural watercourse which had been excavated and sampled c.500 metres to the west.

The nature of the Ribbon does appear to support the suggestion that it has been deliberately laid/deposited by human action. The observed character of the stone surface (distribution patterns of cracked pebbles/quartz across the surface and the uniform makeup of the deposit) is consistent throughout the 60 metre length of the Ribbon so far exposed. A significant observation here is that the jagged sides of the cracked pebbles appear to have been used to ‘key in’ the cobbles to the surface such that the smooth facets typically face upwards. The evidence for what is provisionally interpreted as one or more phases of partial reconstruction of the surface, associated with the localised observation of a lower stone layer of precisely similar character separated from the upper surface by silt horizons, is also consistent with routine archaeological interpretation of stratigraphic sequences of this kind.

The provisional view of the excavators is also that the plan and profile of the linear hollow in which the stone surface sits is similarly consistent with a feature of artificial origin. The directed form of the curves and controlled variation in width of the feature has been judged to indicate a culturally determined landform. The method of formation is unknown, but it may possibly be as a 'hollow way' associated with heavy foot traffic, or may have been deliberately cut as part of the coordinated process of constructing the Ribbon.

It is also important to note the apparently close relationship of the Ribbon to other cultural features. The earlier and later ditches spatially and stratigraphically associated with the Ribbon seem to imply (especially in the case of the later Roman ditch) longevity of cultural use of this particular alignment, and that the Ribbon, for all its unusual nature, represents one specific phase of that long term pattern. In any event it is interesting that the Ribbon is preceded and succeeded by 'standard' linear settlement features. The Ribbon therefore certainly came into being within the period of Neolithic/Bronze Age occupation of the immediate locality, and no re-formation of anything remotely like the Ribbon has occurred at this location since the Bronze Age.

More specifically significant are the five pits which lie on the margins of the Ribbon and which are spatially associated with it (four of the pits are immediately on the eastern edge of the Ribbon cut, with no similar features identified in the large excavated area beyond). Burnt stone, and evidence for burning from these pits

appears to neatly coinicide with the apparent construction of much of the Ribbon from cracked stones which have been interpreted as the products of artificial heating and quenching processes. The linear charcoal rich stain/shallow 'trough' feature which extends onto the ribbon from near one of the pits is of particular relevance in seeming to demonstrate that the pits were in use contemporary with the Ribbon, and that, at least in a casual way, there is a direct relationship between the Ribbon and the features around it.

Given the interlocking patterns of specific and contextual evidence which, from the beginning of the investigation, implicitly and explicitly underpinned the cultural nature of the Ribbon, specialist geomorphological input did not form an initial part of the work (although it should be noted that the sampling programme including a columnar sample from above the stone surface). However, the unusual nature of the Ribbon, and the emergent fact that there appear to be no known Neolithic/Bronze Age parallels for such a feature, has pointed up the need to explicitly engage with the possibility that natural processes were involved in its formation (an issue raised by Matthew Canti of English Heritage and described in a report of a site visit on 25th July 2007).

A quaternary specialist geologist (Dr Andrew Richards*) was therefore requested by WHEAS to comment on the feature. Dr Richards comments as follows:

> *'The sedimentology of the feature comprises of coarse gravel (<150mm) within a sandy silt-clay matrix. The gravels show no distinct sedimentary features, imbrication or sorting. The gravel clasts are dominantly subrounded and many have been fractured* in situ*.*
>
> *The* in situ *fracturing of the pebbles is extremely unlikely to have been caused by cold climate processes. Had ground-ice affected the deposit, the ice would have grown preferentially in the silty matrix, eventually causing the formation of silt lenses and also sorting in the clast content of the sediments. Ice would not have grown in the clasts themselves to form the style of fracturing evident in the sediment (where individual clasts appear to have 'exploded' locally, and the resultant debris surrounds the source clast). This fracturing could only have occurred when the clasts were exposed at- or close to- the surface of the deposit (therefore - the heating, rapid cooling process described to me by Simon Sworn [WHEAS Site Director] makes a lot of sense).*
>
> *The gravel deposit occurs within the alluvium as a single lens, elongated down slope. There are no associated sedimentary features that suggest the action of a fluvial system- structures, sedimentology or external relations with other sediments- that suggest the build-up of the flow rates that would be required to transport gravels of the size. Neither is there a large enough catchment area that would explain flows of this size being generated by slope wash from the high ground above. In addition, were the gravel associated with slope processes, the feature would form a fan shape, or a terrace form following the contours of the valley. In addition, the gravels would be sorted with a change in grain size down-slope. The 'ribbon' shows none of these characteristics.*
>
> *In summary, the best explanation form the formation of the deposit would be that it was 'dumped' by some agent and was subsequently fractured by a process other than crushing or shear- most likely, rapid heating and cooling.*
>
> *Units mapped as the 2nd and 4th Terraces of the River Wye occur near to the site and these are likely to have been the original source of the gravel. Both units are dominated by Lower Palaeozoic sandstones, with local material from the St. Maughans and Raglan Groups of the Lower Old Red Sandstone. The clasts within these terraces are dominantly sub-rounded and contain small proportions of vein quartz.*
>
> *The clast lithology of the 'ribbon' gravels is lithologicaly identical to the terrace deposits. Although vein quartz is more conspicuous in the coarse sand- grit fraction (perhaps the vein quartz was rapidly heated/cooled in preference to other rock types? or maybe quartz was less resistant to weathering following the heating/cooling process?).'*

*Dr Andrew Richards (BSc Hons) Geography First Class; PhD 'The Pleistocene stratigraphy of Herefordshire' University of Cambridge, 1994. Published in International journals on Pleistocene stratigraphy, Quaternary sedimentology: Journal of Quaternary Science, Proceedings of the Geologists Association, Sedimentary Geology, Geological Magazine, Earth Surface Process and Landforms, etc. Edited 'Glaciations of Wales and adjacent areas' published 2005.

Following on from Dr Richard's observations, the photograph below shows the residues from the Ribbon and nearby 4th river terrace samples for comparison. The sample on the right is from 4th terrace, that at the left the upper surface/deposit, that in the middle the lower surface/deposit. Though the samples have the same lithological make up, the degree of shattering between the terrace gravel and that from the monument is markedly different.

(Photo Copyright WHEAS)

It should also be noted in the context of assessing the nature of the Ribbon deposit that the pottery and bone from the top of the stone surface/deposit is not unusually abraded. It may also be relevant to add that preliminary analysis of testing (magnetic susceptibility) for the potential efficacy of geophysical survey undertaken by Archaeological Investigations Limited (Andy Boucher pers. com.) show a distinct contrast between samples from natural soils and the stone surface/deposit.

In summary, the view of Worcestershire Historic Environment and Archaeology Service (formed in consideration of the full range of site observations and the specialist study/comment so far available) is that the Rotherwas Ribbon is most likely of entirely cultural origin, and at the very least is a natural feature which has seen significant cultural enhancement. This view is also supported by the Herefordshire Council Archaeology Service archaeologists monitoring the PPG16 project.

5.0 *Specific interpretation of the Ribbon*

Extensive searches within the literature and via communication with Neolithic/Bronze Age specialists have so far drawn a blank in terms of parallels for any contemporary feature resembling the Rotherwas Ribbon, and only conjectural and preliminary interpretations of what appears to be a unique structure can be offered at this stage.

It should be noted the monument does superficially have some characteristics of burnt mounds, a fairly common and well-known monument form, but these are offset by others which seem to prevent its identification in these terms. These arguments are summarised in the table below:

Characteristic conforming to a burnt mound	Characteristic not conforming to a burnt mound
Presence of fire-cracked stones, ash and charcoal (no ash identified)	Not a "mound" (fire-cracked stone is within a linear hollow)
Sited next to a river or lake (close to hillside springs)	Monument may be earlier than Bronze Age (samples have been taken for radiocarbon dating)
Within region where burnt mounds have been identified	Ground plan - monument is sinuous and in excess of 60m long (not oval, crescentic or kidney-shaped)
	Pits lie adjacent to the linear hollow but none may be described as a "trough"
	No "hearth" has been identified

The table has been prepared using characteristics indicated by the English Heritage monument class description for burnt mounds (Raymond, F, 1987, revised by Darvill, T, 1988, http://www.eng-h.gov.uk/mpp/mcd/index.htm, 18 July 2007.)

It should also be added in this connection that Mike Hodder has pointed out that fire-cracked stones (without charcoal) can spread from the focus of burnt mounds to form sites of similar extent (http://www.sal.org.uk/salon/index_html?id=636#section22).

Other ideas include the possibility that the Ribbon represents functional improvement/metalling of a hollow way feature, perhaps utilising the readily available stone produced by settlement/burnt mound activity in the immediate vicinity. However, the lack of evidence for significant wear/erosion caused by repeated traffic over it, and the undulating topography of the surface do not seem to immediately support this view.

Another obvious line of argument is the suggestion that the Ribbon has explicitly monumental associations. It is certainly large enough to have formed a significant feature in the landscape visible from the ridge to the south which includes Dinedor Hillfort (itself with indicators of earlier activity). In this sense, the apparently sculpted and serpentine form of the Ribbon may tentatively be connected to a range of possible representative/symbolic associations (snake/cord/river?).

6.0 *Significance*

Clearly, the matter of detailed interpretation will require much further analysis and debate and will not be easily resolved.

However, regardless of the specific interpretation of its purpose, it is possible to be clear that the Rotherwas Ribbon is of considerable potential significance, being an apparently unique (if enigmatic) feature with important relevance to the understanding of local, regional and national Neolithic/Bronze Age sequences.

7.0 *Outstanding issues*

Extent and nature. The extent and character of the feature beyond the proposed road corridor is not known. This is a key issue because it means that it is impossible to determine what proportion of the feature is represented by the section within the road corridor, whether the excavated section is properly representative of the structure as a whole, and whether the patterns and structural evidence so far observed (and on which the provisional understanding of the structure is based) are consistently reproduced in other parts of the monument (such as, for example, the nature and continuing presence of the 'cut' in which the Ribbon surface sits, the detailed nature of the surface and the underlying matrix, the undulation of the surface, and the serpentine plan of the feature). It is obviously possible that understanding of the structure could significantly alter when its extent is clarified, and when other sections are examined and described.

In addition, it should be added that accurately determining the full extent of the structure is fundamental to devising appropriate management and conservation processes for the Rotherwas Ribbon as a whole.

Date. The date of the feature has only been broadly determined within the investigation of the currently known section of the monument. There is an important need to identify additional dating evidence through the recovery of associated artefacts and other material suitable to support a radiocarbon (and/or other) programme. The identification of such evidence cannot, of course, be guaranteed by sampling additional areas. However, the character of the feature as so far observed, and its close association with other cultural features, supports the view that there is a reasonable chance elsewhere of retrieving diagnostic dating material of direct or close contextual relevance to the Ribbon.

Preservation and condition of the Ribbon. The preservation and condition of the Ribbon beyond the PPG16 excavated area is not known, although it is considered likely that it may be well preserved in the area downslope of the recent excavation. Determination of the depth, preservation and condition of the feature is, together with the identification of its extent, a key requirement in determining appropriate approaches to long term conservation and management.

Public interest in the Ribbon. The initial discovery of the Ribbon, and the considerable media and public interest this generated (such as attendance of around 1000 people at public open days) has also created an expectation of further investigation and opportunity for further public engagement with the monument. While this is not of itself the primary justification for further investigative fieldwork, it is important that provision of proper public access to the Ribbon (intellectual and, if and when further sections are exposed, physical) is incorporated as a key part of future analysis/project work.

8.0 *Current status of the Ribbon investigation*

All reasonable PPG16 excavation, recording, sampling and public engagement processes have now been undertaken (within the constraint that a decision was made by Herefordshire Council early in the excavation process to preserve the Ribbon *in situ*, thereby also restricting further intrusive/destructive investigation of it, and leading to the recent reburial of the monument for conservation reasons).

Although evolving post excavation analysis (including specialist analysis of artefacts, soil samples, radiocarbon samples so far obtained, and magnetic susceptibility analysis of stone samples) will further advance understanding of the feature, the

major issues identified above can only be substantially addressed by a further process of fieldwork beyond the road corridor.

ENGLISH HERITAGE

WEST MIDLANDS REGION

Mr M Hainge
Herefordshire Council
Director of Environment
Brockington
35 Haford Road
Hereford, HR1 1SH

14th August 2007

Dear Mr Hainge

ROTHERWAS ARCHAEOLOGICAL FINDS

I am writing to offer English Heritage Advice regarding the best method of preserving archaeological remains on the route of the Rotherwas Access Road, as requested within a Herefordshire Council Motion of 27th July, and discussed at a meeting between Herefordshire Council and English Heritage on 3rd August.

The design of the archaeological fieldwork by Herefordshire Council and its execution by Worcestershire Historic Environment and Archaeology Service has been carried out within a PPG16 context. English Heritage advice has been sought within that context, although it is the responsibility of Herefordshire Council to decide upon a course of action.

EH has discussed the site with Council staff and with the site archaeologists, and agrees that an appropriate level of recording has been undertaken within the road corridor. EH is considering financial support for work outside of the road corridor that will enable the sites extent and character to be more fully defined. English Heritage does not intend to make a recommendation regarding scheduling until this work is completed. Our view, however, is that the remains are fragile, and that in-situ preservation is appropriate in this case whether the remains are scheduled or not.

English Heritage Advice

English Heritage advice is that the archaeological remains should be preserved in situ. If Herefordshire Council decides to go ahead with the road English Heritage recommends that the design solution prepared by Herefordshire Council and Owen Williams of July 2007 offers appropriate long term management.

Yours sincerely

Tim Johnston
Regional Director

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Rotherwas Access Road

Archaeology Method Statement

Issue 2

Date of Issue: July 2007

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1. Introduction

Following the discovery of the feature the necessity to avoid damage to the feature was established.

Giffords were commissioned by Herefordshire Council to complete a preliminary design of a protective layer.

Owen Williams reviewed this design and, using the depths of protection required, raised the alignment of the road and associated roadside features by approximately 1m. Owen Williams then developed the detailed design and issued to English Heritage for approval.

Following comment back from English Heritage and discussions with the Contractor, the design was developed further and a method for construction established.

2. Design

The voids within the feature such as the Roman Trench and the fire pits need to be filled to prevent voids being created below the first layer of Geotextile. This fill material should have similar strength and permeability qualities as the surrounding ground to avoid differential settlement.

The first geotextile layer should have the same permeability as the overlying sand. Teram 1000 is specified which has a permeability of $10^{-3}m.s^{-1}$, similar to that of sand.

The sand shall be naturally-occurring clean sharp sand graded to BS 7533-3, Annex D, Category IV.

- Free from deleterious salts, contaminants and cement.
- Obtained from only one source and ensure that all sand supplied has consistent grading.
- Maintained at even moisture content which will give maximum compaction. Sand squeezed in the hand should show no free water and bind together when pressure is released.
- The thickness of sand layers is to be approximately 150mm with the total depth of the sand layer not falling below 250mm. Maximum thickness will vary to suit local ground undulations.

The overall thickness of the sand shall be not less than 250mm. The sand layer will accommodate a settlement monitoring device of a type to be confirmed.

The Geogrid shall be Tensar TX160 or SS30 depending upon material availability.

The granular fill shall be 150mm 6F2 imported capping material, this is different to the Type 1 material specified by Giffords. We believe the capping material will better distribute the loads.

A further layer of Geogrid above the 6F2 material shall again be either Tensar TX160 or SS30.

Additional 6F2 fill shall be added above the last Geogrid layer to the bottom of the first bound carriageway layer. The minimum depth shall be 150mm as per the roadbase thickness for the road.

A summary of the layers above the archaeological feature can be seen in Table 1 below.

Layer Description	Minimum Layer Thickness
Carriageway Surface Course (Bound material)	35mm
Carriageway Binder Course (Bound Material)	60mm
Base (Bound Material)	255mm
Type 1 Sub-base Material	150mm
Tensar TX160 or SS30 Geogrid	0mm
6F2 Imported Capping Material	150mm
Tensar TX160 or SS30 Geogrid	0mm
Clean Sharp Sand	250mm
Teram 1000 Geotextile	0mm
Total Minimum thickness	**900mm**

Table 1 – Protective Layers

A calculation of the maximum loading on the carriageway combined with the total overburden gives a pressure on the surface of the archaeological feature of 70kPa.

We do not believe that under these loading conditions there will be any deformation of the ground. However, strength tests will be undertaken adjacent to the feature prior to the protection works being undertaken to confirm the bearing capacity of the ground.

3. Method Statement

This method statement is for the protection of the archaeological feature found at chainage 2300. It is to be read in association with drawing number 550370-SK-204 revision C.

3.1 General Guidance

All work will be completed under the close supervision of the Archaeologists from Worcestershire Council Historic Environment and Archaeological Services.

No plant will be allowed to track on the surface of the archaeological feature until the first geotextile layer and first layer of sand is laid. At this point only the approved compaction equipment will be allowed to track over the feature.

Personnel will not be allowed to walk on the feature until the first geotextile layer has been laid. Prior to this stage access onto the feature will only be allowed via the routes agreed with the Archaeologist on site (along routes already removed due to the roman ditch and land drains).

3.2 Activities

1. Divert two land drains away from the feature. This must be done without the excavation or damage to the feature itself.

2. backfill the Roman ditch, fire pits and other severe excavations to create a relatively flat surface to avoid the geotextile bridging any holes to create voids. Backfill material to be sourced locally and place using an excavator arm long enough to reach without encroaching on the feature, if this is not possible the material will be brought in by wheel barrow. Take care to avoid

spilling fill on the exposed feature. Compact fill under strict guidance of the Archaeologist using hand held compaction equipment only.

3. Undertake a level survey of the surface for use later to ensure required protection depths are constructed.

4. Lay the first layer of geotextile (Terram 1000) starting from north end and rolling uphill. Leave 3m at the northern end to be wrapped over sand layer. Ensure overlaps of at least 300mm between geotextile sheets. Roll as far south as the diverted field drains allow.

5. Construct chambers for monitoring stations.

6. Place 150mm of the sand adding greater depth to a maximum of 250mm to even out undulations. Compact with a deadweight Bomag 120 roller (2.3Tonnes). Check levels and add sand as necessary.

7. ITM Limited to lay casing from monitoring chambers.

8. Place a further 100mm of sand adding greater depth to a maximum depth of 250mm to further even out undulations. Compact with a deadweight 4 Tonne roller. Check levels and add sand as necessary.

9. Wrap over the 3m of geotextile onto the top of the sand layer. Lay Geogrid (Tensar TX160 or SS30) onto sand layer starting from the North and roll south to the limit of the current sand layer.

10. Place 150mm 6F2 material and compact with a vibrating Bomag 120 roller. 6F2 material to overlap the end of the sand layers by 2m. Check levels and add 6F2 as necessary.

11. Lay final layer of geogrid from the North and roll south to the limit of the Type 1 layer.

12. Overlay with at least 500mm of general fill and compact as necessary, then open north end of feature up as a haul road.

13. Excavate for ditch at the south end of the protection layer to pick up the land drains. Install impermeable layer to sides of the ditch. Utilise the existing trench though the feature, cut during the early archaeological investigation, to minimise damage to the feature. Remove the temporary land drains.

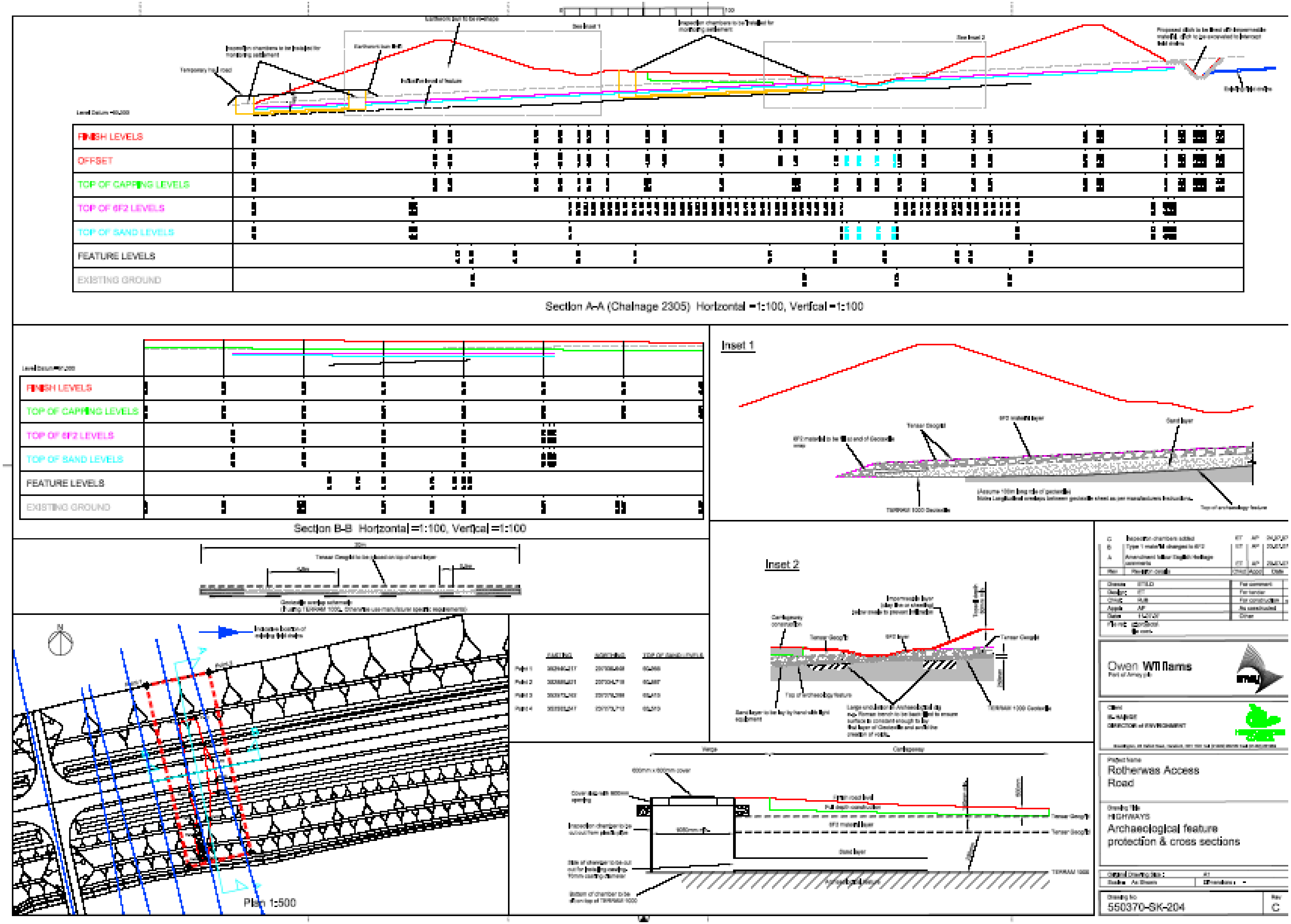
14. Repeat activities 3 to 11 above until the whole feature is covered and protected but with the addition of the settlement monitoring equipment into the sand layer (details to follow).

4. Monitoring

The method for the future monitoring of the feature for settlement following the opening of the road has been investigated. Soil Instruments Ltd specialise in precise settlement monitoring equipment and advise the best produce would be a Horizontal Digital Inclinometer System. This could be installed at the top of the feature within the sand layer and would monitor settlement to an accuracy of 2mm.

Monitoring will take place during construction of the protection layers, haul road and permanent carriageway.

Monitoring will continue from the opening of the road to traffic for two years with readings taken on a 3 monthly basis.



FINISH LEVELS
OFFSET
TOP OF CAPPING LEVELS
TOP OF 6F2 LEVELS
TOP OF SAND LEVELS
FEATURE LEVELS
EXISTING GROUND
Section A-A (Chainage 2305) Horizontal =1:100, Vertical =1:100
Inset 1
Section B-B Horizontal =1:100, Vertical =1:100
Inset 2
Plan 1:500
Rotherwas Access Road
HIGHWAYS
Archaeological feature protection & cross sections
Owen Williams
550370-SK-204
C

Appendix (e)

Rotherwas Access Road

Alternative Options to Avoid Archaeology

Issue 1

Date of Issue: AUGUST 2007

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1 Introduction

1.1 Herefordshire Council requested a preliminary assessment of options for the realignment of the Rotherwas Access Road to avoid the archaeological feature found near Watery Lane.

1.2 The options we have been requested to consider are:

Option A - Re-align the road further south at the feature
Option B - Re-align the road north at the feature
Option C - Bridge over the feature
Option D - Tunnel under the feature

1.3 The report gives only our initial perception of the feasibility of each option without having done any detailed analysis of the risks or constraints.

1.4 An approximate programme for the delivery of the options has been included with assumptions on the success of subsequent planning or statutory processes. No inclusion has been made for the programme implications of funding submissions.

1.5 Outline costs have been provided based on the Termination Clause Report and the Rotherwas Tender submissions. No consultation with the *Contractor* has been undertaken in deriving the figures given in this note. The final costs may therefore differ significantly from those given.

2 Option A – Realignment to the South

2.1 Option Description

2.1.1 An outline alignment design has been considered to the South of the existing route. However the topography as Dinedor Hill rises is such that the alignment is not possible without departures from standard and major cuttings.

2.2 Route Option Comments

2.2.1 The archaeological feature is likely to extend to the south although this cannot be confirmed until further investigation work has been completed in the adjacent field.

2.2.2 The route encroaches upon Woodlands Farm which would require demolition.

2.2.3 The route would require approximately 1.7km of realigned carriageway necessitating the purchase of new land and the re-establishment and sale of the land currently under construction.

2.2.4 A full planning and statutory orders process would be required with objections likely due to the opposition to the road regardless of the archaeological benefits.

2.3 Cost Estimate

2.3.1 Based on the current scheme cost estimates a cost per KM of £3.6M has been assumed. Therefore, the cost of delivering the revised option would be about £9M (including about £1M to demolish and return the road constructed so far to agriculture and £2M for the extensive earthworks necessary).

2.4 Programme

Activity	**Start**	**Finish**
Establish Brief and Feasibility Design	Sep 2007	Nov 2007
Demolish, return to agriculture and demobilise	Dec 2007	Feb 2008
Preliminary Design	Dec 2007	Feb 2008
Environmental Assessment	Feb 2008	May 2008
Planning / CPO Process	May 2008	Sep 2010
Detailed Design	Sep 2009	Sep 2010
Procurement	Sep 2010	Mar 2011
Construction	Mar 2011	Sep 2011

3 Option B – Realignment to the North

3.1 Option Description

3.1.1 An outline alignment design has been tested to the North of the existing alignment. The design moves the road a clear 50m north of the Archaeological Feature found so far. The alignment is designed to the Design Manual for Roads and Bridges single carriageway road with a 60mph speed limit as per the current road design.

3.1.2 The realigned carriageway ties into the current design just east of red brook and at the limits of the existing industrial estate. Due to a sharp turn required at the industrial estate we have assumed that a roundabout junction will be constructed at this point.

3.2 Route Option Comments

3.2.1 The archaeological feature is likely to extend to the north although this cannot be confirmed until further investigation work has been completed in the adjacent field. The ground profiles in the adjacent field also indicate that this may be the case.

3.2.2 The route encroaches upon farm buildings used by Tracy Goodwin. These buildings would need to be demolished and replaced.

3.2.3 The route would require approximately 1.7km of realigned carriageway necessitating the purchase of new land and the re-establishment and sale of the land currently under construction.

3.2.4 A full planning and statutory orders process would be required with objections likely due to the opposition to the road regardless of the archaeological benefits.

3.2.5 The road would encroach onto the area protected by the Defra licences for great crested newts and lesser horseshoe bats.

3.2.6 The road would encroach onto land set aside for development at the industrial estate.

3.3 Cost Estimate

3.3.1 Based on the current scheme cost estimates a cost per KM of £3.6M has been assumed. Therefore the cost of delivering the revised option would be about £7M (including about £1M to demolish and return to the road constructed so far to agriculture).

3.4 Programme

Activity	**Start**	**Finish**
Establish Brief and Feasibility Design	Sep 2007	Nov 2007
Demolish, return to agriculture and demobilise	Dec 2007	Feb 2008
Preliminary Design	Dec 2007	Feb 2008
Environmental Assessment	Feb 2008	May 2008
Planning / CPO Process	May 2008	Sep 2010
Detailed Design	Sep 2009	Sep 2010
Procurement	Sep 2010	Mar 2011
Construction	Mar 2011	Sep 2011

4 Option C – Bridge Over the Feature

4.1 Option Description

4.1.1 A bridge over the feature has been considered requiring the elevation of the road by a further 3m to allow public access to the feature.

4.1.2 The form or design of a structure has not been considered at this stage.

4.2 Route Option Comments

4.2.1 Our understanding of the feature is that it was probable constructed to have a visual presence within the landscape. We do not consider therefore that building a bridge over the feature will be in any way more beneficial to its preservation and appeal to visitors.

4.2.2 The feature would be left exposed to the elements and would deteriorate rapidly leaving little to view or protect in the future. To mitigate against deterioration, the feature would need to be covered with some sort of structure. The feasibility of which could not be considered until the full extents of the feature were discovered.

4.2.3 Although the new alignment would be constructed completely on the line of the existing road the earthworks required to gain the height over the bridge would require additional land. A full planning and statutory orders process would be required with objections likely due to the opposition to the road regardless of the archaeological benefits and the increased visual intrusion of the road.

4.2.4 The extended earthworks for the road would encroach onto the area protected by the Defra licences for great crested newts and lesser horseshoe bats.

4.2.5 The extended earthworks for the road would encroach onto land set aside for development at the industrial estate.

4.2.6 Extensive overhead high voltage electricity diversions may be necessary to facilitate this option.

4.3 Cost Estimate

4.3.1 Based on the current scheme cost estimates a cost of £1M is assumed for the structure. An additional £2M is assumed for the earthworks required. To make this part of the site safe and proceed with the design, planning/statutory processes, procurement, construction and protective structure an additional £7M is assumed. A total cost is therefore estimated to be £10M.

4.4 Programme

Activity	**Start**	**Finish**
Establish Brief and Feasibility Design	Sep 2007	Nov 2007
Demobilise and Make Site Safe	Dec 2007	Feb 2008
Preliminary Design	Dec 2007	Feb 2008
Environmental Assessment	Feb 2008	May 2008
Planning / CPO Process	May 2008	Sep 2010
Detailed Design	Sep 2009	Sep 2010
Procurement	Sep 2010	Mar 2011
Construction	Mar 2011	Sep 2011

5 Option D – Tunnel Beneath the Feature

5.1 Option Description

5.1.1 An outline alignment design has been tested to tunnel beneath the feature at a depth of about 12m. To achieve this the road would not tie into the industrial estate without departures from standard. If departures from standard were required to be introduced to enable the alignment to tie in then either long lengths of tunnel, retaining structure and/or significant earthworks would be required.

5.1.2 A second tunnel option is possible without departures from standards by realigning the carriageway further south and using the rising levels of Dinedor Hill to provide cover to the tunnel. However the length of road in tunnel would be longer, approximately 1km.

5.2 Route Option Comments

5.2.1 Tunneling so shallow beneath the feature is likely to result in surface settlement of a greater amount than the settlement expected by the existing road.

5.2.2 The choice of a tunnel option implies that the feature will be fully exposed and open for public view. The feature would require extensive protection works to preserve it from the elements. Also there may be consideration given to reconstructing the feature due to the extensive damage caused by the Roman ditch and farmers land drains.

5.2.3 Both options would be a significant departure from the existing road and would require access to additional land. Therefore, a full planning and statutory orders process would be required.

5.3 Cost Estimate

5.3.1 The shorter tunnel option to remain on the existing route of the road would require a combination of complicated structures including bored or jacked box tunnel, cut and cover tunnel, extensive retaining wall/reinforced earth structures and significant earthworks. With so many unknowns it is difficult to put any costs to this. However, it is likely to be less than the longer tunnel option.

5.3.2 The Stonehenge Tunnel is currently estimated at £470M for 2.1km of dual carriageway constructed as a twin tunnel, say £235M per drive. The longer of the two tunnel options would need about 1km of tunnel, so on this basis this could cost £110M.

5.4 Programme

Activity	**Start**	**Finish**
Establish Brief and Feasibility Design	Sep 2007	Nov 2007
Demolish, return to agriculture and demobilise	Dec 2007	Feb 2008
Preliminary Design	Dec 2007	Feb 2008
Environmental Assessment	Feb 2008	May 2008
Planning / CPO Process	May 2008	Sep 2010
Detailed Design	Feb 2008	Sep 2010
Procurement	Sep 2010	Mar 2011
Construction	Mar 2011	Sep 2011

6 Conclusions

6.1 All options described will require considerable redesign work, a new planning and statutory orders process and procurement for a new construction contract. Therefore all options would be unlikely to be completed on site before September 2011.

6.2 The Cost estimates within the report can be summarised as follows:

Option A - Re-Align the road further south at the feature	£9M
Option B - Re-Align the road north at the feature	£7M
Option C - Bridge over the feature	£10M
Option D - Tunnel under the feature	£110M

Rotherwas Access Road

Termination Clause Report

Issue 1

Date of Issue: July 2007

Owen Williams
Part of Amey plc

HEREFORDSHIRE COUNCIL

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1 Introduction

Herefordshire Council Requested details on the Termination Clause within the contract for the Rotherwas Access Road and an estimated cost associated with terminating the contract.

The costs quoted in this report are not based on any detailed analysis of the work required but a rough estimate for each activity.

No consultation with the *Contractor* has been undertaken in deriving the figures given in this note. The final costs may therefore differ significantly from those given.

2 Contract Clauses

There are no Z clauses which alter or add to the standard NEC termination clauses 94, 95, 96 and 97.

Clause 94.2 states "The *Employer* may terminate for any reason" and that "The procedures followed and amounts on due on termination are in accordance with the Termination Table".

The termination table refers to a number of standard reasons for termination (R1 to R21) The reason for termination will not fall within these standard reasons.

Using the termination table, procedures P1 and P2 should be followed and the amount due should be calculated using A1, A2 and A4.

3 Procedures

P1 – "On termination, the *Employer* may complete the *works* himself or employ other people to do so and may use any Plant and Materials to which he has title." This contract would not be terminated in order that it could be awarded to a different contractor so this procedure should not be required.

P2 – "The *Employer* may instruct the *Contractor* to leave the Site, remove any equipment, Plant and Materials from the Site and assign the benefit of any subcontract or other contract related to performance of this contract to the *Employer*." Again this should not be relevant as we would not be intending to maintain any subcontractor or other contracts.

4 Amount Due

Code	Contract Clause	Assumptions	Cost
A1	An amount due assessed as for normal payments.	Completed Activities to end of July 07	£2.72M
	The Actual Cost for Plant and materials within the Working Areas to which the *Employer* has title and of which the *Contractor* has to accept delivery	Plant and Material on site and about to be delivered for structures.	£0.25M
	Other Actual Cost reasonably incurred in expectation of completing the whole of the *works*. (Partially completed Activities + all other reasonable costs).	Partially completed Activities as forecast for August + payment of 50% of CEs (0.2M).	£1.06M
	Any amounts retained by the Employer	Retention	£0.14M

	A deduction of any unrepaid balance of an advanced payment.	None	£0
A2	The forecast Actual Cost of removing the Equipment.	demobilisation cost – Assume 1 month preliminaries	£0.07M
A4	The *fee percentage* applied to any excess of the total of the Prices at the Contract Date over the Price for Work Done to Date.	(£4.96M - £4.24M) x 8%	£0.06
		Total	**£4.30M**

5 Fees

The agreement of the amount due is not a simple exercise and is likely to require long and detailed negotiation. It would be likely that this would take more that a year and require significant fees to be allowed. For the purposes of this note a figure of **£200K** has been used.

6 Additional Activities Required

Stop work and return to pre-construction state*	**Stop Work for Commencement at a later stage***
Zone 1 • Removal of temporary road construction, earthworks and fencing. Replace topsoil and return to agriculture. • Divert back BT apparatus to original line. • Re-construction of A49 bound layers. • Backfill earthworks cut, topsoil and return to agriculture. • Remove stock proof fencing. • Re-establish any damaged land drains. • Remove underground drainage.	Zone 1 • Removal of temporary road construction, earthworks and fencing. Replace topsoil and return to agriculture. • Re-construction of A49 bound layers. • Complete stock proof fencing and accesses. • Backfill earthworks with layer to protect formation.
Zone 2 • Remove Norton Brook Culvert, backfill and re-establish original brook course. • Excavate bund with material taken to backfill the Hoarwithy bridge cutting. • Remove stock proof fencing. • Backfill ditches and re-establish field drains. • Remove underground drainage. • Backfill balancing ponds.	Zone 2 • Complete Norton Brook Culvert wingwalls. • Planting along realigned brook course to prevent scour. • Completion of ditch and outfalls • Backfill earthworks with layer to protect formation.
Zone 3 & 4 - Hoarwithy Road Bridge	Zone 3 & 4 – Hoarwithy Road Bridge

• Demolition works to bridge constructed to date or bury. • Place and compact earthworks to fill cutting. • Divert Welsh water main back to original course. • Divert BT back to original course. • Remove fencing and re-establish stock proof fencing.	• Complete bridge structure and road tie-ins. • Complete permanent Welsh Water and BT diversions • Finish stock proof fencing. • Remove temporary carriageway. • Backfill earthworks with layer to protect formation.
Zone 5 • Backfill cutting and balancing pond. • Remove fencing and re-establish stock proof fencing.	Zone 5 • Finish stock proof fencing • Backfill earthworks with layer to protect formation.
Zone 6 • Backfill cutting and re-excavate embankments. • Remove fencing and re-establish stock proof fencing. • Backfill above archaeological feature and return to agriculture. • Re-establish fencing and hedges.	Zone 6 • Construct temporary protection for archaeological feature. • Finish stock proof fence. • Backfill earthworks with layer to protect formation.
Zone 7 • Backfill cutting and re-excavate embankments. • Remove fencing and re-establish stock proof fencing. • Return site to grazing pasture and remove temporary newt fencing. • Divert BT and electrical diversions back to original. • Remove all drainage works completed to date.	Zone 7 • Complete badger and newt fencing and multi species tunnel. • Complete newt ponds and other ecological requirements of the DEFRA licence. • Complete security fencing and accesses for industrial units. • Finish all part complete drainage.
Zone 8 & 9 • Reconstruct removed carriageway. • Excavate new roundabout road construction. • Divert BT and electrical diversions back to original. • Remove fencing and temporary footpath.	Zone 8 & 9 • Complete partially complete roundabout construction. • Complete drainage works
Estimated Total Cost = £2Million	**Estimate Total Cost = £1.5Million**

* Assume works would be carried out by the *Contractor* Alfred McAlpine.

7 Conclusion

The total cost of terminating the contract in August is estimated to be the total of the amount due, fees and additional work (£6.0M to £6.5M) less the amount already paid to McAlpine for completed activities (£2.7M).

Cost to terminate = £3.3M to £3.8M)

Appendix A – Scheme Zone Plan

Appendix (g)

A PROPOSAL FOR ARCHAEOLOGICAL EVALUATION OF THE 'ROTHERWAS RIBBON' ON HEREFORDSHIRE COUNCIL OWNED LAND AT ROTHERWAS INDUSTRIAL ESTATE

(INCLUDING ADDITIONAL OUTLINE PROPOSALS FOR PREPARATION OF A CONSERVATION PLAN, A VISITOR CENTRE FEASIBILITY STUDY AND AN ARCHAEOLOGICAL STUDY OF THE WIDER ROTHERWAS LANDSCAPE)

1. *Summary*

This document is a proposal for archaeological evaluation of the Rotherwas Ribbon (a potentially highly important Neolithic/Early Bronze Age monument discovered in early Summer 2007 at Rotherwas, Herefordshire) on land owned by Herefordshire Council within Rotherwas Industrial Estate. The objective of the work will be to define the existence, extent and character of the Ribbon within the industrial estate.

Dependent on the results of the archaeological work, it is also proposed to prepare an interim Conservation Plan for the Rotherwas Ribbon (in the meantime only for any part of it located within the industrial estate), and to commission a feasibility study evaluating the potential for the creation of a permanent Rotherwas Ribbon visitor centre incorporating an exposed section of part of the monument on Council owned land within the industrial estate. In addition, the designing of a broader archaeological study of the landscape of the Rotherwas area is also proposed.

It is intended that the work should be funded by Herefordshire Council, and managed and undertaken by Herefordshire Archaeology (the archaeology service of Herefordshire Council) with specialist external involvement as required. The first stage of the project (the archaeological evaluation work) would provisionally take place in late Autumn 2007, and would be completed (to Assessment Report stage) by the end of February 2008. The interim Conservation Plan would be completed by the end of May 2008, the Visitor Centre feasibility study by the end of September 2008, and the archaeological landscape study project design by June 2008.

2. *Background and rationale*

The Rotherwas Ribbon was discovered in early Summer 2007 during archaeological mitigation work undertaken for Herefordshire Council by the Worcestershire Historic Environment and Archaeology Service in advance of the construction of the Rotherwas Access Road (a link road from the A49 to the Rotherwas Industrial Estate). The Ribbon is a unique serpentine shaped monument made of fire cracked stone and apparently dating from the Neolithic/Early Bronze Age. Though not precisely interpreted, its likely date and highly unusual character (apparently representing a hitherto unknown aspect of Neolithic/Bronze Age cultural activity) make it of high potential archaeological importance and interest.

75 metres of the Ribbon was exposed within the road corridor, and it is clear that the monument extends north (towards Dinedor Hill) and south (towards the Rotherwas Industrial Estate). A funding proposal for further archaeological work (geophysical survey and sample excavation) has recently been made to English Heritage with the objective of further evaluating the extent, nature and date of the Ribbon in the fields immediately beyond the road corridor. Subject to agreement by English Heritage, this work is planned to take place in early Autumn 2007. As part of an ongoing process of

determining the future of the road scheme and the conservation of the Ribbon, the opened area of the monument within the road corridor has recently been reburied as a protection measure.

Alongside the planned English Heritage funded work it is important to begin to further define the presence of the Rotherwas Ribbon in areas of direct potential management threat (notably the Rotherwas Industrial Estate), to start to set understanding of the Rotherwas Ribbon within a more integrated view of the wider Rotherwas historic landscape, and to evaluate the options for long term public presentation of the Rotherwas historic landscape story (including the Ribbon) within a Visitor Centre (with Herefordshire Council owned land within Rotherwas Industrial Estate an obvious 'in principle' location for such a facility).

The immediate objectives in progressing the Ribbon agenda are therefore (subject to the findings of the planned English Heritage funded work) to define the extent and survival of the Rotherwas Ribbon within the Rotherwas Industrial Estate, to develop an interim Conservation Plan for the monument in this 'high risk' development area, to evaluate the feasibility of creating a Rotherwas Ribbon Visitor Centre Centre within the industrial estate, and to design a process of further investigation and management of the wider Rotherwas historic landscape.

3. *Project Components*

The proposed project has 4 components:

1. Archaeological field evaluation of the Rotherwas Ribbon within Rotherwas Industrial Estate.

2. Preparation of a interim Conservation Plan for the Rotherwas Ribbon in the Rotherwas Industrial Estate.

3. Execution of a feasibility study for the creation of a Rotherwas Ribbon Visitor Centre within Rotherwas Industrial Estate.

4. Devise a 'Landscape Study' to set the Rotherwas Ribbon in the wider historic landscape context of the Rotherwas area, and to enable definition of management objectives for the wider Rotherwas historic landscape.

It should be noted that Component 1 (objectives and method statement detailed below) is contingent on the results of the proposed English Heritage funded work (provisionally planned for Autumn 2007) supporting the possibility that the Ribbon extends into Rotherwas Industrial Estate. Components 2 and 3 are similarly contingent on Component 1 identifying remains of the Ribbon within the Rotherwas Industrial Estate (and therefore at this outline stage they are only defined below in terms of objectives).

4. *Strategic Context*

The specific project proposals set out within this document (and the detailed issue of the identification of and presentation of the remains of the Rotherwas Ribbon within the Rotherwas Industrial Estate) should be seen as Stage 1 within a broader strategic process for developing the understanding, management and public presentation of the multi-period historic landscape of the Rotherwas area. That strategic process will include the following stages:

- Stage 1- Implementation of the present proposals (to be completed by September 2008)

- Stage 2 – Implement the wider landscape survey (according to the design developed under Component 4 of the present project, 2008/9)

- Stage 3 – Implement the Visitor Centre Project (2009/10?)

5. *Project component breakdown*

5.1 Archaeological field evaluation of the Rotherwas Ribbon within Rotherwas Industrial Estate

Objectives:

- To test the premise that the Rotherwas Ribbon extends into the area of the Rotherwas Industrial Estate and that remains of it survive there;

- To establish the extent and location of the Rotherwas Ribbon in the Rotherwas Industrial Estate;

- To provide further archaeological evidence contributing to the overall understanding of the Rotherwas Ribbon;

- To provide opportunities for public engagement with the evaluation process.

Method:

Because past disruption and contamination of surface horizons in the industrial estate/former military camp has almost certainly made geophysical survey impractical, archaeological assessment will be proceed by opening trenches. Subject to confirmation of Herefordshire Council ownership, assessment of the likely line of the Ribbon, location of known services, and practical access and safety considerations, two trenches will be opened. The trenches will be 30 x 4 metres in size. The width of the trenches will allow a narrower trench to be extended (in depth) to achieve a safe working environment at depth. The length of the trenches (30m) is designed to extend a distance beyond the width of the 'paved' monument. Excavation will be undertaken in each trench to expose the top of the stone surface/deposit, prehistoric fills or natural (whichever is encountered first), also ensuring that all later archaeological features (such as features associated with the military use of the site) are properly examined and recorded. Dependent on the initial results, an area of the Ribbon stone surface/deposit may be additionally excavated to extract samples (environmental, geoarchaeological and radiocarbon) and test the sequence of deposits. Where appropriate, excavation of features outside of the stone surface/deposit (such as associated pits) will also be undertaken.

Depending on the exact locations chosen, appropriate consideration will be given to safely securing the site outside of working hours, with necessary practical measures (such as erection of site security fencing) taken to ensure this. On completion of the excavations, the excavated areas will be carefully backfilled, replacing the fills in the same sequence as they were extracted, and restoring the surface as found.

Following completion of the fieldwork, an Assessment Report will be prepared. This process will include collation of the site archive (including finds and environmental processing), preparation of a site archive summary report, and preparation of the

Assessment Report. The Assessment Report will be used to inform the conduct of further analysis of the excavation archive and the subsequent preparation of the Final Report.

The fieldwork and post excavation elements of the project will be accompanied by ongoing dissemination of public information about the project. Provisionally this is planned to include maintaining and posting a daily web based 'dig diary' during the course of the project, the production of 3 formal press releases (announcing the commencement of the work/proposed work programme, the completion/results of the fieldwork phase, and the completion/results of the Assessment Report stage), and programme of 3 public visit days (including one Saturday) to be undertaken following the completion of the excavations.

Staffing and timescale

Overall management would be undertaken by Dr Keith Ray (County Archaeologist), with project management/public liaison coordination undertaken by Ian Bapty (Senior Project Archaeologist). The Site Director would be Peter Dorling (Senior Project Archaeologist), assisted by David Williams (Project Archaeologist) and Chris Atkinson (Community Archaeologist). Post excavation work would be undertaken by Peter Dorling with assistance from other Herefordshire Archaeology staff as required, and potentially including specialist assistance from external experts.

The fieldwork is provisionally planned to be undertaken over a 4 week period in Late Autumn 2007. Post excavation work/Assessment Report preparation would be completed by the end of February 2008, with the final report completed by the end of August 2008.

5.2 Preparation of an interim Conservation Plan for the Rotherwas Ribbon in the Rotherwas Industrial Estate

Objectives (note that this component will only take place subject to the identification of the Ribbon within the industrial estate):

- To detail the remains, extent and condition of the Rotherwas Ribbon within the Rotherwas Industrial Estate;
- To set out constraints on development of areas where the Ribbon may exist;
- To define an overall management plan for the Rotherwas Ribbon within the Rotherwas Industrial Estate

Staffing and timescale

The interim Conservation Plan will be undertaken by Ian Bapty (Senior Project Archaeologist) under the management of Dr Keith Ray (County Archaeologist). The plan is provisionally planned to be completed by the end of May 2008.

5.3 Execution of a feasibility study for the creation of a permanent Rotherwas Ribbon Visitor Centre within Rotherwas Industrial Estate

Objectives (note that this component will only take place subject to the identification of the Ribbon within the industrial estate):

- Assess the practical feasibility of creating a visitor centre within the Rotherwas Industrial estate (finding a suitable location which will incorporate the Ribbon

remains, associated public access and safety considerations, and the process of combining such a facility with the other commercial activities on the site);

- Assess the conservation issues surrounding the permanent open display of a fragile structure such as the Ribbon within a visitor centre context;

- Assess the viability of such a proposal in terms of visitor demand, commercial sustainability, and input to the Hereford/Herefordshire economy;

- Assess the practical display/interpretation issues which the particular nature of the Ribbon (highly important, but unimpressive visually) raises;

- Give outline consideration to the nature of the building and facilities which would best deliver a broad based/sustainable attraction;

- Should the idea be considered feasible, provide outline costs for developing such a facility, identify potential sources of funding, and provide a 'roadmap' for achieving realisation of the project.

Staffing and timescale

The project would be undertaken by external consultants, and would be managed (including preparation of the brief) for Herefordshire Archaeology by Ian Bapty (Senior Project Archaeologist) under the overall management of Dr Keith Ray (County Archaeologist). The project would commence concurrently with the Conservation Plan preparation process. The brief would be prepared by the end of May 2008, and subject to appointment of consultants, the feasibility study would be completed by the end of September 2008.

5.4 Devise a 'Landscape Study' to set the Rotherwas Ribbon in the wider historic landscape context of the Rotherwas area, and to enable definition of management objectives for the wider Rotherwas historic landscape.

Objective

Design a study of the wider history of settlement in the Rotherwas area as a basis for presentation and management of the combined Rotherwas archaeological resource. The study will include:

- Survey of Rotherwas House and Chapel (including house, Scheduled Monument, chapel and English Heritage Guardianship area);

- Survey of the existing Dinedor Hill Scheduled Ancient Monument, and investigation and evaluation of the wider Dinedor ridge area, including possible field evaluation report;

- Integration and restatement of the Royal Ordnance Factory Assessment Report (Gifford 2000) and identification of the historic factory as a key part of the Rotherwas historic estate;

- Preparation of an integrated Conservation Management Plan for the Rotherwas landscape to include Dinedor camp (Conservation Management Plan for Dinedor camp already in progress), the whole of the Rotherwas Ribbon, the whole former Royal Ordnance Factory and the whole of Rotherwas House and chapel and ruined landscape.

Staffing and timescale

The study design would be undertaken by Ian Bapty (Senior Project Archaeologist) under the overall direction of Dr Keith Ray (County Archaeologist). The design process would be undertaken concurrently with Components 2 and 3, with the design to be prepared by the end of June 2008. The objective would be use the design to secure funding for the landscape study and commence its implementation by Autumn 2008.

6. *Costs*

Component 1, including Herefordshire Archaeology staff time (Peter Dorling, David Williams, Chris Atkinson and Ian Bapty) for fieldwork, post excavation, report production and public liaison, plus additional external expenses (such as hire of machine, erection of security fencing, specialist analysis, report printing etc.) is estimated at **£20,000**.

Component 2, including Herefordshire Archaeology staff time (Ian Bapty) and report preparation costs, is estimated at **£3000**.

Component 3 is broadly estimated (inclusive of Ian Bapty staff time for Herefordshire Archaeology and external consultant costs) at **£30,000**.

Component 4 including Herefordshire Archaeology staff time (Ian Bapty) and report preparation costs, is estimated at **£2,500**.

The overall Project Cost is therefore estimated at **£55,500**.