Part E:

Architectural Style, Construction and Materials

Contents

This part of the Development Requirements SPD provides further detailed guidance on the interpretation of the following Core Strategy policies, as appropriate:

- CS.8 Historic Environment
- CS.9 Design and Distinctiveness
- CS.15 Distribution of Development
- CS.20 Existing Housing Stock and Buildings

https://www.stratford.gov.uk/corestrategy

This Section of the SPD provides advice on how applicants can ensure that proposals achieve high quality design in new development.

It will be used by Stratford-on-Avon District Council to help reach decisions on whether to approve or refuse planning applications. Making sure that applications comply with the guidance contained within SPD will make it easier for the Council to grant planning permission. The Council's planning policies are set out in the Core Strategy, available at www.stratford.gov.uk/corestrategy

Key words or terms which appear throughout the document are included in the Glossary.

E1. Introduction

Good design is indivisible from good planning and the principles in this section will relate to applications for the smallest house extension right through to mixed-use schemes for hundreds of homes. The design principles set out in this guidance help ensure the appropriate use of materials and methods of construction, reflecting and enhancing local distinctiveness. It should be read in conjunction with other parts of the SPD, in particular:

Part A: How to Achieve Good Design
Part D: Design Principles
Part K: Shopfronts
Part L: Agricultural Buildings and Trees

This part of the Development Requirements SPD sets out a number of design principles that should be followed when designing new development. Cross reference is made from each design principle to the 9 key design criteria set out in Core Strategy Policy CS.9 demonstrating how the design principle contributes to the achievement of good design.

E2. General Principles

There is a diversity of architectural styles, designs and materials across the district. These reflect both changes in designs over time and changes and advances in the use of materials. That process of change is continuous and proposals will not be rejected if they reflect such advances. Whilst continuing to display the simplicity of detail which characterises most of the District's properties.

There are four broad principles that should apply to details and materials in Stratford-on-Avon:

1. Details should be simple;
2. Within appropriate limits, there should be a variety of details from house to house;
3. The range of details should be based on what is appropriate to the settlement and the position in the settlement, and should be fully justified;
4. The limits should be based on what is appropriate.

Within the District there are three predominant types of traditional construction:

- timber frame;
- brick;
- stone.

There are four predominant types of traditional roof material found within the District:

- plain tile;
- Welsh slate;
- straw thatch;
- stone tile.

The typical associations of roof materials with the three main construction types are:

- with timber frame: thatch and clay tile roofs;
- with brick: clay tile and slate roofs;
- with stone: thatch, stone tile, clay tile and slate roofs.

Fig. E1 - Photo of close studded timber framed house with rendered infill panels in Long Itchington, Feldon area.

Fig. E2 - Photo of a brick house with rubbed brick flat arch window heads in Stratford on Avon.

Fig. E3 - A house built in Cotswold Limestone, Compton Scorpion.

The character map of the District identifies the areas in which each construction type is commonly found. Distinct sets of details have developed for each material and, in the case of stone, for the main types of stone found in the District. Further information on the district's character areas may be found in Part A: Achieving Good Design.

- Blue Lias;
- White Lias;
- Cotswold;
- Hornton Marlstone (aka Ironstone).

Some of the variations in details are illustrated in the examples below:

Fig. E4 – An example of Blue Lias (left).

Fig. E5 - Hornton Stone wall (stone).

Cotswold stone

Cotswold stone varies in colour depending on the location. It is recommended that expert advice is sought when selecting the appropriate stone for future development proposals.

Fig. E6 - Brick (with Flemish Bond pattern using buff brick for the 'header' and orange for the 'stretcher')

Fig. E7 - Photo of slate tile (left)

Fig. E8 - Photo of plain clay tiles (right)

Other materials

Modern timber or steel construction is encouraged, with a cladding appropriate to the settlement.

Render

Caution should be exercised in the use of render. The acceptability of render is dependent on the character of the specific village and location within it. The type of render, roughcast or smooth and its colour need careful consideration to fit with the context of the building. Partial render of single dwellings will not normally be appropriate but the mass of larger buildings can often be successfully broken up by a series of rhythmic changes of the materials. It may be appropriate to use fully rendered buildings as a design statement on key corner plots or to frame terminal vistas.

Mixing materials

Extreme caution should be exercised in combining different external materials in the same building. In general, there should be one principal external material for the walls with complimentary secondary materials for design features. The mass of larger buildings can often be successfully broken up by a series of rhythmic changes of the materials.

Vents and service boxes

All vents and service boxes to be included in a proposed building should be indicated on the submitted drawings. All such items should be as inconspicuous as possible.

E3. Timber Frame Construction

Traditional structural timber framing is encouraged in the appropriate locations within the appropriate settlements. Modern structural timber framing is also encouraged, using cladding appropriate to the location. Mock timber framing will not normally be acceptable.

E4. Brick Construction

The characteristic brick colour in the District varies from an almost pink buff to a fairly strong terra cotta orange. Claret and other darker reds, browns, ochre or beige buffs, greys and blues are unlikely to be acceptable unless for good design reasons.

Use of contrasting detail brick is not common in the District and should be done with restraint. Detailing is most often done with the same brick as the main wall, as is the case in the examples shown here. If contrasting bricks are used, the difference in colour and tone should be minimal. An example found relatively frequently in the District is Flemish bond walls with buff headers. Another example is the use of finer quality bricks for gauged brick arches. Specials of blue brick are sometimes used for window cills. Plinths on brick walls are almost never found in the District and should not be used.

Fig. E 9 - Gauged brick flat arches on a house in Henley-in-Arden, Arden area. The openings are vertically aligned and the second floor windows are smaller than the first floor windows.

Fig E10 - Window with a segmental arch head. Note the arch is made up of headers on edge, a detail very characteristic of brick areas within the District.

Fig. E11 - Cottages with windows set just below the top plate in Old Town, Stratford-upon- Avon. The casement windows shown are flush closing as opposed to 'storm proof'.

Fig. E12 – An example of windows with render used to create the effect of stone lintels. The windows have stone cills and sliding sash frames.

Window and door openings in brick constructions

In most cases openings should be vertically aligned, with openings over openings. Vertical alignment is particularly important on small facades. On smaller houses and cottages, first floor windows are often set just below the eaves line with only the top plate or several courses of bricks over the opening. Most window openings are vertically oriented but there is considerable variation including square and some horizontally oriented. The most common horizontally oriented opening is a three-light casement with vertical lights divided by mullions. The proportions of the lights are often about 3:2, height-to-width.

As a general rule, window and door openings must have visible means of support for the material above. The most common traditional solutions found in the District are segmental arches, flat arches or stone lintels. In some cases, flat arches or lintels are rendered or stuccoed to look like stone.

E5. Stone Construction

Walls

There are four main building stones found in Stratford-on-Avon District: Cotswold Limestone, Hornton Marlstone, Blue Lias and White Lias. The terms used to describe the source beds of these building stones are Oolitic Limestone ('Cotswold'), Marlstone Rock Bed ('Hornton' or 'Ironstone') and Langport Member Limestone ('White Lias'). The bed for Blue Lias is called simply Blue Lias. All these stones are members of the same family (Jurassic and Triassic Limestones) but due to their specific characteristics, they tend to be cut and laid in somewhat different ways.

In general, the most common method of building with all four stones is coursed, squared rubble, usually with quoins. In virtually all cases there is variation in the course depth, the quoins are larger than the rubble making up the wall and the coursing runs through to the joints between quoins.

The principal difference between methods of laying is generally due to the size of individual stones. The size depends on nature of the stone. Blue Lias is one of the most variable, both in colour and size of rubble. This leads in some cases to a distinctive pattern of wall, with alternating courses of larger, blue and smaller yellow-grey stones, often without quoins.

Fig E12 – A Cotswold stone house.

Cotswold and Hornton Stones are also quite variable in colour. Some Cotswold stones have high iron content and can, in colour, look similar to 'Hornton Ironstone'. There is, however, a distinct difference in the structure of the stone and therefore in the way it weathers. Cotswold Limestone is Oolitic and considerably harder. Marlstone is a Liassic stone and quite soft. Care must be taken, therefore, in the selection of stone. Most villages are predominantly one stone or the other but attention should be paid to differences within villages. While there may be one predominant wall material, in some cases there are distinct areas within villages with different predominant materials.

Established patterns of mixing types of stone in one building may be followed. In some areas, for example, Blue Lias is used for the body of the wall and Hornton Stone for dressings.

Window and door openings in stone construction

Because stone and brick are similar building materials - small squared units bound together with mortar - similar details are used with both. Thus, as with brick, in most cases of stone construction, openings should be vertically aligned with void over void. Vertical alignment is particularly important on small facades. On smaller houses and cottages, first floor windows are often set just below the eaves line with only the top plate or several courses of stone over the opening. Most window openings are vertically oriented but there is considerable variation including square and some horizontally oriented. In horizontally oriented openings, individual lights are vertically oriented and divided by mullions. The proportions of the lights are often about 3:2, height-to- width. Probably the most common horizontally oriented opening is a three-light casement.

Fig. E13 - A Hornton stone farmhouse with a three light window, stone mullioned window. The window has flush head, jambs and cill with a label or hood mould above the head.

As a general rule, window and door openings must have visible means of support for the material above. The most common traditional solutions found in the District are segmental arches, flat arches or lintels in squared rubble or dressed stone as well as oak lintels.

E6. All Forms of Construction – Windows & Doors

Cills

A range of cills are found in the District and preferred forms include stone, stone tile and plain clay tile. In the case of brick, special bricks such as single cant on edge or plinth stretchers are preferable. Wood may also be used but only of sufficient size and combining a stub cill and sub-cill. Projecting integral cills are unlikely to be acceptable.

Window frames and door leafs

The window frame should normally be set back from the face of the building to give a shadow line. The presence and design of glazing bars or lead cames should be suited to the opening size, the position of the window in the building and the overall form of the house. If casements are proposed, they should normally be traditional or modern flush closing as opposed to 'storm proof' designs which have projecting external flanges.

The type of door proposed should suit the building type and the position of the door within the building. Simple vertical plank doors are generally suited to smaller 'cottage' type buildings and moulded panel doors to larger houses. Glazing on doors should follow the same pattern as the windows.

E7. All Forms of Construction – Roofing

Verges, eaves and ridges

The most common verge detail is trim with a tile or slate under cloak. Barge boards, clipped and boxed eaves should be avoided as should decorative ridge tiles. Stone-coped gable parapets are normally only used in stone construction.

Where details such as exposed rafter feet are proposed, they should be a genuine expression of the construction of the building and not a cosmetic decoration. See Fig. E18 for further information.

Fig. E14 - Examples of 'wet verge' using mortar to secure the roof tiles.

Fig. E15 - A stone–coped gable parapet of Hornton stone with a corbelled verge/eaves junction known as a kneeler.

Fig. E16 – Dentilated brick eaves made up of a projecting stretcher course, alternating projecting headers and a further projecting stretcher course.

Fig. E17 – A trim verge of brick with stepped projecting header corbelling and a half-round ridge tile.

Fig. E18 – Plain eaves with exposed rafter feet on a brick building.

Chimneys

Chimneys are most commonly located at the main ridge. Very frequently they are found on the gable ends in which case they are most often flush, with an internal breast. Most are rectangular in plan, oriented at right angles to the ridge. Virtually all chimneys have a cap, corbelled weathering and chimney pots.

Fig. E19 - Examples of chimney in traditional and new dwellings.

Dormers

Caution should be exercised in the use of dormers. In many villages they are not common features. In cases where they are appropriate, the number should be limited to avoid clutter. The position of the dormer within the roof should be either just above the eaves (between the top plate and lower purlin), mid-way up the roof (between purlins or above a single purlin) or, exceptionally, with the cill of the dormer below the eaves level. In the latter case, care must be taken with the position of rainwater pipes. In all cases the dormer ridge should be well below the main roof ridge.

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Fig. E20 – good and poor examples of dormer windows.

The dormer should be smaller in height and width than the window openings below and, as far as possible, should be vertically aligned with them. Cheek walls should be as narrow as possible and faced in either lead or render as should the gable. The eaves of the dormer roof should be below or at the same level as the window head, not above. Simple gabled dormers are the most common. Hipped dormers are acceptable in some settlements. Flat roofed dormers with cornice moulding may be acceptable on buildings in a Classical idiom.

Large dormer windows, particularly large flat roof dormers, may possibly be acceptable where out of public views on rear roof slopes, outside of conservation areas.

Rooflights

Like dormers, rooflights should be smaller in height and width than the window openings below and, as far as possible should be vertically aligned with them. Ideally they should be set flush with the roof surface.

Other roof extensions

Other roof extensions should normally fit in with existing roof lines. Depending on the architectural style of the original building, a pitched, hipped or gabled roof will almost always be more appropriate than a flat roof. A bat survey will usually be required if the proposal involves substantial work to roof spaces. Where a roof ridge needs to be raised in order to allow increased headroom in the roof space, careful consideration should be given to its impact on the street scene and neighbours. Where a roof is raised, its pitch should reflect the original, or the roofs of nearby buildings, as appropriate.

E8. All Forms of Construction - Porches & Canopies

Canopies and porches are not characteristic of many of the building types in the District though in many cases they have been added. Care should therefore be taken in applying them to new designs. One of the most common types of canopy is a simple double pitch or lean-to roof on brackets. Less commonly the canopy is supported on posts. Another common type is a flat, moulded projection on brackets. Cheek walls and fully enclosed porches are rarely found and should be avoided as should hipped roofs. Porch roofs should not normally be linked to bay windows or projecting garage roofs as this is not a traditional design feature in most areas of the District. Porch roofs should, where tiled, have small sized tiles. GRP tile effect on porch roofs and windows are not acceptable.

Fig. E21 - A flat canopy on brackets.

Fig. E 22 - Lean to canopies with brackets, Welford-on-Avon, Avon Valley. The roof material is inappropriate in this case as smaller roof tiles are needed.

Fig. E23 - Double pitched canopy, Cotswold area.

Fig. E 24 - Double pitched canopy.

E9. Green Roofs and Walls

Green walls and roofs are simply walls and roofs that have been planted either completely or partially by vegetation. They can be incorporated onto new and existing buildings. They provide a wide range of significant benefits, including:

- Biodiversity – green roofs and walls provide valuable wildlife habitats and can significantly enhance biodiversity, supporting a variety of plants as well as providing nesting and foraging habitats for invertebrates. They can play a useful role in connecting existing habitats and supporting rare and protected species;
- Aesthetic and amenity value – through incorporation of colourful foliage, flowering plants or accessible amenity areas. However, provision of amenity space (e.g. for food production and relaxation) on green roofs must be balanced against provision of space for wildlife;
- Sustainable drainage – green roofs can form a key part of SUDs. They reduce the quantity of runoff by holding water and encouraging its release through evaporation. They also improve the quality of run-off by filtering contaminants;
- Thermal efficiency/insulation – green roofs and, to a lesser extent green walls, can help to insulate buildings, reducing energy demand and associated carbon emissions;
- Reducing the 'urban heat island' effect – providing green roof and wall cover can help to lower surface temperatures and cool dense urban areas;
- Managing air quality – vegetation on roofs and walls can help to improve air quality through absorption of carbon dioxide, some air pollutants and dust;
- Reduce noise levels – green walls and roofs can help to dampen noise levels;
- Cost savings – green roofs and walls can increase the life expectancy of a roof or wall by protecting the building fabric from temperature variations, UV radiation and other climatic factors. The other benefits described here can also provide further cost savings;
- Enhanced sales or rental value - green roofs and walls may enhance the sale or rental value of a development by increasing the aesthetic appeal of a property, reducing energy costs and demonstrating sustainable design and social responsibility.

Green roofs can be fitted to any flat or gently sloping roofs. Green roofs types vary from extensive to intensive types, depending on the depth of substrate (growing medium) and the type of plants that are supported.

The main types of green roofs are:

Intensive roofs – these roofs are designed to allow access for people. They are likely to have deep substrates that can support trees and shrubs, as well as providing accessible areas. These roofs require higher levels of maintenance.

Extensive roofs – incorporate lightweight substrates which support a range of species. They range from shallow sedum mats, which do not offer significant biodiversity or water holding benefits, to deeper substrates which can support valuable biodiversity.

The Council's preferred specification is biodiversity based extensive substrate green roof with a substrate of depth of 80-150mm. These roofs support a greater range of plant species and in turn wildlife species and have greater water holding benefits (green roofs can attenuate up to 60% of runoff).

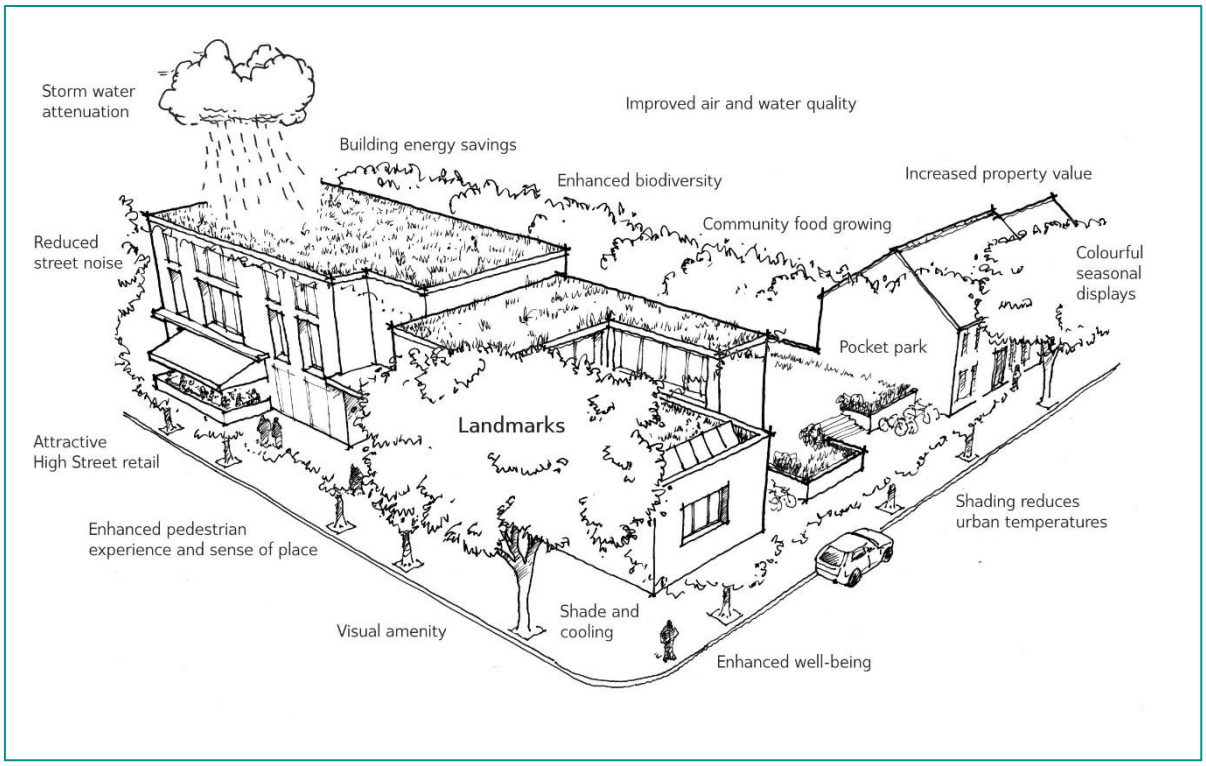

Fig. E25 - Shows the numerous benefits of green roofs.

Design considerations

It is important that, where proposed, green roofs form an integral part of the design of new buildings and are designed in from an early stage because the increased loading associated with thicker substrates may have implications for structural design. Loadings will vary for different types of green roof, for example starting at 80-150kg/m2 for extensive substrate based roofs.

Locational factors such as shading from surrounding trees should also be considered at the start of the design process to ensure the roof specification and planting schedule are appropriate to the context and any related management requirements are considered.

Whilst the Council encourages green roofs, it is acknowledged that they may not be appropriate in all circumstances, for example, in situations where roof space is fulfilling other functions such as amenity space.

Green walls

Green walls generally involve the use of climbing plants to create a living cladding system.

The two principle types are:

Climbing wall plants – these can grow directly on a wall (especially those of brick and stone where the porous surface allows them to attach more easily) or be supported by trellises or steel cables against a wall. Commonly used species for wall-greening are ivy, Russian-vine and Virginia-creeper.

Container systems - plants are grown in large irrigated containers at height which allow them to grow/hang down.

While simple green walls using climbing plants have been widely used for centuries, more extensive green wall systems are developing all the time. Innovative systems now available include walls constructed from trays of plants that have been pre-grown off-site and slotted together on a steel frame, then connected up to an internal irrigation system.

Fig. E26 - Living/Green Wall in Bell Court Stratford-upon-Avon.

The most suitable approach to creating a green wall for any particular development or site is likely to depend on the prioritisation of functions it is intended to perform (e.g. biodiversity, amenity, sound insulation) and the possibilities that the specific space affords. For further details on the variety of green wall systems and design options available and what might be most suitable, see further information below.