4.0 Detailed guidance

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4.1 Introduction

4.1.1 The aim of this section is to provide further information and guidance on the use, design and specification of materials and structures mentioned in previous sections. It has to be recognised that sites and locations vary and that the solution for one site or type of development will not necessarily be the best for others.

4.1.2 Advice on the possible solutions can be sought from a number of organisations and professionals. Proposals may require planning permission from the Local Planning Authority (LPA) in which case advice may be sought from landscape, conservation or planning officers. Conservation Areas and Listed Buildings are subject to more stringent controls and conservation officers from the LPA are more likely to offer detailed advice on any proposals.

4.1.3 Further advice on proposals that do not require planning permission can be sought from a number of organisations and publications with advice increasingly available on the Internet. A list of contacts, publications and web links is contained in Appendices 1 and 2.

Worked ragstone for new steps pre-assembled in quarry before shipment to site

4.2 Materials

General

4.2.1 The Kent Downs AONB partnership is committed to the principle of sustainable landscapes and this is reflected in the Management Plan for the Kent Downs AONB and so where possible sustainable materials should be used. In essence this means locally available and where possible renewable. Using locally grown timber for example, promotes management of local woodland; provides local jobs; supports traditional skills and helps maintain a key characteristic (coppice woodland) of the Landscape Character.

4.2.2 The reuse of locally sourced reclaimed materials by recycling them for refurbishment or new development will generally be the most sustainable option and also perpetuates local character. Reclaimed materials will however always be limited in supply.

4.2.3 From a sustainability point of view the use of new quarried materials is not quite so straight forward but local materials are more likely to be in keeping with the area and will generally be more sustainable than importing a similar material from other areas of the country or abroad. However there are a number of materials that have been imported into the area over the years, particularly with the advent of the railways, that have become engrained in the local character and might still be appropriate to use. These include yorkstone and as paving slabs, setts or cobbles and kerb stones.

4.2.4 With all materials it is important to consider the characteristics of the local character area. Generally it will be appropriate to use traditional materials and patterns found nearby particularly where they are a strong characteristic feature.

Timber

4.2.5 The Kent Downs support a variety of woodlands including chestnut coppice, mixed broadleaved coppice and broadleaved and coniferous woodland. The coppice woodland predominantly produces sweet chestnut and oak for use in fencing whilst other woodland produces timber for the broader timber industry including oak frame construction. Forestry policies are generally seeking to replace coniferous plantations with mixed broadleaved planting which is more in keeping with landscape character and has greater benefits for biodiversity.

4.2.6 All fences should therefore wherever possible utilise oak and chestnut produced from local well-managed woodland. Other structures such as bus shelters, benches, bollards, sign posts, gates, stiles and buildings, can and should also where possible, be made from locally sourced timber. This will mainly be green heart construction grade oak, which is suitable for most types of construction. However more intricate items such as gates need to be made from cured timber (which is more difficult to obtain and expensive) or more commonly, treated softwood to avoid splitting and twisting. Softwood should always be treated with preservative when used for construction but oak or chestnut, which cannot be treated in this way, may last as long or longer than treated softwood.

4.2.7 There are a number of schemes that certify that timber is from a well managed sustainable woodland, the most well known of which is the Forest Stewardship Council (FSC). Other locally grown native broadleaved timbers such as beech or ash are generally used in the furniture or turning industry.

4.2.8 To ensure that appropriate sources of timber are used from woodland that is being well managed timber should be specified as:
All timber to be sourced locally (within the Kent Downs AONB or close by) certified by the FSC or other approved certification scheme.

Bricks and Tiles

4.2.9 Clay bricks and tiles are the traditional building materials of the Kent Downs. The colour and texture of clay bricks and tiles varies according to the source of the clay and the manufacturing process used. Traditionally much of the process was done by hand using a wide variety of sources for the clay resulting in a wealth of variety in the finished product. Large-scale quarries and mechanised production processes have reduced this variability. Never-the-less clay products still have inherent characteristics and a unique appearance not replicated by concrete products.

4.2.10 For projects where brick or tiles are critical, reclaimed or handmade products would be preferable. Elsewhere, new clay bricks or tiles can be specified, taking care to match as closely as possible local colours, patterns or textures. The use of the materials, such as the type of bonding in brickwork, should also reflect local styles and, in the case of walling, local designs.

Tile hanging on upper elevation of traditional brick building

Natural Stone and Local Aggregates

4.2.11 These are the natural stones and aggregates that are commonly found and/or used across the Kent Downs AONB and are an important element in the colour and character of the landscape.

Flint

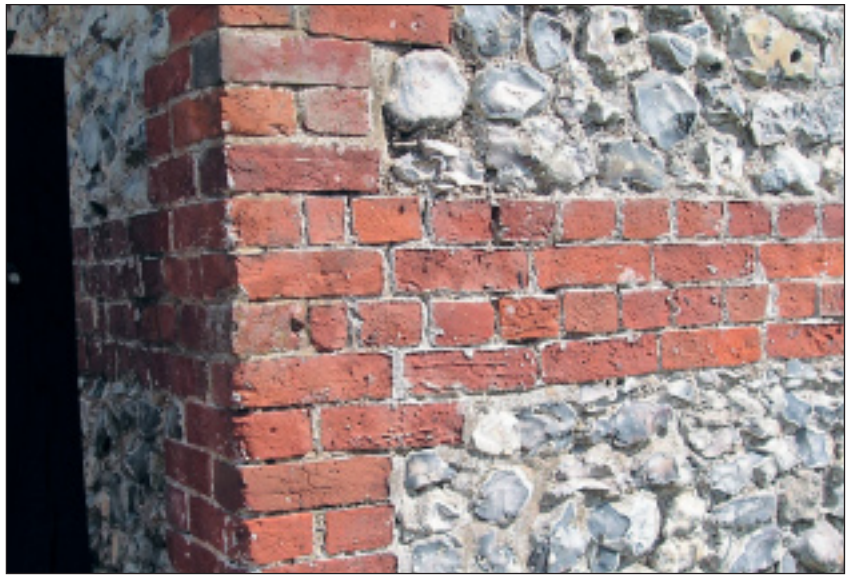
4.2.12 Flint, which is always found in tandem with chalk, occurs within and around much of the Kent Downs AONB and has had a long history in the Downs, first as a tool and then a building material. Commonly, because of its irregular form, flint is used within free standing or house walls contained by brick quoins and bands or as decorative panels. Flints are usually 'knapped' to give them a smooth face and they are used in a variety of dug and 'knapped' forms in different patterns or styles. The dressing and laying of flints is a very specialised trade requiring expert skills and advice.

Ragstone

4.2.13 Ragstone, a dull grey stone, is still quarried on an industrial scale close to the Kent Downs AONB. It has traditionally been used within the AONB as a road stone, cobble or sett and a walling block. Although difficult to 'dress' with a regular face it has been used as rectangular blocks for the construction of walls and buildings and was very popular for the construction of 19th century churches. More frequently, owing to the difficult and variable nature of the stone, it is seen as irregular and self faced irregular blocks in walling. Due to its irregular shape, as with flint, ragstone has been set within brick quoins and bands. 'Spalls', fist sized irregular chips of ragstone, have been used to surface paths but modern usage of ragstone is as a general construction aggregate, including fill for gabions and loose or partly binding gravels. Where appropriate to the character area, ragstone, laid in even courses, would be a suitable material for use in the construction of walls, paths or tracks and has the added benefits of being widely and readily available from sources close to the AONB.

Hoggin

4.2.14 'Hoggin' is the term given to a mixture of clays, sands and gravels to form a material that compacts well and provides a usable, stable surface for paths and tracks at low cost. Traditionally this was an 'as-



Right: Flint walling with brick quoins

Far right: Ragstone outbuilding with tiled roof

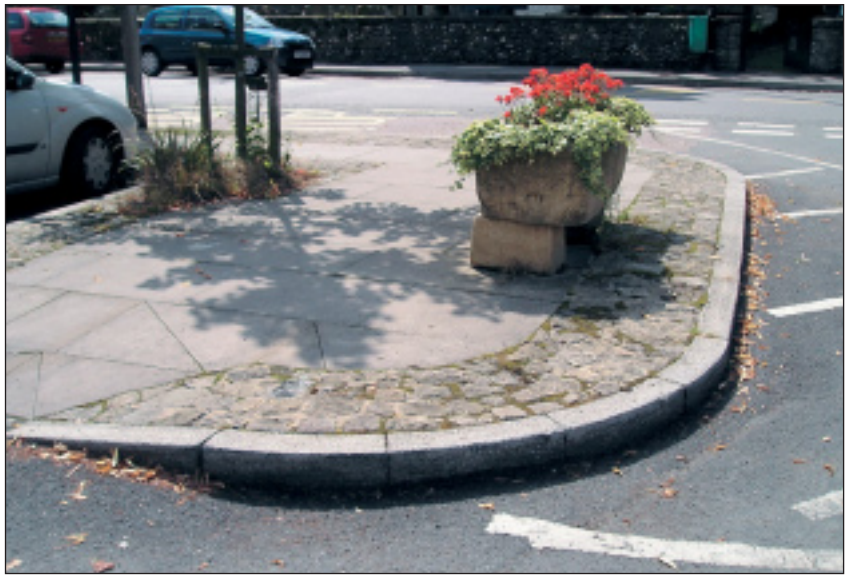
dug' mixture widely used across the south east of England. Now largely replaced by more predictable materials (e.g. MOT Type 1), hoggin is not readily available as a construction aggregate. Ragstone gravel, up to 6mm nominal size with fines laid over a suitable sub-base, will provide a more appropriate alternative low-cost material for paths and tracks.

Granite setts or kerbs

4.2.15 Although not a local material, granite has been widely used across much of the North Downs and surrounding area for kerbs and setts in the construction of roads and other infrastructure projects but is more closely associated with urban areas than rural. Generally, where granite does occur as part of historic development it should be reused and restored. For new development adjacent to such areas consideration can be given to extending the granite or to using alternative modern reconstituted stone products such as 'conservation' kerbs and setts. These are cheaper, lighter and easier to work than granite and should be used instead of concrete. Alternatively new ragstone kerbs could be used.

Reconstituted materials and aggregates

4.2.16 It is recognised that traditional materials are not suitable for all modern uses and applications. As previously mentioned reconstituted granite kerbs may be appropriate in some areas to replace granite for a variety of practical reasons. Generally however reconstituted stone and imported aggregates should not be used. However where they are employed they should, like the local materials, reflect the underlying geology and be similar in colour and tone to traditional materials and natural stones or soils. An example of modern usage of aggregates is anti-skid surfacing on the highway. This material has quite stringent performance criteria that cannot be found in the local geology but a material may be specified that is similar in colour for instance to that of ragstone gravel.



Far left: Ragstone walling with brick coping – good example

Left: "Conservation kerbs" used with ragstone setts

4.3 Fencing, gates and timber structures

Fences

4.3.1 The types of timber and the reason for their suggested use has been set out in the previous section. Below is a description of the fence types commonly found across the AONB together with photographs and supporting text that contain suggestions for appropriate use.

Cleft post and rail

4.3.2 Traditional standard design is 4' (1.2m) high three rails with posts at 9' (2.7m) centres using oak or chestnut. Posts are typically morticed and sawn or cleft. Rails are triangular section with flattened ends and are usually from cleft chestnut. Rails overlap with flat ends in a single mortise and are held by galvanised nails. This is a traditional rural fence particularly suitable for woodland edges, hedgerows and rural lanes. Wire netting can be added to make the fence stock proof.

Sawn post and rail

4.3.3 Traditional standard design is 4' high three rails with posts at 9'6" centres with intermediate prick posts using sawn oak. More recently these fences are almost exclusively built from treated softwood but oak is recommended for use in the Kent Downs AONB. Posts are mortised to the section of the rails. Rails are scarf jointed in the mortise and held by nails. Prick posts are held by nails.
Commonly used for horse paddocks and smaller animal enclosures. Wire netting can be added to make the fence stock proof.

Picket or pale fences

4.3.4 Commonly, decorative formal fences the designs of which are varied with some areas or estates having their own distinctive pattern. In its most common form it is normally 900m high with sawn pointed posts and pales. Posts are mortised with two rails and pales are spaced just less than their width. Traditionally this would have been oak but today is more commonly treated softwood. Quite often the fence is painted white.
Typically used as a garden or cottage fence associated with dwellings and occasionally country estates. In the most traditional simplistic form the whole would have been made of cleft chestnut giving a more rustic appearance.

Post and wire

4.3.5 These are a modern fence with different gauges and patterns of wire to suit different livestock or applications. Commonly high tensile wire is used so that it can be put under tension and it is erected on

Left to right:

Traditional three rail cleft oak and chestnut fencing

Sawn post and morticed rail three bar fence – oak is recommended material

Traditional rustic chestnut picket fence

Post and wire on open downland

chestnut posts.

The main attributes of these fences are that they are relatively cheap and unobtrusive. They are commonly erected alongside hedgerows to make them stock proof. They should be used to divide grazing land in open areas such as downland where there is no hedgerow and none are to be planted.

The use of green coloured wire is a misplaced attempt to conceal fencing and the use of it is therefore not encouraged. Wire 'chain link' fencing whether plastic coated or uncoated is more suited to urban areas and should not be used.

Chestnut paling

4.3.6 Made entirely of chestnut stakes joined together by twisted wire and fixed to chestnut posts this fence is most commonly used today as a temporary low-level security fence in suburban situations for which it is supplied in rolls. As a more traditional rural fence each spile can be driven into the ground and then wired together. This provides a strong flexible design ideal for making good gaps in hedgerows or small section of fencing on difficult terrain or to awkward shapes. It can also be used in this form when the spiles are driven close together as a bank revetment for loose soil, riverbanks and ditch edges.

Estate railings

4.3.7 Metal estates railings were commonly used around large country estates during the 1800s and early 1900s. In places these have become an important characteristic element that should be maintained. New sections of this type of fencing are unlikely to be appropriate except where associated with development in such areas. Where required they should follow the pattern of existing fences.

Security fencing

4.3.8 Intrusive security fencing should be avoided. Designs and materials normally associated with urban areas such as chainlink, metal pailing and close board fencing should be avoided.

Where security fencing is required wooden fence posts and galvanized steel wire should be used. The fencing should be screened with thorny hedges of native plants. This will help reduce the visual impact of the fencing on the landscape and provide additional deterrent to intruders.

Entrance gates should be simple and in keeping with rural character. Timber gates are preferred and the driveway and entrance should be in scale with surroundings and no wider than necessary.

Elaborate, ornate and high gates are more suburban than rural. They are out of place in the countryside and are not appropriate in the Kent Downs.

Left to right:

Sawn oak picket fence

Chestnut paling

Metal estate railings

Woven hurdles

Woven hurdles

4.3.9 Made from coppiced hazel or chestnut and occasionally willow, woven hurdles offer an attractive alternative to closeboard fencing. Chestnut and Hazel hurdles are more appropriate for most areas of the Kent Downs as the products are locally available. Woven hurdles are a traditional and sustainable product. Hurdles are held in place by tall chestnut posts driven into the ground.

Other Structures

Gates and stiles

4.3.10 Consider if a gate or stile is necessary – removing them can make the countryside accessible to more people – where they are required consider designs which allow disabled access – for more information see selected references. The gate should where possible be in keeping with the type of fencing with which it is associated. Invariably for most rural locations a traditional timber five bar gate is acceptable but for metal estate railings or picket fences a matching design would be preferable.

Similarly, stiles and kissing gates should reflect the materials of the fence they are associated with. When passing through a hedge, stiles should reflect the materials of those fences found nearby. As mentioned previously whilst oak and chestnut would be preferable gates and other intricate structures are more likely to be made of pressure treated softwood.

Bus stops and shelters

4.3.11 These structures come in a variety of styles and designs but are often simplistic utilitarian structures that are poorly maintained. Conversely there are a number of good examples that utilise timber construction and tiled roofs and reflect the vernacular of local architecture. Whilst these good examples represent best practice they should not be slavishly copied without regard for the character and architecture around the proposed site.

Interpretive signs

4.3.12 Interpretive signs, finger posts and notice posts are important means of encouraging access and of communication with the public. Care has to be taken with design and siting to avoid creating unnecessary clutter or visually intrusive elements particularly in exposed rural locations. Local timber is likely to be the most suitable material but each situation will require careful site-specific design solutions.

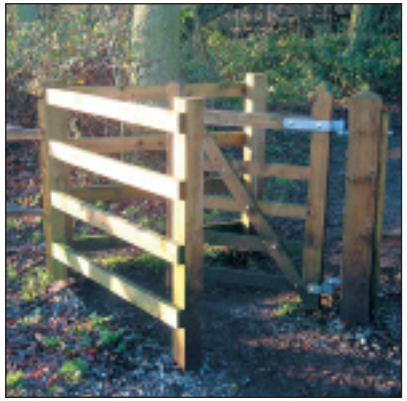
Left to right:

Stile through post and wire fence in chestnut

Kissing gate in sawn timber – oak recommended

Oak bus shelter with clay tiled roof

Country Park sign



4.4 Woodland and hedgerows

4.4.1 The management of woodland and hedgerows can be complex and apart from dealing with seasonal constraints and long time scales it needs to take account of different and often conflicting requirements in terms of function, amenity and biodiversity. Quite often specialised advice will be needed but much useful and accessible information has been published that can be of use to those that own smaller parcels of land. In particular the North West Kent Partnership has published, 'Caring for and Managing the Landscape of the Kent Downs' and specifically covers woodland and hedgerows. Whilst this is designed for the West Kent part of the AONB, nearly all the advice applies equally well to the whole of the AONB. The most important thing to take into account, whether in West Kent or East Kent, is the individual character of the area for the site under consideration and what characteristics it possesses that should be perpetuated. Section 3.0 of this report sets out for each character area Key Characteristics, Objectives and Design Guidelines and these should be referred to when considering the guidance issued in this or any other publication.

4.4.2 The advice issued by the North West Kent Partnership is not repeated here but set out below are a number of key points for woodlands and hedgerows to help with the understanding of this guide and other publications on the subject (Refer to North West Kent Countryside Partnership, 'Caring for and Managing the Landscape of the Kent Downs').

Woodland

4.4.3 The current structure and condition of almost all woodland in Kent, including ancient woodland has resulted from past management and commonly, in more recent times a lack of positive management. Positive management is needed where access or amenity is important or where the woodland structure (e.g. coppice) is based on regular management practices. Individual veteran trees that have in the past been pollarded or coppiced may be dependant upon the continuation of this process to ensure their longer-term survival. Management can also improve the structure and biodiversity of woodland. Woodland should therefore have a long-term management plan that addresses the relevant issues and should take account of:

- Important individual trees within the wood that need special attention (e.g. veteran trees, ancient woodland indicator species such as wild service tree *Sorbus torminalis* or small leaved lime *Tilia cordata*).
- Historic management practices (e.g. pollarding or coppicing)
- Necessary consents or permissions (e.g. felling licence or tree preservation order)
- Replanting where timber trees are to be clear felled
- Available grants
- Public access (formal or informal)
- Biodiversity
- Available expertise and advice.

Veteran pollard tree in woodland

4.4.4 Where new planting of woodland is proposed it should not be at the expense of other important habitats or features such as unimproved grassland or heathland. The species selected should reflect the local character area as set out in section 2.13 and be planted as a mix of species including a range of understorey shrubs. Planting plans and mixes for a new woodland should include:

- Only 10 to 15% high forest trees such as oak and ash with the remainder made up of understorey shrubs (e.g. hazel *Corylus avellana* and dogwood *Cornus sanguinea* or lower storey trees (e.g. hawthorn *Crataegus monogyna* or hornbeam *Carpinus betulus*).
- A broad range of species planted in a random mix based on a 1 to 3m grid with trees well distributed across the planting area and shrubs in groups of 3 to 5 of the same species.
- Where used wild cherry *Prunus avium* and wild service trees *Sorbus torminalis* should be in small numbers (less than 5% of tree species).
- Woodland edge mixes – ideally a strip several metres wide of scrub planting at the edge of the woodland.
- Proposals for thinning during establishment to maintain species and structural balance.
- Protection from mechanical (e.g. strimmer) or environmental (e.g. rabbit or deer) damage and provision for weed control during establishment.
- A programme of inspection and review.

Hedgerows

4.4.5 The term hedgerow in its broadest sense covers linear tree and shrub features such as clipped hedges, shelterbelts or narrow shaws. All are important characteristic features in their own right requiring their own particular management regime. However this section of the guidance is restricted to managed or clipped agricultural hedges. These hedges come under the Hedgerow Regulations (1997), which sets out a definition and criteria for 'Important' hedgerows i.e. those of particular historical or ecological interest. All hedgerows can however be important, regardless of their classification under the regulations as they:

- Are an important element of local landscape character
- Provide connectivity for important ecological resources
- Act as screen to unattractive features
- Provide shelter to people and wildlife and protect crops from the wind.
- Offer a suitable habitat for a number of flora and fauna including protected species.

4.4.6 Hedgerows are a managed feature and where regularly cut need little or no further attention for many years. If left to grow hedges become gappy or thin and reinvigoration may be required. This can be done through coppicing or laying. Hedge laying is a traditional form of management that improves the strength of a hedge and requires

Left to right:

New woodland planting on a 1.5m grid protected by rabbit fencing

Managed hedgerows along rural lane

Recently layed hedge

New hedgerow planting protected by mesh guards

specialist skills. It is not suitable for all hedges and so specialist advice should be sought before undertaking this work. In general regular management should:

- Cut every second or third year where possible, as this will improve the value to wildlife.
- Cut hedges in the same area on a rotation basis for improved ecological structure.
- Cut during January or February (this avoids disturbing nesting birds but leaves autumn fruits as long as possible for wildlife).
- Preserve and, where appropriate, add standard trees.
- Maintain a minimum 2m margin between cultivation or development (including access paths) and the base of the hedge.

4.4.7 Planting of new hedges should where possible follow historic field boundaries/hedge lines or existing landscape features/patterns. The planting mix and structure will depend upon the character area as set out in section 3.0. Commonly a large proportion is hawthorn (more than 40%) for rigidity and strength but a wide variety of species can be used and should include standard trees at 10 to 20m centres. General principles of good practice for new hedge planting include:

- Planting in a double staggered row at 600cm apart with rows 45 to 60cm apart.
- Plant whips, either bare-rooted or pot-grown.
- Planting in a prepared and weed free trench a minimum 900mm wide.
- Provision for protection from mechanical (e.g. strimmer) or environmental (e.g. rabbit or deer) damage and weed control during establishment.
- Using a broad range of species planted in a random mix.
- Provision for regular pruning even during establishment will improve survival rates for new plants and encourage dense growth down to the base.
- Provide measures for weed control in the first three years through mulching using bark or felt mats. This also reduces soil water loss, another important issue in the care of new hedges.
- The best time to plant new hedges is from November to February.

Well managed road side hedges that are regularly trimmed