
**VOLUME 10 ENVIRONMENTAL
DESIGN AND
MANAGEMENT
SECTION 6 ARCHAEOLOGY**

PART 2

HA 117/08

**CULTURAL HERITAGE ASSET
MANAGEMENT PLANS**

SUMMARY

This Advice Note provides guidance on the preparation and implementation of Cultural Heritage Asset Management Plans. The advice covers both the roads network and other land owned by the Overseeing Organisation.

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THE DEPARTMENT FOR REGIONAL DEVELOPMENT
NORTHERN IRELAND

Cultural Heritage Asset Management Plans

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1. INTRODUCTION

1.1 This advice is designed to assist the Overseeing Organisation's service providers (managers, agents, consultants and contractors) in their management of cultural heritage assets in the Overseeing Organisation's estate, and alert them to the effect of their activities on sensitive historic assets adjacent to it. This will be achieved through the preparation of Cultural Heritage Asset Management Plans (CHAMPs) by service providers. In England, CHAMPs will be informed by the cultural heritage asset inventory contained in the Highways Agency's Environmental Information System (EnvIS). This advice does not apply in the devolved administrations of Wales, Scotland and Northern Ireland.

1.2 The advice is intended to help to identify the scope of cultural heritage asset management, and to assess priorities, advise on the preparation of management proposals, and monitor the effectiveness of the process, in order to fulfil the Overseeing Organisation's obligations towards the historic environment. In England these are contained in the *Protocol for the Care of the Government's Historic Estate* issued by the Department of Culture, Media and Sport in 2003 (**Protocol**). The *Protocol*, made mandatory in the *Common Minimum Standards for the Procurement of Built Environments in the Public Sector* (Office of Government and Commerce 2005 **Common Standards**) requires English government departments and agencies to:

- nominate a conservation officer;
- use consultants and contractors with appropriate expertise;
- commission regular condition surveys;
- develop site specific management guidance;
- implement a planned programme of maintenance and repairs;
- protect buildings at risk;
- safeguard historic buildings that are in the course of disposal;
- comply with the non-statutory notification procedures for Crown bodies;

- ensure that the design quality of any new work enhances the historic environment; and
- prepare biennial conservation reports.

1.3 In England the Department for Transport (DfT) co-ordinates the HA's input into this process, but the HA provides the database and the management structure that ensures that the requirements of the *Protocol* are met.

1.4 Trunk roads and their environs and other property owned by the Overseeing Organisation contain areas of considerable value for cultural heritage. Cultural heritage assets potentially affected by roads include buried remains, historic structures and historic landscapes through which roads pass, and other property owned by the Overseeing Organisation can contain a similar range of assets.

1.5 Road improvements, management, maintenance, safety measures and traffic management can all have significant effects on this heritage. Road-related activities that may affect cultural heritage resources can range from major road building projects to the installation of electronic information systems or lighting. Trunk roads can also affect the settings of adjacent historic features and landscapes. Land and historic buildings owned by the Overseeing Organisation will need to be managed in conformity with the protocol.

1.6 The objective of CHAMPs is to ensure that valuable historic assets within and adjacent to the highway estate are protected from maintenance and management activities, as far as is practicable and cost effective. The aims of CHAMPs in England are:

- to analyse the HA's inventory of cultural heritage assets within and adjacent to the highway estate, contained in EnvIS;
- to identify priorities for management;
- prepare proposals for action to protect and enhance assets;
- implement the actions;
- monitor the process and feed information to EnvIS.

1.7 CHAMPs will allow the HA to ensure that maintenance and management will maintain the key HA environmental objective: “To minimise the impact of the trunk road network on both the natural and built environment.” (*Towards a Balance With Nature* HA Environmental Strategic Plan). This objective is embodied in EnvIS as the HA’s Environmental Objective and Cultural Heritage Objective (Interim Advice Note 84/07 Annex B and C).

1.8 The principles underlying the preparation and implementation of CHAMPs are to:

- develop cost-effective cultural heritage management practices for all aspects of the trunk road estate, aimed at maintaining and, where appropriate, enhancing, cultural heritage assets, in balance with other uses of the land;
- ensure a presumption in favour of the preservation in situ of cultural heritage assets;
- meet reasonable targets (both in terms of cost and appropriateness) for the preservation and enhancement of cultural heritage assets;
- establish partnerships with neighbouring landowners and relevant organisations, where appropriate, to optimise the value and efficiency of cultural heritage management;
- respect statutory and non-statutory designated assets adjacent to the trunk road, in order to manage the estate in these areas in a way that buffers and protects them as far as is practicable and cost effective;
- consider existing CHAMPs when undertaking road improvement schemes, maintenance and technical communications works;
- carry out mitigation, where practicable, of unavoidable negative impacts on cultural heritage assets;
- promote cultural heritage awareness within the Overseeing Organisation and its agents;
- publish the results of regular CHAMP reviews to monitor the progress towards achieving the Government’s aims and objectives for cultural heritage.

1.9 The Overseeing Organisation will be the owner

of the plans. In England, service providers will carry out the analysis of the inventory database, identify priorities and prepare CHAMPs, bidding for funds to carry out the identified actions within the existing procurement procedures. The framework for undertaking the process may be route-based or area based, depending upon the situation of the assets, the response of the service provider and other relevant considerations, such as balancing costs etc.

1.10 This Advice sets out the background and aims of CHAMPs, the methodologies for analysing the EnvIS database, the contents of a CHAMP, the procedures for preparing it, and the methods available for implementing it.

1.11 Useful documents related to conservation and heritage management are listed in the bibliography, and organisations that can offer specialist advice are listed in Chapter 5. The Natural England guidance note *Preparing a Heritage Management Plan* aimed at estate managers of property granted conditional exemption from capital taxation or in receipt of a Maintenance Fund) has been consulted in the preparation of this advice (www.countryside.gov.uk/heritagelandscapes).

2. BACKGROUND

2.1 The preservation and enhancement of the cultural heritage resource is generally considered to be desirable for the health and stability of human social groups. It contributes to the understanding and appreciation of our past and our relationship with the natural environment. The UK government is a signatory to the UNESCO *Convention Concerning the Protection of the World Cultural and Natural Heritage* (1972 **World Heritage Convention**), the *European Cultural Convention* (1954 **Cultural**), the *Convention on the Protection of the Architectural Heritage of Europe* (1985 **Architecture**), the *European Convention on the Protection of the Archaeological Heritage* (1992 **Archaeology**) and the *European Landscape Convention* (2000 **Landscape**).

2.2 In England, the review of English national cultural heritage policies, *The Power of Place* (2000 **Place**), led to recommendations that public bodies take full responsibility for the cultural heritage effects of their activities (*A Force for Our Future*, EH 2002 **Future**). The recommendations are endorsed by the government's cultural heritage advisors in England, English Heritage (who are also the Highways Agency's (HA's) statutory consultees), and supported by other heritage bodies. In England the Government's policies for sustainable development are incorporated into transport policies intended to ensure that the impact on the environment is taken into account when undertaking road transport related activities.

2.3 The Department for Transport (DfT) has signed the *Protocol for the Care of the Government Historic Estate* (DCMS 2003 **Protocol**) (see paragraph 1.3). The HA's Cultural Heritage Asset Management Plans (CHAMPs), coupled with the HA's Environmental Information System (EnvIS), will ensure that the requirements of the *Protocol* are fulfilled.

2.4 CHAMPs will use the EnvIS database of cultural heritage assets (identified as "elements" in EnvIS) within and adjacent to the highway, and on other property owned by the Overseeing Organisation to inform the proposals for their management and enhancement.

2.5 EnvIS is the HA's environmental system consisting of specific environmental data supplied by service providers, the HA and other bodies, which is collated and displayed in the Highways Agency Geographical Information System (HAGIS). This data

is used to assist in managing the environment, within and surrounding the trunk road network. EnvIS data is categorised as either an environmental inventory or environmental management information, which together provide important details on the characteristics and management of Environmental Elements located within and surrounding the trunk road network. Data are submitted to EnvIS in a specified format and conforming to identified milestones. Full details are contained in this HA Interim Advice Note 84/07.

2.6 Preparing and implementing a CHAMP is an iterative process. The data gathered through EnvIS are analysed to form the baseline information for CHAMPs. When CHAMPs are implemented, any resulting changes to the assets will be recorded in EnvIS, with details of any management actions undertaken and further proposals for on-going management, if appropriate. Each CHAMP will be reviewed every 4 years (in line with DfT historic estate quadrennial reviews) to ensure that any changes in the network, management, and perceptions of value are taken into account.

2.7 The development of a CHAMP involves the following stages:

- review heritage data supplied by EnvIS;
- analyse the EnvIS data to identify appropriate management actions;
- prepare CHAMP;
- submit Plan and bid to HA for funding;
- implement agreed management actions;
- identify future management actions; and
- review results and update EnvIS.

3. CONTENTS OF A CULTURAL HERITAGE ASSET MANAGEMENT PLAN

3.1 It is not intended that there should be a formulaic approach, but certain components are expected to be covered by all Cultural Heritage Asset Management Plans (CHAMPs). The key contents of a CHAMP are sections describing:

- the purpose of the Plan;
- the objectives of management;
- description of the asset (including its value and any relevant historical evidence);
- its current condition;
- management issues (including the impact the asset currently experiences, potential future impacts on it, and its vulnerability);
- the proposals for management, including work programme;
- costings of the management proposals and bid details;
- arrangements for monitoring and review;
- the procedures for updating EnvIS;
- appendices.

Each of these components is discussed below in more detail.

The Purpose of the CHAMP

3.2 A short introductory section, explaining the purpose of the plan and summarising the description of the cultural heritage asset, its location, recommended actions, cross referenced to full descriptions of undertakings contained in the appendices. This section also identifies the parties to the plan – the Overseeing Organisation’s personnel and agents, the consultants and any specialists involved in its preparation, and statutory and other organisations with an interest. The date, status and author of the CHAMP should be clearly identified.

The Objectives of Cultural Heritage Asset Management

3.3 This section sets out the broad policies for managing the Highways Agency’s (HA’s) cultural heritage assets, related to government and other relevant organisational strategies, policies, aims and objectives. Some of these are mandatory, required by legislation or binding commitments, while others reflect best practice and advice. The Objectives set out in the Environmental Information System (EnvIS) for cultural heritage should be referenced. See EnvIS Part 2, Appendices B and C. The application of these objectives to the asset should be clearly set out.

Description of the Asset

3.4 This section includes information on the location and extent of the cultural heritage asset, a brief description including its setting, a summary of its value and a brief history of the asset. Judgements of value should be based on the advice in *DMRB Volume 11, Section 2, Part 3: Cultural Heritage (DMRBvol11)*. Descriptions should conform to those used in EnvIS (See EnvIS Part 2). Any detailed reports arising from the work to prepare the CHAMP should be placed in the CHAMP appendices.

Condition

3.5 The EnvIS environmental management information (emi) file will include an assessment of the condition of each cultural heritage asset, expressed as Red, Amber or Green (see EnvIS Part 3). These Red, Amber or Green condition assessments are used to establish priorities for management actions. Condition Red indicates the asset is poor condition and not meeting the objectives set out in EnvIS, and urgent corrective action is required. Amber indicates that the asset is satisfactory in terms of the EnvIS objectives but that it is not fully meeting its potential, and action is required to bring it up to the required condition. Green indicates that the asset is in good condition and no remedial work is needed.

3.6 The factors to be considered in assessing Condition are the physical state of the asset, its setting, its value as established in the Description, and its vulnerability. The assessment of an asset’s physical state should take account of:

- completeness;
- the state of its setting;
- the survival of features of historic interest; and
- comparison with others of its type.

3.7 An assessment of an asset's vulnerability should review the rate of change currently being experienced by the asset – for instance, is it deteriorating rapidly or is it relatively stable? – and the predicted changes that will be caused by, for instance, proposed changes in management regimes or by proposed road schemes. Advice on assessing setting can be found in *DMRB Vol II, Section 2, Part 3: Cultural Heritage (DMRBvol11)*.

3.8 Field survey is used for observing the impacts of past events and prevailing conditions, and close liaison with those responsible for maintenance and repair is essential for predicting future impacts. It is important to appreciate the potential impacts caused by changes to regulations, procedures, or standards, or even changes of service provider. Particular note should be taken of the effects on cultural heritage assets caused by historic boundary maintenance, hard estate resurfacing and repairs, structure maintenance and repairs undertaken under routine arrangements.

Management Issues

3.9 This section considers the main management issues that arise in relation to cultural heritage assets. These may include:

- conflicts between roads priorities and other uses;
- conflicts between environmental and economic objectives;
- impacts arising from roads use or previous or existing management regimes;
- implications of compliance with safety legislation, regulations or highways standards;
- options for limited resource allocations;
- impact of maintenance regimes.

3.10 All historic materials change through time, through decay, damage, disturbance, repair, erosion and so on, but avoidable damage to assets can occur through a wide range of agencies. Key sources of impact include:

- road users (eg collision damage, vandalism, etc.);
- air pollution;
- natural agencies (eg erosion, flooding, etc.);
- verge maintenance works (eg tree and scrub management, grassland management, line-of-sight vegetation clearance, etc.);
- planting and aftercare;
- maintenance of drains and boundaries;
- maintenance of structures, utilities and surfaces;
- traffic control and safety measures;
- land management (eg. control of rabbits).

3.11 This is not an exhaustive list and sources of impact should be considered on a case by case basis. Climate change may well affect several of these factors as well as introducing new effects and predictions for future conditions, for example, more extreme weather episodes should be taken into account, using appropriate advice.

3.12 As well as physical impacts on assets there may be impacts on their setting, such as the inappropriate treatment of road-side features, like kerbs or boundaries, and introduction of Automatic Traffic Management and its associated gantries and signage structures. The way the asset is being managed at the time of the survey should be established, noting the effects of any recent changes, and any relevant current and proposed arrangements for improvements, repairs, conservation etc.

3.13 The study should identify any constraints or conflicts arising from resource allocation, existing management plans, highways standards, legislation, or other sources and set out how these are to be resolved. This should take into account the value of the asset, to ensure that proposed arrangements are reasonable, cost effective and appropriate. Opportunities for future management, both short term and long term, should be discussed, with the assessment of the likely outcomes and a programme for their implementation.

3.14 Historic boundaries can include structures, such as walls and "Cornish hedges", as well as historic hedgerows and ditches. Historic hedges are protected by statute, and although other historic boundaries are not currently protected in the same way, they are frequently

important elements in historic landscapes. Maintenance operations should take into account the historic value of these features, and proceed accordingly, for instance, repairing dry stone walls using appropriate materials and construction methods. Maintenance of ditches can reveal archaeological material, and contractors may need to be made aware of potential finds, particularly near known sites.

3.15 Any information collected in connection with road improvements should be incorporated in EnvIS and should inform the preparation of any relevant CHAMPs.

3.16 A consideration of the Condition and the Impact will indicate of the asset's Vulnerability. This is independent of its value, which is taken into account when establishing priorities for action. Vulnerability is described as **Robust, Adequate or Fragile**. These terms are used to describe the situation of the asset, both current and predicted. Assets in condition Green, where the impact is low would be at the Robust end of the scale, and features in condition Red in a high impact situation would be at the Fragile end of the scale. The Value and Vulnerability assessments are subsequently combined to establish the Priority for management action, as set out in below.

The Proposals for Management Actions

3.17 This section of the CHAMP sets out the detailed actions required to implement the undertakings and the Plan aims. The actions should be SMART – Specific, Measurable, Agreed, Realistic and Timetabled. The general options likely to be available for the different categories of asset are set out in Chapter 4, and the CHAMP should detail the application of the agreed actions, as they apply to the particular asset, together with a timetable for their implementation.

3.18 The Priority Matrix (Table 3.1) is used to assign a Priority rating to each cultural heritage asset, and the rating is then used to identify a timescale for action. The Value column should rank assets as High, Medium or Low. The Vulnerability ratings of Robust, Adequate or Fragile, are derived from the assessments of Condition (Green, Amber or Red) made during the data search and field survey, combined with the level of Impact, either from current or predictable future events. Value and Vulnerability combine to indicate a Priority ranking as High, Medium, or Low, as shown by the matrix in Table 3.1. These scores should take account of Value Management Scores.

		VULNERABILITY		
		ROBUST	ADEQUATE	FRAGILE
VALUE	HIGH	Medium	High	High
	MEDIUM	Low	Medium	High
	LOW	Low	Low	Medium

PRIORITY

Table 3.1: Priority Matrix

3.19 The timetable should be related to the priority rating. CHAMPs should recommend actions in a four year rolling programme to undertake works in accordance with the Priority rating of the asset. The timetable for actions recommended for each of the Priority ratings is as follows:

- High Priority action needed in next 12 months;
- Medium Priority action needed in the next 24 months;
- Low Priority review condition in 4 years.

3.20 Each CHAMP should set out the recommended actions and their time scales, and a report should be produced every four years. In this time all the recommendations in the original CHAMP should have been actioned, and a review should be undertaken, and a report prepared.

3.21 Actions should take note of legislative constraints, the results of consultation with relevant authorities, and appropriate conservation principles as regards materials and techniques. Any proposed demolition, alteration, excavation, change of use, disposal or new build that would affect the asset should be taken into account, and if proposed management arrangements involve these activities, they should be clearly identified and justified, through cross referencing to the asset's condition, value, impact and vulnerability assessments.

3.22 A work programme should identify the actions intended to be undertaken in the framework of the Priority timetable, ie 12 months, 24 months and 4 years. It should include routine maintenance as well as actions targeted at specific problems. A work programme is essential for the effective monitoring and review of the work. Once management actions have been identified, these should be submitted to EnvIS in accordance with the requirements as stated in EnvIS Part 3 and 4.

Costings of Management Proposal and Bid Details

3.23 The CHAMP proposal should be submitted to the relevant HA's Area Manager, together with the costings to carry out the proposed works. These costs should form part of the Managing Agent's bid for undertaking the maintenance and management of the network for which they are responsible. The Plan should set out what is the purpose of the proposed work, what is to be done, how and when it is to be achieved and by whom, how it is to be reported and to whom,

how it is to be monitored and how the results measure up to the intentions. The bids should be supported by the priority scores accorded to assets in the analysis described above. Suitably qualified personnel should be identified for any work on the categories of assets in the Plan. The CHAMP proposal should be sent by the Managing Agent to the Area Manager or Route Performance Manager, who would consult the Regional Environmental Advisor for the Technical Services Division view.

Monitoring and Review

3.24 The CHAMP is a statement of intent, backed up by a system of monitoring and review. This section of the Plan sets out the arrangements to review the progress of the actions, access arrangements for monitoring by statutory agencies and other interested parties, and Plan reviews. Reviews of the Plan should not normally entail complete rewriting, rather they are opportunities to refocus and re-assess as new information is forthcoming during the course of works.

Update EnvIS

3.25 The EnvIS database should be updated with the results of implementing the CHAMP. The detailed procedure for undertaking this is set out in EnvIS, and may involve changes to the asset (element), planned, and actual management actions and any condition or performance ratings.

Appendices

3.26 To keep the CHAMP itself concise, all detailed supporting information should be placed in appendices. These should include any baseline survey reports, including desk top information, photographs, condition survey reports, relevant documents such as Scheduled Monument or Listed Building descriptions, and other relevant plans, proposals and information. The appendices should be included in the GIS based EnvIS database.

4. MANAGEMENT OPTIONS BY ASSET CATEGORY

General Management Issues

4.1 An environmentally integrated approach to management should be adopted. Many historic structures, for instance, support rare flora and fauna. The management of these features may need to balance an adverse effect on ecology against the protection of cultural heritage assets or vice versa. Frequently, however, an ecologically sound approach will prove to be equally appropriate for the conservation of the cultural heritage value. Early identification of relevant environmental factors should be possible through the integration of the cultural heritage information with other environmental aspects contained in the Environmental Information System (EnvIS).

4.2 An underlying principle for the management of all cultural heritage assets is to minimise the amount of disturbance to valuable assets. Any recommendations for the management of designated assets will need to comply with the regulations and standards governing them.

4.3 Work affecting Scheduled Monuments requires Scheduled Monument Clearance (SMC) from the Secretary of State for Culture, Media and Sport, advised by English Heritage. English Heritage should be consulted well in advance, as obtaining SMC can take many months, and will normally require a detailed description, explanation and justification of the works to be undertaken. Works affecting the setting of a Scheduled Monument do not need SMC, but setting is a material planning issue and EH should be consulted early in the process.

4.4 Listed Buildings can include structures such as bridges, milestones, tollhouses, gates, walls and many other features found on or near the Highways Agency (HA) estate. Consent is required to alter or demolish listed buildings, including making changes within their curtilage. Changes that would affect their settings do not require consent, but the setting of listed buildings is a material planning issue, and the local planning authority or English Heritage should be consulted if the setting of a listed building is an issue. There may also be local planning policies that cover the treatment of the asset. PPG15 contains the government's guidance on the treatment of Listed Buildings (PPG15).

4.5 The local planning authority controls certain works within Conservation Areas, and effects on the setting of a Conservation Area can also be a material consideration in planning issues. World Heritage Sites, Registered Historic Parks and Gardens and Registered Historic Battlefields, do not have statutory protection. Works affecting them, and their settings, however, are material considerations in planning decisions, and service providers should take this into account in drawing up Cultural Heritage Asset Management Plans (CHAMPs) for areas that include such sites.

4.6 The character of cultural heritage assets, and their situations, vary widely, and management proposals will also vary depending upon the form, material, extent, survival and vulnerability of the asset. Cultural heritage assets are grouped below in terms of their physical characteristics, rather than statutory or other categories, in order to describe the range of appropriate responses to highways works that may impact on them and to indicate the range of specialists whose input may be required. The effects of the same highways works on different asset categories are likely to be different and to require different specialist assessments and management actions. All relevant classes should be noted even if they relate to the same feature, so that the appropriate range of responses can be considered.

4.7 Six broad categories of assets are suggested:

- standing structures;
- earthworks;
- buried material including palaeoenvironmental;
- historic landscapes;
- industrial remains; and
- underwater archaeology.

4.8 The following suggestions for management procedures are for guidance and are not exhaustive; the range of management options available for each asset should be considered on its merits.

Standing Structures

4.9 Historic standing remains are usually visible and so should not usually be overlooked in surveys,

although overgrown vegetation may obscure more subtle items. Despite their visibility, however, for some remains their historic significance may not always be appreciated. This may be the case particularly with 20th century remains. Many highways structures in use, such as bridges, and mileposts, are themselves of historic value, and maintenance and repairs to them should be alert to this possibility and take it into account. The conservation of bridges, including historic examples, is dealt with in a manual prepared for the HA (Giffords, HA 2000).

4.10 If changes to the highway affect valuable historic buildings or their settings, then they may be at risk. Upstanding monuments, ruins and derelict structures are vulnerable to lack of maintenance and neglect, vandalism, vegetation, water damage, inappropriate use and the removal of materials for salvage. The risks posed by these processes should be assessed.

4.11 Standing buildings capable of economic use are usually best kept in occupation to safeguard their future. Although occupied buildings are unlikely to

be encountered within the roads network, roads may affect historic buildings outside the road boundary. Management options may need to consider measures to mitigate the effects of changes related to the highway that would affect the viability of these buildings, for instance, through the creation of bunding, false cuttings, screening, double glazing, planting or quiet running surfaces. These would normally be considered in relation to new road construction, but the setting of historic structures can be affected by more subtle changes to highways, such as lighting or signage.

4.12 The value of any ecology dependent on the structure, such as lichens, invertebrates and specialised flora, should be considered when addressing cultural heritage management procedures. Protected species, such as bats or badgers, may be present and all relevant legislative and regulatory requirements must be observed. Scrub, ivy, tree roots and bracken can be damaging and it may be appropriate to remove them, after taking specialist advice. Ruins may need to be consolidated to make them safe and to prevent further rapid decay, using conservation grade materials and techniques, as advised by specialists.

Summary

STANDING STRUCTURES	
Impacts	Possible Management Actions
Neglect	Enhance access or presentation
Inappropriate alterations	Use of appropriate conservation grade materials and techniques
Damage or demolition	Specialist conservation
Vandalism	Enhance access or presentation
Vegetation	Consideration of statutorily protected flora and fauna
Water damage or air pollution	Assessment and monitoring by specialist
Setting	Bunding, screening, planting, low noise road surfaces

Earthworks

4.13 Historic earthworks may be present in the roadside verge, or in adjacent fields or woods. They may be prominent and easily seen or they can be very subtle, requiring a trained eye to identify them. Some earthworks may be part of extensive complexes, continuing outside the highway boundary. Rapid survey work may be needed to assess the significance of any portions that lie within the highway boundary. Routine LIDAR surveys along the route of the road may

reveal subtle earthworks undetectable through normal observation. The result of this survey work should be submitted to EnvIS.

4.14 The risks should be assessed and damaging processes controlled or prevented if possible. Earthworks can be vulnerable to road re-alignment, vehicular damage, services, scrub invasion, drainage maintenance, burrowing animals and tree planting.

4.15 Where operations are being carried out that could affect earthworks, markers should be used to define their extent, and working methods agreed for their protection. Where this is not possible then recording prior to any physical damage, including excavation, may be

appropriate. All investigative works should be designed and carried out by specialist consultants and contractors. SMC is required for works that affect Scheduled Monuments. For many earthworks the best long-term management regime may be grassland appropriately managed.

Summary

EARTHWORKS	
Impacts	Management Actions
Vehicular damage	Define extent with ground markers during works
Utilities and drainage works	Excavation
Scrub invasion	Swathe management/mowing
Faunal burrows (rabbits)	Protective fencing, extermination
Planting	Recording

Buried Material

4.16 A wide range of historic material can survive below ground, and in some conditions this survival can be very good, for instance waterlogged deposits may contain preserved organic remains such as wood, leather, seeds, pollen, human and animal tissues and so on. For some periods buried material is the only evidence we have of the past. Buried material can be filled-in ditches, pits, gullies and other cut features, together with the remains of collapsed structures, such as walls, hearths, and layers of anthropogenic material.

4.17 Buried remains are not usually visible on the surface unless crop or soil marks betray their presence, frequently only identified from aerial photographs. This makes them particularly vulnerable if they have not been adequately located and marked on the ground. Some buried features may be identified from the study of aerial photographs (APs). Some Sites and Monuments Records/Historic Environment Records (SMR/HERs) have plotted APs onto maps and English Heritage is undertaking a National Mapping Programme of APs for the whole country. Aerial photograph plotting may still need to be carried out by the service provider’s archaeologists in parts of the country where up-to-date AP plots are not available.

4.18 Geophysical survey may also reveal buried features, but this is not usually undertaken as a matter of routine, and the compiler of the Plan will normally only have available the results of previous studies.

4.19 Another source of information regarding buried archaeology is geotechnical survey work, when boreholes and test pits may reveal archaeological areas of potential. The study of geotechnical logs can sometimes alert archaeologists to the potential of an area, for instance the presence of peat or colluvial deposits of archaeological interest. The standard geotechnical log, however, does not usually distinguish archaeological deposits beyond the identification of “made ground” or “fill” with sometimes a note of inclusions of brick or other anthropogenic material. If an area is particularly sensitive then an archaeological presence on site may be useful during the excavation of test pits.

4.20 The results of searches in these records should be recorded in EnvIS as an attachment to the relevant Inventory Element.

4.21 Waterlogged features constitute a special set of buried remains as they may contain palaeo-environmental evidence – organic remains preserved through anaerobic conditions. The importance of such deposits is recognised in their national research priority status, and also because they are particularly vulnerable to some of the effects of road construction. If the hydrological status of deposits were changed then the condition of archaeological materials can deteriorate, even if there were no other disturbance. Severe weather episodes such as flooding of previously dry deposits, or dessication in periods of drought, can be particularly destructive. Drainage systems designed to alleviate

the effects of climate change may need to consider the effects on the buried cultural heritage resource. Palaeo-environmental deposits may be localised or very extensive, and road activities may affect only a small proportion of a wide-ranging layer or threaten the loss of an entire deposit. Management procedures may differ in each case.

4.22 The threat to buried remains is their physical destruction through earthmoving activities, compaction by machinery or overburden, or the effects of changes to the hydrology through drainage, de-watering, impeded drainage, or even piling through impervious layers. Vehicular rutting, topsoil stripping, drainage ditches, fencing, piling, the construction of haul roads and compounds and laying services can all impact on buried remains, and a key to management is identifying areas of known and potential remains and informing those responsible for designing and executing such activities.

4.23 Preservation in situ is the preferred option if possible, but sampling extensive deposits where only a small proportion is under threat may be an acceptable mitigation strategy. A thorough research justification should always be applied where destructive procedures are proposed.

4.24 Careful design may offer ways of protecting buried material, for instance, an embankment constructed without stripping the topsoil, and using a geotextile, may avoid damage to below-ground features, although the effects of compression should be calculated and taken into account. DMRB Volumes 10 and 11 set out procedures for evaluating, avoiding and mitigating the effects of highways activities on archaeological remains.

Summary

BURIED MATERIALS	
Impacts	Management Actions
Earthworks	Avoid, define extent with ground markers during works Excavate and record
Fencing	Sampling programme
Haul routes/off site activities	Avoid, define extent with ground markers during works Excavate and record
Utilities and drainage works	Maintain hydrological regime Sampling programme
Structures and piling	Assess impact depths
Dewatering	Maintain hydrological regime Sampling programme
Faunal burrows	Protective fencing
Planting	Avoid, define extent with ground markers during works Excavate and record

Historic Landscapes

4.25 The field systems, parks, relict landscapes, etc. that go to make up extensive historic landscapes are frequently affected by road schemes, and the road is itself a component in the historic landscape. The very extensiveness of historic landscapes can make them hard to appreciate unless they are formalised in some way, like a park, or contain specialised features, such as might be found in a relict mining area. The whole landscape, however, is historic, and its differences can be seen as contributing to historic landscape character areas that encompass the entire country, including towns and industrial areas. The character of the historic landscape imparted by these components can be changed by alterations to the highway and its maintenance.

4.26 There are several specialised types of historic landscapes that have been separated out for particular attention in government policies. Important Historic Parks and Gardens, and Historic Battlefields are the subject of non-statutory designation by English Heritage, and Conservation Areas have statutory protection. PPG15: *Planning and the Built Environment* (PPG15) sets out the government's policies related to them. Other historic landscapes are not designated in England. It is expected, however, that the country will eventually be wholly covered by Historic Landscape Character descriptions, and many counties have produced Historic Landscape Character maps. Guidelines for the characterisation of historic landscapes have been published by English Heritage (Fairclough 2004 **HL Characterisation**). The EnvIS database should note any Historic Landscape Character descriptions available for the areas through which the trunk road network passes.

4.27 Valuable historic landscapes, other than Parks and Gardens and Battlefields, may not be covered in SMRs or other cultural heritage databases, so identifying them can be a challenge. Conservation Areas often contain a historic landscape justification, within the built environment, and National Parks and Areas of Outstanding Natural Beauty may also include historic features described in their designations that contribute

to their status. DMRB Volume 11 (**DMRBvol11**) also sets out methods for assessing historic landscapes in environmental assessments with more detail contained in *Assessing the Effect of Road Schemes on Historic Landscape Character* (HA, 2007 **HLA**).

4.28 Archaeological databases may list some of the elements that combine to create an important historic landscape but these may not be integrated to form defined historic landscape character areas. The National Trust database, currently under construction (2007), identifies its historic estates, and any road scheme passing through or adjacent to National Trust land will eventually have a detailed historic landscape description that should be consulted. Some important features of the landscape, such as historic hedgerows, although protected by statute, may not be identified until a threat to them has materialised, although some planning authorities are preparing maps of important hedgerows in their jurisdictions. Other historic boundary features, such as dry stone walls or field banks, currently do not benefit from the protection of 1997 Hedgerow Regulations (**Hedgerows**), so these may not appear on local cultural heritage databases, and may need to be surveyed and assessed for the EnvIS database to inform CHAMPs.

4.29 The management of the road in relation to historic landscape depends upon the elements – earthwork, structure, etc. – and their contribution to the historic character of the landscape. Preservation is the preferred option but there may also be scope for enhancement in that the impact of roads may be mitigated to benefit historic landscape character. It may be possible, for instance, to reconstruct or repair features previously lost or damaged, such as dry stone walls.

4.30 A road is likely to affect directly only a small proportion of a valuable historic landscape character unit but it may have a disproportionate effect. Often management is not only a matter of protecting the limited number of individual features that may be directly affected, such as boundaries, tracks, plantings etc, but also of considering the overall impact on views, severance, setting and scale of the resource.

Summary

HISTORIC LANDSCAPES	
Impacts	Management Actions
Inappropriate planting, boundaries, earthworks, materials and structures design/alterations	Maintain accurate HLC mapping and description Sympathetic design Use of appropriate materials and techniques
Loss of key elements of historic pattern	Recreate lost elements
Visual severance	Enhance visual effects

Industrial Remains

4.31 For the purposes of CHAMPs the term “industrial” is taken to mean roughly from the period of the English industrial revolution of the late 17th and early 18th centuries up to the most recent past. Industrial remains are separated out from the other cultural heritage categories only because they usually require specialist interpretation and identification. Industrial remains are immensely varied in type, size, and character. They may be buried deposits, standing structures, earthworks, landscapes or portable objects. For the purposes of CHAMPs, relict military features are categorised as industrial. The national Industrial Archaeology Database and the Defence of Britain database should be consulted in addition to the SMR sources.

4.32 The physical risks to industrial remains are similar to those set out above for the various categories of material remains, but there are some which are particularly associated with historic industrial sites. Economic re-use of redundant industrial buildings

is often not a realistic option. Other risks peculiar to industrial sites can arise from adverse associations, political attitudes or concerns about contaminated land. Relict industrial sites, for instance, may not conform to expectations of “attractive” historic landscapes or structures, and the destruction of historic industrial sites has frequently been carried out for the express purpose of “cleaning up” areas and rehabilitating communities blighted by changes in economic status. The pressure for the remediation and re-use of brownfield sites for redevelopment can affect important relict industrial areas.

4.33 A difficulty in managing historic industrial sites can be their sheer size, for instance, many metres thickness of spoil or slag covering hectares of ground. Alternatively, small historic industrial artefacts can easily be overlooked or disposed of without thought because of their familiarity or portability. Management will consist of variations of the procedures described above for the other categories, but should be designed and overseen by appropriately qualified specialists.

Summary

INDUSTRIAL REMAINS	
Impacts	Management Actions
Specialist area of feature classes: standing remains, earthworks, buried material, and historic landscapes	As per feature classes Includes military material Consult relevant databases Contact specialist to advise on significance and mitigation

Underwater Archaeology

4.34 Underwater archaeology relates to remains that are permanently or frequently underwater, including those in the tidal zones of beaches and estuaries. The range of underwater historic features includes not only remains such as boats, wharfs, fishing structures and so on, but also terrestrial artefacts lost or deposited in the water, and even drowned settlement features. Underwater situations can also contain valuable palaeoenvironmental resources, ranging from well-preserved objects to drowned forests, peat and alluvium. This is considered as a separate category here because the techniques needed to locate, map, assess and manage historic underwater material require specialist experience and skills.

4.35 Situations where roads may affect underwater archaeology are at bridges, causeways, and routes adjacent to the coast or on riverbanks. The construction, repair or modification of bridges may affect the waterside or bed of the watercourse being bridged. The caissons and piers of bridges and viaducts may damage river bottom deposits or lead to changes to the riverbed through scouring. If the bridge were an ancient route there may be traces of earlier crossings and lost or deposited objects on the bed. Works at the bridgefoot can reveal earlier phases of riverbank development

or previous bridges or fords. In urban and dockside situations wharfs have often encroached on the river itself, leaving earlier revetments, beach deposits and possibly wrecks buried behind new embankments, which may themselves be constructed out of re-used boat timbers.

4.36 The location and mapping of underwater archaeology can be a challenge. The local authority SMR/HER may record a pattern of finds from a riverbed, or early maps may indicate the location of previous river crossings, and so provide clues as to the potential of sites. Specialist marine charts and wreck databases may be relevant. It is probably sensible to assume that all river crossings hold some potential for underwater discoveries unless there is good evidence to the contrary.

4.37 The best management of the resource is to try to avoid disturbing it if possible, through the design of roads where they cross or encroach on water bodies. Maintenance of structures in these situations should be planned with the potential for underwater archaeology in mind, and disturbance avoided where possible. If disturbance is unavoidable then targeted surveys by specialists may be necessary, followed by appropriate mitigation.

Summary

UNDERWATER REMAINS	
Impacts	Management Actions
Earthworks	Review ground investigations for evidence of peat or other significant waterlogged organic remains Consult specialist survey databases Contact specialists for advice on significance and mitigation Assess depth of impact
Utilities and drainage	
Structures/piling	
Dewatering	

5. SOURCES OF FURTHER INFORMATION AND ADVICE

Advice and information on the cultural heritage resource and its significance, recording and management can be sought from the following agencies and groups:

English Heritage Regional Offices

(EH Contact)

North East Region
English Heritage
Bessie Surtees House
41-44 Sandhill
Newcastle upon Tyne
NE1 3JF
0191 269 1200

Yorkshire Region
English Heritage
37 Tanner Row
York
YO1 6WP
01904 601901

North West Region
English Heritage
3rd Floor Canada House
3 Chepstow Street
Manchester
M1 5FW
0161 242 1400

East Midlands Region
English Heritage
44 Derngate
Northampton
NN1 1UH
01604 730320

West Midlands Region
English Heritage
112 Colmore Row
Birmingham
B3 3AG
0121 625 6820

South West Region
English Heritage
29 Queen Square
Bristol
BS1 4ND
0117 975 0700

South East Region
English Heritage
Eastgate Court
195-205 High Street
Guildford
GU1 3EH
01483 252000

East of England Region
English Heritage
Brooklands, 245 Brooklands Avenue
Cambridge
CB2 8BU
01223 582700

London Region
English Heritage
1 Waterhouse Square
138-142 Holborn
London EC1N 2ST
020 7973 3000

Specialist Societies and Groups

Ancient Monuments Society
St Anne's Vestry Hall
1 Church Entry
London
EC4V 5HB
0120 7236 3934
(Ancient Monuments Society)

Association for Industrial Archaeology
AIA Office School of Archaeological Studies
University of Leicester
Leicester
LE1 7RH
0116 252 5337
(Industrial Archaeology)

Victorian Society
1 Priory Gardens
Bedford Park
London
W4 1TT
020 8994 1019
(Victorian Society)

Association for Studies in the Conservation of Historic
Buildings
181-2 Macaulay Road
London
SW4 OQX
020 8540 3066
(Building Conservation)

Institute of Field Archaeologists
SHES
Whiteknights
University of Reading
PO Box 227
Reading
RG6 6AB
0118 378 6446
(IFA)

Garden History Society
70 Cowcross Street
London
EC1M 6EJ
020 7608 2409
(Garden History)

Council for British Archaeology
St Mary's House
Bootham
York
YO30 7BZ
0190 467 1417
(CBA)

Georgian Group
6 Fitzroy Square
London
W1P 6DX
087 1750 2936
(Georgian Society)

Society for the Protection of Ancient Buildings
37 Spital Square
London
E1 6DY
0120 7377 1644
(SPAB)

Twentieth Century Society
70 Cowcross Street
London
EC1M 6EJ
0120 7251 3857
(Twentieth Century)

6. GLOSSARY

Actions	The steps needed to achieve the aims of the Cultural Heritage Asset Management Plan (CHAMP), including works, a timetable monitoring and review.
Aims	Intentions underlying the management of assets and the balance to be struck between its use and other interests.
Baseline record	A record of the location, extent, condition and existing management arrangements at the start of the preparation of a CHAMP.
Conservation	The process of managing change to sustain the significance of inherited historic assets, for current and future use and enjoyment.
Conservation Area	Statutorily protected area defined by Local Authorities to denote areas which are significant because of their particular character, generally arising from built heritage. This character may arise from the historic layout of roads, characteristic building materials or styles, or a particular mix of uses or space. It gives broader protection than listing individual buildings.
Desk-based survey	A data collection exercise utilising existing sources of cultural heritage data (such as Sites & Monuments records, Listed Building data, historic maps etc). The purpose is to identify any known cultural heritage resources.
English Heritage	The working name for the Historic Buildings and Monuments Commission.
Enhancement	Works beyond that required for maintenance, conservation or repair, in order to improve the condition, completeness or legibility of assets. Most clearly an option where authenticity is not an issue, for instance where the reconstruction of collapsed dry stone walls would appropriately enhance an historic landscape character area.
EnvIS	The Highways Agency's Environmental Information System (EnvIS), a GIS based database and management tool (see DMRB Vol 10, Section 0) that forms the basis of the Baseline Record. It is the source for initial cultural heritage information and is updated by surveys and actions undertaken in connection with a CHAMP.
Field Survey	Site visit to confirm the desk-based information, locate new assets and record their condition, etc.
Geophysical Survey	A non-intrusive archaeological prospecting technique, used to identify sub-surface features.
Listed Building	A statutory designation assigned to a built structure (not limited to buildings) of special architectural or historic interest. English Heritage holds the national archive of Listed Buildings in England and is responsible for designation. Local authorities hold the lists for their areas.
Maintenance	Routine work necessary to keep the fabric of historic assets in their existing condition, preventing or inhibiting the development of decay, but not involving repair.

Objectives	Overarching policies and intentions to which Aims contribute.
Reconstruction	Goes beyond repair or restoration in re-creating what no longer exists. It is speculative to the extent that physical and documentary evidence has to be supplemented with logical deduction or intelligent guesswork, often based on known parallels.
Register of Historic Battlefields	A non-statutory designation used by English Heritage to identify historically important battlefields.
Register of Parks and Gardens of Special Historic Interest in England	A non-statutory designation used by English Heritage to identify parks or gardens of particular historical value.
Repair	Reversing changes caused by decay, damage or use, taking an asset back to a readily known condition before the defect occurred but not involving restoration.
Restoration	Makes an historic asset conform to its known design or appearance at an earlier time. It is achieved by altering or replacing what has decayed, lost, damaged or inappropriately repaired or added.
Scheduled Monument	The designation by the Department of Culture, Media and Sport in England, Cadw in Wales, Historic Scotland and the Environment and Heritage Service for Northern Ireland, of a site or area as worthy of protection under the terms of the Ancient Monuments and Archaeological Areas Act 1979. Scheduled Monuments are nationally important, but not all nationally important sites are scheduled.
Sites and Monuments Record/ Historic Environment Record (SMR/HER)	Database of cultural heritage resources. In England, each County/Unitary Authority maintains its own SMR. Some details from some individual SMR/HERs are fed into the National Monuments Record (NMR), held by English Heritage.
World Heritage Site	The designation by UNESCO of an area or site considered to be of outstanding universal value.

7. BIBLIOGRAPHY

Listed below are some key texts but a comprehensive library of conservation and other guidance related to cultural heritage management is available on the Historic Environment Local Management website (**HELM**)

Cultural Heritage Management

ALGAO 1999 *An Assessment of English Sites and Monuments Records*, Historic Environment Conservation Report 97/20: Chelmsford.

Baker, D., 1983 *Living with the Past: the Historic Environment*. Bletsoe, Bedford.

Countryside Agency 2004 *Preparing a Heritage management Plan*.

Clark, K. 2001 *Informed Conservation*, EH.

Fairclough G. 1999 *Yesterday's World, Tomorrow's Landscape*, EH.

Heritage Lottery Fund 2004 *Conservation Management Plans*.

Hunter, J. and Ralston, I. (eds) 1993 *Archaeological Resource Management in the UK*. Alan Sutton, Stroud.

RCHME, ALGAO, and English Heritage 1998 *Unlocking the Past for the New Millennium: a New Statement of Co-operation on Sites and Monuments Records* RCHME, Swindon.

Fernie, K. and Gilman, P., 2000 *Informing the Future of the Past: Guidelines for SMRs*, EH.

Rippon, S., 2004 *Historic Landscape Analysis*, CBA.

Legislation

Ancient Monuments and Archaeological Areas Act (1979)

National Heritage Act (1983, amended 2003)

Burial Act (1857)

Planning (Listed Buildings and Conservation Areas) Act 1990

Hedgerow Regulations (1997) Protection of Military Remains Act (1986) Protection of Wrecks Act (1973)

The Treasure Act (1996)

Highways Act (1980)

Policy Conventions and Guidance Documents

DCMS *Protocol for the Care of the Government Historic Estate* (DCMS 2003)

DETR *New Approach to Appraisal* (NATA) 1998

DETR *Guidance on the Methodology for Multi Modal Studies* (GOMMMS) 2000 (superseded by WebTAG)

DoE *Crown land and crown development*. Circular 18/84

DoE *PPG15 Planning and the Historic Environment* (1994)

DoE *PPG16 Planning and Archaeology* (1990)

EH *Power of Place* (2001)

EH *A Force for Our Future* (2002)

UNESCO *Convention Concerning the Protection of the World Cultural and Natural Heritage* (1972)

European Cultural Convention (1954)

Convention on the Protection of the Architectural Heritage of Europe (1985)

European Convention on the Protection of the Archaeological Heritage (1992)

European Landscape Convention

Highways Agency Documents

Design Manual for Roads and Bridges, Vols 10 and 11

Assessing the Effects of Road Schemes on Historic Landscape Character (2007)

Conservation of Bridges (2000)

Commentaries/General

EH 2000: A review of the Monuments protection Programme, 1986 – 2000

EH 1995 Easy Access to Historic Properties

EH 2008 Conservation Principles

ISO 14001

8. ENQUIRIES

All technical enquiries or comments on this Advice Note should be sent in writing as appropriate to:

Division Director of Network Services –
Technical Services Division
The Highways Agency
City Tower
Manchester
M1 4BE

D DRYSDALE
Division Director of Network Services –
Technical Services Division

Director, Major Transport Infrastructure Projects
Transport Scotland
8th Floor, Buchanan House
58 Port Dundas Road
Glasgow
G4 0HF

A C McLAUGHLIN
Director, Major Transport Infrastructure
Projects

Chief Highway Engineer
Transport Wales
Welsh Assembly Government
Cathays Parks
Cardiff
CF10 3NQ

M J A PARKER
Chief Highway Engineer
Transport Wales

Director of Engineering
The Department for Regional Development
Roads Service
Clarence Court
10-18 Adelaide Street
Belfast
BT2 8GB

R J M CAIRNS
Director of Engineering