Design Guide 1
Introduction

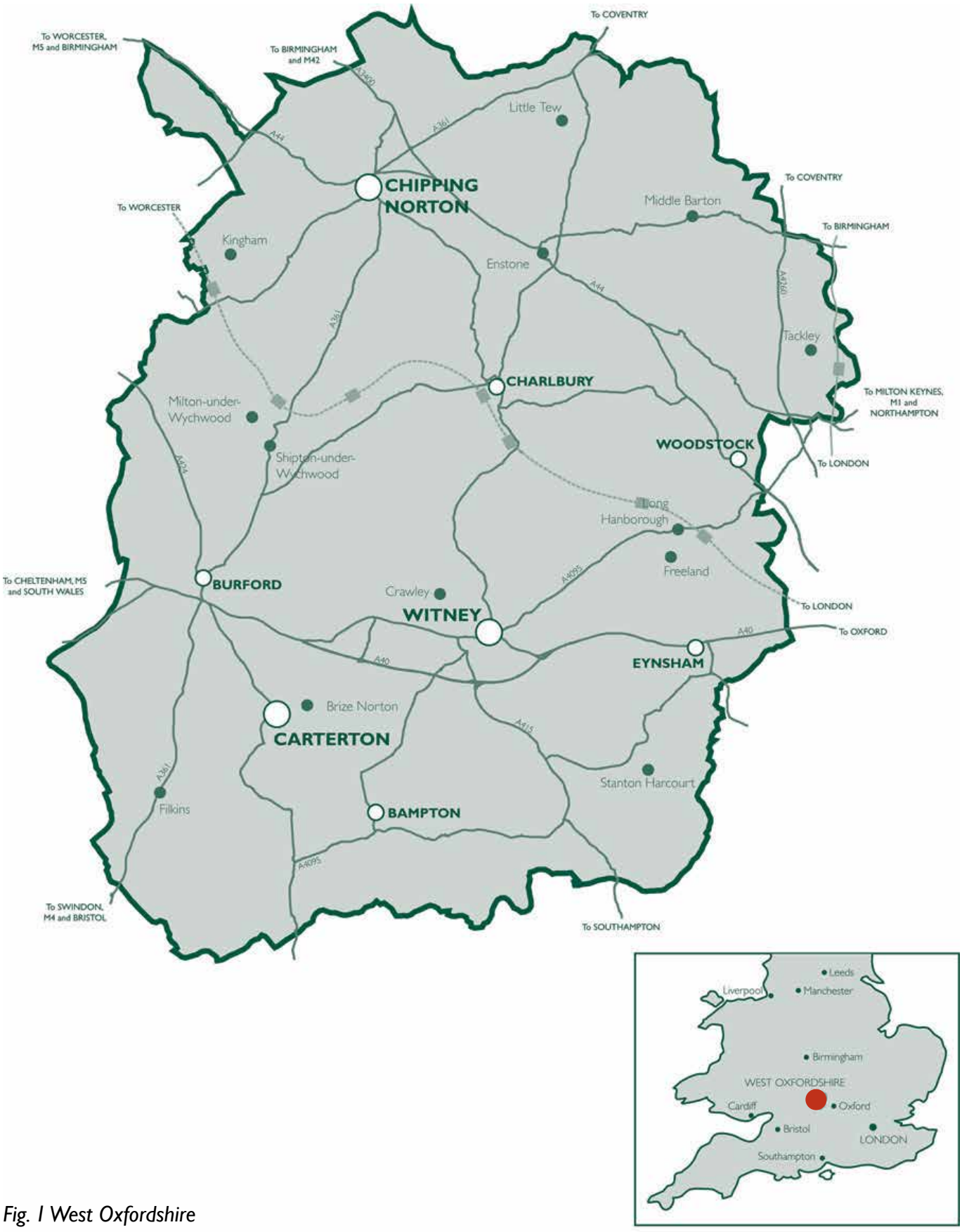


Fig. 1 West Oxfordshire

1.1 INTRODUCTION

The purpose of the West Oxfordshire Design Guide is to describe the qualities and characteristics that make West Oxfordshire special – its landscapes, settlements and buildings – and to describe ways in which good design can protect and enrich the character of the District.

Design is central to a wide range of issues, from the colour of a front door to the layout of a new housing area. Whatever the context, being 'fit for purpose' should never be enough. Outstanding design makes places special, is life-affirming, and forms a material legacy by which future generations will know and judge us. For these reasons outstanding design should be the aim of all those involved in the change or management of West Oxfordshire's built and natural environment.

The Design Guide provides advice and information which builds upon national and local planning policies contained primarily in the *National Planning Policy Framework* (NPPF, 2012) and in the *West Oxfordshire Local Plan 2031*.
See also: Design Guide 2: Planning Policy.

The Design Guide has been subject to public consultation and has Supplementary Planning Document (SPD) status, making it a material consideration in the determination of planning applications.

1.2 STRUCTURE AND SCOPE

The Design Guide is intended to encourage a high standard of design, and to promote new development which respects and fits in with the character of West Oxfordshire. The Guide sets out the characteristics which make West Oxfordshire unique and which can be used to influence new design that reflects and enhances local character.

The Design Guide is intended to provide information to a wide range of potential users, including communities, home- and business-owners, developers and agents, planning officers and local Members; to all those involved with potential change to the landscapes, settlements and buildings of the District.

The central theme linking all parts of the Design Guide is the belief that good design can only result from a comprehensive understanding of, and meaningful response to, local context in all its forms; that each context is unique, and merits an individually tailored design response.

The Design Guide is divided into twenty parts. Parts 1-10 deal in detail with existing context, setting out the qualities and characteristics that make West Oxfordshire distinctive. These parts focus both on broad, District-wide themes, such as landscape and settlement character, together with narrower design-related issues, such as designated heritage assets and building details.

Parts 11-20 are concerned with future change, and cover key themes relating to new development, including sustainable design, extensions and alterations, changes to traditional buildings, and shop front design.

Unlike its predecessor, the updated Design Guide is intended primarily as a web-based document, any part of which may be viewed on screen or printed.

Design Guide 2
Planning Policy

2.1 PLANNING POLICY

NB Owing to the new West Oxfordshire Local Plan 2031 not being due for adoption until 2017, the following Local Plan Policy information may be subject to further amendment. For confirmation of the current Policy position, please contact Planning Policy.

The principal sources of planning policy which underpin the West Oxfordshire Design Guide are the *National Planning Policy Framework* (NPPF 2012) and the *West Oxfordshire Local Plan 2011* (WOLP 2011).

The District Council is preparing a new Local Plan which sets out a vision of the District in 2031 and provides an overarching framework to guide and deliver that vision (emerging WOLP 2031). Once adopted this will replace the WOLP 2011. It is anticipated the WOLP 2031 will be adopted in late Summer 2017.

2.2 THE NPPF

The National Planning Policy Framework (NPPF, 2012) is explicit about the importance of good design and of understanding design in terms of context. Paragraph 17 (**Core planning principles**) states that: *planning should*

- *always seek to secure high quality design and a good standard of amenity for all existing and future occupants of land and buildings;*
- *take account of the different roles and character of different areas, promoting the vitality of our main urban areas, protecting the Green Belts around them, recognising the intrinsic character and beauty of the countryside;* (…)

The importance of good design and of understanding design in terms of context is reinforced in paragraphs 56–68 of Part 7 of the NPPF (**Requiring good design**):

- Paragraph 56: *(…) Good design is a key aspect of sustainable development, is indivisible from good planning, and should contribute positively to making places better for people.*
- Paragraph 57: *It is important to plan positively for the achievement of high quality and inclusive design for all development, including individual buildings, public and private spaces and wider area development schemes.*
- Paragraph 58: *(…) Planning policies and decisions should aim to ensure that developments: (…) respond to local character and history, and reflect the identity of local surroundings and materials.*

The NPPF is also explicit in respect of the protection of the historic environment. Paragraph 17 (**Core planning principles**) states that:

- *planning should (…) conserve heritage assets in a manner appropriate to their significance;* a principle reinforced and expanded upon in Part 12 of the NPPF (Conserving and enhancing the historic environment).

2.3 THE EMERGING LOCAL PLAN 2031

In responding both to guidance contained in the NPPF and elsewhere, and to the strongly held view of residents of the District that: *this part of the country is a special place (…) which must not be eroded by decisions to accommodate inappropriate future development or other change* (emerging WOLP 2031, Paragraph 1.2), the emerging West Oxfordshire Local Plan, too, is explicit about the importance of good design, and of understanding design in terms of context.

The importance of design is set out in Paragraphs 4.32–4.35 of Part 4 of the emerging Local Plan (**Overall strategy**), and concludes with **Policy OS4 – High Quality Design**, which states:
High design quality is central to the strategy for West Oxfordshire. New development should respect and contribute to local distinctiveness and, where possible, enhance the character and quality of the surroundings and should:

- *demonstrate high quality, inclusive and sustainable design with the provision of a safe, pleasant, convenient and interesting environment where the quality of the public realm is enhanced and the likelihood of crime and fear of crime is reduced; and*
- *not harm the use or enjoyment of land and buildings nearby including living conditions in residential properties; and*
- *demonstrate resilience to future climate change, particularly increasing temperatures and flood risk, and the use of water conservation and management measures; and*
- *preserve or enhance areas, buildings and features of historic, architectural and environmental importance, including unlisted vernacular buildings and habitats of biodiversity value; and*
- *enhance local green infrastructure and its biodiversity, including the provision of attractive, safe and convenient amenity open space commensurate with the scale and type of development, with play space where appropriate.*

Designers of new development will be expected to provide supporting evidence for their design approach. They should have regard to specific design advice contained in supplementary planning guidance covering the District. ***The West Oxfordshire Design Guide****, Landscape Assessments, Conservation Area Appraisals and Cotswolds AONB guidance documents are key tools for interpreting local distinctiveness and informing high design quality.*

As with the NPPF, the emerging Local Plan is also explicit in respect of the protection of the historic environment. The importance of the historic environment is affirmed in Paragraphs 8.75–8.92 of Part 8 (**Environmental and heritage assets**), and concludes with **Policy EH7 – Historic Environment**, which states:

All development proposals should conserve or enhance the special character and distinctiveness of West Oxfordshire's historic environment, and preserve or enhance the District's heritage assets, and their significance and settings.

Proposals affecting non-designated heritage assets, such as locally listed buildings, will be assessed on the basis of the significance of the heritage asset and the scale of harm or loss to that heritage asset. The Council's Conservation Area Appraisals should be used as a guide when assessing the significance of a heritage asset.

Proposals that will lead to harm to the significance of a designated or non-designated heritage asset or its setting will be resisted, unless a clear and convincing justification can be made to outweigh that harm.

Proposals that will lead to substantial harm to or total loss of the significance of a heritage asset or its setting, will be refused, unless the harm is outweighed by substantial, demonstrable public benefits or all the four tests set out in Paragraph 133 of the NPPF are met.

2.4 FURTHER GUIDANCE

At the national level, further detailed guidance on Planning matters is available from a variety of sources, including the government's *Planning Practice Guidance*, which explains and greatly expands upon the policies set out in the NPPF.

Historic England is among several organisations to publish detailed advice in respect of design and context. Relevant guidance published by English Heritage includes: *Streets for All* (2004); *Conservation Principles, Policy and Guidance* (2008); *Understanding Place: Conservation Area Designation, Appraisal and Management* (2011); and *The Setting of Heritage Assets* (2011).

At the local level, detailed guidance in respect of design and context is available from a number of sources, including: *the West Oxfordshire Landscape Assessment* (1998) and the Conservation Area Appraisals and Management Plans for the District's Conservation Areas. Sources of information relating in particular to the District's landscapes and the environment include: The Wychwood Project, The Lower Windrush Valley Project, The Cotswolds Conservation Board, and Thames Valley Environmental Records Centre (TVERC).

Design Guide 3
Geology & Landscape

3.1 GEOLOGY AND LANDSCAPE

West Oxfordshire is a predominantly rural District. It encompasses large areas of unspoilt countryside and a diverse pattern of landscapes, including expansive uplands and floodplain, folded river valleys, historic parkland, low-lying farmland, riverside meadows and remnants of ancient forest. It contains scattered villages together with a number of larger towns.

Fig. 1 A typically expansive Cotswolds landscape

Fundamental to a thorough understanding of the District – both in respect of new development and change to and preservation of existing settlements and buildings – is a thorough understanding of the geology and landscape of the District.

The geology of West Oxfordshire is dominated by 150 million-year-old Jurassic rocks, and comprises a sequence of limestones and clays that give rise to two principal swathes of terrain: **The Cotswold Hills** and **The Upper Thames Vale**.

The Cotswold Hills sweep across the centre and north of the District, and are dominated by a thick belt of oolitic limestone. This pale, hard rock plays a defining role in the character of the District. It is the source of the classic, locally dominant building stone, and forms the high, expansive, smoothly rolling plateaux, which reach an elevation of around 220 metres near Chipping Norton, and dip gently towards the south-east. Soils across this part of the District tend to be thin, well-drained and calcareous, supporting arable farmland or grassland.

Notable variations in geology and landform occur in the north of the District. In the broad, shallow basin of the upper Evenlode Valley in the north-west, softer lias rocks are exposed, which include darker iron-bearing marlstone.

The upper Evenlode Valley is characterised by gentle, low-lying topography with heavy clay soils supporting mixed farmland and a strong structure of hedgerows and hedgerow trees.

Across the north of the District, but particularly in its north-east corner, these softer Lias rocks are heavily folded and cut through by rivers and streams to form an area of complex topography supporting a rich pattern of mixed farmland, thick hedgerows, trees and woods.

The geology here contains rocks with high iron content. These are known as 'ironstones', and give rise to the highly distinctive warm, orangey or ginger-coloured building stone, which plays a defining role in the buildings and settlements in the extreme north of the District.

In the south of the District, the oolitic limestone of the Cotswolds gives way in successive belts to crumbly cornbrash limestone, and finally to the Oxford clay, river gravels and alluvium of **The Upper Thames Vale**. This area supports heavy clay soils and larger-scale mixed farmland with a relatively strong structure of hedgerows and trees.

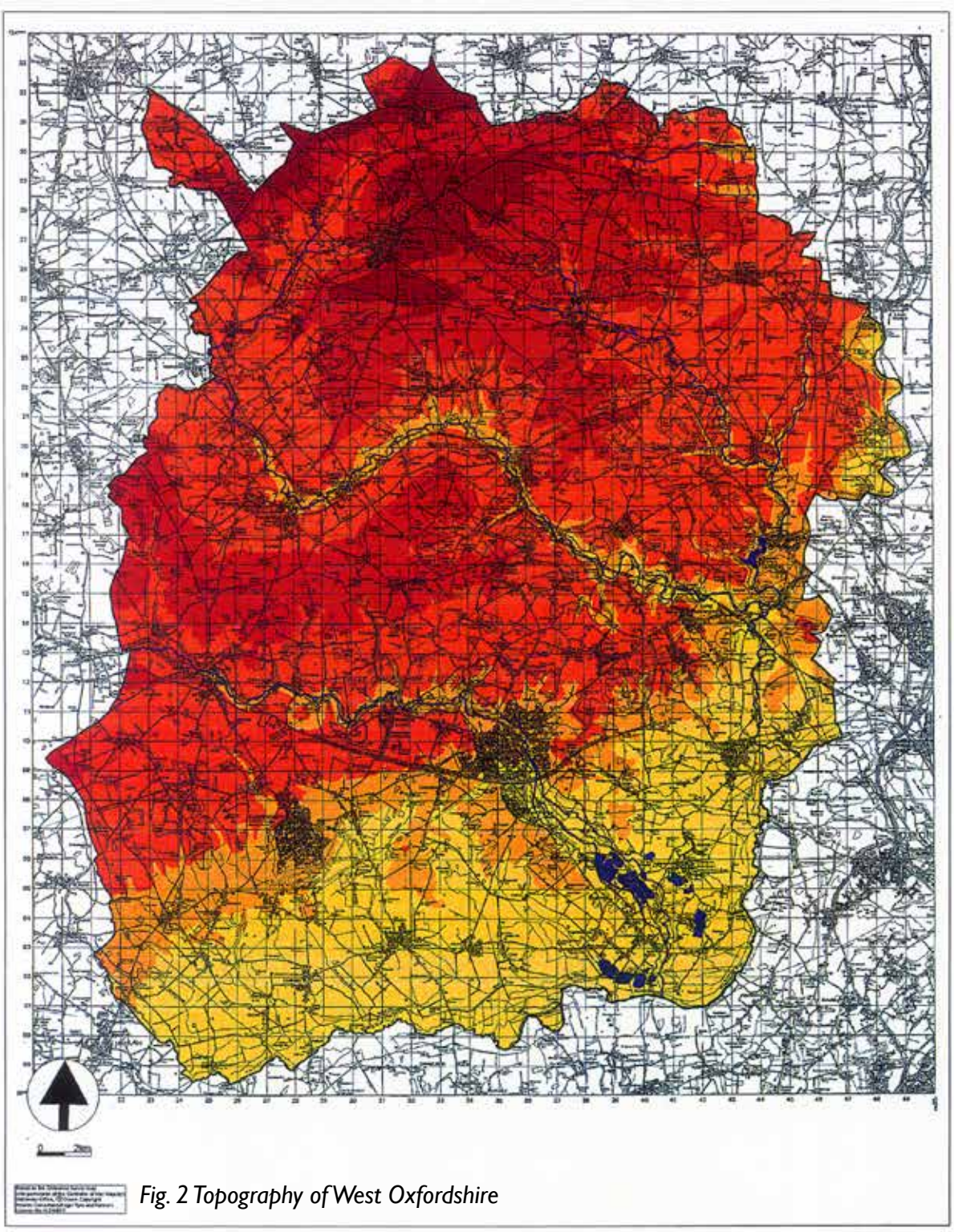
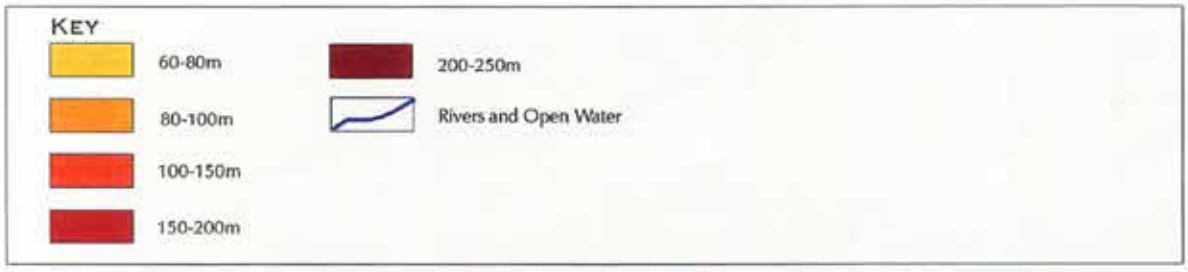


Fig. 2 Topography of West Oxfordshire



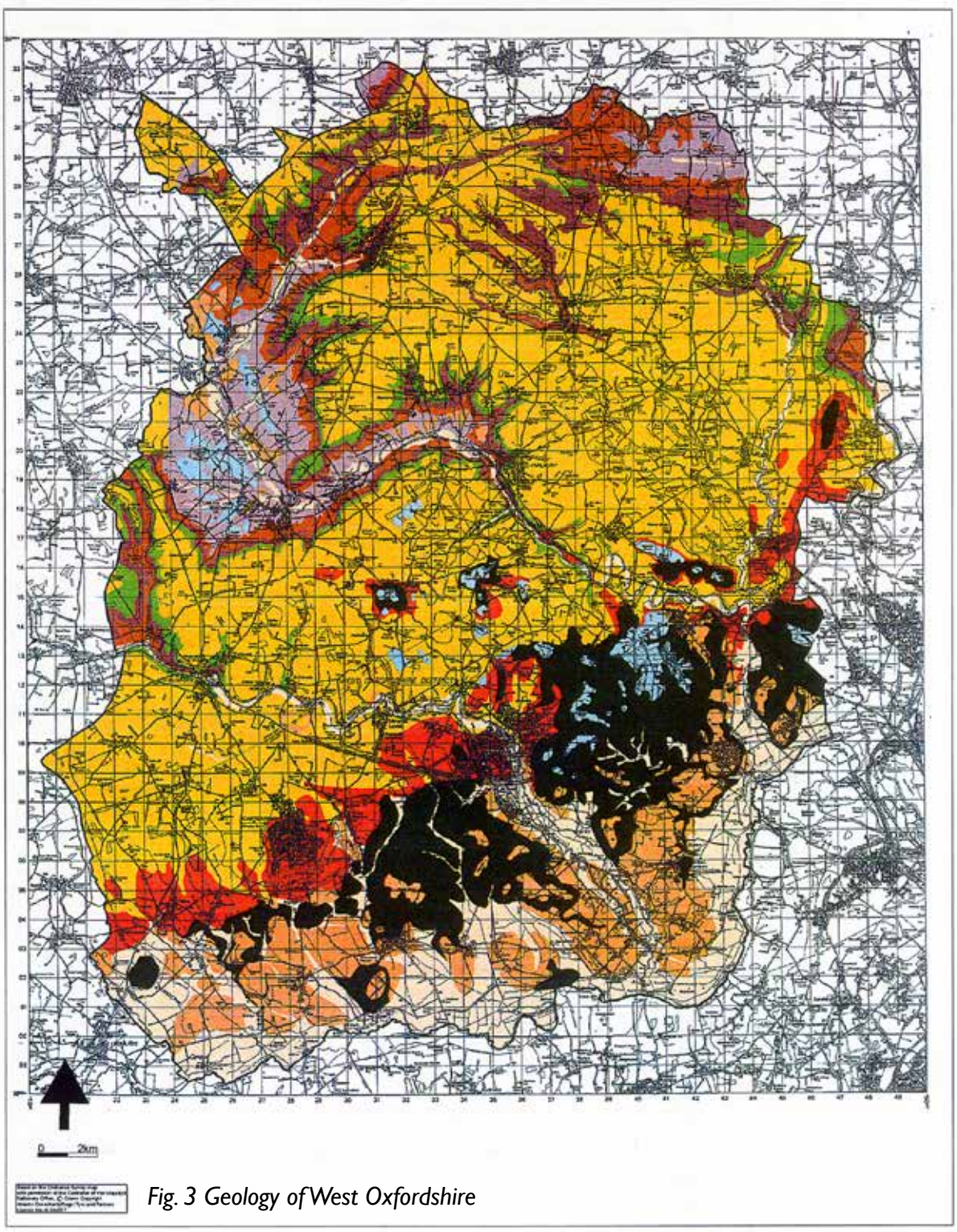


Fig. 3 Geology of West Oxfordshire

The landscape here is low-lying (between 60 and 100 metres) with a distinctive flat, open character. The predominance of clay is reflected in the greater use of brick as a principal building material in this part of the District.

3.2 THE WEST OXFORDSHIRE LANDSCAPE ASSESSMENT

The well-established *West Oxfordshire Landscape Assessment* (WOLA, 1998), from which the above summary is drawn, contains an exhaustive analysis of the landscape and geology of the District. It also includes detailed information on landscape condition – which areas are in poor condition and need enhancing; which are in good condition and need conserving – together with a 'Landscape Enhancement Strategy' map.

3.3 THE COTSWOLDS AREA OF OUTSTANDING NATURAL BEAUTY (AONB)

A large part of the District – roughly one third – forms part of the Cotswolds Area of Outstanding Natural Beauty (AONB). Designated in 1966 for its qualities as a quintessential English landscape, it is the largest of England's 41 AONBs.

The primary purpose of AONB designation is the conservation of natural beauty, wildlife and cultural heritage. The relevant Act (the *National Parks and Access to the Countryside Act 1949*) distinguishes AONBs from National Parks, where the objectives of outdoor recreation, public understanding and enjoyment are deemed to be of equal importance.

The potential impact of development or change within the AONB will be a material consideration in determining planning applications within the area. Development likely to cause harm to the AONB is unlikely to be supported.

3.4 HISTORIC LANDSCAPE TYPES

Landscape character is the product of a complex mix of existing geology, landform and vegetation, shaped by successive human interventions over many centuries. The survival of evidence of historic land management methods – for example the ridge-and-furrow of medieval open fields – has left clearly discernible signs of the complex evolved landscape history of the District.

The historic imparked woodlands, including fragments of the ancient forest of Wychwood, are especially valuable assets here. An understanding of these and other historic landscape types is crucial if the distinctive local character of the District is to be maintained and strengthened. The identification and study of these has led to a number of projects whose aim has been the restoration, conservation and enhancement of these unique landscape types.

3.5 WOODLAND

Fig. 4 Local broad-leaf woodland

At one time much of the District was covered by the former royal hunting forest of Wychwood. By 1086 this covered at least 180 square miles. Since then, however, vast tracts of the forest have been cleared (much of it in the C19) leaving behind fragmentary copses and woods.

Many West Oxfordshire villages, including Finstock, Ramsden and Leafield, originated as clearings in the forest, and owe their distinctive straggling form to haphazard growth as the land was gradually cleared. The remnants of Wychwood forest are extremely important, both for their natural and their historical significance. The parishes of Wychwood and Cornbury, together with Swinbrook and Widford, contain sizeable areas of ancient woodland.

The Wychwood Project [www.wychwoodproject.org/] is a long established organisation dedicated to Wychwood Forest, and set up to encourage the understanding, conservation and restoration of the forest's rich mosaic of landscapes and wildlife habitats. The project area covers some 120 square miles, and encompasses 41 parishes.

3.6 HISTORIC PARKS

Fig. 5 Historic parkland at Rousham

West Oxfordshire, and in particular the north-east of the District, is unusually rich in historic parkland. Some landscapes, such as those at Woodstock and Cornbury, were 'imparked' (enclosed from ancient woodland) in the Middle Ages, in order to create hunting grounds for royalty and nobility. A second wave of development in the C17 saw the creation of the landscapes at Ditchley and Chastleton. However, the majority of the District's historic parks, including those at Rousham and Heythrop, were laid out in the C18. These historic parks are inextricably linked to the rise of the great estates and the establishment of large country houses.

The creation of the great C18 designed landscapes, which may possess both formal and picturesque qualities, entailed three main forms of human intervention. The first of these was physical landscaping and the creation of formal features, such as terraces, parterres and pools, or informal features such as naturalistic landforms and lakes. The second involved the planting of trees and other vegetation, either in formal avenues or blocks, or in naturalistic clumps or belts. The third involved the addition of built elements, such as garden buildings, bridges, monuments, follies or eye-catchers.

In West Oxfordshire, Blenheim (successor to the medieval Woodstock Park) is pre-eminent, and has been designated a World Heritage Site. Designed by Lancelot 'Capability' Brown and others, it covers an area of 1,000 hectares, and is home to 45 structures Listed Grade-I or Grade-II*. Other major figures from landscape history are well represented in the District, including William Kent at Ditchley and Rousham, and Humphrey Repton at Sarsden and Great Tew.

See also Design Guide 7: Listed Buildings, Registered Parks & Scheduled Monuments.

3.7 LOWLAND HEATH

Fig. 6 Lowland Heath at North Leigh Common

Heaths are areas of open, relatively barren land, often resulting from forest clearance. They are characterised by poor-quality, free-draining soils that are high in acid and low in nutrients. This relatively hostile environment leads to the creation of highly distinctive habitats that support a unique combination of plants and animals.

Certain tree species, such as pine and silver birch, readily establish on heathland. Historically, cutting such trees for firewood, or allowing animals to graze, restricted tree growth and protected low plants, such as heathland grasses, heathers and gorses. Although the decline in such practices has seen much heathland reverting to woodland, there are several important remnants of lowland heath in West Oxfordshire, including a notable area at North Leigh Common.

3.8 HISTORIC FIELD PATTERNS

Fig. 7 Historic field patterns bounding Leafield

Significant areas of medieval farmland within the District resulted from forest clearances, in a process known as 'assarting' (the cleared areas known as 'assarts'). Resultant manorial farmland was often worked in strips in common fields. Ploughing patterns led to ridges where the plough soil accumulated between furrows defining the narrow plots; or furlongs, into which the open fields were divided. Headlands at the end of the strips were used for turning the plough. Manorial landholders also had access to common pasture and woodland. Small and often irregular 'closes' around the edges of settlements are also characteristic of this period, and historic field names sometimes relate to the original owner of the land, as in 'Burtons Crofte'; or to its location, as in 'Towne Close'.

The enclosure of medieval open fields and the clearance of forests by major landlords occurred from the mid-C17. The pace of enclosure quickened from 1750, when Acts of Parliament came into effect, which led to open fields and common land being systematically enclosed, and land ownership consolidated. In the middle of the C19, a swingeing programme resulted in the widespread clearance and enclosure of Wychwood, near Cornbury Park.

3.9 MEADOWLAND

Fig. 8 Meadowland at Cogges

Meadows form a distinctive low-lying landscape type, and fall into one of two principal categories. There are those areas adjacent to rivers that experience regular winter flooding; and those in which river water is persuaded to flow through an area of land by means of a series of man-made ridges and ditches. Historically, meadowland has been used as pasture for the grazing of cattle; the flood water having the effect of keeping frost out of the ground, thereby allowing the early spring growth of grass. The alluvium deposits left on

meadowland by the receding waters provide highly fertile soils able to support a rich and distinctive array of flora and fauna. Much of the Thames Vale area in the south of the District is characterised by this landscape type.

For further information, please see: https://www.westoxon.gov.uk/media/329154/Windrush-in-Witney-project-Summary-leaflet.pdf

3.10 VEGETATION CHARACTER AREAS

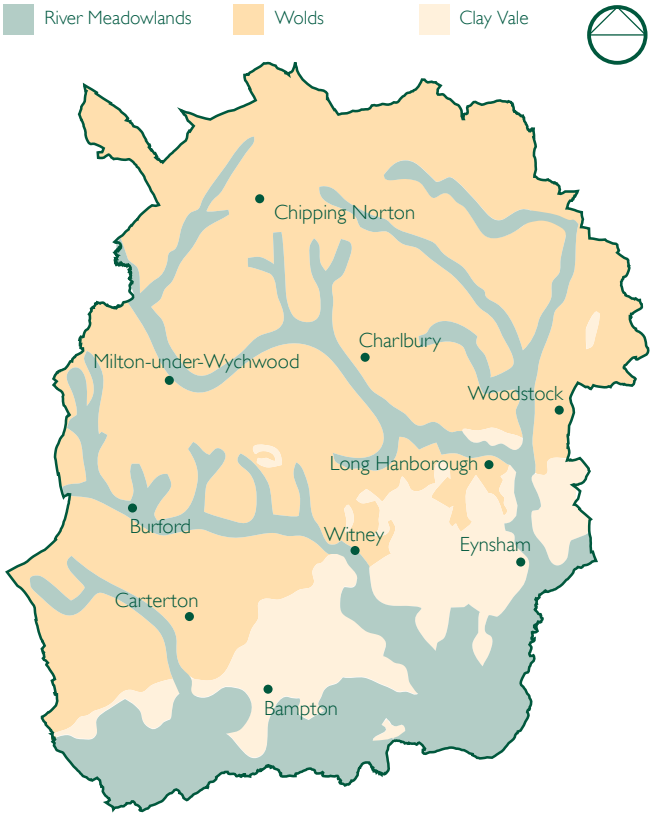
The management of flora and fauna should reinforce or restore those landscape characteristics which contribute to local distinctiveness and biodiversity. In general, intervention should aim to restore diversity and structure to the landscape; for example through the planting of trees and hedgerows, and the creation of habitats, in order to reinforce the distinctive characteristics of a particular landscape type.

In terms of vegetation type, West Oxfordshire can be subdivided into three broad character areas: the Limestone Wolds, the Clay Vale and the River Meadowlands; each with a distinctive combination of key and significant tree and hedgerow species.

NB it should be emphasised that these divisions represent the landscape character of the District expressed in its simplest terms.

See also: https://www.oxfordshire.gov.uk/cms/content/oxfordshire-historic-landscape-characterisation-project (Oxfordshire Historic Landscape Characterisation Project);
http://www.cotswoldsaonb.org.uk/userfiles/file/management-plan-review/final/management-plan-2013-18-adopted-pre-publication.pdf (AONB information);
Natural England National Character Area Profile for the District;
The Oxfordshire Wildlife and Landscape Study.

Vegetation Character Areas



Part of the Cotswolds Area of Outstanding Natural Beauty in West Oxfordshire

River Meadowlands

Key tree and hedgerow species

Willow	*Salix alba*
	Salix caprea
	Salix viminalis
	Salix fragilis
Alder	*Alnus glutinosa*
Poplar	*Populus spp.*
Ash	*Fraxinus excelsior*
Hawthorn	*Crataegus monogyna*

Significant species

Oak	*Quercus robur*

Wolds

Key tree and hedgerow species

Beech	*Fagus sylvatica*
Ash	*Fraxinus excelsior*
Field Maple	*Acer campestre*
Hawthorn	*Crataegus monogyna*

Significant species

Oak	*Quercus robur*
Sycamore	*Acer pseudoplatanus*

Clay Vale

Key tree and hedgerow species

Oak	*Quercus robur*
Ash	*Fraxinus excelsior*
Hawthorn	*Crataegus monogyna*

Significant species

Willow	*Salix alba*
	Salix caprea
	Salix viminalis
	Salix fragilis
Poplar	*Populus spp.*
Field Maple	*Acer campestre*
Hazel	*Corylus avellana*

Design Guide 4
Local Character

4.1 THE CHARACTER OF WEST OXFORDSHIRE

West Oxfordshire is a predominantly rural district. It embraces large areas of unspoilt countryside and a diverse pattern of landscapes, including rolling uplands, river valleys, historic parkland, remnants of ancient forests, low-lying farmland and riverside meadows. It contains within its borders scattered villages and some larger settlements. The architectural and landscape character of West Oxfordshire is chiefly determined by the underlying geology, with corresponding variations in traditional architectural forms in different parts of the District.

See also: Design Guide 3: Geology & Landscape

4.2 ARCHITECTURAL CHARACTER AREAS

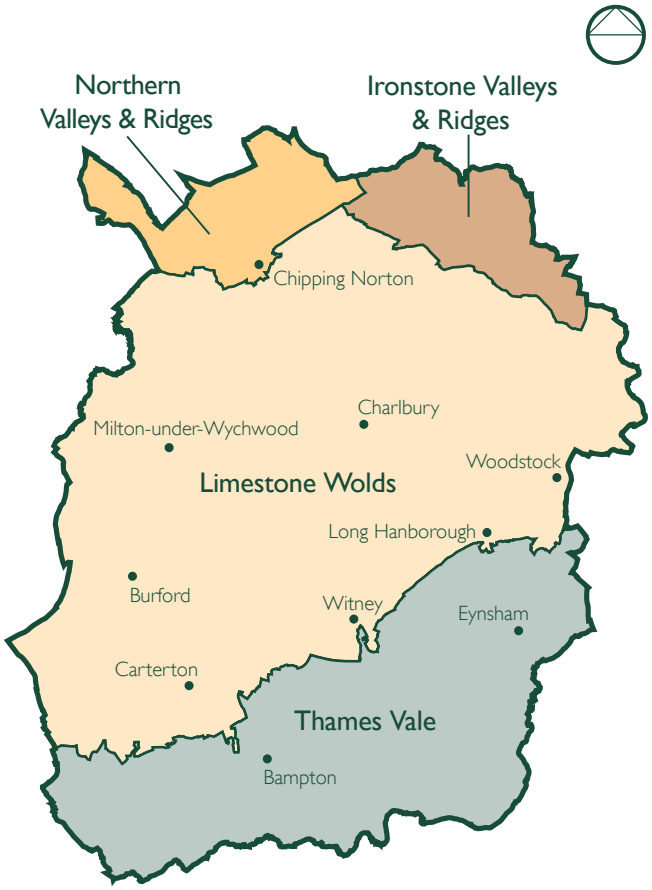
Just as the landscape of West Oxfordshire does not remain consistent throughout the District, so it is with the architecture and building materials. Marked regional variation exists. For this reason, guidance specific to each character area is crucial if this differentiation, and the richness of the District as a whole, is to be honoured.

Four distinct character areas have been identified in West Oxfordshire: the **Thames Vale**, the **Limestone Wolds**, the **Ironstone Valleys and Ridges**, and the **Northern Valleys and Ridges**.

Each area is topographically and geologically distinctive, as well as exhibiting clearly discernible variations in its architecture and building materials. The areas are identical to, or are amalgamations of, the twelve landscape character areas identified in the *West Oxfordshire Landscape Assessment* (WOLA 1998). Each of the four areas is discussed in detail in the following pages.

Local character is particularly marked in West Oxfordshire, where the local oolitic limestone is the dominant material. It has been cut into smooth ashlar facings for the walls of important buildings, laid as coursed facings for walls or as coursed rubble for lower status houses, cottages and barns.

Today a wide range of architectural forms and synthetic materials are available. These, when used alongside traditional forms and natural materials, may appear alien and out of place. Unless special care is used in the design and choice of materials for new buildings, the character of our historic settlements will be progressively eroded and ultimately lost to future generations. Good design, which responds sensitively to its context, should overcome these problems.



i. Thames Vale

This area lies to the south and east of Witney, on the north bank of the Thames. Most of the area lies below 85 metres, and changes in ground level are barely perceptible. The area includes the Vales of Bampton and Eynsham, the Lower Windrush Valley and Eastern Thames Fringes, and the Western Thames Fringes Landscape Character Areas.

The flat, predominantly agricultural landscape is made up of floodplain pasture and vale farmland, and overlies heavy clay, river gravels and silts. The character of the landscape has largely been determined by the process of Enclosure. Large fields of regular shape with a strong structure of hedgerows are crossed by long, straight roads, with the occasional willow-lined ditch. There are significant blocks of oak woodland, and gravel extraction has created large wetland areas in the Lower Windrush Valley.

Distinctive building features include timber framing, and materials relating to the clay that underlies the northern part of the area, such as brick and clay tiles. The vernacular houses and cottages are typically long and low, with steeply pitched roofs.

Walling materials

- Oolitic limestone in narrow beds
- Cornbrash limestone for field and boundary walling, laid in narrow beds
- Red 'Oxford' brick, sometimes glazed and with blue headers
- Timber framing
- Lime render on infill panels or rubble stonework
- Weatherboarding of elm, oak or chestnut, left natural to bleach silver grey, or stained or painted black

Roofing materials

- Welsh slate
- Red handmade clay tiles
- Natural stone slate
- Thatch, long straw or combed wheat reed, with a plain flush wrapover ridge

ii. Limestone Wolds

The central area of the District, lying between the 85m and 200m contours, is formed by the dip slope of the Cotswolds. It comprises the Enstone Uplands, Eastern Parks and Valleys, Upper and Lower Evenlode Valleys, Wychwood Uplands, Upper Windrush Valley, and the Shilton Downs Character Areas.

The area has a highly distinctive open rolling landform. The northern and western part of this area of the Limestone Wolds is included within the Cotswold AONB, which stretches from Bath to Stratford. The undulating landscape is cut into by the rivers Windrush, Evenlode, Glyme and Swere. These create picturesque winding valleys with contained views. Historic Parkland (including Cornbury, Blenheim, Rousham, Ditchley and Heythrop) and fragments of the ancient Wychwood Forest, form landscape elements of exceptional importance. Fields tend to be large and regular. Dating from Enclosure, they are generally bounded by dry stone walling or hedgerows.

Distinctive building features include the famous, creamy limestone, which, together with the extensive use of limestone slates for roofs, creates built environments of strong local character and consistency. Long fronts, narrow gables, and steeply pitched roofs are typical.

Walling materials

- Oolitic limestone, laid as uncoursed rubble, or squared and laid in courses, in a variety of bed widths and colours
- Ashlar limestone dressings
- Cornbrash limestone for field and boundary walling, laid in narrow beds
- Red 'Oxford' brick chimneys
- Lime render on rubble stonework

Roofing materials

- Natural stone slate
- Thatch, either long straw or combed wheat reed, with a plain flush wrapover ridge
- Welsh slate












iii. Ironstone Valleys & Ridges

This small area in the north-east of the District has a diverse character and a complex, hilly landform. The distinctive orange marlstone and red soils result from an underlying geology rich in iron-bearing rocks and clays. The landscape features a patchwork of fields, hedgerows and woodland, and trees are unusually abundant.

The settlement pattern is sparse, with the scattered villages and hamlets typically occupying the sides or bottoms of the hidden intimate valleys that cross the area. The main settlements are Great Tew, Sandford St Martin and the Bartons.

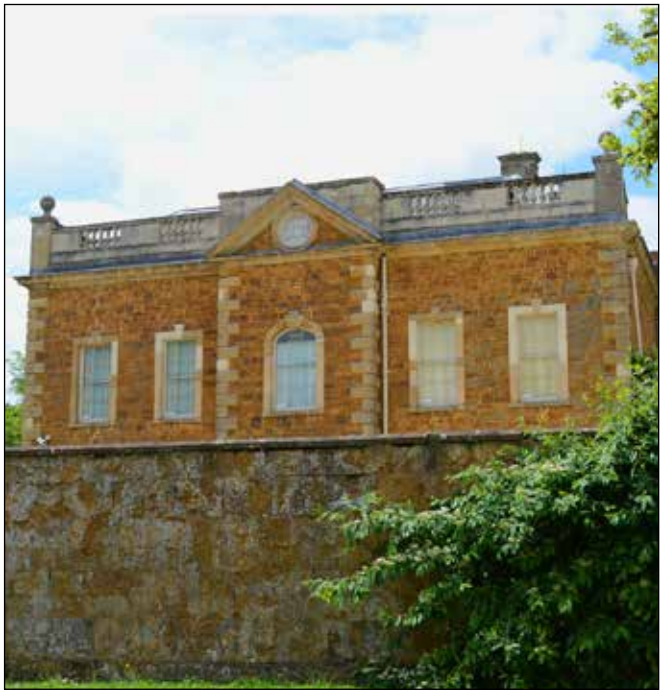
Distinctive building features include the striking orangey-brown ironstones. This material is generally used in larger blocks than the neighbouring oolitic limestone. Because it is often soft and easy to cut, its details and form tend to be simpler than those carved from the finer-grained stone. Stone dormers, stone copings and thatch are also relatively more abundant here.

Walling materials

- Ironstone rubble or rough-dressed stone, in wide bed sizes. The stone may have a blue or green appearance when fresh, but oxidises to a deep, warm ginger-brown when exposed to the air, hence the name 'ironstone'
- Lias ashlar dressings, label mouldings and chimneys
- Oolitic limestone field and boundary walling, laid in narrow beds
- Red 'Oxford' brick used for chimneys, dressings and some outbuildings

Roofing materials

- Natural stone slate
- Welsh slate
- Thatch, either long straw or combed wheat reed, with a plain flush wrapover ridge
- Clay tiles



iv. Northern Valleys & Ridges

This small area in the north-west of the District has distinctive open rolling countryside with high ridges overlooking the valleys below. The area has a variety of exposed geology on the valley sides. The local stone includes grey oolitic limestone, and ginger to light brown ironstone.

Chipping Norton, the principal settlement, occupies a high valley side setting. Most of the other Northern Valley settlements, however, occupy more sheltered sites, or lie in valley bottoms. Field size varies greatly here, and generally decreases as one descends from the open and elevated topography into the folded valleys below.

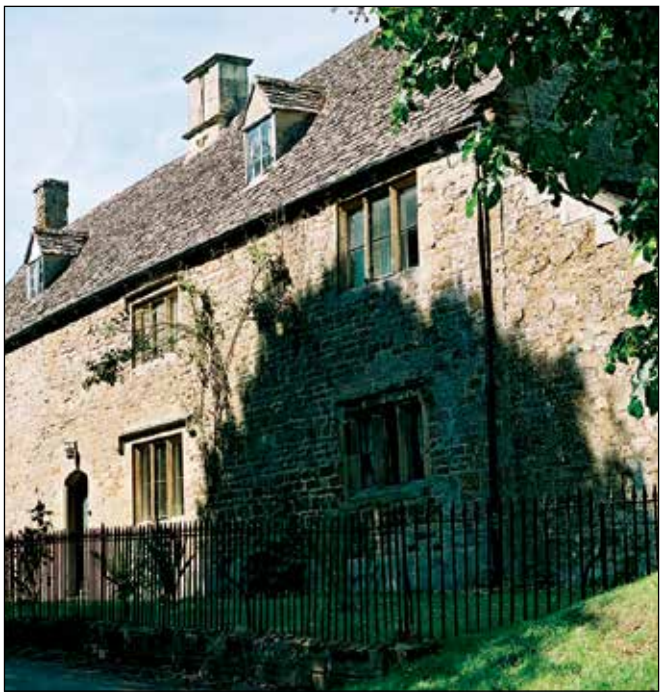
This topographical and geological diversity is reflected in the building materials and their use. Although oolitic limestone predominates, ironstone also appears. Stone walling appears in a variety of forms, featuring squared or rubble stonework, sometimes arranged in courses, sometimes not, and in a range of bed widths. Dormers carried up within stone gables flush with the face of the main wall, and Welsh slate on later houses, are notable features of the area.

Walling materials

- Oolitic limestone rubble in a variety of bed widths and sizes
- Ashlar limestone dressings
- Ironstone
- Oolitic limestone field and boundary walls, usually in rubble in a variety of bed widths
- Red 'Oxford' brick chimneys, arches and dressings
- Lime render on rubble stonework

Roofing materials

- Natural stone slate
- Welsh slate (particularly for the later houses)
- Thatch, either long straw or combed wheat reed, with a plain flush wrapover ridge
- Clay tiles



Design Guide 5
Settlement Type

5.1 SETTLEMENT TYPE

The settlements in the District are covered by Local Plan policies which describe the circumstances in which any development will be permitted. Most new development will occur in sustainable locations within the towns and larger villages where a wide range of facilities and services is already available.

Settlement character is determined by a complex series of interactions between settlements and the landscapes in which they are set, including processes of growth or decline through history, patterns of change in the local economy and design or development decisions by landowners and residents.

As a result, the settlements of West Oxfordshire vary greatly in terms of settlement pattern, scale, spaces and building types. Some villages have a distinctive loose-knit form, allowing for a variety of views, both within the settlement and out over the countryside beyond.

Other settlements have an enclosed character with only limited views. Open spaces within settlements, such as greens, squares, gardens – even wide streets – contribute significantly to the unique form and character of that settlement.

Where development is permitted, the character and context of the individual site must be carefully considered before design proposals are developed. Fundamental to successfully incorporating change, or integrating new development into an existing settlement, is a comprehensive understanding of the qualities that make each settlement distinctive.

The following pages represent an analysis of existing settlements in the District, looking at the pattern and topographic location of settlements, as well as outlining the chief characteristics of all of the settlements in the District (*NB see 5.4 for guidance on the application of this analysis*).

See also: Design Guide 11: New Development and Context

Fig. 1 Aerial view of Chipping Norton

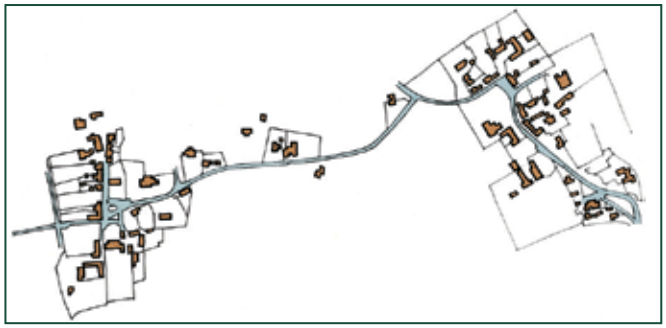
5.2 SETTLEMENT PATTERN

The towns and villages of West Oxfordshire generally exhibit one of four distinct settlement patterns:

Nucleated

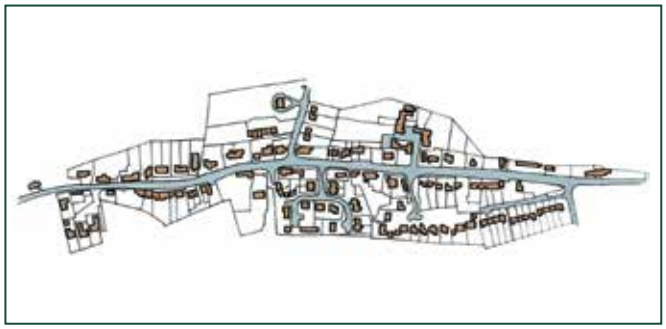
Nucleated settlements are compact, with less dense development on the periphery of the central core. Historically, the core may have been formed by a church or manor house (as at Stanton Harcourt). The tight-knit form of nucleated settlements makes them particularly vulnerable to loss of character if development takes place beyond the fringes of the settlement.

Poly-focal



Poly-focal settlements have more than one original core or 'end'. Historically, these may have developed around several manorial holdings or farmsteads some distance apart, subsequently attracting growth around them. In villages such as Great Rollright and Filkins later infill in the gaps has blurred the distinctions between the once-separate cores. Open land surrounding and penetrating between cores is a vital component of the character of poly-focal settlements.

Linear



Linear settlements have a distinctive ribbon form, and develop along both main roads and the smaller side roads that branch off these routes. Development in linear settlements may only be a single house deep on each side (as at Long Hanborough) thereby allowing significant views into the landscape beyond.

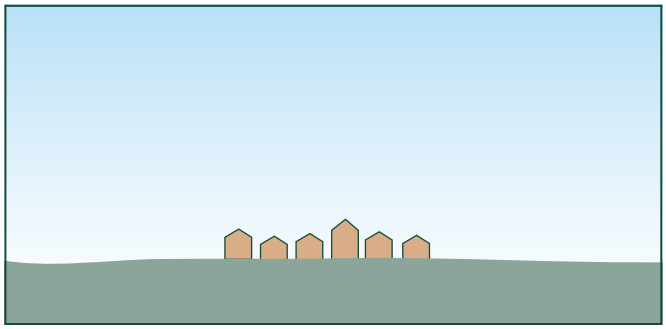
Dispersed

Dispersed settlements are characteristic of West Oxfordshire, with original manors or separate farm groups forming key but distinct elements. Around and between these groups accumulated loose patterns of cottages and scattered houses, (as at Combe and Wootton). Open land is also a key component within dispersed settlements. Later infill can give a previously dispersed settlement a less gappy, and more nucleated form, and result in loss of character.

5.3 SETTLEMENT LOCATION

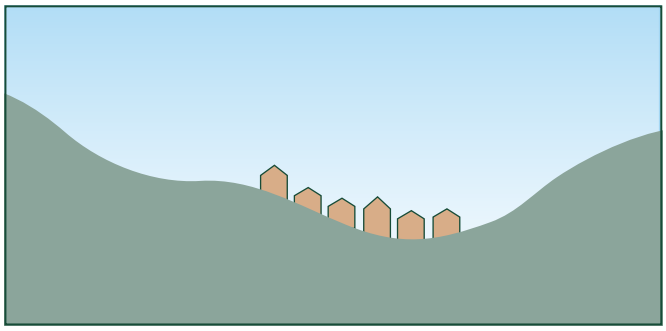
The settlements of West Oxfordshire are generally found in one of four principal location types:

Low-lying/ floodplain



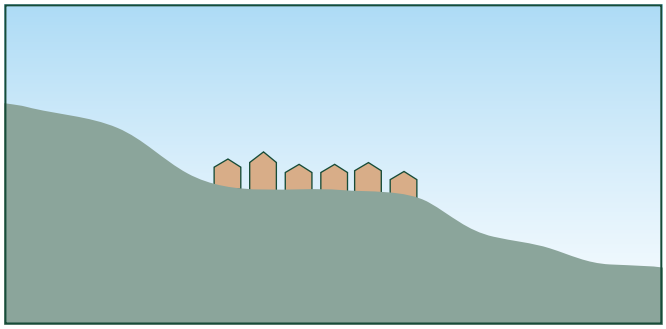
The low-lying or floodplain settlements are generally found in the Thames Vale character area. This landscape is open, expansive and essentially flat, and the settlements here lie mainly between the 60 and 75 metre contours. Natural constraints on development include rivers and manmade water courses, and the associated river floodplains (rather than factors relating to landform, such as steep gradients).

Enclosed/ valley



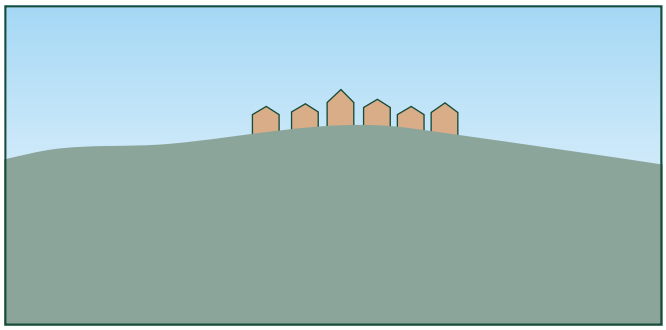
The enclosed or valley settlements occupy the mainly open, rolling landscape of the Limestone Wolds, together with the Ironstone Valleys and Ridges and the Nothern Valleys and Ridges. All are visually contained by their topography. This containment takes one of three forms: river valley, as at Wootton; dry valley, as at Fulbrook; or bowl-shaped, as at Tackley. The settlements lie across contours on enclosed hillsides, but do not tend to spill over hill tops.

Hill terrace/ spur



The hill terrace/ spur settlements are generally located on open hillsides. This location type is not visually enclosed; rather the settlements tend to occupy open, flat hill terraces, and are contained within contours. Growth can be linear, along a hillside, as it is at Long Hanborough and Minster Lovell (Charterville); or more nucleated, on a hill spur, as at Churchill and Combe.

Open wolds



The open wolds settlements all occupy the Limestone Wolds character area, in landscape that is open, expansive and gently undulating. The settlements here are neither visually enclosed nor contained within contours; rather they range loosely over the landform. The open wolds settlements vary greatly in elevation, with parts of Brize Norton lying below 80 metres; and parts of Enstone lying above 150 metres.

Settlement	Conservation Area	Nucleated	Poly-Focal	Linear	Dispersed
THAMES VALE					
Alvescot	✓			●	●
Aston	✓	●		●	
Bampton	✓	●			
Barnard Gate					●
Black Bourton				●	●
Broadwell				●	●
Cassington	✓	●		●	
Church Hanborough	✓	●		●	
Clanfield		●		●	
Cote				●	
Ducklington	✓	●		●	
Eynsham	✓	●			
Filkins & Broughton Poggs	✓		●	●	
Freeland				●	●
Hardwick	✓			●	
Kencot	✓			●	
Kelmscott	✓				●
Langford	✓		●		
Lew					●
Little Faringdon				●	
Northmoor	✓	●		●	
Radcot	✓				●
South Leigh			●		
Standlake				●	
Stanton Harcourt	✓	●		●	
Yelford		●			
LIMESTONE WOLDS					
Ascott-Under-Wychwood				●	
Asthall	✓	●			
Asthal Leigh					●
Bladon	✓			●	
Brize Norton				●	●
Burford	✓			●	
Carterton		●			
Chadlington				●	●
Charlbury	✓	●			
Chilson		●			
Churchill	✓	●			
Church Enstone		●			
Cleveley					●
Combe	✓	●			
Crawley		●			●
Curbridge				●	●
Dean					●
Delly End		●			
East End		●			
Enstone					●
Fawler	✓	●			
Field Assarts				●	

✓ Conservation Area

Low Lying/ Floodplain	Enclosed/ Valley	Hill Terrace/ Spur	Open Wolds	Settlement
				THAMES VALE
●				Alvescot
●				Aston
●				Bampton
				Barnard Gate*
●				Black Bourton
●				Broadwell
●				Cassington
		●		Church Hanborough
●				Clanfield
●				Cote
●				Ducklington
●				Eynsham
●				Filkins & Broughton Poggs
				Freeland*
●				Hardwick
●				Kencot
●				Kelmscott
●				Langford
				Lew*
●				Little Faringdon
●				Northmoor
●				Radcot
				South Leigh*
●				Standlake
●				Stanton Harcourt
●				Yelford
				LIMESTONE WOLDS
	●			Ascott-Under-Wychwood
	●			Asthall
			●	Asthall Leigh
				Bladon*
			●	Brize Norton
		●		Burford
			●	Carterton
			●	Chadlington
			●	Charlbury
			●	Chilson
		●		Churchill
			●	Church Enstone
	●			Cleveley
		●		Combe
			●	Crawley
				Curbridge*
			●	Dean
			●	Delly End
		●		East End
	●		●	Enstone
			●	Fawler
			●	Field Assarts

* Settlement located in the distinctive Clay Vale belt

Settlement	Conservation Area	Nucleated	Poly-Focal	Linear	Dispersed
Fifield		●			
Finstock	✓			●	
Fordwells				●	
Fullbrook			●		
Glympton			●		
Hailey	✓		●	●	
Heythrop			●		
Holwell		●			
Idbury	✓	●			
Kiddington					●
Kingham	✓	●			
Leafield	✓			●	●
Long Hanborough	✓			●	
Lyneham				●	
Milton-Under-Wychwood		●			●
Minster Lovell (Charterville)		●		●	
Minster Lovell	✓	●		●	
New Yatt				●	
North Leigh				●	
Ramsden	✓			●	
Rousham				●	
Poffley End				●	
Shilton	✓	●		●	
Shipton-Under-Wychwood	✓	●			
Spelsbury	✓	●			
Stonesfield	✓	●			
Swinbrook	✓	●		●	
Tackley	✓	●			●
Taston		●			
Taynton	✓	●		●	
Westwell		●			
Witney	✓	●			
Woodstock	✓	●		●	
Wootton	✓	●			●
IRONSTONE VALLEYS					
Great Tew	✓			●	
Ledwell		●			
Little Tew					●
Middle Barton	✓	●			
Sandford St. Martin	✓			●	
Swerford	✓		●		
Steeple Barton	✓				●
Westcott Barton	✓				●
Worton					●
NORTHERN VALLEYS					
Chastleton	✓	●			
Chipping Norton	✓	●		●	
Cornwell	✓	●			●
Great Rollright	✓		●		
Over Norton	✓			●	

✓ Conservation Area

Low Lying/ Floodplain	Enclosed/ Valley	Hill Terrace/ Spur	Open Wolds	Settlement
			●	Fifield
	●	●		Finstock
			●	Fordwells
	●			Fullbrook
	●			Glympton
			●	Hailey
			●	Heythrop
		●		Holwell
			●	Idbury
	●			Kiddington
			●	Kingham
			●	Leafield
		●		Long Hanborough
		●		Lyneham
			●	Milton-Under-Wychwood
		●		Minster Lovell (Charterville)
	●			Minster Lovell
			●	New Yatt
			●	North Leigh
	●			Ramsden
		●		Rousham
			●	Poffley End
	●			Shilton
	●			Shipton-Under-Wychwood
			●	Spelsbury
		●		Stonesfield
	●			Swinbrook
	●			Tackley
			●	Taston
	●			Taynton
			●	Westwell
●				Witney
	●	●		Woodstock
	●	●		Wootton
				IRONSTONE VALLEYS
		●		Great Tew
		●		Ledwell
	●			Little Tew
	●			Middle Barton
	●			Sandford St. Martin
	●			Swerford
	●			Steeple Barton
	●			Westcott Barton
		●		Worton
				NORTHERN VALLEYS
			●	Chastleton
		●		Chipping Norton
		●		Cornwell
		●		Great Rollright
		●		Over Norton

5.4 NEW DEVELOPMENT

The following analysis of the settlements of the District may be used to better inform design decisions in specific contexts. For example, in the case of villages with a dispersed settlement pattern, the infilling through development of otherwise open spaces could result in cumulative harm to the distinctive character of that settlement. Likewise, where development in a village has traditionally been contained within a valley, new development that spills out over the valley sides is likely to radically alter the character of that settlement.

Within settlements themselves, great care should be taken with respect to new road and housing layouts, in order that these respond meaningfully to the unique context of each settlement pattern. Standard modern suburban layouts are almost never appropriate for historical settlements.

At the building and street level, great care should be taken to identify prevailing characteristics in terms of local architecture, building details and materials, surface and boundary treatments.

SETTLEMENT GAZETTEER

The following gazetteer is intended to give a short 'pen portrait' for each of the settlements in West Oxfordshire. Each entry describes the relative size of the settlement, its location (both within the District and its landscape setting) its pattern of growth, and whether the settlement has Conservation Area status.

Alvescot ✓

Village located in the south-west of the District, close to the southern fringes of the Limestone Wolds. Settlement is low-lying, and has evolved haphazardly to give an informal and dispersed form. The village comprises a number of farmsteads linked by modest infill.

Alvescot

Aston ✓

Village located in the south of the District, on flattish water meadows north of the river Thames. Aston has a relatively compact form with some later growth to the east. The detached hamlets of Cote, Shifford and Chimney lie off to the east.

Bampton ✓

Large village located in the south of the District, on a flattish and low-lying terrace. Bampton comprises a sizable loose-knit historical settlement, with a block of later estate development to the north-east. Growth to the south of the village is constrained by the Shill Brook.

Barnard Gate

Small hamlet located in the west of the District in the transitional zone between the Limestone Wolds to the north and the Thames Vale to the south. The settlement has a fragmented form and consists of a number of farms. It is bisected by the Chil Brook.

✓ Conservation Area

Thames Vale

Black Bourton
Small village located in the south-west of the District, on flat, low-lying land immediately south of Carterton. Scattered farms, including Mill Farm off to the east, give the village a loose-knit form. The Shill Brook runs by on an east-west axis.

Broadwell
Village located in the south-west of the District, on low-lying land. Broadwell merges seamlessly into neighbouring Kencot. From the cluster of buildings at the north of the village it evolves a linear form along the road to Langford to the south.

Cassington ✓
Village located in the south-east of the District, bordered by the rivers Evenlode and Thames. The settlement is compact, and growth is constrained both by the disused gravel pits to the north, and the A40 which passes by to the south.

Church Hanborough ✓
Small village located in the south-east of the District, close to the border with the Limestone Wolds. Church Hanborough has a compact, linear form, with houses and cottages set informally along the road that winds through the village.

Clanfield
Village located in the south-west of the District, on low-lying land north of the river Thames. Clanfield has a distinctive form, with a compact core to the north, a 'tail' of linear growth tapering away to the south, and new development branching off west along Mill Lane.

Cote
Hamlet located in the extreme south of the District, in an area of flat, expansive farmland criss-crossed by drainage channels. Cote has a fragmented, linear form, and is strung out along the road that runs past Aston to the west, down to Shifford on the Thames to the south.

Ducklington ✓
Village located in the south of the District, just south of Witney, on a terrace above the floodplain of the river Windrush. The historical settlement is linear, but infill has since accounted for the area between this portion and the A415, which runs past to the south-west.


Ducklington

Eynsham ✓
Large village located in the south-east of the District, on the flat river plain of the Thames and its tributary the Chil Brook. The reasonably compact historical core has witnessed some infill and extensive modern development between it and the A40 to the north.

Filkins and Broughton Poggs ✓
Village located in the south-west of the District, on the border with the Limestone Wolds. Filkins occupies a terrace over 85m, and has been unified by linear infill with nearby Broughton Poggs to form a straggling settlement that runs parallel to, and east of, the A361.

Freeland
Village located in the east of the District, and lying above the 100m contour. Constraints upon growth include significant tracts of wood and marshland to the west and south. The western border represents a strongly defined edge that follows the route of an early lane.

✓ Conservation Area

Thames Vale

Hardwick ✓
Village located in the south of the District, midway between Witney and Stanton Harcourt on the B4449. Hardwick has a compact, linear form, with Cokethorpe Park and School, together with the church, forming outliers to the west.

Kencot ✓
Village located in the south-west of the District. Although essentially linear in form, Kencot comprises three distinct groupings: the first around the junction with the B4477 to the north, the second including the Manor and farm further south, and the third around Manor Farm, where the village merges into Broadwell.

Kelmscott ✓
Small conspicuously unspoilt village located in the extreme south-west of the District, on flat and low-lying land north of the Thames. Kelmscott has a highly attractive dispersed form, with farms, cottages and the eponymous manor house scattered along meandering lanes, and punctuated by significant areas of open land.

Langford ✓
Large, well preserved village located in the south-west of the District, close to the Gloucestershire border. Langford occupies a low-lying and open setting. Although essentially poly-focal, the historical settlement is relatively compact, with a separate and distinct early core and Saxon church to the south.

Lew
Small village located in the south-west of the District, in the transitional zone between the Limestone Wolds to the north and the Thames Vale to the south. Lew has a fragmented form and comprises a handful of farms and houses together with a church.

Little Faringdon
Small village located in the extreme south-west of the District, just north of Lechlade on Thames. Little Faringdon has a linear form, but with notable dispersed elements in the forms of a farm and a mill on the river Leach to the south-west.

Northmoor ✓
Village located in the extreme south-east of the District, due south of Stanton Harcourt and just north of the Thames. Northmoor has a reasonably compact core, but has seen some linear growth (i.e. along Chapel Lane) and has a clutch of dispersed elements in the forms of outlying farmsteads.

Radcot ✓
Small hamlet located in the extreme south of the District, on the Thames, south of Clanfield and east of Kelmscott. Radcot has a dispersed form and comprises a handful of houses, a hotel and farm, together with the ancient bridge over the Thames. Also the site of a significant battlefield.

South Leigh
Village located in the transitional zone between the Limestone Wolds and the Thames Vale. South Leigh has a disparate form, with Church End to the north, farms and the manor off to the south-east and linear growth in between. The village is bisected by the Limb Brook.

Standlake
Village located in the south of the District, in a low-lying and open setting, between expansive gravel pits to the north and south. Standlake has a distinctive attenuated U-form, with linear infill linking previously dispersed nuclei. The Windrush flows by to the east.

Stanton Harcourt ✓/ Sutton ✓
Village located in the south-east of the District, in a low-lying setting, north-east of a WWII airfield and extensive disused gravel pits. Settlement is poly-focal, with a significant historic core at Stanton Harcourt, and a second, linear core at Sutton to the north.

Yelford
Small hamlet located in the south of the District, in a relatively flat landscape (but for Rickless Hill to the north) south of Ducklington. Yelford has a compact, nucleated form and comprises a handful of houses, a pair of farms and a church.

✓ Conservation Area

Limestone Wolds

Ascott-Under- Wychwood
Village located in the west of the District, in an enclosed setting along the 95m contour following the line of the river Evenlode. This and a railway line constrain growth to the north of the village. Ascott-Under-Wychwood comprises two former hamlets, divided by London Lane.

Asthall ✓
Village located in the west of the District, in an enclosed valley setting on the south bank of the Windrush. But for Asthall Farm to the east, the settlement has a compact, nucleated form. The Roman road, Akeman Street, runs passed to the south.

Asthal Leigh
Small village located in the west of the District, mainly along the 122m contour. Asthal Leigh has a dispersed form with some linear qualities, with scattered houses and farms lining the roads that meet at a junction on which the church stands.

Bladon ✓
Village located in the extreme east of the District, close to the border with the Thames Vale. Bladon has a distinctive linear form, with houses following the course of the Witney to Woodstock road. The settlement is constrained by Blenheim Park to the north.


Bladon

✓ Conservation Area

Brize Norton
Village located in the south of the District, in an open and exposed setting. Brize Norton has a loose-knit form, with a number of dispersed farms, some of which have been linked by later infill. RAF Brize Norton covers a large area to the south-west of the village.

Burford ✓
Exceptionally well preserved medieval town located in the west of the District. Burford's main axis runs up the valley side away from the Windrush, and is intersected by a secondary axis that follows a hill terrace to give a cruciform plan. The High Street, which is lined by early houses, most of which are Listed, is especially distinctive.

Carterton
Town located in the south-west of the District, in a flattish and exposed setting, north of RAF Brize Norton. Carterton forms a sizable and dense conurbation on a C20 grid plan. During the late C20 the settlement extended greatly to the north and east.

Chadlington
Village located in the north of the District, in an open and elevated landscape. Chadlington forms a dispersed and loose-knit settlement at the convergence of numerous minor roads. Later infill has done much to unify the previously dispersed parts of the village.

Charlbury ✓
Market town located in the centre of the District. Charlbury forms a relatively compact valley-side settlement, lying mainly between the 91m and 122m contours. Development is constrained by the river Evenlode and the railway line to the south-west.

Chilson
Hamlet located in the centre of the District, below the 122m contour, and to the north of Wychwood Forest. Chilson has a compact, nucleated form and is connected by lanes to the nearby settlements of Shorthampton and Pudlicote.

Limestone Wolds

Church Enstone
Small village located in the north of the District, just below the 152m contour, and overlooking the river Glyme to the south. To the west is a spur of Heythrop Park, and to the east a disused airfield. Church Enstone has a distinctive, compact form, and lies just to the north of Enstone.

Churchill ✓
Village located in the north-west of the District, on a hill spur, mainly between the 155m and 165m contours. Topographical containment has led to a compact hillside settlement, with historic parkland to the south-east also constraining growth.

Cleveley
Hamlet located in the north of the District, in an enclosed valley below the 122m contour, and just east of Enstone. Although disjointed, Cleveley has a distinctive form that follows, in broken linear fashion, the course of the river Glynne.

Combe ✓
Village located in the east of the District, on a hill terrace above the 115m contour, overlooking the river Evenlode. Combe is situated among patches of woodland (once belonging to Wychwood Forest) and scattered farms, with notable areas of open rural space. It lies just to the west of Blenheim Park.

Crawley
Village located in the centre of the District, just to the north of Witney. Crawley has a nucleated form, with the settlement concentrated at the star-shaped meeting of five roads. Growth to the south is constrained by the river Windrush.

Curbridge
Village located in the south of the District, on the border with the Thames Vale, and just to the south-west of Witney. Curbridge is a small settlement showing linear growth along two sides of a triangle formed by minor roads. A railway divides Curbridge from Witney.

Dean ✓
Small hamlet located in the centre of the District, in an open setting north of Charlbury. Dean has a disjointed form, comprising a few houses and farms, together with a mill which lies on the Coldron Brook to the east.

Delly End
Village located in the centre of the District, due north of Witney. Delly End forms one of the 'ends' of Hailey (the other being Poffley End) and is a nucleated settlement articulated about a distinctive and sizable, triangular village green.

East End
Hamlet located in the east of the District, in an essentially open setting that falls away sharply to the east. East End has a predominantly linear form, constrained to the north both by the river Evenlode and by an elbow of ancient woodland.

Enstone
Village located in the north of the District, in the Glyme valley. Enstone and Neat Enstone form a conjoined, loose-knit settlement; Cleveley and Gagingwell lie off to the east (Cleveley in the valley bottom, and Gagingwell at the head of a small valley).

Fawler ✓
Hamlet located in the centre of the District, south-east of Charlbury and on the north bank of the river Evenlode. Fawler has a fragmented, linear form, following the course of the road from Charlbury round to Stonesfield to the east.

Field Assarts
Small hamlet located in the centre of the District, in an open landscape setting due south of Leafield. Field Assarts derives its name from its one-time situation within Wychwood Forest. It comprises a handful of buildings set along the roadside.

✓ Conservation Area

Limestone Wolds

Fifield
Village located in the extreme west of the District, west of Milton-Under-Wychwood. Fifield is a valley-side settlement ranged between the 140m and 170m contours. It has a relatively compact form, with housing lying alongside two parallel streets that run down to The Green.

Finstock ✓
Village located in the centre of the District. Finstock is topographically varied. Linear infill along the triangle formed by the High Street, the Charlbury to Witney road, and School Road has partially consolidated the original dispersed clusters of housing.


Finstock

Fordwells
Hamlet located in the centre of the District, in an open wolds setting to the south of Leafield and just to the west of Field Assarts. Fordwells has a dispersed, linear form, with houses and cottages strung out loosely along the roadside.

Fulbrook
Village located in the west of the District, in a folded and enclosed valley setting north of the river Windrush. Fulbrook is dispersed in form, and has a notable detached element in the form of Manor Farm, which occupies an exposed, hillside setting to the west.

Glympton
Village located in the east of the District, between Kiddington and Wootton. Glympton occupies an enclosed valley setting and is of poly-focal form, with the park and church forming one grouping to the west, and a clutch of houses off to the east.

Hailey ✓
Village located in the centre of the District, in an area of gently undulating topography. Hailey has a poly-focal form, with Delly End and Poffley End forming distinctive detached elements, and Middletown in between forming the core of later settlement.

Heythrop
Small village located in the north of the District, in an open landscape setting to the east of Chipping Norton. Heythrop is of poly-focal form with scattered farmsteads. The hamlet of Dunthrop lies to the north, while the great swathe of Heythrop Park stretches off to the south-east.

Holwell
Small village located in the extreme west of the District, in a hillside setting mainly above the 130m contour and to the south of Burford. Holwell is a compact, nucleated settlement that has grown up at the junction of a number of lanes.

Idbury ✓
Small village located in the extreme west of the District, north of Fifield and north-west of Milton-under-Wychwood. Idbury has a compact, nucleated form and occupies a hill terrace, with settlement contained within the 165m and 185m contours.

Kiddington
Village located in the east of the District, in an enclosed valley setting to the north-west of Wootton. Kiddington has a dispersed form, comprising a core centred on the church and Kiddington Hall, and a number of outlying farms. The site of the medieval village of Asterleigh lies to the south-west.

✓ Conservation Area

Limestone Wolds

Kingham ✓
Large village located in the north-west of the District, in an open setting above the 115m contour. Today's relatively unified form belies its original poly-focal form, centring on Church St., West End, and The Green. An oval of roads has attracted generally loose-knit infill.

Leafield ✓
Village located in the centre of the District, in an open setting south of Wychwood Forest. Leafield has a pronounced linear form resulting from the consolidation of a number of previously dispersed 'ends', including Lower End, Church Farm, and Chimney End.

Hanborough (Long Hanborough ✓)
Large village located in the east of the District, in an open setting, mainly along the 100m contour. The eastern and western arms have a pronounced linear form. The area south of the Witney road has absorbed most of the new growth. Church Hanborough lies to the south.

Lyneham
Hamlet located in the west of the District, due north of Shipton-under-Wychwood, on a hill terrace between the 105m and 110m contours. Lyneham has a linear form, with housing lying along the High Street and, parallel with this, Priory Road.

Milton-Under-Wychwood
Large village located in the west of the District, in an open setting between the 105m and 115m contours. Dense C20 housing and linear infill has given Milton its present core, and consolidated its original dispersed form. A detached hamlet survives at Upper Milton.

Minster Lovell ✓
Small village located in a valley side setting to the north of the river Windrush. Minster Lovell has a significant historic core, from which linear growth took place during the C17 and C18, resulting in the settlement growing in an informal fashion westwards towards the bridge over the Windrush.

Minster Lovell (Charterville)
Village located in the centre of the District, on an elevated ridge above the 115m contour. Charterville comprises a C19 planned utopian settlement of dispersed linear form. To the north of this, adjacent to the B4047, is a sizable block of C20 development.

New Yatt
Hamlet located in the east of the District, in an open setting above the 122m contour, between Hailey and North Leigh. New Yatt has a linear form, with housing strung out along New Yatt Lane. To the east lie dispersed elements in the forms of New Yatt Farm and Glenfield Farm.

North Leigh
Village located in the east of the District, in a fairly open setting. Dense linear infill strongly binds together the previously dispersed parts, but southward growth is constrained by Eynsham Park. Detached hamlets remain at Wilcote (compact) and East End (linear).

Ramsden ✓
Village located in the centre of the District, in a shallow bowl setting between the 122m and 152m contours, south of Finstock. Ramsden has a pronounced linear form, with houses and cottages standing along both the winding main street and Roman Akeman Street which crosses it.

Rousham
Small village located in the extreme east of the District, on a hill terrace between the 75m and 80m contours, north of Tackley. Rousham has a dispersed form, with a loose handful of houses fronting the road close to Rousham House on the eastern edge of the adjacent historic park.

Poffley End
Village located in the centre of the District, in an open setting due north of Witney. Poffley End is one of Hailey's two 'ends' (the other being Delly End). It has a distinctive linear form, with houses and cottages strung out along Poffley End Lane.

✓ Conservation Area

Limestone Wolds

Shilton ✓
Village located in the south-west of the District, north-west of Carterton. Shilton occupies an enclosed valley setting, with a linear arm following the course of the Shill Brook and a compact, nucleated core with two churches to the south-west.

Shipton-Under-Wychwood ✓
Large village located in the west of the District, in a sloping, north facing valley-side setting, overlooking the river Evenlode. Former dispersed hamlets now largely consolidated by linear infill and some C20 estate development.

Spelsbury ✓
Village located in the north of the District, in an open setting to the north of Charlbury. Spelsbury has a reasonably compact, nucleated form (with the manor house, Glebe Farm and the church at its core). The small settlements of Taston and Dean lie to the north-east and north-west respectively.

Stonesfield ✓
Village located in the east of the District, on an exposed hill terrace just below the 122m contour, overlooking the steep lower slopes of the Evenlode valley to the south-west. Stonesfield is large and unusually compact, with very few dispersed components.

Swinbrook ✓
Village located in the west of the District to the east of Burford. Swinbrook has two distinct parts, with the village core situated in the Windrush valley, and a straggling linear component following the spring line up an enclosed valley to the north. The lost village of Widford lies off to the west.

Tackley ✓
Village located in the extreme east of the District in a relatively enclosed setting below the 85m contour. Tackley retains a distinctive loose-knit form, with C20 estate development at Nethercott. Constraints on growth include parkland and the railway to the west.

Taston ✓
Small hamlet located in the north of the District, in an open setting between the 122m and 152m contours, north of Charlbury. Taston has a fragmented form, and comprises a loosely grouped collection of farms, together with a handful of houses and cottages.

Taynton ✓
Village located in the extreme west of the District, in a shallowly enclosed setting north-west of Burford. Taynton has a linear form, with houses and cottages lining the lanes that wind through the settlement. Four large farms and a number of areas of open land form significant components within the village.

Westwell
Small village located in the extreme west of the District, in an enclosed valley setting to the south-west of Burford. Westwell has a relatively compact, nucleated form (with the manor and church forming the historic core), but has a number of outlying farms to the east and west.

Witney ✓
Large historical market town located in the centre of the District in a low-lying site on the border with the Thames Vale. Elongated historic core, surrounded by large swathes of mainly C20 estate development. The river Windrush bisects the town, and the A40 has constrained growth to the south.

Woodstock ✓
Well preserved historical market town located in the extreme east of the District. Growth is constrained by Blenheim Park to the west, and the steep, wooded valley of the river Glyme to the north. Woodstock has a sizable early core, a linear 'tail' to the north, and C20 estate development to the east.

Wootton ✓
Village located in the north-east of the District, in a valley-side setting north of the river Glyme. Wootton has a relatively compact core, with sporadic later development and several significant dispersed elements scattered throughout the surrounding landscape.

✓ Conservation Area

Ironstone Valleys & Ridges

Great Tew ✓
Small village located in the extreme north-east of the District, on an elevated, sloping site between the 183m and 122m contours. Great Tew is a planned estate village adjoining historic parkland, essentially created in the C19. It has a straggling, linear form, with a number of outlying farms.

Ledwell
Hamlet located in the extreme north-east of the District, on a hill terrace between the 155m and 165m contours, due north of Sandford St Martin. Ledwell has a compact, nucleated form and is unusual for not adjoining a through-road.

Little Tew ✓
Unspoilt village located in the extreme north of the District, tucked away in an enclosed, shallow bowl-shaped setting, to the west of Great Tew. Little Tew has a distinctive, loose-knit form, with mix of C17 and C19 houses and cottages scattered along the lanes the wind through the settlement.

Middle Barton ✓
Village located in the north-east of the District. Middle Barton lies partly in the parish of Steeple Barton, and is of loose-knit form with large blocks of C20 estate development to the north. Steeple Barton forms a separate and dispersed settlement to the east.


Middle Barton

✓ Conservation Area

Sandford St Martin ✓
Village located in the extreme north-east of the District, in an enclosed valley setting due south of Ledwell. Sandford St Martin is essentially of linear form, with the church and vicarage at its core, a number of farms to the north and south, and the manor and adjoining parkland to the west.

Swerford ✓
Village located at the northern tip of the District, in an enclosed setting in the valley of the river Swere. Swerford has a pronounced poly-focal form, with the nucleated Church End to the west and East End, with its linear growth up Chapel Hill, to the east.

Steeple Barton ✓
Village located in the extreme north-east of the District, in an enclosed valley setting south-east of Middle Barton. Steeple Barton has an especially fragmented form, with Barton Abbey and a number of farms, houses and cottages scattered throughout patchy woodland.

Westcott Barton ✓
Small village located west of Middle Barton in the neighbouring parish of Westcott Barton, beside the river Dorn, between the 115m and 125m contours. Westcott Barton comprises a loose-knit settlement, strung out between Middle Barton and the Manor House at its western end.

Worton
Village located in the extreme north-east of the District, on a hill spur: between the 125m and 130m contours in the case of Over Worton, and in a shallow valley setting in the case of Nether Worton. The settlements form a poly-focal village, the latter historically a colony of the former.

Northern Valleys & Ridges

Chastleton ✓
Well preserved small village located in the north-western spur of the District, in a hillside setting between the 150m and 175m contours. Chastleton comprises a handful of fine C17 houses and cottages scattered along the roadside, together with Chastleton House and the adjoining church and parkland.

Chipping Norton ✓
Market town located in the north-west of the District, in an unusually elevated valley-side setting mainly between the 183m and 213m contours. Linear, historical core with large volumes of C20 estate development (mainly along the 185m contour, but with some undue spillage over the hill top).

Cornwell ✓
Small village located in the extreme north-west of the District, on a hill terrace between the 150m and 160m contours west of Chipping Norton. Cornwell has a loose-knit form, comprising the manor house and a handful of farmsteads.

Great Rollright ✓
Large village located in the extreme north of the District, on a hill terrace between the 205m and 220m contours, with steep slopes to the east, south and west. Great Rollright's original poly-focal form has been eroded by later infill. Little Rollright lies off to the west.

Over Norton ✓
Village located in the north-west of the District, on a hill terrace, mainly below the 213m contour. Over Norton has a compact and linear form, with a modest historic component, a small amount of later growth to the west, and a number of outlying farmsteads to the north-east.


Over Norton

✓ Conservation Area

Design Guide 6
Conservation Areas (CAs)

6.1 CONSERVATION AREAS (CAs)

Conservation Areas (CAs) are defined in the *Planning (Listed Buildings and Conservation Areas) Act 1990* as: *places of special architectural or historic interest, which have a particular character or appearance worthy of preservation or enhancement.* Groups of Listed and non-designated buildings, walls, trees and hedges, open spaces, views and historic settlement patterns all combine to create an individual sense of place. It is this character, rather than the individual buildings, that Conservation Area status seeks to protect.

Fig. 1 Chipping Norton Conservation Area

The first Conservation Areas in the District were identified in the late 1960s, since when there has been a rolling programme of designation and review. To date, some 50 Conservation Areas have been designated in West Oxfordshire, ranging in size from small settlements such as Asthall and Radcot, up to large market towns such as Witney and Chipping Norton.

CONSERVATION AREAS IN WEST OXFORDSHIRE

Conservation Area	Designated
1. Alvescot	**1988**
2. Asthall	1993
3. Aston	1999
4. Bampton	1976
5. Bartons	1993
6. Bladon	**1990**
7. Burford	1970
8. Cassington	**1992**
9. Charlbury	1974
10. Chastleton	**1995**
11. Chipping Norton	**1970**
12. Church Hanborough	1990
13. Churchill	1999
14. Combe	1989
15. Cornwell	**1994**
16. Ducklington	**1988**
17. Eynsham	1975
18. Fawler	1991
19. Filkins	**1986**
20. Finstock	**1991**
21. Great Rollright	**1990**
22. Great Tew	1978
23. Hailey	**1992**
24. Hardwick	1989
25. Idbury	1991
26. Kelmscott	1995
27. Kencot	**1994**
28. Kingham	1986
29. Langford	**1993**
30. Leafield	1990
31. Little Tew	**2007**
32. Millwood End (Hanborough)	**2004**
33. Minster Lovell	**1990**
34. Northmoor	1992
35. Over Norton	1992
36. Radcot	1995
37. Ramsden	**1991**
38. Sandford St Martin	1991
39. Shilton	1985
40. Shipton-under-Wychwood	1989
41. Spelsbury, Taston & Dean	**1991**
42. Stanton Harcourt & Sutton	**1989**
43. Stonesfield	1988
44. Swerford	**1988**
45. Swinbrook	**1990**
46. Tackley	1994
47. Taynton	**1970**
48. Witney & Cogges	**1975**
49. Woodstock	1975
50. Wootton	1976

settlements in bold have up-to-date CA Appraisals

For further information, see: http://www.westoxon.gov.uk/planning-building-links/historic-buildings-conservation-areas-page/conservation-areas/

6.2 CONSERVATION AREA STATUS

Conservation Area status does not mean that no further change or development will be permitted in that area; rather it is intended to ensure that any potential changes will be managed in a way that preserves or enhances the special qualities of the Conservation Area. An accumulation of poorly judged additions or losses of traditional features, each apparently minor in its own right, can cause significant harm to the character of a Conservation Area as a whole.

Fig. 2 Burford Conservation Area

In Conservation Areas, the preservation and enhancement of the area is a consideration in all planning decisions. Proposals likely to cause harm to a Conservation Area or its setting are unlikely to be supported.

Planning applications for development within Conservation Areas, including for new buildings and alterations to existing buildings, should demonstrate how the proposals would preserve or enhance the character of the area. Special attention should be given to design, scale and massing, and use of materials, so that the existing character of the area is not harmed.

Conservation Area status brings with it some restrictions to the Permitted Development (PD) Rights enjoyed by homeowners and businesses (the rights to carry out development without planning permission). Examples of forms of development that *may* require Planning Permission within a Conservation Area, but that *may not* require Planning Permission outside a Conservation Area, include: some extensions; some alterations to roofs, windows and doors; some types of cladding; and some elements protruding from walls or roof slopes (including satellite dishes, antennae, chimneys and flues)

NB this is not a comprehensive list, and for the avoidance of doubt you should contact the Planning Department.

In 2013, the previous statutory requirement for Conservation Area Consent for the demolition of structures within Conservation Areas was superseded by a requirement for Planning Permission. A building in a Conservation Area may not be demolished without the consent of the Local Planning Authority. The requirement for Planning Permission in such cases is quite separate from any related consents required (for example, for the construction of a replacement structure).

If a replacement structure is proposed – and particularly where the structure it is proposed to demolish has merit – the relative merits of the proposed replacement will be set against those of the existing structure. In such cases, applications for Planning Permission for demolition should not be made in isolation.

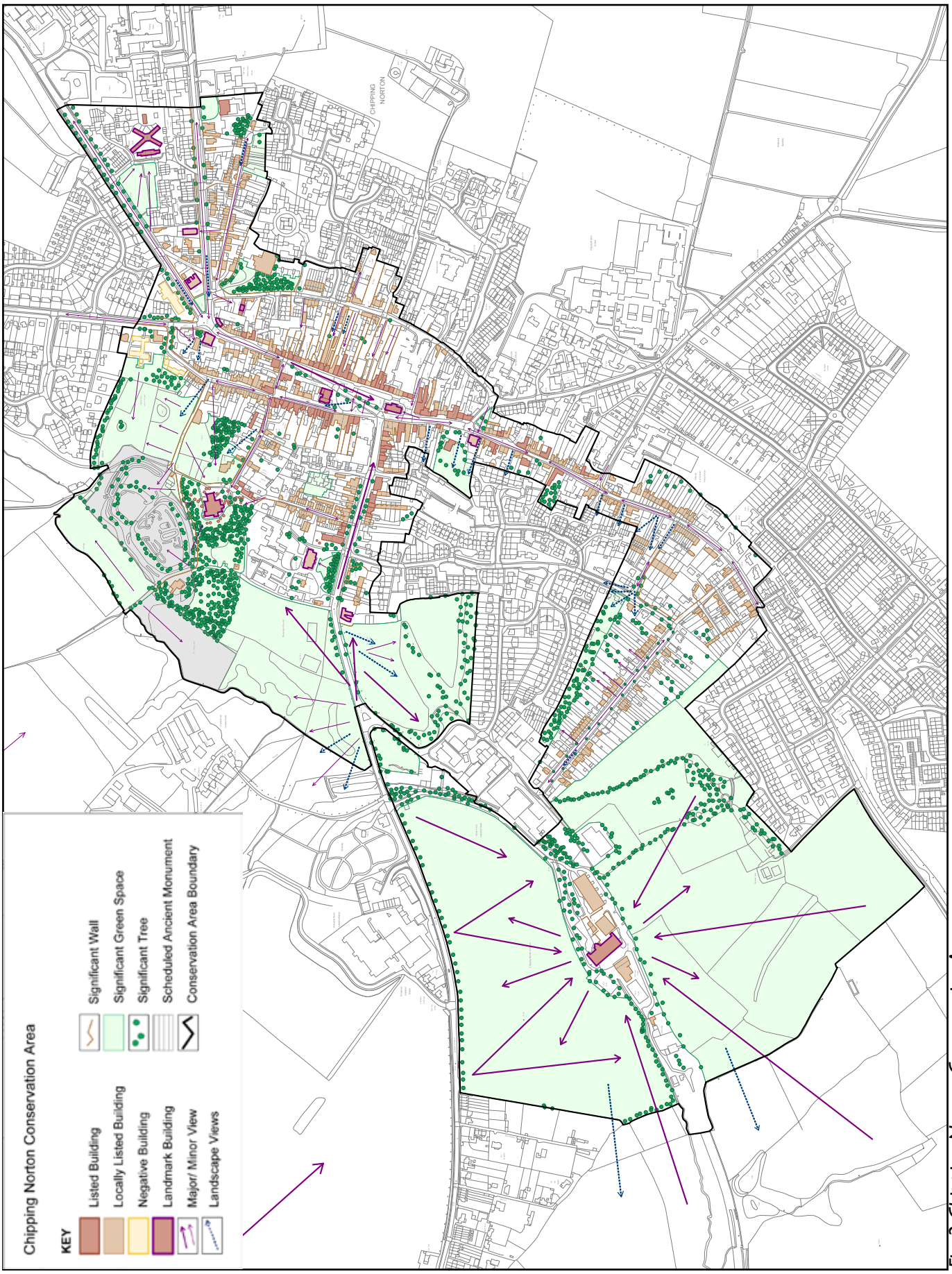


Fig. 3 Chipping Norton Conservation Area

The requirement for Planning Permission for the demolition of structures within Conservation Areas does not apply to: a) Listed Buildings, b) buildings subject to the ecclesiastical exemption (such as churches), or c) Scheduled Monuments. In the case of a proposal to demolish a Listed Building, whether within or outside a Conservation Area, an application for Listed Building Consent would be needed. In such cases, Historic England would act as a statutory consultee. In general, it is extremely unusual for Listed Building Consent to be granted for the demolition of a Listed structure.

See also: Design Guide 7: Listed Buildings, Registered Parks and Scheduled Monuments; Design Guide 11: New Development and Context.

Fig. 4 Tackley CA: consistent use of local limestone

6.3 DEVELOPMENT ADVICE

The historical settlements of West Oxfordshire owe much of their distinctiveness and charm to the consistent use of local materials (most notably oolitic limestone) and the unfolding pattern of historical building styles. Settlements appear to have grown organically, creating a visual context into which new development must be sensitively inserted if it is not to damage their established appearance and character.

Today, a wide range of architectural forms and man-made materials is available. When juxtaposed with traditional forms and natural materials these are often inappropriate. Unless special care is taken in both the design and choice of materials for new buildings, the character of historical settlements will be progressively eroded and may ultimately be lost to future generations.

Extensions to existing houses and the conversion of appropriate structurally sound buildings, which are worthy of retention or make a positive contribution to the local scene, may be permitted in some circumstances. The conversion of redundant historical buildings should respect the original character of the building and its setting. Historical or architectural features of merit should be protected and retained. Large extensions, or an accumulation of extensions, can easily obscure the simple form of traditional buildings and should be avoided. Some buildings with a particular visual or historical character may be harmed by new development, however well designed. In these cases development may not be permitted.

New buildings and extensions should be well designed in themselves, and in sympathy with the character of the area. They should respect the form, siting, scale and massing of the surrounding buildings. New development should incorporate existing features of importance, such as trees, hedgerows, ponds, stone walls, paths and tracks. Views within, into and out of Conservation Areas are also protected, and should be carefully assessed, with new development designed to ensure that these are not harmed.

See also: Design Guide 14: Extensions & Alterations; Design Guide 15: Conversion of Agricultural Buildings.

Fig. 5 Chipping Norton CA - key view of Bliss Mill

6.4 TREES

Owners of trees in Conservation Areas must give the Council six week's notice of their intention to carry out any of the following works: lopping, topping or felling. This applies to trees with trunks more than 75mm in diameter, but not to fruit trees or saplings.

Fig. 6 Prominent tree in Tackley CA

Trees and hedgerows which make a contribution to a Conservation Area should not normally be removed unless dead, dying or dangerous. Where removal is necessary, suitable replacements should be planted in consultation with the Forestry and Landscape Officer.

6.5 BOUNDARY TREATMENTS

Boundary treatments, both natural and man made, are a critically important element of historical settlements, and often play a defining role within Conservation Areas. In West Oxfordshire, dry stone walling is especially characteristic, knitting together settlements and giving definition to roads, fields and properties. In general, traditional stone walling should be retained and restored in Conservation Areas, and will often represent an appropriate choice where new boundary treatments are required.

Particularly vulnerable to change is the burgage walling found in a number of the District's towns: most notably Burford, Chipping Norton, Woodstock and Witney. Burgage plots are long, thin housing plots trailing back from the street and dating back as far as the C13. While the walling may be recent, it will often respect the original burgage plot lines, thus providing an invaluable physical record of the town's historical topography. Such walls are rarely Listed (though may be curtilage Listed), and are thus susceptible to incremental change and loss over time. In general, burgage plot lines and walls should be preserved, and loss of burgage walling avoided.

Traditional native hedgrow species, such as hawthorn and field maple, also form key local boundary features in the District. In general, these should be retained where present, and such species used in preference to non-native ornamental species when new hedgerows are required.

6.6 SETTING

As the NPPF makes clear (*NPPF 2012 paragraph 128* etc.) setting is a fundamental aspect of heritage assets. In the case of Conservation Areas, where change is proposed (including beyond the boundary of the Conservation Area), careful consideration should be given to the likely impact of that change on the character and appearance of the Conservation Area and its setting.

'Setting' is defined in the NPPF as: *The surroundings in which a heritage asset is experienced. Its extent is not fixed and may change as the asset and its surroundings evolve. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance or may be neutral.* (Annex 2, Glossary, NPPF, 2012).

'Setting' is defined by Historic England as: *The surroundings in which a place is experienced, its local context, embracing present and past relationships to the adjacent landscape.* (Conservation Principles, English Heritage, 2008).

6.7 CONSERVATION AREA CHARACTER APPRAISALS

Conservation Area Character Appraisals are concise, illustrated documents describing the main features of a Conservation Area, which contribute to its special interest and quality. Each document has sections describing the location and setting of the Conservation Area, its historical development, settlement pattern, architectural character, boundary treatments, landscape context and views; and includes gazetteers of both Listed and Locally Listed Buildings, together with a map detailing the salient features. Conservation Area Appraisals are accompanied by management proposals for the future maintenance and improvement of the Conservation Area.

Conservation Area documents are intended to support, and provide an evidence base for, the designation of each Conservation Area; to complement national and local planning policy; and to provide a source of information for local residents, planners and developers.

For further information see: http://www.westoxon.gov.uk/planning-building-links/historic-buildings-conservation-areas-page/conservation-areas/

https://content.historicengland.org.uk/images-books/publications/gpa3-setting-of-heritage-assets/gpa3.pdf/ (Historic England Guidance)

Design Guide 7

Listed Buildings, Registered Parks & Scheduled Monuments

7.1 LISTED BUILDINGS

Listing gives statutory protection to buildings of special architectural or historic interest. It protects these buildings from unauthorised alteration or demolition. The Listing of buildings of special architectural or historic interest is the responsibility of Historic England; however, all planning matters relating to Listed Buildings are the responsibility of the District Council.

Fig. 1 Grade-I Listed church of St Mary, Witney

There are roughly 374,000 Listed Buildings in England. The older a building is, the more likely it is to be Listed. All substantially complete buildings built before 1700 are likely to be Listed, as are most built between 1700 and 1840. Thereafter the criteria become tighter with time, so that post-1945 buildings need to be of exceptional importance to merit inclusion (only 0.2% of all Listed Buildings belong in this category).

Listed Buildings are graded in terms of their relative significance. The vast majority of Listed Buildings (94%) are Listed at Grade-II: *buildings of special interest, warranting every effort to preserve them*. The remainder (6%) occupy one of the two higher grades. Grade-II* covers *particularly important buildings of more than special interest*; while Grade-I is reserved for *buildings of exceptional (national) interest*.

West Oxfordshire's 3,200 Listed Buildings comprise a small but immensely important part of the District's building stock, encompassing buildings from the twelfth century onwards. As well as locally characteristic buildings of the evolved vernacular tradition, they include those influenced by national or international styles, including Gothic, Jacobean, Classical, Georgian, Victorian and twentieth-century design.

Listed Buildings provide examples of technology and innovation in construction. A unifying theme in West Oxfordshire is the consistent use of local materials, most notably: limestone and ironstone, stonesfield slate, long straw thatch, and lime mortars, renders and washes. Despite imports of brick, tile and blue slate, the built character of the District remains overwhelmingly defined by the locally-sourced materials listed above.

In addition to statutory protection, West Oxfordshire's Listed Buildings are afforded protection by policies contained in the Local Plan. These seek not only to protect the Listed Buildings themselves, but also the settings of these buildings. The impact of any proposed development upon the setting of a Listed Building will be a material consideration in the determination of that planning application.

7.2 LISTED BUILDING CONSENT (LBC)

Listed Building Consent (LBC) is a form of Planning Permission required for any alterations or other works affecting the character, fabric or appearance of a Listed Building, regardless of grade, inside or out.

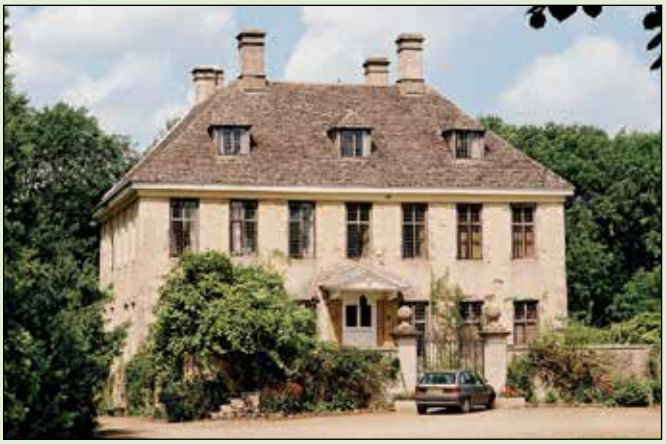
There are approximately 3,200 Listed Buildings in West Oxfordshire. A copy of the List of Buildings of Special Architectural or Historic Interest is available for inspection at Planning Reception. Listed Buildings fall into one of three categories:

Grade I (2% of Listed Buildings nationally)

These buildings are of exceptional national importance. There are 43 in West Oxfordshire, including Blenheim Palace (which also forms part of a World Heritage Site), Cornbury Park, Chastleton (*pictured right*), Kelmscott Manor and many of the District's ancient parish churches.

Grade II* (4% of Listed Buildings nationally)

Buildings of outstanding interest. There are 211 in West Oxfordshire, including many of the best examples of the local variety of Cotswold architecture: for example, Strong's House in Taynton, and Wychwood Lodge in Ramsden. The agricultural and industrial heritage of the District is also well represented by Church Enstone Tithe Barn, the Blanket Hall in Witney and Bliss Tweed Mill in Chipping Norton.



Grade II (94% of Listed Buildings nationally)

Buildings of special interest. There are about 3000 in West Oxfordshire. These form key elements of the historic character of the settlements and landscape of West Oxfordshire, and range from grand houses to simple cottages, farm buildings to factories, telephone boxes to milestones.

Listing covers the entire fabric of the Listed Building, inside and out and including later extensions; and may cover structures deemed to lie within the curtilage of the Listed Building, such as outbuildings or walls. Internal or external alterations, extensions or demolition all require Listed Building Consent.

Fig. 2 Listed house in Witney

The requirement for Listed Building Consent is in addition to any other consents required, such as Planning Permission or Advertisement Consent. The administration of Listed Building Consent is the responsibility of the District Council, and applications for Listed Building Consent should be made on forms available from the Planning Service, or via the Planning Portal [http://www.westoxon.gov.uk/residents/planning-building/planning-applications/make-a-planning-application/].

In the case of applications for development relating to buildings Listed at Grade-I or Grade-II* or to their settings, or applications proposing the demolition of any Listed structure, Historic England will act as a statutory consultee.

The fact of Listing does not rule out future change to a Listed Building or structure; however, all proposals must be carefully considered. Any proposal likely to entail harm to the character, appearance, fabric or setting of a Listed Building is unlikely to be supported.

Unauthorised external or internal works entailing material change to a Listed Building constitute a criminal offence that may lead to enforcement action or prosecution, and ultimately an unlimited fine or up to twelve months imprisonment (or both). There is no time limit for this action, and liability for illegal works may pass to the new owners of a Listed Building.

Fig. 3 Listed house in Burford

Anyone wishing to redevelop a site on which a Listed Building stands would need both Listed Building Consent for the demolition of the structure and Planning Permission for the new building. Consent for the demolition of a Listed Building would only be granted in exceptional circumstances, and would require the de-Listing of the structure by Historic England. Planning Permission alone would not be sufficient to authorise demolition.

Applications for Listed Building Consent should be accompanied by survey drawings recording the existing form of the building, and making a clear graphic distinction between existing retained fabric, demolitions and new work. As part of the application, an understanding of the particular sensitivities of the Listed Building, and of the implications of the proposed changes for the character or fabric of the Listed Building, must be clearly demonstrated in an accompanying Design and Access Statement.

The proposed works will need to be fully justified, with the applicant showing clearly why works likely to affect the character or fabric of the Listed Building are necessary or desirable. Full information to enable the assessment of the likely impact on the Listed Building and its setting must be provided.

See also: Design Guide 11: New development & context.

7.3 DESIGN PRINCIPLES FOR CHANGE TO LISTED BUILDINGS

When considering change to a Listed Building, there are a number of fundamental design principles to consider, in order to avoid harm to the character or fabric of the building.

Understand the context

Before any change is considered, the character, fabric and history of the building should be understood as fully as possible. This analysis should identify the reasons for Listing, and all relevant aspects of the building which contribute to its special interest. It could also identify later or inappropriate features of the building, or original features or characteristics that have been lost or altered in some way.

The character of a Listed Building will derive from a variety of factors, including the original use of the building, its scale and massing, the size and arrangement of internal spaces, architectural type and features, doors and windows, and its setting; together with adjoining or related buildings and structures, including walls.

Considering change

Only once the context of the Listed Building is comprehensively understood can informed decisions be made about potential change. As a general principle, any change likely to cause harm to the character or fabric of a Listed Building is unlikely to be supported. Again as a general principle, any change that would cause no harm to the character or fabric of a Listed Building, or would result in a net gain to the character or fabric of the Listed Building, may be supported.

Changes that would entail the restoration to the Listed Building of appropriate or original features or fabric, or the better revealing of existing original features, may also be supported.

7.4 LOCALLY LISTED BUILDINGS

Local Listing recognises the special interest of otherwise non-designated buildings, together with the contribution they make to the appearance of Conservation Areas in particular. Such buildings, as well as having architectural or historical merit in their own right, are vital components of the settlements and landscapes of West Oxfordshire.

Seemingly small but inappropriate alterations to these buildings can be harmful not only to the building itself, but also to the appearance of the wider area. Non-designated buildings of architectural or historic interest within a Conservation Area may be identified as Locally Listed in the relevant Conservation Area Appraisal.

The criteria for Local Listing are essentially similar to those for Listed Buildings. Identification of a Locally Listed Building entails an analysis of the architectural and historical interest of the building, its date and style, design and materials, state of preservation, and what contribution the building makes to the area. A typical Locally Listed Building might be a substantially original nineteenth-century house, of locally characteristic design and materials, whose presence enhances the character and appearance of a Conservation Area.

Fig 4. Locally Listed Building in Chipping Norton

Although Local Listing does not constitute a statutory designation, it is supported by guidance in the NPPF and elsewhere (including from Historic England) which encourages the protection of otherwise non-designated heritage assets.

The special interest of non-designated buildings deemed to be of architectural or historical merit will be reflected in planning decisions, and care should be taken to ensure that any changes to such structures are carried out in such a way as to cause no undue harm to their character or fabric, or to their wider context.

7.5 REGISTERED PARKLAND

Parks and gardens of special historic interest are registered by Historic England in a way similar to that of buildings of architectural or historic interest. There are 16 parks and gardens of special historic interest in West Oxfordshire, including internationally important landscapes at Blenheim (a World Heritage Site - *see below*) and Rousham:

Registered Parks in West Oxfordshire

1.	Blenheim	Grade-I
2.	Chastleton	Grade-II*
3.	Cornbury	Grade-II*
4.	Cornwell	Grade-II*
5.	Ditchley	Grade-II*
6.	Eynsham	Grade-II
7.	Great Tew	Grade-II
8.	Heythrop	Grade-II*
9.	Kelmscott	Grade-II
10.	Kiddington	Grade-II
11.	Rousham	Grade-I
12.	Sandford	Grade-II
13.	Sarsden	Grade-II*
14.	Shipton	Grade-II
15.	Swerford	Grade-II
16.	Tackley	Grade-II*

Development will not be permitted that adversely affects the character, setting, amenities or historic context of a Registered Park or Garden; or adversely affects views within, into or from a Registered Park or Garden. Applications involving a Registered Park or Garden will entail consultation with Historic England, and possibly other consultees (such as the Garden History Society).

The international importance of Blenheim Palace and its landscape is recognised in its designation as a World Heritage Site, with the palace and parkland are also covered by the Blenheim Palace World Heritage Site Management Plan.

Fig. 5 Rousham House and Park

Fig. 6 Rollright Stones Scheduled Monument

As well as being protected by various other landscape designations, the park is home to 45 structures Listed at Grade-I or Grade-II*, together with five Scheduled Monuments. These exceptional levels of sensitivity must be appropriately reflected in any proposals that might affect Blenheim Palace, its associated structures, park or landscape setting.

7.6 SCHEDULED MONUMENTS (SMs)

Scheduled Monuments are nationally important sites and monuments protected against disturbance or unlicensed metal-detecting by *The Ancient Monuments and Archaeological Areas Act 1979*. The Schedule is administered by the Department for Culture, Media and Sport (DCMS), under the direction of Historic England. Scheduled sites include both above- and below-ground structures and features, and may or may not be ancient.

In West Oxfordshire there are 142 Scheduled Monuments, including well known sites such as the Rollright Stones and Minster Lovell Hall; together with comparatively recent monuments, such as the C19 pottery factory near Leafield. Details of West Oxfordshire's Scheduled Monuments are available from the District Council.

7.7 SCHEDULED MONUMENT CONSENT (SMC)

Scheduled Monument Consent (SMC) is administered by Historic England, and not by the District Council. Scheduled Monument Consent is required before any works can be carried out which will affect a Scheduled Monument. There are limited exemptions (generally relating to gardening or agriculture, where such activities are already being carried out).

Before carrying out any works to a Scheduled Monument, it is strongly advised that contact is first made both with Historic England and the County Archaeologist. Details of how to apply for Scheduled Monument Consent are available from Historic England.

Applicants for Scheduled Monument Consent must investigate if Planning Permission is

also required (this aspect of any works being administered by the District Council). However, if a structure is both Scheduled and Listed, Scheduled Monument Consent takes precedence, and Listed Building Consent is not required.

It is a criminal offence to disturb a Scheduled Monument by carrying out works without consent; to cause reckless or deliberate damage to a Scheduled Monument; to use a metal detector or remove an object found at a Scheduled Monument without a licence from Historic England. Conviction for any of these offences can lead to substantial fines.

The District is generally rich in archaeological remains, and consideration should be given to the possibility of remains not covered by Scheduled Monument legislation being present in historical settings, possibly in consultation with the County Archaeologist.

Even where remains do not warrent preservation *in situ,* consideration should be given as to how such remains might usefully and appropriately be recorded and possibly published, in order to add valuable data to the historical record.

7.8 Heritage at Risk

Historic England keeps an up-to-date Heritage at Risk Register, which includes details of buildings and structures, places of worship, archaeological sites, conservation areas and registered parks and gardens threatened by deterioration or loss.

The register is intended to highlight threatened heritage assets, and to provide a database for members of the public and other stakeholders. The Council should be informed if potential harm to a heritage asset (such as a Listed Building or Conservation Area) is identified.

7.9 SETTING

As the NPPF makes clear (*NPPF 2012 paragraph 128* etc.) setting is a fundamental aspect of heritage assets. In the case of Listed Buildings, Registered Parks and Scheduled Monuments, careful consideration should be given not only to the heritage asset itself, but to the contribution made to the heritage asset by its immediate and wider settings.

'Setting' is defined in the NPPF as: *The surroundings in which a heritage asset is experienced. Its extent is not fixed and may change as the asset and its surroundings evolve. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance or may be neutral.* (Annex 2, Glossary, NPPF, 2012).

'Setting' is defined by Historic England as: *The surroundings in which a place is experienced, its local context, embracing present and past relationships to the adjacent landscape.* (Conservation Principles, English Heritage, 2008).

Design Guide 8
Stonework

8.1 TRADITIONAL WALLING

Locally quarried stone – most notably the distinctive pale or buff-coloured oolitic limestone – is a defining feature of the built character of West Oxfordshire, employed both as a walling stone and for roof slates. In the far north of the District (and reflecting a change in the underlying geology here) distinctive orangey, brown or rust-coloured ironstones are also found.

Fig. 1 Traditional dry stone wall

Walling stone was traditionally laid either with or without mortar. Field and property boundary walls in particular were often of dry stone construction (*see* **Dry Stone Walls** *below*); while the walls of buildings were generally constructed using lime mortar (*see* **Mortared Walls** *below*).

In both cases, prior to laying, the stones would be sorted into piles of random lengths but the same course height (*c.*75mm or *c.*175mm are typical course heights). The larger stones were generally reserved for the base or corners of the walls, for use as quoins; and for the door or window edges, for use as jambs.

The stones were generally laid level in regular courses; or, if the stones were highly irregular, then 'brought to course' by masking two or more thin courses by a larger quoin or jamb stone. A skilful blending of different course heights creates a pleasing and harmonious visual pattern, with neither the individual stones nor the mortar pattern being unduly obtrusive.

The stones were fitted together as closely as possible, so that very little mortar showed in the case of a mortared wall. Walls were laid to give a flat face on both sides, the irregular 'tails' of the stones pointing into the core of the wall. Any remaining voids would be packed tightly with bonded stone fragments. This method of laying gives a much greater thickness than a modern wall. The use of square stones (or 'jumpers') as random features is not locally traditional and should be avoided. Limestone is a sedimentary rock and should be laid with these layers parallel to the ground. If laid with its sedimentary layers parallel with the wall face, frost action will 'blow' the faces of the stones and progressively weaken the wall.

8.2 DRY STONE WALLS

Traditional dry stone walls are a key feature of the landscapes and settlements of West Oxfordshire, enclosing farmland and stitching together towns and villages. Dry stone walls vary in height, and may be topped by one of several coped finishes, depending on the use or status of the wall.

A dry stone wall should correspond in its appearance (profile and stonework) with adjacent and local patterns of walling. When rebuilding an old wall, every effort should be made to re-use existing stone, and to conserve lichens and mosses. New or replacement stone should be sourced from reclamation yards or local quarries, and match in its size, colour, texture and thickness the existing adjacent or nearby walling.

The three most common ways to top a dry stone wall are: a) with a random pattern of upright coping stones (sometimes referred to as 'cocks and hens', and traditionally used both for field and property boundary walls); b) with flat stone coping (traditionally used for higher status property boundary walls); or c) with curved mortar coping (a more recent finish).

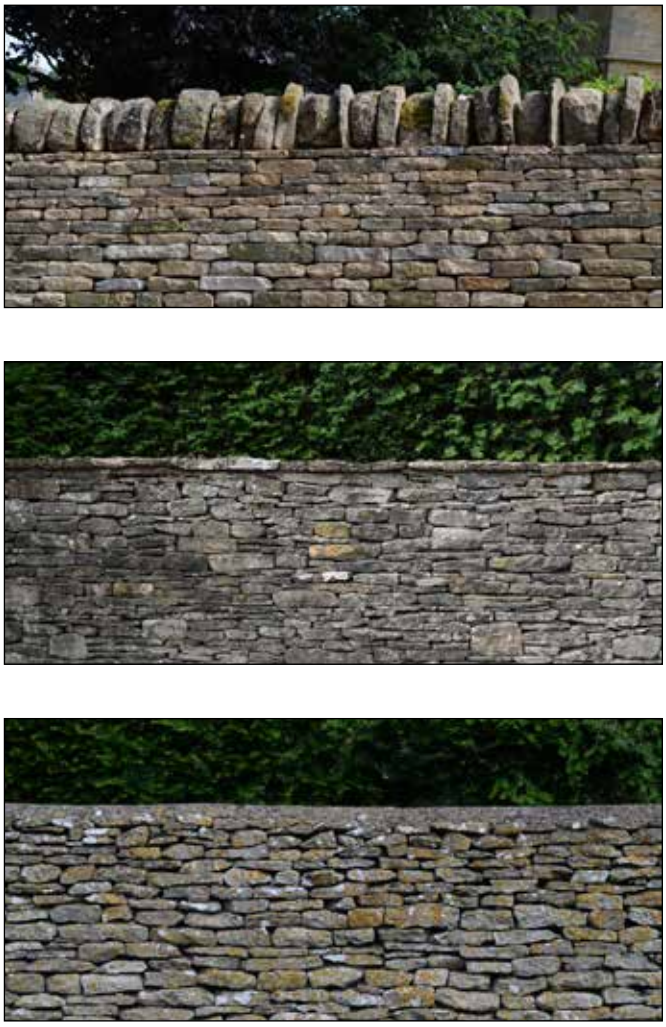


Fig. 2 Random upright coping (top); flat stone coping (middle); curved mortar coping (bottom)

8.3 MORTARED WALLS

In mortared walls, the horizontal mortar between the courses (the 'bed') and the vertical seam between stones in the same course (the 'perp' or 'perpend') should be as thin as possible (on average no more than *c.*10mm). Any projections on the stones which may enlarge the joint should be trimmed with a walling hammer or bolster. Stones should be selected to be compatible in shape with their neighbours. Courses should be laid level on top, with any variation in shape taken up in the top of the bed joint below.

Fig. 3 Recent traditional mortared wall

The mortar must be allowed to set slightly before it is finished. Finishing can be done with a trowel, brush or the corner of a butterfly wall tie. Care should be taken to avoid smearing mortar on the stone faces. The joint should be given a flush or concave surface, slightly recessed from the corner (arris) of the adjoining stones. Projecting (ribbon) pointing, which traps moisture in the wall, is not traditional for the District and should be avoided.

The preparation and use of mortar is of particular importance, both for the appearance and the longevity of the wall. Dense, cement-rich mortars are not appropriate for limestone, as they do not allow the free passage of moisture from the wall. The colour and texture of the mortar must relate to the chosen stone. When dry, the mortar should be the same colour as, but slightly lighter than, the adjoining stone. The local tradition is for mortar with a fairly gritty texture.

Building stone was traditionally used in a range of finishes, depending on the date, status and use of the building:

8.4 RUBBLE OR ROUGH DRESSED STONE

The stones, roughly squared-off or used as found, were sorted according to size, and laid in uneven courses. A harmonious and pleasing overall appearance was achieved by the skilful blending of courses of different height, sometimes by 'bringing to course' two or more narrower stone courses.

This finish is a characteristic of the District's field and property boundary walls, with the stones generally laid dry; and of many of the District's vernacular houses and cottages, laid with lime mortar – particularly those belonging to the C17 and C18.

Fig. 4 Traditional rubble stone wall

8.5 DRESSED STONE

The stones were squared off to give a more pronounced uniformity of size and shape, leading to stone courses (and thus walling) of more consistent overall appearance. The greater uniformity allowed for narrower mortar beds between courses, and a flatter and more even overall appearance to the stonework. This finish is characteristic of the District's C18 and C19 vernacular houses, and in particular higher status detached properties of this period.

Fig. 5 Dressed stone

A characteristic Victorian variation, found particularly on houses of the late C19, was for the stone to be squared off, but for the face of each stone to be given a rougher, raised finish.

8.6 ASHLAR STONE

The stones were sawn to give a finely squared-off finish, with flat faces and sharp edges. They were laid near-flush with one another, with narrow, inconspicuous joints, to give a wall face of pronounced flatness and evenness. This finish is especially characteristic of higher status houses of the C18 and C19. However, ashlar stone was also used for the quoins, window surrounds and chimneys of houses otherwise constructed from dressed stone.

Fig. 6 Limestone ashlar

Fig. 7 Natural limestone stone slates

8.7 STONE SLATES

Natural stone 'slates' represent a highly important and distinctive application of the local limestone as a roofing material. Good quality stone slates were sourced from a number of local quarries in the District. Historically, however, the eponymous Stonesfield Slates have been especially highly regarded for their quality and evenness.

Rather than being split with chisels, stone slates were formed by spreading the stones on the ground and allowing them to split naturally by frost action. The resultant stone slates were laid on roofs in diminishing courses, with the smallest slates nearest the ridge.

This roofing material is especially characteristic of local vernacular houses, cottages and agricultural buildings of the C17 and C18 and remains a conspicuous and precious feature of both Listed and non-designated buildings throughout the District (frequently being highlighted in List entries in the case of the former).

Stone slates, as well as being significant for their architectural and historical interest, are also, by virtue of their method of creation, significant in terms of the District's cultural heritage. For all these reasons, natural stone slates should be retained or replaced on a like-for-like basis wherever possible (either sourced from a salvage yard or from one of the quarries still producing natural roofing slates).

In the case of Listed Buildings – and particularly where the presence of stone slates is cited in the List entry – proposals to replace natural stone slates with an alternative material (including reconstituted stone tiles) will generally not be supported, on the basis that such a change is likely to be harmful both to the character and fabric of the Listed Building.

This also applies to a partial re-roofing where, for example, two roof slopes might be stripped of their natural stone slates in order that enough original slates may be salvaged to re-roof one slope in naturals (the other being roofed in artificial stone slates). This latter change would still entail harm to

the character and fabric of the Listed Building, even if carried out to a discreet roof slope, and would potentially represent one step in a cumulative loss over time.

8.8 ARTIFICIAL STONE

The purpose of artificial stone is to replicate the character and appearance – and specifically the colour and texture – of local natural stone. Artificial stone is available in 100mm thicknesses, to allow the formation of an outer skin. In order to give the most natural appearance possible, artificial stone should be employed in a wide range of course heights and stone lengths.

Fig. 8 Artificial stone wall

The stone should be laid in courses of randomly varying height, and with stones of varying length within each course, to give a harmonious overall effect. If a narrow range of course heights and stone lengths is used, the finished wall will have a mechanical and repetitive appearance. Again, the use of square stones (or 'jumpers') as random features is not locally traditional and should be avoided. Larger stones can be used at the corners (as quoins) and to define window or door openings.

Artificial stone should also be laid with a *c.*10mm average bed joint and a *c.*10mm average vertical 'perp' joint. The joint profile should be slightly recessed, matching that of natural stone; and the mortar should be similar in colour, but slightly lighter than, the artificial stone. Difficulties frequently arise when using grey Portland cement or dark sand. A pale buff to neutral colour is generally appropriate for artificial stone, but the shade will depend on the choice of artificial stone.

8.9 SAMPLE PANELS

In order to demonstrate the natural or artificial stone type, laying pattern, mortar colour and finish for a given building project, a sample panel using the material should be constructed of at least 1m x 1m surface area.

The sample panel must be constructed apart from, but within the context of, the development. It should be in a position on the site where it can remain until practical completion, as it will serve as the standard against which all other stonework will be assessed.

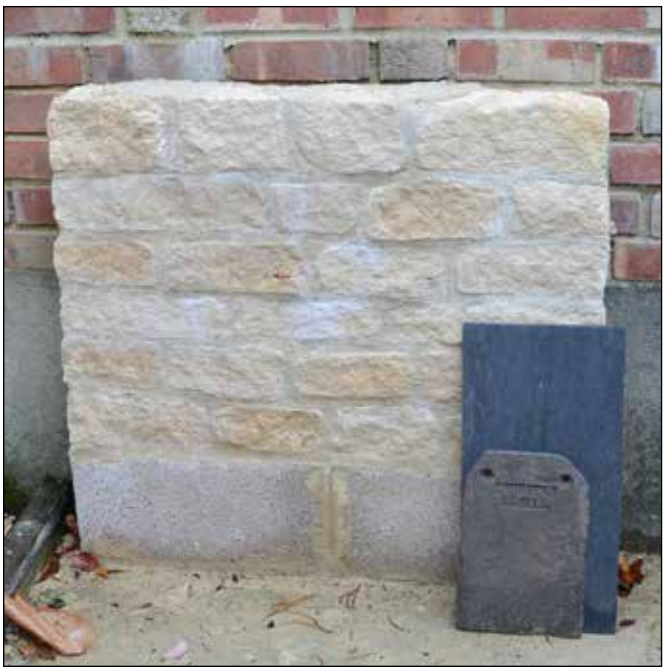


Fig. 9 Natural stone sample panel and proposed roofing materials

Common problems with sample panels include: mortar joints that are too wide (i.e. more than *c.*10mm); the use of untraditional 'jumpers'; and mortar that is either darker than the adjoining stonework or of a poor colour or texture match.

When complete, the sample panel should be protected from frost and rain, and the mortar allowed to dry out before an inspection is requested. Until the sample panel has been approved in writing, no external stonework should be carried out, even below the damp proof course.

Design Guide 9
Roofs & Roofing Materials

9.1 ROOFS AND ROOFING MATERIALS

The roofs of West Oxfordshire's traditional buildings display a number of highly distinctive characteristics.

Roof pitches (whether of duopitch or monopitch/ lean-to type) tend to be fairly steep: generally 45 degrees or more (particularly on pre-C19 houses and cottages); and rarely less than 40 degrees, even on later houses.

Fig. 1 Locally characteristic steeply pitched roof

Verges and eaves tend to be simply detailed. Verges are generally flush and rarely overhang, and are generally plain and devoid of barge-boards. Eaves tend to have only a modest overhang. Coped or tabled verges are occasionally found on higher status detached houses of the C18 and C19 (including farmhouses). Likewise, raised parapets are sometimes found, typically on gentrified town houses of the C18 and C19 (most notably in the larger market towns, such as Witney and Chipping Norton). Traditionally, rainwater goods were of cast iron and painted black.

9.2 TRADITIONAL ROOFING MATERIALS

Across West Oxfordshire, two traditional roofing materials dominate: natural limestone stone slate and Welsh (blue) slate. While the latter appears on C19 and C20 buildings across the country as a whole, the former is locally distinctive, and plays a defining role in the built character of the District. Thatch forms a third traditional roofing material in the District, found mainly in the Thames Vale.

Stone slates were sourced from a number of quarries in the District; historically, however, the eponymous Stonesfield Slates have been especially highly regarded for their quality and evenness.

Fig. 2 Natural stone slates laid in diminishing courses

Rather than being split with chisels, stone slates were formed by spreading the stones on the ground and allowing them to split naturally by frost action. The resultant slates were laid on roofs in diminishing courses, with the smallest slates at the ridge. This roofing material is especially characteristic of local vernacular houses, cottages and agricultural buildings of the C17 and C18, and remains a conspicuous and precious feature of

both Listed and un-Listed buildings throughout the District (often being highlighted in List entries). Stone slates, as well as being significant for their architectural and historical interest, are also, by virtue of their method of creation, significant in terms of the District's cultural heritage. For all these reasons, natural stone slates should be retained or replaced on a like-for-like basis wherever possible (either sourced from a salvage yard or from one of the quarries still producing natural roofing slates – though in the case of the latter, care must be taken to ensure a good match in terms of texture and colour, as these vary between quarries).

In the case of Listed Buildings proposals to replace natural stone slates with an alternative material (including artificial stone slates) will generally not be supported, on the basis that such a change is likely to be harmful both to the character and fabric of the Listed Building.

This also applies to a partial re-roofing where, for example, the intention is for two roof slopes to be stripped of their natural stone slates in order that a sufficient quantity of original slates might be salvaged to re-roof one slope in naturals (the other being roofed in artificial stone slates). This latter change would still entail harm to the character and fabric of the Listed Building (even if carried out to a discreet roof slope) and would potentially represent one step in a cumulative loss over time.

Welsh blue slate was widely used in the C19 and the first half of the C20 in particular, and is also a conspicuous feature in parts of the District, owing to the large amount of building that took place at this time. As well as being a primary roofing material on some houses and cottages it also appears, for example, on extensions to period buildings otherwise roofed in stone slate, and on outbuildings (including farm buildings) of the period.

Traditional blue slate remains available, both from reclamation yards and a limited number of still operational slate mines in Wales. The material is also imported from other countries, including Spain, China and Brazil. With any blue slate, be it new or reclaimed, it is important that great care is taken when it comes to selection.

Blue slate, even from different parts of the same quarry, may vary considerably in its colour and quality. Colour selection is especially important where the new slates must marry with existing slates in the same or adjoining roof slopes. In terms of quality, slates should be checked for inclusions – especially metallic inclusions liable to rust or discolour over time – and for signs of shaling or flaking.

Fig. 3 Traditional natural blue slate

Besides stone slate and blue slate, terracotta roof tiles are sometimes found on buildings (including outbuildings) belonging to the C19 and C20; though when these are encountered at all, it tends to be in the south of the District (the Thames Vale) where clay forms a significant component of the underlying geology.

Also occasionally found are cedar shakes or shingles: timber tiles which weather down to a silvery sheen, and are generally best suited to low-key garden- or outbuildings, for example.

9.3 THATCH

Thatch forms a highly important and locally characteristic roof type throughout West Oxfordshire, and is most conspicuous in the south of the District (the Thames Vale – *see also:* Design Guide 4: Local Character) where significant numbers of period properties are roofed in thatch.

The greater prevalence of thatch in this part of the District partly reflects changes in the underlying geology, which here is dominated by clays – in contrast to the wolds further north, where limestone dominates and stone slates are the prevailing local roofing material.

Thatch is generally found on relatively humble vernacular properties – most notably cottages – and is less often a feature of high status properties and large houses.

Long Straw

The traditional, historical thatch for the area is known as 'Long Straw' thatch, and was employed locally for centuries. Long Straw entails the use of old-fashioned long-stemmed varieties of wheat. This was first threshed, then made into 'yealms' (tight, compact bundles level at both ends), before being fastened to the roof with staple-like hazel spars to give a thick, multi-layered coat.

Long Straw thatch is distinctive, with long lengths of straw visible on the surface, giving the thatched coat the general appearance of having been poured onto the roof. It is characterised by soft, sweeping shapes and a tussled appearance. Long Straw roofs typically feature 'ligger work' at the eaves and verge, which is both decorative and used to firm up a shaggy or loose coat at these points. Although this thatching method is all but obsolete across Oxfordshire and neighbouring counties, old coats of Long Straw still remain preserved beneath later coats of thatch on many period buildings in the area. A good quality, well laid Long Straw thatch roof should last 25-30 years, with a new ridge being needed at about the 12-15 year mark.

Combed Wheat Reed

Since the 1960s, the predominant thatching type across Oxfordshire has been Combed Wheat Reed. In contrast to Long Straw thatch, Combed Wheat Reed is dressed into place with only the 'butts' (the ends of the reed bundles) visible on the surface, then fixed with hazel spars driven into the existing thatch (which must first be stripped back to give a sound base coat).

Fig. 4 Thatched house in Bampton

The local style in West Oxfordshire is for a flush-fitting wrapover ridge, with hazel spars and liggers only employed if the roof is being dressed up to look like Long Straw. Combed Wheat Reed has almost entirely replaced its Long Straw predecessor.

A good quality, well laid Combed Wheat Reed roof should also last 25–30 years, with a new ridge being needed at about the 12–15 year mark.

9.4 MODERN ROOFING MATERIALS

A wide range of modern roofing materials is available. Some of these – most notably artificial stone slates – are designed to replicate traditional local materials. Artificial stone slates are predominantly made of concrete, and consequently are much cheaper than their natural counterparts. When well-chosen and used in diminishing courses, they can be an effective alternative to natural stone slates, being suited to some traditional new builds, and some extensions to existing traditional buildings. They will not generally be appropriate as replacements for natural stone slates on period buildings, particularly where a building is Listed.

A number of products replicating blue slate also exist. These are available in a range of materials (including plastic) and vary greatly in terms of their appearance and suitability.

Other more recent roofing materials do not seek to replicate traditional materials, though may be sympathetic in terms of their colour and/or texture with palettes of existing traditional materials. Concrete plain tiles are available in a wide range of colours, finishes and sizes, and can make a good choice not only for new builds but also for some extensions to existing traditional buildings.

In terms of metal roofing, lead has traditionally been used and continues to be used (including for flat or awkwardly shaped roofs where tiling would be impractical). Today, a number of proprietary materials for use in similar circumstances (but cheaper and of limited or no scrap value) is also readily available.

Fig. 5 Standing seam roof on recent house in Woodstock

Other metals, including copper, aluminium and zinc, are also found. These typically come in roll or sheet form, and are laid with standing seams. They are particularly well suited to a modern aesthetic, or again where an awkwardly shaped form needs roofing. Colours and reflectivity can vary greatly (including over time), so care must be taken with the selection of such materials for prominent roof slopes. With metal or standing seam roofs, the detailing of eaves, cornices, guttering and roof junctions is particularly important, as the resolution of such details will have a significant bearing on the success or otherwise of the design.

9.5 WINDOWS IN ROOFS

There are two main ways of bringing natural light into a roof space: dormer windows and roof-lights. With roofs, as with walls, the ratio of solid to opening should be carefully considered. Openings should not be too expansive, numerous or close together. Roof slopes are easily cluttered, and their form and appearance undermined, by too many or mismatched openings, and an accumulation of, for example, aerials, flues, vents or solar panels.

Fig. 6 Traditional dormer window

Fig. 7 Artificial stone slate roof with flush roof-light

In general, dormer windows and roof-lights should be positioned no higher than halfway up the roof slope, and ideally a little below halfway up (though the exact position will generally depend on the position of the purlins within). In the case of some types of roof, including those belonging to some barns and Listed Buildings, it may not be appropriate to have any openings at all in the roof.

Dormer windows are traditionally proportionately smaller than the windows in the elevations below. They are usually of gabled form, but occasionally have hipped roofs. The cheeks and gable (if gabled) are of roughcast render. The windows are formed by timber posts acting both as framing for the dormer and jambs for the window; and traditionally have flush-fitting, side-hung timber two-light casements.

Roof-lights come in a huge range of shapes, sizes and opening types. They are most commonly made of aluminium or wood, and can sit flush with, or proud of, the roof slope. Flush-fitting roof-lights in dark painted or powder-coated finishes are generally more appropriate for period buildings, and almost always more appropriate for Listed Buildings (where these are deemed acceptable) as they appear more discreet and do not interrupt the silhouette of the roof.

See also: Design Guide 10: Windows and doors

9.6 CHIMNEYS

Chimneys were traditionally constructed in stone or brick (rubble or dressed stone on vernacular buildings, and ashlar stone on some higher status buildings). Chimneys tend to be located on the ridge, generally at the ridge end; though occasionally they may occupy a position further down a roof slope. While many period properties initially had stone chimneys which were subsequently replaced with brick, many early stone-built properties originally had brick chimneys (one of the reasons being the relative ease with which hods of bricks could be taken onto the roof, compared with larger and irregularly shaped stones).

Traditional chimneys are a prominent and distinctive feature of the roofs and roof-scapes

Fig. 8 Traditional brick chimneys in Woodstock

of the District, and original chimneys should generally be repaired or rebuilt on a like-for-like basis – particularly if the building is Listed. In some cases it may be appropriate to raise or to reduce the height of a chimney, or to rebuild a chimney using different materials (for example, where a traditional house has a poor quality recent chimney); however, such is the importance of chimneys, both to the physiognomy of individual houses and to the appearance of wider roof-scapes, that they should generally not be lost altogether – even where functionally redundant.

9.7 SOLAR PANELS

Solar panels, whether of photovoltaic or evacuated tube type, are increasingly becoming a feature of roofs, particularly in new-build contexts, and are also easily retrofitted to existing properties. When considering fitting solar panels to an existing property, three things in particular should be taken into account: i) viability (in terms of potential benefits given the size and orientation of the roof slopes), ii) visual impact, and iii) what Planning Consents, if any, may be required.

Additionally, it will be important to ascertain the structural implications of the additional weight of the solar panels on the roof.

In terms of visual impact, both the immediate property context and the wider settlement and landscape contexts should be considered. If the property is traditional or Listed, solar panels can be visually harmful if prominently sited. Particularly in the case of Listed Buildings, solar panels should ideally occupy discreet roof slopes only (in roof valleys the panels may not be visible at all from the ground). In general, the cluttering of roofs with an accumulation of features – of which solar panels may be one element – should be avoided.

Fig. 9 Conspicuous and concealed solar panels

If prominently sited, solar panels may be visually harmful in wider views – for example within or into Conservation Areas or the AONB – and may be deemed unacceptable for this reason. In sensitive contexts it may be possible instead to locate solar panels on an outbuilding or as a free-standing array in the grounds of the property.

Any change or addition to a roof – including new roofing materials, windows, chimneys, solar panels, aerials or satellite dishes – may require Planning Permission. It is important to check with the Planning Department what planning consents, if any, will be needed. If the building is Listed, material changes of this type will almost always require Listed Building Consent.

See also: Design Guide 12: Sustainable design; Design Guide 16: Greener traditional buildings.

Design Guide 10
Windows & Doors

10.1 TRADITIONAL WINDOWS

Windows are the eyes of a building. They make a fundamental contribution to the character and appearance of buildings, and of settlements more widely. Changes to windows represent one of the easiest ways to dramatically alter the character and appearance of buildings.

There are a number of traditional window types found in the District:

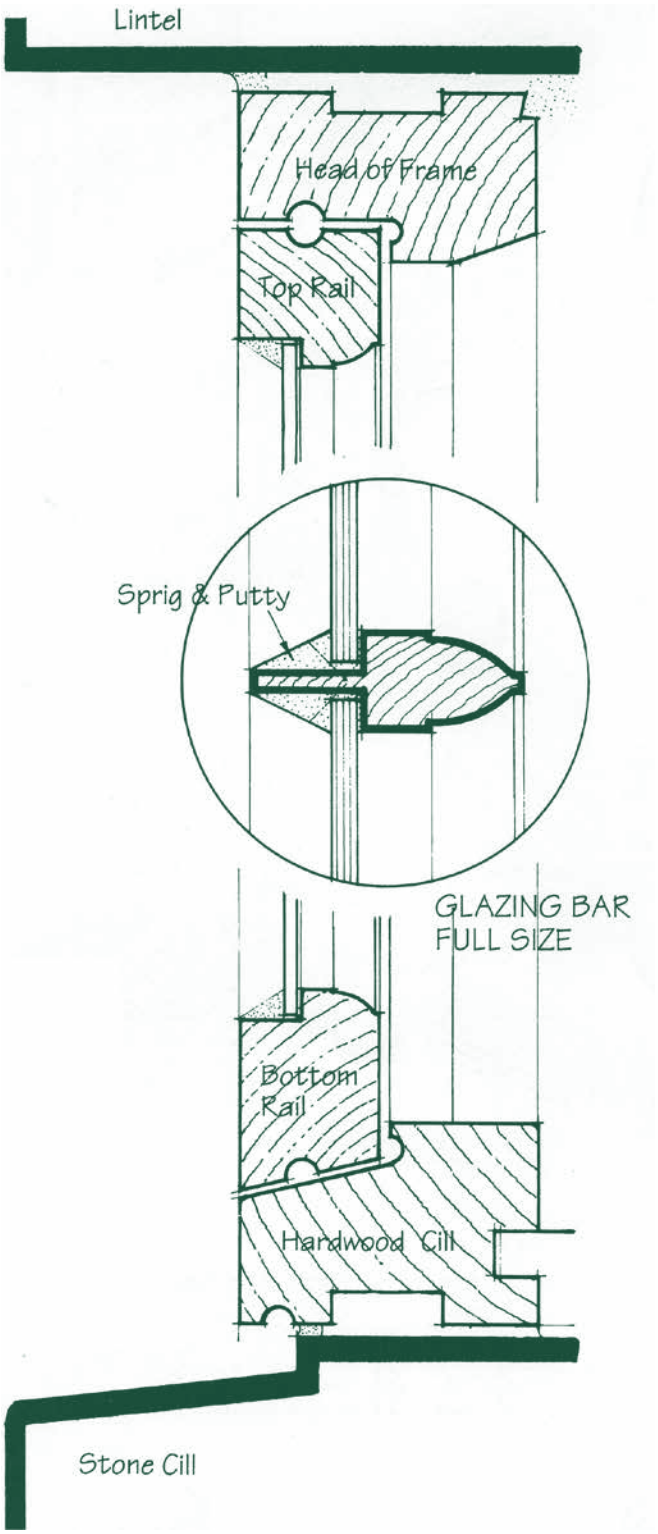
10.2 CASEMENT WINDOWS

The most common traditional window type, found mainly in vernacular houses and cottages from the C17 onwards.

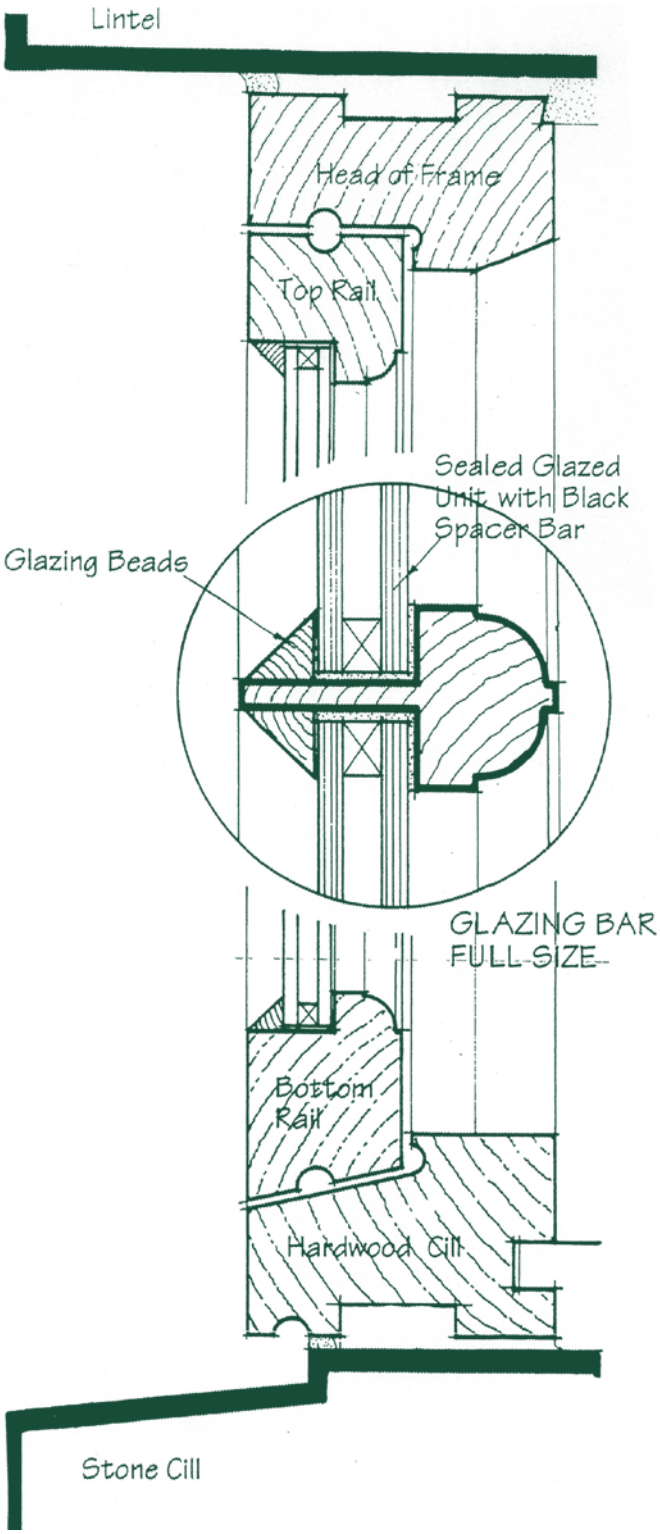
- The casements are flush with the window frames, the joinery in-plane and without raised features or mouldings (i.e. not storm casements);
- The fixed and side-hung opening elements are balanced and symmetrical, the panes of glass of uniform size and proportion within a given window;
- The glazing is usually divided up by glazing bars, typically with smaller panes in earlier windows and larger panes in later windows;
- The panes may be square or, if rectangular, with the rectangles generally upright;
- Judgments about glazing bar pattern should be made on a window-by-window basis, rather than slavishly applying an identical pattern to a range of windows without due regard to variations in the size and proportions of the window openings;
- The frames are recessed into the wall, typically by *c.*75mm or more;
- Lintels may be timber (plain or chamfered) or stone;
- Sills may be timber, stone or tiled.

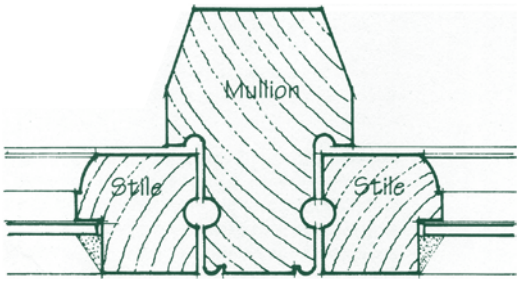
Fig. 1 New traditional flush, side-hung casement window

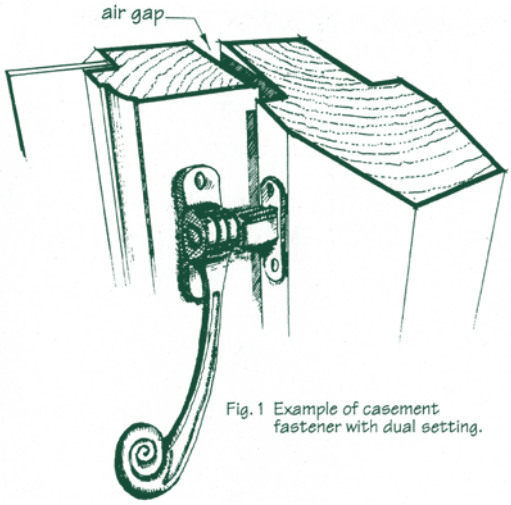
Traditional casement window:
Single-glazing



Traditional casement window:
Double-glazing







A

Fig. 1 Example of casement fastener with dual setting.

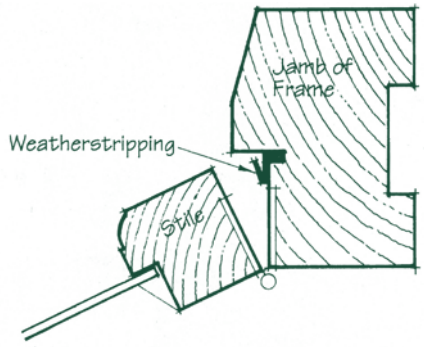
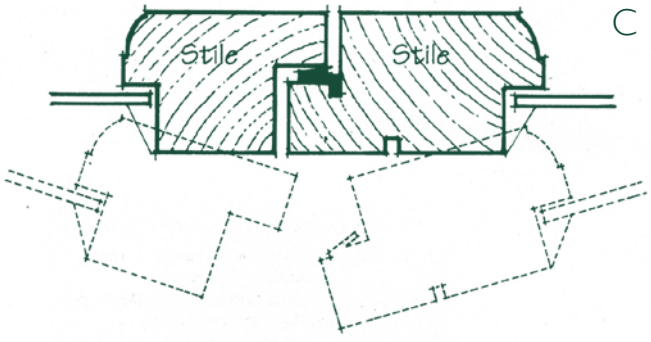


Fig. 2 Example of weatherstripping.



C

Fig. 3 Example of escape window with stile of opening casement incorporating fake mullion.

10.3 SASH WINDOWS

A window type that became widespread in the C18 and C19, the vertical sliding sash is characteristic of higher status houses of the C18, but also of vernacular houses of both the C19 and C20. In parts of some settlements in the District – the historical cores of Woodstock and Chipping Norton, for example – the vertical sliding sash window is the dominant window type.

With vertical sliding sash windows, the casements slide vertically within the frame, counterbalanced by sash weights boxed into the framing of the window.

Advances in glass technology, resulting in larger panes of glass becoming increasingly affordable over time, saw glazing bar patterns alter in the second half of the C19, with fewer and larger panes of glass common from *c.*1850 onwards.

A switch from sash to casement windows, or vice versa, can lead to visually incongruous results, owing to the distinctive proportions of each type of window opening.

Fig. 2 Traditional vertical sliding sash windows

With thanks to Cotswold District Council for allowing use of these drawings.

10.4 STONE MULLION WINDOWS

A distinctive window type found in both vernacular and higher status houses of the C16 and C17 in particular (though also revived in Jacobean style houses of the C19).

The window surround is of stone, and the opening divided up (typically into two or three lights) by vertical stone mullions. Both the surround and the mullions are typically chamfered or ovolo moulded in profile. The window surround may be plain, but over the window is generally a hood mould with lable stops, forming an 'eyebrow' over the window designed to throw rain water clear of the window opening below.

Stone mullion windows are often comparitively more expansive in higher status houses, and occasionally divided horizontally by stone transoms in the case of the largest windows.

The windows themselves are typically metal-framed, the glazing often comprising small panes of glass supported by lead 'cames'.

Fig. 3 Traditional C17 stone mullion windows

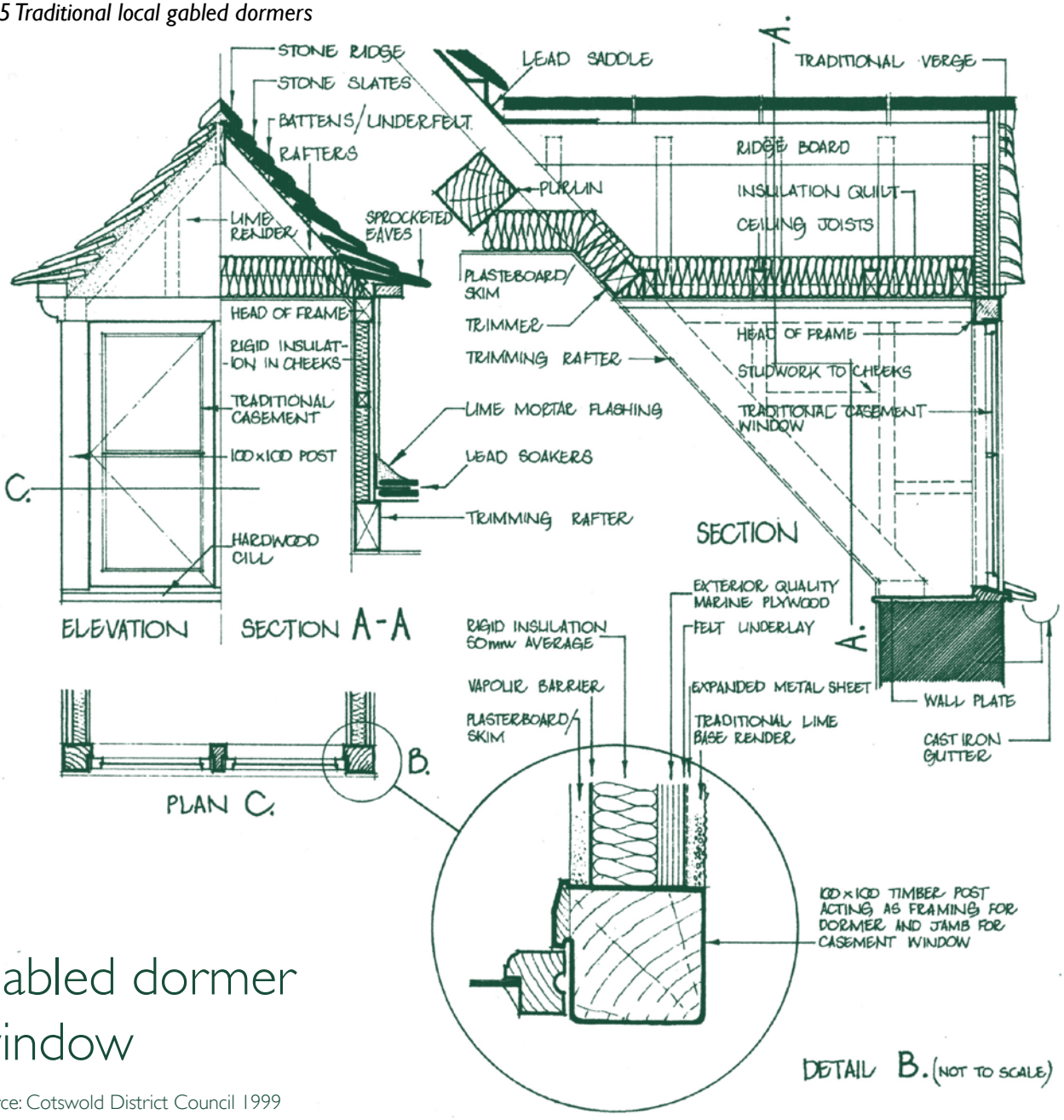
10.5 DORMER WINDOWS

A distinctive and visually prominent window type, lighting attic spaces and giving character and variety to the roof-scapes of both vernacular and higher status houses and cottages, particularly those of the C18 and C19.

Fig. 4 Traditional local gabled and hipped dormers

- Traditional dormer windows are proportionately smaller than the windows in the elevations below;
- They are typically of gabled form, but occasionally have hipped roofs;
- They can occupy one of three locations on the roof: a) Packed up of one of the purlins; b) at the eaves aligned to the internal wall face; c) at the eaves aligned to the external wall face. The most common position is at or below half-way up the roof slope, the ridge well below the main ridge of the house. Dormers flush with the external wall face are generally uncommon in the District;
- The windows themselves are generally flush-fitting, side-hung timber two-light casements (*see CASEMENT WINDOWS above*);
- The window is formed by timber posts acting both as framing for the dormer *and* jambs for the window itself;
- The cheeks and gable (if the window is gabled) are of roughcast render.

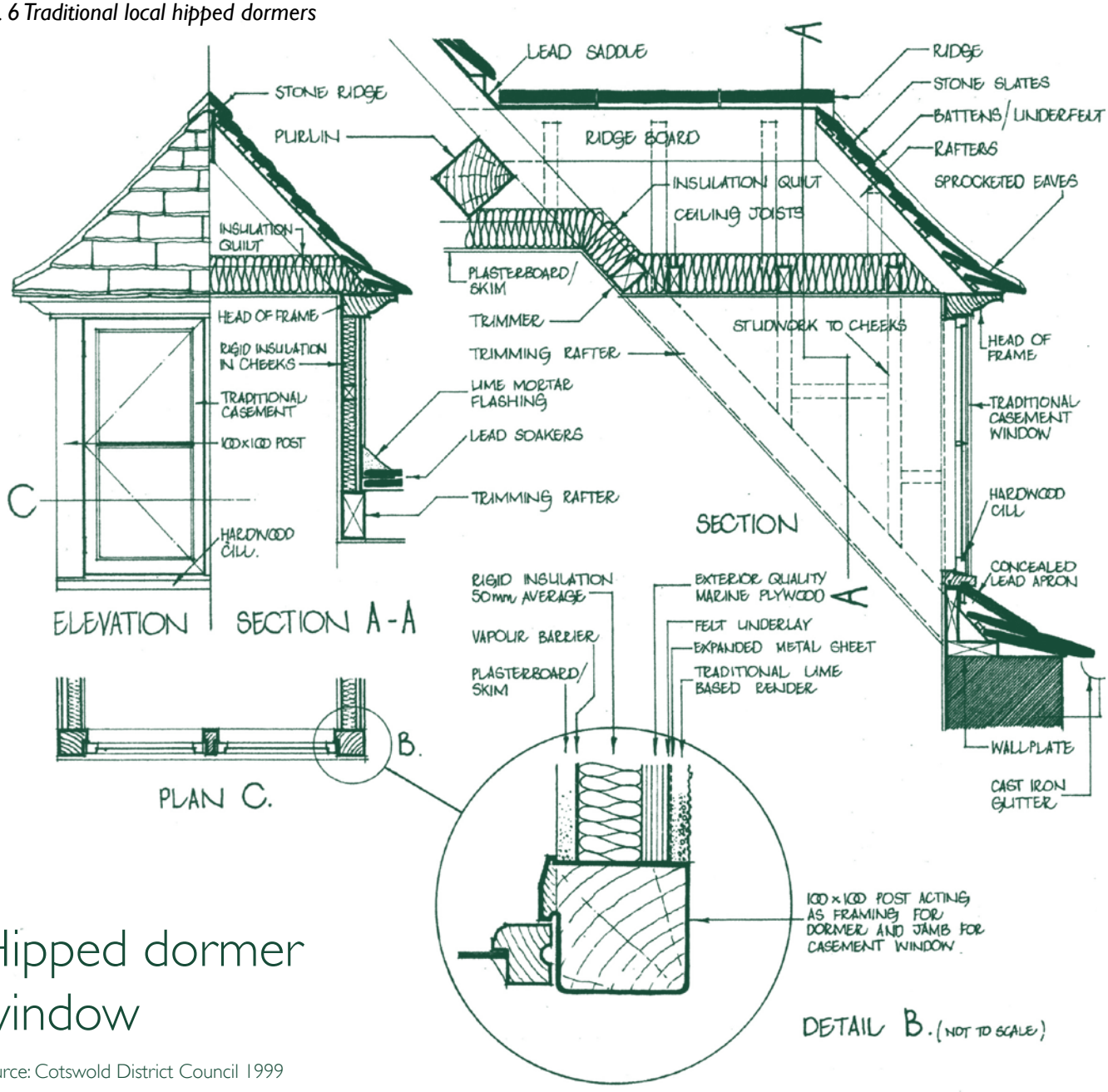
Fig. 5 Traditional local gabled dormers



Gabled dormer window

Source: Cotswold District Council 1999

Fig. 6 Traditional local hipped dormers



Hipped dormer window

Source: Cotswold District Council 1999

10.6 REPAIR AND REPLACEMENT OF WINDOWS

As a general principle, traditional windows in period properties, whether Listed or un-Listed, should be retained, repaired or, if replacement is strictly necessary, replaced on a strictly like-for-like basis, rather than with inappropriate modern windows. A pieced-in repair is often a better (and cheaper) solution than wholesale replacement. Draughty and ill-fitting windows often only need stripping of old paint layers, careful re-hanging and draught-proofing to significantly improve their insulation. Original 'crown' or 'cylinder' glass has a distinctive uneven appearance, and should be retained or replaced on a like-for-like basis, rather than being replaced by flat modern 'float' glass.

Traditional window designs are fundamental to the character of local buildings. When replacement windows are installed these should match the original windows in both design and materials. If the property has a variety of traditional window types it is generally not desirable to make all the windows conform artificially to one type (for example by replacing the sashes with new windows to match the existing casements). A range of window types within the one property is locally characteristic, expressing different chapters in the story both of the building and of the settlement more widely.

Wood is the traditional material for windows. Modern substitutes, such as uPVC and aluminium do not look the same, and have poor environmental consequences. European hardwoods, such as oak and elm, were usually left to weather naturally; while softwoods such as pine (popular in the C19 and C20) were traditionally painted. Timber stains and varnishes are modern introductions, and are not traditional finishes for period joinery.

See also: Design Guide 19: Traditional Paint Colours

10.7 DOUBLE-GLAZING

Modern sealed unit double-glazing can bring noticeable advantages, in terms of heat and sound insulation, to a traditional building. However, it can also have profound implications for the appearance and character of such buildings – whether Listed or not.

As a general principle, where double-glazing is deemed acceptable, the closer the double-glazed window accords visually with a traditional single-glazed window, the better:

- The window should be of timber, the joinery detailed to match traditional window types;
- The double-glazing should be as thin as possible (*c.*12mm or less) ideally with black spacer bars between the sheets of glass;
- The window should have properly detailed glazing bars (with the glazing bars framing up the individual panes of glass, rather than sandwiching unbroken sheets of glazing, or being sandwiched between unbroken sheets of glazing).

Fig. 7 An inappropriate modern uPVC double-glazed window

10.8 LISTED BUILDINGS

Traditional windows are often a critically important feature of Listed Buildings; their significance highlighted in List entries. Any change to the windows in a Listed Building (including changes to materials, design or glazing) will require Listed Building Consent.

As with all proposals relating to Listed Buildings, the essential Planning test will apply: are the proposed changes likely to cause harm to the character or fabric of the Listed Building? If the answer is 'yes', it is highly unlikely that Listed Building Consent will be granted.

Fig. 8 A Palladian sash window in a Listed Building

Double-glazing can often result in unacceptable visual harm to the character and fabric of Listed Buildings, owing to its conspicuous modernity, the visible internal refraction of light within the units, and unduly deep glazing bars. However, it may be deemed acceptable in some limited circumstances. Assessments made in respect of double-glazing in Listed Buildings will be carefully made on a case-by-case basis, the merits of the proposals set against the relative merits of the existing windows.

As a broad guide, the following are examples of scenarios in which it is *unlikely* that Listed Building Consent would be granted for change, including from single- to double-glazing:

- Material changes to windows that are substantially original;
- Material changes to windows belonging to the nineteenth-century or earlier;
- Material changes to appropriately detailed traditional window types, particularly in a primary, street-facing or public elevation.

Again, as a broad guide, the following are examples of scenarios in which it is *possible* that Listed Building Consent might be granted for change in certain circumstances, including from single- to double-glazing:

- Material changes to windows that are recent and of poor quality or untraditional appearance or materials, where a net gain to the character or appearance of the Listed Building can be clearly demonstrated;
- Material changes to windows in later extensions (most notably perhaps rear extensions), which would entail no harm or result in a clear improvement to the character or appearance of the Listed Building.

10.9 DOORS

The traditional material for doors, whether external or internal, is timber. Door types vary in their design, depending on the age, status and type of property. Great care should be taken in the choice both of external doors, which (like windows) can have a significant bearing on the appearance and character of the property; and of internal doors, which often form part of a room's, or an entire house's, decorative scheme and aesthetic.

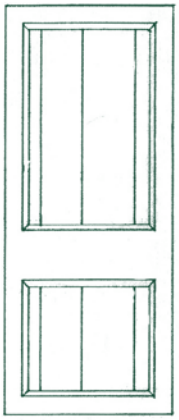
As a general principle, where an original or early door and its frame survives, these should be retained, preferably *in situ,* and refurbished where necessary, rather than being discarded or replaced with a modern alternative. Traditional door fittings and ironmongery should also be retained – or even re-used on replacement doors.

Fig. 9 A traditional panelled entrance door

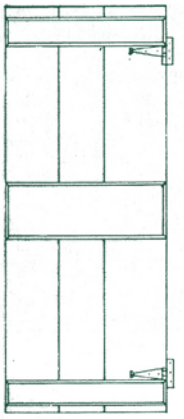
For vernacular houses and cottages of the C17 and the first half of the C18, a solid upright planked or boarded door is characteristic (in modern versions, these sometimes have a small square window in the upper half of the door). For houses and cottages of the later C18 and the C19, solid doors of Georgian or Victorian character, typically with four or six fielded panels are often found. These would generally be unglazed, though perhaps with a window or fanlight above (modern Georgian style doors with integral fanlights have no historical basis and should be avoided).

Similar patterns are found with internal doors, with framed and boarded or planked doors found in earlier vernacular properties, and 4- or 6-panel doors common in C18 and C19 houses.

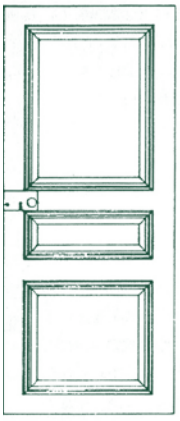
Material changes to doors in Listed Buildings – particularly to original external doors – may need Listed Building Consent.



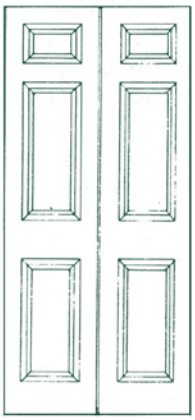
A framed and boarded door with butt-jointed boards nailed to back of frame.



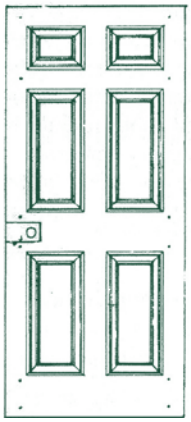
A planked door with ledges only - no bracing or framing.



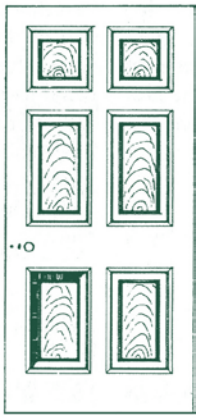
A Queen Anne door with three panels; this one also has bolection mouldings.



Mid-Georgian with central bead to create the impression of larger, double-size door.



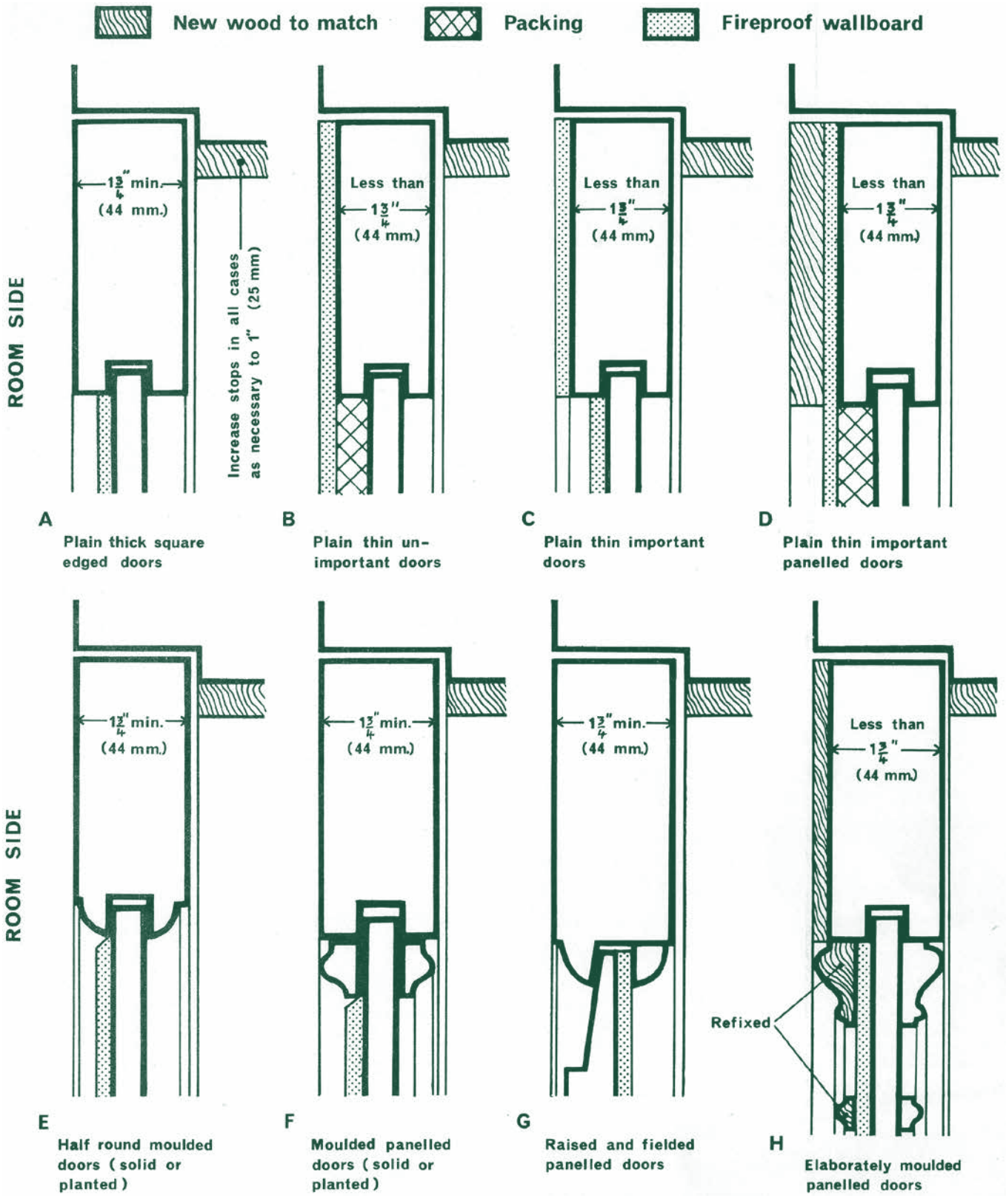
Typical mid-Georgian oak door with raised and fielded panels.



A later Georgian door.

Doors:

Fire protection doors in historic buildings



With thanks to Oxford City Council for allowing use of these drawings.

Design Guide 11

New Development & Context

11.1 NEW DEVELOPMENT AND CONTEXT

This section concentrates on proposals for new development, and in particular on new residential schemes. It sets out the processes and design considerations most likely to lead to a successful outcome; one that realises the aspirations of all those with an interest in the scheme, be they local communities, developers, land owners and planners.

The settlements of West Oxfordshire are covered by policies which describe the circumstances in which new development will be permitted.

Most new development will occur in sustainable locations within the towns and larger villages, where a wider range of facilities and services is already in place. However, smaller villages may also contain sites that can be sustainably developed.

With all development proposals – but especially in the case of residential schemes – it is expected that, in terms of initial and on-going involvement with the District Council, the following three-part process will be followed:

1) An initial pre-application inquiry should first be made in order to establish the relevant planning context, and to establish whether or not the principle of development on the site is acceptable in planning terms (*See also:* 11.2 PRE-APPLICATION ADVICE below);

2) If development on the site is deemed acceptable in principle, the second stage should be a comprehensive analysis of all relevant aspects of the site and context (*See also:* 11.3 UNDERSTANDING THE SITE AND CONTEXT below);

3) Following analysis of the site and context, initial concept plans should be drafted, showing the main aspects of the site and context, and outlining the location and nature of any proposed development (*See also:* 11.4 LARGER DEVELOPMENT PROPOSALS below).

In addition, Strategic Development Areas (SDAs) are covered at 11.15

11.2 PRE-APPLICATION ADVICE

When a potential development site is identified, it is strongly recommended that contact is first made with the planning department, in order to gain a clear understanding of the planning context of the site; both to confirm what consents if any may be needed for the proposal, and to gain an indication of whether or not the principle of development on the site is likely to be supported in planning terms.

Early pre-application engagement with the council's planning department and other relevant stakeholders (such as local residents and statutory consultees) offers the best opportunity both for an outcome that will satisfy all those with an interest in the site, and for the smooth and timely progress of any subsequent planning applications.

Pre-application advice is available either by writing in to the council, or by using the pre-application advice form on the WODC website (LINK). There is a charge for pre-application advice on new houses and major developments. The charge will vary depending on the scale of the proposed development. Details of the charges are available from the planning department (LINK).

The minimum information required for a pre-application enquiry would typically include details of the site (address and site boundary), type/ usage of development (e.g. residential or

commercial), and the extent of development (e.g. potential dimensions and locations of new structures on the site). Plans and elevations need to be drawn to scale, with dimensions shown in metres. NB It is recommended at this stage that a detailed masterplan is not only unnecessary, but inappropriate in the absence of a comprehensive analysis of the site and context.

11.3 UNDERSTANDING THE SITE AND CONTEXT

Where the principle of development is deemed acceptable in planning terms, fundamental to the success of any subsequent proposal will be a comprehensive analysis and understanding of the site and context. Only with this in place can a genuinely meaningful design solution be reached.

Each context, while potentially sharing some characteristics with other sites, represents a unique scenario with its own unique set of characteristics. Because of this, the council will seek to ensure that new development offers bespoke and locally resonant, rather than generic and non-specific, design solutions. The greater the level of analysis and understanding, the more meaningful and successful the design outcome is likely to be.

The nature of an existing site will be determined by a series of physical, economic and social characteristics, including location, size and topography, linkages, changes in land use and activity, and the design and development decisions of successive stakeholders over time. Aspects of the natural and historical environment that form a part of the context of a site will need to be considered with particular care, and appropriately reflected in proposals for the site. All relevant aspects of the site and immediate and wider contexts must be carefully assessed as part of the design process.

A residential development site may vary in scale from an infill plot within an existing settlement, whose development potential is limited to a single new dwelling – up to an extensive new area lying beyond the edge of an existing settlement, and whose development potential might encompass tens or even hundreds of new homes, and include the provision of related infrastructure such as new roads, a neighbourhood centre, shops or a new school.

The level of contextual analysis should always be commensurate with the scale and nature of the site, and of the associated development proposals. However, in all cases, from a small infill development up to a large mixed-use scheme, the same level of care should be taken to ensure that the final design responds meaningfully to its context.

Whatever the scale or nature of a proposed development, particular care should be taken to ensure that local character is respected or strengthened. This need not entail the slavish replication of surrounding housing layouts or house types, for example; however, it could involve drawing on locally distinctive aspects of design – for example, architectural details or materials – and should involve the preservation or enhancement of local character, and the avoidance of 'dropped-in' design solutions with little or no relevance to the unique context of the site.

Where no positive or meaningful precedents exist in terms of local settlement character or design upon which to draw, it is important that new development is nonetheless made as distinctive as possible – in order to create a clear, strong and locally resonant sense of place and identity, and in order to avoid the sense of an 'anywhere' design solution.

11.4 The following represents a breakdown of the major aspects of context, expressed as a series of questions. These should be addressed at the initial stage of any development proposal, and should inform the design process itself, recognising the need for individually tailored design responses. The questions are arranged broadly hierarchically, dealing first with the wider aspects of context and progressing to more detailed aspects of context:

1. What local or national planning policies or guidance are relevant to the site? *See also:* Design Guide 2: PLANNING POLICY

2. Does the site, or an adjoining similar or related site, have any relevant planning history?

3. What types of development, tenure and price range are needed in the area?

4. What considerations might inform the make-up of a given development? (Including, for example, planning policy in respect of affordable housing provision, or an assessment of local need?)

5. Who might be consulted as part of the planning process, and at what stage? (e.g. Parish or Town Councils, the owners of neighbouring properties, or statutory consultees such as Historic England, the County Highways Department or County Archaeologist).

6. Is the site sustainable in terms of accessibility, local facilities, infrastructure and services?

7. Who or what might be affected by the proposals, and in what ways?

8. What are the potential impacts in respect of neighbouring amenity?

9. How accessible, safe and legible are the approaches to the site, entry to the site and the site itself?

10. Are there any access, parking or Highways issues associated with the site?

11. How might the scheme work with the existing grain of the site, and take advantage or account of existing site orientation, topography, landscape features, roads and paths, trees and planting, ponds and watercourses, wildlife habitats, and existing buildings and features?

12. Are any designated heritage assets (such as Listed Buildings, Listed Parkland or Scheduled Monuments) likely to be affected by the proposals, and in what ways? *See also:* Design Guide 7: LISTED BUILDINGS, REGISTERED PARKS & SCHEDULED MONUMENTS

13. Are any non-designated heritage assets (such as Locally Listed Buildings or historical boundary features identified in a Conservation Area Appraisal) likely to be affected by the proposals, and in what ways? *See also:* Design Guide 6: CONSERVATION AREAS; Design Guide 7: LISTED BUILDINGS, REGISTERED PARKS & SCHEDULED MONUMENTS

14. Is any archaeology likely to be affected by the proposals, and in what ways? *See also:* Design Guide 7: LISTED BUILDINGS, REGISTERED PARKS & SCHEDULED MONUMENTS

15. Is the site within (or within the setting of) a Conservation Area, the AONB or other designated area? *See also:* Design Guide 6: CONSERVATION AREAS

16. If the site is within (or within the setting of) a Conservation Area, the AONB or other designated area, will the proposed development preserve or enhance this aspect of the area? *See also:* Design Guide 6: CONSERVATION AREAS

17. What are the key views within, into and out of the site, and how should any proposals take account of these?

18. Are any sensitive views (for example, of an important heritage asset or landscape) likely to be affected by the proposals, and in what ways?

19. Do any opportunities exist to enhance any key or sensitive views, or even to open up or further reveal any previously concealed or compromised views?

20. Are any important or protected habitats, trees, hedgerows, ponds or watercourses likely to be affected by the proposals, and in what ways? *See also:* 13 BIODIVERSITY & PROTECTED SPECIES

21. Are any important or protected species, such as bats or great crested newts, likely to be affected by the proposals, and in what ways? *See also:* Design Guide 13: BIODIVERSITY & PROTECTED SPECIES

22. Are there any drainage or flooding issues associated with the site?

23. Are there any other potential constraints to development on the site? (for example, in relation to safety, crime or hazardous materials).

24. Where constraints exist, what potential is there for their mitigation? *See also:* Design Guide 5: SETTLEMENT TYPE

25. In what ways might the development connect with the existing road, cycle, pedestrian and green network?

26. In what ways might the development connect with existing public transport?

27. What existing characteristics or features (including landform, trees and key buildings) may be worth retaining and incorporating into the proposed new development? *See also:* Design Guide 3: GEOLOGY & LANDSCAPE

28. What is the prevailing local settlement pattern in terms of development density and the arrangement and interrelationship of buildings, building lines, roads, footpaths, public and private space? *See also:* Design Guide 4: LOCAL CHARACTER; Design Guide 5: SETTLEMENT TYPE

29. What is the prevailing local built character in terms of building scale, form, type, style and materials? *See also:* Design Guide 4: LOCAL CHARACTER; Design Guide 8: STONEWORK; Design Guide 9: ROOFS & ROOFING MATERIALS; Design Guide 10: WINDOWS & DOORS

30. What are the prevailing local surface and boundary treatments? *See also:* Design Guide18: STREET SCENE & PUBLIC REALM

31. How can the various components of the development be arranged in order to create a strong and distinctive sense of place?

32. How is car parking on the site going to be addressed to enable sufficient and appropriate parking for homeowners, workers or visitors to the site?

33. How is storage – including outbuildings, garages, bike and bin stores – going to be incorporated into the scheme in such a way that the overall effectiveness and appearance of the scheme is not compromised?

34. How is waste storage and collection in particular going to be addressed?

35. Overall, what steps can be taken to ensure the creation of an attractive, desirable and efficient place to live, with improvements to quality of life, and enhancements to the historic, natural and built environment?

A thorough analysis of the site and context should not only underpin every development proposal, but aspects of the analysis should be submitted as part of any subsequent planning applications, in order to demonstrate a clear understanding of the site and context, and to provide meaningful justification for the final design solution.

Fig. 1 Aerial view of Chipping Norton

This information may take a number of forms, depending on the nature of the development proposal; however, it will typically be included in a Design and Access (D&A) Statement and a Landscape Visual Impact Assessment (LVIA) for example.

Such information, submitted in support of planning applications, should not be compiled towards the end of the application process and retrofitted to a planning application in order merely to satisfy the requirements of the application procedure, or in order to provide post-event justification for the final development proposal.

Design and Access Statements should include a thorough analysis of the site (*see above*), and an accurate dimensional survey of the land and buildings which are the subject of the proposals. The depth of analysis and the extent of the survey should be commensurate with the nature, scale and sensitivity of the proposed development. The analysis should address the suitability of the site to fulfil the brief, and highlight the inherent benefits and constraints of the site.

Further advice on Design and Access Statements can be found on the Government Planning Portal at: http://www.legislation.gov.uk/uksi/2013/1238/contents/made

National guidance encourages applicants to carry out professional consultations and engage in community involvement at the earliest possible stage. Keep a record of the groups and people you have consulted with, and note the ways in which these consultations have informed subsequent development decisions.

Early and open consultation – not only with the planning department and any statutory consultees, but with others who may be affected by development proposals – provides the best opportunity for the early identification of potential issues, and a more efficient pre-application and application process.

11.5 LARGER DEVELOPMENT PROPOSALS

The overarching ambition when designing larger schemes should always be for high quality, distinctive and meaningful place making; for the creation of highly desirable places to live, with all levels of design, from master plan through parking and bin provision to building detail, attended to with equal care.

Poor quality design of even minor aspects of a scheme can disproportionately undermine the appearance and success of the scheme as a whole.

Design is a highly skilled process, and there is no substitute for the services of an architect or other appropriately qualified designer – preferably with knowledge and experience of the District.

11.6 CHARACTER

For any development to be successful, it is fundamentally important that it has a strong and distinctive character. Pre-existing character not only resides in the built environment, but in a variety of aspects and features both natural and manmade; some conspicuous and others more subtle. Natural aspects and features contributing to local character may include topography, trees, hedgerows and watercourses. Manmade aspects and features may include tracks, paths and boundary treatments, such as walls and fencing. Careful attention to local hedgerow species or patterns of dry stone walling, for example, has the potential greatly to enhance the distinctiveness and local resonance of a new development.

In the case of a site within or immediately adjoining a settlement with a distinctive established character, it may be most appropriate to develop a scheme that echoes and builds sympathetically upon distinctive aspects and features of that settlement, in order to create a place whose character meaningfully relates to that of its context.

In the case of edge-of-settlement or more removed sites, however, or where the adjoining settlement does not have a distinctive established character, there may be greater scope for the creation of a place with a new and strongly defined character and identity of its own.

Larger developments fundamentally differ from smaller schemes in that they offer far greater potential for the creation of distinctive and characterful new places – rather than simply additions to existing places. Because of this the onus on those responsible for their creation is all the greater.

With larger schemes, it may be appropriate to subdivide the site area into a number of distinctive character areas; the areas differentiated for example by changes in house and street type, and scale and density. As well as introducing variety and avoiding unrelieved expanses of identical development over a large area, this can also greatly enhance the scheme's legibility and ease of navigation.

In the case of locally inspired schemes, character should not merely be understood in terms of local house types and materials; but also, for example, in terms of locally distinctive settlement and street patterns, public and private open space, landscape, surface and boundary treatments.

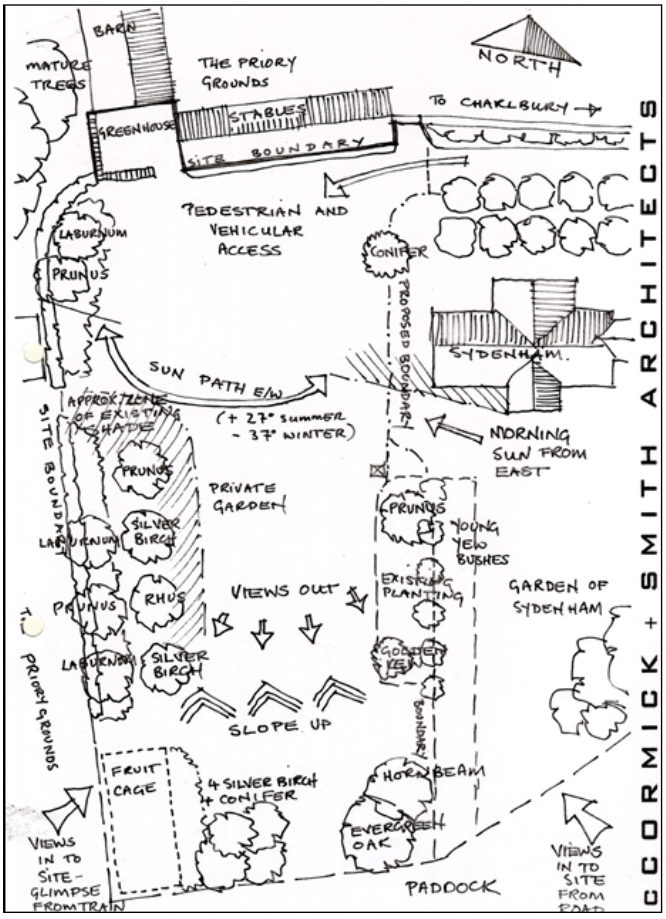


Fig. 2 Initial site analysis sketch

The following sections set out what are considered to be fundamental aspects of larger development proposals. It is expected that each of these will be carefully addressed as part of the design process.

11.7 EXISTING SITE AND CONTEXT

Following analysis of the site, early consideration should be given to what existing aspects or features of the site might be retained, enhanced, exploited or better revealed, and potentially incorporated into subsequent proposals for the site. These might include any of the following:

- Natural features, such as site orientation, topography, trees and vegetation, watercourses and ponds, and wildlife habitats;
- Routes and linkages, such as roads, tracks and footpaths;
- Built features, such as houses, outbuildings and walls;
- Heritage features, such as Listed or Locally Listed structures, or Scheduled Monuments (SMs);
- Views within, into and out of the site.

Older existing buildings on the site should be carefully assessed for their development/ conversion potential; as these can provide significant or defining focal point structures for the scheme. Non-designated heritage assets which make a positive contribution to the site, such as Locally Listed Buildings or non-designated period outbuildings, should be retained and re-used where viable, rather than being demolished to make way for new development.

Careful consideration should be given to the treatment of those parts of the site which adjoin neighbouring areas of development and landscape. For adjoining areas of existing development, this will entail having regard to the height, layout, building line and form of housing immediately bordering the site. Views of focal points beyond the site, such as existing landmark buildings or mature trees, could be framed or otherwise incorporated, or new views out of the site created.

11.8 CONNECTIONS AND STREETS

Larger schemes should be carefully integrated into their surroundings by reinforcing existing road, cycle and pedestrian routes; and by creating new ones – with particular attention paid to permeability and the access points onto the site.

Care should be taken not only to facilitate access onto and through the site, but to create clear desire lines to shops, pubs and public open spaces.

Connections and streets should be attractive, well lit, direct, legible and easy to navigate, well overlooked and safe, both for those living on the site and those passing through the development to get somewhere else. Streets should encourage low vehicle speeds; they should be pedestrian-, cycle- and child-friendly, and offer the potential for shared (rather than car-dominated) spaces with plenty of natural supervision.

Good buildings and strong landscaping should be used to create and enclose streets and spaces, with streets informed by the position of buildings and 'plumbed in' afterwards – rather than buildings being bolted onto the framework formed by an arbitrary or predetermined street layout.

A pattern of traditional road types/ spaces should be used to create a clear hierarchy of streets and to differentiate areas of housing within a scheme.

The careful use of street trees can have a dramatic effect on the character and appearance of streets and settlements (particularly as the trees mature). As well as making places distinctive, trees also offer further opportunities to differentiate areas within the same scheme, and to reinforce particular street and public space types. However, root protection (in respect of buried services, for example) will need to be considered, as will the on-going maintenance costs of all new planting.

11.9 HOUSING AND BUILDINGS

Residential developments should have a mix of housing types and tenures that suit local requirements. In each case, the scheme's housing mix must be justified with regard to planning policy, local context and viability. There is a requirement that with all housing developments of 100 or more dwellings, 5% of the residential plots will be serviced and made available for custom and self-build housing.

Fig. 3 Strong and distinctive urban landmark building

In order to ensure richness of character and identity, and a strong and meaningful sense of place, particular attention should be paid to the mix of property types and residential density. Clear and imaginative variations in building typology, plot size and building position in relation to the street, for example, can be used to give interest, variety and legibility to a scheme.

Strong and characterful landmark buildings can be used not only to form focal points within schemes, and to aid navigation, but have the potential to play a defining role in the character and identity of places and settlements.

Great care should be taken to ensure that homes offer something to the street, with particular attention paid to detail, craftsmanship and building quality, and the space between front doors and the pavement.

The fronts of buildings, including front doors and habitable rooms, should face the street. Buildings should turn corners well, so that both elevations seen from the street have windows in them, rather than offering blank walls and gables to the street.

11.10 SERVICES AND FACILITIES

In the case of larger developments, it is important that careful consideration is given to whether there are sufficient services and facilities in the local area to support that development; and if not, how this can best be addressed. Services and facilites may include shops, schools and workplaces, pubs and cafés, community centres and play areas.

Where sufficient services and facilities are located close by, care should be taken to ensure that these are easily accessible by car, cycle and on foot. Where new local centres are needed, these should be easily accessible to the greatest number of residents, and should form vibrant, well-designed and distinctive places within the development.

Access to public transport should be integral to larger schemes, with care taken to ensure that the number of homes that are close to good, high frequency public transport routes is maximised.

11.11 LANDSCAPE AND OPEN SPACE

Private and public spaces should be clearly defined with walls, railings or planting, with sufficient budget allocated to ensure a high quality boundary, surface and landscaping scheme can be delivered, and then funded and managed on an on-going basis. This aspect of any new development should not be factored in as an afterthought, but should be integral to the overall design concept.

Careful consideration should be given to what types of open space might be appropriate, where these might be located, how they might be accessed, how spaces can be multi-functional and serve a wide age range, and how they might contribute towards enhancing biodiversity and the overall network of Green Infrastructure.

Engagement with local communities, being site specific and imaginative – for example in respect of retained wildlife habitats or play areas – increases the likelihood of a distinctive scheme that will be embraced by those living in and around the site.

Careful thought should be given to the size and shape of outside amenity and garden space. Rear gardens should be at least as large as the ground floor footprint of the dwelling, they should be accessible other than solely through the home, and benefit from passive supervision.

SUDS schemes, swales and other drainage strategies have the potential to bring significant landscape, amenity and wildlife enhancements to a scheme, and should be considered early in the design process, and carefully and imaginatively integrated into development proposals.

11.12 BIODIVERSITY AND GREEN INFRASTRUCTURE (GI)

With any new development, negative impacts on biodiversity should be minimised and gains in biodiversity sought where possible. Urban green space allows species to move around within, and between, settlements and the countryside, as well as offering a tool for managing environmental risks such as flooding, and contributing to public health and well-being, recreation and amenity.

See also:http://www.naturalengland.org.uk/Images/GI-signposting_tcm6-11961.pdf (Natural England GI signposting document) and: http://www.tcpa.org.uk/data/files/TCPA_TWT_GI-Biodiversity-Guide.pdf (good practice guidance for green infrastructure and biodiversity)

See also: Design Guide 13: BIODIVERSITY AND PROTECTED SPECIES

11.13 ENVIRONMENTAL IMPACT ASSESSMENTS (EIAs)

For some types of development (typically larger developments likely to have significant effects on the environment, or development within the AONB) an Environmental Impact Assessment (EIA) may be required. EIAs are intended to protect the environment by providing the local planning authority with a full understanding of the likely effects on the environment of a given development proposal, and to ensure the public are given meaningful opportunities to participate in the decision making process.

Whether an EIA is required (together with the scope of the EIA) will be determined at the pre-application stage, and will depend on whether the proposed development falls within the EIA Regulations, and is likely to have a significant effect on the environment.

See also: http://planningguidance.planningportal.gov.uk/blog/guidance/environmental-impact-assessment/ (Planning Practice Guidance on EIAs)

11.14 CAR PARKING AND STORAGE

Resident and visitor car parking and garaging should be sufficient (including taking into account local public transport provision and car ownership trends), well integrated so that it does not dominate the street, and located close to people's homes. The overall aspiration should generally be for carefully designed on-plot parking.

Where streets are designed to incorporate on-street parking, sufficient trees, planting and front garden space should be provided in order to balance the impact of parked cars, and to reinforce the spatial enclosure of the street.

With the exception of apartment typologies, rear parking courtyards are generally unacceptable. In larger developments, a range of parking solutions should be provided appropriate to the context and types of housing found across the scheme.

Dedicated bin and recycling storage should be fully integrated, out of sight and easily and conveniently accessible to homeowners, in order to ensure that these items are less likely to be left on the street. Distances between storage areas and collection points should be minimised.

Access to cycle and other outside storage (including garages and outbuildings) should be convenient and secure.

11.15 STRATEGIC DEVELOPMENT AREAS (SDAs)

Further to the above, the following paragraphs set out additional expectations in respect of Strategic Development Areas (SDAs).

In order to guide consultations with applicants through both the pre-application and application stages for SDAs, the Council will encourage early pre-application discussions and the use of planning performance agreements.

Planning applications should be supported in the usual way, through the submission of appropriate documentation – including, for example, parameter plans, development specifications, design and access statements, transport assessments, environmental statements, flood risk assessments and drainage strategies, sustainability assessments and waste/ energy strategies.

Outline planning applications should be supported with clear evidence of strategic master planning, demonstrating how the application contributes to and delivers the key principles of the relevant SDA Policy, indicating the broad location of land uses, primary roads, surface water attenuation ponds, key footpath/ cycle links, open space, management proposals for public realm, infrastructure and community facilities and broad phasing.

Parameter plans should cover land use, access and movement, landscape and open space, density, maximum building heights and urban design framework. The Design and Access Statements should illustrate design principles and parameters that demonstrate how quality of design can be achieved, and should provide the basis for the scope and nature of future design control through subsequent Design Codes and Reserved Matters applications.

Applicants will be expected to demonstrate how they have incorporated high standards of design throughout, and how these will be carried through to completion. If the applicant is not the developer, the applicant will be expected to set out what steps will be taken to ensure that high standards are carried forward by subsequent developers.

11.16 DESIGN CODES

Following the approval of outline applications, it may be necessary for design codes to be submitted and approved in accordance with the principles set out in the relevant SDA policy and the proposed parameters in the outline planning applications.

The Design Code should systematically break down elements that contribute to the creation of high quality place making, starting with the most strategic elements. The strategic elements of the code will expand upon, and knit together, the themes established in the parameter plans submitted as part of the outline application.

The extent of the detailed coding elements will be established through negotiations between the Council and developers and their representatives, but should seek to address the following elements:

The strategic issues should cover:

- Block structure including types and principles and conceptual approach to townscape and roofscape design
- Street network and hierarchy
- Detailed design of primary spine roads, including adoptable street materials
- Conceptual landscape plans for open space, specifically addressing strategy for development edges
- Open space network, including approach to SUDS, youth/ play space provision and links to existing networks

The detailed neighbourhood or geographical phase design codes should cover:

- Character and sub area characters
- Key spaces and frontages
- Street types and street materials
- Building types and uses, building heights
- Boundary treatments
- Parking strategy (including cycle provision)
- Sustainable construction (approach and principles)
- Feature spaces (including public realm and landscape)
- Building materials and palette
- Edge principles and relationships between green infrastructure and built form

Design Guide 12

Sustainable Building Design

12.1 SUSTAINABLE BUILDING DESIGN

Although the earth's climate is in a state of continuous natural change, most scientists agree that the speed and intensity of this change is largely due to human activity, and in particular the heavy reliance on coal, oil and natural gas. There are two main problems with the use of fossil fuels. Firstly, by-products of the burning of these fuels, such as carbon dioxide, concentrate in the atmosphere and lead to global warming. Secondly, fossil fuels represent a finite and fast-diminishing natural resource.

The solution to both of these problems is to reduce the reliance on fossil fuels; both by being more energy efficient, and by finding alternative and renewable sources of energy. Although climate change is a global problem, there is a widespread recognition that action taken at the local level has important consequences for global well-being.

Sustainable building design will help to reduce greenhouse gas emissions and enable adaptation to climate change. It is an important step towards Sustainable Development – a statutory duty for local authorities, enshrined within the NPPF. Revisions to UK Building Regulations Part L (energy efficiency) require a 20% improvement in current energy standards in buildings: this has profound implications for design.

Sustainable building design principles should be considered at the beginning of the design process, as some features – such as Passive Solar Design – cannot be retro-fitted. This chapter sets out sustainable building design considerations for the following elements of the design process; site and layout, buildings and building materials.

12.2 A sustainable building is one that:

- minimises the use of scarce resources such as certain building materials, fossil fuels and water;
- is economic to run over its whole life cycle and fits well with the needs of the local community;
- is energy and carbon efficient, designed to minimise energy consumption, with effective insulation, heating and cooling systems and appliances;
- values and sustains or improves existing site character, topography, vegetation, watercourses and built features;
- minimises the need for unsustainable transport and encourages travel by cycle or on foot;
- minimises the production and costs of waste disposal, and which looks to re-use on-site materials such as waste soil;
- minimises flooding and pollution;
- is designed to make recycling and composting easy for its occupants.

Fig. 1 Modern eco-housing in Bladon

Location and setting

Traditional buildings in the District were generally located in sheltered rather than exposed locations and were thus easier to heat. They were close to primary resources such as water, with easy access to the work of the occupants.

Development in a sustainable location both benefits from and supports existing local services and infrastructure, and is thus less reliant on fossil fuels than is development remote from local services.

The Local Plan embodies the principles of sustainable development by locating most new development in the largest settlements in the District, where the need for travel to local services and infrastructure is minimised. Within development areas, layout design should be as cycle- and pedestrian-friendly as possible, to further encourage reduced reliance on travel by car.

A sustainable development approach is one which values and sustains or improves the character of the site. Existing features, such as topography, vegetation, watercourses and built structure should be retained wherever possible. Inert materials which arise from the development should, in the first instance, be retained and re-used on the site, not disposed of elsewhere.

Energy saving layout design

The siting and orientation of buildings relative to the existing landscape (together with the treatment of that landscape) can save up to 30% in cooling and heating costs. The amount of direct sun heating up surfaces can be reduced, and reflected light prevented from carrying heat into the building from the ground or other surfaces. It can also reduce wind velocity and slow air leakage from the house.

To maximise solar gain, the majority of housing within a layout would need to face within at least 45 degrees of south, and preferably within 30 degrees. Overshadowing by neighbouring buildings and trees should reduce the loss of useful total solar gain by no more than 5% (through the spacing and location of dwellings rather than the loss of existing trees). Maximising solar gain at the layout design stage also maximises the potential for solar power generation (which may be added to the scheme at a later date). In general it is both easiest and most cost-effective to incorporate sustainable energy strategies – such as Combined Heat and Power (CHP) and Geothermal Energy – at the design layout stage.

During summer months, shade created by trees, together with the effect of grass and shrubs, will reduce air temperatures adjoining the house, and provide evaporative cooling. As people may spend more time outside, natural shade becomes more important. Deciduous trees on the south side of a property can be used to admit the winter sun; evergreen plantings on the north side can slow winter winds. Planted channels can funnel cooling summer breezes into a property.

Careful evaluation of existing vegetation will identify those species that can contribute to an energy conserving landscape. Established plants should be retained wherever possible as they will require less effort to maintain, and will generally be larger and better established than new plantings.

See below for detailed information on Passive Solar Design (PSD).

Sustainable landscapes and open space

Increasing average temperatures will lead to a greater demand for outdoor spaces (both public and private) and existing spaces will be used more intensively with lifestyle changes. Although predicting such changes is difficult, the experience of those living in warmer climates can give us some clues.

As outdoor spaces are used more, there will be a need for more hard wearing natural surfaces. Landscaping that mimics Mediterranean marquis or lowland heath land for example can be hard wearing and appropriate to an urban environment. Alternatives to traditional lawns may be needed for hotter, drier summers. Gravelled or paved areas can be used as an alternative to lawn (as long as a high proportion of permeable surfaces – to avoid aggravating soil erosion and run-off – can be provided). However, it should be remembered that lawns are comparatively valuable in biodiversity terms.

Changes in temperature and water balance can have significant implications for soil, and require the careful planning of green spaces. For example, increased water storage can reduce flooding and subsidence. Other strategies, such as the increased vegetation required for Sustainable Drainage Systems (SUDS) must not be at the expense of soil condition (by for example allowing subsidence).

Adapting to climate change, a landscape checklist:

- Provide deciduous vegetation to give summer shade, taking care that the foundations of nearby buildings are sufficient to prevent movement;
- Introduce soil management strategies to protect against flooding and subsidence;
- Water in water features should be recycled or re-used, for example for watering vegetation rather than putting into drains;
- Solar energy can be used to power pumps to re-circulate water in water features;
- Provide wormeries for compostable waste (although this is only applicable at the domestic scale). Large scale composters could be considered for business/ industrial operations;
- Incorporate an appropriate range of public and private outdoor spaces in developments, with appropriate shade, vegetation and water features;
- Ensure the design of surfaces takes account of increased use, permeability and the potential for causing dust and soil erosion;
- Consider gravelled or paved areas rather than lawns (so long as a high proportion of permeable surface can be provided);
- Ensure the selection of vegetation takes account of future climate change;
- Provide rainwater collection/ grey-water recycling for gardens and landscaped areas.

Biodiversity

Many local plant and animal communities enjoy statutory protection and those found on or adjacent to the site must be conserved at all stages of construction. Planning Conditions, Statute, and Construction Codes and Standards must be adhered to at all times, and damage to trees and contamination or pollution from oil or chemicals must not take place. There is a need not only to conserve biodiversity, but to seek net gains in biodiversity as a result of new development.

See WODG 13: BIODIVERSITY AND PROTECTED SPECIES

Surface water and Sustainable Drainage Systems (SUDS)

SUDS (sustainable drainage systems) mimic natural drainage patterns and can ease surface water run-off (so encouraging the recharge of groundwater) and can help to avoid soil erosion. SUDS represent a drainage strategy that should be considered on all sites. SUDS include rainwater harvesting, green roofs and water butts; filter strips and swales (vegetated landscape features with smooth surfaces and a gentle downhill gradient to drain water evenly off impermeable surfaces).

SUDS can also provide significant amenity and wildlife enhancements, as well as pollutant trapping and degradation processes (this secondary use must not compromise the system's primary role as a drainage system). Soakaways and permeable and porous pavements avoid aggravating run-off and allow water to drain directly into the ground (though the primary purpose is the conveyance of water away from buildings). In practice, all pavements, driveways, footpaths, car parking areas and access roads could have permeable surfaces.

In 2015 the government published guidance on non-statutory technical standards for SUDS. This can be found at: www.gov.uk/government/publications/sustainable-drainage-systems-non-statutory-technical-standards

Sustainable energy

In the UK five sustainable technologies in particular offer viable alternative means of energy production: Solar, Wind, Ground Source Heat Pumps (GSHP), Biomass and Combined Heat and Power (*CHP*). The scale and density of a development can have a huge impact on the viability of sustainable energy schemes (for example, CHP schemes are far more viable at higher densities, while biomass systems can be better suited to rural locations). Renewable energy measures should not be taken at the expense of landscape character or the quality of the built environment.

Wind energy

The UK has 40% of Europe's total wind energy, but this is largely untapped and only 0.5% of our electricity requirements are currently generated by wind power. Wind-flow must first be assessed to gauge viability. For planning permission, visual impact – across West Oxfordshire generally, but in the Cotswolds AONB specifically – will form a key environmental consideration.

Ground Source Heat Pumps (GSHP)

Heat pumps transfer heat from the ground into a building (via buried pipework) to provide space heating and, in some cases, to pre-heat domestic hot water. For every unit of electricity used to pump the heat, 3-4 units of heat are produced. Air source and water source heat pumps are also available.

Biomass energy

Biomass is organic matter of recent origin. The CO2 released when energy is generated from it is balanced by that absorbed during the fuel's production. The process is thus carbon-neutral. Biomass is also called 'bio energy' or 'bio fuels'. Bio fuels are produced either directly from plants or indirectly from industrial, commercial, domestic or agricultural products.

Waste and recycling

The Council operates a waste collection service that includes the provision of bins for general waste, food waste and containers for glass, paper, card, plastic and tin. Collection is from the kerbside, but also from communal bin stores or other specified collection points. Waste and recycling provision has profound implications for site layout, and must be considered at an early stage in the design process.

Wormeries for compostable waste can be provided (although this is only applicable at the domestic scale). Large scale composters could be considered for business/ industrial operations. Rainwater collection/ grey water recycling systems can be used for watering gardens and landscaped areas.

Combined Heat and Power (CHP)

With CHP one of the by-products of power generation – namely heat – is recycled for a variety of purposes, including community heating and space heating. Because it uses what is typically waste heat in order to heat buildings it can increase fuel efficiency to 70-90% (compared to the 30-50% with conventional generation). CHP is especially suited to larger community heating schemes.

Building aspect

Building form, room arrangements and the location of doors and windows in relation to the path of the sun and prevailing winds can have a significant impact on the resources needed for heat and light. For example, a building with its living rooms on the warmer south, south-east or south-west sides could exploit opportunities for large window areas on these walls to maximise natural lighting. By contrast, room functions on the cold and shady north side could take advantage of these conditions for cool storage, services, or to draw in cool air. Window sizes can be smaller on the cold side to reduce heat loss.

The layout of new development should balance the benefits of minimising heat loss in winter with the risk of excessive solar gain during the summer. The site layout should take advantage of landform and landscape for shelter to minimise heat losses in winter and provide adequate shade in summer. For example, deciduous trees help minimise heat loss but also provide shading in summer but lower sun angles permit solar gains in winter.

Passive Solar Design

Passive Solar Design (PSD) makes use of the sun's energy for heating and cooling living spaces. Further information on PSD can be found at: http://www.greenbuilder.com/sourcebook/PassiveSol.html.

In the case of Passive Solar Heating, the goal is to capture the sun's heat within the building's elements and release that heat during periods when the sun is not shining. The principal features of Passive Solar Heating are south facing windows and Thermal Mass.

The building envelope should be designed to benefit from passive heat in winter, but reduce heat gain in the summer. Summer heat gains can be reduced by lighter or more thermally reflective surfaces, especially roofs. Passive Solar Cooling makes use of natural ventilation, and typically employs such elements as openable ventilation windows, wing walls and thermal chimneys.

Openable windows can aid natural ventilation when located in the path of prevailing summer breezes. Wing walls are vertical exterior wall partitions placed perpendicular to adjoining windows, which enhance ventilation through windows. Thermal chimneys create or reinforce the effect of hot air rising, in order to draw air out of buildings and induce air movement for cooling purposes.

Thermal capacity and insulation

Thermal Mass refers to materials, such as masonry and water, which can store heat energy and be used to prevent rapid temperature fluctuations. Traditional local stone buildings have thick walls of substantial mass and high thermal capacity: they heat up and cool down slowly, insulating the residents from rapid thermal variations. Modern buildings, by contrast, have thin walls and low thermal capacity. To address this, Buildings Regulations require high levels of thermal insulation.

The structure should have the optimum Thermal Mass for a comfortable internal environment with the least use of energy. For high occupancy uses (e.g. houses and hospitals) this usually means high thermal mass. Many types of insulation are made using processes which produce toxic waste and gasses, or are manufactured in other parts of the world, leading to heavy energy use in transportation. It is worth considering local natural insulation, such as wool batts, which are produced from the by-products of textile production.

Solar panels

Despite the UK's cool climate, solar energy still represents a highly viable means of sustainable energy production. The sun's energy can be harnessed in two main ways: by using photovoltaic (PV) panels, which utilise light to produce electricity; or by using solar powered heating panels, which directly heat water. Solar technology is well-established, with a wide range of products on the market. Panels can be linked in almost inexhaustible configurations, and for optimum performance should be located on south-facing, unshaded roof aspects.

Convection ventilation

Natural processes can be exploited to provide free ventilation. Since hot air rises, cool fresh air may be drawn into a building at low level on the shady side. When heated by solar gain from south facing windows air will be drawn upwards and vented naturally at high level, helping to draw in more fresh air at low level. Atria, conservatories and porches can be used to enable natural ventilation and the conservation of heat.

Higher temperatures may lead to pressure for mechanical ventilation and cooling to be added to buildings in the future, even if not installed initially. Developers should consider using alternative methods to traditional air conditioning so that comfortable temperatures can be maintained while minimising additional greenhouse gas emissions. Larger floor-to-ceiling heights will generally help in allowing later addition of any cooling mechanisms. Higher ceilings trap hot air above the heads of people using the room, making the room feel cooler.

Re-use or conversion of existing buildings

The re-use or conversion of existing buildings takes advantage of the high levels of embodied energy in their fabric. This would be lost in demolition and redevelopment; processes which themselves would use even more energy.

It was thought until recently that the embodied energy content of a building was small compared to the energy used in operating the building over its life. Most effort was therefore put into reducing operating energy by improving the energy efficiency of the building envelope. Research has shown, however, that this is not always the case. Embodied energy can be the equivalent of many years of operational energy. Consequently, buildings should be designed for long life and adaptability, using durable, low maintenance and easily separable materials. Avoiding an overly large house will also save materials.

Timber

The UK is currently the largest importer of illegal tropical timber in Europe, with approximately 60% of all UK tropical timber imports coming from illicit logging operations in some of the world's most important rainforests.

Due to an increase in the design of 'green' buildings, and the promotion of timber as a renewable resource, the use of timber within the construction industry is likely to grow. As a result of this increase in demand there is also an increased likelihood of illegal logging, poor forest management and deforestation.

Timber used in construction should be drawn from sustainable sources. The CIOB (Chartered Institute of Building) 'Procuring Legal and Sustainable Timber' guide explains the procedures that need to be adopted by construction organisations to achieve these environmental objectives: www.constructionbooksdirect.com.

Local materials

The use of locally-produced sustainable materials reduces energy use in transport, and promotes local enterprise and employment. By contrast, many cheap products are manufactured in other parts of the world, and because of large energy inputs in transport, cannot be seen as sustainable.

Embodied energy is a method of factoring in all the hidden energy costs of producing a material. This gives a truer cost of the building material. Some general estimates of embodied energy for various materials (the higher the number the higher the environmental 'cost'):

Material	Embodied Energy
Timber	1
Brick	2
Glass	3
Steel	8
Plastic	30
Aluminium	80

Manufactured materials and pollution

Many modern building materials and products are manufactured using very high energy inputs and processes which produce toxic waste and gasses.

PVC is excluded from the EU's and WWF-UK's purchasing policies because it contains phthalates and releases highly toxic chemicals when incinerated. PVC is not a sustainable material and will degrade with exposure to ultraviolet light.

As a general rule, the sustainable designer should avoid materials which emit formaldehyde, organic solvents, VOCs and chloroflourocarbons, which contribute to the recent 'sick' buildings phenomenon.

Most finishes and adhesives contain VOCs which 'outgas' and adversely affect indoor air quality. Lower VOC and non-VOC products are available.

Low biocide paints avoid the fungicides and mildewcides typically added to latex paints to extend their shelf life. These additives are potentially harmful to indoor air quality. Natural plant/mineral-based finishes and adhesives are available from several companies (such products can cost more and can spoil if not used quickly). Some very energy-intensive finishes, such as paints, often have high wastage levels.

Re-use of materials

Efforts should always be made, where possible, to re-use and refurbish rather than demolish or replace. The re-use or recycling of manufactured building materials, such as brick, timber or slate, is highly sustainable because it reduces the strain on natural resources and eliminates the need for new energy investment.

Materials that are local, and that have a high recycled content and low embodied energy should be favoured, and preference given to materials manufactured using renewable energy sources. Standard sizes should be specified; the use of energy-intensive materials as fillers should be avoided; off-cuts, construction waste and materials arising from demolition should be re-used or recycled.

Redundant structure should be avoided, and efficient building envelope design and fittings used in order to minimise materials use. Materials that can be re-used or recycled easily at the end of their lives using existing recycling systems should be favoured.

Water services

The supply of water is likely to become more restricted because of climate change, while the demand is likely to increase.

The use of water from the mains should be minimised. New homes should be built to the highest practicable BREEAM Ecohomes standards with regard to reducing internal water use. Further information can be found at: www.breeam.org/

Strategies to minimise water use include water efficient toilets (and waterless urinals), taps, showers, dishwashers and washing machines, as well as the installation of water re-use systems. Water saving can also be promoted by installing water meters.

Rainwater should be harvested for irrigation, garden watering (in butts), car washing or toilet flushing. Such systems reduce household water demand, ease pressure on the mains water supply, and can reduce the risk of flooding by storing rainwater and buffering run-off.

Targets for water consumption:

Housing - 30 cubic metres per person per year;

Offices - 1.05 cubic metres per person per year.

Wind and rain

Climate change is likely to result in stronger winds and heavier rain, so roof and local drainage systems must be designed to cope with the increase. Loose items, such as roof tiles, may need to withstand higher winds, while rain may be driven harder against walls and roofs. The design of openings and the choice of materials must allow for this.

The risk of flash-flooding will also increase, while at the same time Building Regulations now require level thresholds for disabled access. Both of these factors increase the risk of ingress of water at ground level.

The size of guttering and down pipes could be increased. The use of secret and parapet gutters and internal down-pipes should be reduced. Water could be thrown clear of buildings using spouts and gargoyles, and storm drains on the ground. In areas of low flood risk, the size of upstands could be increased.

12.7 Help with energy efficiency

Other resources providing information on a range of sustainability issues:

Thames Valley Energy Centre:
www.tvec.org.uk
Wide range of sustainable energy advice and services.

The Energy Saving Trust:
www.energysavingtrust.org.uk
Helpline: 0845 7277200
Practical and money-saving advice, much of it in easily downloadable documents.

Environment Agency:
www.gov.uk/government/organisations/environment-agency
Up-to-date information on the latest government guidelines.

Carbon Trust:
www.carbontrust.com
Research and development into energy efficient buildings.

Defra (Department for Environment, Farming and Rural Affairs):
https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs
Defra environmental protection pages.

Low Carbon Trust:
www.lowcarbon.co.uk
Progressive, detailed advice and information on sustainable building.

Waste and Resources Action Programme:
www.wrap.org.uk
National scheme developing markets in recycled products.

Centre for Alternative Technology:
www.cat.org.uk
Wide-ranging information resource for alternative technologies.

Association for Energy Conscious Building:
www.aecb.net
Founded to increase awareness within the construction industry of the need to respect, protect, preserve and enhance the environment.

Construction Resources:
www.constructionresources.com
Information on construction materials and procurement.

Natural Building Technologies:
www.natural-building.co.uk
Founded to bring ecological building materials and systems into the mainstream construction industry in the UK.

BRE:
www.bre.co.uk
Multi-disciplinary building service centre with a mission to improve the built environment through research and knowledge generation.

National Energy Foundation:
www.nef.org.uk
Charity that gives people, organisations and government the knowledge, support and inspiration they need to understand and improve the use of energy in buildings.

Zero Carbon Hub:
www.zerocarbonhub.org
Provides a range of resources to support the mainstream delivery of low and zero carbon homes in England, including 'Builder's Book' - an illustrated guide to building energy effiient homes.

Design Guide 13

Biodiversity & Protected Species

13.1 BIODIVERSITY

NB Owing to the new West Oxfordshire Local Plan 2031 not being due for adoption until 2017, the following Local Plan Policy information may be subject to further amendment. For confirmation of the current Policy position, please contact Planning Policy.

Biodiversity is defined as the variety of life on earth; all plants, animals and the places they live. National, regional and local planning policy and guidance aims to ensure that there is no net loss of biodiversity in the future, and where possible there are net gains in biodiversity.

Fig. 1 Ecologically rich local woodland

The protection and enhancement of biodiversity is a key component of sustainable development, and thus has significant implications for design.

In 2013 the first British Standard on biodiversity management was published: *BS42020:2013 Biodiversity – Code of Practice for Planning and Development*.

This code of practice sets out how biodiversity, protected species and habitats should be considered in relation to planning applications, with the aim of structuring the ecological assessment methods employed in England and Wales to support planning applications.

The National Planning Policy Framework (NPPF 2012) sets out wide-ranging goals in respect of the natural environment in Chapter 11 – including the overarching aim that:

The planning system should contribute to and enhance the natural and local environment by (…) minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.

National guidance has been supported and expanded upon with the publication of a detailed biodiversity strategy for England – *Biodiversity 2020: A Strategy for England's wildlife and ecosystem services*, which sets out the strategic direction for biodiversity policy for the next decade, with the aim of halting the loss of biodiversity and continuing to reverse previous losses through targeted actions for species and habitats.

At a county level, the Oxfordshire Biodiversity Action Plan (BAP) has identified 36 Conservation Target Areas (CTAs) within the county, with the aim of restoring biodiversity at a landscape-scale through the maintenance, restoration and creation of Biodiversity Action Plan priority habitats.

See also: https://www.oxfordshire.gov.uk/cms/content/oxfordshires-biodiversity-action-plan

The above national and regional policy and guidance is reflected in Policy EH2 of the emerging West Oxfordshire Local Plan 2031:

13.2 POLICY EH2 – BIODIVERSITY

The biodiversity of West Oxfordshire shall be protected and enhanced to achieve an overall net gain in biodiversity, including by:

- *giving sites and species of international nature conservation importance and nationally important sites of special scientific interest the highest level of protection from any development that will have an adverse impact;*
- *requiring a Habitats Regulation Assessment to be undertaken of any development proposal that is likely to have a significant adverse effect, either alone or in combination, on the Oxford Meadows SAC, particularly in relation to air quality and nitrogen oxide emissions and deposition;*
- *protecting and mitigating for impacts on priority habitats and protected species and their importance individually and as part of a wider network; avoiding loss, deterioration or harm to locally important wildlife and geological sites and sites supporting irreplaceable habitats (including ancient woodland and aged or veteran trees), UK priority habitats and priority species, except in exceptional circumstances where the importance of the development significantly and demonstrably outweighs the harm and the harm can be mitigated through appropriate measures and a net gain in biodiversity is secured;*
- *ensuring development does not prevent the achievement of the aims of the Conservation Target Areas (CTAs);*
- *promoting the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations, particularly within the CTAs;*
- *taking all opportunities to enhance the biodiversity of the site or the locality, especially where this will help deliver networks of biodiversity and green infrastructure and UK priority habitats and species targets and meet the aims of Conservation Target Areas.*

All developments will be expected to provide towards the provision of necessary enhancements in areas of biodiversity importance.

The management of biodiversity, as well as being important in its own right, has significant implications for the maintenance and enhancement of local character.

This also forms a core component of the emerging Local Plan, as expressed in **Policy EH1 – Landscape Character**:

The quality, character and distinctiveness of West Oxfordshire's natural environment, including its landscape, cultural and historic value, tranquillity, geology, countryside, soil and biodiversity, will be conserved and enhanced.

13.3 ASSESSING NET GAIN OR LOSS TO BIODIVERSITY

In order for an overall net gain in biodiversity to be delivered, it is fundamentally important that a consistent method for the measurement of net biodiversity gains or losses for development is established.

This can be achieved through the use of the Biodiversity Metric produced as part of the DEFRA Biodiversity Offsetting Guidance: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69531/pb13745-bio-technical-paper.pdf

Alternatively, there is also a version produced by the Environment Bank: http://www.environmentbank.com/news/post.php?s=2014-10-31-toolkit-for-local-planning-authorities

The aim of the metric is to provide an effective, objective and quantifiable mechanism to assess net loss or gain in respect of biodiversity.

Use of the Biodiversity Metric entails assigning an ecological unit score to any given piece of land based on its ecological value. If a development is brought forward on a piece of land, the baseline score must be equalled or exceeded by a development proposal to meaningfully deliver no net loss or net gain. If the baseline figure cannot be reached on the development site then a receptor site in another location (a biodiversity offset) must be proposed together with an in-perpetuity management agreement.

Assessed against Local Plan Policy EH2 and the requirement for an overall net gain in biodiversity, development proposals that would lead to unacceptable harm to biodiversity, protected species and habitats will not be permitted.

13.4 BIODIVERSITY AND NEW DEVELOPMENT

New development, whether large or small, residential or non-residential, can have profound consequences for local landscape, habitats and wildlife. It is important that such issues are thoroughly considered before the submission of an application; and suitable Green Infrastructure (GI) measures incorporated.

In the case of applications where the impact upon biodiversity may be significant, a Biodiversity Impact Assessment may be needed as part of the submission, incorporating a report on the application of the Biodiversity Metric in order to demonstrate clearly whether the development will achieve a net gain in biodiversity.

In addition, it is expected that all schemes will:

- *Aim to maintain and enhance, restore, or ideally add to the net biodiversity and geological conservation interests of the District;*
- *Avoid direct loss or damage to priority habitats or species;*
- *Mitigate/ compensate for any unavoidable loss or damage to habitats or species;*
- *Incorporate beneficial biodiversity and geological features within the design of the development;*
- *Encourage habitat creation.*

13.5 PRIORITY HABITATS

For new development, be it a single residential dwelling or a large mixed use scheme, the existing landscape, vegetation and wildlife context must be carefully considered. Established plant and animal communities must be conserved during and after construction, and provision must be made for such assets long into the future.

There may be biodiversity enhancements through the use of Green Infrastructure (GI) and the creation or restoration of habitats – particularly indigenous habitats – which support rare or protected species. Planting schemes should reflect not only the broad landscape character as set out in the Vegetation Character Areas map (*see also:* Design Guide 3: Geology & Landscape), but also the specific local context as described in the *West Oxfordshire Landscape Assessment* and elsewhere.

West Oxfordshire is rich in locally distinctive habitat types, including grasslands (including

lowland meadows, calcareous and acid grasslands), woodlands (including ancient woodland, lowland mixed deciduous woodland and wet woodland), heathland, wood pasture, parkland and traditional orchards. These in turn are home to a diverse mix of locally distinctive flora, including for example valuable hay meadow and limestone grassland species in the Wolds and river meadowlands.

In line with Policy EH2, at an early stage in any development proposal, consideration should be given as to how both direct and indirect negative impacts to habitat can be avoided, and what enhancements might take place or what mitigation measures may be needed – especially in the case of Local Wildlife Sites and irreplaceable habitats (for example, by demonstrating how changes in layout have been made in order to avoid direct or indirect impacts).

Fig. 2 Village pond and trees in the centre of Ducklington

There are various mechanisms whereby development may have indirect impacts on valuable habitats. These include: a) Hydrological impacts – a hydrological assessment may be required for development close to high value water dependent habitats, with SuDs being one potential method of mitigation; b) Air pollution impacts – consideration may be required for traffic levels within 200m of sensitive habitats; and Recreational impacts – habitats vary greatly in terms of their resilience to recreational pressure (for example, the trampling caused by large numbers of walkers).

In order to ensure that the management of habitats retained within or adjacent to developments is secured long term, as well as any necessary measures for mitigation, compensation or enhancement, an Ecological Management Plan should be provided with applications. Measures will be secured through the use of planning conditions and Section 106 Agreements.

Further to these considerations, specific attention must be paid to the following habitats and wildlife:

13.6 Trees and hedgerows

As well as being important natural components in their own right, contributing much to the appearance and character of the District, trees and hedgerows also form vital habitats for wildlife, and can provide important corridors between otherwise isolated habitats.

Some hedgerows and trees are protected by law, so if your application involves the removal of a part or the whole of a hedge or tree, you should first contact the District Landscape and Forestry Officer. If the application involves planting, careful attention should be paid to the species used.

Whilst local, native species will often be the most appropriate choice (particularly for hedgerows), non-indigenous ornamental species, for example, may sometimes be an appropriate alternative. Again, the District Landscape and Forestry Officer can provide guidance.

13.7 Rivers, watercourses and ponds

Watercourses – including ditches, streams and rivers – together with lakes, ponds, support a wide range of wildlife. Water Voles and amphibians (most notably the great crested newt) are protected by law, so if your application affects a watercourse, body of water or surrounding habitat, you should first contact the Species Officer at English Nature, or the County Ecologist.

13.8 Bats

It is illegal to kill, injure or disturb bats or their roosts, both occupied and unoccupied. As well as occupying natural sites, such as trees and caves, bats roost in roof and wall spaces. For this reason, work in these areas, including the blocking up of bat entrance holes, can disturb them. If you are concerned that your application may affect bats, you should contact the Species Officer at English Nature or the County Ecologist.

If your application involves an unoccupied building or may affect a tree or trees with cavities used by bats, it may require a survey by a qualified professional, which should then be made available to the planning authority. English Nature can supply a list of licensed bat surveyors, and DEFRA provides information about licences and legal protection: www.defra.gov.uk

13.9 Birds

All birds and their nests are protected by law. For this reason, no work that might disturb them – including building work, tree felling and hedge clearance – should take place in the breeding season, which generally runs from the beginning of February to the end of August.

Certain species, such as swifts and house martins, have adapted their nesting habits to take advantage of manmade structures; in particular older houses, cottages and barns. Swifts, for example, occasionally nest in rubble walls, and their nest sites are thus vulnerable to repointing, which might block up nest holes. By identifying such habitats at an early stage, it becomes possible to offset any damage or loss – for example, by leaving gaps in the pointing to encourage the continued use of the site by swifts.

13.10 Badgers

Badgers and their setts are protected by law. Badgers have large territories and travel widely to feed. For this reason, even development at some distance from a sett can have implications for badgers. If your application affects a badger sett in any way, please contact the County Ecologist.

NB A variety of other plant and animal species are protected. A full list is contained at: https://www.gov.uk/topic/environmental-management/wildlife-habitat-conservation.

13.11 BIODIVERSITY ENHANCEMENTS

Two sources in particular are invaluable when it comes to providing detailed information about biodiversity and priority habitats across Oxfordshire. The Oxfordshire Wildlife and Landscape Study or OWLS (http://owls.oxfordshire.gov.uk/wps/wcm/connect/occ/OWLS/Home/) comprises a detailed investigation of landscape character and biodiversity across the county. Conservation Target Areas (CTAs) in Oxfordshire, meanwhile, are detailed on the Wild Oxfordshire website (http://www.wildoxfordshire.org.uk/biodiversity/conservation-target-areas/) – and aims for their management detailed.

Where there is potential for a development to provide for the maintenance, restoration or creation of habitats, these should help to deliver the aims of any Conservation Target Area that

is within the vicinity of the development. Where there is no CTA within the vicinity, then newly created habitats should reflect those relevant to the area as identified in the Oxfordshire Wildlife and Landscape Study. The layout of the development should ensure continued or improved connectivity between existing and new habitats. Provision should be made for long term management of habitats.

Biodiversity in built development is not only about helping wildlife. It is also about creating a much better environment for people, and also about wider 'ecosystem service' benefits to people. There is clear evidence that wildlife habitats in urban areas can also have a highly significant beneficial effect for humans by:

Reducing the urban heat-island effect in a warming world where summer heatwaves can make urban areas dominated by tarmac, concrete and brick – as opposed to street trees, wetlands and other green space – increasingly unbearable and harmful to health;

Reducing air pollution, particularly by removing gaseous pollutants from vehicle exhausts, such as nitrogen oxides and particulates, which are increasingly shown to be harmful to human health; Reducing flood risk, by increasing infiltration and therefore slowing run-off into watercourses.

13.12 GREEN INFRASTRUCTURE

Green Infrastructure (GI) is defined by the National Planning Policy Framework (NPPF) as: *a network of multifunctional green space, both new and existing, both rural and urban, which supports natural and ecological processes and is integral to the health and quality of life of sustainable communities*.

Green Infrastructure (GI) is about more than simply delivering traditional infrastructure in a greener way, but stresses multifunctionality, using urban networks of natural and semi-natural features (such as green spaces, rivers, street trees and parks) to deliver a wide range of ecosystem services. As well as having clear potential benefits for biodiversity, GI can also lead to enhancements in people's health and wellbeing.

See also: https://www.westoxon.gov.uk/media/896990/Biodiversity-and-Planning-in-Oxfordshire-BBOWT-and-OCC-full-document.pdf;

British Standards BS 42020 'Biodiversity – Code of Practice for Planning and Development.

Thames Valley Environmental Record Centre: http://www.tverc.org/cms/content/data-searches

For further, detailed guidance, or if you are unsure about the status of a species, please contact the Species Officer at English Nature or the County Ecologist.

See also: Design Guide 11: New Development & Context.

Design Guide 14
Extensions & Alterations

14.1 EXTENSIONS AND ALTERATIONS

The following guidance is intended to provide design advice for domestic extensions and alterations. The guidance is not intended to be exhaustive, but sets out key design principles relevant to changes of this kind. Although weighted towards older, traditional house types, this design advice is applicable to all types of domestic property, irrespective of age or size.

Fig. 1 Two-storey side extension to a traditional house

Many properties need altering or enlarging from time to time in order to meet the evolving needs of successive owners; and most (though not all) offer scope for both types of change. Whether, or to what extent, alterations or extensions are possible will depend on the individual context of the property in question; with the success or otherwise of such changes dependant both on a thorough understanding of that unique context and on the design approach subsequently adopted.

As an overarching principle, the scale, form and character of the original property should be sympathetically reflected in any proposed changes.

The character of a given property will derive from a number of factors, including:

- architectural style
- local details
- building type (semi-detached, detached, cottage or terrace)
- date/ period
- size and shape of plan
- elevational composition (overall proportions, symmetrical/ asymmetric etc.)
- roof pitch
- window and door openings
- materials
- setting (including relationship with other buildings)

Extensions or alterations that are of an inappropriate scale, or likely to obscure or significantly alter the form or character of the original property, are unlikely to be supported; as are extensions or alterations likely to fill a garden area, to provide substandard living conditions, or to result in a loss of amenity for neighbouring properties (through overlooking or overshadowing, for example).

It is also important to consider whether the size and architectural details of the original dwelling, or the gaps between buildings, make a particular contribution to the character or appearance of the street or settlement.

Bulky extensions that would block the outlook from, or daylight reaching, principal rooms and garden or patio areas of adjacent properties should be avoided. The position and nature of windows in relation to potential overlooking should also be carefully considered. The impact of a proposed extension on the capacity of a site to accommodate parking must also be addressed.

Domestic extensions often require Planning Permission; and if the property is Listed the extension will almost certainly require Listed Building Consent in addition. You should check with the Planning Department prior to carrying out any work, both in order to check what consents (if any) may be needed, and whether the proposal is likely to be supported in its current form.

14.2 EXTENSIONS: AMOUNT

While many properties can successfully accommodate some degree of enlargement, no property can accommodate endless enlargement without fundamentally compromising aspects of its original character and design. Even an apparently modest extension may be inappropriate if, for example, the original property has already been significantly extended.

Fig. 2 Addition to a period terrace in a Conservation Area

There is no fixed rule for the extent to which a property can successfully be enlarged; every property is different. In general, however, any extension or accumulation of extensions should remain clearly secondary and subservient to the original property. Extensions which would, through their scale and massing, result in the primacy of the original property being eroded or lost altogether should be avoided. An extension or accumulation of extensions which would double, or more than double, the existing volume, is unlikely to be supported. Extensions will usually need to be secondary in terms of footprint, height and volume.

Fig. 3 Two-storey rear projecting gabled extensions

14.3 EXTENSIONS: FORM

Two aspects of the design of a property are particularly important when considering a traditional extension: the building span and the roof pitch. The span of the extension should match, or be less than, that of the original property, and it should not generally exceed the span of the original property. The roof should be of a similar pitch.

While domestic extensions in West Oxfordshire vary greatly in form, the following are the three most common forms of traditional domestic extension found in the District:

1. single-storey pitched roof form, either aligned with the ridge or projecting at ninety degrees, generally from the rear elevation;

2. two-storey pitched roof form, either aligned with the ridge or projecting at ninety degrees, generally from the rear elevation; and

3. single-storey lean-to form, generally projecting from a rear elevation, though sometimes from an end-gable.

In the case of a pitched roof extension aligned with the ridge of the house, while continuing the established span may potentially be appropriate for extending a flat-fronted terrace, it may be less successful when extending a detached or semi-detached house, as it can result in the extension being neither sufficiently differentiated from, nor sufficiently secondary and subservient to, the original house. In the case of a semi-detached house it can also unbalance the symmetry of the original pair of houses.

Fig. 4 Single-storey lean-to extension

Extending with a reduced span is generally a successful approach, which can result in the extension appearing both clearly differentiated from, and secondary and subservient to, the original house. For the differentiation to be clearly expressed it is important that the stepping in of the wall (be it to one elevation only – almost always the front elevation – or to both elevations) is sufficiently pronounced: typically no less than *c.*300mm.

Likewise, if the roof of a two-storey pitched roof extension is to step down from that of the original house, in order that the differentiation is clearly expressed, it is important that the stepping down of the ridge and eaves of the roof is sufficiently pronounced: typically no less than *c.*600mm.

A lean-to extension can represent an appropriate way in which to extend a traditional property. Such extensions tend to be single-storey, and may be suitable when a modest amount of additional space is sought. Traditionally, the span of a lean-to extension would be half, or less than half, that of the original house; with a roof of similar pitch to that of the original house.

14.4 EXTENSIONS: TRADITIONAL OR MODERN

Although a well-designed traditional extension, in terms of its form, details and materials, is generally a successful approach when seeking to enlarge a traditional property, it is not the only approach.

A well designed and well executed modern extension can also be successful – not least because it has the potential to clearly express a new chapter in the story of the property through being clearly differentiated from the existing structure.

A modern design approach can be expressed through untraditional or modern forms, details and materials, or use of materials. A successful modern extension is arguably more difficult to achieve than a successful traditional extension, as the former will diverge in its design language from that of the original property.

Fig. 5 A modern, highly successful glazed extension/ link

For a modern approach to be successful, it is crucial that the design intention is clearly expressed. If the design appears unresolved – for example because it falls uncomfortably between modern and traditional – it is unlikely to be successful. The relationship between old and new is crucial, with the junction between the two, and how this is handled, especially important.

14.5 EXTENSIONS: GLAZED LINKS

In some circumstances, a predominantly glazed structure may be appropriate either as an extension in its own right, or as a link between a property and either a new extension or a pre-existing but detached structure, such as an outbuilding.

The potential advantages of a predominantly glazed structure include its transparency, which can be exploited both for its visual and physical unobtrusiveness (its apparent lack of mass), and the fact that it can allow views through the structure to original fabric beyond.

A glazed link can be an effective way of physically and visually separating (and thus differentiating) an extension from a property, particularly in cases where a greater degree of physical attachment might cause undue harm to the character or fabric of that property, or might be difficult to achieve because of the resultant junction of walls or roof.

While the aspiration may be for an extension or link that is predominantly transparent in nature, two things in particular can work against this aim, and so undermine the original design intention. Firstly, large areas of minimally framed glazing can be prohibitively costly when compared to more extensive and conspicuous framing (the use of the latter resulting in a physically and visually more imposing structure). And secondly, even if the structure itself is largely transparent, this quality can easily be undermined by later changes, such as the addition of blinds or curtains, furniture or other domestic paraphernalia. Also, a predominantly glazed structure will also increase in visual prominence at night, due to internal lighting.

14.6 EXTENSIONS: PORCHES

A porch, just like other forms of extension, should relate in its scale, proportions and character to the original property. Traditional porches vary considerably in size and design. The simplest take the form of a hood, typically gabled or flat, projecting over the door and supported on timber or stone brackets. Larger canopies may be supported on posts, and sometimes the porch may be completely enclosed, with an outer door – again, typically with a gabled or flat roof.

While a small gabled hood may be suitable for a modest period cottage, a large enclosed porch may appear disproportionately big, and be harmful to the character of the building. In general, matching the roof covering of the porch to that of the original property is a successful approach.

14.7 EXTENSIONS: LISTED BUILDINGS

Like non-Listed Buildings, many Listed Buildings offer some scope for enlargement. However, in some cases (perhaps owing to the building's sensitivity, or because it has already been extended) it may be impossible to extend the building at all without causing undue harm to its character or fabric. Any proposed extension likely to obscure the original form of a Listed Building, to obscure or result in the loss of significant original fabric or features, or which fails to respond sympathetically or meaningfully to the Listed Building, is unlikely to be supported.

Fig. 6 Historical extension to a Listed Building

Some Listed Buildings have poor quality later extensions. In such cases, where a net gain for the building can be clearly demonstrated, it may be appropriate to replace the extension/s with a more appropriate addition, or to remove it altogether.

See also: Design Guide 7: Listed Buildings, Registered Parks & Scheduled Monuments

14.8 ALTERATIONS (INTERNAL)

For domestic properties, the most common internal alterations are changes to the layout of floors, and to the orientation, size and shape of rooms – typically either by making new openings in walls (to increase circulation, or to make a more open-plan layout) or by inserting new walls (in order to subdivide a room).

In the case of new openings in walls or the complete removal of walls (where either is deemed acceptable) it is important that the structural implications are fully understood, if necessary by taking advice from a suitably experienced structural engineer before proceeding (this advice in turn may need to be submitted as part of the application).

In the case of Listed Buildings, while new openings can often be carried out without causing undue harm to the character or fabric of the building, this is not always the case. Particularly for those Listed Buildings dating from before 1800, the size and shape of rooms can be highly distinctive, and often should not be significantly altered. In addition, new openings can result in the loss of significant features, such as original panelling, plasterwork or cornicing. The removal of an original chimney-breast, fireplace or staircase from a Listed Building is generally unlikely to be supported.

The subdivision of rooms, typically by the use of stud partitions, is generally a more straightforward change, as there are rarely structural issues and the change can often successfully be made both to non-Listed and Listed Buildings. For Listed Buildings it has the attraction of being easily reversible, and thus potentially entailing less overall impact than that resulting from a loss of walling.

14.9 ALTERATIONS (EXTERNAL)

Apart from extensions, the most common alterations to exteriors include changes to windows, doors and doorways, roofing materials, and paint colours. By their nature, external alterations are more conspicuous than internal alterations, and should be carried out with particular regard to the implications for the character and appearance of the building – especially if the building is Listed or in a Conservation Area. If the building is Listed, the change may require Listed Building Consent.

See also: Design Guide 7: Listed Buildings, Registered Parks & Scheduled Monuments

14.10 REPAIRING WINDOWS AND DOORS

The repair of traditional timber windows and doors is often a better and cheaper alternative to their wholesale replacement. Draughty and ill-fitting windows and doors can be greatly improved by the stripping of old paint layers, through re-hanging or the use of draft proofing strips. For reducing noise and draughts, secondary glazing can be an effective alternative to double-glazing. Damaged frames or casements (including those with partial rot) can often be restored through a pieced-in timber repair. Damaged or faulty ironmongery, including hinges, handles, catches and locks, can easily be renewed (though it is always desirable to retain original fittings where practicable).

Traditional window designs are fundamental to the character of local buildings. When replacement windows are installed, these should match the originals in terms of design, proportions, dimensions, materials and glazing. Modern top-hung lights and large sheets of fixed glazing are rarely appropriate.

Fig. 7 Original windows should be retained and repaired

Timber (either softwood or hardwood) is the traditional material for windows and doors in the District. Modern substitutes such as uPVC and aluminium do not look the same, and generally have poor environmental consequences.

Paint is the traditional finish for external joinery. European hardwoods such as oak and elm were usually left unfinished to weather naturally. Timber stains and varnishes are modern introductions, and should generally be avoided on traditional joinery.

See also: Design Guide 10: Windows & doors; Design Guide 19: Traditional paint colours

14.11 REPAIRING STONEWORK

The re-pointing of stone walling and brickwork should always be undertaken with great care, as the visual character of a building or boundary wall can be harmed by ill-advised work. Hard, cement-rich mortars and raised ribbon pointing should be avoided. Bagged mortar joints are the traditional finish in the District.

Roughcast render on stone buildings may be a traditional finish, and if so should be retained where existing. Removal of traditional stucco or render finishes can expose poor quality porous stone to unacceptable weathering. External finishes of this kind were often an essential part of the original architectural concept, and should be retained or restored wherever possible. Stone or brick walling should not be painted, as this can lead to damage of the walling materials as well as resulting in dramatic visual alteration.

Fig. 8 Stonework should always be repaired with care

Traditional building techniques involve the use of materials that are porous, and which allow moisture in solid wall construction to 'breathe' – i.e. to evaporate naturally from the external stonework or render. Local limestone was traditionally laid with lime mortar to give breathable joints between the stones; with lime plaster applied internally, and perhaps lime render and limewash applied externally.

Unlike some modern impermeable materials (such as cement-rich mortars and renders) traditional lime-based materials allow the structure to breathe and are flexible enough to accommodate structural movement. Such materials are fundamental not only to the character and appearance of traditional buildings, but also, crucially, to the intended and ongoing performance and maintenance of the fabric. For these reasons, traditional building methods and materials should be fully understood and carefully respected when carrying out repair work.

See also: Design Guide 8: Stonework

14.12 DAMP IN TRADITIONAL BUILDINGS

Damp is a common problem in many traditional buildings. The severity of damp in a building can range from negligible, requiring minor or no remedial work; through to serious, likely to result in damage to the fabric or the building, and requiring urgent attention.

Before any works to address damp are carried out, it is important to understand, if possible, the source/s of the moisture, and only then to carry out proportionate and appropriate remedial works where necessary.

While 'rising damp' from the ground beneath or adjacent to the wall can be a source of invasive moisture, most damp in old buildings originates at higher level. Common culprits include blocked or defective guttering and down-pipes, loose or damaged slates or tiles (including ridge tiles), and failed or damaged flashing (most notably to chimneys). Water seeping into solid walls at high level may take some time to work its way down within the masonry, and only then become visible at lower level.

Over time, many traditional buildings have been unwisely repaired or 'improved' using hard and impermeable modern renders which trap moisture, making natural evaporation impossible. The results

Fig. 9 Water damage to cellar steps in a Listed Building are often severe damp and condensation.

Where proprietary 'damp proofing' installers are consulted, the problem may be misdiagnosed. This can occur due to the use of electrical resistance meters designed for timber rather than masonry. Surface meter readings on walls can be misleading, as salts deposited on an inner surface will carry electric current even if the wall itself is relatively dry. Invariably recommendations are for even more impermeable materials, which may at best mask the problem, and which may drive damp elsewhere. The most accurate test of moisture content in masonry is the laboratory oven-balance method.

Chemical damp course injections, tanking and even dry lining are common prescriptions when damp is identified in traditional buildings. In the worst case, sealing external and internal surfaces leads to a dramatic rise in moisture levels within the structure.

Typical treatments have included the removal of internal plaster to a height of 1–1.5m, the application of a waterproofing plaster system, and injection of waterproofing solutions into the wall.

In thick, irregularly filled stone walls it is generally impossible to form a completely waterproof layer. However, where the layer is incomplete, moisture may be forced up in such places under increased pressure. In time this can lead to a 'tide mark' as the moisture is driven ever higher, potentially resulting in structural damage to joinery for example.

14.13 AVOIDING DAMP IN TRADITIONAL BUILDINGS

The following is a list of the principal measures recommended in order to avoid damp in traditional buildings (though many of these apply equally well to modern buildings):

- Ensure the roof – including tiles/ slates, ridge, chimneys and flashing – is in good condition;
- Ensure that gutters and down-pipes are kept clear and do not leak;
- Ensure that down-pipes discharge to drains or soakaways some distance from the building (if they discharge direct to the ground the water is likely to track back into the building);
- Ensure that external ground levels are well drained and as low as possible (without exposing footings or foundations). Consider the use of a 'French drain';
- Prevent the saturation of external walls by flush pointing using a lime-based mix. This will also promote the evaporation of any moisture within the wall. Cement-rich mortar should be avoided, as this will trap moisture and may lead to frost damage;
- Where modern gypsum plasters have failed in damp conditions they can be replaced with lime plaster which will reduce condensation problems. Pozzolan additives for lime plasters help them set in damp conditions. Hard cement renders can be replaced with lime

renders. Lime renders should not be sealed with an impervious paint. Limewashes can be used to resist penetrating rain, and mixed with oils, tallow or other ingredients to reduce water penetration. Silicate masonry paints may also be suitable;

- Ensure the building is properly ventilated and heated.

See also: Design Guide 6: Conservation Areas; Design Guide 7: Listed Buildings, Registered Parks and Scheduled Monuments; Design Guide 8: Stonework; Design Guide 10: Windows and doors; Design Guide 15: Conversion of agricultural buildings; Design Guide 19: Traditional paint colours

Design Guide 15

Conversion of Agricultural Buildings

15.1 CONVERSION OF AGRICULTURAL BUILDINGS

Traditional agricultural buildings are a conspicuous and precious feature of the settlements and landscapes of West Oxfordshire. The best possible use for these buildings is the one for which they were originally designed.

However, in the event that they become redundant as agricultural buildings, appropriate new uses may sometimes be found to secure their conservation and continued utility.

Where planning permission is required for the change of use or for alterations, the Council's primary objective will be to secure the preservation of the agricultural building and its meaningful contribution to the character of the surrounding area.

While local and national planning policies generally encourage the re-use of existing buildings, a residential use can entail more extensive internal and external alterations to the building, and more radical changes to its setting than other uses.

Whether Listed or non-designated, agricultural buildings are protected by policies intended to protect their agricultural character. Fundamental to any planning judgment relating to an existing agricultural building or its setting will be the question: what will be the likely impact of the proposed changes on the established agricultural character of the building or its setting?

If the agricultural character is likely to be substantially eroded or lost altogether – particularly if the building is Listed – then conversion may not be acceptable in principle.

15.2 TYPES OF AGRICULTURAL BUILDING

Proposals involving agricultural buildings should begin with a thorough understanding of the historical use and architectural character of the building, and of its setting. The various functions of different types of agricultural building manifest themselves in a distinctive combination of form, size and detailing particular to each type – characteristics that must be recognised and protected in any conversion.

Barns were built for the storage of produce and equipment. Some were also used for processing produce, including the threshing of grain. They are generally rectangular in plan with large cart openings. These openings are usually placed centrally in the flanking walls, but may be placed off-centre, and sometimes occupy projecting gabled or hipped bays. Walls do not generally have other openings (except perhaps ventilation slots). Roofs slopes are generally unbroken, with no openings.

Fig. 1 Traditional field barn

Cart Sheds and Stables were built to house equipment and animals, and vary in size and form. They may be free-standing, attached to other buildings, or form a linking range in a courtyard group. They generally have a number of open bays divided by timber posts or masonry columns, on which roof trusses are supported.

Fig. 2 Traditional cart sheds

Granaries were built for the storage of bagged grain. They are usually much smaller than barns, and timber-framed granaries may be supported on mushroom-shaped 'staddle stones', with the floor set well above ground level to deter vermin. They are entered through a simple doorway opening, and typically have one or two small windows high up in their walls.

Fig. 3 Traditional granary

Other Agricultural Buildings were built for a variety of uses, including storage and workshop space, and vary in size and form. They are sometimes free-standing, but sometimes form a linking range in a farmyard or an addition to another building. They are entered through simple doorway openings, and may or may not be lit by windows depending upon the use.

15.3 SETTING

An agricultural building may exist as an isolated structure in an open landscape setting, or as part of a collection of structures in a farmyard setting. Isolated structures, such as field barns, are often unenclosed, with no associated boundary treatments such as walls. A farmyard or farmstead is characterised by a group of agricultural buildings generally arranged to form an enclosed or partly enclosed courtyard space or spaces; the buildings forming ranges bound together by stone walling.

Fig. 4 Farm buildings in an agricultural context

CONVERSION PRINCIPLES

15.4 GENERAL FORM:

- The plan and massing of the building should remain substantially unaltered;
- It is generally difficult to extend or enlarge an agricultural building without causing some harm to its character; and particularly difficult in the case of extensions of conspicuously residential character. For this reason, extensions to agricultural buildings, whatever their form, are unlikely to be supported.

15.4 WALLS:

- The creation of new window and door openings should be avoided;
- Existing openings should be retained;
- Where openings need to be blocked up, a contrasting material should be used, and/ or the infill recessed into the wall;
- External pipework should be avoided;
- Repairs to existing walls should be carried out with great care, especially when re-pointing.

15.4 ROOFS:

- No alteration should be made to the pitch of the roof;
- Unbroken roof slopes should be retained, and the insertion of roof-lights minimised;
- Where roof-lights are permitted, they should be of traditional 'conservation' type, and set flush with the roof covering. They should not be used on prominent roof slopes;
- Masonry or brick chimney stacks are primarily residential features and should be avoided;
- Dormer windows and porches are also primarily residential features and should be avoided.

15.4 MATERIALS:

- Existing traditional materials should be retained and re-used;
- Artificial slates and tiles, reconstituted stone, concrete, aluminium and plastic should not generally be used;

Fig. 5 Walls and roof slopes should remain largely unbroken

Fig. 6 Existing traditional materials should be retained

- Original features and details, such as buttresses, staddle stones, lintels, owl or slit windows, mangers, hoists and date stones should all be retained.

15.4 INTERIORS:

- The open nature of most barn interiors should be preserved, and internal subdivision should be minimal;
- Roof structures, particularly roof trusses, should generally be retained without modification, and kept visible;

Fig. 7 Original roof trusses should be retained

- New first floors should be kept away from main cart openings, where the double-height space should be maintained.

15.4 SITE:

- The open nature of farmyard or courtyard groupings should always be preserved;
- The relationship between the building and surrounding landscape should be preserved;
- Residential features – such as car parking, lighting, garden spaces, sheds, patios, washing lines, climbing frames etc. – will have a detrimental effect on the character of an agricultural building and its setting, and should be avoided or minimised;

Fig. 8 Setting and curtilage are crucial aspects of character

- Boundary treatments are critical to the setting of agricultural buildings. Traditional features such as stone walling, timber post-and-rail fencing, iron estate fencing and simple barred gates can reinforce agricultural character; lap or panel fencing, some hedging, and elaborate residential style gates are likely to erode agricultural character;
- In some cases – for example, an isolated field barn – boundary treatments of any type may be inappropriate.

15.4 RESIDENTIAL CONVERSION:

- While residential conversion may be acceptable in some instances, it is important to acknowledge that it will usually entail certain compromises in terms of the treatment of the building and its site (for example, in terms of limitations to new openings or the extent of garden space) – compromises that will need to be recognised and accepted by potential owners of the property;

Fig. 9 Residential barn conversion

Fig. 10 Commercial barn conversion

- Owing to the desire for new floors, or new window and door openings that were not features of the original building, the residential conversion of barns is especially difficult to achieve without compromising agricultural character;
- Further problems include the loss of elevation unity and building integrity when farm buildings are subdivided;
- There is a general presumption against residential conversions in the open countryside, both for reasons of sustainability and also because of the impact on the wider landscape.

15.4 COMMERCIAL USES:

- Commercial uses (particularly small workshops, offices or studios (including B1 uses) are often more appropriate than residential uses, as they can often be accommodated with minimal intervention to the building and its site;
- However, issues relating to landscaping, parking, noise, fumes and traffic will still need to be carefully addressed.

15.4 RECREATION AND TOURISM:

- Recreation and tourism can also represent appropriate uses for traditional farm buildings. The open and expansive interiors of barns lend themselves to a variety of community uses, including halls, meeting rooms, wedding venues or community centres – and again, such uses can generally be achieved with only minor alterations to the building and site;
- Some traditional farm buildings can be developed as attractions in their own right – incorporating, for example, farm shops, cafés, workshops, exhibitions on farming life etc.;
- Some farm buildings may also have the potential to provide overnight accommodation, for example, holiday lets or camping barns.

15.4 BIODIVERSITY:

Unconverted agricultural buildings are often home to bats and birds. Care is needed to ensure no undue harm comes to protected wildlife species, and a bat survey, for example, may be required.

Design Guide 16

Greener Traditional Buildings

16.1 UNDERSTANDING HISTORIC FABRIC

Historic buildings, like all existing buildings, have considerable embodied energy: the energy used in collection and preparation of materials and in construction. From the climate change perspective, it makes sense to prolong the life of such structures, which brings continuing returns from the energy originally invested, and which reduces the need to build anew.

However, historic buildings differ from modern buildings in various ways and, along with continued and evolving use, there can be pressure to make changes to address perceived deficiencies. Such changes can have profound implications for historic fabric: this advice seeks to help to resolve the tension between preservation and adaptation, giving guidance on practical matters, and on the statutory consents that may be required. Key to the planning of such change is to understand the nature of what is to be changed.

16.2 WALLS

Traditional walls are usually of thick, solid construction; of local limestone, or, from the C18 onwards, clay brickwork. Traditional walls have no cavity between the inner and outer faces, unlike most walls built since the early part of the C20. With a cavity wall, the outer face of the wall is separated from the inner face, and moisture soaking into the outer face is thus prevented from passing to the inner face.

Traditional walls, however, control moisture in other ways: they are usually much thicker than modern walls; and they are built with soft, porous lime mortar between the stones or bricks, which allows moisture passing into the wall to evaporate out again, when weather conditions change.

From the C19 onwards, walls have usually been built with a damp proof course – a continuous layer of some impervious material, such as lead, slate or bitumen, set just above external ground level. This separates the lowest part of the wall from the upper part, and prevents moisture from the ground passing up into the parts of the wall that are within the internal rooms.

Fig. 1 Local limestone and clay brick walling

Older traditional walls do not usually have damp proof courses of any kind – again, they rely on the breathable nature of the wall, which allows moisture to evaporate away. It is also notable that traditional walls are usually finished internally with porous lime plaster, which aids this process and which is able to withstand moisture in the wall.

Since the latter part of the C20, walls have tended to incorporate some form of insulation, usually of mineral wool or plastic foam, and usually set within the cavity (although occasionally fixed to the inner or outer face of the wall). Traditional walls have no such provision. They rely on the much greater mass of the wall acting as a heat store, tending to maintain a fairly steady temperature, and tending to feel warm in winter and cool in summer.

16.3 GROUND FLOORS

Traditional ground floors were usually of solid construction, with a stone slab or tile surface laid on the ground. The stones or tiles may be laid directly on earth, or on some form of lime,

sand or ash base. Modern, solid ground floors are usually of concrete, with damp proof membranes (usually impermeable plastic sheeting) separating the floor surface from the ground; they may also have insulation beneath or within the floor structure. Traditional solid ground floors do not have insulation or damp proof membranes; as with traditional walls, they rely on their mass and the breathability of the construction to allow moisture to evaporate.

Fig. 2 Traditional stone flag flooring and elm boards

From the C19, suspended timber ground floors were also used (Fig. 4), with floorboards on timber joists set well above the ground. In such constructions there is usually ventilation beneath the floor, ideally with air vents in two opposite external walls, which is essential to control ground moisture and prevent timber decay.

16.4 ROOFING

There was a range of traditional roof coverings, including thatch, stone tiles, timber shingles, clay tiles and blue slate; all usually laid on timber battens, and fixed directly to the roof structure, with no form of underlay. The more irregular coverings (particularly stone slates) were sometimes pointed-up internally with porous lime mortar (a process known as 'torching'), to help prevent wind-driven rain entering the roof. Such roofs are breathable over the whole surface, and will allow moisture from the habitable spaces below to evaporate effectively.

Fig. 3 Welsh slate, stone slate, clay tile and thatch

Traditional roof coverings continue to be used, supplemented in more recent years by products such as concrete tiles and reconstituted stone tiles. Since the early part of the C20, roof coverings have usually been fixed over some form of underlay (and of course many traditional roofs have been re-covered using underlay). The first underlays were bitumastic and not permeable; although in more recent years breathable cloth underlays have been developed.

16.5 WINDOWS

There are three basic types of traditional window in our area: 1) side-hinged casement windows, which may be metal or timber framed, and which may include some areas of fixed glazing; 2) vertical sliding sash windows, which are usually timber-framed, and which have counterbalancing weights concealed in the side framing; 3) the much rarer horizontal sliding sash window (sometimes known as the 'Yorkshire window'), which is usually timber framed, and which slides in a grooved timber sill.


Fig. 4 Traditional casement and vertical sash windows

Earlier windows were originally glazed with handmade 'cylinder' or 'crown glass', both of which have an uneven and highly characteristic surface.

Earlier windows were also usually formed with relatively small individual panes of glass, joined together with a grid of grooved lead 'cames', which again are highly characteristic. Usually, there is just a single layer of glass. Heat loss through windows was commonly controlled with timber shutters, usually mounted internally, and folded back against the window reveals when not in use.

16.6 ALTERATIONS TO HISTORIC FABRIC

The previous paragraphs detail how historic buildings differ significantly from more recent buildings – especially in the way they control the internal environment. It is important to ensure that alterations intended to improve energy efficiency are sympathetic to the historic fabric, with particular regard to the way the fabric functions and to its appearance, whatever the status of the building.

If the building is Listed, any proposal potentially affecting the character or fabric of the structure is likely to require Listed Building Consent. Careful analysis of the building fabric should always be undertaken in order to determine whether the proposed changes are necessary and effective; and if they are, to ensure they can be carried out in a sympathetic manner. Evidence of this analysis and the part it has played in coming to an optimum design solution is an essential part of a Listed Building application.

16.7 INSTALLING INSULATION, GENERAL POINTS

As noted above, traditional buildings in West Oxfordshire have certain characteristics which mean modern methods of insulation may be impractical or inappropriate. The following notes on forms of insulation and methods of installation summarise key issues that home-owners should consider when instructing contractors or briefing professional advisers. They are not intended to be definitive advice for any specific circumstance.

16.8 SOLID STONE WALLS

These have poor insulating properties by modern standards. However, because of their high thermal capacity, they act as a useful temperature modulator: in summer, they tend to remain cool; in winter, once warmed, they retain heat. Although this does not save energy to the extent that a highly insulated modern enclosure would, in practice, acceptable comfort conditions can be achieved with lower air temperatures than in a house where heat is not stored by the structure.

As a consequence, boiler and radiator thermostats can be set significantly lower. Adding insulation as an internal lining to solid walls eliminates this effect because their thermal capacity can then have little if any impact on temperature or comfort inside the building.

16.9 SMALL WINDOWS

These often represent a significantly lower proportion of the external surface area than windows in typical modern buildings. Consequently, heat loss through the whole


Fig. 5 Small window area in traditional houses

enclosure needs to be considered before deciding whether double-glazing would necessarily be the best use of available resources. Also, especially in the countryside, vernacular buildings were

often built to take advantage of passive solar gain. Windows to habitable rooms tended to be grouped in southern elevations; whereas, when rear elevations were exposed to the prevailing wind (if windows were provided at all) they were invariably kept small. This intuitive but sensible approach should be respected when considering alterations or extensions to existing vernacular buildings. Having large windows to take advantage of a view is a modern concept.

16.10 STEEP ROOFS

Whether originally covered by thatch or stone slates, the attic storeys of most traditional houses were enclosed by steeply-pitched roofs supported by purlins on A-frame trusses. These attics were often used as habitable rooms, or may have been converted for such use at a later date. For this reason, it is unlikely home-owners will be able to benefit from insulation grants, which assume insulation is simply rolled out on ceiling joists within a roof void used only for storage. Nonetheless, increasing roof insulation is likely to be the most efficient and cost effective intervention it is possible to make to a traditional house: in many cases, it is likely to be much more effective than certain other interventions, such as double-glazing.

Roof voids are often home to bats and birds. Care will be needed to ensure that no undue harm comes to protected wildlife species, and a bat survey, for example, may be required.

16.11 INSTALLING INSULATION TO ROOFS

Adding roof insulation will not usually require planning permission, provided it can be added in such a way that it does not significantly raise the level or volume of the existing roof surface. However, whether adding roof insulation internally or externally, Listed Building Consent will probably be necessary, especially where:

- The roof surface would have to be raised by even a small amount – this often results in awkward details at eaves and verge which will certainly alter, and could detract from, the appearance of the building;
- Original ceiling finishes (often lath and plaster) have to be removed and/or replaced in order to facilitate the work;
- Main roof timbers (such as trusses or purlins) are likely to be affected.

The following notes relate to the main building elements where traditional construction is often judged to be inadequate by modern standards and where intervention is most frequently considered. Installing insulation to roofs is most likely to be undertaken in one of three ways:


Fig. 6 Insulation can be laid between joists or rafters

Method 1: within the ceiling void:

As noted above, many older traditional buildings in the District have steeply sloping roofs in which A-frame trusses create an attic, which may be used as habitable space. In this case, method 2 or 3 (*below*) must be adopted. However, where: a) the roof slope is so shallow that it is not feasible to use it for habitable accommodation; b) there is some form of impediment, such as a restricted means of escape; or c) the nature of alterations to trusses or original roof fabric necessary to allow habitable use is considered to be unacceptable, then it would be normal to consider the use of cheap and simple roll or granular insulation, laid over or between the ceiling joists.

Method 2: externally – usually during re-roofing:

When existing roof finishes are at, or nearing, the end of their life, it is often necessary to strip and re-roof; either with reclaimed materials (such as stone slates) or a modern replacement (such as artificial slate); on Listed Buildings, the latter alternative requires Listed Building Consent., and may not be deemed acceptable. Re-roofing can afford an opportunity to add an effective and efficient level of insulation in the most practicable way. There are many available products and several ways this could be achieved:

a) by inserting slab material (or occasionally, quilt) between rafters

This is a common approach; however, great care must be taken to cut the slabs so they fit snugly between the rafters (on older buildings, these are often at unequal centres and not always parallel one to another). Consequently, strict supervision is essential to ensure accurate cutting, so that there is the minimum of gap between insulation and rafter. It will usually be necessary to tape all junctions and joints to ensure the insulation is air tight, and a ventilated air gap is usually required above the insulation – all to prevent condensation forming within the roof structure.

b) by laying slab material or quilt over rafters

This is easier to apply and can thus be cheaper. However, it will invariably have the disadvantage that the finished roof surface will be significantly raised – especially where battens and counter-battens are required. This will create difficult (and often ugly) junctions at eaves and verge, and sometimes ridges and valleys. Traditional junctions with dormers, roof lights and other features may also be compromised. Consequently, this method of adding insulation may well be problematic in historic buildings – especially where the roof surface is a key element in the appearance of the building. Unless there are special circumstances (and carefully considered details) this would not usually be permitted with a Listed Building.

c) by fixing multi-layer, reflective foil beneath or above rafters

There are now several products of this type, and their range and performance is rapidly expanding. However, some Building Control officers do not accept that these products comply with Building Regulations, and it is advisable to check with the Building Control Department. Despite possible technical reservations, these products offer some significant advantages for retro-fitting to existing buildings: they are simply stapled to the bottom or top of existing rafters, and it is much easier to achieve an air-tight enclosure. A small air gap needs to be maintained either side of the foil (and this sometimes requires battens); despite this, they often achieve a reasonable level of insulation without a significant increase in the overall depth of the roof construction.

d) By a combination of the above

Where, for instance – as is often the case in older buildings – rafters are insufficiently deep to accommodate a good thickness of insulation, the optimum solution could be to use whatever slab material fits the joists, with multi-foil quilt beneath, using battens to maintain the required air gap before reinstating a ceiling finish. Whether used on their own or as the top part of a composite insulation package, thin, multi-layer foil-based insulation membranes have the further advantage that their reflective nature provides better protection against solar gain in the summer than insulation quilts and slabs.

Method 3: Internally – with roof finish left in situ

When the roof is not being stripped, there is little practical alternative to adding insulation on the underside of the roof covering, often between existing rafters. In this case, it is important to check what, if any, membrane may have been added beneath the slates and usually over the roof joists when the building was last re-roofed.

Until recently, it was usual for roofers to add bitumen-based or other waterproof felts. Unlike the modern breathable membranes now used, these can cause condensation to develop on the felt above the insulation. Where this form of construction remains, great care (and specialist advice) should be taken to ventilate the roof void, or otherwise detail the new construction to avoid condensation.

With Listed Buildings, or other buildings where some roof slopes are an important part of the building's appearance, any required vents should be carefully sited so as not to break the roof surface, or ideally to be integrated within existing features, such as eaves, ridges, and dormers. Also, where existing ceilings are predominantly lath and plaster, there may be a requirement for this to be replaced on a like for like basis.

NB Several companies offer a service entailing the spraying of foam insulation within the roof void; some implying their product 'repairs' old roof finishes in some way. Whilst some of these systems might be considered in very specific circumstances, in principle the application of a sprayed membrane to the underside of any slate or tiled finish is discouraged because it makes the roof surface (originally flexible and permeable) rigid and impermeable; it also makes the replacement or re-fixing of individual slates from time to time difficult, and could lead to other problems.

16.12 INSTALLING INSULATION TO WALLS

As with loft insulation, there are many specialist firms offering various forms of cavity insulation, with grants again available for the work. However, few if any traditional historic buildings have cavity walls, so the most common (and heavily promoted) form of wall insulation is seldom feasible.

Adding sheet insulation to the internal face of external walls of Listed Buildings is seldom appropriate (and will rarely be permitted) because it will cover existing stonework, plaster or other finishes, which are often an important part of the building's architectural interest. New internal lining can also affect other important details, such as window and door reveals, skirting boards, architraves and cornices.

Whilst these considerations may not always apply to un-Listed traditional buildings, it is still worth considering whether the loss of temperature modulation and increased comfort provided in rooms enclosed by walls with a high thermal capacity are worth the potential energy saving

achieved by adding insulation on the inner face of a solid masonry wall.

However, in some forms of traditional building, such as non-Listed barns, where there are no or few internal details or finishes that would be affected, it may be appropriate to add insulation to the internal face of walls behind dry lining or other new internal finishes. In this case, it would be important to ensure that adequate ventilation was maintained behind the dry lining, so that the moisture always present in a solid stone wall could continue to dry out in the normal way.

Occasionally, the construction and finish of vernacular buildings may be of such poor quality or in such bad repair that it may be appropriate to add insulation externally. Slab insulation can be fixed to the outside of the wall, which is then protected by a new water-resistant external finish, such as render on expanded stainless steel mesh. This is a specialist area of work which needs to be carefully specified; there are often junctions (especially with the roof) where the relationship between the planes of existing and new materials will be difficult to resolve successfully.

Adding wall insulation internally will not require Planning Permission; however, it will normally require Listed Building Consent where the building is Listed – especially where the internal wall finish and/ or internal details around openings are integral to the character of the building. However, adding insulation externally (probably with some additional weathering coat) may require Planning Permission.

Where a building is Listed, such works will require Listed Building Consent – which would rarely be considered appropriate, except in exceptional circumstances, and where the altered appearance could be demonstrated to be an appropriate change to the Listed Building which did not detract from its character.

16.13 INSTALLING INSULATION TO GROUND FLOORS

As noted above, most traditional buildings in the District have a solid floor, effectively laid directly onto earth. In these circumstances owners may wish (and are often advised by surveyors or contractors) to take up the floor so that a new concrete floor can be laid on a damp-proof membrane; and, these days, a good layer of insulation – especially where under-floor heating (whether water or electric) is contemplated. Where old flagstones or other important fabric is not lost (and can be taken up and re-laid without significant physical damage or impact on its character) this is invariably sensible advice; however, on a Listed Building, where original fabric could be lost, Listed Building Consent would be required, and such work may be problematic.

Fig. 7 Care must be taken to avoid undermining footings

Adding insulation beneath existing raised timber floors is also viable. Again, with original or old boards it is important to make sure they can be carefully taken up and re-laid without significant damage or alteration of character. Great care should be taken to ensure existing ventilation

beneath the floor is not reduced or eliminated (and where no ventilation exists beneath the raised floor, it should be added as part of the works).
In either case, if excavation is required to accommodate the extra depth of concrete slab, insulation or ventilation gap, it is important to make sure that such excavations do not go lower than the footings of any load-bearing walls, whether external or internal. Unless the depth of foundations is already clearly understood, it would be wise to excavate a number of trial pits (externally if possible) to determine the safe level to which excavation could be carried out. If there is any doubt, a structural engineer, architect or surveyor experienced in working with traditional construction should be consulted.

Underpinning existing load bearing walls in order to allow deeper excavation (or for any other reason) should be avoided. Traditional stone buildings are usually built off modest foundations (if any) laid in lime mortar, which can accommodate the normal minor movement which often arises in old buildings. However, if underpinning is introduced beneath part of a traditionally-built wall, it creates an area of rigid construction; and when movement does occur, it can 'break the back' of that part of the building, leading to cracking at one or both sides of the underpinning.

16.14 IMPROVING THE THERMAL PERFORMANCE OF WINDOWS

Windows are one of the main elements that give character to a building: they are its eyes. Even apparently minor alterations to windows can have a major impact on the appearance of a building. For this reason, any proposed alterations must be carefully considered before being implemented, especially when a building is Listed (when change will require consent) or in a Conservation Area.

Partly as a result of advertising by window replacement companies, many people believe double-glazing is one of the most effective ways to save energy in their homes. However, as noted above, the proportion of heat lost through the small area of window openings in traditional buildings is often significantly smaller than that lost through other elements of construction – most notably the roof.

Fig. 8 Visually harmful double-glazing

The next most important element is air-tightness. Draughts and air circulation, including through ill-fitting windows and doors, up chimneys, probably accounts for a greater loss of energy than through the single-glazing of comparatively small windows in historic buildings. Air-tightness of the whole construction is more difficult to secure in renovation and conversion projects than in new buildings; however, reducing heat lost through chimneys (especially open fireplaces) and retro-fitting draught seals to existing windows and doors, is simple to achieve. Even with original windows in Listed Buildings it can usually be achieved without having an impact on the appearance of the building: consequently it is unlikely to require consent.

Fig. 9 Slim double-glazing with well detailed glazing bar

Government guidance used to hold that double-glazing was seldom if ever appropriate for a Listed Building. Current advice holds that the potential damage of such a change needs to be weighed against the potential to mitigate the impact of climate change. Whether single-glazed windows in a Listed Building should be replaced by double- or even triple-glazed windows, or whether some form of double-glazing should be added – will always need to be judged on a case-by-case basis; however, considerations will include:

A) The importance of the existing windows to the character and appearance of the building;

B) Whether an equivalent increase in insulation could be achieved by other means – such as increased roof insulation and/or more efficient heating equipment (*see below*) – which are likely to be less detrimental to the character and appearance of the building. It is worth noting such alternative methods can also be more cost effective;

C) The extent to which the design and appearance of the window relies upon the precise size and detail of frame and glazing bars. For instance: the narrow and finely-detailed glazing bars of C18 sash windows are one of the fundamental aspects of their design – features that cannot accommodate double-glazing of any thickness. On the other hand, replacement of traditionally detailed flush casements with minimum horizontal subdivision can sometimes accommodate double-glazing with only a limited impact on their appearance;

D) The skill and care with which a building owner or their design adviser has analysed the current situation, appraising alternatives and, where these demonstrate that a change of window form may be appropriate, the skill with which the change is designed and detailed to have the minimum impact on such matters as:

- designing the window to solve the actual technical and aesthetic issues;
- the proportions of the window and its subdivision;
- the size and detail of frame and glazing bar sections;
- the impact of flat reflective modern sheet glass replacing older glass types where some distortion is a key characteristic;
- the choice of spacer bars for double-glazing that match the colour of the frame (brilliant white and silver seldom being appropriate for traditional buildings);
- avoiding the use of fake elements, such as applied glazing bars or applied lead strips.

E) Adding shutters where none exist, or replacing existing shutters with better insulated and more air-tight versions could well be a cheaper alternative to double-glazing; it could also have a less damaging impact on the appearance of the building. On Listed Buildings, original shutters are usually an important part of the character of the building; in which case, as with windows, a carefully detailed alteration

Fig. 10 Traditional wooden shutters

to add draught seals could be considered. Where shutters are absent or not original, a good case could be made for the addition of modern highly insulated shutters (as part of a fully considered package of work) in preference to any alteration to the windows themselves – except the addition of draught seals if possible.

F) The form and appearance of uPVC windows is seldom appropriate for traditional buildings, and never appropriate for Listed Buildings. In addition to aesthetic considerations, uPVC windows utilise considerable energy in their manufacture; and whilst they require minimal initial maintenance, when they do degrade they usually cannot be repaired, and must be scrapped. In contrast, well-designed traditional windows, made with timber from sustainable sources, have a virtually unlimited life if properly maintained. Even if an ideal re-decoration schedule is not maintained, as a last resort it is always possible to piece in a new sill, an individual frame or even a whole sash or casement without discarding the whole window.

16.15 INSTALLING NEW SERVICES

The vast majority of traditional buildings already have electrical, heating and hot water services. However, the search for greater energy efficiency has led to new technologies and to changes in services equipment. Installation of such new services is likely to make a significant contribution to the energy efficiency of historic buildings, but may also have profound implications for historic fabric. The Council's Planning and Building Control Departments are happy to advise on the acceptability of specific proposals, and on the need for statutory consents; there is also guidance on the Government's Planning Portal.

NB these notes are intended for general guidance only; you will need to take specialist advice from suitable consultants with respect to technical feasibility, and you will need to use experienced and appropriately qualified contractors for installation.

Fig. 11 Combi-condenser boiler, and flue next to chimney

16.16 BOILERS AND FLUES

A new or replacement gas or oil fired boiler can give significant energy savings. The best condensing boilers are up to 90% efficient, using 30 or 40% less energy than older models. Installing such a boiler is unlikely to be problematic, as new boilers tend to be smaller, and fuel supply is unlikely to require significant openings to be made. Condensing boilers need a condensate drain, but this usually requires only small bore pipework. However, the provision of a new flue can be problematic, as it may require a sizeable new

hole in walling, alterations to an existing vertical chimney flue, or even a completely new vertical flue. New flues can make a significant impact on the exterior, due to their appearance and also due to the white plumes of water vapour that they release. Such flues will need to be placed with great sensitivity to the building and to the setting, as will new or replacement oil tanks. Solid fuel boilers and their fuel stores tend to be more voluminous, and may be more difficult to accommodate within the main part of a typical traditional building.

Installing a new boiler in a Listed Building may require Listed Building Consent, particularly if it involves alteration to internal walls, significant fittings or fixtures. A new flue through an external wall, a new vertical flue, or the alteration or lining of an existing vertical chimney flue to a Listed Building will usually require Listed Building Consent.

New flues may also need Planning Permission under certain circumstances, whether the building is Listed or not, depending on form, height, position on the building and the location of the building. Similarly, new oil tanks may require Planning Permission, depending on size, position on the site, whether they are in the grounds of a Listed Building, and location of the building. Note also that gas or oil fired boilers and their flues and tanks will need to be certified by an appropriately accredited installer, whilst other types of boiler and their flues will require approval under The Building Regulations.

16.17 GROUND SOURCE, WATER SOURCE AND AIR SOURCE HEAT PUMPS

These devices harvest the sun's heat stored within the ground, water or air, usually giving a favourable energy return for the relatively modest amount of electricity needed to drive the system (typically three or four units of heat energy for each unit of electrical energy). The harvested heat can be used to provide hot water or warm air for space heating, and can also be used to provide hot water for domestic purposes.

Ground and water source heat pumps have two primary components: 1) the heat collecting pipework, which allows a mixture of water and anti-freeze to flow through the heat source; 2) the pump unit, which circulates this mixture and which collects heat from it. Pump units tend to be larger than typical heating boilers, although can usually be fitted into typical domestic spaces. With relatively small bore pipework, installation is unlikely to be problematic.

Fig. 12 Ground source pipework and air source heat pump

In ground source systems the heat collecting loop is buried in the ground around the building, in flat or vertical coils, or possibly in vertical bore holes where the site is restricted. Care must be taken not to undermine building or wall foundations, or to affect garden features of special interest. In water source systems the heat collecting loop is laid in a large volume of water – typically a deep lake, although it may be possible to use a river or other water source. Again, care needs to be taken not to affect significant garden or landscape features.

Installing a ground or water source pump in a Listed Building may require Listed Building Consent, particularly if it entails alteration to internal walls, significant fittings or fixtures. Heat collection loops will not normally require Listed Building Consent, unless directly affecting Listed fabric. Heat collection loops for domestic buildings do

not require Planning Permission, although this is required for installations to other types of building. Ground and water source heat pump systems will require approval under The Building Regulations.

Air source heat pumps also have two primary components: 1) the air handling fan unit, usually placed on or against an external wall, which passes large volumes of external air over a small collecting pipe coil of water and anti-freeze; 2) the pump unit, usually located internally, which circulates the water and anti-freeze mixture and which collects heat from it.

Just as for standard boilers or ground or water source pump units, the internal equipment can usually be located in a traditional building without problem, although the external unit can be more problematic. The size of the external unit varies, depending on how much equipment is located externally; but there will usually need to be a significant cabinet to house the fan (a metre or so tall) and a sizeable clear space around it.

It may be possible to locate the external unit away from the building, although this may reduce efficiency. In any event, the external unit will need to be placed with great sensitivity in relation to the building and to the setting.

Installing an air source pump unit to a Listed Building may require Listed Building Consent, particularly if it involves alteration to internal walls, significant fittings or fixtures. An external air handling fan unit to a Listed building would usually require Listed Building Consent. Under current legislation, external air source heat pump equipment also requires Planning Permission in all circumstances, whatever the building type. Such systems will also require approval under The Building Regulations.

16.18 HEAT DISTRIBUTION AND EMISSION

Heat can be distributed around the building from the boiler, heat pump or other source in one of two main ways: 1) via hot water, in pipework; 2) via warm air, in duct-work. With water systems, the pipe diameter tends to be small, and it can usually be fitted around the building with minimal disruption of fabric.

Air systems can be more problematic: air is much less dense than water, and so a much greater cross-sectional area is needed to carry useful amounts of heat. Because of this, the ducts tend to be of large size, and are likely to be obtrusive when retrofitted to a building of traditional form. New hot water pipework systems to a Listed Building may need Listed Building Consent if significant internal fabric is affected; although in some cases, with careful planning and installation, the impact does not justify this. New air duct systems in a Listed Building would almost certainly need Listed Building Consent.

Warm air is usually released via grilles of some type. For hot water systems there are two main types of heat emitter: 1) wall-mounted or freestanding radiators; 2) underfloor heating pipework. Some early cast iron radiators in Listed buildings are significant features, and replacement with modern radiators may need Listed Building Consent and may not prove acceptable. However, the removal of thick paint layers from such early radiators, with cleaning out and general overhaul, can greatly improve their performance.

Modern pressed steel radiators in Listed Buildings are unlikely to be considered significant, and replacement with more efficient convector versions, or radiators of different proportions, may not require Listed Building Consent, subject to the impact on adjacent fabric.

Underfloor heating is becoming increasingly popular for two main reasons: 1) the emitters are unobtrusive; 2) the systems run at lower temperatures and are thus well suited to use with ground, water and air source heat pumps. However, underfloor systems require substantial building works and this can be problematic when retrofitting to traditional buildings.

In ground floors it is usually necessary to cast a new concrete slab and screed in which the pipes are embedded, entailing substantial excavation for the new floor structure and for the required insulation. There are three potential problems here: 1) excavation of the existing floor may undermine wall foundations; 2) significant early flooring, including stone slabs and tiles, may be lost; 3) the new floor structure will be less breathable than traditional flooring, and may cause moisture trapped beneath the floor to migrate to the walls. Underfloor pipework is also sometimes fitted in upper floors below floorboards.

Again, this may be problematic when retrofitting to traditional buildings, because: 1) early timber floorboards and ceiling plaster may be lost or damaged; 2) retained early timber floorboards may be affected by heat in such close proximity; 3) pipe holes or notches may need to be formed in spine beams and joists. Installing underfloor heating in a Listed Building will usually require Listed Building Consent, and if significant early fabric is adversely affected the proposal may be unacceptable.

16.19 RAINWATER HARVESTING

This entails the collection of rainwater from roofing and possibly the land, for various non-potable uses, including flushing WCs, clothes and car washing, and garden irrigation. It can offer significant savings in mains water consumption (around 50% for a typical house), and so, from a climate change perspective, is eminently supportable. A rainwater storage tank

Fig. 13 Water butt for rainwater harvesting

will be needed, and because of our variable climate this will need to be sizeable. Tanks are usually buried on site, though can be above ground. Filters and pumps are also needed, usually in or adjoining the tank, and control valves and pipework within the house.

In order to retrofit such systems to traditional buildings, there must be sufficient site area for the tank, and the pipework fitted around and through existing fabric. In Listed buildings, particular care must be taken to minimise the impact on historic fabric. Excavation for the tank must not undermine foundations or affect garden features of special interest.

If the tank is above ground, it must be sited with special regard to the building and its setting. The internal pipework must be fitted with special regard to internal fabric, fittings and fixtures. Listed Building Consent may be required for new pipework in a Listed Building if significant internal fabric is affected; although, with careful planning and installation, the impact may not justify this. If the storage tank is sited above ground, Planning

Permission may also be required, depending on size, position on the site, whether the tank is in the grounds of a Listed Building and the location of the building. Rainwater harvesting systems require approval under The Building Regulations.

16.20 GREY-WATER RECYCLING

This entails the collection of water from baths, showers and basins for flushing WCs. In a typical home it can save around 30% in mains water consumption; although grey-water requires sophisticated cleaning processes and detergents, which have environmental implications. The technology is still young, and the pros and cons need careful weighing. A storage tank will be required; however, as there is usually a fairly continual supply of grey-water, it need not be as large as that for rainwater harvesting. There will also be cleaning and filtering equipment, and connecting pipework and control valves.

Systems vary: tanks can be external and buried, or internal, or both. Internal equipment and pipework will need to be fitted with special regard to internal fabric, fittings and fixtures. Listed Building Consent may be required for installations to a Listed Building if significant internal fabric is affected. Again, however, careful planning and installation can do much to mitigate the impact. Grey-water recycling systems require approval under The Building Regulations.

16.21 SOLAR THERMAL PANELS

These are externally located panels containing fluid in tubes (usually water with antifreeze), designed to absorb heat from the sun. Typically, the heated fluid is circulated through a heat exchanger in an internally located water tank, to provide hot water for domestic uses. It is possible to use these systems for air heating; although in this country this is likely to require large expanses of panels. There

Fig. 14 Solar thermal panels (evacuated tube type)

are two main types of panel: 1) flat plane, where the fluid filled tubes are mounted in a glazed box; 2) evacuated tubes, where the fluid filled tubes are mounted within evacuated glass tubes. The latter are more efficient, but more expensive.

The optimal orientation for solar thermal panels is south, south-west or south-east facing, mounted at an angle of 30 to 40 degrees. They may be mounted on a roof slope, a wall, a flat roof, or a freestanding structure on the ground, provided the panels will be exposed to sunlight for the majority of the day. It is also possible to mount some flat plane panels flush with the roof covering; although there will usually be a visual impact either way. So, for historic buildings it will usually be preferable to site such panels in less prominent positions, including on rear roof slopes, in roof valleys, behind parapets, within the perimeter of flat roofs, and on ancillary buildings.

Planning Permission is not usually needed for such installations, provided: the panels are not on a building in the grounds of a Listed Building; the panels are set lower than the highest part

of the roof; and the panels do not project more than 200mm above the roof or wall surface. For freestanding arrays Planning Permission may not be needed either, depending on location, height and size.

Fig. 15 Conspicuous and concealed solar panels

Listed Building Consent will usually be needed for panels on a Listed Building – and as they can have a significant impact on historic character, this may be problematic. Great care must be taken with siting panels in such situations, and with some particularly sensitive buildings there may not be an acceptable solution. Listed Building Consent may also be needed for internal changes for new hot water tanks, and for connecting pipework. Installation of solar thermal panels will also require approval under The Building Regulations in respect of the increased roof loading, fixings, penetrations through the roof covering and changes to electrical, heating and hot water systems.

NB: Further guidance is given in the council's 'Solar Microgeneration' leaflet.

16.22 SOLAR PHOTOVOLTAIC PANELS

These are externally located panels of semi-conducting material, usually silicon-based, which convert the sun's light into electricity. The electricity generated can be used for domestic purposes, with any surplus sold back to the grid (with the agreement of the network operator and supplier). There are no pipes, just electrical connections to the internal system, so the physical installation can be simpler than for solar thermal panels. The panels vary in form and colour, and include translucent glazed types, and panels that imitate traditional roofing materials, such as slate.

The optimal orientation for solar photovoltaic panels is also south, south-west or south-east facing, mounted at an angle of 35-40 degrees. As with solar thermal panels, they may be mounted on a roof slope, a wall, a flat roof, or a freestanding structure on the ground, again provided the panels will be exposed to sunlight for the majority of the day. The panels that imitate traditional materials can be built into the roof covering, which can mitigate the visual impact. However, for historic buildings it is usually preferable to site the panels in the least obtrusive positions, as noted above.

Planning Permission is not usually needed for solar photovoltaic panels on buildings, and may not be for freestanding solar photovoltaic arrays, subject to the same considerations as solar thermal panels. Listed Building Consent will usually be needed for solar photovoltaic panels on a Listed Building; and, as with solar thermal panels, they have the potential to make a significant impact on the historic character, so great care must be taken. Again, with some particularly sensitive buildings there may not be an acceptable solution. Installation of solar photovoltaic panels will require approval under The Building Regulations in respect of increased roof loading, fixings, penetrations through roof covering and changes to electrical systems.

NB: Further guidance is given in the council's 'Solar Microgeneration' leaflet.

16.23 SMALL-SCALE WIND TURBINES

These devices convert the kinetic energy of the wind into electricity. They comprise rotating blades, on either a horizontal or vertical axis, driving a generator. As with solar photovoltaics,

the electricity generated can be used for domestic purposes, and any surplus potentially sold back to the grid. Typical small scale turbines range from around 0.93 metres diameter, producing up to 0.1 kW, to around 15 metres diameter, producing up to 50 kW. Smaller turbines may be building-mounted; larger turbines are usually freestanding.

Fig. 16 Small scale wind turbine

Wind turbines are not the easiest devices to deploy in the domestic context, or on small-scale sites generally. They need to be exposed to the prevailing wind (usually from the south-west), and be clear of obstacles such as trees, other buildings and tall landscape features.

Careful assessment of wind speeds must be undertaken before pursuing this strategy, as local annual average wind speeds of below 4.5 meters per second will not produce enough electricity to justify the capital outlay. The Energy Saving Trust recommends that wind turbines are best considered when the local annual average wind speed is 6 metres per second or more.
If building-mounted, turbines generally need to be set well above the roof line, which has profound implications for the building, both in visual and structural terms. Planning Permission is usually needed for domestic wind turbines, whether building-mounted or freestanding.

If the turbine is to be attached to a Listed Building, it will also need Listed Building Consent, and such proposals will need to be carefully considered. With historic buildings the visual impact may be problematic because, in order to function efficiently, turbines are likely to need to be prominently located. Suitable structural fixings into old roofs or walls at high level are also likely to be difficult to achieve, both practically and in terms of the impact on historic fabric. Siting away from the main historic building, either on ancillary buildings or freestanding, is likely to be less problematic. Wind turbines also require approval under The Building Regulations in respect of the structural works and changes to the electrical systems.

16.24 FURTHER INFORMATION AND CONTACTS

http://www.historicengland.org.uk/advice/technical-advice/energy-efficiency-and-historic-buildings/
(*Historic England guidance on Energy Efficiency and Historic Buildings*);

http://www.oxford.gov.uk/PageRender/decP/HeritageEnergyEfficiencyTool.htm
(*Oxford Heritage Energy Efficiency Tool*)

See also: Design Guide 12: SUSTAINABLE BUILDING DESIGN

Design Guide 17
Shop Front Design

17.1 SHOP FRONT DESIGN

Shops are a key part of the fabric of our lives and settlements, and represent a defining building type in towns and villages. Whether standing alone or lining high streets, the contribution they make to the appearance, character and dynamics of places is profound. The public face of a shop – the shop front – is by its nature calculated to be a conspicuous presence in the street scene. Consequently, the visual impact of shop fronts, whether through good or bad design, can also be profound.

A well-designed shop front has the potential not only to enhance the appearance and character of a building, street or settlement, but also to make a huge difference in terms of the success of that business. With increasing competition from out-of-town retail parks and supermarkets the onus on those involved in the design of shop fronts and the appearance of high streets has never been greater.

A town centre or high street characterised by high quality shop fronts has the potential not only to enhance the appearance of that area, but to stimulate prosperity, civic pride and tourism. High quality design should therefore be the aspiration of all involved in the creation of shop fronts.

When considering the design of a new shop front, the first judgment to be made (assuming there is a pre-existing shop front) is whether the current shop front merits retention and refurbishment.

17.2 EXISTING OR HISTORIC SHOP FRONTS

Before an existing shop front is replaced, consideration should be given to its condition, quality and relevance, and why it may need replacing. Even if it has been altered, it may still be worthy of repair and refurbishment; or original details may exist behind later cladding. Restoration may result in a shop front that is more appropriate to the building and its location. The craftsmanship found in older shop fronts is not always easily replicated today, and it is rare that a shop front needs to be entirely replaced for practical reasons.

Where an historic shop front survives, this should be preserved or restored – particularly if it forms a part of a Listed Building. Where an historic

Fig. 1 Leigh & Sons in Witney c.1900

Fig. 2 Leigh & Sons c.2000

shop front has been mutilated, or features have been lost, sufficient evidence (either physical or documentary) may exist to enable an accurate reconstruction. In replicating any lost features, it is important that details are correctly reproduced in appropriate materials.

The application of 'stick-on' mouldings or fascias, the use of plywood, MDF or plastic, and the distortion of original proportions are all likely to result in harm to the original shop front.

17.3 NEW SHOP FRONTS

Where a new shop front is required, in order to achieve a successful design the shop front should:

A) Respond meaningfully to the elevation of the building as a whole; and

B) Respond meaningfully its street (adjoining buildings) and settlement contexts; and

C) Demonstrate a clear understanding of the composition of a traditional shop front; and

D) Make sympathetic and appropriate use of materials and colours; and

E) Make measured and appropriate use of signage; and

F) Successfully integrate lighting (internal and external), access and security measures; and

G) Clearly display goods for sale within; and

H) Be well maintained.

17.4 A) CONTEXT: THE BUILDING ELEVATION

Crucial to the success of a shop front is the degree to which it responds to its context; and most importantly to the building elevation of which it is a part. Traditional, period buildings (often Listed and within Conservation Areas) make up a large proportion of the stock of premises whose ground-floor use at least is retail. If the character and appearance of such buildings is to be preserved or enhanced, it is critically important that the design of their shop fronts is carefully considered in light of the elevation and building as a whole – as opposed to being designed without due regard to context, and simply 'bolted on'.

Proportions

In designing a shop front, particular attention should be paid to the proportions of the shop front. The shop front should not be overly expansive relative to the overall elevation, but should follow the proportions established by the elevation.

In terms of its lateral proportions, the shop front should not extend the full width of the building, but should be contained within piers of the same material as the main elevation (for example, stone or brick) extending down to ground level at either side. These not only provide visual enclosure and seperation to the shop front, but also serve compositionally to integrate it with the elevation above. Where this is not possible, substantial pilasters should be used to provide strong framing elements to either side of the shop front.

In terms of height, and to avoid the shop front 'chopping' the building in two horizontally, the top of the shop front (the cornice plus fascia) should remain clear of the sills of the first-floor windows, and should not meet with or cut into them.

The vertical divisions of the shop front provide a key way in which the shop front can be made to relate well to the elevation as a whole. The main vertical divisions established in the elevation above – such as those provided by bays, piers or windows – may be carried down through the shop front, in order to respect and respond meaningfully

to the elevation as a whole, and to ensure the architectural harmony of the overall composition. The continuation of these strong verticals also provides visual support for the building, rather than leaving it 'floating' above a weak shop front.

Character/ design approach

Another fundamental aspect of context to consider is the character of the building. Is the building traditional or modern, vernacular or high status, humble or imposing? What date or period does it belong to? (for example, Georgian, Victorian or twentieth-century?)

Fig. 3 The shop front should respect the overall elevation

If traditional, what characteristics does the building have that might meaningfully be reflected in the design of its shop front? (for example in terms of the design or scale of existing mouldings and motifs, patterns of glazing, colours or typography appropriate to the building?) If the building is traditional, this need not preclude a modern design approach; however, the implications for the elevation as a whole will need to be carefully considered, in order to ensure that the pre-existing character of the building is not harmed.

17.5 B) CONTEXT: THE STREET

While the building elevation provides the most important context for the shop front, other wider contexts should also be considered, including that provided by the adjoining buildings and street scene. Careful consideration will need to be given as to how a proposed new shop front – in all of its particulars, including scale, proportions, traditional or modern design, colour and signage – will relate to adjoining and nearby shop fronts. In responding meaningfully to its individual building context, it may also be appropriate, for example, to respect the stallriser or fascia height of the flanking shop fronts.

Where the buildings vary in date and design along a street or in an area (and are not uniform) the shop fronts, too, should vary in their composition and design. It is more important that a shop front relates well to the specific building elevation of which it is a part, than conforms artificially to the design of nearby shop fronts belonging to fundamentally different buildings. Vibrant, traditional high streets are generally characterised by the richness and variety, and not the uniformity, of their shop fronts.

Fig. 4 Variety characterises traditional high streets

Fig. 5 The components of a traditional shop front

17.6 C) COMPOSITION OF A TRADITIONAL SHOP FRONT

A traditional shop front is composed of a number of distinctive, well established elements – most notably a stallriser (base), a fascia (top) and sometimes pilasters (to either side) – which together provide the basic frame for the shop front.

These elements are equally relevant to traditional and modern shop front design; with the adaptability of these and other elements (including doorways, mullions and glazing bars), allowing for almost limitless compositional variety.

Only through the careful resolution of all these elements, however, will a successful design result – one that responds sympathetically to the immediate context of the elevation of the building as a whole, and to the wider contexts of street and settlement.

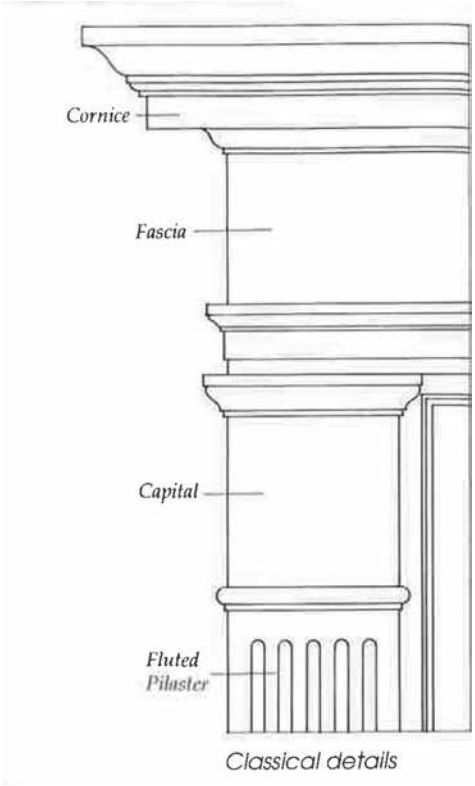


Fig. 6 Classical shop front details

Fascia

This is perhaps the most important element in the composition of a shop front. The fascia is the uppermost, and most visually prominent, element of the shop front's frame, and provides the hoarding upon which the name of the shop is generally displayed. In traditional shop fronts, the fascia itself should be made of timber, with hand-painted lettering (*see SIGNAGE below*).

Fig. 7 A traditional (canted) fascia

The depth of the fascia is crucial, and should be in proportion both to the other elements of the frame (including the stallriser and pilasters) and to the elevation as a whole. It should not be excessively deep (generally less than *c.*400mm), as not only are deep fascias not locally traditional, but they can be unduly visually dominant, leading to the shop front having a top heavy appearance.

The fascia should be kept well below first-floor window sill level. It may be aligned with the wall plane, or may occasionally be canted forwards, in order to make it more legible to shoppers.

Traditional fascias generally have a projection above in the form of a moulded cornice (often with lead flashing), which is both decorative and functional, giving a clear edge to the top of the shop front, and affording weather protection by throwing rainwater clear of the fascia itself. The fascia may also have a raised moulding or architrave below.

In some instances, a suitable retractable awning or canopy may be incorporated into the cornice of a traditional shop front. This might be plain, or display the name of the shop.

Stallriser

The stallriser provides the shop front with a conspicuous physical base. If the stallriser is excessively low (less than *c.*300mm) or non-existent, the frame of the shop front is likely to appear weak and less well anchored, and the elevation as a whole visually undermined by the apparent lack of a solid base. Additionally, the stallriser protects the frontage from knocks and splashes, and can also be used to increase security provision.

Traditional stallrisers may be left as exposed stone, or clad in timber (either left plain, or with a moulded or recessed panel finish). Locally, exposed stone stallrisers are a common feature of period shop fronts.

The stallriser should be topped by a sill substantial enough to provide a robust, visible base for the windows, and to throw water clear of the stallriser below. The sill should not generally project forward of any pilasters or the opening in which the shop front is installed.

Pilasters

Pilasters generally form the flanking uprights in traditional shop fronts, dividing shops from their neighbours or dividing longer shop fronts into a number of bays. They generally project proud of the shop front, and are terminated by a base or plinth at ground level, and topped with a capital, console, or a combination of the two at fascia height (the elements approximating with those of a classical column).

Where capitals are present, these typically 'support' the fascia; where consoles are present, these generally bookend the fascia (and may themselves carry a moulded projection or corbel; *see fig. 5*). If the fascia does not have enclosing console brackets, it should have returns back to the wall. The pilasters, bases, capitals and corbels may be variously moulded, with pilasters sometimes having fluted faces.

Like the other framing elements of a traditional shop front, pilasters should relate well in their proportions to the other principal elements of the frame, most notably the fascia and stallriser (with typical pilaster width in the range 150–250mm).

Windows and doors

Fenestration and doorway/s should relate meaningfully to the elevational context, particularly in terms of the character and composition of the elevation. The height of the window is generally governed by the size of the structural opening. The visual proportions of the glazing are generally greatly improved if it has a vertical emphasis (the individual panes taller than they are wide) – this can be achieved through the use of mullions to subdivide the glazing.

Fig. 8 Windows and doors should relate to the elevation

Large undivided sheets of glazing are not generally characteristic of traditional shop fronts. Smaller paned designs may be appropriate (for example, for early Victorian buildings); while larger paned designs may be appropriate for late nineteenth- or early twentieth-century buildings. The fenestration may vary across the window – with, for example, an area of smaller paned glazing in the top of the window above doorway height, separated from the more expansive display glazing below by a transom.

Doorways may be recessed in order to break up and relieve a shop front, and to afford shelter to those entering or leaving the shop. Doors, meanwhile, should also be considered as integral to the composition as a whole, typically with the height of the solid lower portion matching that of the adjoining stallriser.

17.7 D) MATERIALS AND COLOURS

Painted timber is the traditional material for shop fronts. It is versatile, durable, relatively cost effective and simple to maintain and refurbish. Materials such as aluminium and plastic (acrylic or

Perspex) are not generally appropriate for shop fronts in historical contexts, being conspicuously modern materials that tend to look out of place on historic buildings.

Fig. 9 The consistent use of colour

There is no standard formula for shop front paint schemes. However, restrained, dark colours often work well, as they can act as a good foil and strong frame for window displays. Lighter colours tend to appear more intrusive, look dirty or faded more quickly and need more frequent maintenance.

Corporate colour and branding, which makes little or no reference to local distinctiveness (indeed, is intended to impose a universal and unvarying brand message), may be inappropriate in historical contexts. However, even minor variations to corporate colour and branding can result in a greatly improved design, and a more meaningful response to a local context.

For further information on paint colours, including shop fronts, see: Design Guide 19: Traditional Paint Colours.

Signage

The purpose of shop front signage is primarily to inform shoppers of the name and nature of the business. It is important that this information and its display is carefully considered, proportionate and appropriate to its context.

Fig. 10 Signage should be proportionate and in keeping

On principal signage (the fascia and sometimes a hanging sign) the name and nature of the business is generally sufficient. Other information, including opening times and contact details can be displayed on much smaller secondary signs, on entrance doors or within windows. Excessive signage (including excessive text upon signage), can lead not only to a visually cluttered shop front, but also to a dilution of the message and branding being projected by that shop front.

Shop signs should be well designed in their own right, and relate meaningfully to the design of the shop front as a whole, and to the elevation/ building more widely. Lettering and text in particular should be carefully considered – in terms of their design, colour and size of typography – in order to meaningfully reflect the nature of the business, and

the character of the elevation/ building. Lettering on principal signs (both fascia and hanging signs) should be sign-painted on timber.

Projecting signs are not always appropriate in historic areas or as additions to historic buildings. Where they are acceptable, however, they should generally take the form of a traditional hanging sign, with no more than one for any given shop front. Traditional hanging signs should be sign-painted with a free-swinging board suspended below a wrought iron bracket. The size and proportions of the sign board should relate well to other aspects of the shop front, and be neither overly large, nor so small as to render the sign unintelligible.

Where an original bracket remains in place, this should be reused if possible. Otherwise, while a more elaborate wrought iron bracket may be appropriate in some traditional contexts, in most cases a simple bracket will be appropriate. In terms of position, this will vary from building to building, and will depend on such factors as the composition of the elevation, and the position of hanging signs on adjoining buildings. However, at or around first floor window height is typical.

Occasionally, where a fascia sign may not be appropriate (for example, in the case of a traditional residential property converted for retail use at a later date, but not having a proper shop front) the application of individual cut-out letters directly to the stonework may be appropriate.

17.8 F) LIGHTING, ACCESS & SECURITY

The illumination of town centres, pedestrian spaces and linking routes requires a co-ordinated approach to lighting, in order to ensure a safe and vibrant night-time environment and economy. Particular care will be needed in historic settlements, where inappropriate lighting, or levels of lighting, may be visually harmful. In Conservation Areas, and where the levels of street lighting and the light from shop windows is adequate for trade, illuminated shop signage may be inappropriate.

Where illuminated signage is deemed acceptable, the lighting should be carefully integrated as part of the overall design, being discreetly concealed rather than conspicuously added as an afterthought. Internally illuminated box fascias, individually illuminated or 'halo-lit' lettering, swan neck and projecting spotlights and fluorescent lighting generally appear out of place in historical areas. It is not usually appropriate to illuminate projecting or hanging signs unless they belong to a public house, restaurant or similar late-opening premises.

Access

New shop fronts should be designed in such a way as to accommodate the needs of elderly and disabled people. As a general principle, steps should be avoided and doors should be openable by people in wheelchairs. Frameless glass doors, as well as being generally inappropriate for period buildings, should be avoided, as they can present a hazard to the young and partially sighted.

In the case of Listed Buildings and sensitive historical areas, the needs of elderly and disabled people should be accommodated as far as possible, commensurate with the need to preserve the character of the building or area.

Security

When installing a new shop front, questions of security should always be taken into account. However, a measured approach needs to be taken, preferably as part of comprehensive approach to crime reduction in an area, rather than a piecemeal approach being taken by diverse business owners.

While the need for adequate security – and the attendant pressures of insurance – are recognised, it is important that the attractiveness and vibrancy of shops and shopping areas is not eroded by overbearing security measures. In general, security should entail discreet or invisible alterations only.

The use of external steel roller shutters should be avoided – particularly in Conservation Areas. Research suggests that solid shutters create a hostile environment, deterring public from an area and removing the natural deterrent of activity, thereby encouraging the problems they seek to prevent. Laminated glass or solid shutters behind the glazing are aesthetically preferable.

CCTV schemes can provide benefits over a wide area with minimal harm to appearance. Individual CCTV installations either within premises or on the exterior of premises may assist security.

17.9 G) WINDOW DISPLAY

As the majority of a shop-front will comprise the window display, the treatment of this aspect of its design is also important – both for the appearance and success of the shop itself, and for that of the street and wider area. Clarity and an absence of visual clutter are generally key ingredients in a successful window display: a few carefully chosen and well displayed items are likely to result in a more eye-catching and enticing display than one crammed haphazardly with goods.

Shop windows should not be obscured by a proliferation of stickers or posters. The internal illumination of the window display should also be carefully considered: subtle, focussed lighting of the goods being displayed can greatly enhance a window display; while harsh, overly bright or unvarying illumination can undermine it.

Fig. 11 Particular care should be taken with window displays

17.10 H) MAINTENANCE

Regular maintenance of shop fronts is vital if shops and retail areas are to remain attractive and vibrant. This is especially important in the case of traditional joinery and metal surfaces. Neglect will lead to deterioration and unnecessary expenditure on repairs or replacement. Most retail areas have empty shops. In order to avoid these properties detracting from the character of the street, owners should ensure that maintenance and repair is continued pending a change of tenant.

17.11 MODERN SHOP FRONTS

The same basic principles set out above in relation to traditional shop fronts also apply to modern shop fronts. In terms of context, it is vital that the composition of a modern shop front responds meaningfully to the elevation of which it is a part. The basic horizontal components of the traditional shop front – the fascia-plus-cornice and stallriser – should be respected in order to create a strong and meaningful top and base for the shop front and the display glazing.

The components themselves, however, might be handled quite differently. A common strategy is for the composition and the individual features to be simplified, in order to give a 'cleaner', pared-down aesthetic. This might involve the use of larger areas of glazing; less conspicuous framing of glazed areas; the omission or simplification of pilasters, consoles, capitals and mouldings; the use of untraditional colours, modern typography or internal lighting. Where pilasters are not used, the sides of the display glazing, and the lateral extent of the shop front, should be clearly defined by the outermost vertical framing elements of the shop front, in order that the edges of the shop front, and the frame as a whole, remain clearly discernible.

Whether a traditional or modern approach is taken, if the context is a traditional building the shop front should generally still be of timber.

Common failings in modern shop fronts include missing, badly proportioned or badly designed components, such as too-deep fascias (top heavy), too-low stallrisers (weak or undermined base), too-thin or missing uprights (weak framing), 'stuck-on' features, including fascias and mouldings; garish or cluttered signage, and inappropriate materials and lighting.

17.12 PLANNING CONTROL

Shop fronts come under planning control, and may need any or all of the following consents: Planning Permission, Advertisement Consent and Listed Building Consent (if the building is Listed).

As with all other forms of proposed development, it is strongly recommended that contact is made with the Planning Department before an application is made, in order to determine both what consents may be required, and whether or not the proposals are likely to be supported in their current form.

Design Guide 18

Street Scene & Public Realm

18.1 STREET SCENE & PUBLIC REALM

The finest streetscapes and public realms generally have the minimum amount of street furniture and surface markings. That which is essential is sited to reinforce an underlying sense of visual order. Improvements to streetscapes and the public realm should enhance local distinctiveness and reinforce those qualities which make an area special. The most modest schemes are usually the most successful in reinforcing a sense of place and making streets attractive for people. In order to achieve high quality streetscapes and public realms:

- Use a townscape analysis to identify the visual, spatial and historical qualities that make an area special;
- Observe and respect local detail in surfaces and street furniture;
- Limit formal design to formal spaces. Informal or vernacular spaces should follow their functional tradition;
- Provide for regular ongoing management and maintenance.

High quality streetscapes and public realm are not reliant merely upon built elements, but require the careful use of softer or natural elements too, including trees and planting, open space, Green Infrastructure, water courses and public rights of way. The use of street trees and vegetation blocks, for example, can 'soften' and make more appealing and legible an otherwise hard urban landscape.

18.2 Street management

No single authority or agency has control over, or responsibility for, the presentation and management of the street. The impact of roads and traffic on the historic environment can be minimised if works are coordinated.

Street audits, carried out jointly by Highways and urban design/ conservation staff, will identify surviving historical materials and details. Investing in quality will provide enduring value for money. If resources are limited, doing less but of a high standard is better than compromising by doing more of a lesser quality. However, all investment must be protected with adequate provision for ongoing maintenance.

See also: Historic England 'Streets for All' guidance.

18.3 Ground surfaces

Paving forms the foreground of almost every street scene. Quality in the design and construction of footways and street surfaces is vital to the character of an area. It provides the context within which the buildings are seen.

- Relate ground surfaces to the local context;
- Keep paving simple and avoid discordant colours;
- Maintain and restore historic paving and detail such as kerbs.

York stone paving slabs and setts used as part of a streetscape enhancement in the heart of Woodstock Conservation Area.

The paving slabs are laid using a traditional bonded pattern found historically throughout the District (as here in Witney).

Stone kerbs are flush with adjacent road surfaces which feature stone setts. Concrete block paviours had bonded yellow lines applied before laying.

York Stone flag footway with a flush adjoining area paved with bonded Staffordshire blue paviours.

Traditional vehicle crossover surfaced with an irregular grid of stone setts; and a modern interpretation using concrete block paviours.

Grass verge with a simple stone kerb and gutter. A traditional cast drain cover is set within the asphalt road surface.

Traditional side road with simple full width tarmac surface shared by vehicles, cyclists and pedestrians: an uncluttered streetscape with minimal road markings.

Simple pedestrian/ cycle route with informal alignment and landscaped edges: the surface is bituminous with embedded aggregate.

New paved surfaces using second-hand and new Staffordshire blue paviours.

18.4 Other traditional surfaces:

Pebbles embedded in lime mortar base; and pitched limestone paving.

New surface treatments: footway and flush road surfaces using coursed and bonded concrete paviours and aggregate embedded bituminous road; paving bordered by wood chip and planting.

18.5 Traffic management

Traffic calming measures should be fitted with sensitivity into the street-scene, as though they were part of the original design of the area. Adopt a minimalist approach. Physical measures should involve minimal visual interference with the established street-scene.

18.6 Street scene and the public realm

The streets and roads of West Oxfordshire are increasingly cluttered with a proliferation of traffic signs, bins, bollards, guard rails and street furniture. This results in streetscapes that are both unsightly and lack character. Coordinated action is needed to reverse this decline.

Retaining historic features keeps the streets' individuality and helps create a sense of place. It can contribute to regeneration: well-designed, well-ordered and well-maintained streets are an expression of a confident and caring community.

Rural environment dominated by intrusive signage which is too high and projects over the hedgeline; unnecessary multiple footway. Footway appearance dominated by rumble strips and painted surfaces.

18.7 Street furniture

Retain historic street furniture which reinforces local character, but identify and remove superfluous or redundant items.

Minimise signage, and locate signs on existing lamp posts or buildings, or at the back edge of the pavement; use a single dark colour for all items.

Reduce guard rails to a minimum and use designs that relate to the townscape or locality, such as traditional post and rail fencing.

Avoid standardised lighting and choose the design and light source most appropriate for the area. Care should be taken to ensure that well-used routes are well lit and feel safe. However, excessive, inefficient and intrusive illumination, both from street lighting and buildings, can cause undue light polution and reduce dark skies.

Wherever possible, eliminate the need for bollards through good design; where unavoidable use designs and materials appropriate to function and context.

18.8 Boundary treatments

Boundary treatments should be carefully chosen to reinforce local character. Metal railings were a common feature during the C19 and can be appropriate to modern urban settings.

Traditional parkland fencing is well-suited to the edge of farmland or open land.

Traditional walling types can be adapted to modern urban settings. Note parkland-style tree guard.

Other types of boundary feature, including hedging, willow hurdles and slatted fencing, are particularly well suited to the rural context.

Design Guide 19
Traditional Paint Colours

19.1 TRADITIONAL FINISHES

In West Oxfordshire, traditional finishes for external timber fall into three general categories:

1. **Paint Finishes** – on softwood and hardwood doors, windows and door frames from the C18 to the present day;
2. **Pitch and Tar Finishes** – weatherproofing with a dull black appearance, mainly on frames and boarded surfaces of agricultural buildings;
3. **Natural 'bleached' surfaces** – weathered patina of grey or silver on oak, elm, chestnut.

19.2 COMPATIBLE MODERN FINISHES

Where finishes for modern work are required to match existing work in, for example, Conservation Areas; or where alterations to existing traditional buildings are to take place, the following approaches are recommended:

Paintwork – white/ off-white or other pale colours. 'Burford Green' (BS 12 B 17 or similar). There are specific guidelines for Great Tew and informal guidelines for Burford. For front doors and shopfronts, dark primary colours are recommended.

Dark Finishes – (to match the 'pitch/ tar' tradition), 'Ebony' stains such as those by Dulux, Jotun or Sigma.

Light Finishes – (to match 'bleached' timber tradition), 'Light Grey' (Ref. 625 by Jotun), or a light wash of black external stain diluted with white spirit, to give a pale grey colour.

NB The above recommendations are not exhaustive and suitable alternatives exist. However, there is NO traditional precedent for the use of modern red/ brown stains widely available in DIY superstores. Their appearance is quite unlike anything known in the traditional palette. These materials are not suitable for use on traditional buildings or in Conservation Areas unless part of an approved design approach.

19.3 RECOMMENDED SHOP FRONT COLOURS

The following colours have been, or could be, used with success in this context.
(All numbers refer to British Standard 4800)

Greens:

14 C 40 Conifer, 'Trust Green'
14 C 39 Hollybush
16 C 45 Scarab
12 C 39 Orchard
10 B 17 Mistletoe
12 B 17 Willow, 'Burford Green'
12 B 21 Moorland
12 B 25 Chive
12 B 29 Juniper

Reds:

04 D 45 Monarch
02 C 39 Plum
02 C 40 Loganberry
20 C 40 Midnight (limited situations)

Blues, Blacks, Browns, Greys, Buffs and 'broken' Whites:
all can be used with confidence, in particular:

08 B 15 Magnolia
08 B 17 Sandstone
08 B 21 Antelope
08 B 25 Beaver
10 B 17 Mistletoe
10 B 21 Lizard
10 B 25 Turtle
10 B 29 Ironstone

19.4 PAINT COLOURS IN GREAT TEW

In order to preserve the picturesque appearance of this historic estate village, the paint colours used on all buildings in the Great Tew Conservation Area are subject to Planning Control. However, Planning Permission is NOT required for the use of the following colours:

Joinery, doors, gutters and downpipes:

'Buff' or 'Fawn', British Standard colours 08 C 35, 08 C 37. 'Bamboo', 'Butterscotch', 'Madras'.

Windows:

'Broken' or 'creamy' whites, British Standard colours 08 B 15, 10 B 15, 10 B 31. 'Magnolia', 'Gardenia', 'Buttermilk', 'Lime White', 'Old White'. (Brilliant white should not be used.)

Ironwork, gates and fences:

'Invisible Green', British Standard colours 12 B 29, 14 C 40, 'Holly', 'Conifer', 'Juniper', 'Trust Green'.

Reference: General Development Order 1077 (as Amended), Article 4 Direction 19.6.87

Design Guide 20
Public Art

20.1 PUBLIC ART

The term 'public art' refers to artists working in the built, natural, urban, rural or virtual environment. Public art is an expression of cultural wellbeing and engages people with the economic, social and environmental development of places. It can be permanent or temporary and may include: the installation of artworks in the public realm; the involvement of artists in the planning and design of buildings and spaces; and artists working creatively with communities in order to explore and articulate issues of local significance.

20.2 The Council's Public Art Policy

The Council has developed a Draft Public Art Policy, informed by the National Planning Policy Framework (NPPF, 2012), policies EH3 (*Public Realm and Green Infrastructure*) and OS4 (*High Quality Design*) of the emerging Local Plan 2031. Draft Public Art Strategy:

The Council will require developers to support the provision of public art projects in accordance with this Public Art Policy and the Council's Public Art Strategy. In general terms, this will comprise either:

- *the funding, management, development, implementation and maintenance of public art projects which are part of developments located within Strategic Development Areas and major development sites; or*

- *a financial contribution towards the provision of public art projects located outside Strategic Development Areas and major development sites and throughout the District.*

The NPPF recognises that Cultural Wellbeing is part of achieving sustainable development, and includes Cultural Wellbeing within the twelve core planning principles which underpin both plan-making and decision-taking.

Fig. 1 Mosaic at Cogges Neighbourhood Centre

The NPPF states that the planning system should: *take account of and support local strategies to improve* (…) *cultural wellbeing for all* (paragraph 19).

The Public Art strategy applies to public and private sector developments, usually those which are large-scale and include publicly accessible buildings and spaces.

20.3 Strategic Development Areas in Witney and Carterton and major development sites

The Local Plan currently identifies four Strategic Development Areas in Witney and Carterton. These areas will contain most of the new housing to be built in the District between 2013 and 2029.

The development areas will also include schools, office and industrial buildings, shops, community and leisure facilities, public realm and green infrastructure and transport provision.

Fig. 2 Horses at Carterton Country Park

In addition, the Council recognises that major development sites could be established by the Council and developers which provide similar types of physical and social infrastructure and activities to those found in the Strategic Development Areas.

The areas and sites will provide significant opportunities for public art projects which respond to the priorities and policies of the Council Plan and the Local Plan. For example:

- *public art projects integrated within the design of building and spaces will support the protection and enhancement of the built and landscape environment and the provision of high quality design; and*

- *public art projects which engage existing and new communities and enable them to celebrate and/ or investigate local identity and/ or local issues will support social development, cohesion and wellbeing.*

Due to the size of the areas and sites, public art projects will be secured via Section 106 planning obligations and planning conditions. To achieve this, the Council's Arts and Leisure Team and Planning Team will support developers in undertaking the process which is summarised below:

- *The appointment of external public art expertise (public art consultants/ curators) by developers to prepare public art plans for the areas and sites;*

- *The submission and approval of public art plans as part of either outline or full planning applications for the areas and sites;*

- *The appointment of artists by developers (using their public art expertise) to develop and implement the public art projects identified within the public art plans for the areas and sites;*

- *The Council's approval of the conceptual and material details of the public art projects identified within the public art plans as part of outline, reserved matters and/ or full planning applications submitted by developers for the areas and sites;*

- *The agreement of Section 106 planning obligations and planning conditions to secure the implementation and maintenance of the public art projects for the areas and sites.*

20.4 What can the money be spent on?

- *Commissioning of artists or craftspeople to participate in the overall design of the development or features within the development;*

- *Commissioning of art works;*

- *Commissioning of artists to create community events;*

- *Purchase of materials for public display;*

- *Consultation with the local community and relevant organisations;*

- *Dedication of space for the public exhibition of works of art;*

- *Transportation, installation and maintenance of the art work.*

NB Early consultation with the Council is strongly recommended prior to a planning application being submitted.