ANNEX 5 CULTURAL HERITAGE SUB-TOPIC GUIDANCE: ARCHAEOLOGICAL REMAINS

Contents

5.1 Introduction

5.1.1 Archaeology involves the study of the material remains of human activity from the earliest periods of human evolution to the present. Archaeological remains may comprise the buried traces of human activities or visible monuments, or moveable artefacts. Archaeological investigations can encompass the remains of buildings, structures, earthworks and landscapes; human, animal or plant remains, or other organic material produced by or affected by human activities, and their settings.

5.1.2 For the purposes of this guidance, however, archaeological remains and their settings have been distinguished from historic buildings and historic landscapes, to acknowledge that for practitioners there are specialist techniques and methods for studying each of these categories of the cultural heritage resource. Archaeology can involve the study of the material remains of walls, structures, field banks, monuments etc. from the past, and while historic buildings and historic landscapes are also formed of such materials, they are also subject to their own specialist approaches. Historic buildings are considered in Annex 6 and historic landscape is the subject of Annex 7. These sub-topics, however, are inter-related aspects of cultural heritage, and the sub-topic studies will need to be integrated to arrive at an assessment of the significance of the effect of a scheme on the cultural heritage resource.

5.1.3 It is likely that many schemes will not require equally detailed consideration of all three cultural heritage sub-topics. This Annex is intended to provide freestanding detailed guidance concerning the methodologies and sources of information specific to the Detailed Assessment of archaeological remains. Details of procedures for Scoping and Simple Assessment for all Cultural Heritage Sub-Topics can be found in the main Cultural Heritage guidance in Chapter 5.

5.1.4 A list of current guidance and standards documents is set out in Annex 4 and devolved administration procedures in Annex 8. Any departures from government guidance and standards should always be discussed with the relevant national heritage agencies, and approved by the Overseeing Organisation.

5.2 The Assessment Process

5.2.1 The detail of the archaeological assessment will depend on the stage of scheme delivery, and the nature of information required for decision making at a particular stage in the design process. Sections 1 and 2 of Design Manual for Roads and Bridges (DMRB) Volume 11 set out the framework for determining the appropriate type of assessment.

5.2.2 The Detailed Assessment will need to review the data obtained for the Scoping exercise or Simple Assessment, and consider the need to research more detailed or specialist sources or undertake fieldwork. A higher degree of detail in the evaluation and analysis is normally required in Detailed Assessments, in order to identify the significant constraints, and to obtain reliable indications of archaeological potential.

5.2.3 Assessing the archaeological implications of mitigation proposed by other studies (e.g. remediation of contaminated land, or landscape planting) forms an important part of the liaison with other topics. The same is valid for the other topic specialists, who should consider the effects of proposed archaeological mitigation on their topic areas, such as a route option that avoids important archaeological assets but impacts upon significant landscape views or ecologically protected areas.

5.3 Consultation

5.3.1 Chapter 3 of the main Cultural Heritage Topic guidance sets out the nature of consultations with statutory and other stakeholders appropriate for each type of assessment. The national heritage agencies have their own arrangements for the relationships between the statutory consultees and the highway authorities (see Annex 8) and these should always be followed. In England early consideration of English Heritage (EH) views is advised to assist in the identification of matters of national concern.

5.3.2 Detailed Assessments will usually involve consultations with local planning authorities' heritage advisors to discuss any archaeological issues potentially raised by the proposals.

5.3.3 If either, or both, the Historic Buildings and Historic Landscape Sub-Topics were also identified for further investigation by the Scoping Report or the Simple Assessment, then close liaison with the relevant sub-topic specialists would be required. The same may be the case with the Landscape, Townscape, Ecology and Nature Conservation and, if necessary, other topic specialists as well, as there may be significant areas of common interest between them. Consultation with other stakeholders should take account of any specialist

knowledge, and the sensitivity of the archaeological resource. Ongoing consultation with the design engineers is also essential, as early archaeological advice should inform the design process and the proposed design will be critical to the analysis of the data.

5.3.4 Investigations may include consideration of the aspirations of local amenity groups and local residents, as expressed in village plans or similar documents.

5.4 Defining the Study Area

5.4.1 The assessment should define a Study Area appropriate to each scheme, according to the sensitivity of the receiving environment, the potential impacts of the road scheme and the type of assessment. For a new road, if a preferred route were not yet defined, the Study Area may need to include the proposed route corridor plus 500m on either side. Once route options have been identified the Study Area for archaeological remains would usually comprise the scheme options and any new land-take, plus an area extending at least 200m either side of them. Issues of setting may need the consideration of the visual or aural envelope of monuments or even more distant aspects of the asset's surroundings.

5.4.2 In considering an extensive and well-preserved archaeological landscape, of prehistoric ritual monuments for example, the extent of the study should allow predictions to be made of the type, density and location of associated archaeological remains expected within the environs of the scheme and potentially affected by it. Predictions about the archaeological potential of the area may also be derived from the consideration of the historic landscape character units affected by the scheme.

5.5 Gathering data on archaeological remains

5.5.1 The two modes of investigation used to collect archaeological data are desk-based studies and fieldwork. General advice on the procedures is given below, but each scheme needs to be approached individually.

5.6 Desk-based studies

5.6.1 The study should collect relevant information on all significant archaeological remains and their setting, whether designated or not. Designated sites, such as Scheduled Monuments, World Heritage Sites, National Trust Land, Historic Parks and Gardens, Historic Battlefields, and all other designated archaeological sites should be located and assessed for their archaeological potential. If the historic buildings and historic landscape sub-topics are also being studied then the data collected by the respective specialists may be relevant to the understanding of the archaeological potential and should be consulted.

5.6.2 For undesignated sites the most detailed source of information is likely to be the local Sites and Monuments Record/Historic Environment Record (SMR/HER) held by the local planning authority. If the proposed route traverses the territory of more than one planning authority then several SMR/HERs may need to be consulted, and the study should make clear any disparities between the different records, and consider the implications these may have for the assessment.

5.6.3 Access to local SMR/HERs based on a Geographical Information System (GIS) can greatly assist data collection. Similarly, county or regionally based Historic Landscape Characterisation (HLC) or similar studies can help in understanding the archaeological development of an area and the likely survival of archaeological remains. The study should gather data in a manner compatible with the need for subsequent collation and mapping. Where possible and practicable researchers should obtain data in digital form. This will also help in the production of reports where the Overseeing Organisation requires electronic document submission.

5.6.4 To identify the potential for further archaeological remains the assessment may need to consider:

- historic maps to identify any features that do not appear on the SMR/HER. Detailed map regression may be carried out with the aim of identifying potential archaeological features, and former land-use (such as common land) that may have an implication for archaeology;
- aerial photographs and plot soil and cropmarks, if not already incorporated in the SMR/HER data;
- any information collected for the historic landscape and historic building studies, for instance, historic boundaries, settlement foci, historic activities and historic routes;

- relevant books, journals and other published and non-published material to assist an understanding of the overall archaeological potential;
- geological, topographical and hydrological maps, as well as available ground investigation information for details of previous ground disturbance and ground conditions;
- details of previous archaeological excavations in, or relevant to, the Study Area;
- published or unpublished national and regional archaeological research agendas, priorities and frameworks.

5.6.5 The engineering history of the route, where available, may be important for assessing the likely survival of buried archaeological remains, as past construction activities may have affected archaeological survival. The study should ensure that the results of any previous programmes of road-related archaeological investigations are considered. The archaeology topic may be screened out at any stage of the assessment process if it can be demonstrated that previous disturbance of the route has completely removed all archaeological potential. Such a conclusion may need to be tested by field survey.

5.7 Field Survey

5.7.1 Desk based studies may provide sufficient information for the decision making process. Recorded archaeology, however, only represents the known portion of the resource. Road schemes involving ground disturbance have the potential to affect remains whose presence is not yet known. The study should consider the potential for unknown archaeological remains in the light of the known data and the history of the area, and if necessary a programme of field surveys should be prepared to test the conclusions.

5.7.2 The purpose of field survey is to improve the information about the presence or absence, character, extent, date, integrity, quality and state of preservation of remains affected by a scheme. Field survey strategies should be designed to provide sufficient information for the purposes of the assessment. All methods must reflect the nature of archaeological remains likely to be present, and should be reasonable in terms of the scale of the threat, land use, presence of buildings, value for money etc. The availability of access, or the season, or the costs in comparison to the likely benefits, may constrain the methods, timetable or extent of field surveys that can be reasonably undertaken.

5.7.3 Field surveys should be undertaken on the basis of a written scheme of investigation for each survey, approved by the Overseeing Organisation, which clearly sets out the known archaeological data, the justification for the work, and the aims and objectives of the work, related to the proposed scheme.

5.7.4 The Study should always include a walkover survey. The walkover should enable the surveyor to:

- check the condition of visible assets within the Study Area, and record any that have not been previously noted;
- note indications of ground disturbance, made ground, colluvium, alluvium, etc. which might obscure or complicate the ability to detect sites;
- identify sites of palaeo-environmental potential (e.g. dry valleys, stream valleys, upland bogs, lowlands, etc);
- record current land-use and ground conditions;
- locate overhead cables and pylons that could constrain proposals for further work; and
- inform decisions about further field survey techniques to be applied, if necessary.

5.7.5 If further information is required the study will need to consider the range of field survey techniques available, some of which break the ground surface (‘intrusive’), and some of which do not (‘non-intrusive’). The distinction is made because in England and Wales the 1980 *Highways Act* does not include powers to enter and survey land for intrusive archaeological surveys; the same applies in Scotland. The landowner’s permission is required to undertake such surveys before Compulsory Purchase Orders (CPO) transfer ownership of the relevant land to the Secretary of State. In choosing the appropriate survey methods the surveyor will take into account the purpose of the assessment, the existing information, access and cost-effectiveness. There may be compensation issues to consider in the decision. In all cases where an intrusive survey is deemed necessary before a CPO is issued, a formal approach should be made to the landowner and occupier, through the appropriate channels, and the response recorded.

5.7.6 Non-intrusive survey methods include:

- topographical survey;
- geotechnical watching brief;
- geophysical survey; and
- field-walking.

5.7.7 A topographical survey may already have been prepared for the designers, and this may be sufficiently detailed and extensive for archaeological purposes. Engineers and archaeologists should liaise to see if archaeological information requirements can be met through the topographical survey. However, detailed annotation or specialist survey may still be required, for instance in cases where subtle surface indications have escaped the existing survey, or where specialist knowledge is required to recognise their significance. The use of LIDAR, a specialist photographic survey technique, may reveal patterns of micro-relief indicating buried archaeological potential, and in some cases LIDAR resources may already exist as part of the data collected for the scheme design. It will require specialist archaeological analysis and interpretation.

5.7.8 The geotechnical watching brief – the archaeological monitoring of test pits and boreholes carried out primarily for ground investigation purposes – is included as a 'non-intrusive' survey in archaeological terms because geotechnical investigation **can** be undertaken under powers of entry granted by the 1980 *Highways Act* and the *Roads (Scotland) Act* 1984. Archaeological consultants, together with the scheme's geotechnical consultants, should consider whether archaeological interests, as well as geotechnical ones, could be served when planning the location and analysis of test pits or boreholes.

5.7.9 In responsive environments geophysical surveys can locate and show the layout of complex sites through a variety of techniques. Geophysical surveys for archaeological purposes are generally non-intrusive. Although resistivity surveys involve shallow probes this disturbance is so minimal that it is generally ignored. Geophysical surveys may, however, result in crop damage, or be impractical in areas of growing crops. Metal detector surveys may be considered intrusive **or** non-intrusive depending upon the surveyors' response to positive readings – if anomalies are investigated by digging a hole then the survey technically becomes intrusive, but if they are merely recorded and mapped then it is non-intrusive. As with field-walking (see below), there is an issue of finds' ownership if an intrusive metal detector survey is carried out prior to the CPO. In the case of scheduled monuments, any geophysical survey (including the use of a metal detector, as well as other activities) undertaken without Scheduled Monument Consent is a criminal act.

5.7.10 Field-walking involves the systematic examination by archaeologists of the surface of a ploughed fields to collect, record and analyse the artefacts visible on its surface. It is, therefore, only possible where the ground is ploughed and still bare, preferably a little weathered. This usually sets seasonal limits, although sometimes ploughing can be arranged to facilitate the study. The technique can be effective for locating areas of human activities, and indicating their period. It can, however, be misleading in suggesting the presence of sites that do not survive. Field-walking is usually considered to be a non-intrusive technique, because it involves removing artefacts only from the **surface** of the field, not digging below it. However, in England such material belongs to the landowner, and, prior to CPO its removal would require a formal agreement with the landowner regarding its ownership, treatment and ultimate disposal (in Scotland such material belongs to the Crown; see Annex 8). In addition, field-walking could be considered intrusive in that it disturbs the artefact status of the ground in a way that other non-intrusive surveys do not. Each case needs to be considered in the light of the situation on the ground.

5.7.11 Intrusive methods of field survey include:

- borehole/probe/auger survey;
- test-pitting;
- trial trenching.

5.7.12 The study of borehole logs recorded for ground investigation purposes may be sufficient to alert the archaeologist to the palaeo-environmental potential of an area. Archaeologically targeted boreholes, probes and auger surveys are sometimes undertaken to establish the location and character of more or less extensive palaeo-environmental deposits and to assist in geo-archaeological modelling, and detailed palaeo-environmental information is likely to come only from boreholes specifically undertaken for archaeological purposes. They usually differ from geotechnical boreholes in both their depth (usually archaeological boreholes are shallower) and in the analysis of the core samples.

5.7.13 Test pits for archaeological purposes differ from geotechnical ones in that they are usually small (typically 1m x 1m) and normally only penetrate a little below the top of the uppermost archaeologically sterile layer. They are hand dug, and the soil is usually sieved in order to assess the artefact density or character of the topsoil, where this cannot be achieved through field-walking (for instance in permanent pasture). They are unlikely to reveal much about the plan or extent of archaeological sites, except by chance. Like field-walking, the technique can suggest the presence of a buried site or demonstrate remains which exist only in the topsoil. It can also be valuable for establishing the depth of topsoil or overburden in the absence of ground investigation data.

5.7.14 Trial trenching is undertaken to examine a sample area through archaeological excavation, and can be a guide to the presence/absence, condition, period and type of remains. The proportion of the proposal area to be trenched should be chosen on a case-by-case basis, but in studies of areas of known archaeology it has been shown that the optimum percentage is between 5% and 10% of an asset. Trial trenching is good for assessing the location, complexity, character, condition of assets and the quality of artefacts. It is less effective for revealing the layout of buried remains. The timing, location and percentage of the area to be trial trenched should be discussed with consultees and agreed with the Overseeing Organisation.

5.7.15 Strip map and sample is an archaeological mitigation technique that entails stripping extensive areas under archaeological supervision, then planning and selectively excavating significant deposits. It should not be adopted as an alternative to effective evaluation, nor as a form of watching brief where little is known. It is most effective where the information usually sought by evaluation – namely the location, extent, survival and character of archaeological deposits – is already known, and therefore, where further evaluation is redundant, although confirmation by evaluation may be prudent before committing to a strip map and sample programme.

5.7.16 There may be opportunities to investigate the impact of schemes through stripping selected areas of topsoil under archaeological supervision at the start of an earthworks contract. For instance, haul roads may traverse the length of a scheme and expose a narrow window onto the underlying archaeology that can be widened to accommodate full investigations where required. This technique, however, is a variation of the strip map and sample mitigation strategy, and should not be used as an alternative to evaluation, nor should it be confused with a watching brief.

5.8 Assembling the Data

5.8.1 Many schemes will have a long life, and consideration should be given to the collection and presentation of data in a way that can continue to be used and modified at later stages, possibly by different contractors.

5.8.2 The archaeological data should be recorded on maps accompanied by a descriptive gazetteer. The maps will show the location of archaeological remains, possibly on the same maps as historic building and historic landscape data. The presentation should distinguish areas of archaeological potential from known sites.

5.8.3 Detailed data may need to be collated in database or spreadsheet form. The data fields should include appropriate OS grid references, and sites should be categorised in accordance with recognised national data standards. The study should also, where possible, refer to relevant national monument description systems (such as the English Monument Protection Programme Monument Class Descriptions, compiled by English Heritage).

5.9 Analysis

5.9.1 The purpose of the data collection and analysis is to assist the scheme decision-making process. The location, value and vulnerability of the archaeological resource and its setting are the key issues to be examined, and, as far as practicable, sufficient data should be collected to enable conclusions to be drawn with confidence. The study should also identify the risks, both to the scheme and to the archaeology. The analysis should, therefore, be directed to understanding where significant archaeological material may potentially be affected by the scheme, the mitigation that is to be applied, the impact of the scheme and the significance of the effect.

5.10 Evaluating the Archaeological Resource

5.10.1 The analysis of the archaeological data must include an assessment of the value of the resource, including its setting. Designated assets will have a value recognised in their citations, but undesignated assets may match or outstrip these values. The current designated status of archaeological sites and

monuments may not represent their value, or their potential. In addition, archaeological assets may be of uncertain value until tested through further evaluation.

5.10.2 Assessments of value should consider how far the asset(s) contribute to an understanding of the past, through their individual or group qualities, either directly or potentially. This will require a consideration of whether the asset belongs to a group or a subject of study that is of acknowledged importance, and how far it retains the characteristics that can contribute to an understanding of that group or subject, or whether it offers the potential for such understanding. The community that values the asset is a factor to be taken into account. For instance, is it internationally known, or locally valued? Is the asset appreciated by specialists or by a wider public? Is the subject area to which it contributes of major concern or is it a minority matter? These factors need to be balanced, and a reasoned assessment reached in each case.

5.10.3 These are professional judgements, but they should be guided by legislation, national policies, acknowledged standards, designations, criteria and priorities. The study should consider development plans, archaeological research frameworks, characterisation initiatives and current research interests in order to inform the assessment of the value of assets. These should form part of the consideration in setting the Scheme Design Objectives. It is inevitable that these will be subject to change in response to new information and concerns, and the assessment should work with the standards of best practice pertaining at the time of the study.

5.10.4 Government policy requires that an asset's 'setting' is taken into account when considering the effects of development upon it. In the broadest terms the setting of an asset comprises the objects and conditions around it, and within which it is perceived; and in this sense all assets have settings. Not all settings, however, contribute to the value of the assets they encompass. The setting will be a combination of views, other historic features and their relationships to the asset, ambience (topography, vegetation, sound, other sensual experiences) and context (what is known or thought about the asset, but not immediately experienced through the senses).

5.10.5 The criteria taken into account when considering proposals for scheduling can be a useful guide to the value of all archaeological remains, and undesignated sites may be assessed using these factors. The English and Scottish criteria are reproduced in Annex 3. These should not be simply aggregated, but rather treated as factors to be taken into account, bearing in mind the issues noted in paragraphs 5.10.2 – 5.10.4 above.

5.10.6 Procedures such as those used in the Monument Class descriptions prepared for the English Monuments Protection Programme (MPP) can also be useful for assessing the value of different types of monument.

5.10.7 The use of number scoring is not recommended, as this tends to introduce an element of spurious accuracy that can be misleading. The scale of values to be used for archaeological assets is:

- Very High;
- High;
- Medium;
- Low;
- Negligible.

5.10.8 An 'Unknown' value may sometimes be all that can be determined, particularly in the early stages of a project. In these cases there should be an estimate of the risk of there being valuable archaeological remains that could be affected, and how this risk is to be managed.

5.10.9 The 'Very High Value' category is intended for sites of international concern or status, and is expected to be invoked only rarely. More advice on these terms can be found in Section 2, Part 5, Chapter 2.

5.10.10 The following table is a guide for assessing the value of archaeological assets:

Table 5.1

Factors for assessing the value of archaeological assets	
Very High	• World Heritage Sites (including nominated sites). • Assets of acknowledged international importance. • Assets that can contribute significantly to acknowledged international research objectives.
High	• Scheduled Monuments (including proposed sites). • Undesignated assets of schedulable quality and importance. • Assets that can contribute significantly to acknowledged national research objectives.
Medium	• Designated or undesignated assets that contribute to regional research objectives.
Low	• Designated and undesignated assets of local importance. • Assets compromised by poor preservation and/or poor survival of contextual associations. • Assets of limited value, but with potential to contribute to local research objectives.
Negligible	• Assets with very little or no surviving archaeological interest.
Unknown	• The importance of the resource has not been ascertained.

5.11 Mitigation

5.11.1 The impact of a scheme is judged taking into account agreed mitigation measures. Mitigation aims to avoid or lessen the effect of negative impacts on the archaeological resource. Once the presence and value of archaeological remains have been established, or the potential for them, mitigation of any potential impacts on them is an iterative design process, and mitigation measures should be considered at all stages of the design. Cost effectiveness of mitigation in relation to the value of the resource is a factor in establishing an appropriate mitigation programme.

5.11.2 Mitigation strategies should take into account the objectives defined according to Chapter 4 in the main Cultural Heritage Topic guidance. Mitigation measures can be seen as a hierarchy, from 'best' – prevention of impacts at source – to 'worst' – offsetting impacts that cannot be avoided by providing improvements elsewhere. The prevention of potential impacts at source can be achieved by design, through vertical or horizontal alignment. Preservation of archaeological remains **in situ** is usually the option preferred on cultural heritage grounds, but proposals that adopt this option should be monitored to ensure that the measures do actually protect the remains in practice. The reduction of the effects of impacts that cannot be avoided could include the screening of assets. Only for significant remains that cannot be avoided, should the option of archaeological excavation be adopted. In such a case it is the effective investigation, recording, analysis, interpretation and appropriate dissemination of the results which constitutes mitigation – in that it addresses the effect of the scheme, as compared to the destruction of the site without understanding it. Although the site is still destroyed, archaeology is the understanding of our past through the study of material remains, not the remains themselves, so destruction without understanding is the worse option, and effective investigation, analysis and interpretation ameliorates the loss to archaeology. The corollary is that merely recording sites with inadequate analytical and interpretive input, does not constitute mitigation.

5.11.3 The increase of knowledge gained through such an investigation should not normally be counted as a benefit, but should be offset against the loss of the information that would otherwise occur if a site were to be damaged or destroyed unrecorded. Further guidance on archaeological mitigation is given in DMRB Volume 10.

5.11.4 Opportunities may exist to improve the setting of archaeological remains. This could include, for instance, enhancing the appearance by opening archaeological features to view, by improving the view from monuments, by screening or removing existing intrusions or improving the experience of the site in other ways.

5.11.5 Access and amenity may be improved by providing new routes or car parking for visitors to monuments, or by enabling improved management of the archaeological resource as part of road maintenance (e.g. fencing, security coverage, regular inspection and maintenance, trimming vegetation). Schemes to interpret and improve access to monuments, while ensuring that they are protected from damage, can also enhance the value of archaeological assets to the public.

5.12 Assessing Magnitude of Impacts

5.12.1 An impact is defined as a change resulting from the scheme that affects the archaeological resource. The baseline from which this change is measured should be the condition that would prevail in a 'do-nothing' scenario, that is, it should take into account changes that would happen anyway if the scheme was not built (insofar as this can be predicted). Consideration must be given to the types of potential impacts – negative or positive, permanent, temporary, short, medium or long term, constructional or operational, direct and indirect, and cumulative – as set out in Chapter 4 of the main Cultural Heritage Topic guidance. Impacts can be on the physical material of the archaeological remains (loss, damage) or on their setting.

5.12.2 The magnitude of the impact should be assessed taking into account any agreed mitigation. See Annex 8 for assessing magnitude of impact in Wales and Scotland.

5.12.3 Ongoing communication with design engineers regarding the potential sources of impacts of a scheme is essential, although accurate calculations of the area of the scheme may not be available before the detailed design is prepared. The locations of 'off-site' activities such as contractors' compounds, borrow pits, haul roads, soil storage etc. are also frequently undetermined until relatively late in the contractual process. Nevertheless, these factors can be key considerations in assessing archaeological impacts, and designers' estimates of new land-take are needed for each route option as early as possible. In the absence of information about off-site activities, maps should be prepared showing areas of archaeological sensitivity so that these may be avoided during the construction period. Some sources of potential impacts are listed in Table 5.2 below. This list is not exhaustive.

Table 5.2: Sources of Impacts

Stage	Activity	Impacts: negative	Impacts: positive
Ground investigations	Trial pits Boreholes	• removal of archaeological deposits (loss, damage)	
Site clearance	Removal of trees and vegetation	• removal of archaeological deposits (loss, damage) • impact on setting	
	Fencing	• removal of archaeological deposits (loss, damage) • impact on setting	
	Traffic movement	• dust damage to historic monuments • compaction of archaeological deposits	
Road construction	Topsoil removal	• removal of archaeological deposits (loss, damage)	
	Excavations for demolition, drainage, shallow foundations, borrow pits, decontamination etc.	• removal of archaeological deposits (loss, damage) • desiccation of waterlogged archaeological deposits	

Table 5.2: Sources of Impacts (continued)

Stage	Activity	Impacts: negative	Impacts: positive
Road construction (contd)	Construction traffic movement	• collision damage to upstanding monuments from construction traffic • damage through rutting of superficial deposits	
	Siting of construction sites	• compaction of archaeological deposits • removal of archaeological deposits (loss, damage)	
	Piling	• removal of archaeological deposits (loss, damage) • damage caused by changes to hydrology and chemical alteration • vibration causing damage to historic monuments	
	Chemical decontamination	• removal of archaeological deposits (loss, damage)	
	Drainage and recharge	• desiccation of waterlogged archaeological deposits • change of chemical conditions/regime • removal of archaeological deposits (loss, damage)	
	Landscaping Earth-mounding	• removal of archaeological deposits (loss, damage) • compaction of archaeological deposits • impact on setting of historic monuments	Screening improving setting
	Spoil disposal	• impact on setting of historic monuments • compaction of archaeological deposits • removal of archaeological deposits through topsoil stripping of storage areas	
	Pollution	• damage to assets by pollutants	
	Structures, Installation features (bridges, signage, fencing etc.)	• removal of archaeological deposits (loss, damage) • impact on setting of historic monuments	
	Installation of lighting scheme	• removal of archaeological deposits (loss, damage) • impact on setting of assets	Improvement of lighting ambience
	Road alignment	• impact on setting of assets • severance causing dereliction or neglect of historic monuments or reduction of group value	Removal of traffic from sensitive areas
	Planting	• removal archaeological deposits (loss, damage • damage to archaeological deposits through root action • impact on setting of assets	Screening of assets

Table 5.2: Sources of Impacts (continued)

Stage	Activity	Impacts: negative	Impacts: positive
Operational	Maintenance of drainage ditches	• removal of archaeological deposits (loss, damage)	
	Lighting	• impact on setting of assets	Improvement of lighting ambience
	Traffic movement	• damage to assets by pollutants • noise intrusion	
	Maintenance	• damage to assets	Arrest of erosion or deterioration
Other Environmental Mitigation (not exhaustive)	Ecological pond creation	• removal of archaeological deposits (loss, damage)	
	Landscape planting Other screening	• removal of archaeological deposits (loss, damage)	Screening of assets
	Noise reduction panelling	• impact on setting of assets • removal of archaeological deposits (loss, damage)	

5.12.4 The magnitude of the impact is assessed without regard to the value of the resource, so the total destruction of a Low Value site is the same magnitude of impact as the destruction of a scheduled monument. The value of the asset is subsequently factored-in to calculate the significance of the effect (see paragraph 5.13).

5.12.5 The judgement of the magnitude of an impact should be based on the principle that physical preservation is preferred. The worst impact (archaeologically) would usually be the physical destruction of the archaeological resource. Other types of impact, such as an impact on setting, need to be ranked in relation to this, and the relationship explicitly described.

5.12.6 It may be possible to assess physical impacts in terms of percentage loss for some types of asset, for instance, extensive homogenous deposits, but complex sites will almost certainly require more sophisticated criteria, taking into account the capacity of the asset to retain its character (whatever that might be) after sustaining the damage.

5.12.7 The assessment of the impact on the setting of archaeological assets should study how changes in the environs of a cultural heritage asset would affect that asset. This issue is discussed generally in the main text in paragraphs 4.19 – 4.27 and the principles are summarised below:

- an asset's setting is its **relevant** surroundings;
- settings have **physical factors** which can be changed by a scheme, but it is the effect these changes have on the perception of the asset that is assessed;
- **context** is an aspect of setting where a relevant aspect of knowledge, belief or relationships may not be visible (or audible) at the site;
- **professional judgement** is required, using criteria measured against the scheme's Cultural Heritage Design Objectives.

5.12.8 This will mean considering the factors that comprise the setting – for example, views, topography, structures, vegetation, sound environment, approaches, context – and how the impact of the scheme on them affects the asset of which they form the setting. Liaison with the Landscape and Noise Topic specialists may be important in identifying the sources of some impacts.

5.12.9 Context is a component of setting. Context embraces any relationship between a place and other places. It can be, for example, temporal, functional, intellectual or political, as well as visual, so any one place can have a multi-layered context. The range of contextual relationships of a place will normally emerge from an understanding of its origins and evolution. Understanding context is particularly relevant to assessing whether a place has greater value for being part of a larger entity or group.

5.12.10 There is currently (2007) no generally recognised procedure for establishing impacts on setting. For the purposes of this guidance government policy and, where relevant, the cultural heritage objectives set out in the Scheme Design, informs the weight given to matters of setting (including context), taking account of the contribution of the asset and its setting to the quality and understanding of the country's cultural heritage resource.

5.12.11 The contribution of an asset's setting to its character will vary from case to case, and the assessment of how far the change to the setting is an element in the impact as a result of a scheme will also vary. For instance the setting of a stone circle in open country, with views to the horizon where possible prehistoric astronomical markers are visible, could be affected by a new road on an embankment hundreds of metres away if it were to obscure the horizon and compromise the astronomical aspect of the monument. In such a case the horizon is part of the setting that contributes to the understanding and character of the asset, and the loss of this part of its setting could be a significant impact. In another case, a similar stone circle in a modern Forestry Commission pine plantation could have a setting that contributes little to the understanding or character of the asset. The introduction of a new road nearby could dramatically change the setting and introduce a new source of noise and visual distraction, but the impact on the character of the monument could be less than would be the case in the first example.

5.12.12 The study should also assess the impact on the archaeological resource as a result of changes in access. For instance, if the scheme changes the previous use of, or access to, an archaeological asset so that it becomes more liable to vandalism or erosion then that would be an negative impact. Alternatively, opening up a previously inaccessible site could promote moves for its better management, and lead to a positive impact. Improved opportunities for the appreciation of archaeological features, such as information boards in lay-bys near monuments, new access or signage to describe or explain features, could also be positive impacts. Changes that may involve archaeological remains but that do not result in changes to the archaeological character of assets may be more appropriately a subject for the Community and Private Assets Topic. Discussions between the appropriate Topic Specialists should ensure that the issue is properly considered.

5.12.13 The scale of the magnitude of impacts is:

- Major;
- Moderate;
- Minor Adverse;
- Negligible;
- No Change.

5.12.14 The factors to be considered in the assessment of the magnitude of impact are set out in Table 5.3. It does not set out a prescription for ranking, as each scheme assessment must establish the magnitude of the impact caused by these factors on a site by site basis, and the weighting to be accorded to each of them. Further advice is contained in Section 2, Part 5, Chapter 2.

Table 5.3: Factors in the Assessment of the Magnitude of Impact

Factors in the Assessment of Magnitude of Impacts	
Major	Change to most or all key archaeological materials, such that the resource is totally altered. Comprehensive changes to setting.
Moderate	Changes to many key archaeological materials, such that the resource is clearly modified. Considerable changes to setting that affect the character of the asset.
Minor	Changes to key archaeological materials, such that the asset is slightly altered. Slight changes to setting.
Negligible	Very minor changes to archaeological materials, or setting.
No Change	No change.

5.13 Assessing the Significance of Effects

5.13.1 Assessing the **significance of the effects** of the scheme combines the **value** of the resource and the **magnitude of the impact** (incorporating the agreed **mitigation** in England), for each cultural heritage asset.

5.13.2 The significance of effect should be expressed on the following scale:

- Very Large;
- Large;
- Moderate;
- Slight;
- Neutral.

5.13.3 Table 5.4 illustrates how information on the Value of the asset and the Magnitude of Impact are combined to arrive at an assessment of the Significance of Effect. The matrix is not intended to 'mechanise' judgement of the significance of effect but act as a check to ensure that judgements regarding value, magnitude of impact and significance of effect are reasonable and balanced. If the matrix indicates a significance of effect that is clearly unreasonable, then the value and impact decisions should be revisited to ensure that they are justifiable.

Table 5.4: Significance of Effects Matrix

VALUE/SENSITIVITY						
	Very High	Neutral	Slight	Moderate/ Large	Large or Very Large	Very Large
	High	Neutral	Slight	Moderate/ Slight	Moderate/ Large	Large/Very Large
	Medium	Neutral	Neutral/ Slight	Slight	Moderate	Moderate/ Large
	Low	Neutral	Neutral/ Slight	Neutral/ Slight	Slight	Slight/ Moderate
	Negligible	Neutral	Neutral	Neutral/ Slight	Neutral/ Slight	Slight
		No change	**Negligible**	**Minor**	**Moderate**	**Major**
		MAGNITUDE OF IMPACT				

5.14 Assessing Significance of Effects on the Overall Cultural Heritage Resource

5.14.1 It will be necessary to provide an overview of the significance of the effect on the combined cultural heritage resource (archaeological remains, historic buildings and historic landscapes) over the scheme as a whole. For Environmental Statements it is not necessary to reduce this assessment to a single overall score (as it is in Appraisal Summary Tables), but the effects on individual assets in each sub-topic should be discussed, and their relative significance considered. The intention is that the ranking of value, impact and significance should be comparable across the sub-topics, so that their relative contribution to the overall assessment is reasonably transparent.

5.14.2 For an individual cultural heritage asset there may be differing degrees of effect related to each sub-topic. An historic structure in an industrial landscape may be more important in the historic landscape assessment than its relevance to archaeology. In these cases the highest reading should be taken as the significance of effect for that asset, and it should not be 'double counted'.

5.14.3 If all the effects on all assets were adverse then the highest Significance of Effect reading will also normally be taken to be the overall cultural heritage effect, but judgement should be exercised to ensure that this does not distort the assessment. A scheme with wholly beneficial effects, however, would not necessarily be assessed at the highest beneficial reading, a precautionary attitude should be adopted so as not to overstate benefits. Again, judgement is necessary.

5.14.4 If there are adverse **and** beneficial effects these will need to be brought out in the assessment, not obscured by balancing them off against one another. If there are both adverse and beneficial effects they should be recorded separately. For example, a bypass proposal with a Moderate Beneficial Effect on the cultural heritage assets in a town centre, might also have a Moderate Adverse Effect on rural archaeological sites. If these were offset against one another to produce a neutral assessment score this would be misleading. An alternative route with no adverse or beneficial effects, or one with different "balancing" effects, would also have Neutral scores, but clearly the schemes would not be **equivalent** in their effect on the cultural heritage resource. The effects of the different options should be described in the text, to make the differences clear.

5.15 Reporting

5.15.1 Guidance on reporting for Simple and Detailed Assessment is given in Chapter 6 of the main Cultural Heritage Topic guidance.

5.15.2 Dissemination requirements may not be determined in detail until the archaeological investigation has been completed and the results assessed. However, the predicted scale of, and approach to, post-fieldwork processing and the dissemination of the results must be established, and costed, in all proposals for fieldwork, bearing in mind that some schemes may not progress beyond the survey stage. The individual circumstances of the scheme should be taken into account so that the Cultural Heritage Design and mitigation strategy are formulated with its ends products – information to inform decision making and full and effective reporting, including post-excavation work – clearly in mind.

ANNEX 6 CULTURAL HERITAGE SUB-TOPIC GUIDANCE: HISTORIC BUILDINGS

Contents

6.1 Introduction

6.1.1 This section is intended to provide freestanding detailed guidance, methods and sources of information, which are specific to the Detailed Assessment of historic buildings. Procedures for Scoping and Simple Assessment for all Cultural Heritage Sub-Topics can be found in the main Cultural Heritage Topic guidance. Guidance on assessing archaeological remains and historic landscapes is contained in Annexes 5 and 7 respectively.

6.1.2 Historic buildings form part of the overall cultural heritage resource and there is a continuum linking the three cultural heritage sub-topics. For the purposes of this guidance historic buildings are distinguished from archaeological remains and historic landscapes, and defined as standing historic structures that are usually formally designed or have some architectural presence. The study of their design, construction, history and functions is generally the subject of historic buildings specialists. Some aspects of them may need to be elucidated using archaeological techniques, deployed in the service of historic building studies. If buildings are demolished, collapse or decay they may form the materials studied by archaeologists, and as they exist within the landscape they are elements in historic landscape studies.

6.1.3 Historic buildings may be of interest for many reasons. Their design or aesthetic character may be significant, their fabric may contain physical evidence of earlier phases or technologies, or the land beneath them may contain archaeological deposits, or they may be of historic significance by virtue of their role in historic events or processes. Buildings may be of historic significance because of their architectural quality, character, age or association with historic figures. Historic buildings comprise a wide range of buildings and structures, including dwellings, defences, industrial buildings, places of worship, and individual items ranging from tombs and railings to paving and milestones.

6.1.4 Historic buildings in the United Kingdom may date from the Roman period to the late 20th century, although the earliest examples are usually reduced to archaeological remains. Buildings may be recognised as being of special architectural or historic interest and be protected by statutory listing, and some may be Scheduled Monuments, or form part of historic designed landscapes. Some protection is given to buildings within the curtilage of a listed building, or by virtue of their location within a Conservation Area. However, many other important structures are not designated or protected by legislation or through the planning system.

6.1.5 The devolved administrations' procedures are set out in Annex 8. Any departures from government guidance and standards should always be discussed with the relevant government heritage agencies, and approved by the Overseeing Organisation.

6.2 The Assessment Process

6.2.1 The detail of the assessment will depend on the stage in scheme delivery, and the nature of information required at a particular stage in the design process. Chapter 3 of the main Cultural Heritage Topic guidance sets out the framework for determining the appropriate type of assessment. Further advice is contained in Section 2, Part 2.

6.2.2 The Detailed Assessment will need to review the data obtained for the Simple Assessment, and consider the need to research more detailed or specialist sources or undertake fieldwork. A higher degree of detail in the evaluation and analysis is normally required in Detailed Assessments, in cases where it is necessary to identify significant constraints, to obtain reliable indications of historic potential, potential impacts and their mitigation, the impact of the scheme and the significance of any effect.

6.2.3 Predicting the implications for historic buildings of mitigation proposed by other studies (e.g. remediation of contaminated land, or landscape planting) forms an important part of the liaison with other topics. The same is valid for the other topic specialists, who should consider how the proposed mitigation of impacts on historic buildings would impinge on their topic areas.

6.3 Consultation

6.3.1 Early consultation with national heritage agencies is important to assist in the identification of key areas of study. It is not normally expected that detailed local research would be undertaken for Scoping, but, with the agreement of the Overseeing Organisation, early contact with key non-statutory consultees is recommended. For Simple and Detailed Assessments, discussions with local planning authorities' advisors will be necessary for identifying historic building issues potentially affected by the scheme. Early consideration of statutory advisors' and stakeholders' views may avoid unnecessary assessment work and help identify key areas of interest.

6.3.2 The need for discussions with other interested parties, such as local historic buildings groups or national specialist groups, should be judged in the light of the type of the impact, the sensitivity of historic buildings as an issue, and the importance of particular historic structures affected by the scheme.

6.3.3 If either, or both, the Archaeological Remains and Historic Landscape Sub-Topics were identified for further investigation in the Scoping Report, then close liaison with the relevant sub-topic specialists would be required. The same may be the case with the Landscape. Townscape, and other Topic specialists, as there may be significant areas of common interest between them. Ongoing consultation with the design engineers is also essential, as early advice should inform the design process and the proposed design will be critical to the analysis of the data.

6.4 Defining the Study Area

6.4.1 Historic building studies will need a Study Area defined according to the sensitivity of the receiving environment, the potential impacts of the road scheme, and the type of assessment. Impacts on historic buildings may be restricted to assets within the visual envelope of the proposed works or those immediately adjacent, but the wider Historic Landscape Sub-Topic Study Area may be relevant in order to provide further information relating to setting, and liaison with the Historic Landscape sub-topic specialist should be sought.

6.5 Gathering Data on Historic Buildings

6.5.1 The amount of work required at the data gathering stage for the Detailed Assessment of historic buildings is dependent on the type and scale of the proposal, in particular the extent of new land-take, the types of impacts expected, and the character of the historic environment affected. At all phases of an assessment, consideration should be given to the most cost-effective approach to data gathering, under the particular circumstances of the scheme.

6.6 Desk-based Studies

6.6.1 Listed Buildings can be identified from the statutory lists and supplements issued by the Secretary of State in England and the devolved administrations' ministers, and from the mapping held by statutory advisors and planning authorities. A parish or group of parishes may also arrange lists.

6.6.2 Some planning authorities in England maintain 'local lists' of buildings that were once listed or were considered for listing but are not statutorily designated. Designations relating to the built environment, such as Conservation Areas, should be identified, together with any studies that have been undertaken for them. Some Scheduled Monuments are also listed historic buildings, but other important structures may not be included on the statutory lists, and these should also be identified. In particular, the study should be aware of emerging areas of historic significance, such as late 20th century structures, where designation may not fully represent their historic status. Many of these may be road transport related, and so be of particular interest but also at particular risk.

6.6.3 A map regression from recent OS mapping back to first edition 25" or 6" maps may be undertaken to confirm the existence and form of listed buildings, and identify other buildings that may survive from the 19th century that can then be inspected by fieldwork. The examination of printed historic maps and manuscript maps, such as tithe maps and estate maps to be found in national and local collections, may also be important in order to locate known buildings and reveal the existence of others that can be checked in the field for any potential interest. Sites and Monuments Record/ Historic Environment Record (SMR/HER) data held by planning authorities may include listed and other historic buildings and structures.

6.6.4 Published accounts of buildings may exist in national and regional guides (e.g. the *Buildings of England* series, or the *Victoria County History*), while for important buildings there may be detailed published accounts in monographs or specialist journals or periodicals. These may be held in local history libraries, or located through local or national bibliographies. Conservation or Management Plans for buildings or sites may contain valuable assessments and statements of importance, while for Conservation Areas character appraisals commissioned by Local Authorities may contain specific references to individual historic buildings.

6.6.5 There may be photographs or measured surveys of buildings in national buildings records (such as the English National Monument Record (NMR) or the RIBA library), or the local SMR/HER, or deposited in local authority building records. National and local museums, art collections, libraries and record offices may hold important visual sources of lost building features, such as old photographs and topographical drawings. Measured drawings for some buildings or structures (especially those commissioned by public

bodies e.g. railways and public buildings) may be deposited with planning authorities for purposes of building control.

6.6.6 In areas that possess them, planning authority Geographical Information System (GIS)-based SMR/ HER systems and/or historic landscape characterisation schemes can greatly assist the early stages of assessment. Detailed data may be readily obtainable for the whole study area, without duplicating work. In Scotland map-based data is available on PASTMAP (see Annex 8).

6.6.7 The wider context of regional building character (e.g. timber framing, or farm buildings) may be provided by published regional studies of buildings and building types, or by publications on individual buildings. On-line bibliographies and databases (e.g. NMR images of English listed buildings) may be of use.

6.6.8 All data should be gathered in a manner compatible with detailed collation and mapping. Where possible data should be obtained from sources in digital form to avoid unnecessary manual data input and manipulation. If either or both the Historic Landscape or Archaeological Remains Sub-Topics are included in the scope of the assessment the specialists should co-ordinate their researches to avoid duplicated effort.

6.7 Field Survey

6.7.1 Desk-based studies may provide sufficient information without new field surveys, and field survey will not normally be undertaken for Scoping and Simple Assessments. Some schemes have the potential, however, to affect historic buildings whose presence, character, extent, complexity and importance may not yet be known.

6.7.2 The study should consider the risk of an impact on potentially valuable historic buildings in the light of the known data and the history of the area. Detailed inspection and investigation, including the condition of the structure and fabric of buildings, may be necessary where a high degree of certainty is required about the age or significance of a building, or to assess the impact of a scheme or to inform mitigation measures, where these aspects are not apparent from documentary and visual research. If necessary a programme of field surveys should be prepared to test the conclusions, and the services of structural engineers or specialist buildings surveyors may be required to complement the historical studies.

6.7.3 The purpose of field survey is to provide the information about the presence or absence, character, extent, date, integrity, quality and state of preservation of buildings. Field survey, combined with documentary research, should be sufficient to enable decisions to be made confidently regarding the effects of a proposal. Field survey strategies should be designed to provide sufficient information for the purposes of the assessment. The effectiveness of the available techniques for this purpose should be judged in relation to the buildings under consideration and the scheme proposals. The availability of access may constrain the methods, timetable or extent of field survey (see Chapter 3 of main Cultural Heritage Topic guidance).

6.7.4 Field surveys should be undertaken on the basis of a written scheme of investigation, approved by the Overseeing Organisation, which clearly sets out the known data, the justification for the work, and the aims and objectives of the work, related to the proposed scheme. National advice on the conduct of building surveys (such as the Royal Commission on Historic Monuments (England) Guidelines) should be followed where appropriate.

6.7.5 A walkover survey should enable the surveyor to check the condition of historic structures within the study area, record any that have not been previously noted and inform decisions about further field survey techniques to be applied, if appropriate.

6.7.6 If further information is required the study will need to consider the range of field survey techniques available, some of which affect the fabric of the structure, some of which may require access onto private property, and others that can be undertaken from locations accessible to the public. In the choice of methods the surveyor will take into account the purpose of the assessment, the existing information, access and cost-effectiveness. In all cases a formal approach should be made to the landowner and occupier through the Overseeing Organisation.

6.7.7 Survey methods may include photographic survey, measured survey, remote sensing, investigations involving sample taking (such as dendrochronology), and the physical removal of accretions/alterations to reveal earlier features.

6.7.8 Field survey could involve internal inspection of key buildings and close external inspection of others. This survey may confirm the identification of unlisted historic buildings of sufficient importance to be included in the data. The assessment of setting issues should also be undertaken at this time.

6.7.9 The more detailed field investigation of buildings may involve looking inside roof-spaces to gather information on the age or importance of the building. Consideration should be given to the use of non-intrusive measures such as remote sensing to find timber framing or other obscured features. In some cases it may be advisable to avoid uncertainty by more intrusive inspection of fabric, such as the removal of plaster to expose the wall structure, or the sampling of timber for tree ring dating.

6.7.10 All inspections and investigations undertaken before Compulsory Purchase Orders (CPOs) that involve access onto private property or have a physical impact on the fabric of a structure must have the owners' permission, and be approved by the Overseeing Organisation. If the building is listed then all intrusive investigations must have prior listed building consent, whether or not the building has been the subject of a CPO.

6.8 Assembling the Data

6.8.1 The baseline data on historic buildings should be presented through maps and gazetteers. Mapping will be used to show the location of listed and other historic buildings. Typically the base map will be at a scale of 1:10,000 (OS based), though a larger scale may be required for a detailed appreciation of built-up areas. Historic areas such as Conservation Areas, and areas occupied or once occupied by significant numbers of buildings (e.g. dense settlement or industrial activity) may also need to be shown at a larger scale. Where large numbers of listed buildings occur on the edge of the study area or within a Conservation Area it may be appropriate to show them indicatively as a group.

6.8.2 The gazetteer will include the address and grid reference of each building, a short description of its building type, materials and date (the name of the architect may be included if relevant and known). The designation or any assessment of importance should be included (e.g. Category A listed (Scotland); unlisted building in Conservation Area, in curtilage of listed building; historic building of local interest etc.).

6.8.3 Many schemes will have a long life, and the study should collect and present the data in a way that can continue to be used and modified at later stages, if necessary by other contractors or specialists.

6.9 Analysis

6.9.1 The purpose of the analysis is to assist the scheme decision-making process. The location, value and vulnerability of the resource in relation to the proposals are the key issues to be examined, and, as far as practicable, sufficient data should be collected to enable confident conclusions to be drawn. The study should also clearly identify the risks, both to the scheme and to historic buildings. The analysis should therefore be directed to understanding where significant historic buildings may be affected by the scheme, the nature of the impacts, and the mitigation that would need to be applied.

6.10 Evaluating Historic Buildings

6.10.1 Analysis of the data must include an assessment of the value of the resource. The Design Objectives will set out the framework for establishing values. Designations will assist in this analysis, but undesignated buildings should be fully considered. The current designation status of buildings may not fully represent their value, or their potential, and some of the resource may be of uncertain value until tested through further evaluation. The study should consider research frameworks, characterisation initiatives and current research interests in order to assess the value of buildings or building types.

6.10.2 The scale of values to be used for each historic building is set out below:

- Very High;
- High;
- Medium;
- Low;
- Negligible.

6.10.3 An 'Unknown' value may sometimes be all that can be determined, particularly in the early stages of a project. In these cases there should be an estimate of the risk of there being valuable historic buildings that could be affected, and how this risk is to be managed. The 'Very High Value' category is intended for buildings of international concern or status, and is expected to be invoked only rarely. More advice on these terms can be found in Section 2, Part 5, Chapter 2.

6.10.4 These terms are intentionally qualitative rather than quantitative as numerical scores can give a misleading impression of precision. The assessment of buildings can usefully follow the Listed Building grades. As a guide, English and Welsh Grades I and II* (Scotland's Category A) would be 'high value', and Grade II (Scotland's Category B) buildings would be 'medium value'. Locally listed buildings (Scotland's Category C(S)) and other identified historic buildings and structures would normally be of 'low value'. The following table is a guide for evaluating the value of historic buildings:

Table 6.1: Guide for Establishing Value of Historic Buildings

Criteria for Establishing Value of Historic Buildings	
Very High	• Structures inscribed as of universal importance as World Heritage Sites. • Other buildings of recognised international importance.
High	• Scheduled Monuments with standing remains. • Grade I and Grade II* (Scotland: Category A) Listed Buildings. • Other listed buildings that can be shown to have exceptional qualities in their fabric or historical associations not adequately reflected in the listing grade. • Conservation Areas containing very important buildings. • Undesignated structures of clear national importance.
Medium	• Grade II (Scotland: Category B) Listed Buildings. • Historic (unlisted) buildings that can be shown to have exceptional qualities in their fabric or historical associations. • Conservation Areas containing buildings that contribute significantly to its historic character. • Historic Townscape or built-up areas with important historic integrity in their buildings, or built settings (e.g. including street furniture and other structures).
Low	• 'Locally Listed' buildings (Scotland Category C(S) Listed Buildings). • Historic (unlisted) buildings of modest quality in their fabric or historical association. • Historic Townscape or built-up areas of limited historic integrity in their buildings, or built settings (e.g. including street furniture and other structures).
Negligible	• Buildings of no architectural or historical note; buildings of an intrusive character.
Unknown	• Buildings with some hidden (i.e. inaccessible) potential for historic significance.

6.10.5 This guide is not intended to be prescriptive, professional judgement will need to be exercised in assessing the value of historic buildings. As a further guide, in England the main factors used by the Secretary of State in deciding which buildings to include on the statutory list are as follows:

- **architectural interest**: the lists are meant to include all buildings which are of importance to the nation for the interest of their architectural design, decoration, and craftsmanship; also important examples of particular building types and techniques (e.g. buildings displaying technological innovation or virtuosity) and significant plan forms;
- **historic interest**: this includes buildings which illustrate important aspects of the nation's social, economic, cultural, or military history;
- **close historical association**: with nationally important people or events;
- **group value**: especially where buildings comprise an important architectural or historic unity or a fine example of planning (e.g. squares, terraces or model villages).

6.10.6 Age and rarity are relevant factors, and in general (where surviving in anything like their original

condition) all buildings built before 1700 are listed, most from between 1700 to 1840, selectively from 1840 to 1914, and more selectively thereafter. Special criteria have been developed for 20th-century buildings. The principles of these criteria can be used for evaluating unlisted historic buildings (see Annex 8 for Scottish guidance related to the age of buildings).

6.10.7 Buildings may be valued by communities and special interest groups for a number of reasons, perhaps most often for their historical association (with local people and events) or their historic role in the community (e.g. schools or public houses).

6.10.8 Buildings may have associations with, and importance for, other Cultural Heritage Sub-Topic areas, for instance: Historic Landscape for houses built around former commons, or Archaeological Remains for standing buildings on historic sites.

6.10.9 Other Topic areas may also be relevant. Historic buildings in Conservation Areas may feature in the Townscape Topic, and the Landscape Topic will consider historic houses, and the Historic Building Sub-Topic specialist should liaise with the specialists undertaking the studies for these topics.

6.11 Mitigation

6.11.1 Assessment and design are parts of an iterative process, which together should lead to mitigation measures where possible. Mitigation should aim to avoid or lessen a negative impact on the heritage resource. Mitigation strategies should take into account the design objectives defined according to Chapter 4 in the main Cultural Heritage Topic guidance.

6.11.2 For historic buildings, as with archaeological remains, there is a general presumption in favour of preservation in situ. However, in some schemes a degree of impact may be unavoidable and there may be circumstances in which preservation is not possible and a programme of investigation and recording prior to removal is required in mitigation.

6.11.3 Important historic buildings should be avoided if reasonably possible, taking into account the value of the structure, the scheme and cost effectiveness. The loss of listed buildings is not envisaged in the legislation or guidance but may, exceptionally, become necessary. Such cases should be fully justified. There is a range of options for mitigating the loss of historic buildings, all of which have been used in recent years. These include:

- moving the entire building;
- rebuilding for re-use (commercial/domestic);
- rebuilding as a museum exhibit;
- partial recovery of historic fabric for museum use;
- recording prior to demolition or damage.

6.11.4 In all these cases the end use should be established prior to demolition, since the placing of buildings in storage has been shown to be an insecure option frequently leading to loss. The nature of the end use also has a bearing on the amount of recording that is necessary.

6.11.5 Where significant buildings will be lost, their importance must be established before and investigated during demolition by survey and a programme of recording at an appropriate level. This may range from summary recording by photography and basic plans, through fuller investigation and measured record, to full physical examination of structures during demolition, involving investigation, recording, analysis, interpretation and publication. The aims and objectives of undertaking detailed studies must be clearly understood and stated, so that resources can be effectively prioritised across the scheme.

6.11.6 Opportunities may exist to improve the setting of buildings. The setting is taken to mean the environs of a building which contribute to its character, and as such a setting may be relatively restricted or may be very extensive. The setting of a building is not confined to its original surroundings, such as an agricultural scene or streetscape, but can include subsequent developments unrelated to the original intentions of the builder, which give the current frame of reference. Improvements to setting could include opening features to view, or by improving the view from historic buildings by screening, down-grading or removing intrusive developments. In some cases the opportunities for rearrangement of landholdings may enable the setting of a building to be enhanced.

6.11.7 The primary mitigation measures will respond to the potential impacts of the scheme, but as the design develops further potential impacts may arise from mitigation measures related to other topics. Changes that affect the character of listed buildings (e.g. installation of new glazing) will in any case require listed building consent. It is therefore essential for the Historic Building Sub-Topic specialist to be aware of,

and if necessary involved in, these continuing design processes.

6.12 Assessing Magnitude of Impacts

6.12.1 An impact is defined as a change arising from the scheme that would affect the historic building resource. The baseline from which this change is measured should take into account changes that would occur anyway, if the scheme were not built (the 'do-nothing scenario'). Consideration must be given to the types of potential impacts – negative or positive, constructional or operational, direct or indirect, permanent or temporary, short, medium or long term, and cumulative – as set out in Chapter 4 of the main Cultural Heritage Topic guidance.

6.12.2 Ongoing communication with design engineers regarding the potential impacts of a scheme is essential. Accurate calculations of the area of direct scheme impact are rarely available before the detailed design is prepared. The location and design of 'off-site' activities, such as site compounds, borrow pits, haul roads etc, are also frequently undetermined until relatively late in the contractual process. Nevertheless, these may be a key consideration in assessing impacts, and designers' estimates of new land-take and the location, scale and design of off-site features are needed for schemes as early as possible. In the absence of information about the location of off-site activities maps should be prepared showing where such activities should not be sited if possible.

6.12.3 Obvious examples of settings that enhance the value of archaeological assets are the parks and gardens surrounding many historic country houses, designed or evolved over time to show off the particular character of the house. Possibly less obviously, the industrial surroundings of an historic workshop, for instance, can be integral to its appreciation, even in a state of dereliction.

6.12.4 Sources of potential impacts are listed in Table 6.2. This list is not exhaustive.

Table 6.2: Sources of Impacts

	Activity	Impact: adverse	Impact: beneficial
Site clearance	Removal of trees and vegetation	• damage to setting of historic buildings	Re-establishment of historic setting
	Fencing	• intrusion on setting	
Road construction	Demolition, drainage, shallow foundations, piling borrow pits, decontamination etc.	• damage to building fabric • effect on setting • vibration from piling: damage to historic structures	
	Landscaping/ earth mounding	• visual and noise intrusion on setting	Re-establishing historic setting Screening of intrusive elements

Table 6.2: Sources of Impacts (continued)

	Activity	Impact: adverse	Impact: beneficial
Road construction (contd)	Spoil disposal	• visual and noise intrusion on setting	Re-establishment of historic setting Indirect: screening of intrusive elements
	Structures, Installation features (bridges, signage, fencing etc.)	• visual and noise intrusion on setting	
	Installation of lighting scheme	• visual and noise intrusion on setting	Improved lighting systems can impact less on night time scene
	Road alignment	• demolition of or damage to historic buildings • severance causing dereliction or neglect of historic buildings • visual and noise intrusion on setting	Re-instatement of historic setting
Operational	Planting	• visual and noise intrusion on setting	Re-establishment of historic setting Screening of intrusive elements
	Traffic movement	• visual and noise intrusion on setting	
	Maintenance	• repairs to, or alteration of historic buildings	
Other Environmental Mitigation	Topsoil stripping	• damage to setting	
	Screen planting Other screening	• visual and noise intrusion on setting	Re-establishment setting screening of intrusive elements
	Noise reduction panelling	• visual and noise intrusion on setting	
	Noise reduction glazing	• visual and noise intrusion on setting	

6.12.5 The magnitude of the impact is assessed without regard to the value of the resource, so the total destruction of an insignificant building counts as the same degree of impact as the destruction of a high value building. The value of the asset is factored-in later to calculate the significance of the effect.

6.12.6 The judgment of the magnitude of an impact should be based on the overriding principle that the physical preservation of historic material and the setting is normally the best strategy. The worst impact would normally be the total destruction of the asset. The assessments of the magnitude of impacts on historic buildings and their settings need to be ranked in relation to this range of possibilities.

6.12.7 The quantitative assessment of vibration and noise impacts will derive from specialist studies in those topics (requiring consultation and data exchange with other consultants). Even where these impacts are calculated to be low it may be necessary to consider the cultural heritage effects of mitigation measures related to them (e.g. double glazing, secondary noise insulation).

6.12.8 The following scale of the magnitude of impacts should be used:

- Major;
- Moderate;
- Minor;
- Negligible;
- No change.

6.12.9 Impacts can be on the physical material of the building, or on its setting, or on amenity, or any combination of these elements. It may be possible to assess physical impacts in terms of percentage loss for simple structures, but most assessments will require more sophisticated criteria, taking into account the capacity of the structure to retain its historic interest after sustaining the damage.

6.12.10 Historic buildings not physically affected by a project may nonetheless experience impacts from changes to their settings. The setting of an historic building comprises its surroundings, and therefore all buildings have a setting. An assessment of the impact on the building includes the way its character would be changed by alterations to its surroundings caused by the project. This will mean considering the factors that contribute to the setting – including views, topography, structures, vegetation, sound environment, approaches, context – and how changes to these factors caused by the scheme affect the asset they encompass.

6.12.11 Most of these factors are self evident, but 'approaches' and 'context' may need further explanation. 'Approaches' refers to what people experience as they travel to the asset, usually as they near it, and can take into account the sequence of views, the character of the surroundings etc. 'Context' is applied to the knowledge about an asset that is not visible at the site, for instance the former extent of an abbey whose parent church still stands, but where the location of the buried cloister garth is now only known from published excavated evidence. A proposal which impinged upon this cloister area could compromise the ability to understand the abbey church (it may also, of course, have a physical impact on the archaeological remains of the cloister, and that impact would be considered within the Archaeological Remains Sub-topic). In another example, a proposed new dual carriageway might divide a manor house from its associated village, and although neither may be visible from the proposed road nor from one another, and the proposal might not affect any historic structures physically, it could nonetheless make it more difficult to appreciate their historic relationship.

6.12.12 Impacts on setting may be, in theory at least, reversible, and do not destroy the material of the resource itself. The study should explicitly describe and explain the weighting given to impacts on setting.

6.12.13 The Historic Building Sub-Topic assessment of impacts on the resource as a result of changes in amenity should consider the changes at the asset and changes to people's experience of the historical character of the asset. For instance, if the scheme changes the previous use of, or access to, an historic structure so that it becomes more liable to vandalism or erosion, then that would be a negative impact. Alternatively, opening up a previously inaccessible site may promote its better management, and lead to a positive impact. Improved opportunities for the appreciation of historic buildings would normally be positive, but this may need to be set against the risk of damage by greater visitor numbers, for instance. Changes in amenity that involve historic buildings but that do not ultimately result in changes to the fabric, setting, or historic appreciation may more appropriately be the subject of the Community and Private Assets Topic. Discussions between the appropriate Topic Specialists should ensure that the issue is properly considered.

6.12.14 Table 6.3 summarises the factors to be taken into account when assessing the magnitude of impact. It is not intended to be prescriptive, as each scheme assessment must establish the magnitude of the impact caused by these factors, and the weighting to be accorded to each of them, using professional judgement.

Table 6.3: Factors in the Assessment of the Magnitude of Impacts

	Factors in the Assessment of Magnitude of Impacts
Major	Change to key historic building elements, such that the resource is totally altered. Comprehensive changes to the setting.
Moderate	Change to many key historic building elements, such that the resource is significantly modified. Changes to the setting of an historic building, such that it is significantly modified.
Minor	Change to key historic building elements, such that the asset is slightly different. Change to setting of an historic building, such that it is noticeably changed.
Negligible	Slight changes to historic buildings elements or setting that hardly affect it.
No change	No change to fabric or setting.

6.13 Assessing the Significance of Effects

6.13.1 Assessing the **significance of the effects** of the scheme combines the **value** of the resource and the **magnitude of impact** (incorporating the agreed **mitigation** in England), for each cultural heritage asset.

6.13.2 The significance of effect should be expressed on the following scale:

- Very large;
- Large;
- Moderate;
- Slight;
- Neutral.

6.13.3 Table 6.4 illustrates how information on the **Value** of the asset and the **Magnitude of Impact** are combined to arrive at an assessment of the **Significance of Effect**. The matrix is not intended to 'mechanise' judgement of the significance of effect but act as a check to ensure that judgements regarding value, magnitude of impact and significance of effect are balanced. If the matrix produces a significance of effect that is clearly unreasonable, then the value and magnitude of impact judgements should be revisited to ensure that they are justifiable.

Table 6.4: Significance of Effects Matrix

VALUE/SENSITIVITY						
	Very High	Neutral	Slight	Moderate/ Large	Large or Very Large	Very Large
	High	Neutral	Slight	Moderate/ Slight	Moderate/ Large	Large/Very Large
	Medium	Neutral	Neutral/ Slight	Slight	Moderate	Moderate/ Large
	Low	Neutral	Neutral/ Slight	Neutral/ Slight	Slight	Slight/ Moderate
	Negligible	Neutral	Neutral	Neutral/ Slight	Neutral/ Slight	Slight
		No change	**Negligible**	**Minor**	**Moderate**	**Major**
		MAGNITUDE OF IMPACT				

6.14 Assessing Significance of Effects on the Overall Cultural Heritage Resource

6.14.1 It will be necessary to provide overview of the significance of the effect on the combined cultural heritage resource (archaeological remains, historic buildings and historic landscapes) over the scheme as a whole. For Environmental Statements it is not necessary to reduce this assessment to a single overall score (as it is in Appraisal Summary Tables), but the effects on individual assets in each sub-topic should be discussed, and their relative significance considered. The intention is that the ranking of value, impact and significance should be comparable across the sub-topics, so that their relative contribution to the overall assessment is reasonably transparent. The scales of value, impact and significance are intended to be similar across the three sub-topics, and indeed, across the other topics too, so effects on different types of asset should be capable of comparison.

6.14.2 For an individual cultural heritage asset there may be differing degrees of effect related to each sub-topic. For example, the role of an historic structure in the historic building sub-topic may be more important than it is in the historic landscape assessment, and its relevance to archaeology may be minimal. In these cases the highest reading should be taken as the significance of the effect on that asset.

6.14.3 The assessment of the significance of the effects on historic buildings should contribute to the assessment of the effect on the overall cultural heritage resource. If all the effects on all assets were adverse then the highest reading on the Significance of Effect matrix will also normally be taken to be the overall cultural heritage effect, but judgement should be exercised to ensure that this does not distort the assessment. A scheme with wholly beneficial effects, however, would not necessarily be assessed at the highest beneficial reading, a precautionary attitude should be adopted so as not to overstate benefits. Again, judgement is necessary.

6.14.4 If there were adverse and beneficial effects (normally on different cultural heritage assets) these will need to be brought out in the assessment, not obscured by balancing them off against one another. If there were both adverse and beneficial effects they should be recorded separately. For example, a bypass proposal with a Moderate Beneficial Effect on the cultural heritage assets in a town centre, might also have a Moderate Adverse Effect on rural archaeological sites. If these were offset against one another to produce a neutral assessment score this would be misleading. An alternative route with no adverse or beneficial effects, or one with different balanced effects, would also have neutral scores, but clearly the schemes would not be **equivalent** in their effect on cultural heritage. The effects of the different options and their scores should be described in the text, to make the differences clear.

6.15 Reporting

6.15.1 Guidance on reporting for Simple and Detailed Assessment is given in the main Cultural Heritage Topic guidance at Chapter 6.

6.15.2 Arrangements for the dissemination of the results of the investigations may not be determined in detail until the investigation has been completed and the results assessed. However, the general scale and approach to post-fieldwork processing and data dissemination must be established and costed at all stages of the work including in the initial mitigation proposals contained in the Environmental Impact Assessment (EIA). The individual circumstances of the scheme should be taken into account so that the cultural heritage design and mitigation strategy are formulated with their end products – the requirements of decision making and the need to ensure full and effective reporting, including post excavation work – clearly in mind.

6.15.3 Usually the publication of any significant results of preliminary works is incorporated into the publication of the results of the final investigations. If the scheme is shelved or delayed it will be necessary to ensure the appropriate publication of any significant results of the assessment.

ANNEX 7 CULTURAL HERITAGE SUB-TOPIC GUIDANCE: HISTORIC LANDSCAPE

Contents

7.1 Introduction

7.1.1 The cultural heritage resource is not naturally split into the sub-topics of archaeological remains, historic buildings and historic landscapes; the sub-divisions in this guidance are intended to set out the different methodologies and approaches employed by different specialists. It is likely that many schemes will not require detailed consideration of all three Cultural Heritage Sub-Topics. This Annex is intended to provide freestanding guidance concerning the methodologies and sources of information specific to Detailed Historic Landscape Assessments. General advice on Screening, Scoping and Simple Assessment for all the Cultural Heritage Sub-Topics can be found in Chapter 5 of the main Cultural Heritage Topic guidance. Guidance on assessing archaeological remains and historic buildings is contained in Annexes 5 and 6 respectively.

7.1.2 The definition of historic landscape used in this guidance is derived from the European Landscape Convention (2000): *landscape is an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors.* Historic landscape is defined by perceptions that emphasise the evidence of past human activities in the present landscape.

7.1.3 The appearance of the present countryside is the result of the interaction of human activities and the physical factors of climate, geology and topography. However 'natural' the landscape may seem, it has been modified and shaped by human interventions. These processes have modified the landscape over time, and because all landscapes have been subject to human change, all landscapes are historic.

7.1.4 Studies of historic landscapes are undertaken for a variety of reasons and take a variety of approaches. The discipline is developing rapidly and the concepts and terminology used in historic landscape studies are also evolving. In this document the following definitions have been adopted:

- historic landscape **characterisation** (HLC) seeks to describe representative or predominant historic characteristics of the present landscape over more or less extensive tracts of land – its *Historic Landscape Character*;
- historic landscape **analysis** seeks to understand the processes underlying the development of past landscapes, how this can be 'read' in the present countryside, and what this can tell us about the human and natural history of the present landscape;
- historic landscape **evaluation** considers the relative values of historic landscapes;
- historic landscape **assessment** involves the combination of characterisation, evaluation and the impact of a proposed development to arrive at a decision regarding the effect of the development on the historic landscape;
- landscape **archaeology** focuses on the physical remains of past landscapes, using archaeological methods of study and analysis at the landscape scale.

7.1.5 Landscapes have many qualities – for instance: **aesthetic** stimulation for the poet and artist, **economic** potential for the agriculturalist or industrialist; **wildlife** value for the ecologist; **recreational** opportunities, and potentially as many other qualities as there are groups and individuals to perceive them. It is people's uses and their perceptions of landscape that shape these conceptions of landscape quality. The perception that defines the historic landscape in this guidance is one that considers the evidence of human activities as agents of change visible in the current landscape.

7.1.6 Other qualities like those mentioned above may contribute to this perception. For instance, literary or aesthetic ideas may have motivated the manipulation of parts of the landscape in the past, such as the 18th century parklands designed in response to complex cultural ideologies. Technological, political or economic forces, such as the parliamentary enclosure movement or the railway boom, are important historic landscape themes. The presence of ecological markers of previous management regimes may also be evidence for reconstructing the development of the historic landscape. A multi-disciplinary approach is almost always necessary in historic landscape studies.

7.1.7 There may be significant overlaps between the three Cultural Heritage Sub-Topics, as all involve the evidence for past human activities, and indeed part of historic landscape studies relies upon the results of specialist researches into archaeology and historic buildings. The crucial distinction is that the study of archaeological remains and historic buildings are

concerned with **objects**, in the broadest sense, which can be measured, sampled, tested, etc. Even very large or extensive features, such as field systems, can be subjected to archaeological study – landscape archaeology has developed techniques to study such features. The historic landscape, although it contains archaeological and historic built features, is recognised as a result of choosing to attend to the historical significance of these at the landscape scale. The resulting description of the historic landscape is generally called its Historic Landscape Character, and it is the **character** of the historic landscape that is potentially affected by road schemes, whereas it is the **objects** of archaeological and historic buildings study that are the receptors in their case.

7.1.8 Clearly the objects of archaeological and historic buildings studies contribute to the character of the historic landscape they occupy (along with topography, landuse, geology, historic patterns of settlement and fields, etc.), and a scheme's effects on individual assets may therefore affect the historic landscape character, but historic landscape assessment is directed to understanding these effects on character rather than reiterating the effects on the objects. This can be likened to the difference between being concerned about either the individual flowers in a bouquet – their identification, state of freshness, rarity, colour, size etc. – or the effect of the bouquet as a whole, – is its character spring-like, sombre, casual, formal etc.? The character of the bouquet may be maintained even if many of the individual stems that make it up were to be changed, or conversely its character could be radically altered by the substitution of a few critical items, or by the rearrangement of the existing blooms. Similarly in historic landscape character studies it is the contribution of individual assets to the character of the area that needs to be appreciated, and the effects that changes to them would have on that character.

7.1.9 It follows that although there should be close involvement of the other Cultural Heritage Sub-Topic specialists and the Historic Landscape specialist, there should be no risk of double counting in the assessment process. For instance, earthwork remains of a deserted medieval village may figure in the archaeological remains assessment, and a surviving church at its centre may feature in the historic buildings assessment. The historic landscape assessment should be careful not merely to catalogue these elements again, but to consider their contribution to the historic landscape character and assess what the effect of the scheme under consideration might be on this character and its value, while the effect on archaeological remains and historic buildings will be assessed by the relevant sub-topic specialists.

7.1.10 There may also be significant overlaps between the Cultural Heritage Historic Landscape Sub-Topic and the Landscape and Townscape Topics (and probably other topics too), and the relevant specialists should maintain close liaison during the assessment. Many of the data used in the Landscape Topic assessment, for instance, may be useful in the Historic Landscape assessment, such as viewpoints, or the integrity of Landscape Character Areas. Care should be taken to ensure that there is no duplication of effort during data gathering and in the analytical process. Any relevant cultural heritage studies undertaken by the Landscape and Townscape Topic specialists should be taken account of appropriately in the Historic Landscape Sub-Topic assessment, and vice-versa.

7.1.11 Assessing the historic landscape implications of mitigation proposed by other studies (for example, remediation of contaminated land, or landscape planting) forms an important part of the liaison with other topics. The same is true for the other topic specialists, who should consider how the effects of proposed mitigation of effects on historic landscape would impinge on their topic areas.

7.1.12 If historic landscape were to be identified in the Scoping exercise as requiring assessment, it should be the subject of specialist Historic Landscape Sub-Topic study in the Cultural Heritage Topic. Competent practitioners should undertake historic landscape assessments. Appropriate specialists may be trained in historic landscape methods or come from an archaeological, geographical, historic building, landscape or other background, but so long as they are able to undertake the specialist historic landscape study effectively their professional title is a secondary matter. The practitioner's experience and ability to co-ordinate, assimilate, analyse and present a wide variety of data sources appropriately will always be the principal requirement.

7.1.13 Where appropriate, guidance from UK government departments, devolved administrations' heritage agencies, statutory bodies, professional institutes, specialist researchers and practitioners and planning authorities should be sought to establish the appropriate standards and methods of assessment. Devolved administrations' procedures can be found in Annex 8. Any departures from national heritage agencies' guidance and standards should always be discussed with the relevant statutory agencies and be approved by the Overseeing Organisation.

7.1.14 The cultural heritage agencies in different parts of the UK have different approaches to historic landscapes. English Heritage and Historic Scotland have adopted similar approaches that emphasise the historic character of the entire landscape, developing HLC in England and Historic Landuse Assessment (HLA) in Scotland. In Wales, Cadw and the Countryside Council for Wales (CCW) have developed a Register of Landscapes of Historic Interest. The Welsh approach defines *Areas of Outstanding Historic Landscape* and *Special Historic Landscapes,* and is accompanied by a methodology for establishing their value and the impact on them (*Assessment of Significance of the Impacts of Development on Historic Landscapes*, (ASIDOHL) published by Cadw and CCW). The Overseeing Organisation should consult with Cadw and CCW on the scope and detail of an ASIDOHL assessment. In Wales the LANDMAP process should also be followed. Annex 8 contains guidance on the requirements of the devolved administrations.

7.2 The Assessment Process

7.2.1 The purpose of assessing the historic landscape in connection with proposed road schemes is to inform the decision-making process, which includes decisions regarding mitigation of adverse impacts. The assessment should consider the impact on the historic landscape character of the proposal. The detail required at the data gathering stage is dependent on the type and scale of the road scheme and the requirements of the decision-making process.

7.2.2 The Detailed Assessment will need to review the data obtained for the Simple Assessment, and consider the need to research more detailed or specialist sources or undertake fieldwork. A higher degree of detail in the evaluation and analysis is normally required in Detailed Assessments, in order to identify the significant constraints, and to obtain reliable indications of potential impacts and their mitigation, the impact of the scheme and the significance of any effect.

7.3 Consultation

7.3.1 Chapter 3 of the Cultural Heritage topic guidance sets out the nature of consultations with statutory bodies and other stakeholders appropriate for each level of study. In the different Overseeing Organisations there are different arrangements for the relationships between the statutory consultees and the highways authorities (see Annex 8). For Scoping studies in England early consideration of English Heritage (EH) views is advised to assist in the identification of key areas of study. It is not normally expected that detailed local research would be undertaken but, with the agreement of the Scheme Sponsor, early contact with key non-statutory consultees is usually advisable.

7.3.2 For Simple and Detailed Assessment in England, EH should be formally approached for their views, and discussion with local planning authorities' advisors is recommended for identifying historic landscape issues potentially affected by the scheme. Timely consideration of national heritage agencies' and other stakeholders' views may avoid unnecessary assessment work and will help identify key areas of interest.

7.3.3 The need for discussions with other interested parties, such as local history groups or national specialist groups, should be judged in the light of the relevance of their input into the data collection or analysis.

7.3.4 If either, or both, the Archaeological Remains and Historic Buildings Sub-Topics were also identified for further investigation in the Scoping Report, then liaison with the relevant sub-topic specialists would be required. The same may be the case with the Landscape, Townscape, Ecology and Nature Conservation and other topic specialists, as there may be significant areas of common interest with them. Ongoing consultation with the design engineers is also essential, as early advice should inform the design process and the proposed design will be critical to the analysis of the data.

7.3.5 Consultation and data gathering may be required to define local distinctiveness and, in England, Quality of Life objectives. The issues may include the influence on historic landscape character arising from matters such as amenity, public awareness, accessibility, and local interests. Investigations regarding these aspects may include consideration of the aspirations of local amenity groups and local residents.

7.4 Defining the Study Area

7.4.1 Where the Scoping Report indicates that the historic landscape is an issue an appropriate study area will need to be defined. This will be determined on a case-by-case basis, to take account of the stage of the proposal, its scale and its likely effects, and the character of the historic landscape through which it passes. Although the Historic Landscape Sub-Topic

study area may be similar in scale to the Landscape Topic study area, the relevant historic land divisions – farm, estate, manor, township, parish etc. – may not coincide with the visual parameters adopted by Landscape Topic specialists, and the study area should be justified in historic landscape character terms.

7.4.2 As a project progresses to more detailed stages the study area may need to be refined, and broad brush characterisation and assessment appropriate to early route corridor investigations will usually need to become more focussed. The linear nature of many road schemes, and the linear factor that roads themselves contribute to historic landscape character units, should guide the choice of study area. The study area is not the same as the historic landscape character unit; a scheme may traverse many individual HLC units. In identifying the appropriate scale of the HLC unit a factor needing consideration is that a unit that is too large may experience an unreasonably minimal effect, while for one that is too small the effect may be misleadingly dramatic. The reasons for the choice of study area and scale of the HLC units should be explained and justified.

7.4.3 As far as practicable, the study should collect and analyse sufficient data at the appropriate level of detail from a wide enough area to enable decisions to be made with confidence about the effect of the proposed scheme.

7.5 Gathering Data on Historic Landscape

7.5.1 Gathering data on the historic landscape should contribute to the historic landscape characterisation, directed to the purposes of the scheme assessment. The information should help to:

- understand the processes that have created the historical landscape character;
- evaluate its quality;
- identify the changes to the historic landscape character potentially caused by the scheme (potential impact);
- develop measures to mitigate the impact;
- assess the magnitude of the mitigated impact;
- assess the significance of the effect.

7.5.2 The two general approaches to historic landscape studies may be crudely described as 'top-down' and 'bottom-up'. The top-down approach is to take generally accepted historic landscape descriptions and apply them broadly over wide areas, or to identify areas already defined or designated as having a particular historical character. It is an opinion-led approach. The bottom-up approach is to analyse the detailed evidence of surviving historical assets and progressively integrate them to construct an appreciation of the broader historical character of the landscape – an analytical approach. Usually a combination of the two approaches is the appropriate strategy.

7.6 Top-down Data Collection

7.6.1 The top-down approach can be used to assess a large area, using readily available designations and existing opinions. It can be an efficient way of rapidly establishing an overall sense of historic landscape character and quality over a wide area. The top-down approach uses existing descriptions, designations and characterisations and the judgements of acknowledged specialists to define historic landscapes, working from maps, published syntheses and consultations. In Wales, the Register of Landscapes of Historic Interest was initially compiled using a top-down methodology.

7.6.2 Using the top-down approach, for example, it is accepted that medieval-type open fields have a particular character, and any extensive surviving examples of open field strip farming are well known and recorded. Similarly, some extensive tracts of surviving prehistoric field systems and associated archaeological remains are also well studied and are precisely plotted in some regions. Such information is readily available, and the value of the landscapes generally agreed.

7.6.3 Historic landscape information may be gleaned from other sources. Some cultural heritage designations may include landscape-scale areas. World Heritage Sites (WHSs) frequently encompass large swathes of historic landscapes, and may be specifically inscribed for their historic landscapes value by the International Council on Monuments and Sites (ICOMOS) on the WHS list.

7.6.4 Designations involving important historic landscapes include the national registers of historic landscapes (in Wales); historic parks, gardens, and battlefields, and other designations (Conservation Areas, Registered Commons, etc.). Other landscape-scale designations, even when applied mainly for reasons other than cultural heritage interest, may

include historic landscape factors. Records of ancient woodlands, Sites of Special Scientific Interest related to historic landuse and other ecological designations that involve historic landscape issues should be consulted. National Parks and Areas of Outstanding Natural Beauty designations frequently cite specific historic qualities, and these should be taken into account. There may be other relevant historically focussed countrywide or regional summaries, and where available these should be consulted.

7.6.5 National and regional research agendas (where available) should assist the understanding of the relative priorities accorded to different historic landscapes.

7.6.6 The national countryside agencies' Landscape Character Assessment (LCA) or landscape information databases should be consulted, although it should be borne in mind that recording historic character is not the primary purpose of this mapping. Nonetheless the LCA methodology includes the consideration of heritage factors.

7.6.7 Targeted bottom-up data gathering may be advisable in order to check the validity of top-down evaluations.

7.7 Bottom-up Data Collection

7.7.1 If no appropriate 'top-down' study is available, or it is inadequate for the purpose, then a 'bottom-up' approach should be adopted. Care should be taken not to undertake an unnecessarily detailed study – all work should be directed towards scheme requirements.

7.7.2 The historic landscape contains features from the past that can be considered on an increasing scale and complexity. The bottom-up approach uses the collection and analysis of detailed information from the landscape to form the basis of historic landscape characterisation and analysis. It is the basis of county or regional HLC mapping, and can be taken to varying degrees of detail. There is currently (2007) no standardised terminology or definition for the categories and scales suggested above. Similarly there is no consistency in their application.

7.7.3 A useful model for analysing historic landscapes, developed by Stephen Rippon and published by the Council for British Archaeology (S Rippon, CBA 2004) identifies historical landscape features of increasing scale and complexity, from the smallest to the largest units. This model, slightly amended, identifies the following historic landscape units:

- **elements,** individual features such as *earthworks*, *built structures*, *hedges*, *woods*, *roads*, *tracks*, and *planned planting* in parks and gardens;
- **parcels,** elements combined to produce, for example, *farmsteads* or *fields*;
- **components,** larger agglomerations of parcels, such as *dispersed settlements*, or *straight sided field systems*;
- **types,** distinctive and repeated combinations of components defining generic historic landscapes such as *ancient woodland* or *parliamentary enclosure*;
- **zones,** characteristic combinations of types, such as *Anciently Enclosed Land* (a Cornish zone) or *Moorland and Rough Grazing* (a Scottish zone);
- **sub-regions** distinguished on the basis of their unique combination of interrelated components, types and zones (but see below);
- **regions,** areas sharing an overall consistency over large geographical tracts.

7.7.4 The term 'area' as used by Rippon is omitted in this guidance, as it is also used in the LCA system in its sense of a particular piece of land, and confusion could ensue, as the LCA system is well understood. It is suggested that the term '**sub-region**' is adopted in its place. The mid-scale range of **type** or **zone** is usually the appropriate scale to adopt for the purposes of roads assessment. The smaller units risk losing the generality required for the assessment, but the larger units may nonetheless be appropriate for strategic assessments.

7.7.5 Particular cases may suggest other ways of characterising historic landscapes, such as the Cadw list of 'types' related to function, such as administration, transport, defence, industry and so on. 'Themes' may be another appropriate approach. These issues must be considered carefully during the data search and analysis, and all the terms and criteria used in the assessment should be explicitly identified and defined.

7.7.6 The bottom-up approach starts with an OS based map showing landscape **parcels**, that is, groupings of **elements** into, for instance, fields and

farms. The mapping should be at a scale that shows at least all fields and buildings (a minimum of 1:25,000). Further integration of **parcels** into **components** or **types** is likely to be necessary to achieve the scale of historic landscape character unit appropriate for assessment.

7.7.7 A map regression analysis from recent OS maps back at least to the OS first edition 25" or 6" maps should be undertaken to confirm the existence and form of landscape **elements**, such as field boundaries, street patterns, ponds, woods, lanes and paths. Further information may be obtained from other printed historical maps, and manuscript maps, such as tithe maps and estate maps to be found in national and local archives. Other accessible records, such as terriers and surveys in estate records, may provide additional information about the form and use of the past landscape. Aerial photograph collections may be examined for additional data, while Sites and Monuments Record/Historic Evironment Records (SMR/HERs) include information on archaeological and historic assets crucial to understanding historic landscape character.

7.7.8 Published or unpublished historic town and village surveys may exist in SMR/HERs or local studies collections, and in England useful information may be published in the Victoria County Histories. Similarly there may be local or regional studies of place-names, historic gardens and designed landscapes in monographs or periodicals. These may be identified in local history libraries, or located through local or national bibliographies.

7.7.9 Important visual sources relevant to existing or former landscapes, such as old photographs and topographical drawings may be held by national and local museums, art collections, libraries and record offices.

7.7.10 If archaeological remains and historic buildings are part of the assessment, the specialists involved should ensure that there is sharing of data.

7.8 Field Survey

7.8.1 Field survey will not normally be undertaken for the Scoping Report and the Simple Assessment, but if the Historic Landscape Sub-Topic is identified as needing detailed study to assess the impact of the scheme, then the desk-based results may need to be augmented by fieldwork. As with the desk based study the aim is to understand the historic landscape character and the effect of proposal upon it.

7.8.2 An initial walkover should locate the boundaries of any designated historic landscapes and previously identified historic landscape character units, and confirm their character. Any historically significant sight lines or visual envelopes should be noted and discussed with the Landscape Topic specialist.

7.8.3 The historic character of the landscape may take in a wide range of experiences, not just visual ones. The presence of historic or archaeological remains that are not visible but which nonetheless may have influenced the contemporary historic character may need to be taken into account, so the walkover should be informed by desk based research undertaken by the archaeological remains and historic buildings specialists, as appropriate. The sounds experienced in the landscape may also have a bearing upon the historic landscape character and, if appropriate, should be noted. The simple volume of noise may be an issue, but attention should also be paid to its character. For instance, the sound of small prop-engined aircraft on a summer day, known as a **wokingham** (Adams and Lloyd, 1992), would be a characteristic feature of historic airfields, many of which still operate.

7.8.4 The results of field surveys carried out by the Archaeological Remains Sub-Topic and Historic Buildings Sub-Topic specialists should be taken into account in constructing the historic landscape characterisation, as should Landscape and Townscape Topic surveys as appropriate. Archaeological remains and historic buildings and the relationships between them, the natural world and human activities should be described to bring out their contribution to the character of the historic landscape, rather than being merely re-listed. Further field survey may involve a more detailed inspection, where a better understanding of the form, condition and importance of assets is required. Field survey may include the inspection and measured survey of historic landscape elements, or the mapping of features identified on aerial photographs, but this would be exceptional.

7.8.5 All fieldwork programmes should be agreed with the Overseeing Organisation in advance, and the access issues related to intrusive survey fully appreciated (see Annex 5).

7.9 Characterisation

7.9.1 The simple accumulation of data will not suffice for this Sub-Topic. It requires analysis and interpretation of the relevant relationships between objects, facts and perceptions. The data should be

analysed to produce an understanding of the historic character of the landscape through which the scheme would pass. There is currently no standard for the definitions or descriptions of historic landscape character, although many counties and regions have prepared HLC maps and descriptions. These, however, have often been produced for development control purposes and naturally emphasise factors related to areas rather than the linear character of road and transport corridors. The linear nature of transport corridors can be overlooked in the area-based HLC system.

7.9.2 The characterisation should identify the evidence for time-depth, and describe predominant and subordinate periods represented by the historic features and the main socio-economic themes represented. One of these themes in road schemes is likely to be transport related. Many road schemes will be in areas where roads with their ancillary features and historic developments make a significant contribution to the historic character, and possibly are the predominant historic elements. This should be born in mind when using existing Historic Landscape Characterisation studies which may under-emphasise roads as a factor in their historic character.

7.9.3 The study should identify the typical **elements/parcels/components** that reflect these themes, as well as patterns of temporal relationships, particularly those exhibiting continuity or change, patterns of spatial relationships, and relationships with the natural world.

7.9.4 The appropriate size of the character unit to be studied will be determined in each case by the scale and nature of the scheme and the development stage it is at, and the character of the historic landscape. It is likely to be at least at the level of the **type** or **zone**, and for larger or strategic studies the historic landscape character **sub-region** or **region** may be the appropriate unit. The analysis should make clear the distinctive historic landscape character units traversed by the scheme, and their boundaries.

7.9.5 With some exceptions, the historic landscape is a continuum, and usually changes gradually from one character unit to another. The edges of the historic landscape character units are often transitional areas where precise boundaries are difficult to identify, particularly at the larger scales. It may be possible to show these transitions as broad overlapping boundaries on maps, although this can be technically difficult. It may be simpler to indicate status of the mapped boundaries in the text or legend, but their 'fuzzy' nature should always be borne in mind.

7.9.6 Many schemes will have a long life, and data should be assembled and presented in ways that can accommodate changes at later stages without confusion.

7.10 Evaluating Historic Landscapes

7.10.1 The characterisation of historic landscapes is a preliminary step, but further analysis and evaluation will be required to establish the significance of any effects on the character areas identified in the study. Whilst all historic landscapes contain evidence of the processes that have formed them, some character types may be considered to be commonplace and of little special interest, while others may be highly valued. It is important that the value of historic landscape character units is addressed in the assessment and the reasons for judgements clearly set out. The attribution of 'high value' to selected historic landscapes exclusively with a view to protecting them can obscure the reality that all landscapes are changing all the time, and a more appropriate approach would be to establish how to manage change.

7.10.2 The approach to managing change can be either proposal led – 'does this particular proposal affect a particular character unit significantly and if so is it desirable?' or the approach can be development plan led – 'what sort of development would be appropriate to these particular character units'. The first would be the appropriate approach for road projects, where the type of development and its location are given; the second may be more appropriate for planning authority guidelines and planning frameworks.

7.10.3 The UK administrations differ in their approach to evaluating historic landscapes. In Wales the non-statutory Register of Landscapes of Historic Interest is the basis for any evaluation and Cadw has published the *Guide to Good Practice* for its evaluation, and in Wales this should be followed, in consultation with the Overseeing Organisation and Cadw. Elsewhere in the UK there is as yet no statutory or official government guidance on evaluating historic landscapes. The following suggestions are intended to assist in establishing the value of historic landscapes in territories where no systematic government register or evaluation guidance exists.

7.10.4 All historic landscapes are different, and grouping them into **types** or **zones** inevitably risks blurring their detailed individuality and local character.

This should be acknowledged, and where appropriate the evaluation should take account of the local distinctiveness of the character unit on which evaluation is focussed.

7.10.5 The principle to be borne in mind is that the evaluation is directed at the historic landscape **character** unit not at the archaeological remains or historic buildings that contribute to that character. Evaluating those is the work of the Archaeological Remains and Historic Buildings Sub-Topics. The question for the purposes of this study is 'how valuable is this historic landscape **character** unit?'.

7.10.6 Where there are useful landscape-scale designations the assessment should take into account any cultural heritage values cited in support of them, for instance in the official descriptions of National Parks and Areas of Outstanding Natural Beauty. Some designations relate to particular sorts of historic landscapes, such as designed landscapes. Where the designation grades the resource the assessment should consider the grades carefully. In England, for instance, Registered Parks and Gardens are currently graded I, II* and II. Other historic landscape designations – historic battlefields for example – may not be officially differentiated or graded, and in these cases judgement should be exercised, bearing in mind the weight given to these designations by national heritage agencies and planning authorities.

7.10.7 Individual historic assets, including archaeological remains and historic buildings contribute to historic landscape character, and the key assets should be identified together with an analysis of their contribution to the character of the unit. The value of individual historical or archaeological elements is not necessarily the determinant of the value of the historic landscape character unit to which they contribute. The presence of a scheduled monument (archaeologically 'high value'), for instance, does not necessarily confer great value to the historic landscape character unit in which it is found; and conversely, post-medieval walls ('low value', say, in historic building terms) may be crucial in a 'high value' historic landscape.

7.10.8 The study should consider local plans, relevant research frameworks, characterisation initiatives and research interests to assist in assessing the value of historic landscape character units. A useful guide is to consider whether changes to an historic landscape character unit would raise curatorial concerns at a national, regional, or local level.

7.10.9 Communities and special interest groups may value historic landscapes for a variety of reasons, for instance, for the amenity, social, spiritual and educational value of the resource, or the current or potential value of the resource for local visitor or tourism objectives. Evidence of values accorded to historic landscapes may be found in parish or village plans adopted by planning authorities in England, or in equivalent documents in the devolved administrations. Similarly, guidebooks and tourist recommendations may be sources of information on perceived values. The place of these factors in establishing the value of the historic landscape character unit should be carefully considered in the context of establishing issues of local distinctiveness, power of place, quality of life, and so on.

7.10.10 Relevant factors to take into account may include:

- local character, local distinctiveness (including local residents' perceptions);
- time-depth: rarity or special interest/typicality (as judged by local, regional and national standards);
- legibility (complexity of the elements/parcels/components and the completeness or articulation of the historic landscape, association of features, either of the same period or not);
- fragility/robustness (history of change, sensitivity to change, capacity to absorb change);
- cultural associations (including historical events, personages, literary or artistic connections, views);
- research potential (anticipation of further evidence).

7.10.11 These factors are not to be taken as necessary, nor exclusive, nor should they be merely aggregated, with more 'ticks in the box' automatically taken to mean more value (although that may sometimes be the case). For instance, an area with no cultural associations is not automatically devalued, and an area exhibiting only one period will necessarily lack time-depth, but in both these cases the value may be considerable. In particular cases there may be other relevant factors not listed above, and they should be identified, given their appropriate weight, and justified in the study.

7.10.12 Using the relevant factors, each historic landscape character unit (**type**, **zone** etc.) should be assigned a ranking within the national context. For instance it would be normal to assign a lower score to a wholly commonplace, modern historic landscape character unit with little or no earlier survivals (for example, late 20th century industrial estates) as compared with scarce, well-preserved historic landscape character units with good legibility and time-depth (for example well-preserved pre-18th century enclosure field systems, with fossil medieval furlong boundaries).

7.10.13 The scale of value to be used for assessing the historic landscape character units is set out below:

- Very High;
- High;
- Medium;
- Low;
- Negligible.

7.10.14 The following table is a guide for evaluating historic landscape character units:

Table 7.1: Evaluating Historic Landscape Character Units

Very High	• World Heritage Sites inscribed for their historic landscape qualities. • Historic landscapes of international value, whether designated or not. • Extremely well preserved historic landscapes with exceptional coherence, time-depth, or other critical factor(s).
High	• Designated historic landscapes of outstanding interest. • Undesignated landscapes of outstanding interest. • Undesignated landscapes of high quality and importance, and of demonstrable national value. • Well preserved historic landscapes, exhibiting considerable coherence, time-depth or other critical factor(s).
Medium	• Designated special historic landscapes. • Undesignated historic landscapes that would justify special historic landscape designation, landscapes of regional value. • Averagely well-preserved historic landscapes with reasonable coherence, time-depth or other critical factor(s).
Low	• Robust undesignated historic landscapes. • Historic landscapes with importance to local interest groups. • Historic landscapes whose value is limited by poor preservation and/or poor survival of contextual associations.
Negligible	• Landscapes with little or no significant historical interest.

7.11 Mitigation

7.11.1 Mitigation aims to avoid or lessen a negative impact on the resource. Assessment and design are iterative processes that together should suggest appropriate mitigation measures. Overall cultural heritage Design Objectives for the scheme should be established in line with the Overseeing Organisation's environmental objectives, and the approach to mitigation will be informed by these. Mitigation strategies should take into account scheme objectives defined according to Chapter 4 in the main guidance. Further detailed guidance on landscape mitigation, some of which are applicable to historic landscape matters, is given in DMRB Volume 10.

7.11.2 Approaches to the management of the cultural heritage resource include conservation, preservation, restoration, renovation, reconstruction, replication, rebuilding, alteration, and demolition or destruction. For the purposes of this guidance these are used as far as possible in line with their useage in the Burra Charter (1999) and other European and international documents, and as defined in the Standard and Guidance for the Stewardship of the Historic Environment (IFA, Institute of Historic Building Conservation, Association of Local Government Archaeological Officers, forthcoming).

Conservation is the process of managing change through strategies and tasks that sustain the significance of inherited historic assets and places so that they can be enjoyed now and in the future. **Preservation** is defined as 'to do no harm', and entails **maintenance** to keep the fabric of historic assets in their existing condition, or **repair** to reverse changes caused by decay or damage but not involving restoration. **Restoration** makes an asset or place conform to its known design or appearance at an earlier time. **Renovation** literally means making new again, but it usually requires some qualification to the scope of work. **Reconstruction** goes beyond repair or restoration in re-creating what no longer exits, and can be speculative. **Replication** makes an exact copy of all or part of an historic asset. **Rebuilding** is a general term for complete or partial replacement of a building or artefact through repair, restoration, reconstruction or replication. **Alteration** is a physical change that modifies function or appearance. **Demolition** or **destruction** is the physical loss of all or part of the historical asset.

7.11.3 Mitigation strategies may involve any of these approaches, or a combination of them. As well as preservation and conservation, with historic landscapes, there is the possibility of repair, restoration or reconstruction of features that contribute to historic landscape character

7.11.4 The mitigation of negative impacts on an historic landscape character unit may be different from the mitigation approaches appropriate to the Landscape Topic. Indeed, Landscape Topic mitigation proposals may constitute an negative impact on the historic landscape character, for instance, the provision of screening bunds or planting could run counter to the historical grain of the countryside, or disrupt an important historic field system or open-field pattern.

7.11.5 Mitigation of impacts on historic landscape character units may include design measures to minimise changes caused by noise and visual intrusion, and the avoidance of land-take that could affect significant features.

7.11.6 The loss of historic landscape elements through land-take may require full archaeological or historic buildings investigation, recording, analysis, interpretation and publication as mitigation. The appropriate sub-topic specialists will undertake these, but their results should inform the historic landscape study.

7.11.7 There should be liaison between the Landscape, Ecology and Cultural Heritage specialists throughout the design and mitigation process. Close liaison with the Landscape Topic specialists will be necessary to ensure that historic landscape concerns are taken into account in landscape mitigation proposals. The design of new landscaping and planting undertaken as part of the scheme or as part of the landscape mitigation measures may be able to consider factors relevant to the historic landscape character (e.g. local styles of hedging), and match new planting to the existing historic character. Where landscape features are to be changed (e.g. ponds, tree clumps) there may be opportunities to recreate them in their historic form and location, and this may be an area of mitigation also of interest to the Ecological Topic specialists.

7.11.8 Many of the **elements** that contribute to historic landscape character are highly transient, even in use, and would be renewed or repaired in the normal course of events. Walls fall down and are reconstructed; trees are felled and replanted; hedges grow old and are replaced; roads and tracks are widened and resurfaced; gates are replaced etc. Historic landscape character **may** be improved, for instance where a collapsed dry stone wall could be rebuilt, the better to restore the integrity of an historic field system, although the

collapsed wall might better contribute to the qualities of the historic landscape character in some circumstances and be best left alone. Decisions about the desirability of repair, reconstruction or *laissez faire* should be discussed with appropriate experts, clearly recorded and justified in historic landscape terms.

7.11.9 Land-use contributes to the character of the historic landscape, so enabling the recreation or restoration of characteristic historic land uses and their physical expression in hedges, field sizes, crop or pasture management, the disposition of trees and so on, could markedly improve the value of an historic landscape character unit.

7.12 Assessing Magnitude of Impacts

7.12.1 The impact of the scheme on the historic landscape character will need to be considered, taking into account agreed mitigation (see Annex 8 for Wales and Scotland). As historic landscapes are ubiquitous, it follows that they cannot be destroyed; impacts on them can change their character, but not leave a hole in the historic landscape map. An **impact** is, therefore, defined as a change as a result of the proposed scheme that would not otherwise have occurred, and which alters the historic landscape character.

7.12.2 Consideration should be given to the types of potential impacts – constructional or operational, direct or indirect, positive, negative, temporary or long-term, and cumulative – as set out in Chapter 4 of the main Cultural Heritage Topic guidance.

7.12.3 The impact can be seen as negative or positive, that is, changing the character unit to a more commonplace or a more valued type. Negative and positive impacts should be assessed using the evaluated historic landscape character units, not the **elements/ parcels/components** that contribute to the historic landscape character. The key assets contributing to the historic landscape character should have been identified in the evaluation stage, and any changes to these assets arising from the proposed scheme should be considered in relation to the changes in HLC that would result from impacts upon them.

7.12.4 The scale of the historic landscape character unit will need to be chosen on a case-by-case basis, bearing in mind that it should be sufficiently extensive to merit a landscape-scale description but not so extensive as to swallow up any changes, regardless of their scale. The choice of the historic landscape character unit that is to be subjected to the assessment should be clearly recorded and justified.

7.12.5 Constructional impacts may be temporary or long-term. Impacts likely to last longer than 15 years are considered to be long term. As with the Landscape Topic, the growth of new planting may mitigate some changes within this time frame, and this should be taken into account. Medium term impacts are those that would last for less than 15 years and short term impacts would last for the construction period only.

7.12.6 Direct impacts are those that arise from the scheme itself, indirect impacts arise away from the scheme or through complex pathways. Impacts on setting are direct impacts if they arise from the scheme in a straightforward way.

7.12.7 As historic landscape is ubiquitous it may seem unreasonable to suggest that there could be an impact on its setting, but there can be impacts on the setting of historic landscape character units, where it can be demonstrated that the character of the unit would be changed by the presence of the scheme outside it. This could arise most obviously where a scheme was outside, but within sight or sound of, a designated historic landscape such as a historic park, but it is equally possible that impacts on the setting of undesignated historic landscape character units may arise as a result of activities nearby. The setting is the environs of an asset, including the topography, views, vegetation, approaches, ambience (sound etc) and context (known or believed information where little or no visible evidence exists). Some historic battlefields are almost wholly appreciated through their context – that is, there are no visible structures dating to the battle period, the topography, field boundaries, roads, settlement patterns, vegetation may all have changed, the views may be completely altered, the modern sound environment may bear no relation to the period of the battle let alone the sounds of the battle itself – all that remains is the knowledge that an event happened at that spot, and even the precise location of that spot can sometimes be open to debate. Methodologies used to assess impacts on setting should be transparent, clearly described and supported by professional standards where available. In developing or adopting methodologies for assessing the role of an asset's setting the specialist undertaking the study should bear in mind the principles discussed above and summarised below:

- an asset's setting is its **relevant** surroundings;
- settings have **physical factors** which can be changed by a scheme, but it is the effect these changes have on the perception of the asset that is assessed;

- **context** is an aspect of setting where a relevant aspect of knowledge, belief or relationships may not be visible (or audible) at the site;
- settings are **experienced by people** as contributing to the understanding or appreciation of assets;
- **professional judgement** is required, using criteria measured against the scheme's Cultural Heritage Design Objectives.

A fuller discussion of setting and context is set out in paragraphs 4.19 – 4.27 of the main text.

7.12.8 Cumulative impacts can arise from **multiple effects** of the same scheme on a single asset, **different multiple effects** of the scheme and other sources on the same asset, or **incremental effects** arising from a number of small actions over time. Interactions may arise from activities related to other topics, such as drainage schemes, endangered species relocation, sound attenuation measures or access arrangements, taken together with any cultural heritage impacts. The forms of cumulative impact are discussed in Section 2, Part 5, Chapter 1, with advice on how to consider the certainty of outcome and the probability of the predictions.

7.12.9 Impacts caused by the scheme on many similar, possibly minor, historic elements may be cumulative, but for historic landscape character units such impacts may best be assessed as the totality of their impact on the historic landscape character unit. The assessment of such multiple impacts is not simply a matter of aggregating scores; it requires professional judgement to assess how these changes actually affect the character of the historic landscape unit.

7.12.10 The sort of impacts on historic landscapes that could be caused by road schemes are often those associated with linear developments. These involve such factors as vertical alignment (embankments, cuttings, terracing, grade separated junctions, revetments etc.), horizontal alignment with its associated issues of severance, boundary structures and juxtaposition with other alignments (fields, tracks, topography), lighting and its ancillary structures, the treatment of minor side road junctions, and massive constructions such as bridges and viaducts.

7.12.11 Impacts may arise from the proposed activities related to other topics, such as landscape screening, or balancing pond excavations. The historic landscape specialist should liaise with the specialists in other relevant topics to ensure that account is taken by all of them of the impacts of activities proposed by others.

7.12.12 Ongoing communication with design engineers regarding the potential impacts of a scheme is essential. Accurate indications of the area affected by the scheme may not be available before the detailed design is prepared, and even later for 'off-site' matters such as site compounds, borrow pits, etc. Clearly, however, the scheme design is a key consideration in assessing impacts, and designers' estimates of new land-take, structures, alignments etc. are needed as early as possible. Sources of potential impacts are listed in Table 7.2 (this list is not exhaustive).

Table 7.2: Sources of Impacts

	Activity	Impact: negative	Impact: positive
Site clearance	Removal of trees and vegetation	• change to historic landscape integrity	Re-establishment of historic landscape pattern
	Fencing	• intrusion of inappropriate elements	

Table 7.2: Sources of Impacts (continued)

	Activity	Impact: negative	Impact: positive
Road construction	Topsoil removal	• disturbance of historic landuse pattern	
	Excavations for demolition, drainage, shallow foundations, borrow pits, decontamination etc.	• visual intrusion	
	Landscaping/ earth mounding	• visual or aural intrusion	Re-establishment of historic patterns Screening of intrusive elements
	Spoil disposal	• visual or aural intrusion	Re-establishment of historic patterns Screening of intrusive elements
	Installation features features (bridges, signage, fencing etc.)	• disruption of historic landscape integrity	
	Installation of lighting scheme	• visual intrusion	Improved lighting systems impact less on night time scene
	Road alignment	• Disturbance, severance causing dereliction or neglect of historic patterns of landuse	Re-instatement of historic landscape pattern
	Planting	• visual intrusion on historic landscape	Re-establishment of historic landscape pattern

Table 7.2: Sources of Impacts (continued)

	Activity	Impact: negative	Impact: positive
Operational	Traffic movement	• visual intrusion	
	Maintenance	• small scale repairs and consolidation or alteration of historic landscape elements – cumulative impact	Re-establishment of historic landscape elements
Other Environmental Mitigation	Topsoil stripping	• damage to historic landscape elements	
	Screen planting Other screening	• visual intrusion	Re-establishment of historic landscape pattern
	Noise reduction panelling	• visual intrusion	

7.12.13 Cadw in Wales has published a method of assessing impacts on historic landscapes, and where such a systematic approved approach has been established this should be followed. Assessments in the devolved administrations' territories should be guided by the relevant authorities (see Annex 8).

7.12.14 The magnitude of the **impact/change** should be assessed without regard to the **value** of the resource, so a total change experienced by a commonplace (low value) historic landscape character unit is the same magnitude as a total change experienced by of a nationally important historic landscape character unit. The value is factored-in later to calculate the significance of the effect (see Chapter 4 of the main Cultural Heritage Topic guidance and Table 7.4).

7.12.15 The study should judge the magnitude of an impact bearing in mind the extremes that could occur, not just the range of changes that would occur on the scheme under consideration. The largest would be a total change to the historic character; the least would be no change to the historic character. The changes should be ranked in relation to these extremes. The scale of the magnitude of impact is as follows:

- Major;
- Moderate;
- Minor;
- Negligible;
- No change.

7.12.16 The factors to take into account in assessing the magnitude of the impact on historic landscape character include:

- how changes to archaeological remains and historic buildings would change the character of the historic landscape;
- changes affecting historic spatial patterns;
- changes of characteristic historic landscape elements;
- changes to vegetation;
- changes in vibration/visual intrusion/noise (including the nature of sounds);
- changes to landuse.

Particular cases may require the consideration of other issues.

7.12.17 The study should assess the degree to which important elements, parcels, components etc. of the historic landscape would be obscured or opened up, and from which viewpoints, how the views from them would be affected, and how this would change the character of the historic landscape. This should be

assessed in relation to locations not currently accessible to the general public as well as from public rights of way, as changes to legislation may make these accessible in the future. The Landscape Topic specialists should be consulted, as they are involved in establishing these factors. The focus should be on the magnitude of the change to the historic landscape character arising from changes to views.

7.12.18 The assessment should consider any changes in noise levels, and changes to the ambience at important locations in the historic landscape. The Noise Topic and Landscape Topic specialists will normally be consulted in relation to noise levels and the mapping of noise affected areas. As well as noise levels, the nature of the sounds should also be taken into account. The magnitude of the change in the historic landscape character caused by such alterations to the soundscape should be the focus of the study.

7.12.19 The important principle is the magnitude of the impact on the historic landscape character unit. If an historic landscape unit has been characterised as – say – a late 20th century transport and industrial corridor, then the addition of a new transport element may have little or no impact on its historic character, despite a large land-take and possibly considerable negative impacts on other cultural heritage assets. There could be little or no historic landscape character change. Conversely, a new dual carriageway, which may have no significant impacts on archaeological remains or historic buildings, built across an otherwise coherent and relatively untouched pre-enclosure landscape unit may change it into urban edge-land, a considerable alteration.

7.12.20 Table 7.3 summarises the factors to be taken into account when assessing the magnitude of impact.

Table 7.3: Magnitude of Impact: Summary of Factors

Factors in the Assessment of Magnitude of Change	
Major	Change to most or all key historic landscape elements, parcels or components; extreme visual effects; gross change of noise or change to sound quality; fundamental changes to use or access; resulting in total change to historic landscape character unit.
Moderate	Changes to many key historic landscape elements, parcels or components, visual change to many key aspects of the historic landscape, noticeable differences in noise or sound quality, considerable changes to use or access; resulting in moderate changes to historic landscape character.
Minor	Changes to few key historic landscape elements, parcels or components, slight visual changes to few key aspects of historic landscape, limited changes to noise levels or sound quality; slight changes to use or access: resulting in limited changes to historic landscape character.
Negligible	Very minor changes to key historic landscape elements, parcels or components, virtually unchanged visual effects, very slight changes in noise levels or or sound quality; very slight changes to use or access; resulting in a very small change to historic landscape character.
No change	No change to elements, parcels or components; no visual or audible changes; no changes arising from in amenity or community factors.

7.13 Assessing Significance of Effects

7.13.1 The significance of the effect - that is, the extent to which the change to the historic landscape character matters – is the result of the value of the historic landscape character unit combined with the magnitude of the impact on it (incorporating the agreed mitigation). A large negative impact on a valuable historic landscape character unit would matter more than a large negative impact on a commonplace character unit. For instance, a new road scheme might totally change a late 20th century industrial landscape (historic landscape value: negligible) into a 21st century transport and communications landscape (value also negligible), so despite the high magnitude of impact (major change), when combined with the low value it would result in a slight or neutral significance of effect.

7.13.2 The judgement of the significance of effect should use the following scale:

- Very Large;
- Large;
- Moderate;
- Slight;
- Neutral.

7.13.3 Table 7.4 illustrates how information on the Value and the Magnitude of Impact are combined to arrive at an assessment of the Significance of Effect.

Table 7.4: Significance of Effects Matrix

VALUE						
	Very High	Neutral	Slight	Moderate/ Large	Large or Very Large	Very Large
	High	Neutral	Slight	Moderate/ Slight	Moderate/ Large	Large/Very Large
	Medium	Neutral	Neutral/ Slight	Slight	Moderate	Moderate/ Large
	Low	Neutral	Neutral/ Slight	Neutral/ Slight	Slight	Slight/ Moderate
	Negligible	Neutral	Neutral	Neutral/ Slight	Neutral/ Slight	Slight
		No change	**Negligible**	**Minor**	**Moderate**	**Major**
		MAGNITUDE OF IMPACT				

7.13.4 The significance of effect should be included in the data entry for each asset. It should be classified according to whether it is caused by scheme construction or operation.

7.14 Assessing Significance of Effects on the Overall Cultural Heritage Resource

7.14.1 The Cultural Heritage resource is an integrated whole, divided into the three sub-topics in this guidance solely because of the differing methods required for their assessment. It will be necessary to provide overview of the significance of the effect on the combined cultural heritage resource (archaeological remains, historic buildings and historic landscapes) over the scheme as a whole. For Environmental Statements it is not necessary to reduce this assessment to a single overall score (as it is in Appraisal Summary Tables), but the effects on individual assets in each sub-topic should be discussed, and their relative significance considered. The intention is that the ranking of value, impact and significance should be comparable across the sub-topics, so that their relative contribution to the overall assessment is reasonably transparent.

7.14.2 Historic landscapes have associations and significance for other cultural heritage sub-topics, for example, they will form the setting of historic buildings, and the archaeological remains buried beneath them will have shaped the character of the landscape. Historic landscape character analysis can provide a powerful tool for predicting the presence of other cultural heritage assets. The assessment should aim to re-integrate the three cultural heritage sub-topics to arrive at an overall assessment of the significance of the effect on the cultural heritage resource over the whole scheme. This does not require there to be a single overall score, as required in Appraisals for Appraisal Summary Tables (see WebTAG).

7.14.3 For each cultural heritage sub-topic there may be differing degrees of effect. For example, an historic structure may be important in the historic building assessment but the historic landscape character evaluation may be low. In these cases the highest sub-topic score should be taken as the significance of effect for that asset.

7.14.4 If all the effects on all assets were adverse then the highest reading on the Significance of Effect matrix will also normally be taken to be the overall cultural heritage effect, but judgement should be exercised to ensure that this does not distort the assessment. A scheme with wholly beneficial cultural heritage effects would, however, not normally be assessed at the highest beneficial reading, as a precautionary attitude should be adopted to avoid an over optimistic assessment. Again judgement is required on a case by case basis.

7.14.5 If there were adverse and beneficial effects these will need to be brought out in the assessment, not obscured by balancing them off against one another. For example, a bypass proposal with a Moderate Beneficial Effect on the historic building assets in a town centre might also have a Moderate Adverse Effect on rural archaeological remains. If these were offset against one another to produce a Neutral assessment score this would be misleading. An alternative route with no adverse or beneficial effects, or one with different balancing effects, would also have neutral scores, but clearly the schemes would not be equivalent in their effect on the cultural heritage resource. The effects of the different options and the scores should be described in the text, to make the differences clear.

7.15 Reporting

7.15.1 Guidance on reporting the Scoping, Simple and Detailed Assessment is given in the main Cultural Heritage Topic guidance at Section 6.

7.15.2 Dissemination requirements may not be determined in detail until the investigations have been completed and the results assessed. However, the general scale and approach to post-fieldwork processing and data dissemination must be established, and costed, at all stages of the proposals, and included in the commitments and contracts to carry out the work. Post fieldwork analysis, archiving and dissemination for archaeological works are covered in DMRB Volume 10a, and similar arrangements should be made for original historic landscape work. The individual circumstances of the scheme should be taken into account so that the cultural heritage design and mitigation strategy are formulated with their end products – the requirements of decision making and the need to ensure full and effective reporting, including post excavation work – clearly in mind.

7.15.3 Particular care should be taken to ensure that any original research undertaken in connection with the scheme is appropriately disseminated if no further programme of work were undertaken into which it could be assimilated, for instance if the scheme were abandoned or postponed.