

Part Two

LANDSCAPE, ECOLOGY AND FEATURES OF HISTORIC INTEREST

2.1 Trees, Hedgerows, Verges

Trees, hedges and verges which are within adopted highway land are the responsibility of the Highway Authority. Construction and maintenance work can have serious impact on vegetation and wildlife. Care and protection should be an important consideration when undertaking any highway works.

2.1.1. Tree Preservation Orders and Conservation Areas

Where trees are protected by a Tree Preservation Order or are within a conservation area, the consent of the Local Planning Authority must be sought to fell or prune the tree. If the tree is dead, dying or dangerous then urgent work can be undertaken but notice must still be given. If a tree is felled then planting a replacement is likely to be required. Statutory Undertakers are exempt from acquiring consent where land on which the tree is situated is "operational land" and the work is necessary in the interests of safety.

2.1.2. Hedgerows Regulations

Under the Hedgerows Regulations 1997, consent is required from the Local Planning Authority to remove most hedges, other than those within the curtilage of residential properties. Where hedges are found to be 'important' under the Regulations, a Hedgerow Retention Notice may be served which requires the hedge to be preserved.

2.1.3. Maintenance of Trees and Hedgerows

Vegetation within the highway needs to be appropriately maintained. Although for both the Highway Authority and adjacent landowners there are cost implications, roadside vegetation is an asset to the county's landscape. As well as being important visually, vegetation can also:

- reinforce the local identity of the highway network
- provide a physical and legal boundary to the highway
- prevent erosion
- provide barriers to ditches, streams etc
- enhance local biodiversity
- provide wildlife habitats
- provide shelter from the extremes of weather (e.g. snow and windbreaks)
- reduce airborne pollution
- reduce noise
- help reduce boredom on a long journey
- reduce the impact of new developments in the countryside

Maintenance of trees, shrubs and hedges should be carried out by specialists and might include:

- cutting and pruning – cutting back overhanging trees and shaping hedges using a circular saw
- thinning – reducing the number of plants in a hedge or young trees in a plantation, copse or woodland
- pollarding – cutting back all the branches to the trunk of the tree in order to allow new stems to grow (e.g. lime trees)
- crown reduction – reducing the size and volume of the tree canopy

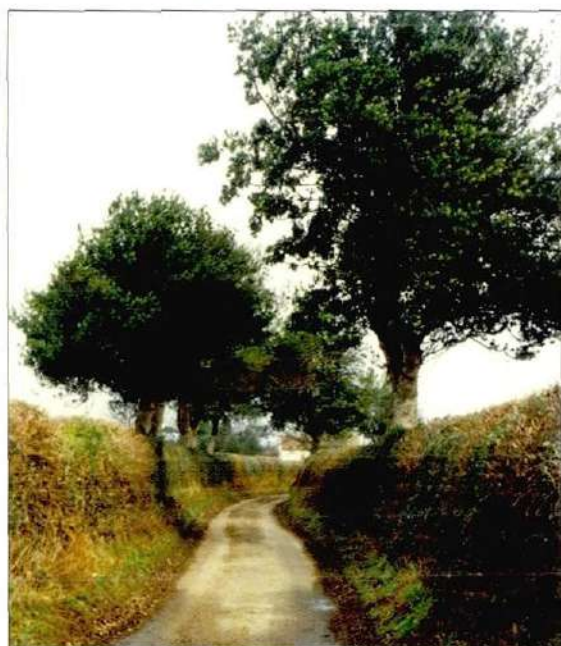


- coppicing – cutting the tree or hedge down almost to ground level in order to allow new stems to grow from the stump
- hedge laying – a traditional method of hedge management which involves splitting the stems of the plants and weaving them horizontally along the line of the hedge
- flailing – using machinery to break off the branches of trees and hedgerows. This is a common practice and while the results initially look extremely untidy, the hedges usually recover by spring. However, young hedgerow trees will

not survive this method of management unless they are clearly marked so that the machine operator can avoid them. Debris should be cleared immediately after the flailing operation.

Tree work should be carried out at the correct time of the year to protect the vegetation as well as wildlife. Tree surgery is best done in the autumn and winter when there is no sap in the wood and pathogens are not active. It is an offence to disturb nesting birds under the Wildlife & Countryside Act. Hedge cutting should not be undertaken from spring to autumn when birds are nesting, rearing young and using hedgerows as a source of food.

Trees & Hedgerows -



Well maintained cut hedge allowing trees to develop



Tree surgery



Flailed hedge can become top heavy and gaps may develop at base



A laid hedge

2.1.4. Retention of Trees, Shrubs and Hedges

When work is being planned and designed it is important to recognise the value of any existing vegetation and it may mean that the creative use of engineering design standards will be required in order to afford it adequate protection.

Important considerations include :

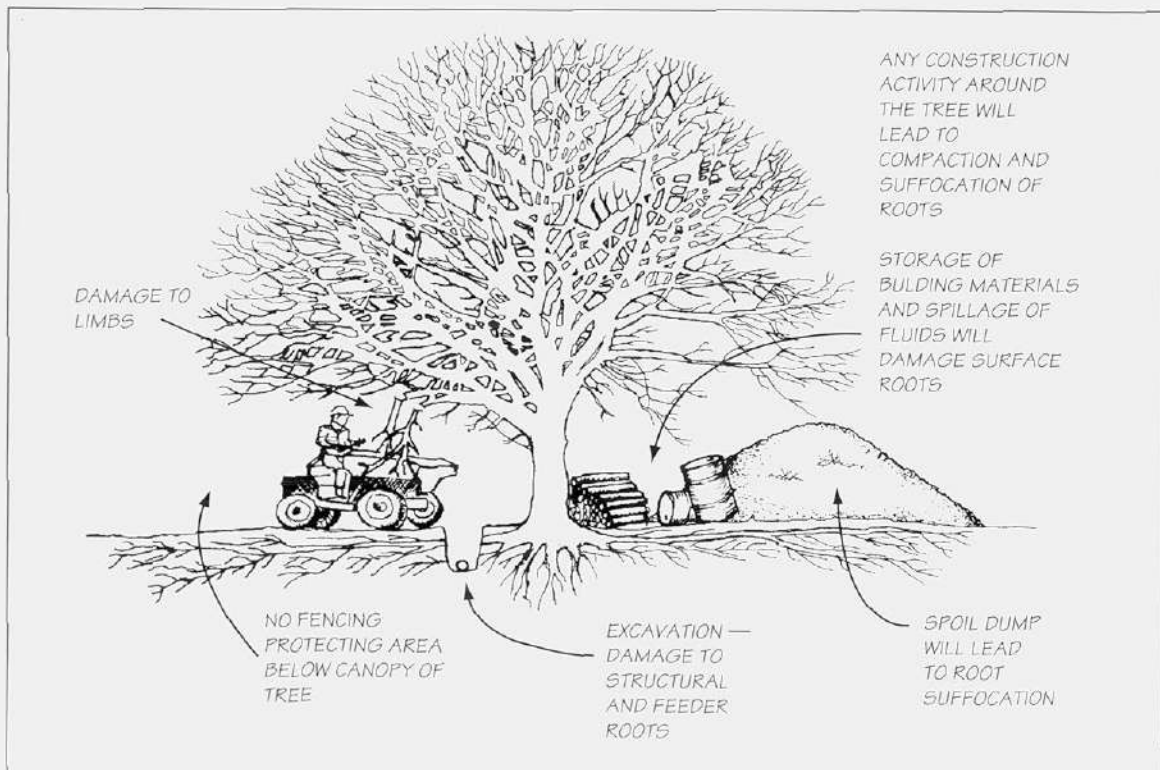
- A proper survey and assessment of all trees, shrubs and hedges likely to be affected should be undertaken before any design work is carried out
- Excavation works for foundations or services, kerbing and the laying of hard impervious surfaces can cause permanent root damage or alter the water supply to trees and shrubs
- Hand excavation should take place under the canopy of trees or in the vicinity of hedges to avoid root damage
- The erection of temporary sturdy fencing is likely to be necessary because vegetation can be damaged by spilled pollutants, the movement of heavy plant and machinery or by materials storage

- Existing soil levels around trees, hedges or shrubs should be maintained to prevent root damage or loss of associated ground flora
- Any necessary pruning should be undertaken carefully by a suitable contractor under correct supervision
- Work should adhere to the guidelines issued by the National Joint Utilities Group for the "Planning installation and maintenance of utility services in proximity to trees" (NJUG 10)
- The relevant British Standards are BS 5837 Trees in relation to Construction and BS 3998 Tree Work



Trees protected by temporary fencing during works

Trees and Construction - bad practice



2.1.5. Grass Verges

Grass verges need to be cut for safety reasons but, if managed sensitively, they can be a haven for wildlife. Careful cutting regimes may result in the appearance of a greater number of wild flowers. Chemical spraying should only be carried out where absolutely essential.

To prevent contamination, salt and grit used for winter maintenance should be stored carefully and not near to important trees and hedges. Grit bins can prevent contamination but the type should be carefully chosen to avoid being too visually intrusive. They are normally provided by the district and parish councils and filled by the County Council.

When carrying out construction work on or alongside verges careful practices should be used:

- Heavy plant and machinery, or materials, should not be stored on verges unless there is no alternative. If this is the case, the verges should be properly restored.
- Surplus soil should be disposed of appropriately
- Where it is necessary to make up soil levels, soils should be preferably screened and of a suitable compatible type
- Verges should be properly re-profiled so they relate to the existing roadside character. They may need temporary protection in order to allow the vegetation to re-grow. Timber posts or plastic net barriers may be necessary.
- Reseeding should be undertaken with suitable species and mixes. In certain locations it may be necessary to turf to ensure early establishment.



Flower rich roadside verge

Some verges are designated as Roadside Nature Reserves. This scheme aims to maintain a selection of verges containing rare and unusual plants by timing verge cutting and other operations to suit flowering and seeding times. These verges are important sites and are protected as County Wildlife Sites. They are indicated by white posts with notices at either end of the protected section.

Grit Bins - *timber bins look better*



Grass Verges -



Roadside Nature Reserve at Easton with Drooping Star of Bethlehem (below)



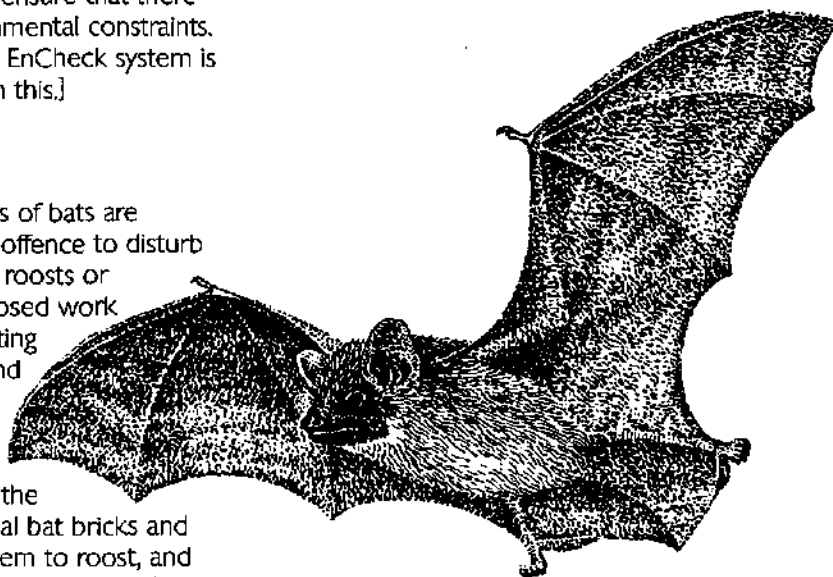
2.2. Wildlife and Conservation

Much of our wildlife is now protected by legislation which covers plants and animal species as well as habitats (see Appendix B). Road construction and alterations to the highway can have an impact on wildlife by destroying habitats or by creating a disturbance (for example, noise). An offence can therefore be committed even when there is no physical damage. To avoid delays, or possible prosecution a check should be made before proceeding to ensure that there are no known environmental constraints. [The County Council's EnCheck system is designed to assist with this.]

2.2.1. Bats

In Britain, all 15 species of bats are protected and it is an offence to disturb them or destroy their roosts or breeding sites. If proposed work might affect bats roosting in bridges, buildings and trees, English Nature should be contacted.

Bats can benefit from the incorporation of special bat bricks and openings to enable them to roost, and breed. Advice is available from the Suffolk Bat Group.

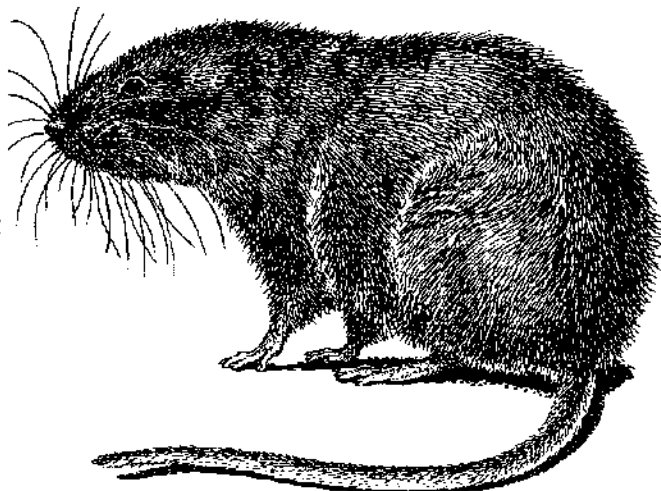


2.2.2. Otters, Water Voles, etc

The rapid decline in the number of otters has been due to polluted watercourses and the loss of prey, as well as human persecution. However, more recently, improvements in water quality, better river management and strategic conservation programmes, including controlled releases of otters has resulted in their numbers increasing but this has been partly offset by road casualties.



Otters and other protected species like water voles, must be considered in the design, construction and maintenance of highway works near watercourses. Bridges and culverts should incorporate ledges to allow safe passage. Wetlands, including wet woodlands and marshes, are also important habitats so the impact of drainage schemes on them must be considered.



2.2.3. Amphibians

Amphibians, including Great Crested Newts, can be affected by operations such as culverting, cleaning ditches or pond desilting. Similarly, changing the water quality in a ditch or pond can also have an impact. Knowledge of their life cycles will assist in choosing the best time to carry out work as during September to December the newts are on dry land. English Nature must issue licences for experts to handle these animals and this may take time to process.

Frogs and toads return to the same ponds each year to breed, their migration routes often cross roads and inevitably, there are many casualties. Special measures such as tunnels, amphibian fencing or signing can be installed in order to safeguard established routes.

Amphibians -



Great Crested Newt

PHOTO: COURTESY LORNE GILL/SNH



Temporary signs are erected in Spring at known migration routes (above)

Amphibian fence in verge and tunnel under Scole-Stuston bypass (below)



2.2.4. Badgers

Badgers and their setts are both protected by legislation. The location of setts are kept secret and therefore are not recorded on EnCheck. It is an offence to disturb these animals and using heavy machinery within 30 metres of the access to an active badger sett is considered to be disturbance by English Nature. Advice should be sought from the Countryside Section of the County Environment and Transport Department if work is undertaken in an area possibly frequented by badgers. Tunnels or underpasses can be constructed to maintain established routes, with special fencing used to guide animals to safe crossing places.



Badgers sett -

Known badger sett (top), excavations works showing existing badger runs (middle) and installation of new badger tunnel under road (below)

PHOTOS: COURTESY OF PAUL CANTWELL, DEFRA



Left: This hole discovered close to proposed works, was confirmed as a badger sett. A licence was obtained from English Nature to undertake works.

2.2.5. Barn Owls and Other Bird Species

Planting and the proper management of hedges and trees beside roads is beneficial to protected bird species such as Barn Owls. Roadside hedges act as physical barriers, causing owls to fly up and over a road rather than flying into vehicles. Hedges also provide shelter, food sources and nesting sites. It is an offence to disturb nesting birds so care in timing management operations is crucial.

Birds -



Barn Owls are a protected species



All nesting birds are protected

PHOTOS COURTESY www.lauriecampbell.com



Ivy can provide food and shelter for birds and other types of wildlife

2.3. Archaeology

2.3.1. Scheduled Ancient Monuments

There are over 200 Scheduled Ancient Monuments (SAM) in Suffolk. They include major buildings such as castles, forts and Martello towers but also burial grounds, bridges and crop marks.

It is an offence to damage a monument. Any proposed works affecting a SAM (including excavation or soil deposition) must obtain prior approval from English Heritage and the Secretary of State for Culture, Media and Sport.

Suffolk County Council's Archaeological Service will give advice on such applications.

2.3.2. County Sites and Monuments Record (Other Sites)

Other known County archaeological sites are also important and should, wherever possible, be protected. The inventory of known sites, the County Sites and Monuments Record, is held by the County Archaeological Service, Shire Hall, Bury St Edmunds, and is also recorded on EnCheck. Sites may be man made structures which are clearly visible or may be locations of important finds which indicate a settlement. These latter sites are not necessarily easily identified. Any work in the vicinity of a known site should not be progressed until the Archaeological Service has been consulted.

If work requires planning consent then a condition may be attached to any planning permission requiring either an archaeological investigation or a watching brief so that anything of interest can be

recorded before it is disturbed or destroyed.

2.3.3. Undiscovered Sites

The Register of Scheduled Ancient Monuments and the County Sites and Monuments Record are merely those sites that have been identified and recorded. There are innumerable other sites which have yet to be discovered.

If carrying out invasive work, it is important to be alert to possible archaeological evidence and if found, consult the Archaeological service. Evidence could comprise pottery, worked flints, dietary residue (animal bones or mollusc shells), organic preserved structures such as timber posts, earthworks and burial grounds. Sites may also be identified by unexplained and significant changes in ground levels, soil colours and topsoil depth.

The Institution of Civil Engineers Standard Conditions of Contract stipulate procedures to be followed by contractors in the event of the potential discovery of archaeological evidence.



Crop marks indicate presence of archaeological occupation and cannot be seen at ground level

Archaeology -



Greyfriars (Dunwich) – not all archaeological features are as easily recognised



Bronze age burial mound at Foxball adjacent to the highway

2.4. Historic Structures and Materials

2.4.1. Historic Street Furniture

Existing items of historic street furniture not only contribute greatly to the character and appearance of the rural street scene but are also often important historic artefacts in themselves. Features such as old bollards, lights, seats, drinking troughs, pumps, metal drainage channels and covers, milestones, memorials, telephone boxes and directional signs should all be retained in their original locations wherever possible. In some instances individual items are protected as listed structures which means that consent would be required for any works which would affect their special interest, including relocation.

When work is programmed to take place in the vicinity of an historic feature, and especially if they are going to be directly affected, it is important that they are protected. Whilst there may be circumstances when objects have to be temporarily removed, the preferred option will always be for them to be properly protected in situ.

Historic Structures -

Existing historic features should be retained



2.4.2. Traditional Railings

In the past, various forms of decorative and plain metal railings were used for property boundaries in rural locations. Houses, churchyards, formal parks and other sites in villages were often enclosed with metal railings, sometimes used in conjunction with brick or stone. Where these have survived, every effort should be made to retain and properly maintain them.



Simple metal railings

In rural Suffolk, railings made from simple continuous bar or tubular rails supported on concrete posts are traditionally found along the highway. The former is usually found around country houses and parkland, the latter (painted white) were erected as guardrails on bridges, alongside streams or as simple handrails alongside steps.



Old decorative railings

Traditional railings -



The horse racing industry around Newmarket has resulted in simple fencing and trimmed hedges giving a special character to the landscape



Continuous bar or parkland railings



White painted concrete posts and tubular rails are a traditional feature in the Suffolk countryside

2.4.3. Traditional Walls

The majority of old walls which survive in Suffolk were constructed from the local soft red brick and many were quite substantial structures. Gault or white brick walls are also common and these mostly date from the late 18th and the 19th Century.

Walls made up of random courses of brick and flint, and flint walls with brick dressings were constructed and a number of crinkle crinkle or serpentine walls also exist in the County.

Every effort should be made to ensure the long term preservation of old walls. Some walls are protected as listed buildings or structures within conservation areas. Changes to road and footway alignments and levels can often adversely affect existing walls. Splashing from passing vehicles, particularly in the winter when roads have been salted, can cause damage.

When repairing old walls, appropriate techniques and materials should be used. Advice on repair work is available from the County Council's historic buildings officer or from the conservation officers at the district councils.



Above: examples of white and red brick and flint walls

Old Walls -



Above left: the listed serpentine wall at Easton

Left: an example of a wall constructed in rat-trap bond

2.4.4. Old Surface Materials

In most rural areas, before the advent of modern surface finishes, roads comprised just compacted soil and a mixture of gravel, larger stones and flints. Subsequently, hard surfacing for roads and footways was selected according to the location and function of the space and the availability of materials. In the more important and heavily used areas :

- stone flags were imported to provide a better, hard wearing, surface for pedestrians
- granite setts were laid to accommodate vehicular traffic
- gravel and small areas of cobbles were traditionally used in villages

- yorkstone was used to pave important spaces
- the local red and white bricks were used in squares and courtyards
- granite slabs were used as kerbs and drainage channels
- in the 19th Century blue clay stable paviors, kerbs and channels were introduced as an alternative to stone

Important old materials are not only attractive but are also of historic significance and should be retained or re-laid in the same location. If this is impossible then, where practicable, such materials should be stored for re-use within the locality.

Historic Surfaces -



Pink granite setts around manhole covers



Yorkstone



Traditionally laid cobbles



Blue clay paviors



Stone setts



White bricks