The Cheshire East Borough Design Guide

A Supplementary Planning Document

Adopted

2nd May 2017

Volume 2: Residential Guidance - Creating Quality

e*SCAPE urbanists

Cheshire East Council

Quality Checked*	e*SCAPE urbanists
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Contents:

Useful Reference:

Introduction

01 Volume 2 of the Cheshire East Borough Design Guide provides the practical guidance to implement the best practice approach to design set out in chapter iii of Volume 1.

02 It is broken down into 6 topic chapters for residential design. At the end of each is a checklist to assist users in reviewing development proposals, supported by case studies illustrating some of those particular design issues being implemented positively.

03 The checklists are there to assist a design dialogue and to act as prompts through the design process. Their purpose is to also enable an assessment of the acceptability of proposals either informally at pre-application or as part of the consideration of a planning application.

04 New developments may not be able to achieve positive outcomes for all of the criteria. However, designers are encouraged to minimise the number that cannot be adequately addressed. Certain of the criteria are deemed essential to delivering a high quality scheme and they are marked as 'M' within the tick box. If a scheme does not perform well in relation to any of those essential criteria then it should be re-designed or refused permission.

05 An effective system that could be used is the red amber green system, as used in Building for Life 12. The aim would be to eliminate reds for all essential criteria and to minimise them generally, whilst maximising the number of greens. If amber is achieved for an essential criterion then the design should be revisited to seek to address that.

06 Once the local, more detailed, checklist has been completed it should enable the user to determine whether red, amber or green should be assigned to the Building for Life 12 criteria set out at the bottom of the page.

07 The performance of the development in design terms will be one of the material considerations that will be weighed in the planning balance. However, the issue of design quality will carry considerable weight having regard to the requirements to achieve high quality design set out in the NPPF and the Local Plan.

Green Infrastructure & Landscape Design Checklist:

The Landscape Strategy demonstrate a thorough understanding of its context?

Does the Landscape Strategy demonstrate a thorough understanding of its context:

What landscape character been taken account of:

What evaluation of exiting landscape features been done? e.g. physical & ecological; their retention, protection and enhancement as appropriate:

What landscape designations been respected; e.g. public rights of way, SSSI, TPOs:

Do the hard materials chosen reflect the vernacular as identified in part one? If not what is the justification for the proposed materials:

Are the planting species appropriate to the character area, the street hierarchy and the scale of space available:

Is the quality of all materials proposed appropriate in relation to the design intent and setting:

Have Landscape mitigation proposals been provided where appropriate:

Do the proposals have a green and blue infrastructure network integrated into the layout which connects out to the wider green infrastructure:

Have CEC's strategic GI goals been addressed within the proposal:

Has there been the adequate provision for maintenance and management of the scheme following completion:

Has the development address BRE12?

Therefore does the development address:

Q5 Character:

Q6 Working with the site and its context::

Q7 Creating well defined streets and spaces

Q11 Public and private spaces

v. Sustainable Design Checklist:

Has a sustainable design strategy been set out in the D&As or separately?

Is the site well located in terms of spatial sustainability?

Is the site well located adjacent to an existing settlement with facilities which can support growth:

Is the site of a size that it requires on-site facilities and a greater mix of uses to ensure its sustainability:

Is the site well connected to encourage walking, cycling and use of public transport facilities:

Does the development deliver passive aspects of sustainability?

Does the orientation of the layout exploit passive solar gain, utilising topography and existing features to maximise energy use:

Do the landscape proposals include for the use of trees and planting to offer shade and cooling of the public realm, open spaces and play areas:

Does the design properly consider provision for cyclists, including storage in the public realm and within homes:

Does the development deliver active aspects of sustainability?

Has active sustainability been adequately considered within the design of the buildings:

Has the Passivhaus approach been adequately considered:

Has a 'fabric first' approach to thermal performance been adopted by the developer on the development:

Has energy management been considered in the proposals i.e. maximising use of natural light, thermal mass, efficient appliances/boilers and smart metering:

Is the site of a size to develop opportunities for district heating and has that been adequately considered:

Have other micro-generation systems been considered i.e. Solar thermal or electric, ground/air source heating and or biomass CHP systems etc:

Is water conservation tackled in terms of efficient sanitary ware, drought tolerant landscapes and rainwater harvesting etc.:

Have the selected materials come from a sustainable source, preferably a local sustainable source:

Do the proposals ensure working from home is achievable in terms of the internal layout of the house types and the supply of Superfast Broadband:

vi. Quality of Life Checklist:

Has Quality of Life been properly addressed in the proposals?

Has a good quality design been produced as set out in previous chapters of this guidance:

Do the proposals offer opportunities for active recreational activities, formal or informal:

Will the development have a strong identity, thus ensuring residents have a sense of belonging:

Have the proposals developed a strong green infrastructure network, and if so, is there a good mix of recreational uses included within it:

Have spaces been developed within the public realm to allow residents to meet casually and aid the development of community cohesion:

Will the development of this site contribute to the local economy in term of jobs created and support for existing businesses:

Does the internal layout of proposed homes comply with the Technical Housing Standards - Nationally Described Space Standard, providing adequate 'family space' and storage:

Does the site benefit from good access (locally and regionally) to creative and cultural facilities and events:

Do the proposals actively promote sustainable living to potential residents:

Does the Rapid Impact Assessment demonstrate there are no detrimental health effects by developing this site:

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i. Working with the Grain of the Place

i|01 Working with the grain of the place or its context means using the character and setting of the area positively to influence the design as it progresses.

i|02 Using context is a crucial starting point for designing a distinctive place.

i|03 A thorough understanding of context only comes from visiting and getting 'under the skin' of a site, its setting and surrounding area. An appreciation of a settlement's evolution in terms of both human and natural influences will aid in an understanding of the layers of history and how that settlement has evolved. Such an appreciation will inform the design process consciously and sub-consciously.

i|04 A design developed using a settlement's indigenous character will strengthen local identity and aid the development's integration into the townscape/ villagescape and wider landscape.

i|05 Working with existing site features identified during the site survey, whether it be topography, trees, hedgerows, existing buildings, watercourses, water bodies, views to landmarks (i.e. a church spire) or retention and framing of panoramic views into, through or out of a site not only enhances identity but informs character and grounds the development in its setting.

i|06 This level of appreciation goes beyond the site to the surroundings. Understanding how the site can be knitted into the wider urban and rural form is crucial to ensure the proposals are not incongruous within the town, village or landscape in which they are set.

i|07 Looking at the adjoining urban grain, building forms, massing, public transport nodes, uses, connections, materials, green infrastructure/landscape elements and respecting footpaths/cycleways and other forms of linkages and relating proposals directly to them will ensure a sympathetic integration between existing and proposed.

i|08 Within this contextual assessment it is important to consider the potential impacts of development upon heritage assets and their settings including archaeology which will require separate assessment as part of the D&As, a heritage assessment, or an archaeological impact assessment (either alone or as part of Environmental Impact Assessment (EIA) depending upon the scale of the development).

From Regional to Local Context

i|09 A spatial appreciation of the roles and relationships of the area in which a site is located to the strategic context, along with understanding characteristics of form and use will form the basis for creating a unique design response.

i|10 Much of this contextual appreciation has been dealt with in Part 1, Chapter iii, Preparation of a Design & Access Statement.

i|11 In essence the contextual appreciation should consider:

- Regional Identity
- Linkages to Surroundings
- Local Character & Vernacular
- Morphology
- Natural Features
- Demographics

i|12 This working with the grain and appreciation of context is graphically illustrated opposite in Figure i:01.

Table i:01

Relevant Building for Life 12 Questions:

Integrating into the neighbourhood:

Q1 **Connections:** Does the scheme integrate into its surroundings by reinforcing existing connections and creating new ones, whilst also respecting existing buildings and land uses along the boundaries of the development site?

Q2 **Facilities and services:** Does the development provide (or is it close to) community facilities, such as shops, schools, workplaces, parks, play areas, pubs or cafés?

Q3 **Public transport:** Does the scheme have good access to public transport to help reduce car dependency?

Q4 **Meeting local housing requirements:** Does the development have a mix of housing types and tenures that suit local requirements?

Figure i:01 - Graphically Illustrating the Appreciation of Context , Character & Site Features Copyright & Credit: Richborough Estates

Building for Life 12 - Contextual Responses

i|13 Table i:01 sets out the four questions relating to context asked by BfL12. These directly relate to the information set-out above and opposite and will need to be thoroughly answered in the D&As.

i|14 The design process cannot progress beyond initial design concepts until those questions have been fully explored and answered.

Greenfield, Brownfield & Infill Sites

i|15 Cheshire East recognises that in order to fulfil housing demand it will need a combination of greenfield and brownfield sites. Many of the less contaminated and problematic brownfield sites have been reclaimed and developed over the last 30 years following on from the Greenfield moratorium of the late 1980's.

i|16 Brownfield sites shall be promoted for redevelopment where they exist and issues around viability, should it be necessary, shall be explored with developers in terms of reducing the levels of contributions required towards social housing, transport and other infrastructure projects in the local area.

i|17 Within settlement boundaries infill sites and changes of use to residential must be sympathetically explored by developers in terms of adjoining uses and established communities.

i|18 In such locations the appreciation of context is paramount, especially in terms of social dynamics and demographics by ensuring that developments respect existing residential amenity, and do not significantly impact on infrastructure, transport networks, historic vistas or conservation areas.

i|19 Indeed, careful consideration of surrounding uses must be undertaken to appreciate the impact of residential uses on existing businesses where noise, odours and vibration may cause concern to new residents etc. Technical, mechanical or building fabric solutions may not be enough to adequately mitigate such issues.

i|20 Primarily, by their very definition, greenfield sites are located on the edge of existing settlements and impact on both the urban and rural environments. The main concern for allocated greenfield development sites is in ensuring that they are fully integrated into their setting and landscape and visual impacts can be mitigated. Mitigation does not mean heavy screening and hiding development, but by ensuring, through a contextually responsive design that:

- existing landscape features are retained,
- the local landscape character is emulated,
- buildings are of a scale, massing and detailing to compliment the surrounding built form,
- visual and physical links and connections are established between the site and surroundings,
- the materials palette compliments the existing, and,
- the development works with the topography of the site.

i|21 The location of greenfield development should also take cognisance of their context in terms of its ability to strengthen or indeed weaken a settlements identity. If for example a settlement has a strong approach and gateway from a particular direction, then development in such a location will either have to add to that gateway location or the site should be retained in its current form, or a significant offset left undeveloped.

i|22 However if an approach and gateway is weakened by a lack of an announcement of arrival, the road frontage is not addressed, buildings being inward looking, poor interfaces between the settlement and countryside or a brownfield site which has been left to decline, then a sympathetic development

Figure i:02 - Creating a Gateway Copyright & Credit: Richborough Estates

that works with the context, creates a gateway and celebrates the settlement would be appropriate. An example is illustrated in Figure i:02.

i|23 All three forms of development site have their own challenges, contextual appreciation is just as important in any setting and using that indigenous character to inform the design process must be clearly set-out in the D&As.

Using the Vernacular without creating Pastiche

i|24 As stated in Volume 1 and reiterated above as part of the contextual appreciation, a study of the local vernacular should be undertaken.

i|25 Indeed within Volume 1, Chapter ii much of this work has been undertaken in terms of defining settlement character areas, settlement forms, locations, landscape setting, typical traditional materials/colour palettes and detailing etc.

i|26 Also and as stated in the introduction to Volume 1, analysis of the local vernacular is about distilling out the 'Sense of Place' and what provokes an emotional response to it. Therefore, by attempting to justify insensitive design by referencing adjoining post war 'anywhere neighbourhoods' as the local vernacular, which have little sense of place or justifying a design that has not been derived from a site responsive design process will not be looked upon favourably.

i|27 Use of vernacular is just one part of the contextual appreciation and, as stated throughout this document, its use is not about creating **pastiche** developments which awkwardly reflect the past, it is about taking design cues from the vernacular of the settlement such as layout, building rhythms, building lines, form, massing, roofscape and skyline, street and space hierarchies, views, vistas, landmarks, header buildings, enclosure, landscape, materials, fenestration, detailing, colours and the relationship of public to private space and using those cues creatively in a modern context for homes which are fit for purpose in the 21st century. A sketch study of house archetypes derived from the local vernacular is illustrated in Figure i:03.

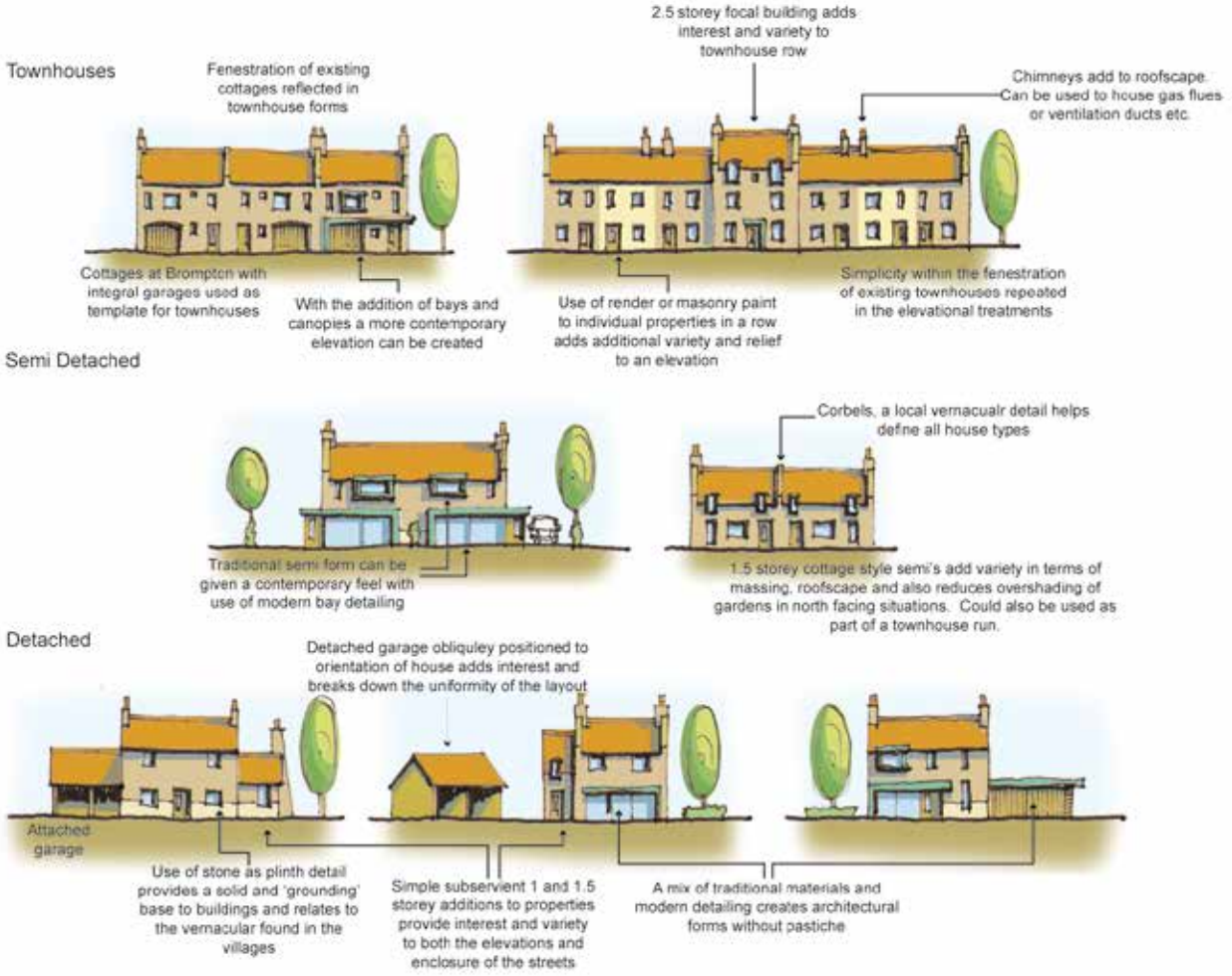


Figure i:03 - Archetype Sketch Study using vernacular influences to create contemporary building forms Copyright & Credit: Arla Foods UK

Pastiche - a novel, poem, painting etc., incorporating several different styles, or made up of parts drawn from a variety of sources.

Oxford English Dictionary

i|28 It is stressed that the Design Guide SPD should be used as guidance and not a design 'rule book' to enable more creative, place led design solutions. Design proposals that depart from this guidance need to be justified in design and place terms and must result in high quality and enduring developments that have their own strong sense of place. This provision shall not be used to justify 'anywhere development'. Proposals that do not meet the required design standards shall be refused unless amendments can be secured to enable this quality of design to be achieved.

i|29 Even if a contemporary approach is adopted then cues around layout, massing, streets and spaces and even vernacular materials and colour palettes can still be used. I.e. if a contemporary approach demands clean lines and thus finishes depart from what is found traditionally in the area, for example the use of diamond sawn stone rather than split faced or use of clean smooth renders rather than textured render or painted brick.

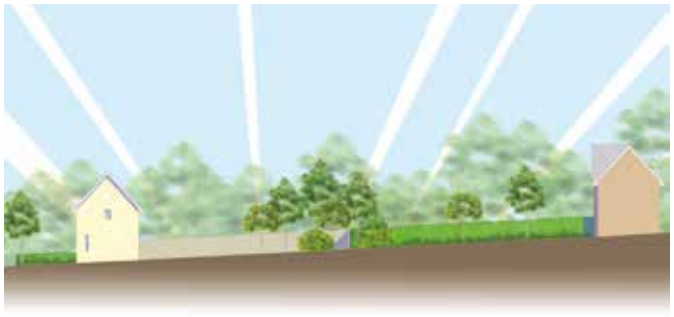
i|30 There are many good examples of the reinterpretation of the vernacular and this approach will deliver homes which are unique, compliment the context and create places in which people want to live.

Typical Residential Design Issues

i|31 There are a number of practical issues relating to residential development that can be addressed through the design process. Most are associated with the interface between existing uses and the development site. Indeed development of a site could aid in resolving some issues such as antisocial behaviour, fly-tipping or a lack of surveillance.

Views between homes...

Views over homes...



Longer rear gardens...

Figure i:04 - Mitigating the loss of views.

General issues include:

- Loss of Views
- Residential Amenity
- Accessibility
- Isolated Developments

i|32 All can be identified and addressed in the early stages of the project by ensuring the contextual analysis of the site and surrounding environs has been thoroughly undertaken. The following paragraphs address each issue in turn.

Loss of Views

i|33 Whilst it is accepted that no one is entitled to a view in planning terms, taking on-board such concerns from residents and mitigating the impact of development in terms of views and the relationship of development to existing neighbourhoods is paramount to reducing the concerns and frustrations of residents.

i|34 If existing residents have views from the front or rear of their properties out across countryside or a park which could be obstructed by development then careful spacing of proposed properties, the reduction of storey heights, ensuring the topography if the site is lower than existing properties, landscape buffers or extending the length of proposed rear gardens are all ways in which this issue can be addressed as illustrated in Figure i:04.

Residential Amenity

i|35 The residential amenity of existing properties in terms of overlooking must be protected.

i|36 At present the minimum residential amenity standards for property fronts to fronts (18 metres)

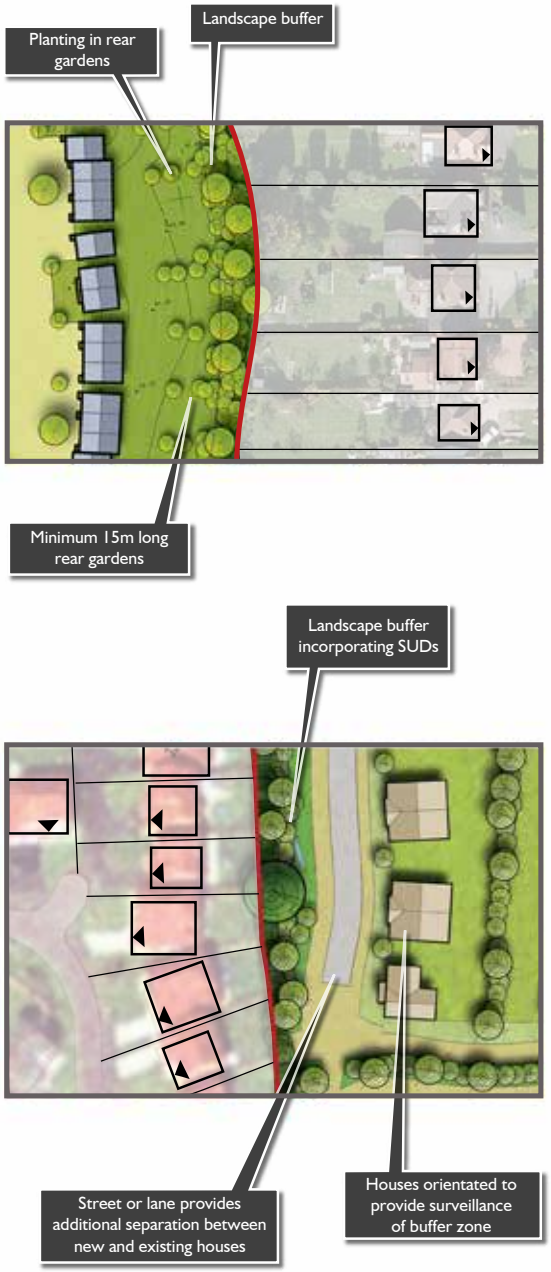


Figure i:05 - The interface between existing and new development.

and back to backs (21 metres), as set out in the emerging Local Plan should be seen as a minimum when used in a situation where development backs onto existing housing. However, within new development there is an opportunity to use innovative, design led approaches to ensure privacy without slavishly responding to the minimum distances approach.

i|37 Good urban design practice dictates that if the rear of existing properties back onto a site then ideally the proposed development blocks should be completed by new development backing onto the rear of those properties.

i|38 Ideally extended rear gardens of around 15 metres length to new properties with additional woodland/ hedgerow planting to the shared rear boundary should be allowed for it to be sympathetic to those established properties and residents within them.

i|39 It is acknowledged that in some locations existing residents may prefer an offset buffer from their properties which creates potentially unsurveiled open spaces and opportunities for crime to the rear of properties. Careful design and orientation of the site will be required to ensure such areas are overlooked, whilst not impacting on the privacy of the existing properties.

i|40 Frontages distances are more problematical and in part need to be developed in response to the contextual analysis of the existing grain and street structures of the settlement. However, if justified and front to front distances drop below 18 metres, to say 12 metres for example, then reducing the opportunity for issues around overlooking could be addressed by creating oblique bay windows to the front of proposed properties, thus creating views along the street rather than across the road to existing properties, or by appropriately spacing plots and windows.

i|41 The illustrations in Figure i:05 explore potential solutions.

Accessibility

i|42 Many potential development sites contain Public Rights of Way (PRoW). In addition a potential development site may contain informal desire lines, which are easy to identify on site or by examining recent aerial photography. Both PRoW and informal paths provide an indication of the best locations for pedestrian/cycle routes or combined movement corridors within the site.

i|43 Definitive PRoW may be retained on their original course and set within a retained landscape corridor to preserve their original character. However if this is not practical, PRoW can be diverted, subject to a legal process involving public consultation, as long as the route meets the criteria set out under section 257 of the T.C.P.A. and is set within an area of open space or linear green space.

i|44 Desire lines can be dealt with in a similar way to a PRoW or, as they are not a formal designation, could be accommodated within the general movement network alongside streets and lanes. Circular routes for daily leisure walking should be designed into the layout of a site.

i|45 If a PRoW or desire line is on an alignment which means that it will act as a route for utility purposes, such as getting to school, shops or bus station, then proposals should be drawn up to improve the surface of the route so that it is suitable for year

round use. In contrast, if a PRoW or desire line would form a leisure route, then a 'softer' surface may be more appropriate.

i|46 However, whilst maintaining and improving connectivity between the site via PRoW or other footpath/cycleway routes is highly desirable and a central part of delivering BfL12, care must be taken that these routes are not located to cause conflict with existing residents.

i|47 If a current PRoW or footpath runs through an alleyway between the gables ends of two existing properties and does not benefit from natural surveillance and issues have been identified around anti social behaviour, then, a diversion, may be desirable where an alternative route could be offered which is better overlooked, taking away the opportunities for anti social activities.

i|48 Alternatively the layout and orientation of the proposed properties could aid the surveillance of the original route and the addition of lighting to the alleyway (subject to agreement with CEC Street Lighting) may discourage loitering. Furthermore, the development of the adjoining land increases use of the alleyway and combined with environmental improvements to the path and surrounding landscape, may further discourage anti-social activities.

Figure i:06 - Gated Developments will be discouraged

i|49 In essence care must be taken to ensure a site is highly permeable and connected to the wider area, whilst ensuring that all routes (both existing and proposed) are safe and do not cause conflicts between users and residents.

Isolated Developments

i|50 Many of the issues around security and surveillance have been dealt with above. However it must be made clear that by developing a site in isolation without taking cognisance of the local context will inevitably lead to issues around anti-social behaviour.

i|51 For a site to become part of a neighbourhood and the residents to be accepted into an existing community every opportunity must be taken to ensure the site is connected, outward looking and welcoming.

i|52 Isolated, closed or gated developments do nothing for community cohesion or the design quality agenda in Cheshire East. Well designed, open and vibrant developments address issues of security and safety as well as, if not better than high walls, fences, security cameras and gates. Isolated developments will therefore be discouraged.

Creating A Vision

i|53 The Vision is not always overtly expressed as such and does not necessarily need to be, as long as the key elements of a Vision are set out in the D&As and used, once the contextual analysis and identified opportunities for public art has been undertaken to provide a structure and brief for the design development of the proposals.

i|54 A vision for the scheme should be discussed as part of the pre-application process and further refined after feedback from the planning case officer, ensuring a collaborative approach has been adopted.

i|55 Indeed Vision Statements can be used as standalone documents to promote sites through the local plan/site allocations process or as part of the pre-application process. They are usually a precursor to the submission of a D&As. Much of the work in those documents can be re-used to inform the development of the planning application. One such document is illustrated opposite in Figure i:07.

i|56 The Vision, whether titled as such or incorporated into the executive summary or as an introduction to the design parameters, should clearly state; this is the site, this is the context, this is what we aim to achieve, this is how we will get there, and this is what will be achieved.

i|57 The contextual analysis is the key for shaping a vision. The vision should be re-visited throughout the design process to remind the team as to the aims of the development, which can get lost when faced by site and financial constraints.

i|58 We have touched upon site constraints as part of the contextual analysis above and in terms of the content of the D&As in Part 1. Constraints can be

Figure i:07 - Example of a Vision Statement Copyright & Credit: SATPLAN

overcome and should be seen as opportunities to create a development which is contextually responsive and better grounded as part of the settlement or landscape in which it is set.

Design is an Iterative Process

i|59 Designs for residential developments need to be inherently flexible to ensure the future needs and demands in terms of climate change, social change, technological advances and changes of use can be accommodated as developments proceed.

i|60 This is particularly relevant for larger schemes which will be implemented over a number of years. On such projects it is vital to develop a masterplan and design codes as a foundation which enables the detailed proposals to evolve over time, phase by phase.

i|61 Flexibility in the design process during design evolution is just as important, as highlighted in Volume 1, Chapter iii, 'Preparation of the Design and Access Statement'. Additional information from consultants, through stakeholder and public art led community engagement or changes in national and local policy all need to be accommodated within an evolving design. If that design can be adapted without losing sight of the vision or the key underpinning principles, then it will prove to be flexible and adaptable over the longer term.

i. Working with the Grain of the Place Checklist:

Does the Design and Access Statement demonstrate a thorough understanding of context?

Has the development addressed the relationship of the site to the surrounding settlement:

Is the development well served by existing facilities and services locally or will it provide additional facilities and services to support the development:

Is the site close to existing public transport and cycling facilities or does it propose to improve public transport access to the site and surrounding area:

Does the development demonstrate good connectivity for all modes of transport including cycling and justify the location of these connections:

Do the enclosing buildings respond to the street, frame views and have varied building lines set at different distances from the street:

Has the local character/vernacular informed the design, if not has the approach taken been justified and does it reinforce existing or create gateways appropriate to the settlement:

Has the visual and physical relationship between the site and surrounding settlement/countryside been thoroughly explored and any issues identified:

Do the proposals address local housing needs in terms of mix and tenure enabling a broad-based community:

Has there been a though analysis of the sites existing features and an explanation as to how they can be used in developing the proposals?

Has a strong Vision been created for the proposals and does the design address all the aims and aspirations of that Vision:

Have existing properties lost their views out to the surrounding area and if so has this loss been properly considered in the proposals:

Does the site have the potential to cause residential amenity issues with existing neighbours and have these been properly addressed:

Have PRoW and/or desire lines been identified, if so have they been appropriately designed into the scheme in terms of green infrastructure, surveillance and safety:

Are the proposals open and outward looking in terms of layout, orientation and the design of access points into and through the development:

Does the D&As demonstrate an iterative and evolving design as the proposals have developed through site analysis and stakeholder engagement:

Does the development address BfL12?

Q1 Connections:

Q2 Facilities and services:

Q3 Public transport:

Q4 Meeting local housing requirements:

i. Working with the Grain of the Place Precedents:

Abbott's Cottages, Corfe Castle, Dorset

Location: Village Centre

Context: Historic/Conservation Area

- New cottages adopt dimensions of existing cottages and houses in the village.
- Ceiling heights reduced to minimise the change in height from the thatched cottage immediately to the south.
- A stone wall joins the new cottages to the existing one to maintain the building line on the street.
- Local materials and methods used in construction of new dwellings.
- Elements of non-traditional detailing used to avoid development appearing pastiche.
- Strong built frontage along street with only narrow gap leading into rear courtyard.
- Visibility around narrow entrance maintained by pulling back cottages from the building line and chamfering corner of cottage at low level.
-

Church Fields, Boston Spa, West Yorkshire

Location: Greenfield

Context: Greenfield Development

- Use of materials (including sandstone boundary walls and black metal railings) and architectural detailing reflects character of Boston Spa.
- Subtle elements of individuality introduced within built form to help integrate the development into the eclectic fabric of Boston Spa, generating appropriate micro-character areas.
- Careful siting of buildings and open space to allow or frame views towards local landmarks.
- Varied built form onto High Street to reflect existing character.
- Footpath connections through open space to existing facilities.
- Rear parking court used to remove vehicles from line of sight of existing historic building.

Wheatsheaf Works, Leicester

Location: Infill Site

Context: Brownfield Development

- Existing desire lines through site maintained.
- New townhouses respect orthogonal grid established by existing factory.
- Townhouse typology reflects predominant housing type nearby.
- New houses along site frontage aligned to historic building line.
- Conversion of existing factory to provide apartments.
- Gable elevations inspired by old roof angles of factory buildings.
- Salvaged materials from demolished buildings used in landscaping scheme.

ii. Urban Design

ii|01 The previous sub-chapter dealt with the appreciation of context and how that should translate into a design vision. This chapter takes that appreciation and illustrates how to develop a design framework or parameters masterplan.

Creating the Structure

ii|02 Once the site and its context are fully understood and mapped, the results can be used to develop the foundations for the parameters masterplan.

ii|03 Figure ii:01 illustrates the development of the sketch structure overlaying the already developed constraints plan.

ii|04 Various fixes have been identified during the contextual and site appreciation including important views/vistas, potential safe access points/ connections (pedestrian and vehicular), sensitive interfaces with existing residential areas, public art opportunities, hedgerows, woodlands and trees to be retained (due to amenity value, health, use by protected species, ability to soften inter-visibility between site and settlement) and existing on-site buildings (some to be retained/removed).

Turning Constraints into Opportunities

ii|05 What is clear in this process is that what could be considered to be constraints to development such as the retained woodland or farmhouses have been turned into opportunities and are an intrinsic part of the developed parameters masterplan as illustrated.

ii|06 The woodland becomes a resource for the local primary school and wider community, softens the impact of the development from immediate neighbours and even frames part of the vista between the site and church tower.

Figure ii:01 - Developing the Structure Copyright & Credit: Richborough Estates

Table ii:01

Relevant Building for Life 12 Questions:

Creating a place:

Q5 **Character:** Does the scheme create a place with a locally inspired or otherwise distinctive character?

Q6 **Working with the site and its context:** Does the scheme take advantage of existing topography, landscape features (including watercourses), wildlife habitats, existing buildings, site orientation and micro-climates?

Q7 **Creating well defined streets and spaces:** Are buildings designed and positioned with landscaping to define and enhance streets and spaces and are buildings designed to turn street corners well?

Q8 **Easy to find your way around:** Is the scheme designed to make it easy to find your way around?

ii|07 The two retained farmhouses form the south western fringe of the site and provide a basis for an area of larger and lower density homes, set into generous gardens on this interface with the open countryside, thus providing a transition between rural and urban.

Developing the Parameters Masterplan

ii|08 As illustrated and described above, the transition from constraints to a structure which informs the emerging parameters in itself creates a responsive and unique development.

ii|09 The parameters which emerge are in essence made up of a series of interdependent layers, all are important and rely upon each other to create a strong urban design response.

ii|10 These layers of 'urbanism' are illustrated in the schematic in Figure ii:02 and described in the following paragraphs.

Green & Blue Infrastructure

ii|11 These topics are dealt with in more detail in Part 2, Chapter iv. Green Infrastructure is defined by the Landscape Institute as:

"The network of natural and semi-natural features, green spaces, rivers, lakes that intersperse and connect villages, towns and cities. It is a natural, service-providing infrastructure that is often more cost-effective, more resilient and more capable of meeting social, environmental and economic objectives than 'grey' infrastructure."

Green Infrastructure, An integrated approach to land use. Landscape Institute Position Statement March 2013

ii|12 Green Infrastructure is therefore a holistic reference which also encompasses issues around water catchment, water bodies, water courses and land drainage. The term also used for this interrelated element is 'Blue Infrastructure'.

ii|13 Site specific Green and Blue Infrastructure networks should, like movement, not be considered in isolation but connected into the wider network which moves through and around the established settlement and countryside the development is related to.

ii|14 This wider network should have been identified and mapped as part of the contextual appreciation as mentioned in Part 2, Chapter i and as illustrated in Figures i:01 and i:07.

ii|15 Green Infrastructure is a key element to be fully considered and incorporated into any proposals, no matter what the scale of proposed development.

Connections, Movement & Public Realm

ii|16 As clearly highlighted in BfL12, connectivity and permeability of sites to the wider area must be clearly illustrated. Even where a site cannot immediately be connected to adjoining areas, due to current uses or land ownerships, allowance must be made for potential future connections.

ii|17 In designing new development, and considering connectivity and movement both within the development and the wider area, developers and designers should be mindful of the objectives of reducing greenhouse gas emissions by considering the interrelationship between the availability and effectiveness of public transport, walking and cycling, car usage and the consequent impacts on greenhouse gas emissions.

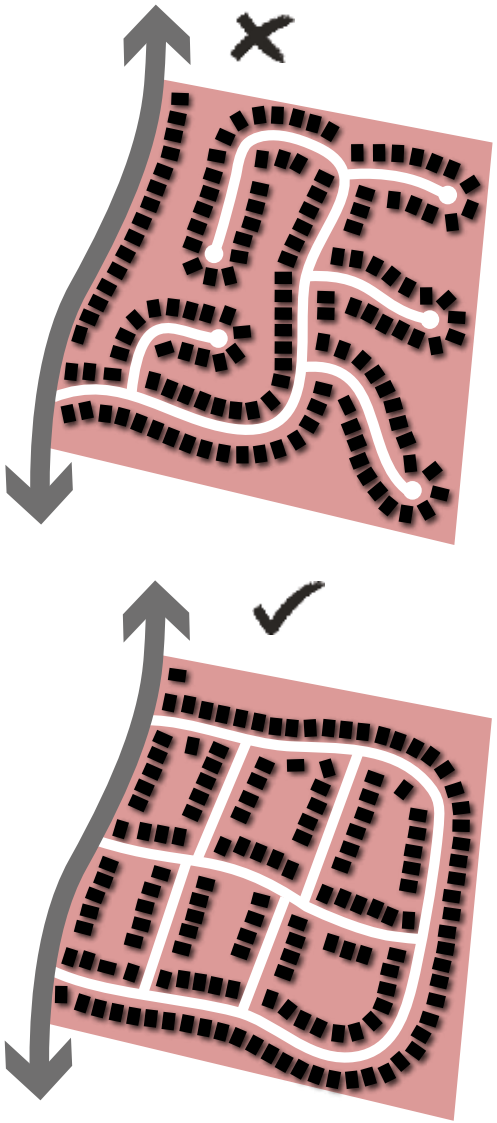


Figure ii:02 - Creating Direct Routes

ii|18 In addition to outward connections the internal movement network must be fully explored, direct routes through the development from 'A' to 'B' must be clearly designed to aid permeability of the site, circuitous routes, where you literally have to go round the houses, discourages walking and cycling and should not be developed if more direct routes can be created (see Figure ii:02).

ii|19 In addition to good permeability and to aid legibility of the development a movement hierarchy must be developed where there is clear differentiation between main access roads, connecting streets, lanes and shared drives. The differentiation can be achieved through street widths, incorporation of footpaths, cycletracks, verges, distance between enclosing buildings, use of shared surfaces, soft landscape i.e. change in size and species of street trees, use of formal/informal character, and varying boundaries to gardens etc.

ii|20 With the creation of a movement hierarchy, additional shared space public realm areas can be incorporated into the streetscape in the form of squares, mews and courts. Such features further aid legibility, create focal points, meeting spaces and aid traffic calming. Movement hierarchies and street design is dealt with in detail in Part2, Chapter iii.

Character

ii|21 'Genius loci' or the feeling of place is made up of layers of understanding and our emotional reaction to a settlement in terms of aesthetics, landscape, structure, human vibrancy and perceptions of comfort and safety.

ii|22 Whilst hard at times to translate this feeling of place arises from an understanding of the physical and

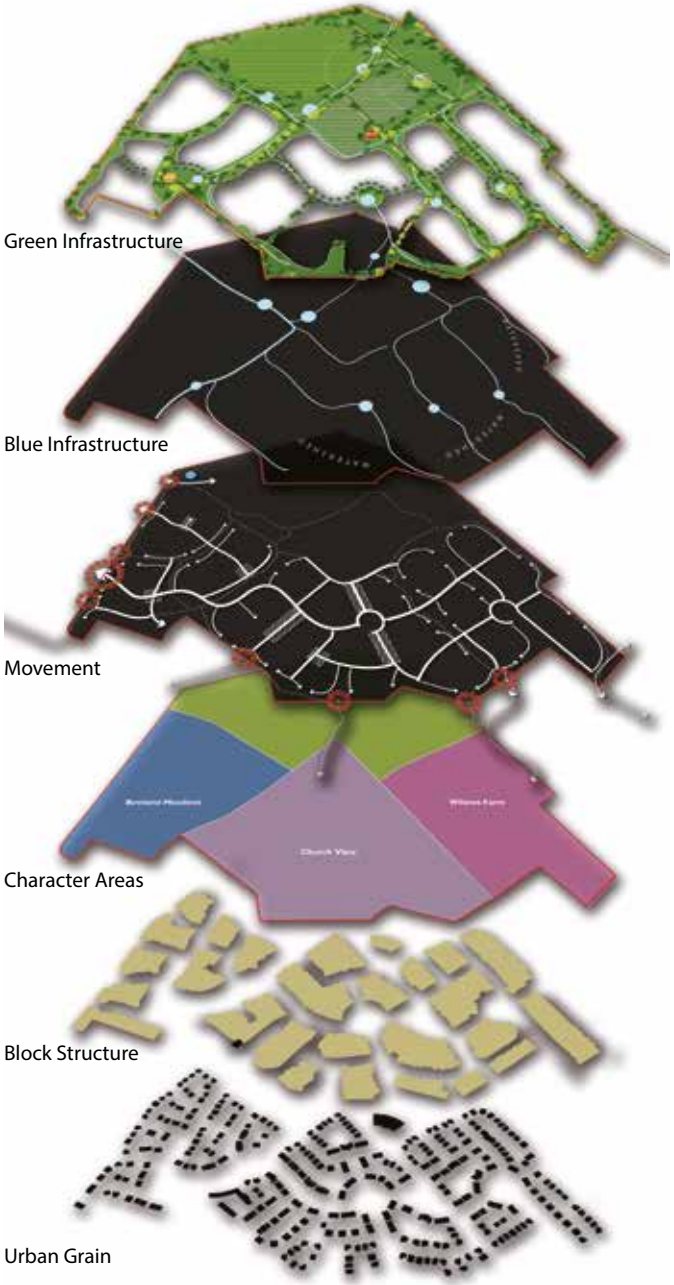


Figure ii:03 - Layers of Urbanism Copyright & Credit: Barratt Homes

human geography, the evolution of the place and an appreciation of the site and surrounding context. Engraining a sense of place into a development is paramount in making it unique and liveable.

ii|23 In essence defining and distilling the sense of place in terms of the physical form and the way it is used establishes the intended character.

ii|24 Depending on the scale of development a site could have a single character or multiple characters. Character can be derived from a combination of the following:

- Surrounding context
- Local vernacular
- Site specific features
- Density of proposed development
- Materials palette
- Detailing
- Landscape proposals

ii|25 At the outset of a project the nature of the character or characters for a development should begin to develop. The engagement of a public artist onto the team can assist the process to identify opportunities to identify character. Is there a particular local character that should be complimented or strengthened, or should a new character area or series of character areas be proposed so as not to weaken an existing strong character area or to set the development apart as a new neighbourhood?

ii|26 Such issues should be discussed with the assigned case officer as part of the pre-application process and as outlined in BfL12, Question 5, but derived from the character assessments.

Block Forms & Urban Grain

ii|27 The nature of creating town and villagescapes in which people want to live and interact with one another is reliant on the right combinations of the layers of urbanism as touched upon earlier. A key element of this is developing proposals that are of a human scale in which people feel comfortable living in and moving through.

ii|28 Developing a strong, liveable structure into which homes can be placed is of primary importance, based on the intended intensity of use and experience the residents are intended to live within.

ii|29 Therefore whilst creating well defined urban blocks with clear outward looking public fronts and secure and private backs the intensity of development should also clearly be defined in terms of number of homes per hectare.

ii|30 Density around primary areas of public realm intended as the foci of the site should be higher and involve the use of town houses or other buildings of stature to create enclosure, massing and vibrancy to the streetscene.

ii|31 In contrast peripheral, more sub-urban or rural edge locations should see a lower intensity transitional style of development (urban to rural), more dictated by landscape than built form, using semi-detached and detached properties set into larger gardens and with ample spacing around them. Density is dealt with in more detail below, but the last layer in Figure ii:03 clearly illustrates this varied intensity of use in the form of a figure ground diagram.

ii|32 Consequently, the level of street enclosure will depend on the street type, the character and location of the site, with taller buildings defining the edges of wider streets and spaces and a more intimate scale for narrower, more informal streets.

ii|33 The edges of developments will reflect their context, either tying in with the existing urban grain or, if adjacent to countryside, reflecting the informal character and a transition from a built to a landscape dominated character.

ii|34 In areas of lower density characterised by semi-detached and detached dwellings, adequate separation should be provided between dwellings both for amenity and townscape reasons, whilst in higher density areas, buildings should be terraced rather than leaving inadequate spacing between properties. Consequently the practice of 'zero plotting' shall be strongly discouraged in new housing layouts.

Adding the additional detail

ii|35 Once the basics have been established then additional detail can be added to strengthen the proposals in design terms. Other urban design related elements include:

- Creating gateways
- Legibility & orientation
- Views, vistas & landmarks

Figure ii:04 - Creating Gateways

- Mixed uses & future proofing adaptations
- Layout
- Density & form
- Massing, roofscape & skyline
- Creating & defining character areas
- House types - making them unique
- Residential amenity
- Access & parking
- Resolving edges

ii|36 This additional detail is required to ensure a comprehensive design approach has been adopted in developing the proposals. Each element of detail is described and illustrated below.

Creating Gateways

ii|37 Key thresholds and junctions into and through a settlement historically have served as a gateway announcing arrival into a settlement or as a threshold between neighbourhoods or character areas.

ii|38 As part of the contextual appreciation such existing gateways should be identified, their role(s) understood and unique character traits studied.

ii|39 New gateways can then be formed and developed as part of any proposals, whether they combine to serve as a gateway to the settlement and site, announce arrival at the site specifically or are internal secondary gateways or thresholds between character areas, spaces or areas of public open space. All are very much dependent on the location and size of each site.

Figure ii:05 - Using Landmarks & Focal Points

Legibility & Orientation

ii|40 A key element in making a place liveable and easy to find your way around is legibility and orientation. Much of this is to do with a logical and well defined street hierarchy; as mentioned above and set-out in more detail in Part 2, Chapter iii. In addition varied density also aids in legibility and will be discussed later on in this chapter.

ii|41 If one can read the Public Realm in terms of the street types, their widths, the types and forms of buildings which surround them, then that aids movement of pedestrians, cyclists and vehicles into and through the development.

Views, Vistas & Landmarks

ii|42 In addition to a well conceived and defined street and public realm hierarchy, using views into and out of the site, to and from surrounding neighbourhoods and of existing landmarks and/or adding new ones will ensure that the place reads logically and as part of the wider townscape.

ii|43 The built form can be used to aid legibility by using landmarks in the form of header buildings at the top of a street, on the outside of a curving bend or within a square. That header building could be set apart from the surrounding buildings by being of a bespoke design, of a different massing, of different storey heights, use of an alternative elevational material (i.e. render instead of brick) or even by having a different use.

ii|44 Built form does not only have to form landmarks in themselves, but buildings can also frame views to landscape features or panoramas of the wider rural landscapes and hillscapes of the Borough by

stepping the building line forwards and creating a 'picture frame' to the view beyond.

ii|45 Landscape features such as existing mature trees, ponds, landforms, geological features, sculptural elements etc. can also be used as landmarks/focal points within and around a site to create uniqueness and thus aid legibility and orientation.

ii|46 The use of header buildings, framing buildings and landscape features as landmarks are illustrated in Figure ii:05.

Housing Mix

ii|47 The housing mix should be developed to respond to proven local need, including the provision of different sizes, types and tenures, including appropriate provision for the elderly and infirm (including the consideration of bungalow provision). On larger scale developments, there should be consideration of plot provision for extra care housing development as part of the masterplanning. Further guidance on housing mix will be provided in the Site Allocations and Development Policies Document of the Local Plan.

Mixed Uses & Future Proofing Adaptations

ii|48 A diversified mix of uses on a residential led development site adds to the vibrancy of the development in terms of movement and activity, aids in the sites sustainability (depending on the mix proposed) and adds to the character through the architectural forms, massing, times of use, public realm and landscape treatments.

ii|49 It is acknowledged that a mix of uses will not be appropriate on all sites, due to size, location or existing adjoining land uses. The use mix proposed will be explored as part of the pre-application discussions as set out in BfL12, Question 2.

ii|50 On some sites in the borough the use of adaptable house types has been advocated. Proposals to allow for flexibility and adaptation to other ground floor uses in the future in key locations creates a future opportunity. This could entail greater floor to ceiling heights on the ground floor.

ii|51 Such flexibility is not required on every home in a development, but in key locations on larger sites where the opportunity for other uses may emerge in the longer term i.e. small offices, shops, cafés on a square or along a site frontage.

Layout

ii|52 Layouts must be developed which create a connected series of streets, lanes and spaces, not only in the development, but out to the surrounding areas. As stated earlier in this chapter as part of the 'Developing the Parameters Masterplan' the opportunity for good permeability; internally and externally must be taken.

ii|53 The layout creates the basic structure around which the masterplan forms and dictates the hierarchy of routes, block sizes and dynamics of a development.

ii|54 The layout must create a series of interconnected streets and spaces which encourages pedestrian and cycle movement, as well as connects the development directly to public transport hubs (existing and proposed).

Density & Form

ii|55 Density is a key tool in developing a legible and logical masterplan, as touched upon earlier in this chapter. It is an important aspect of character and ensuring best use of land in an efficient and cost effective manner.

ii|56 Traditionally densities decrease the further from the centre of a settlement one travels. This historic trait is typical of Cheshire East and aids the legibility of the settlements in the district.

ii|57 Proposed development, therefore should use varied density where the scale of the development allows, based on site constraints and local context.

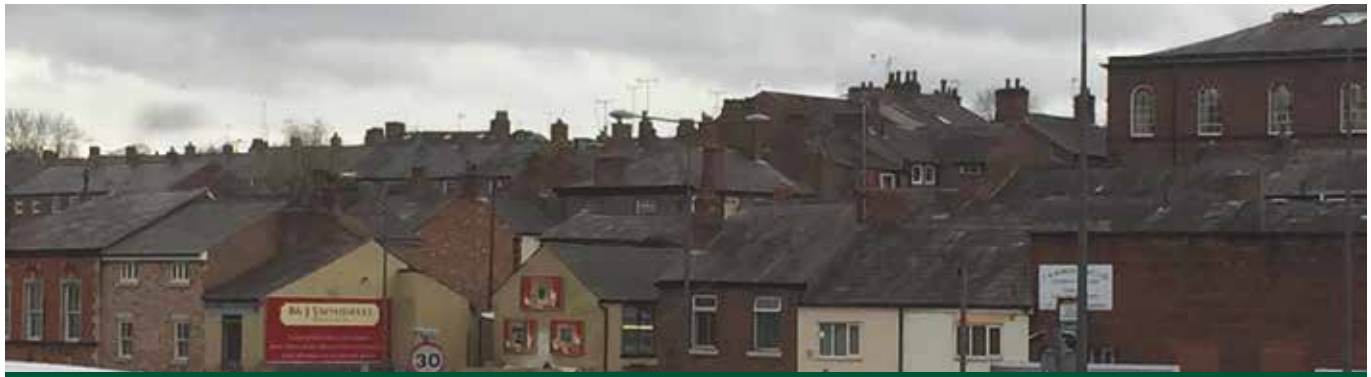


Figure ii:06 - Changing storey heights and use of topography creates interesting Roofscape & Skylines...

ii|58 A development, depending on size and context, should look to develop a variety of densities across the scheme which reflects intensities of use, character areas and the intended relationship with settlement and/or the rural fringe.

ii|59 Higher density zones should therefore be seen to support more active and vibrant areas i.e. mixed use zones, public squares or adjoining existing local services and facilities. Areas of lesser activity, for example sub-urban residential areas adjacent to open spaces or the countryside would have a reduced density and less formal character with more generous gardens.

Massing, Roofscape & Skyline

ii|60 The massing of development must respond to the existing massing and built form in the area to ensure the development is not incongruous and jarring with its context. Looking at the existing building rhythms in the area, plot widths, plot depths, storey heights, response to topography will all affect the massing of the proposals to ensure that the transition from existing to proposed is seamless.

ii|61 In addition to massing, variation in storey heights and use of the topography will add variety to the character of the development. Using changes in level, internally and externally will create uniqueness to development at street level, whilst changes in storey heights and the stepping of buildings with changes in topography will add interest to the roofscape and create an interesting skyline to the development.

Settlement Edges

ii|62 Where development forms a new urban edge to a settlement it should create an outward looking positive relationship with the adjoining countryside.

ii|63 The temptation in such locations is to totally hide the development from the wider countryside by screening with trees and mounding. This approach does not accord with the character of the borough as set-out in Part 1 of this document.

ii|64 Developments should, through a proper analysis of the context and vernacular of the area be integrated into the settlement.

ii|65 Figure ii:07a below demonstrates how a typical Cheshire village in the Gritstone Fringe Character Area is set into the surrounding landscape, responds to the topography and landscape features which surround and envelop it. Figure II:07b theoretically illustrates how a small development could be developed and integrated into the villagescape and wider landscape. The settlement is an intrinsic part of the landscape character and should not be hidden or separated from it.

ii|66 Development should therefore look at a sympathetic materials and colour palette which accords with the local vernacular, looks to how existing settlements interrelate with and use landscape features to soften the impact of built form in the landscape and aid its integration into its setting.

Figure ii:07a - Settlements are part of the landscape

Figure ii:07b - New developments should not be hidden or screened, but integrated into their setting

ii|67 In addition developments should not turn their back on the countryside with high rear fences right on the development boundary, but front outwards. The built form should be set back behind a traditional boundary treatment (stone walls, native hedges, Cheshire railings), use the set-back between the site boundary and front gardens to create a landscape transition zone served by a country lane style shared drive. This approach can be further integrated into its setting by using native tree groupings, wildflower meadows and drainage ditches, as illustrated in Figure ii:08 opposite. The approach adopted should reflect the character area in which it's located.

ii|68 The Council will continue to seek patterns of development that encourage modes of transport other than the private motor car and would encourage innovative approaches to reduce the dedicated parking requirement within new development. Car pooling and clubs are potential ways to reduce car ownership but still provide access to a motor vehicle when required. Generally these are more effective in urban locations, with a more concentrated population.

Figure ii:08 - The Rural Interface Copyright & Credit: HIMOR

Parking

ii|69 Over the past 15 years or so generous allocated parking standards have been discouraged with the aim of promoting alternative modes of transport such as walking, cycling and public transport.

ii|70 However, it has to be acknowledged that Cheshire East is a largely rural Borough and therefore the freedom and accessibility derived from car ownership is both valued and often a necessity for its residents. The developments with reduced parking standards have seen these good intentions have a dire knock-on effect on the streetscape and public realm with wall to wall parking along streets, ad-hoc parking on verges, pavements and even in shrub beds.

ii|71 Cheshire East intend to take a more pragmatic approach to parking by ensuring there is ample allocated and visitor parking for the location of the development and the size of the properties. In addition Cheshire East will expect to see a variety of parking solutions employed on proposals to ensure a balance of parking where the car is part of the streetscene, but not dominating within it.

ii|72 As parking is such an important issue in creating successful schemes, the issue is discussed in detail in the following paragraphs.

ii|73 The various parking solutions are listed below:

- On Street:
  1 Perpendicular to Kerb
  2 Angled to Kerb
  3 In Line with Kerb
  4 Central Reservation
  5 Garden Square
- Frontage Parking:
  1 Forecourt Parking
  2 Mews Court
- Rear Parking:
  1 Rear Court
  2 Parking Lane with Chauffeur Unit
- In-Curtilage:
  1 Front & Side Parking
  2 Integral Garage
  3 Attached Garage
  4 Rear Parking
  5 Side Parking
  6 Side Parking with Car Port
  7 Side Parking with Detached Garage

ii|68 Cheshire East will expect to see a variety of the above solutions adopted on each and every site to ensure the car is properly integrated into the development.

ii|69 If one parking method is over employed and is detrimental to the design quality of the proposals, in particular frontage parking, the developer will risk refusal of the application.

ii|70 The following paragraphs and drawings in Figure ii:09 over page describe and illustrate each of the parking solutions listed above.

On Street

ii|71 On Street parking should be unallocated and primarily used as informal visitor parking. Road widths should be designed to enable on-street parking. If possible road widths should vary by opening out and closing back in, allowing space to park in groups of 3 to 5 maximum and to reduce the opportunity for entire streets or lanes to be full of cars parked end to end. Alternatively private drives entering the street at intervals also reduces the opportunities for too much on-street parking.

ii|72 In higher density locations allocated on-street parking may be a solution. However the uses of such solutions will need to be explored with Cheshire East's highways team at an early stage in the design process.

1. Perpendicular to Kerb

ii|73 Kerbside parking at right angles to pavement. Creates wider streets and thus there is a need to use 2.5 to 3 storey properties to compensate. Landscape is key to success of this solution.

ii|74 Hedgerows, trees and shrub planting should be used in combination to soften the impact of the parking, as well as the use of varied paving materials to demarcate the bays and add to the streetscene.

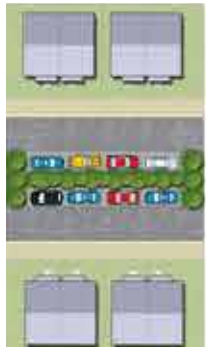
On Street Parking

1. Perpendicular to Kerb

2. Angled to Kerb

3. In Line with Kerb

4. Central Reservation



5. Garden Square

Frontage Parking

1. Forecourt

2. Mews

Figure ii:09 - Parking Solutions

Rear Parking

1. Rear Parking Court

2. Parking Lane

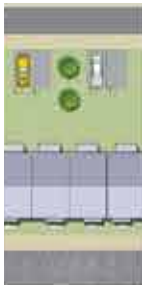
In-Curtilage Parking

1. Front & Side Parking

2. Integral Garage

3. Attached Garage

4. Rear Parking



5. Side Parking

6. Side Parking with Car Port

7. Side Parking with Garage

Figure ii:09 - Parking Solutions

2. Angled to Kerb

ii|75 Kerbside parking solution at between 30 to 45 degrees to pavement. Requires demarcated bays and good landscape solutions in order for this solution to work well as described above for perpendicular parking.

3. In Line with Kerb

ii|76 Bays run parallel with pavement, the traditional solution. Bay may be marked or unmarked and again good landscape treatments are crucial to ensuring cars do not dominate the streetscene.

4. Central Reservation

ii|77 This creative solution could be used in a Mews type setting where traffic is limited to vehicles accessing properties on the mews court itself. It divides traffic flows and pushes cars into the centre of the court and sets them under the dappled shade of trees, moves the cars away from the frontage of properties and enables a stronger streetscene to be created.

5. Garden Square

ii|78 Traditionally found in Garden City and Garden Suburb settings. Parking is positioned around the edges of a formal garden square which again pulls the cars away from frontages and softens the impact of the cars by setting them against a backdrop of trees and shrubs.

Frontage Parking

ii|79 Frontage parking to properties is perhaps the most efficient form of parking layout in terms of land use. However when over used and badly laid-out with little or no soft landscaping associated with it it can be harsh and dominate the streetscene with cars.

ii|80 This parking solution should be used in a limited way as part of a mix of other solutions along with side and/or a parking lane. No more than five properties in one group should be served by frontage parking and landscaping should subdivide bays.

1. Forecourt

ii|81 Allocated bays set effectively into front gardens of properties. To work effectively in design terms courts need to be partially enclosed by built form, hard and soft boundary treatments to soften impact of cars on the streetscape and function as high quality spaces within the public realm too.

2. Mews Court

ii|82 In essence a shared surface street with cars set into allocated bays, car ports or integral garages etc. Soft landscape and especially trees should be seen as integral elements in a mews to soften the frontage parking, provide shade and reduce traffic speeds.

Rear Parking

1. Rear Court

ii|83 Parking Courts are set behind building line and serve a maximum of 6 homes. They can be accessed via a lane or through an arch in the building frontage. The court could contain a chauffeur unit to provide added surveillance and security. Secured by Design advice usually asks for them to be gated. Parking courts require good soft landscape design to soften the impact of the parking area and provide a more human feel to the space.

2. Parking Lane with Flats over Garaging (F.o.G)

ii|84 A different take on a parking court. Parking courts are disliked by many developers as they are hard to secure and manage, subsequently residents do not like or use them and park on-street in front of their properties. The parking lane is aimed at taking cars off the main street frontages in the same way as a court, but by setting the court into a minor through-route it adds activity, vibrancy, is surveilled from the rear of the main properties and from chauffeur units above garages.

ii|85 The parking lane is intended to have a different feel to a parking court to encourage residents to use it.

In-Curtilage Parking

ii|86 One of the most traditional forms of parking with a mix of frontage and side parking solutions.

1. Front & Side Parking

ii|87 A combination of front parking with a side drive for larger properties where additional parking is required. Usually it is in the form of two frontage bays with a single drive to the side of the property. This solution can be too dominant in streetscape if development densities are high.

2. Integral Garage

ii|88 Garaging set into the ground floor of a property with an internal door providing direct access to house. Care must be taken with the house types to ensure ground floor surveillance and activity is maintained alongside the integral garage and to draw attention away from the opening.

3. Attached Garage

ii|89 This solution, as per the previous one, provides a garage, but this time between properties and should be set back behind the main building line. Garages can have additional rooms above and could be paired with the adjoining property. This solution can be combined with a front drive to provide additional parking.

4. Rear Parking

ii|90 Single or larger area of hard-standing to rear garden and accessed from a rear service lane. Provides direct access to the home as this solution is on-plot. It could be combined with parking lane solution. Screening and integration within the layout is important.

5. Side Parking

ii|91 An in-curtlidge parking solution where the majority of the parking is set to the side and behind the building line and hidden from the street and public realm by the buildings and/or landscape. One of cleanest solutions in design terms and with cars set well back from the road and one of the most secure also.

ii|92 Side parking solutions can be set to a single or a double drive width (dependent on property size) for detached properties, or into paired drives for detached and semi-detached properties.

ii|93 Side parking also enables properties to be spaced further apart giving a less dense feel to the layout generally.

Figure ii:10 - Contemporary Elevations
Copyright & Credit: Morris Homes

6. Side Parking with Car Port

ii|94 Sometimes described as a link detached, properties are joined to one another via a car port. Other than this, the solution is similar to side parking and offers the opportunity for parking behind the main building line and within the side/rear garden.

7. Side Parking with Garage

ii|95 This solution, as per the previous one provides external side parking, with the addition of an attached/detached garage. The attached garage is usually set back behind the main building line with detached garages set into the rear garden.

ii|96 Garages, like the drives, can be single or double in size.

ii|97 Parking and cycling provision should be in accordance with the parking standards (including garage dimensions) as set out in Table C.1 of Appendix C of the Cheshire East Local Plan Strategy.

House Types - Making them Unique

ii|98 Bespoke housing designs, developed specifically for a site are welcomed for any proposed schemes across the borough, as long as they take cognisance of their context and the constraints of the site on which they are proposed.

ii|99 Such an approach, whether it draws on the local vernacular for inspiration or takes a more modernist approach, as long as it is justified, of a human scale, works with the grain of the place and is well detailed will address the quality design agenda promoted by Cheshire East Council.

ii|100 However new developments using what is referred to as 'standard house types' also offer a positive alternative to bespoke units, if the house types are re-elevated, detailed and where necessary amended to suit the location.

ii|101 Indeed the images in Figure ii:10 of a scheme by Morris Homes illustrates reasonably traditional house types in terms of form and layout, but by re-elevating them and using a simple palette of brick and render finishes with grey painted joinery and contemporary steel Juliet balconies these house types provide a fresh modern feel to the street

Figure ii:11 - Contemporary Homes using Vernacular Materials & Detailing Copyright & Credit: Richborough Estates

and development as a whole. These have proved extremely popular with home buyers.

ii|102 Another solution is to draw upon the local vernacular to create house types which utilise materials, detailing and features found in the local archetypes and reinterpret them in a modern way as illustrated in Figures ii:11 & ii:12 opposite.

ii|103 Using the local vernacular as a reference for the architectural response in design terms is welcomed however, its use is not about creating pastiche developments which awkwardly reflect the past, it is about taking design cues from the vernacular and using those cues creatively for homes which are fit for purpose in the 21st century as stated in Volume 2, Chapter i of this guidance.

ii|104 Indeed additional variety in terms of approach can be developed around house types in different areas of a site, related say to character areas. If an area of the site is adjacent to an existing neighbourhood with a particular feel, then perhaps house types reflecting that character would be appropriate in that location, then other character areas not directly related to an existing townscape could utilise more modern forms, materials and detailing, whilst still employing certain base characteristics to tie the scheme together.

Figure ii:12 - Drawing on the Local Vernacular Copyright & Credit: Persimmon Homes North West

Residential Amenity

ii|105 Privacy is important in terms of residential developments. Privacy between existing and new dwellings has been dealt with in Volume 2, Chapter i previously. It is reiterated here that the minimum distances set-out below must be exceeded when taking existing dwellings into account unless there are strong contextual and urban design justifications not to do so.

ii|106 Residential amenity is all about creating good living conditions and is thus related to Quality of Life which is dealt with in Volume 2, Chapter vi below.

ii|107 Residential amenity covers privacy/overlooking, noise, light and views. These issues need to be dealt with in any submitted application and should be set out in the D&As.

Overlooking/Separation Distances

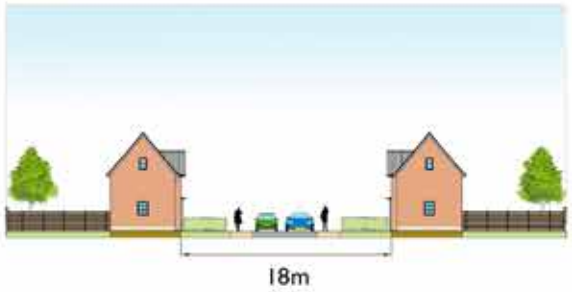
ii|108 Prior to the formation of Cheshire East, Congleton Borough Council employed guidance on the provision of private open space in new residential developments as a Supplementary Planning Guidance Note dated November 1993.

ii|109 The separation/overlooking distance illustrated suggest 21 metres between directly facing dwellings and 21 metres between the rear of two directly facing properties. These distances exceed standards set-out elsewhere regionally and nationally.

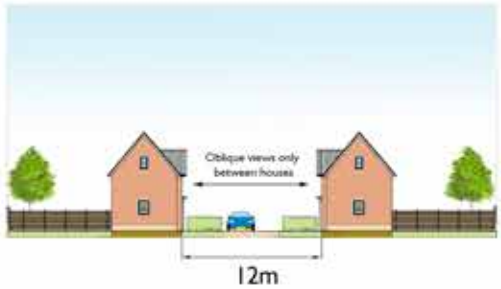
ii|110 Separation distances should be seen as a guide rather than a hard and fast rule.

ii|111 However rear distances between properties where habitable rooms face one another should not drop below 21 metres to ensure privacy and good levels

Typical rear separation distance



Typical frontage separation distance



Reduced frontage separation distance (minimum)

Figure ii:13 - Separation Distances

of light internally and some degree of privacy to rear gardens. Where the rear of properties sit at oblique angles to one another (on a curving block or as a block turns a corner) then these distances can potentially be reduced. Landscaping in rear gardens should be included to assist in creating privacy.

ii|112 In terms of frontage distances then as a general rule, 18 metres distance between directly facing dwellings will achieve a good level of privacy. However if employed too rigidly it will lead to uniformity and limit the potential to create strong streetscenes and varied movement hierarchies and thus not create the interesting places Cheshire East aspire to delivering through this guidance.

ii|113 Acceptable levels of privacy can be achieved through careful and considerate design down to a frontage distance of 12 metres. Anything narrower than this would not allow in enough natural light and cause issues in terms of surveillance, let alone causing issues in terms of residential privacy.

ii|114 These separation distances are illustrated here in Figure ii:13.

Adaptable Living - Growing Homes

ii|115 In addition to adaptable layouts for future needs, the ability for homes to grow to accommodate larger families should also be planned for in the design of homes and the layout into which they are located.

ii|116 Homes can be extended with single or two storey extensions to the rear or the side of an existing property, over garages or a car port as illustrated in Figure ii:14 below.

ii|117 In addition to rear or side extensions adaptable ground floors for other uses (shop/cafe) as touched upon previously in this chapter (Paragraph ii:43) could be accommodated in appropriate locations on larger developments.

ii|118 Also utilising the roofspace for additional accommodation at a later date can be accommodated through variation in roof truss design prior to initial construction to enable easier adaptation in the future also as illustrated in Figure ii:14.

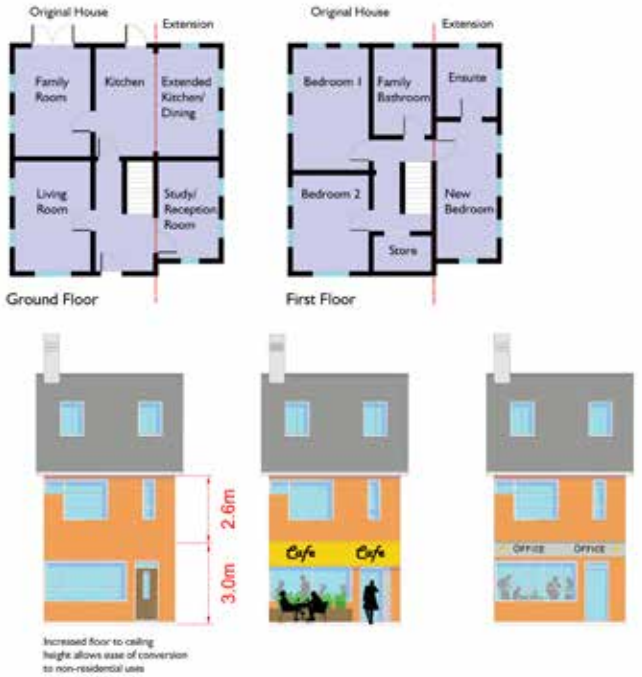


Figure ii:14 - Adaptable Living

Bin and Cycle Storage

ii|119 Question 12 of BfL12 asks if there is adequate external storage space for bins and recycling as well as vehicles and cycles within the proposed development.

ii|120 Often this question is partially addressed in most developments. Cheshire East therefore expect to see bin and cycle storage properly accommodated on planning layouts and described and illustrated in submitted D&As as well as the question answered in any BfL12 assessments submitted.

ii|121 In addition layouts need to take into account the servicing of properties in terms of access to and from bin stores by residents, their temporary storage on street frontages whilst awaiting collection and the requirements of the refuse collection teams in terms of the needs of the collection vehicles (turning and reversing) and ease of access etc.

ii|122 Bin and solid waste storage are also covered by the Building Regulations and thus should be fully considered during all stages of the design process.

ii|123 Use of garden sheds, properly screened bin storage areas accommodating refuse and recycling wheelie bins and/or garages of a size to accommodate storage of bikes and garden paraphernalia as well as cars are all solutions which would comprehensively answer this issue as illustrated in Figure ii:15.

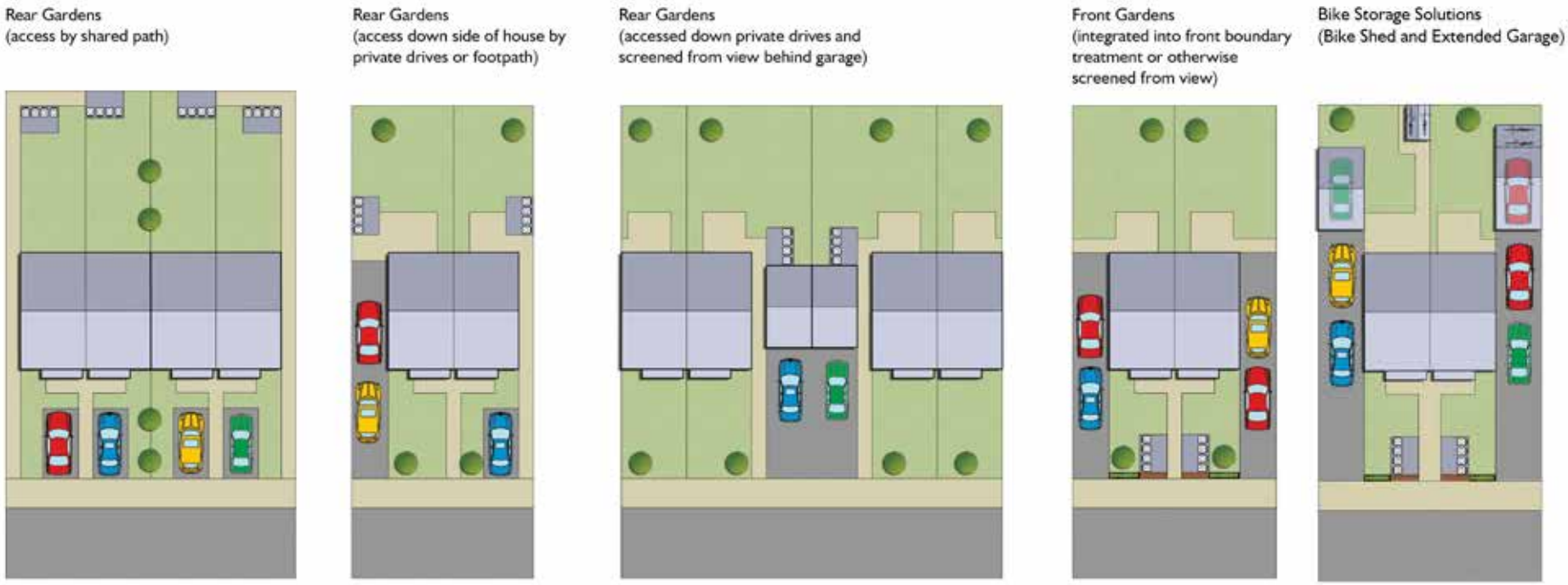


Figure ii:15 - Bin & Cycle Storage

Secured by Design

ii|124 Secured by Design (SBD) is a police initiative to guide and encourage those engaged within the design, specification and building of new homes to adopt crime prevention measures.

ii|125 The latest designing out crime guidance for new homes from Secured by Design was produced in 2014 and can be downloaded on the link below:

www.securedbydesign.com

ii|126 The approach adopted on any scheme to designing out crime should clearly be set-out in the D&As as stated in Volume 1, Chapter iii of the companion guidance.

ii|127 Much of the SBD guidance, Section 1 is around good urban design and common sense and covers such issues as the layout of new roads and houses. The layout should be:

- Visually open;
- direct;
- well used; and,
- retain defensible space between properties and the streets.

ii|128 In addition routes should be legible within the hierarchy which is covered in chapter iii of this guide. Different routes and their public/semi private/private status should clearly be identified in the design of the streets by using features such as:

- Creating thresholds;
- using changes of road/pavement surfacing; and,
- narrowing a road visually by stepping the building line inwards, using walls and planting to emphasise a gateway.

ii|129 However design teams must ensure that following Secured by Design principles is not to the detriment of good urban design. A balanced and practical approach must be adopted.

ii|130 Some SBD principles around permeability restrict opportunities for pedestrian/cycle way connections due to their potential use as escape routes, anti-social behaviour or concerns over unseen access to properties.

ii|131 If good urban design is followed and such routes are well overlooked and well lit, with properties fronting out onto them then the associated risks are much reduced.

ii|132 Other practical and common sense issues covered by the SBD guidance includes:

- Through-roads and cul-de-sacs (as touched on above);
- Footpath;
- Communal areas;
- Dwelling boundaries;
- Layout and orientation;
- Gable end walls;
- Dwelling identification;
- Climbing aids;
- Planting; and,
- Lighting.

ii|133 In addition to the general guidance as set-out above SBD, Section 2 goes on to look at detailed guidance on the security of dwellings which would be primarily tackled as part of a Detailed or Reserved Matters Planning Application.

ii|134 This detailed guidance covers issues around the technical approach to security, providing a reasonable level of security to properties covering:

- Doors and windows;
- Roof lights;
- Security lighting;
- Conservatories;
- Intruder alarms;
- Utilities;
- Party walls and sound insulation, and;
- Loft hatches in communal areas.

ii|135 Finally SBD, Section 3 deals with ancillary security requirements for additional and optional features found within residential developments that don't fit into the previous sections. These features include:

- External garage doorsets;
- Underground car parking standards;
- Conservatories;
- Internal communal drying rooms;
- Bicycle parking;
- External bicycle storage;
- Internal communal bin and bicycle storage;
- External bin stores and home composting facilities, and;
- Home User Guides.

ii|136 SBD offers comprehensive guidance on designing out crime aimed at both the masterplanning and detailed design stages. As stated above SBD must not be delivered at the expense of good urban design practice. They are not mutually exclusive and both can be delivered where a common sense approach is adopted.

ii. Urban Design Checklist:

Does the Design and Access Statement clearly set out the design process undertaken in the developing the proposals?

Is there evidence in the D&As that existing positive site features (buildings, trees and topography etc.) have been retained and used to inform the layout and form of development:

Has a parameters masterplan been prepared which illustrates how the proposals will integrate with the local context and site specific constraints:

Do the proposals have a green and blue infrastructure network integrated into the layout which connects out to the wider green infrastructure:

Does the layout allow for connections out into the surrounding area, even if they cannot be delivered at the present time:

Does the layout create a logical, legible and permeable movement hierarchy ensuring good pedestrian/cycle access into the wider area and incorporate varied parking solutions:

Have the proposals created an identifiable character or series of character areas (depending on scale of development) drawn from the local area:

Alternatively, have the proposals created a specific and unique character which has been explained and illustrated within the D&As:

If the site is of a reasonable size, have additional uses been proposed, and if so, have they been integrated into the layout to add vibrancy:

Are the densities proposed appropriate to the site's location (town centre, suburban or rural fringe):

Does the scale, massing and architectural detailing of the proposed development create an interesting and varied roofscape and skyline:

Has the interface between the development and rural fringe been successfully detailed in terms of landscape, development density and built form:

Has the layout incorporated a variety of parking solutions that meet the Council's parking standards to ensure cars are accommodated as part of the streetscene without overly dominating it:

Are house types bespoke to the site or re-elevated from standard types which reflect the local character or of a suitable contemporary form:

Do the buildings enclose the spaces created and turn corners well:

Has residential amenity of existing and new residents been taken into account in the layout, architecture and landscape proposals:

Does the proposal include an appropriate housing mix, including provision for the elderly and infirm, and, on larger sites, does it consider extra care provision:

Does the development address BfL12?

Q5 Character:

Q6 Working with the site and its context:

Q7 Creating well defined streets and spaces:

Q8 Easy to find your way around:

ii. Urban Design Precedents:

Eastern Gateway, West Bromwich

Location: Town Centre
Context: Historic/Conservation Area

- Strong frontage along principal streets
- Variety in roofscape – mix of pitched, mono-pitch and flat roofs
- Buildings with additional height used to define key junctions
- Upper floor balconies to front of properties provide added surveillance over public open spaces
- Good mix of complementary materials
- Mid-block linkages created to improve connectivity with town centre

Church Fields, Boston Spa, West Yorkshire

Location: Urban Extension
Context: Greenfield Development

- Clear hierarchy of direct routes aligned north-south to reflect historic grain and allow views towards River Wharfe
- Internal loop road minimises need for refuse or large vehicles to reverse to turn around.
- Large built form onto public open space to create strong presence.
- Smaller buildings used to create Mews and intimate lanes.
- Parking provided off-street to minimise visual impact of cars on streetscene
- Sharp street corners and junctions keep car speeds down
- Windows directly overlooking footpaths.
- Village green located to function as extension to wider green infrastructure network

Manor Kingsway, Derby

Location: Infill Site
Context: Brownfield Development

- Different house types used to create and inform character areas
- Three storey buildings used on key corners and a taller building at the main entrance
- Most taller buildings located near public open space where larger scale is appropriate
- Bespoke house types at key locations and boundaries between phases
- Un-adopted shared-surface streets provide greater pedestrian permeability
- Crescent around significant group of existing trees provides strong gateway
- Limited use of render to highlight different house types, character areas and key entrances
- Dutch gables reflect former hospital buildings

iii. Street Design

iii|01 Streets are a key part of the design of new development and the main public face of any residential development. If the streets are overly engineered or not creatively designed then no matter how interesting the built form, the development will not create the desired sense of place.

iii|02 Streets are more than just a vehicular route, priority should be given to pedestrians, cyclists and public transport over the motor car. Streets should be treated as part of the public realm alongside squares, mews, courtyards, parks and open spaces.

iii|03 In order to ensure the quality of street design is delivered, technical issues relating to street design and adoption needs to be dealt with as part of the pre-application process at both the outline and detailed/reserved matters stages of projects. The adoptions team needs to be as involved and engaged with alongside the highway planning team.

Manual for Streets & Cheshire East

iii|04 Cheshire East uses the criteria as set out in Manual for Streets 1 & 2 (MfS1 & MfS2) and promotes a Manual for Streets approach to all residential developments.

iii|05 Streets are defined as highways that have an important public realm function beyond the movement of traffic. Streets should have a sense of place, which is mainly realised through local distinctiveness and sensitivity in design and be human in scale. Streets also provide direct access to buildings and the spaces between them. Most highways therefore, in built up areas can be considered as streets.

iii|06 Early engagement with the highways team alongside urban design and the planning case officer via the pre-application process is encouraged to ensure design and highways issues are considered and resolved together as advocated in MfS1.

iii|07 In essence the approach to street design has changed in the following ways:

- pedestrians followed by cyclists are now at the top of the street user hierarchy;
- use a collaborative approach to street design;
- recognise the importance of the street as a community space;
- promote inclusivity through design to ensure access by all ages and abilities;
- work with pedestrian desire lines in networks and detailed designs;
- apply MfS principles in masterplans and delivery of them through Design Codes and D&As;
- create streets that are connected and permeable to main destinations with a choice of route;
- move away from standard hierarchies and developing site and context specific hierarchies with reference to context and the movement functions for each street;
- encourage innovation is street layouts and the use of locally distinctive, durable and maintainable materials and street furniture;
- use quality audit systems that demonstrate how designs will meet key objectives for the local environment;
- design to traffic speeds of 20mph on residential streets unless justified reasons for higher speeds; and
- use the minimum of highway design features necessary to make the streets work properly.

iii|08 All of the above aims of MfS accords with good design practice and BfL12 and should be followed as a matter of course throughout the design process.

6 Cs Design Guide & Cheshire East

iii|09 The 6Cs Design Guide has been developed by Leicestershire, Nottinghamshire and Derbyshire County Council's and associated local authorities in response to National and Local Policies from 2007 onwards. The 6Cs Design Guide is currently being revised and updated and will be reissued in the near future (as at June 2015).

iii|10 The guidance has been developed to sit alongside MfS1 and 2 and provide additional guidance in terms of developing street designs and hierarchies for development sites. It is not intended to stifle creative design solutions, although if the guidance is not followed, it will require additional supporting evidence to justify the approach taken or the materials proposed.

iii|11 The 6Cs advocates early discussions to be undertaken with the authority as part of the pre-application process to ensure issues are resolved at an early stage. This reiterates the approach taken by Cheshire East and, as emphasised previously, at various points in this document.

iii|12 The 6Cs Design Guide has now been adopted by Cheshire East.

iii|13 Its principles, but more importantly MfS in the Cheshire East context are discussed further below:-

Table iii:01

Relevant Building for Life 12 Questions:

Street & Home:

Q9	**Streets for all:** Are streets designed in a way that encourage low vehicle speeds and allow them to function as social spaces?
Q10	**Car parking:** Is resident and visitor parking sufficient and well integrated so that it does not dominate the street?
Q11	**Public and private spaces:** Will public and private spaces be clearly defined and designed to be attractive, well managed and safe?
Q12	**External storage and amenity space:** Is there adequate external storage space for bins and recycling as well as vehicles and cycles?

Figure ii:01 - A well designed traditional street

Creating Legible Hierarchies

iii|14 As stated earlier, streets within residential developments are a key part of the public realm and should be designed to reflect their use and position in the movement hierarchy. MfS advocates a bespoke approach to developing street hierarchies based on the site and surrounding context. An example of a hierarchy diagram is illustrated in Figure ii:16.

iii|15 The hierarchy below is meant as a guide to the types and variety of streets Cheshire East would expect to see developed at least in part on sites where more than a single adoptable highway is proposed.

iii|16 We have named the streets and spaces within the hierarchy as follows:

- Street Hierarchy:
  1 Avenues
  2 Streets
  3 Lanes
  4 Shared Drive
  5 Footpaths/Cycleways
- Shared Spaces:
  1 Squares
  2 Garden Squares
  3 Mews
  4 Forecourts

iii|17 The hierarchy is presented from major to minor in terms of size, traffic movements and general levels of expected activity/use from all modes of transport.

iii|18 The names chosen for each type of street and space are indicative with each element in the hierarchy described and illustrated over page:

Figure ii:02 - The street as part of the Public Realm

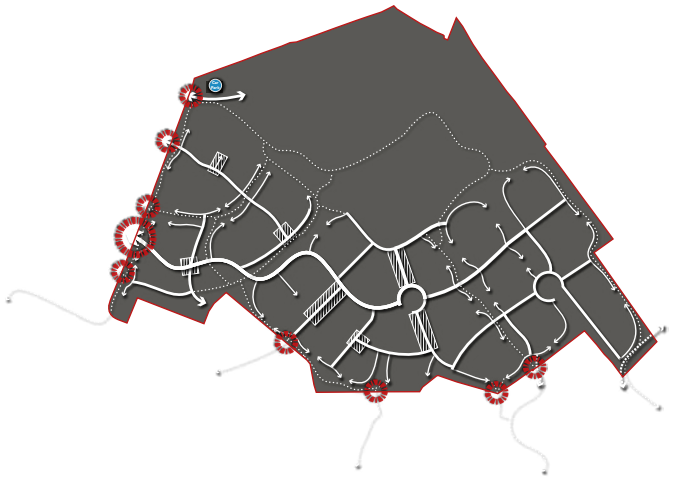


Figure iii:03 - Creating Legible Movement and Public Realm Hierarchies
Copyright & Credit: Barratt Developments PLC

Street Hierarchy

1. Avenues

iii|19 The avenue would provide the main access into a development from the main road. Due to its heavy use it would be traditional and more engineered in form with a bitmac carriageway and dedicated pavements. Parking would primarily be accommodated off street, but this would in part be dependent on the amount of traffic using this route, some visitor parking set within bays off the main carriageway may be accommodated.

iii|20 Two forms of the avenue have been illustrated here, one with footpaths traditionally located immediately adjacent to the carriageway and the other with footpaths or footpath/cycleways located behind a wide verge which accommodates the avenue of trees and swales related to the SuDS system, thus providing a pleasant environment for pedestrians away from this busier street.

iii|21 The built form should be set back from the road, creating a stronger green feel to the avenue and allowing sufficient room for the planting of larger street trees which will not interfere with foundations or services. These add scale to the streetscape, offer shade to pedestrians and reinforce the green character of the development; the rhythm of the tree planting creates a continuous avenue that frames views into any surrounding open spaces or along the avenue itself.

iii|22 Formal hedge planting and/or railings along boundaries would provide structure and identity to the streetscape and define the public/private interface. The avenue could vary in width (say between 5.5 and 6.5 metres) depending on whether it would need to accommodate a bus service and would serve up to 400 homes.

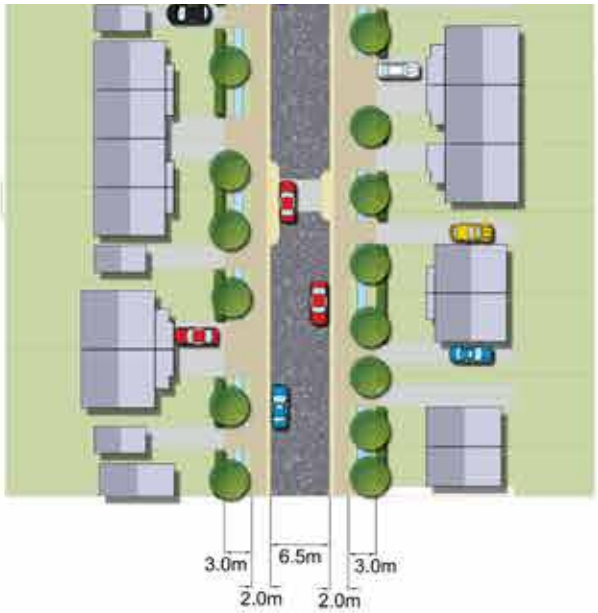


Figure iii:04 - Street Hierarchy: Principal Avenue

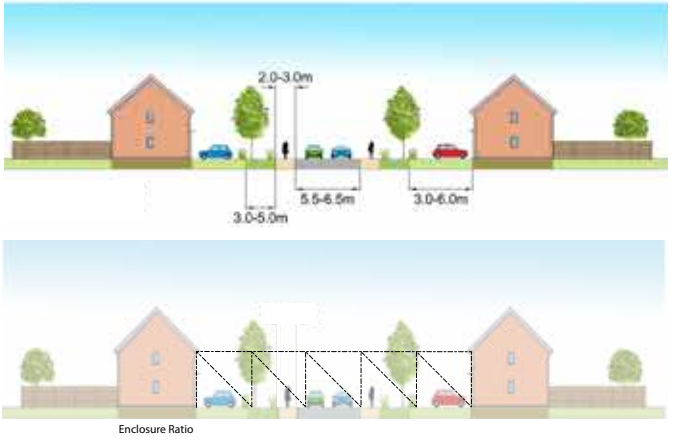


Figure iii:05 - Street Hierarchy: Secondary Avenue

2. Streets

iii|23 The streets in this example provide the secondary routes in the hierarchy, linking the avenue into the heart of the residential areas, on smaller schemes the street may be the primary route in the scheme.

iii|24 Narrower than the avenue, the layout is traditional in form with a bitmac carriageway and pavements running adjacent to the carrageway. Thus the scale of the road has a more domestic feel, with the built form set slightly closer to the road and the street tree planting incorporating smaller growing species.

iii|25 Gardens would generally be more informal with mixed native hawthorn/holly hedges, small tree planting and some herbaceous/shrub planting to front gardens.

iii|26 Driveways would generally be a mix of frontage, garaged and side parking solutions with visitor parking to the street.

iii|27 The main carriageway, could vary in width along its length to emulate a more traditional and organic form of street found in a number of settlements which then allows on street parking off the main carriageway alignment for primarily visitors.

iii|28 Typical street widths could be in between 4.8 and 5.5 metres wide depending on how many homes they served (Up to 50 homes for 4.8m width and 400 homes for 5.5 metre width).

Figure iii:06 - Street Hierarchy: Street

3. Lanes

iii|29 The lanes in this example take on the informal character of a shared surface route. Domestic and organic in nature, designed as a simple shared surface route which provides access up to 50 homes along its length, often connecting onward into shared drives and/or pedestrian/cycleways or itself used to de-formalise the edge of schemes at the rural interface.

iii|30 Use of a small unit paved surface reinforces the more domestic and semi-rural nature of the route. Traditional upstand kerbs and raised pavements are also avoided to create a more seamless transitional space between the residential properties and the landscape beyond. This approach also assists with the SuDS strategy by facilitating the movement of surface water flow from the roads onto grassed transition strips and from there to swales and the wider system.

iii|31 The lane itself would be between 4.5 and 4.8 metres wide with 2 metre service verges to either side in front of the private garden front boundary. In certain circumstances the service strip could be reduced on one side to 1 metre in width to further enclose the space and create a more intimate street environment.

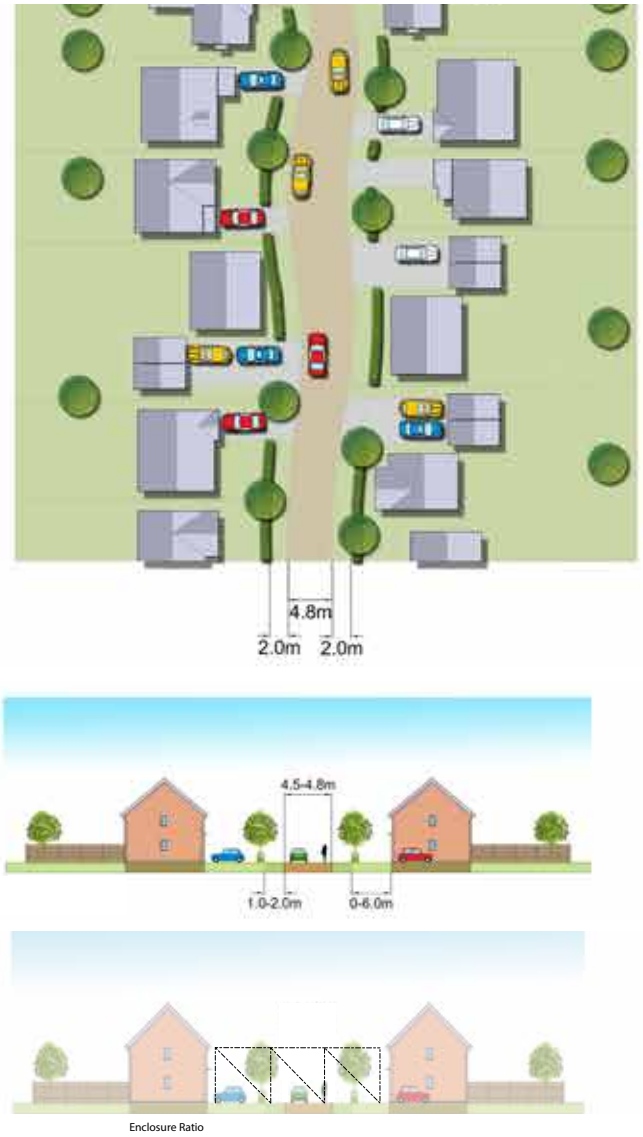


Figure iii:07 - Street Hierarchy: Lane

4. Shared Drive

iii|32 The shared drive serves a maximum of five properties and takes on the character of a narrow track as it would usually be associated with the development edge and interface with the wider countryside and open spaces

iii|33 Organic in nature, designed as a simple shared surface route and often sits alongside pedestrian/ cycleways. These routes aren't usually adopted and are maintained by the residents living on them and thus a bound gravel surface or permeable pavement would be more acceptable to define these more private, rural edge routes.

iii|34 As with the lanes, traditional upstand kerbs and raised pavements are avoided to create a more seamless transitional space between the development and the landscape beyond and again assists with the delivery of the SUDS strategy.

iii|35 Bitmac with unbound edges may be appropriate as an alternative to self-binding or resin bound aggregates in areas of anticipated greater use and where it does not compromise the design and landscape quality of the proposal and where it is not proposed for adoption by the Local Authority

iii|36 As a rule, shared drives would be 3.3 metre wide and depending on length could widen locally to allow some visitor parking or a passing place to be accommodated.

Figure iii:08 - Street Hierarchy: Shared Drive

Footpath/Cycleways & Tow Paths

iii|37 Distinct from the pavements associated with the streets, footpaths and footpath/cycleways are the simple pedestrian and cyclist routes which should link the development with its open spaces, following the line of a Public Right of Way, formalised desire line or creating a new permissive route through the site and out to the surrounding areas.

iii|38 Paths would be a minimum of 2-3 metres wide, depending on the nature and intended use of the paths by pedestrians and/or cyclists. The width and design should be determined by an assessment of the level of predicted use.

iii|39 Surface finishes would again depend on the anticipated volume of traffic, and the nature of the path, be it designed for leisure or utility journeys, and can vary between self binding aggregates/ clays (i.e. Hoggin), resin bound aggregates and/or bitmacs.

iii|40 Such routes within the site can be associated with general amenity routes, nature trails, jogging and general fitness trails etc. and should be designed as an integral elements with a landscape scheme and any public arts strategy.

iii|41 Given the historic character of canals and associated structures, a sensitive approach to design and materiality is required. Where towpaths are required to be implemented or enhanced, this shall be in accordance with the design specification required by the Canals and Rivers Trust.

iii|42 More guidance on the design of cycling infrastructure is available in the Government publication LTN 2/08.

Cycle Infrastructure Design LTN 2/08

Figure iii:09 - Street Hierarchy: Footpaths & Cycleway Solutions
Copyright & Credit: Barratt Developments PLC

Shared Spaces within the Street Hierarchy

iii|43 These spaces should be designed around building placement and quality of space, with highway functions operating within that structure.

1. Squares

iii|44 Squares would be areas of public realm set into the streets and lanes within the heart of developments and fronted and enclosed by the homes which surround them, with corner buildings rotated to focus views onto the central space. Focal buildings in the form of header buildings should be located on main vistas into the spaces and pinch points created into the space to frame views, create greater enclosure and aid in slowing traffic speeds.

iii|45 A square should be designed as a shared surface space, detailed with small unit paving which calms traffic and gives priority to pedestrian and cyclists. Designed as a piece of public realm, rather than a traditional road, it provides a focus within the development for residents and other users.

iii|46 The design and layout is simple, allowing flexibility in its use and form by the residents, with subtle changes in colour and texture used to define parking bays within the square and contrasting flush kerbs/ thresholds to define the pedestrian refuges and through-routes for the partially sighted.

iii|47 Within the square soft landscape elements should be used to add to the structure and character of the spaces, architectural planting, along with street trees should be used to accentuate architectural elements, define the corners of the square, frame views and provide shading of users and parked vehicles.

Figure iii:10 - Street Hierarchy: Squares

2. Garden Squares

iii|48 Garden Squares would be used to create a green space within larger developments and offer relief from the streets. The garden square would be enclosed by strong building lines and defined by a strong green framework in terms of front private gardens and the public gardens themselves. It should not just be a patch of grass.

iii|49 The form of the streets within the square could change to a shared surface with parking bays and pedestrian priority zones defined by different sized paving units, colour variations, textures and flush kerbs/thresholds.

iii|50 Such spaces could contribute to the overall open space provision for the scheme.

Figure iii:11 - Street Hierarchy: Garden Squares

3. Mews

iii|51 The mews would be positioned within the lanes and would be primarily associated with townhouse rows which would front the space created.

iii|52 Mews should be designed as a shared surface space using small unit paving which calms traffic and gives priority to pedestrian and cyclists. Designed as a piece of public realm, rather than a traditional road, it provides a break in the streetscene and offers legibility and orientation to the user.

iii|53 Like the square, the design and layout is simple, allowing flexibility in its use and form by the residents, with subtle changes in colour and texture used to define parking bays within the square or along the mews and contrasting flush kerb to define the pedestrian refuges and through-routes for the partially sighted.

iii|54 Announcement of arrival into the mews could be defined by a stepping forward of the building line to create a threshold, gateway and/or inclusion of public realm features and street furniture.

Figure iii:12 - Street Hierarchy: Mews

4. Forecourts

iii|55 Similar in form to the mews but set to one side of the lane and strongly enclosed by the buildings relating to the space.

iii|56 The main footpath would create a threshold to the forecourt on the lane side of the space with parking positioned to back of footpath and with residential access paths and small garden frontages providing separation between parking bays and properties.

iii|57 The forecourt requires careful planning and landscape treatments to ensure cars are not overbearing, both dividing or defining the run of spaces with trees and/or hedging but also to create a definable boundary between public and private space.

Figure iii:13 - Street Hierarchy: Forecourt

Technical Design Considerations

Junction & Access Visibility Splays

iii|58 The design speed of all residential developments is anticipated to not exceed 20mph and this would be achieved through the design and layout of streets, not by using physical traffic calming features.

iii|59 In the unlikely event that the urban design of the scheme cannot ensure a 20mph design speed, then traffic calming features may be considered, provided that they can be satisfactorily integrated without detriment to the design quality of the proposed development.

iii|60 Signage promoting a 20 mph speed limit should be unnecessary. Highway signage specification is quite onerous to ensure the information being given is easily translatable to highway users. Adoptable highway signage must be in accordance with the Traffic Signs and Regulations and General Directions 2016 (TSRGD). However in residential developments, where it is required, signage should be designed as sensitively as possible so as not to detract from the aesthetic qualities of the development or to create visual clutter

iii|61 Figure iii:12 illustrates a typical visibility splay for a 20mph design speed.

Carriageway Widths

iii|62 Carriageway width is dealt with as part of the 'Creating Legible Hierarchies' section previously in this chapter and should be read to appreciate typical widths and the number of homes anticipated to be served from each street type, as discussed at paragraph iii|14 onwards. The use of channels/ gulley details in stone or concrete sett units can help to visually narrow wider streets and aid in the hierarchy detailing.

Vehicle Tracking

iii|63 Vehicle tracking assessments are a useful tool in demonstrating the appropriateness of design solutions in terms of refuse and emergency vehicle access and their ability to manoeuvre within the adopted street. Tracking diagrams submitted as part of the planning application pack are required by Cheshire East to ensure streets and shared spaces perform to the best of their ability in terms of servicing and potential emergency requirements. This should form part of the early design process to ensure deliverable solutions.

Footway Widths

iii|64 Generally footpaths would be 2 metres wide alongside streets. In circumstances where it is appropriate, footpaths should have a more varied width to reflect the frontage and grain created by buildings. In more informal locations, in rural locations for example, formalised paths may not be appropriate and a shared surface lane may be more in keeping.

iii|65 In such locations care must be taken to accommodate accessibility for the partially sighted and disabled more generally and pedestrian refuge zones will need to be designed into schemes to ensure access for all. In certain locations footpaths should also be designed with more polite surfacing, such as within key spaces or locations within the scheme.

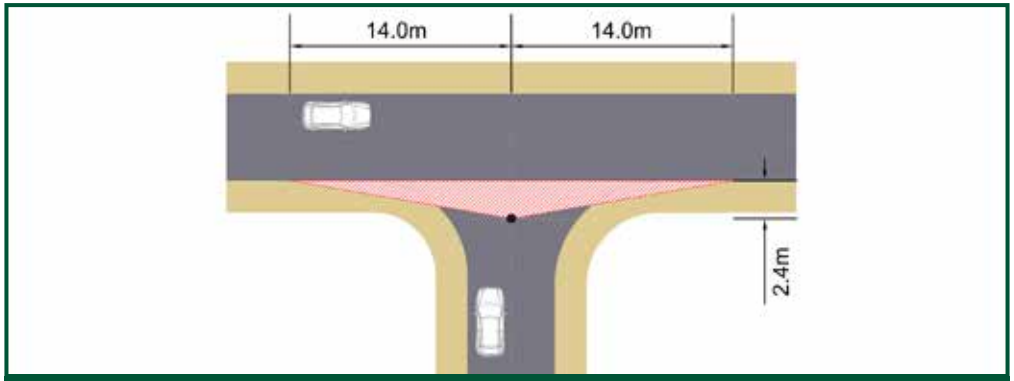


Figure iii:14 - Visibility Splays

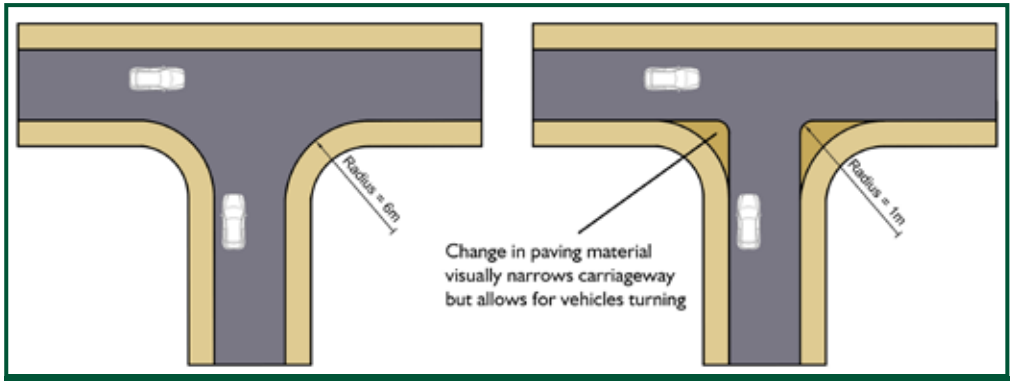


Figure iii:15 - Junction Radii

iii|66 Where formal cycleways are to be included then the minimum width for a combined footpath/cycleway is 3 metres. Footways are dealt with in more detail as part of the 'Creating Legible Hierarchies' section previously in this chapter and should be read to appreciate typical widths and the relationship with the streets in each street type.

Junction Radii

iii|67 Radii should not normally be greater than 6 metres in order to restrict vehicle speeds accessing and moving through the development. Reduced radii in line with MfS guidance can also be proposed as long as vehicle tracking has been undertaken to ensure swept paths do not impinge on footways and pedestrian refuge zones.

Lighting

iii|68 Lighting can provide many benefits and in some areas can help reduce crime and increase the perception of safety. Amenity lighting can enhance areas and increase the 'feel good factor'.

iii|69 Cheshire East Highways is actively seeking to reduce the impact street lighting has on the environment. Installing energy efficient and sustainable equipment is a vital part of this process.

iii|70 Street lighting design shall support the aims of the Council's Sustainable Strategy which include:

- Reduction in Energy Consumption
- Thriving Economy
- Sustainable Environment
- Reduction of primary energy consumption and increasing the share of renewable energies
- Carbon free energy supply
- Safe communities
- Health and wellbeing
- Cohesive and Strong Communities
- Highway safety for road users

iii|71 All submitted lighting designs shall be in compliance with the following current reports:

- BS5489 - Code of practice for the design of road lighting
- Cheshire East Highways Street Lighting policy and specifications
- 6C's Specification
- Well Lit Highways
- ILP Technical Reports
- Bats and environmental impact assessment
- Conservation (Natural Habitats) Regulations
- Climate Change Act
- BS EN 13201-1 European Standard for the design of street lighting on the public Highway.

iii|72 The lighting design shall be sympathetic to the environment, without causing light pollution onto residential properties, using the most up to date lighting equipment, appropriate to the location, Conservation Areas and dark skies locations need to be considered, along with ecological reasons for minimising light pollution and spillage (i.e. Bats).

Bat Conservation Trust - Lighting Guidelines

iii|73 Cheshire East Highways is committed to reducing CO2. Reduction will be achieved through the introduction of LED lighting, dimming, trimming of burning hours and de-illumination of equipment where possible.

iii|74 At present the availability and reliability of solar, wind or other renewable energy equipment is in its infancy. Trials of solar powered equipment, in particular, have identified areas of improvement required to make it both energy and cost effective. The Council recognises the importance of the promotion and improvement in this area.

iii|75 At an early stage in the development of design proposals consideration must be given for the lighting and highway infrastructure design to be developed alongside the strategic landscape principles, to ensure landscape proposals are compatible with lighting or other highway infrastructure requirements within the detailed design.

Street Furniture

iii|76 Street furniture has an impact on the public realm of developments. Too much and the streets and spaces can appear cluttered, too little and the streets appear underused and denude of life.

iii|77 Use of seating in the streets and related public realm is encouraged, but should be sighted in logical locations to ensure they are used. Seating within a public square looking onto active areas, or located to exploit a view, or vista or at a bus stop or at the top of some steps are logical locations for people to stop and use them.

iii|78 Whilst bollards should be installed as last resort or for safety purposes, where required they can be creatively used to define separation between pedestrian and vehicles without impeding the movement of either, protect trees in shared surfaces from vehicular damage or provide verticality within the street to define thresholds and gateways.

iii|79 If bollards are to be used they should be of a material and colour/finish that makes them clearly visible to cyclists but only where it does not compromise the design quality of the development and to the approval of the Local Highway Authority.

iii|80 Use of guard railing is discouraged, if pedestrian need to be guided away from a potential hazards in the street then the use of seating, planters or changes in level should be explored.

iii|81 The quality of street furniture can add to the impressions of the place.

Signage & Road Markings

iii|82 Traffic signage cover both signs and road markings and the Traffic Signs and Regulations and General Directions 2016 (TSRGD) is a regulatory document which details every traffic sign prescribed in the UK and stipulates the conditions under which they may be used.

iii|83 Compliance with TSRGD is mandatory and is supported by additional guidance documents which are listed in MfS.

iii|84 In residential areas minimising signage where traffic volumes and speeds are low, normally works well and reduces clutter in the street. Shared surface zones especially benefit from this approach.

iii|85 Too many warning signs in themselves cause hazards in the street with users taking more notice of them than the road ahead or the location of the sign itself creating restricted widths to footpaths etc..

iii|86 It should be stressed that no signs are fundamentally required by TSRGD per se. Signs are only needed to warn or inform and therefore designers should start from a position of having no signs, and introduce them only where they serve a clear function.

iii|87 If designed well, streets, their alignments and the hierarchies in which they are set should make the network self explanatory and readable to all users. Legibility as discussed previously is a key element to reducing the need for signage.

Specification & Adoption

iii|88 For new developments, an agreement under Section 38 of the Highways Act 1980 can be entered into between the developer and the local highway authority which provides for their construction, maintenance and adoption.

iii|89 Cheshire East Council has specific standards that the design of a new street must meet in order for it to be adoptable. Previously this used to be based on the design advice in DB32 but is now based on the Manual for Streets (MfS). In accordance with MfS, Cheshire East encourages innovative, place led designs that satisfy MfS's provisions, subject to relevant vehicle tracking and safety auditing during the initial design and subsequent technical stages.

iii|90 A basic level materials palette (as set-out over page) has been provisionally agreed and accepted by the Council from a highway perspective. Based upon this guidance, features or materials specifications considered to be outside of this accepted suite shall be subject to additional commuted payments, payable prior to adoption, to ensure the council is not adversely affected in terms of future maintenance and liability.

iii|91 Commuted sums may be required to cover maintenance of such items as highway structures, noise fencing, traffic signals and non-standard street lighting, including heritage, passive safe, architectural etc., any equipment that is not part of Cheshire East Highways specification, where they are to be adopted as part of a publicly maintained highway.

iii|92 So, where in principle we are prepared to adopt them, you will normally also have to pay commuted sums on:

- additional areas exceeding usual highway design standards and which are not required for the safe functioning of the highway;
- materials outside our usual Specification;
- non-usual or additional street furniture;
- landscaping within the proposed highway, including trees; and
- sustainable drainage systems (SuDS), for example flow attenuation devices, swales and storage areas that are located within the adoptable area and that convey, control or store highway surface water"

iii|93 A SuDS Manual is being prepared by the Council which will further clarify the situation with regards to SuDs adoption.

iii|94 It is likely that the vast majority of developments will therefore incur commuted payments. This should be factored into site feasibility and land valuations at the earliest possible opportunity to ensure that developers are not disadvantaged. Table iii:02 over page provides the agreed schedule of commuted payment charges that will be applied by Cheshire East Council to new developments for landscape features within the highway.

iii|95 Early engagement with Cheshire East Council's

Table iii:02 - Commuted Payments for Landscape Features

Street Trees:		
Final Mature Size:	**Unit*[1]:**	**Cost*[2]:**
Small Tree	Item	£700.00
Medium Tree	Item	£900.00
Large Tree	Item	£1,100.00
Existing Mature Tree	Item	£1,500.00
Tree Grilles	Item	£500.00

Notes:
*[1] Item costs illustrated above are for the adoption of single trees and reduction factors will be applied for multiple trees.
*[2] Costs correct at time of issue and will be subject to annual review.

Development Control and Highway departments will ensure commuted sums are identified and where you are proposing SUDS, you must hold discussions with all relevant parties at an early stage (and certainly before you submit your planning application) to agree ownership and responsibility for the facility.

iii|96 The following paragraphs set-out under the title 'Materials' and the associated tables provides guidance on a simple palette of durable materials that will add to the aesthetic quality of the streetscape that Cheshire East Council expects to be developed in design proposals, related back to the settlement character areas in which they would be located and the street hierarchies.

iii|97 The only occasion that the Local Highway Authority would not accept block paving are in locations where it is envisaged that proposed vehicle loading and/or heavy turning would detrimentally impact the condition of paviours and result in long term maintenance liability. Serious maintenance problems can occur with the inclusion of cut sections on radii, around ironwork, over trench reinstatements and on change of vertical alignment. Appropriate thought must be applied to the location and highway usage where block paving is proposed.

iii|98 The Development Management and technical highway teams will work closely to ensure layouts agreed at the planning stage are designed in accordance with this design guide in order to gain speedy technical approval and subsequent adoption.

iii|99 Some developers may decide not to seek the adoption of streets within a development. However, because of the future potential for Cheshire East to be approached to adopt such streets, the Council will require streets to be designed and constructed to an adoptable standard, again to safeguard it in respect to future liability and cost.

Materials

iii|100 As stated above, developers and their designers are encouraged to engage with the local authority highways team to discuss appropriate materials at an early stage in the design process.

Table iii:03 - Carriageway Materials Palette

	Gritstone Edge		North Cheshire Fringe		Silk, Cotton & Market Towns		Salt & Engineering Towns		Market Towns & Estate Villages	
	Carriageway	**Shared Surface*[1]**	**Carriageway**	**Shared Surface*[1]**	**Carriageway**	**Shared Surface*[1]**	**Carriageway**	**Shared Surface*[1]**	**Carriageway**	**Shared Surface*[1]**
Avenue	Bitmac with gutter detail in Tegula setts*[2] (harvest)	Gritstone/ Yorkstone flags and setts (buffs/ pinks)	Bitmac with gutter detail in Conservation setts*[2] (silver grey)	Gritstone/ Yorkstone/ Granite flags and setts (buffs/greys/ blues)	Bitmac with gutter detail in Tobermore Tegula long setts*[2] (heather)	Gritstone/ Yorkstone flags and setts (buffs/ pinks)	Bitmac with gutter detail in clay block pavers (red multi)	Clay block paving in red multi and/ or blue slate flags	Bitmac with gutter detail in Conservation setts*[2] (charcoal)	Blue slate flags or Tobermore Hydropave*[2] (graphite)
Street	Bitmac with gutter detail in Tegula setts* [2] (harvest)	Gritstone/ Yorkstone setts and/ or Charcon Stone Master flags*[2] (buff shade mix)	Bitmac with gutter detail in Conservation setts*[2] (silver grey)	Gritstone/ Yorkstone/ Granite setts (buffs/greys/ blues) or Conservation setts*[2] (silver grey)	Bitmac with gutter detail in Marshalls Conservation setts* [2] (harvest)	Gritstone/ Yorkstone setts and/ or Charcon Stone Master flags*[2] (buff shade mix)	Bitmac with gutter detail in Clay block paver (red multi)	Clay block paving (red multi) or Tobermore Retro*[2] (heather)	Bitmac with gutter detail in Marshalls Tegula sett*[2] (grey)	Tobermore Retro*[2] (heather)
Lane	Tegula sett*[2] (harvest)	Tegula setts*[2] (harvest)	Tegula sett*[2] (pennant grey)	Tegula sett*[2] (pennant grey)	Marshalls Tegula sett*[2] (traditional)	Marshalls Tegula cobbles*[2] (traditional)	Tegula cobbles*[2] (Red)	Tobermore Retro*[2] (heather)	Tegula cobbles*[2] (pennant grey)	Tobermore Retro*[2] (heather)
Shared Drive (unadopted serving 5 homes or less)	Tegula sett*[2] (harvest) or Resin Bound Gravel using buff aggregates or Mistral Priora permeable paving*[2] (harvest) with edging detail in Tegula cobbles*[2] (harvest)		Mistral Priora permeable paving*[2] (silver grey) or Resin Bound Gravel using pink aggregates or Tobermore Shannon*[2] (heather) with edging detail in Tobermore Country Kerb*[2] (silver grey)		Tegula sett*[2] (traditional) or Resin Bound Gravel using buff aggregates or Mistral Priora permeable paving*[2] (traditional) with edging detail in Tegula cobbles*[2] (harvest)		Tegula sett*[2] (Red) or Resin Bound Gravel using Tuscany barley beech aggregates or Tobermore Shannon*[2] (heather) with edging detail in Tobermore Country Kerb*[2] (silver grey)		Tobermore Shannon*[2] (heather) or Mistral Priora permeable paving*[2] (silver grey) or Resin Bound Gravel using pink aggregates with edging detail in Tobermore Country Kerb*[2] (silver grey)	

*[1]Shared surface public realm areas set within streets i.e. squares or mews; *[2]or similar approved;

Table iii:04 - Conservation Area/Sensitive Setting Materials Palette

	Gritstone Edge	North Cheshire Fringe	Silk, Cotton & Market Towns	Salt & Engineering Towns	Market Towns & Estate Villages
Avenue	Bitmac carriageway with buff granite aggregate chippings rolled into wearing course with Gritstone/Yorkstone diamond sawn setts (buffs/pinks) as gutter detail (five courses)/ parking bays and Gritstone/ Yorkstone diamond sawn flags (buffs/pinks) to pavements	Bitmac carriageway with silver grey granite aggregate chippings rolled into wearing course with Granite split faced setts (silver grey) as gutter detail (five courses)/parking bays and Yorkstone diamond sawn flags (buffs/greys) to pavements	Bitmac carriageway with buff granite aggregate chippings rolled into wearing course with Gritstone/Yorkstone cobbles (buffs/pinks) as gutter detail (five courses)/parking bays and Gritstone/Yorkstone diamond sawn flags (buffs/pinks) to pavements	Bitmac carriageway with silver grey granite aggregate chippings rolled into wearing course with Granite diamond sawn setts (dark grey) as gutter detail (five courses)/parking bays and Granite diamond sawn flags (blues/greys) to pavements	Bitmac carriageway with mid grey granite aggregate chippings rolled into wearing course with clay block paving (red multi) as gutter detail (five courses)/parking bays and Granite diamond sawn flags (blues/greys) to pavements
Street	Bitmac carriageway with buff granite aggregate chippings rolled into wearing course with Gritstone/Yorkstone cobbles (buffs/pinks) as gutter detail (three courses)/parking bays and Gritstone/Yorkstone diamond sawn flags (buffs/ pinks) to pavements	Bitmac carriageway with silver grey granite aggregate chippings rolled into wearing course with Granite split faced setts (silver grey) as gutter detail (three courses)/parking bays and Yorkstone diamond sawn flags (buffs/greys) to pavements	Bitmac carriageway with buff granite aggregate chippings rolled into wearing course with Gritstone/Yorkstone cobbles (buffs/pinks) as gutter detail (three courses)/parking bays and Gritstone/Yorkstone diamond sawn flags (buffs/ pinks) to pavements	Bitmac carriageway with silver grey granite aggregate chippings rolled into wearing course with Granite split faced setts (silver grey) as gutter detail (three courses)/parking bays and Granite diamond sawn flags (blues/greys) to pavements	Bitmac carriageway with mid grey granite aggregate chippings rolled into wearing course with clay block paving (red multi) as gutter detail (five courses)/parking bays and Granite diamond sawn flags (blues/greys) to pavements
Lane	Conservation setts*[1] (buff) to carriageway with Gritstone/ Yorkstone diamond sawn flags (buffs/pinks) to footways	Conservation setts*[1] (silver grey) to carriageway with Gritstone/Yorkstone diamond sawn flags (buffs/greys) to footways	Conservation setts*[1] (buff) to carriageway with Gritstone/ Yorkstone diamond sawn flags (buffs/pinks) to footways	Conservation setts*[1] (silver grey) to carriageway with Granite diamond sawn flags (blues/greys) to footways	Tobermore Retro*[1] (heather) to carriageway with Granite diamond sawn flags (blues/ greys) to footways

*[1]or similar approved;

Table iii:05 - Footpath & Cycleway Materials Palette

	Gritstone Edge	North Cheshire Fringe	Silk, Cotton & Market Towns	Salt & Engineering Towns	Market Towns & Estate Villages
Avenue	Charcon Stone Master flags*[1] (buff shade mix) with Tegula sett*[1] (harvest) in single course to back of kerb	Charcon Stone Master flags*[1] (reds shade mix) with Tegula sett*[1] (brindle)	Charcon Stone Master flags*[1] (buff shade mix) with Tegula sett*[1] (harvest) in single course to back of kerb	Charcon Stone Master flags*[1] (reds shade mix) with Tegula sett*[1] (brindle)	Charcon Stone Master flags*[1] (reds shade mix) with Tegula sett*[1] (brindle)
Street	Charcon Stone Master flags*[1] (buff shade mix)	Charcon Stone Master flags*[1] (reds shade mix)	Charcon Stone Master flags*[1] (buff shade mix)	Tobermore Retro*[1] (heather)	Tobermore Retro*[1] (heather)
Lane	Resin bound gravel (buffs/ pinks)	Bitmac	Bitmac	Bitmac	Resin bound gravel (buff)

*[1]or similar approved;

iii|101 Using materials palettes that have been derived from the local vernacular is encouraged and the following table provides suggested palettes based on each Settlement Character Area. Creating high quality feature areas in the public realm, such as squares, garden squares, mews and forecourt areas will add to the sense of place and general quality of the design.

iii|102 Standardised material palettes across developments are not appropriate and will not meet the aspirations of Cheshire East Council to create high quality places.

iii|103 However materials palettes will need to be easy to maintain, safe, durable, sustainable and appropriate to the local character. The following tables sets out a limited palette of standard and non-standard materials which should be used in combination to add variety and interest to the streetscape and public realm within developments, based on their location, vernacular, type and level of use.

iii|104 Where the proposal involves redevelopment of existing streets or lanes, existing historic or vernacular materials should be retained/re-used where this meets the adoption requirements of the highway authority.

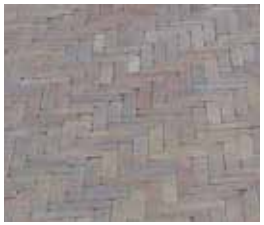
iii|105 Table iii:03 sets out the standard palette, whereas table iii:04 sets out the palette applicable to sensitive settings, including conservation areas. the relevant palette should be discussed with the council at the pre-application stage.

iii|106 All the materials in these palettes will be adopted by Cheshire East Council - as long as they are manufactured and laid to the councils specifications.

Gritstone Edge

	Carriageway	Shared Surface	Conservation Area
Avenue	 Bitmac  Bitmac with gutter detail in Tegula Setts (Harvest)  Tegula Setts (Harvest)	 Gritstone/Yorkstone Flags (buffs/pinks)  Gritstone/Yorkstone Setts (buffs/pinks)	 Bitmac carriageway with buff granite aggregate chippings rolled into wearing course with Gritstone/Yorkstone diamond sawn setts (buffs/pinks) as gutter detail (five courses)/parking bays and Gritstone/Yorkstone diamond sawn flags (buffs/pinks) to pavements
Street	 Bitmac  Bitmac with gutter detail in Tegula Setts (Harvest)  Tegula Setts (Harvest)	 Charcon Stone Master (Buff Shade Mix)  Gritstone/Yorkstone Setts (buffs/pinks)	 Bitmac carriageway with buff granite aggregate chippings rolled into wearing course with Gritstone/Yorkstone cobbles (buffs/pinks) as gutter detail (three courses)/parking bays and Gritstone/Yorkstone diamond sawn flags (buffs/pinks) to pavements
Lane	 Tegula Setts (Harvest)	 Tegula Setts (Harvest)	 Carriageway - Conservation Setts (Buff)  Gritstone/Yorkstone Flags (buffs/pinks)
Shared Drive	 Tegula Setts (Harvest)  Resin Bound Gravel (Buff)  Mistral Priora Permeable Paving (Harvest)		

North Cheshire Fringe

	Carriageway	Shared Surface	Conservation Area
Avenue	 Bitmac  Bitmac with gutter detail in Conservation Setts (Silver grey)  Conservation Setts (Silver grey)	 Gritstone/Yorkstone/Granite Flags (buffs/greys/blue)  Gritstone/Yorkstone/Granite Setts (buffs/greys/blues)	 Bitmac carriageway with silver grey granite aggregate chippings rolled into wearing course with Granite split faced setts (silver grey) as gutter detail (five courses)/parking bays and Yorkstone diamond sawn flags (buffs/greys) to pavements
Street	 Bitmac  Bitmac with gutter detail in Conservation Setts (Silver grey)  Conservation Setts (Silver grey)	 Gritstone/Yorkstone/Granite Setts (buffs/greys/blues)  Conservation Setts (Silver grey)	 Bitmac carriageway with silver grey granite aggregate chippings rolled into wearing course with Granite split faced setts (silver grey) as gutter detail (five courses)/parking bays and Yorkstone diamond sawn flags (buffs/greys) to pavements
Lane	 Tegula Setts (Pennant grey)	 Tegula Setts (Pennant grey)	 Carriageway - Conservation Setts (Silver grey)  Gritstone/Yorkstone/Granite Flags (buffs/greys/blue)
Shared Drive	 Resin Bound Gravel (Pink Aggregates)  Mistral Priora Permeable Paving (Silver grey)  Tobermore Shannon (Heather)	 Tobermore Country Kerb (Silver grey)	

Silk Cotton and Market Towns

Carriageway

Avenue


Bitmac


Bitmac with gutter detail in Tegula Long Setts (Heather)


Tegula Setts (Heather)

Street


Bitmac


Bitmac with gutter detail in Tegula Setts (Harvest)


Tegula Setts (Harvest)

Lane


Tegula Setts (Traditional)

Shared Drive


Tegula Setts (Traditional)


Resin Bound Gravel (Buff)


Mistral Priora Permeable Paving (Traditional)


Edging - Tegula Cobbles (Harvest)

Shared Surface


Gritstone/Yorkstone Flags (buffs/pinks)


Gritstone/Yorkstone Setts (buffs/pinks)


Charcon Stone Master (Buff Shade Mix)


Gritstone/Yorkstone Setts (buffs/pinks)


Tegula Cobbles (Traditional)

Conservation Area

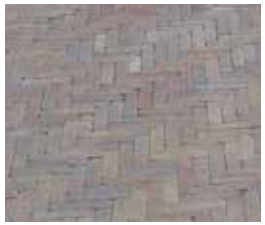

Bitmac carriageway with buff granite aggregate chippings rolled into wearing course with Gritstone/Yorkstone cobbles (buffs/pinks) as gutter detail (three courses)/ parking bays and Gritstone/ Yorkstone diamond sawn flags (buffs/pinks) to pavements


Bitmac carriageway with buff granite aggregate chippings rolled into wearing course with Gritstone/Yorkstone cobbles (buffs/pinks) as gutter detail (three courses)/ parking bays and Gritstone/ Yorkstone diamond sawn flags (buffs/pinks) to pavements


Carriageway - Conservation Setts (Buff)

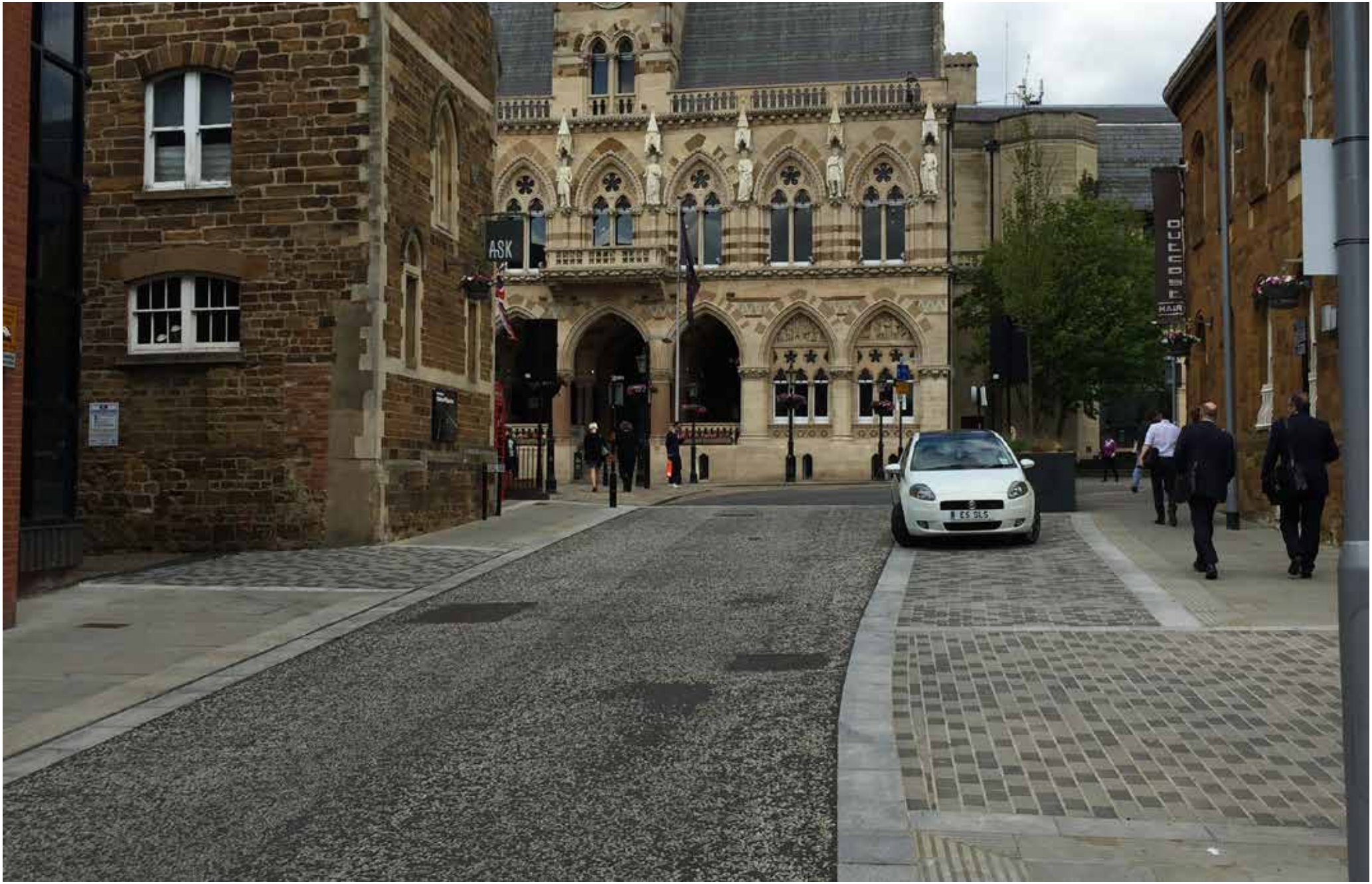

Gritstone/Yorkstone Flags (buffs/pinks)

Salt and Engineering Towns

	Carriageway	Shared Surface	Conservation Area
Avenue	 Bitmac  Bitmac with gutter detail in Clay Block Pavers (Red multi)	 Clay Block Pavers in Red multi  Gritstone/Yorkstone/Granite Flags (buffs/greys/blue)	 Bitmac carriageway with silver grey granite aggregate chippings rolled into wearing course with Granite diamond sawn setts (dark grey) as gutter detail (five courses)/ parking bays and Granite diamond sawn flags (blues/ greys) to pavements
Street	 Bitmac  Bitmac with gutter detail in Clay Block Pavers (Red multi)	 Clay Block Pavers in Red multi  Tobermore Retro (Heather)	 Bitmac carriageway with silver grey granite aggregate chippings rolled into wearing course with Granite split faced setts (silver grey) as gutter detail (three courses)/ parking bays and Granite diamond sawn flags (blues/ greys) to pavements
Lane	 Tegula Cobbles (Red)	 Tobermore Retro (Heather)	 Carriageway - Conservation Setts (Silver grey)  Gritstone/Yorkstone/Granite Flags (buffs/greys/blue)
Shared Drive	 Resin Bound Gravel (Tuscany Barley Beech Aggregates)  Tegula Setts (Red)  Tobermore Shannon (Heather)	 Tobermore Country Kerb (Silver grey)	

Market Towns and Estate Villages

	Carriageway	Shared Surface	Conservation Area
Avenue	 Bitmac  Bitmac with gutter detail in Conservation Setts (Charcoal)  Conservation Setts (Charcoal)	 Gritstone/Yorkstone/Granite Flags (buffs/greys/blue)  Tobermore Hydropave (Graphite)	 Bitmac carriageway with mid grey granite aggregate chippings rolled into wearing course with clay block paving (red multi) as gutter detail (five courses)/ parking bays and Granite diamond sawn flags (blues/ greys) to pavements
Street	 Bitmac  Bitmac with gutter detail in Tegula Setts (Grey)  Tegula Setts (Pennant grey)	 Tobermore Retro (Heather)	 Bitmac carriageway with mid grey granite aggregate chippings rolled into wearing course with clay block paving (red multi) as gutter detail (five courses)/ parking bays and Granite diamond sawn flags (blues/ greys) to pavements
Lane	 Tegula Cobbles (Pennant Grey)	 Tobermore Retro (Heather)	 Tobermore Retro (Heather)  Gritstone/Yorkstone/Granite Flags (buffs/greys/blue)
Shared Drive	 Tobermore Shannon (heather)  Mistral Priora Permeable Paving (Silver Grey)  Resin Bound Gravel (Pink Aggregates)  Tobermore Country Kerb (Silver grey)		


ASK

iii. Street Design Checklist:

Has Manual for Streets been properly applied?

Is there are strong street hierarchy to the development:

Is the street hierarchy legible with variations in street widths, materials and planting used:

Do the enclosing buildings respond to the street, frame views and have varied building lines set at different distances from the street:

Is there a balanced response to provision of parking with a mix of solutions - in-curtilage, behind building lines, forecourts, drives and on street:

Can residents see their cars from their homes:

Has the use of shared surface streets, lanes and public spaces been incorporated into the hierarchy:

Have the streets been designed so they can be used as social spaces, i.e. for play and conversation:

Is there a clear definition between private and public spaces and are public spaces well overlooked by surrounding properties:

Have technical and landscape design considerations been taken into account in the design of the streets?

Have the appropriate visibility splays been applied to the layout:

Are carriageway widths appropriate to the streets' position in the hierarchy and different materials used to visually narrow carriageways:

Has a vehicle tracking assessment been provided to ensure bin lorries and emergency vehicles can manoeuvre in the adoptable streets:

Has lighting been properly considered to not only light the streets and spaces safely but is additional lighting required to highlight landmarks and points of interest:

Has street furniture been used in appropriate locations to encourage the use of active spaces or to highlight views, vistas or panoramas:

Is the materials palette proposed adoptable and have appropriate commuted sums been agreed for its maintenance:

Does the design properly consider provisions for cyclists, including parking/storage in the public realm and within homes:

Does the development address BfL12?

Q9 Streets for all:

Q10 Car parking:

Q11 Public and private spaces:

Q12 External storage and amenity:

iii. Street Design Precedents:

Guildhall Road, Northampton

Location: Town Centre - Primary Street
Context: Historic/Conservation Area

Materials:

Carriageway: Hot rolled asphalt with silver grey granite chippings

Kerbs: Almost flush (15mm upstand) silver grey granite

Braille strip: Corduroy Yorkstone paving flags

Paving: Yorkstone flags

Parking bays: Silver grey and dark grey granite setts

Upton, Northampton

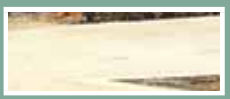
Location: Urban Extension - Lane
Context: Greenfield Development

Materials:

Carriageway: Concrete sett paving

Kerbs: Almost flush (15mm upstand) grey granite

Run-over strip: Silver grey granite setts



Paving: Saxon concrete slabs

Parking bays: Silver grey granite setts

Rosewood, North Colchester

Location: Infill Site - Shared Space
Context: Brownfield Development

Materials:

Shared Space: Brindle concrete block paving

Flush Kerbs: Bracken concrete kerb edgings

Parking Delineation: Charcoal concrete block paving

Paving: Cotswold tegula cobbles

Bollards: Brushed stainless steel

iv. Green Infrastructure & Landscape Design

Introduction

iv|01 Previous sections have considered the roles of urban design and masterplanning, this section focuses on the equally important subjects of green infrastructure (GI) and landscape design.

iv|02 Green infrastructure is a large and comprehensive subject in its own right and beyond the remit of this Guide, however in the first part of this section we have considered how GI aspirations can promote green assets within residential communities, as demonstrated in Figure iv:01.

iv|03 The Landscape Design section is a more practical part of the Guide which aims to give additional design guidance to developers within Cheshire East.

Green Infrastructure

iv|04 The Cheshire East Local Plan defines Green Infrastructure as *"A network of multi-functional green space, urban and rural, which is capable of delivering a wide range of environmental and quality of life benefits for local communities."*.

iv|05 Further information on the relevance of GI can be gained from Volume 2 section ii|11 of this Guide and within the following documents:

Green Infrastructure. An integrated approach to land use. Landscape Institute Position Statement March 2013.

Green Infrastructure North West

Green Infrastructure Framework for North East Wales, Cheshire and the Wirral

Crewe Green Infrastructure Action Plan

Good Practice Guidance for Green Infrastructure and Biodiversity

iv|06 The following pages provide information on

Figure iv:01- Green Infrastructure within Residential Communities [PGLA 2015]

how to promote GI aspirations within residential developments.

Protecting and Promoting Biodiversity and Geodiversity

iv|07 Cheshire East is one of a number of contributing members to the Cheshire Region Biodiversity Partnership (CRBP) which was set up with "A 2020 Vision - towards a land and sea richer in wildlife by the year 2020".

iv|08 The eastern part of the Borough lies within the boundary of the Peak District National Park. Led by The National Park Authority, the Peak District Biodiversity Partnership is managing a Biodiversity Action Plan for this area. For further information on these action plans and current habitat assessments please follow the following links:

Cheshire Region Biodiversity Action Plan

Peak District Biodiversity Action Plan

iv|09 Development should not lead to a loss of biodiversity and ideally should enhance it. Important habitats and species should be protected from harmful development. Any adverse effects should firstly be avoided, any unavoidable impact should be mitigated for and as a last resort compensated.

iv|10 Geodiversity and important geological features should also be protected and enhanced.

iv|11 Early discussions through the pre-application process are encouraged with the Council's Ecologist. Policy SE3 within the new Cheshire East Local Plan relates to biodiversity.

iv|12 The approach should be to design biodiversity into new developments as far as possible. Site layout and design should seek to retain existing habitats and features that benefit wildlife, giving priority to Biodiversity Action Plan habitats and species where they are present. Figure iv:02 identifies biodiversity values of potential elements within a residential development.

iv|13 The 2011 UK National Ecosystem Assessment (UK NEA) concluded that the natural world and its ecosystems are important to our well-being and economic prosperity. Yet they are consistently undervalued in conventional economic analyses and decision-making. Protecting and enhancing biodiversity and geodiversity as part of development proposals therefore contributes to both our social and economic well-being. This is discussed further in chapter vi.

UK National Ecosystems Assessment 2011

iv|14 Consideration also needs to be given to natural features outside the application site which may be affected by the scheme.

iv|15 Increasing the overall quality of the development by enhancing existing habitats or creating new areas appropriate to the wider landscape context could be achieved by implementing the following design measures:

- Creating areas of new habitat such as woodland, scrubland, species rich grassland or ponds in landscaped areas or public open space.
- Natural habitat areas such a species rich grassland, should not be located in close proximity to houses where they may be perceived as untidy and poorly managed. Woodland and tree belts should not be located where they would shade houses and gardens when mature.
- Siting open space and landscaping so that planting within them forms a wildlife corridor and habitat link between areas of habitat adjacent to the site.

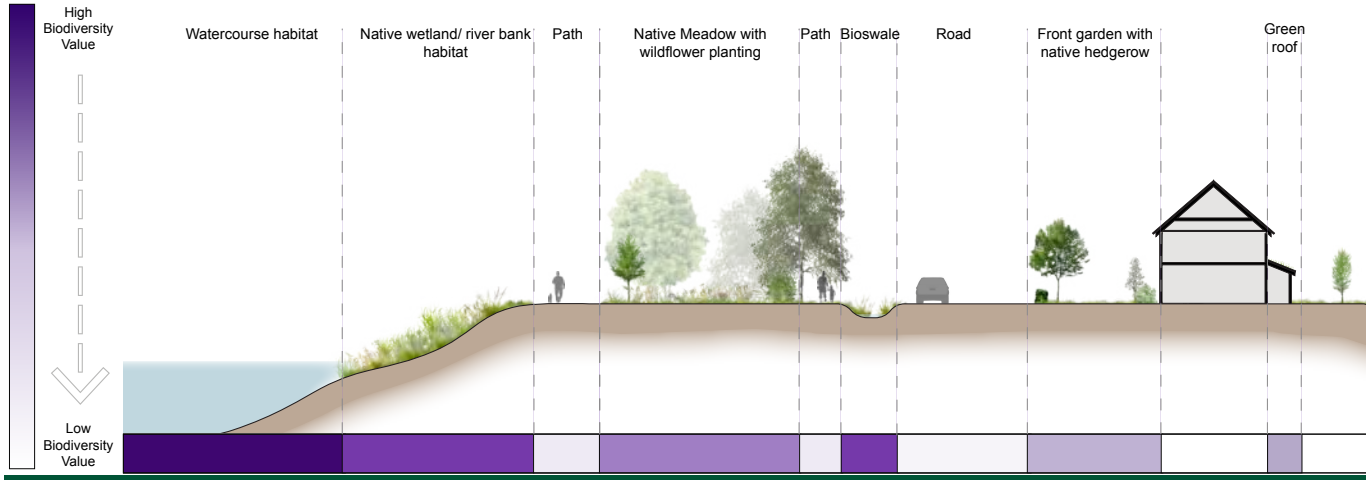


Figure iv:02- Biodiversity value in new residential development [PGLA 2015]

- Using locally native species in planting schemes.
- Making provision on new buildings for species such as bats, swallows, barn owls, house swallows or other species that might live locally.
- Using Sustainable Drainage Schemes so that drainage infrastructure also acts as biodiversity habitat.
- A balance needs to be achieved between biodiversity and the functionality of a space so that all spatial and biodiversity objectives can be achieved.

Bats & Nesting Birds

iv|16 New development should also aim to secure ecological enhancement by providing nesting/ roosting opportunities for bats and nesting birds. This should take the form of integrated opportunities within buildings (such as roosting/nesting within part of the roof space). Features for nesting house sparrow and swifts being particularly important and so should be prioritised. Measures should also be included as part of the landscape design through selection of appropriate tree and hedgerow species and supplemented by tree mounted or free standing roosting and nesting boxes (depending on the species be provided for). Provision should be informed by a trained ecologist in discussion with the Council's Nature Conservation Officers. Small scale developments (up to 10 units) would be expected to make a proportional contribution. Larger scale developments should provide features for nesting birds and roosting bats on 30% of consented units. The Exeter Residential Design Guide provides useful guidance.

Exeter Residential Design Guide

iv|17 Where it is not possible to avoid harm to existing habitats and species, through design measures, it may still be possible to minimise potentially damaging impacts through mitigation measures. For example:

- Timing the development of sites to avoid the breeding seasons of species present.
- Creating buffer zones between sensitive areas and development areas to reduce disturbance to habitats.
- Ensuring that new infrastructure such as bridges are built to enable movement of wildlife to continue.
- Steps to ensure that the hydrological status of sensitive sites is maintained through the careful design of drainage infrastructure.
- Translocation of species from destroyed habitat (to be used as a last resort).
- A financial contribution to management of nearby existing wildlife sites, through a commuted sum, can be required where the development could lead to increased pressure on those sites (e.g. noise and disturbance through increased amenity use).

iv|18 Where damage is unavoidable, and will still occur in spite of mitigation, then consideration should be

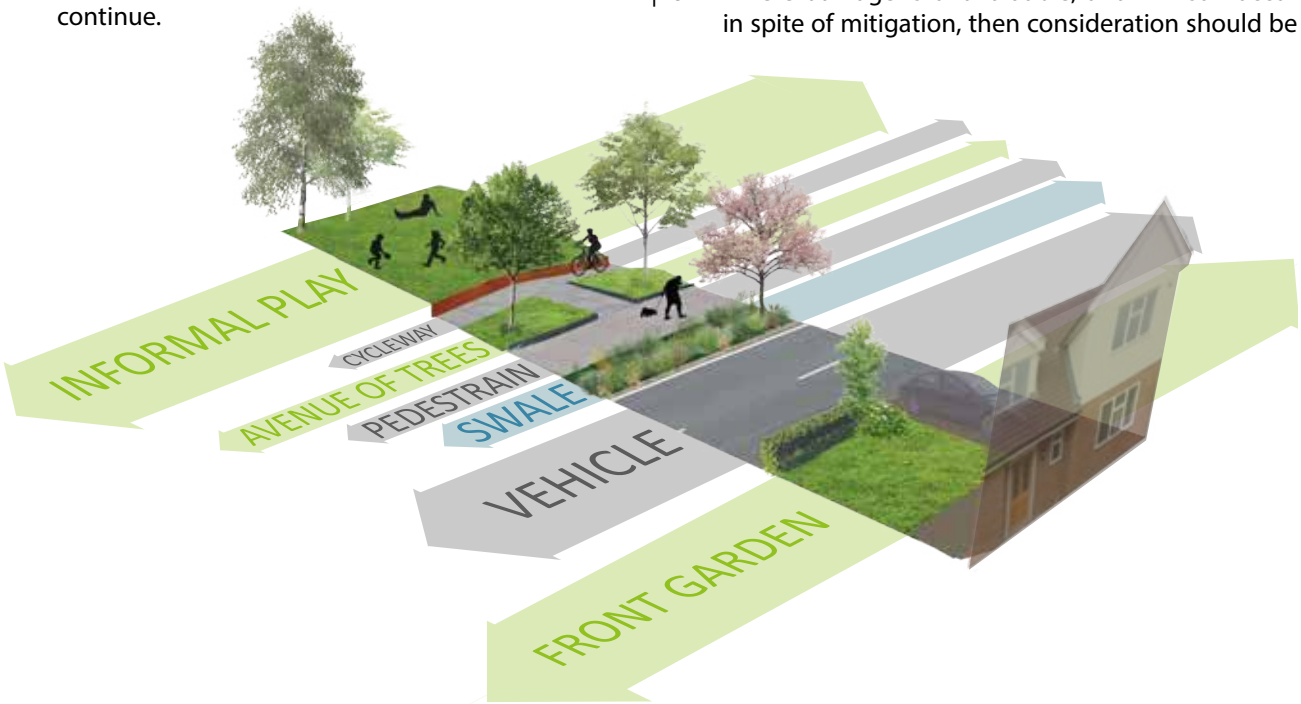


Figure iv:03 - Green Corridors within a residential development [PGLA 2015]

given to compensating for any loss to biodiversity by creating new habitat in replacement either on site or off-site.

Green Corridors

iv|19 Green networks, corridors and linkages are widely seen as a key mechanism for promoting biodiversity alongside delivering a range of other social and environmental benefits, including enhancement of local landscape character, improving air quality and greater opportunities for public access and recreational use (see Figure iv:03). The canal towpath network also plays an important role in widening travel choices and providing recreational opportunity.

iv|20 New developments should seek opportunities to make more connected and comprehensive local, and ultimately national, footpath and cycleway networks to enable people to get to the places they need to go including work, education, shops and recreation without using the car.

Figure iv:04 - Open Space, Bishopton Drive, Broken Cross.

iv|21 The enhancement of the quality of local greenspaces will create a need for safe, convenient and sustainable access to those spaces, ensuring everyone benefits and the journey to a park or play space becomes part of the overall recreational experience.

iv|22 This can be done by connecting the development to existing cycleways and public rights of way, bridleways and National Trails or providing easy access to them, by improved wider connections by merging parks and improving towpaths and open access to riverside locations and other water bodies.

iv|23 There maybe an opportunity within the development to improve existing rights of way. Further guidance can be found at:

Cheshire East Rights of Way Improvement Plan 2011-2026

iv|24 Dependent on the dimensions of the space it may be possible to create multifunctional corridors, for example, where other activities could be incorporated alongside a footpath or cycleway.

iv|25 The Cheshire East quantity standard on green corridors:

0.8ha per 1,000 population - green corridors or links to other open spaces (equates to 20m^2 per family dwelling)

iv|26 Further information can be found at:

Cheshire East Green Space Strategy 2013

Recreation and Health

iv|27 Cheshire East define Open Space as *'All space of public value, including public landscaped areas, playing fields, parks and play areas, and areas of water such as rivers, canals, lakes and reservoirs, which may offer opportunities for sport and recreation or act as a visual amenity and a haven for wildlife.'*

iv|28 The National Planning Policy Framework (2012) states that *"'Access to high quality open spaces and opportunities for sport and recreation can make an important contribution to the health and well-being of communities."*

iv|29 Further guidance can be gained from the Cheshire East Green Space Strategy, which focuses on one of the twelve core planning principles, outlined in the National Planning Policy Framework (March 2012), to "*take account of and support local strategies to improve health, social and cultural well-being for all, and deliver sufficient community and cultural facilities and services to meet local needs.*"

Cheshire East Green Space Strategy

iv|30 The Open Space Assessment for Cheshire East describes the accessibility, quantity and quality of open spaces across the main settlements. The assessment indicates whether there is a need to improve the quantity, quality, accessibility and visibility of open spaces within the main towns. The assessments can be found here:

Cheshire East Open Space Assessments

iv|31 The Landscape Institute provide further guidance on creating healthy places within the following publication:

Public Health and Landscape: Creating Healthy Places Nov 2013

iv|32 The Cheshire East Open Space vision is to provide *'a network of clean, green, sustainable, attractive, well maintained, safe areas for all ages, for formal and informal recreational activities, more formal outdoor*

sports or for sitting and relaxing, which are easily accessible and are well designed to avoid conflict and build community cohesion, whilst enhancing our day to day environment'.

iv|33 To ensure that the vision responds to the needs of local communities, these green assets need to be influenced by local social and cultural characteristics, multi-functional, well connected and in close proximity to people's homes. Good maintenance is critical if they are to have a positive role in public health and well-being.

iv|34 Early consultation with Cheshire East Council (CEC) will help to ensure the appropriate needs are met.

iv|35 However if the site is not suitable to provide recreational facilities in their own right then there will be a need to contribute to an off site provision.

iv|36 Outdoor play is vital for younger people in terms of their health, physical and social development. This can be addressed by providing space for play within new development and within existing greenspaces.

iv|37 The Cheshire East Quantity Standard for Children's playspace:

0.8ha per 1,000 population - kickabout area, landscaping and equipped play - centrally located or split between different sites (equates to 20m^2 per family dwelling).

iv|38 The figure combines formal and informal play provision. This amount of land could accommodate a children's kickabout area or similar facility and an area of play equipment/formal provision. It may not be possible to create a centrally located facility so a number of smaller sites may need to be created or existing sites improved/upgraded. The emphasis will be on creating a network of varied open spaces for children's play (all ages)

iv|39 The Cheshire East Quantity Standard for Amenity Green Space is:

0.8ha per 1,000 population - areas of open space for informal recreation (equates to 20m^2 per family dwelling)

iv|40 The Open Space Strategy states: *'This particular type of open space is for informal recreation required in association with new development will depend on the individual site's requirements, location and existing open spaces for informal recreation in the immediate neighbourhood. It could include important landscape and historic features, wildlife areas, areas for relaxing and for visual amenity.'*

iv|41 Ways in which GI assets can be implemented into new developments to make greenspaces places of culture, exercise and social interaction could include the following:

iv|42 Playgrounds - Providing formal play areas with fixed equipment that provide both physical and creative challenges. Fields In Trust, suggest in their document, 'Planning and Design for Outdoor Sport and Play' that NEAPs (Neighbourhood Equipped Area for Play) should comprise of a minimum area of 1,000m^2 with at least eight activities and LEAPs (Local Equipped Area for Play with a minimum area of 400m^2 with at least five activities).

iv|43 Creating imaginative and interesting playspaces is actively encouraged and can still be achieved whilst incorporating characteristics such as robustness and durability. Natural play equipment should be considered.

iv|44 Outdoor Gyms comprising dedicated gym equipment within a park or part of a 'trim trail' circumvent the two main barriers for people wanting to exercise; c*ost and accessibility*. Adult playgrounds remove these barriers and that's why their popularity has grown.

iv|45 Skateparks - These could be incorporated within multifunctional open spaces around the development, or as a dedicated skatepark with formal equipment.

iv|46 Green Gyms Initiatives - Greenspace allows for alternative practical activities such as planting trees, sowing meadows and establishing wildlife ponds. This provides opportunities for people to volunteer to support their local parks and green spaces.

iv|47 Community Parks - places where informal activities could take place such as places to take short strolls, play ball games, picnics, woodland walkways, cycle rides, exercise such as jogging, seating areas etc.

Figure iv:05 - Multifunctional recreational park in Lemvig, Denmark

iv|48 Landscaping Features - Existing and functional landscaping features can be creatively incorporated into the landscape design e.g. to provide definition of spaces, places for further activity etc.

iv|49 Play Streets - the ability for children to play in the street outside their homes, such as initiatives that allow the closure of residential streets for a few hours every week to allow children to play freely, or specifically designed Home Zones.

iv|50 Dog Walking Parks - Areas of a park where dogs can exercise and play off-leash in a controlled environment under the supervision of their owners, separate from wider leisure use.

iv|51 There should also be provision for more passive recreational activities such as:

- Spaces for social interaction - group seating areas, shelters, grass to have a picnic on, hangout areas for teenagers
- Spaces for individual reflection - singular seating areas
- Seating areas within a children's playground, areas to sit, relax, read and lunch
- Quiet Sensory Areas - Therapeutic landscapes
- Bird hides / wildlife viewing platforms

iv|52 Sports facilities - [with natural or artificial surfaces] including football pitches, tennis courts, bowling greens, sports pitches, athletics tracks and MUGAs.

iv|53 The Cheshire East guidance on outdoor sports provision is presently informed by the Green Space Strategy which applies a quantity standard - 1.6 hectares per 1,000 dwellings (equates to 40m2 per dwelling).

iv|54 The emerging Local Plan advocates a different approach and moves away from quantity standards and relies on site specific requirements outlined in an action plan. The weight that will be applied to this approach will increase as the Plan moves towards adoption.

iv|55 The emerging plan states that any major residential developments are required to contribute, through land assembly and financial contributions, to new or improved sports facilities where development will increase demand and/or there is a recognised shortage.

iv|56 In terms of the development of appropriate facilities, this will be determined through evidence from the Playing Pitch Strategy process, other work with the community and sports bodies, to determine a particular club or community's needs. The Council is expected to introduce the Community Infrastructure Levy (CIL) and the balance between what monies are collected between Section 106 agreements (S106) and CIL will be part of this process. The level of contributions will be determined through the S106 and CIL setting agenda.

iv|57 Further information can be found within the Cheshire East Playing Pitch Strategy:

Playing Pitch Strategy

Public Art

iv|58 Public art is an expression of cultural well-being and engages people with the use and development of land and buildings within cities, towns and the countryside. The benefits of integrating public art into major developments and regeneration projects include: the environmental development of places by contributing to all aspects of urban and landscape design; the social development of a place by enabling people to celebrate and or investigate local identity and or local issues; the economic development of a place, by contributing to re-branding and attracting tourists.

iv|59 Public art involves the commissioning of artists and craftspeople to make new work that can be permanent, temporary, performance, internal or external. It can involve artists' unique creative abilities in the development and design of the fabric of public spaces and creative community consultation to engage people in the process.

iv|60 The form public art can take varies, however to achieve high quality and successful public art it needs to be site-specific and relate to the local context. It may be integrated into a scheme, this could range from bespoke street furniture, lighting, boundaries and landscaping through to internal details of a building - its furniture, flooring, ceramics and textiles. It can also be sculpture, photography, performance, moving image and events.

Figure iv:06 - Bioswales

iv|61 To maximise the benefits of public art it is important that artists be engaged at the early stages of a project and that the creative process be embedded into the development of a scheme. This will enable the artist to work collaboratively with other professionals in the project/design team and to integrate their work into the scheme as a whole. The intended outcome of this is that the resulting artworks are not only responsive to the character and identity of places, but also innovative and insightful and maximise resources.

iv|62 CEC can advise on how to appoint the public art expertise needed for the development. The involvement of public art expertise and artists with a specific development site should include the development and implementation of a Public Art Plan and should include details of: why and how artists have contributed and will contribute to a specific development site; the community consultation; the cost of the public art projects; the maintenance, timescale and trigger points for the delivery.

iv|63 Further information can be found here:

Improving culture, Arts and Sporting Opportunities through Planning: A Good Practice Guide

Blue Infrastructure

iv|64 Cheshire East define Blue Infrastructure as '*A network of water that supports native species, maintains natural ecological processes, prevents flooding, sustains air and water resources, and contributes to the health and quality of life of local communities.*'

iv|65 The Flood and Water Management Act passed by parliament in 2010 has designated Cheshire East Council as a Lead Local Flood Authority (LLFA). As LLFA, CEC has a duty to manage local flood risk including risk from 'ordinary watercourses', surface water and groundwater.

iv|66 CEC is also a statutory consultee for surface water drainage matters on all major planning applications and the provision of SuDS within new development became a material consideration in planning decisions from 15 April 2015. This supports the National Planning Policy Framework which states that development should give 'priority to the use of sustainable drainage systems'.

iv|67 In developing drainage proposals for a development a key objective should be to ensure the avoidance of water pollution.

iv|68 SuDS represent an opportunity to maximise desirability and value of developments whilst managing surface water in a sustainable manner. It is however essential that SuDS are considered from the very beginning of a project and are integrated with design through the masterplanning process. As a LLFA, CEC encourages planners and developers to use SuDS as a tool for place-making and good design. Well designed SuDS can mitigate local flood risk, benefit local ecology and provide valuable amenity spaces for communities.

iv|69 SuDS should not be thought of as individual features but as an integrated system which helps to treat, store, re-use and convey surface water. The 'treatment train' is an important concept when considering SuDS systems as it allows water to pass through several stages of treatment to remove sediment and other pollutants. This treatment train can provide the opportunity for a developer to create green corridors throughout a development site.

iv|70 However the SuDS scheme should not conflict with activities in other open space areas or take space identified by CEC Open Space Quantity Standard for other facilities.

iv|71 Typically SuDS aims to deal with water at source by:

- Percolation at source, use of porous pavements, french drains and unlined swales (see figure 1v:06) to allow as much surface water as possible to percolate into the ground at its 'point of contact'.
- Retention of water on-site and allowing natural percolation to occur which has a much slower release rate into the surrounding watercourses.
- Slow release of water via balancing ponds - where the possibility of percolation is restricted by underlying permeability surface pools are constructed to retain storm water surges on site, and, through controlled release of the water (via weirs or brake pipes) water is released (at greenfield rates) into surrounding watercourses.
- Removal of pollutants and silts using filter beds and marginal aquatic vegetation to catch silt particles and draw in chemicals, hydrocarbons and organic compounds washed into the system from surrounding roadways.

iv|72 Green roofs/walls and roof gardens also provide a means to reduce surface water run-off and to manage run off rates in a more naturalised way. They particularly lend themselves to urban locations of higher density, but may also be suited to other locations.

iv|73 Therefore SuDS as part of a Blue and Green Infrastructure network have five specific objectives:

- To efficiently drain the site.

- To create secondary habitat for amphibians, invertebrates, birds, mammals, native aquatic and marginal plant life.
- Create ecological corridors across the site to enable wildlife to move more freely and native plants to spread and colonise the wider area,
- Create an aesthetically pleasing setting for development,
- Promote the site as a sustainable place to live and work.

iv|74 Innovative SuDs schemes are encouraged and early consultation with CEC Landscape Architecture Section is encouraged so that an appropriate integrated solution can be implemented.

iv|75 Further information can be gained from the Cheshire East Local Flood Risk Management Strategy and CEC Flood Risk Management Team.

CEC Local Flood Risk Management Strategy

Future SuDS Strategy

iv|76 Susdrain - The community for sustainable drainage also provides detailed design information on delivering and retrofitting SuDS alongside case studies and resource information.

Susdrain

Canal & Rivers

iv|77 Canals and rivers are important components of the Borough's blue infrastructure and heritage and can contribute to sustainability. New development should maximise the waterside potential of sites that adjoin waterways, including the improvement of pedestrian and cycle access to canal towpaths and the wider footpath and rights of way network.

Figure iv:07- Examples of alternative food production locations

Food Production

iv|78 Community food growing can specifically contribute towards Principle Nine of the National Planning Policy Framework (NPPF):

"Promote mixed use developments, and encourage multiple benefits from the use of land in urban and rural areas, recognising that some open land can perform many functions (such as for wildlife, recreation, flood risk mitigation, carbon storage, or food production)."

iv|79 The significance of food growing to healthy communities is further reinforced in the Guidance to the NPPF11 where a healthy community is defined as a place where active healthy lifestyles are made easy through "the pattern of development, good urban design, good access to local services and facilities" and there are "green open space and safe places for active play and food growing".

iv|80 'Sustain' is an alliance for better food and farming they offer advice on how to integrate food production areas into new developments.

Sustainweb.org

iv|81 Community food growing spaces contribute to mitigating and adapting to the effects of climate change and other sustainability priorities. Urban food growing spaces help achieve sustainable development in the following ways:

- Locally grown food reduces food miles and improves air quality;
- Vegetated open spaces reduce the urban heat island effect;
- They provide valuable wildlife habitats;
- Permeable surfaces of food growing spaces and the harvesting of rainwater contribute to sustainable drainage;
- Green roofs provide accessible open space in high-density development.

iv|82 All new residential development should be designed and located to facilitate opportunities for local food growing. Landscaping should be kept flexible so that spaces may be adapted for growing opportunities now as well as in the future.

iv|83 The establishment of community gardens, allotments and community orchards can help with social cohesion and inclusion.

iv|84 Schemes should also consider opportunities for more innovative growing spaces and integrated community food growing spaces, productive trees and plants in any landscaping proposal as part of a cohesive design of the development – recognising that these are good for wildlife and people.

iv|85 Incorporation of productive planting into a general planting scheme is encouraged. For example exchange a Sorbus aucuparia for a Prunus insititia 'Prune Damson'

iv|86 Bees make an invaluable addition to any allotment site as they play a critical role in the pollination of so many plants, especially fruit crops. Higher yields and better quality produce will result from having hives

near to the allotments or by planting species that will attract bees or other pollinating insects.

iv|87 Cheshire East's quantity standard for allotment space is:

0.2 hectares per 1,000 (equates to 5m^2 per family dwelling)

Access

iv|88 There should be adequate provision for pedestrian and cycle access, including disabled access.

iv|89 Therefore alongside the quantity and quality of recreational space the accessibility of open spaces in a new development is an important factor.

iv|90 Cheshire East's Green Strategy states that :

- An accessible natural greenspace, of at least 2 hectares in size should be no more than 300 metres (5 minutes walk) from home
- At least one accessible 20 hectare site is to be within two kilometres of home.
- One accessible 100 hectare site should be within five kilometres of home.
- One accessible 500 hectare site should be within ten kilometres of home.
- There should be one hectare of statutory Local Nature Reserves per thousand population.

Security

iv|91 "Secured by Design" design principles for crime prevention should also be considered throughout the layout and design of the scheme.

Secured By Design

Landscape and Open Space Design

iv|92 Landscape Design contributes to the setting and effective integration of a new development into its environment, providing the potential to create beautiful places.

iv|93 Good design, at any scale, will achieve a balance between functionality, durability and delight. The Guide encourages developers to appoint Landscape Architects as part of their design team to ensure there is an understanding of the natural and cultural elements that define an area's special character which can be integrated into practical, resilient and deliverable design proposals. This approach results in cost-effective and sustainable solutions to the many challenges associated with new development, including opportunities to reduce or remove adverse impacts such as visual impact and the management of flood risk.

iv|94 Cheshire East Council advise that developers are *'to seek advice on the landscape design aspects of a major scheme in the early stages of the development of a project. The input of a Landscape Architect in the design team can encourage appropriate form, scale and siting and ensure that landscape design issues are fully integrated into the proposals. Landscape Architects take a holistic overview of design in the environment, taking account of all factors: natural, historical, cultural, social. They are specialists in the design and implementation of a wide range of hard and soft landscapes and can provide services which include landscape appraisals, feasibility studies and environmental impact assessment.'*

iv|95 Landscape and Open Space Design covers all open space areas within the new development.

iv|96 The Landscape Institute and Government have further information on the benefits of investing in landscape:

Profitable Places: Why Housebuilders invest in Landscape

Why invest in Landscape?

Public Health and Landscape: Creating Healthy Places Nov 2013

The Natural Choice: Securing the Value of Nature

Table iv:01
Relevant Building for Life 12 Questions:
Landscape:

Q5	**Character:** Does the scheme create a place with a locally inspired or otherwise distinctive character?
Q6	**Working with the site and its context:** Does the scheme take advantage of existing topography, landscape features (including watercourses), wildlife habitats, existing buildings, site orientation and micro-climates?
Q7	**Creating well defined streets and spaces:** Are buildings designed and positioned with landscaping to define and enhance streets and spaces and are buildings designed to turn street corners well?
Q11	**Public and private spaces:** Will public and private spaces be clearly defined and designed to be attractive, well managed and safe?

iv|97 When making a planning application developers should consider:

- The wider landscape character and setting and any landscape designations and policies.
- A detailed site analysis should be undertaken.
- Factors relevant to layout and landscape design include: siting, density, landscape and visual impacts and mitigation, access and connectivity, security, hard and soft landscape materials and quality, long-term landscape management considerations.

iv|98 The remainder of this section considers these principles in more detail.

iv|99 Table iv|01 sets out the four questions relating to landscape asked by BfL12 and will need to be answered throughout the design process and ultimately within the Landscape Strategy.

Landscape Character

iv|100 It is important to ensure there is an understanding of the natural and cultural elements that define an area's special character so that it can be integrated into practical, resilient and deliverable design proposals.

iv|101 According to Natural England *'Landscape Character assessments is the process of identifying and describing variation in character of the landscape. The character assessment documents identify and explain the unique combination of elements and features that make landscapes distinctive by mapping and describing character types and areas. They also show how the landscape is perceived, experienced and valued by people.'*

iv|102 There are 159 distinct Natural Character Areas (NCA) within England. Each is defined by a unique combination of landscape, biodiversity, geodiversity, history, and cultural and economic activity. NCA Assessments for North West England can be found on the Natural England website:

National Character Areas

iv|103 The character descriptions within the NCAs tend to be very broad as it focuses at a regional level. Therefore focus should be on the Cheshire County Councils local character study.

The Cheshire Landscape Character Assessment

iv|104 To further augment the Cheshire Landscape Character Assessments, Cheshire East Council have identified nine areas of special character and qualities. These Local Landscape Designations were previously known as Areas of Special County Value (ASCVs) and provide additional information of the special qualities of these nine locally designated landscapes.

Local Landscape Designation Study

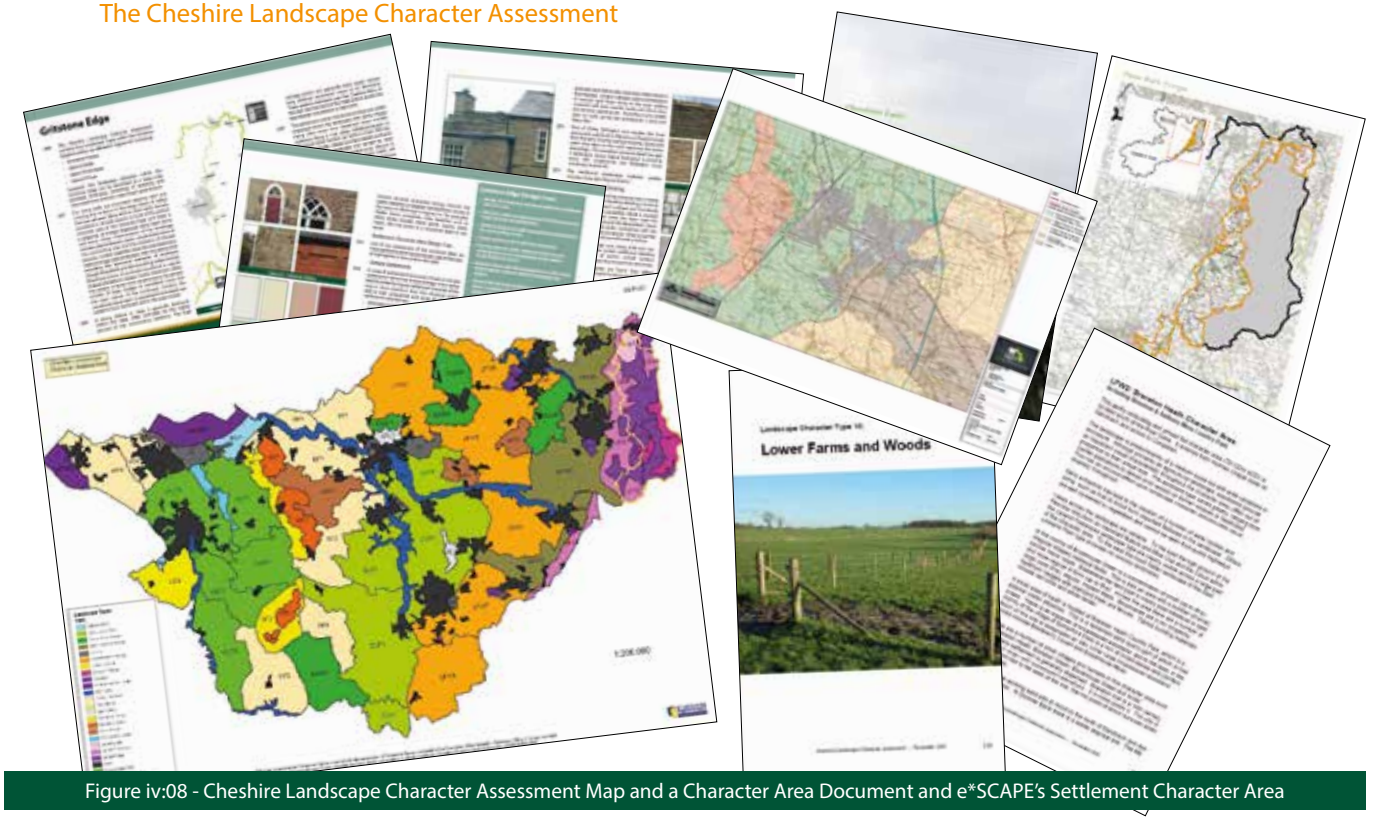


Figure iv:08 - Cheshire Landscape Character Assessment Map and a Character Area Document and e*SCAPE's Settlement Character Area

iv|105 In the previous volume, e*SCAPE identified five additional settlement character areas within Cheshire East. These character areas have been used to inform the materiality part of this section and should be used as a guide when considering landscape treatments. Please refer to Volume 1 section ii|01 - ii|241 for details on the settlement character areas.

iv|106 The emerging Neighbourhood Plans throughout Cheshire East also give additional detailed and more specific information on local character. These should be considered alongside existing Village Design Statements and Conservation Area Character Appraisals, where they have been prepared.

Cheshire East Neighbourhood Plans

Designations and Landscape Policies

iv|107 Cheshire East Council is currently in the process of preparing a new Local Plan that will provide guidance on landscape related planning policies. Please visit the link below to see the Local Plan. Policy SE4 deals with The Landscape.

Cheshire East Local Plan

iv|108 Please note that prior to the adoption of the Local Plan the saved policies of previous Local Plans will be used. These can be found at the link below:

Saved policies

iv|109 Research should also be conducted into assessing whether the relevant local town/village has developed a design statement or a Conservation Area Character Appraisal has been prepared. These can be used to further inform any strategy and give design cues that ensure the development integrates into its environment and a true understanding of its character can be gained.

iv|110 Developers need to respect current landscape designations for example, Public rights of way, Sites of Biological Importance, Conservation Areas, Tree Preservation Orders etc. and consider the impact on any relevant designations when preparing their plans. Information regarding the site location and the areas around the site boundaries can be found by using the Cheshire East Interactive Mapping tool and also the MAGIC website.

Cheshire East Interactive Map

MAGIC Interactive Map

iv|111 There are currently 76 designated Conservation Areas within Cheshire East. CEC state that *'The designation of a conservation area does not prevent development taking place, but the Council has to pay particular attention when deciding planning applications; the council has to be mindful of the need to preserve and enhance the character and appearance of the area. Some developments that are normally allowed may need specific planning approval including the demolition of a building or structure. Written consent from the Council is also required for works to any trees.'*

Conservation Area Assessments

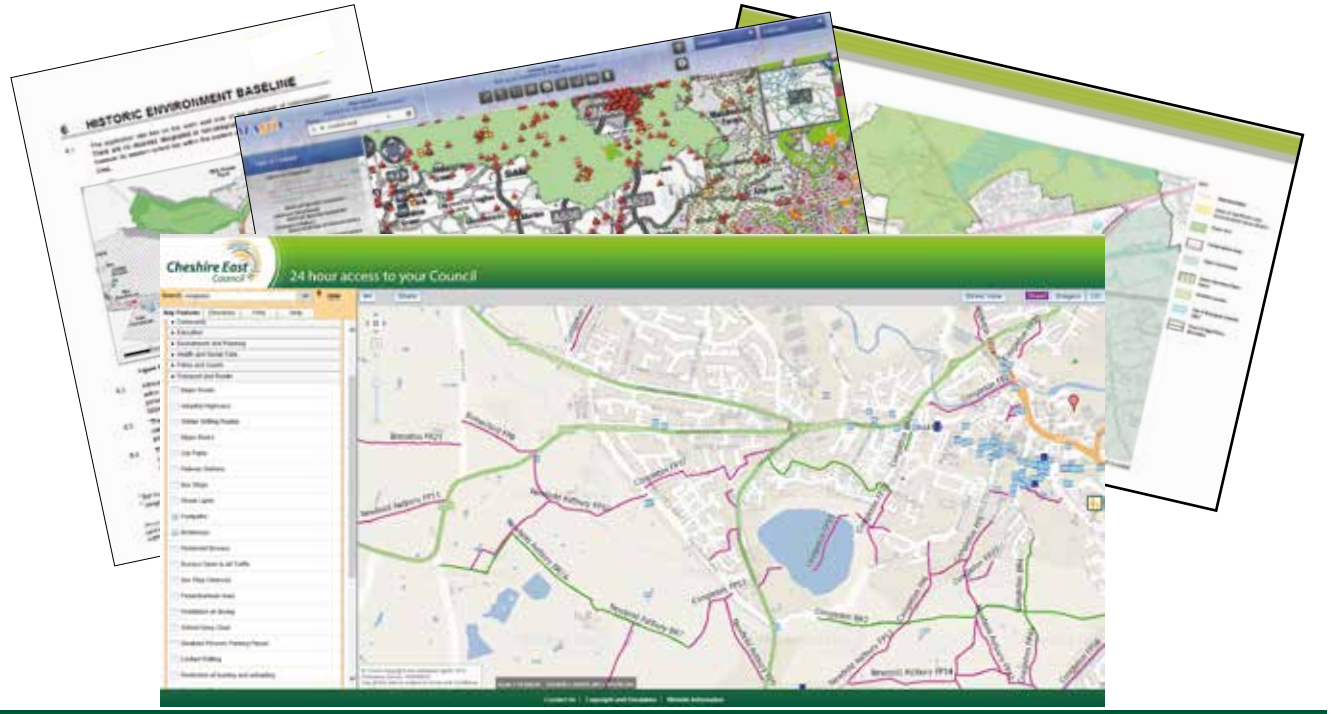


Figure iv:09- Designations within Cheshire East

iv|112 In some instances, it maybe necessary to conduct a Heritage Impact Settings Assessment. The purpose of this report is to inform development proposals with respect to the historic environment, specifically the settings of nearby heritage assets and conservation areas. Advice should be sought from the Council's Conservation and Design Team.

Site Analysis

iv|113 An evaluation of existing features based on accurate site surveys (physical and ecological) should be carried out.

iv|114 Alongside visual surveys, topological, ecological, arboricultural and flood risk assessments should be carried out by professional bodies where appropriate.

iv|115 All this information can be combined to provide a Site Appraisal drawing which can form the basis for the Landscape strategy.

iv|116 Site layout and design should seek to retain, protect and enhance existing features where possible e.g. habitats and features that benefit wildlife, giving priority to Biodiversity Action Plan habitats and species where they are present.

Cheshire Region Biodiversity Action Plan

iv|117 Developers should aim to improve the overall quality of a development by retaining and enhancing existing features, for example, existing field ditches usually associated with a native hedgerow could be retained, widened and used as a swale within the SuDs strategy.

iv|118 Consideration should also be given to natural features that fall outside the application boundary which may be affected by the scheme. This is especially necessary where adjacent sites such as; SSSIs may be designated for their biodiversity value, for example wetland habitats where hydrology could be affected; or where off site trees overhang the boundary and Root Protection Areas (RPAs) need to be considered; or if adjacent to ancient woodlands, appropriate buffers need to be provided.

Layout Design

iv|119 Appropriate siting of the buildings and infrastructure should be considered to ensure that the development integrates sensitively with its surroundings.

iv|120 The layout design should respond to topography, landscape features and existing green and blue infrastructure networks to help integrate the new development into the existing landscape and ultimately soften its impact.

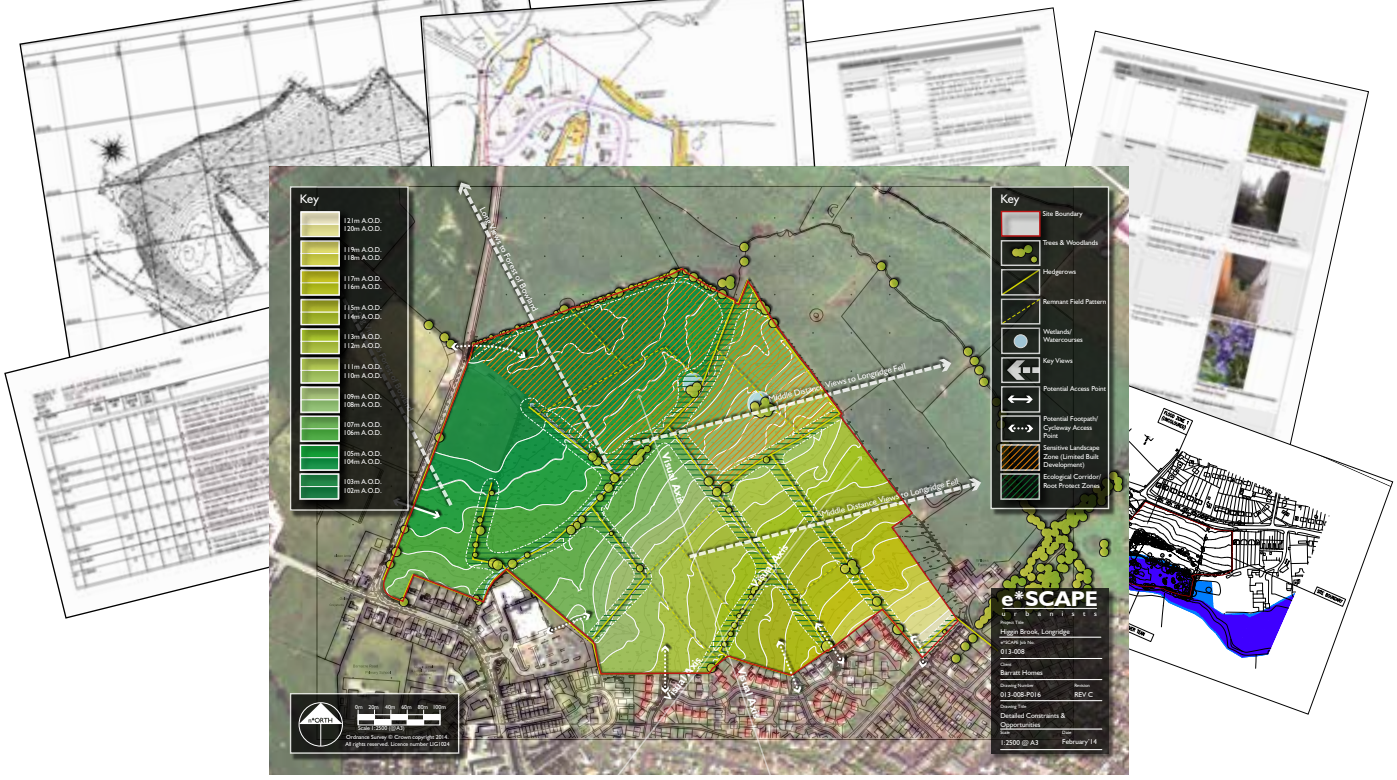


Figure iv:10 - Site Appraisal Drawing and reports relating to existing features affecting the Site. Copyright & Credit: Barratt Developments PLC

iv|121 For example a gappy hedge should be retained and incorporated into the design and infilled where required, existing trees should remain, linkages should be made to existing footpaths, cycleways and public open spaces etc.

iv|122 Veteran trees, ancient woodland and ancient hedgerows are particularly sensitive and important natural landscape features and adverse impacts should be avoided, both upon the natural assets themselves and their settings. As identified in Volume 1, Chapter iii, A Best Practice Design Approach, features of this kind should be considered as assets rather than constraints with the potential to raise the quality of the scheme and to ground the development in its context. Where appropriate succession planting for veteran trees and ancient woodland and appropriate buffering of the assets should be secured, including root protection in accordance with BS 5837 (2012) as part of the design strategy for the proposal.

iv|123 It is important that adequate space is provided for large trees within developments, particularly those sites proposed on the countryside edge of existing settlements. Mature canopies that rise above roof tops are fundamental to achieving a more verdant landscape character and more varied and softened roofscapes.

iv|124 Reference should be made to section ii|62 - ii|68 which discusses urban design at the settlement edge and appropriate responses, see figure iv:11.

iv|125 When the new development will have an interface with the open countryside and areas of woodland, the development should be outward facing and not screened from the wider countryside. The layout should also include sufficient landscape between

Figure iv:11 - Development interface with the open countryside or woodland

the development and woodland to provide a landscaped setting for the natural assets.

iv|126 Traditional landscape treatments should be used where required, such as stone walls, native hedges or Cheshire railing depending on the character of the area.

iv|127 There maybe instances where the interface is with an existing development, responses, for example should consider linkages with existing networks, views through the new development, enhancing boundaries and existing GI networks etc. The development may interface with waterways, such as rivers or canals and appropriate protection and enhancement will be required.

Density

iv|128 Density refers to the **balance** of provision for open space and vegetation that is required in relation to the density of built development and infrastructure.

iv|129 Cheshire East's vision for landscape "*To protect, improve and enhance Cheshire East's unique landscape through contributing to the planning, designing and managing of development and green space with regard to the balance of green space and built form'.*

iv|130 Please refer to section ii|50 for more information on density.

iv|131 The Quantity Standards in the Green Space Strategy set out the **minimum** space required for open space provision within Cheshire East. Details on the quantity standards can be found within:

Cheshire East Local Plan

Green Space Strategy

iv|132 The balance of open space to built development should be determined by the character of the area and urban design and masterplanning objectives and therefore in some instances it would be appropriate for this to be exceeded.

iv|133 The "Green Space Factor" (GSF), developed by Southampton University is a scoring system used on development sites aimed at encouraging the maximum achievement of permeable surfaces which can support GI. Whilst use of this tool isn't mandatory within Cheshire East at the present time, developers are encouraged to consider using it to help maximise the quantity of permeable surfaces that can support GI within designs.

Green Space Factor

Impact and Effects

iv|134 The landscape and visual impact of any proposal should be appropriately assessed. The impact and the effects will be dependant on various site specific conditions alongside the scale of development.

iv|135 It may be appropriate for a Landscape and Visual Appraisal (LVA) or a full Landscape and Visual Impact Assessment (LVIA) to be carried out.

iv|136 These are conducted to demonstrate the anticipated effects of the proposed residential development upon the local landscape character and the visual amenity.

iv|137 LVAs and LVIAs should be conducted by a Landscape Professional and in accordance with the Guidance for Landscape and Visual Assessment Third Edition (GLVIA 3).

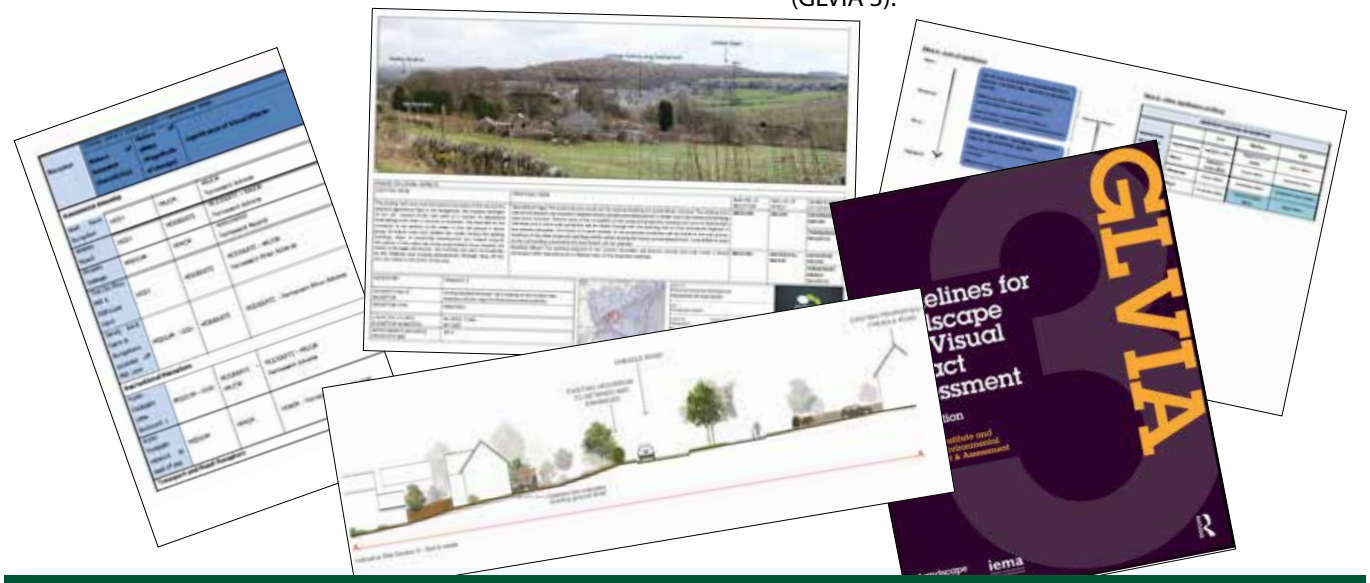


Figure iv:12 - Landscape and Visual Impact Assessment tools

Mitigation

iv|138 The Landscape Strategy and Design Proposals for a new development should provide sufficient mitigation to enable the scheme to successfully integrate into the immediate setting and offset any identifiable adverse impact on the landscape or visual amenity.

iv|139 Mitigation proposals within new developments may take the form of new structure planting, screening, boundary planting, acoustic barriers etc.

iv|140 The proposals set out in the Landscape Strategy and Design Proposals should respect and respond to the existing landscape character by incorporating existing landscape features (such as trees and hedgerows) within the design in order to provide a 'mature' landscape framework for the development. This will help to avoid the typical 'bedding in' period experienced whilst new tree and shrub planting reaches maturity. This will enable the development to sit more comfortably within its immediate landscape context from year one.

iv|141 The landscape proposals should protect the valuable green infrastructure within the site and enhance and diversify the landscape resource to achieve many social, environmental and economic objectives.

Materials

iv|142 An appropriate choice of hard (i.e. built elements such as paving, fencing) and soft materials (i.e. plant material and earthworks) is required throughout the proposal. These should be high quality appropriate for the proposed situation.

Hard Landscaping Materials

iv|143 The following pages offer proposed material advice on boundary and surface treatments that relate to and contribute to the street scene and street hierarchies within each of the character areas. They should be cross referenced with the guidance offered in Section iii of this Volume.

iv|144 Key characteristics, typical treatments and colour palettes have previously been identified in Volume 1, Section ii with regards to the settlement character areas. Please refer to this section for further information.

iv|145 Table iv:02 - iv:06 on the following pages highlight a range of treatments that would be typically suited to the relevant settlement character areas.

iv|146 However please note that these are guidelines and there are many other factors to take into consideration before a final treatment is decided on.

iv|147 These proposed boundary treatments should be viewed as a starting point and it is encouraged that the suggested materiality is used in new and innovative ways, see figure iv:13.

iv|148 If there is a departure from the suggested materiality then the Design and Access Statement should state the reasons why the materials have been specified.

Figure iv:13 - Examples of Innovative Uses of Traditional Materials

Gritstone Edge

Table iv:02 Gritstone Edge Hard Landscape Materials Palette.

	Front Boundary	Footpaths	Driveway	Dividing Boundary
Avenue	Low natural stone wall (ideally Gritstone) in pinks or buffs or Low wall with railing or native hedge.	Natural gristone setts or natural stone flags and setts.(Kerridge quarried flags or Charcon Stone Master Buff Mix).	Bitmac with natural stone edges (gritstone setts).	Natural stone wall (1m at the front and up to 1.8m to gable & rear) or Hedge.
Streets	Low stone wall (dry stone or mortar) or hedge.	Natural gristone setts or natural stone flags and setts (Charcon Stonemaster Shade Buff mix).	Natural gritstone setts or Tegula (Traditional colour).	Hedge or railing or no boundary.
Lanes	Railing or hedge or no boundary - open front-age.	Block paving or flag paving (natural or PCC natural aggregates) or resin bound surface. (SureSet Norwegian Pearl).	Bitmac or resin bound surface.	Hedge or no boundary.
Shared Drive	Hedge or no boundary - open frontage.	Sett paving (natural or PCC natural aggregates) or resin bound surface in a buff colour.	Tegula traditional or resin bound surface in a buff colour.	Hedge or no boundary.

Please Note: Hedge species will be determined by the local character of the area and/or the circumstances and design objectives for the scheme.

The proposed boundary and surface treatments are based on the existing situation and should be viewed as a starting point and it is encouraged that the suggested materiality is used in new and innovative ways.

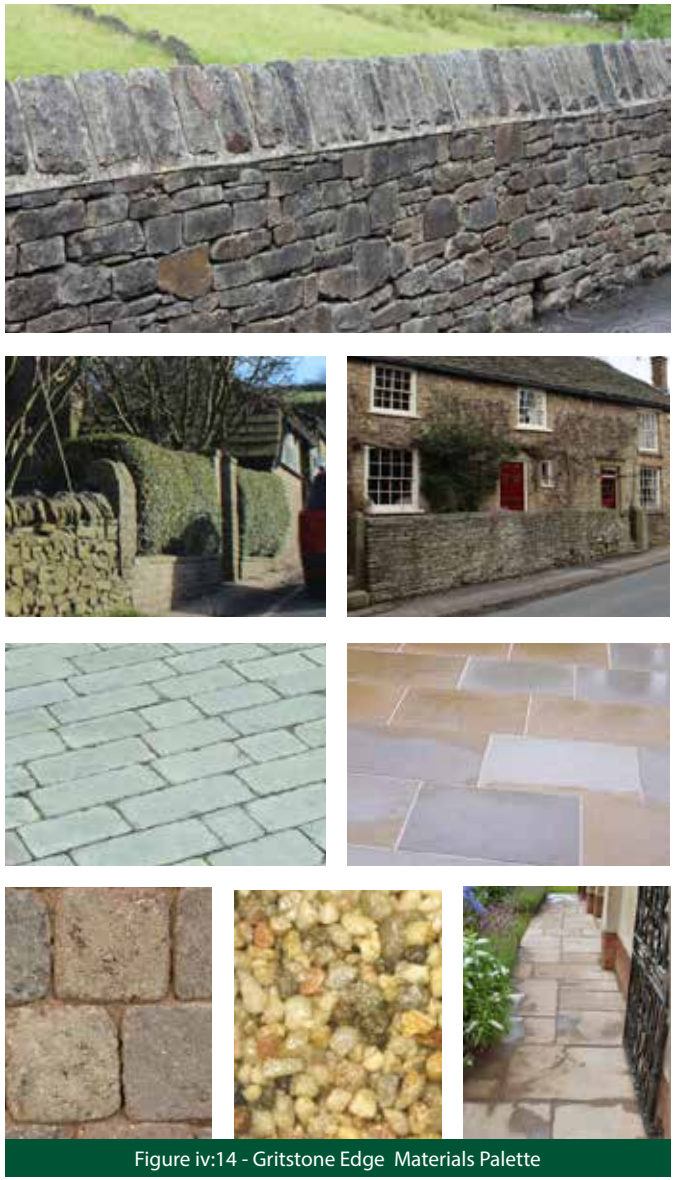


Figure iv:14 - Gritstone Edge Materials Palette

North Cheshire Fringe

Table iv:03 North Cheshire Fringe Hard Landscape Materials Palette.

	Front Boundary	Footpaths	Driveway	Dividing Boundary
Avenue	Hedge; Low natural stone wall or brick walls (reds and light browns) with a natural stone coping and hedge and/or railing; Low natural stone wall with black decorative railing.	Natural stone flags or PPC natural aggregates flags. (Charcon Stone Master flags (reds shade mix).	Setts or clay paver fronting onto the road with gravel drive. (Marshalls Tegula in pennant Grey).	Tall hedge with or without decorative black railings.
Streets	Hedge; Brick walls (reds and light browns) or low brick wall with railing and/or hedge.	PPC natural aggregates flags. (Charcon Stone Master flags (reds shade mix).	Natural stone setts or clay paver.	Railings with or without hedge.
Lanes	Hedge; Railings with or without a native or evergreen hedge; or no boundary - open frontage.	Tegula (Marshalls brindle or pennant grey) or clay paver.	Natural stone setts or clay paver.	Low level hedge.
Shared Drive	Hedge or no boundary - open frontage.	Tegula or resin bound surface (SureSet Barley. Beech).	Tegula or resin bound surface.	Low level hedge; or no boundary.

Please Note: Hedge species will be determined by the local character of the area and/or the circumstances and design objectives for the scheme.

The proposed boundary and surface treatments are based on the existing situation and should be viewed as a starting point and it is encouraged that the suggested materiality is used in new and innovative ways.

Figure iv:15 - North Cheshire Fringe Materials Palette

Silk, Cotton & Market Towns

Table iv:04 Silk, Cotton & Market Towns Hard Landscape Materials Palette.

	Front Boundary	Footpaths	Driveway	Dividing Boundary
Avenue	Low natural stone wall and/or steel railing and or hedge.	Natural stone flags or PCC natural aggregates flags.	Bitmac with edging in setts of a grey or red colour; or setts Marshalls Tegula (Pennant Grey).	Hedge or railing.
Streets	Red brick walls with coloured coping or low stone walls with railing.	Natural stone flags or PPC natural aggregates flags.	Bitmac with edging in setts of a grey or red colour; or setts Marshalls Tegula (Pennant Grey).	Hedge or railing.
Lanes	Low wall and railing or no boundary - open frontage.	Natural stone flags or PPC natural aggregates flags.	Bitmac with edging in setts of a grey or red colour; or setts Marshalls Tegula (Pennant Grey).	Hedge or no boundary.
Shared Drive	No boundary - open frontage.	Natural stone flags or PPC natural aggregates flags.	Resin bound surface.	Hedge or no boundary.

Please Note: Hedge species will be determined by the local character of the area and/or the circumstances and design objectives for the scheme.

The proposed boundary and surface treatments are based on the existing situation and should be viewed as a starting point and it is encouraged that the suggested materiality is used in new and innovative ways.

Figure iv:16 - Silk, Cotton & Market Towns Materials Palette

Salt & Engineering Towns

Table iv:05 Salt & Engineering Towns Hard Landscape Materials Palette.

	Front Boundary	Footpaths	Driveway	Dividing Boundary
Avenue	Red or blue brick wall or red/blue mix brick wall with clay coping or white stone coping; or low red/blue brick wall and hedge.	Natural stone flags or PCC natural flags with blue sett edging.	Bitmac with red/blue sett edging; or setts (Marshalls block paving).	Hedge or planting.
Streets	Red brick wall with stone copping or no boundary - open frontages.	Block paving (Tobermore retro paving) blue or red.	Bitmac or block paving.	Hedges; or low red brick walls.
Lanes	Low red or blue brick wall with stone copping; or no boundary - open frontage.	Block paving (tobermore retro paving) blue or red.	Block paving (tobermore retro).	Planting or no boundary - open frontages.
Shared Drive	No boundary - open frontage.	Block paving (tobermore retro paving) blue or red.	Block paving (tobermore retro).	Planting or no boundary - open frontages.

Please Note: Hedge species will be determined by the local character of the area and/or the circumstances and design objectives for the scheme.

The proposed boundary and surface treatments are based on the existing situation and should be viewed as a starting point and it is encouraged that the suggested materiality is used in new and innovative ways.

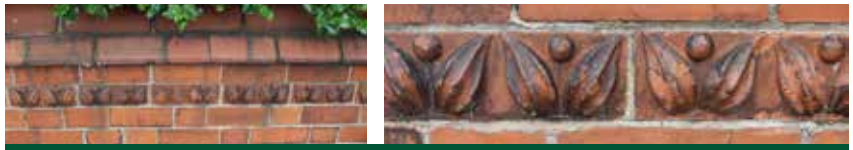


Figure iv:17 - There are opportunities to incorporate detailing on the walls e.g. pattern or dentil detailing

Figure iv:18 - Salt & Engineering Towns material precedents including examples of existing treatments

Market Towns & Estate Villages

Table iv:06 Market Towns & Estate Villages Hard Landscape Materials Palette.

	Front Boundary	Footpaths	Driveway	Dividing Boundary
Avenue	Red brick wall with blue engineering brick coping or clay coping; or low red or blue brick wall with natural stone coping and hedge and ornate railing.	Natural stone flags or PPC natural aggregates flags; engineering brick or natural stone setts in a red colour.	Bitmac or natural stone setts; or PCC aged setts in red/blue colour (Marshalls Tegula setts red/charcoal multi).	Hedge or decorative railing.
Streets	Red brick wall with blue engineering brick coping; low brick wall and hedge or low brick wall and railing with clay coping; or ornate railings or Cheshire railing and hedge.	Natural stone flags or PPC natural aggregates flags; or natural stone setts in a red colour.	Bitmac or natural stone setts; or PCC aged setts in red/blue colour (Marshalls Tegula setts red/charcoal multi).	Hedge.
Lanes	No boundary - open frontage.	Block paving ;or bitmac with red setts as edging.	Block paving (Marshalls Tegula setts heather); or bitmac with red brick edging.	Hedge.
Shared Drive	No boundary - open frontage.	Block paving ;or bitmac with red setts as edging.	Block paving (Marshalls Tegula setts heather); or bitmac with red brick edging.	No boundary.

Please Note: Hedge species will be determined by the local character of the area and/or the circumstances and design objectives for the scheme.

The proposed boundary and surface treatments are based on the existing situation and should be viewed as a starting point and it is encouraged that the suggested materiality is used in new and innovative ways.

Figure iv:19 - Market Towns and Estate Villages material precedents of existing treatments

Soft Landscaping Materials

iv|149 To compliment the hard landscaping materials, a range of tree species that are appropriate for open spaces, avenues, streets, lanes, shared drives and gardens should be compiled.

iv|150 Tree selection must be based on a range of factors including the site location and conditions and the design function such as: woodland, screen belt, copse, formal avenue or individual specimen. Most importantly the size, form and characteristics of the mature tree must be appropriate for the scale of the space available and its proximity to dwellings in order to avoid future conflicts.

iv|151 Trees, hedges and shrubs can be used to further define character areas within the development and improve legibility.

iv|152 The landscape design, plant selection and other landscape treatments should be detailed either in the Design and Access Statement or Landscape Design Report and/or Strategy Report.

iv|153 The landscape proposals must be appropriate for the overall design intent and the setting.

iv|154 The size of tree stock to be used will vary according to its purpose, site conditions and whether it has been possible to retain Green Infrastructure. On sites where there are few mature trees and hedgerows it will be desirable to create a sense of maturity by planting larger trees, particularly along principal avenues and at focal points within the development. These trees should be planted as extra heavy standard or semi-mature sized stock. Elsewhere a range of tree sizes from light to heavy standard would be appropriate. Whips and feathered trees can be used to establish new structure planting and woodland within open space areas.

iv|155 The following section on trees provides examples of the mature size of trees suitable for different planting situations together with examples of species within each size class. Species choice will be dependent on a wide range of factors such as those described in paragraph 139, but also ground conditions, fruiting and flowering characteristics etc. The choice of tree species will have a significant effect on the character of an area.

Figure iv:20 - Examples of Soft Landscaping Materials

Open Space & Street Trees

iv|156 The size, character and function of open space areas within housing developments will vary enormously. In areas that are primarily for ecological mitigation native species would be appropriate, whereas in amenity and recreation areas more ornamental species could be considered.

iv|157 Where there is sufficient space, large parkland species should be used such as: Quercus robur, Fagus sylvatica, Tilia cordata, Aesculus hippocastanum and Castanea sativa.

iv|158 Where space is more restricted and open space areas are in close proximity to dwellings smaller species should be selected such as: Sorbus aucuparia, Sorbus aria and Acer campestre.

Principal Avenue

Where sufficient space is available, large avenue species should be used such as Tilia cordata or Platanus x hispanica.

Where space is more restricted, medium to large species with a more upright form should be selected such as Tilia Green Spire, Acer platanoides vars or Liquidambar styraciflua.

Secondary Avenue

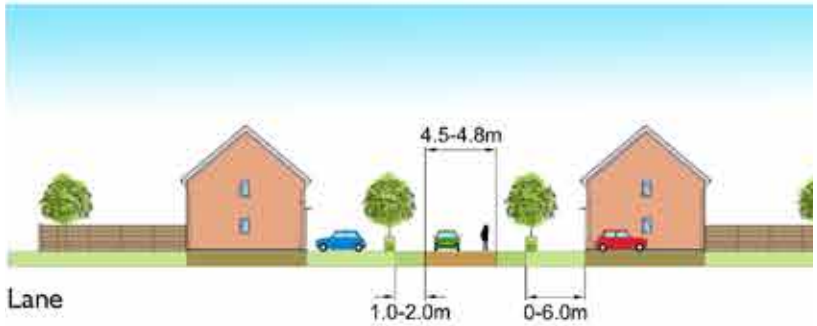
This type of avenue has less space so medium sized trees with a narrow form would be suitable such as: Betula utilis Jacquemontii, Pyrus calleryana Chanticleer and Acer platanoides Columnare.

Street

Trees will frequently be planted within front gardens and the space available will vary. Small to medium sized trees should therefore be selected according to the space available and could include: Carpinus Frans Fontaine, Sorbus aucuparia Sheerwater Seedling and Acer campestre Streetwise.

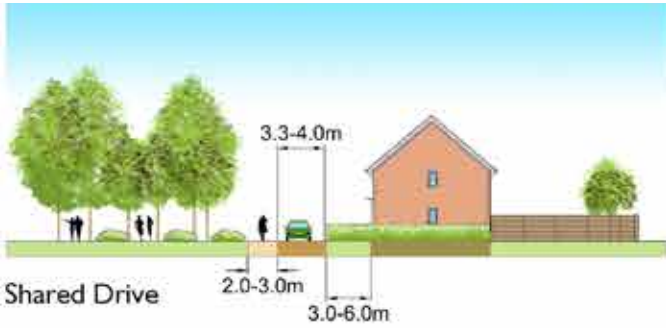
Lane

Trees will normally be planted in front gardens and space will be limited. Small species should be selected for example: Crataegus prunifolia, Prunus sargentii, Sorbus commixta Embley.



Shared Drive

Trees will normally be planted in small front gardens and space will be limited. Small, narrow species should be considered such as: Malus tschonoskii, Prunus hilleri Spire and Sorbus Joseph Rock.



Landscape Proposals

iv|159 Detailed landscape proposals should be appropriate to the overall scale and context of the scheme.

iv|160 The quality of proposals in relation to the appropriateness to design intent and setting is essential. One of the twelve core planning policies in the NPPF is to *'always seek to secure high quality design and a good standard of amenity for all existing and future occupants of land and buildings'*.

iv|161 There maybe the need to provide some or all of the following either in written or graphical form dependant on the scale and complexity of the scheme.

Landscape Strategy

iv|162 A landscape strategy should give all landscape related details of the scheme drawing from the information that has been previously collated. The strategy will contain details of retained features, proposed planting, development areas, access, street furniture, structural planting, ornamental planting, paving, boundary treatments etc.

iv|163 These could take the form of a plan, with sections and elevation drawings to give a more indicative visual description.

Landscape Masterplan

iv|164 A scaled plan detailing all landscaping related elements within the development. There maybe a requirement to provide appropriate sections and visualisations to further explain the design.

Hardworks Drawings

iv|165 Sketch and detail design drawings and written specifications for hard landscape features e.g: paving materials, surfaces, edgings, steps, boundary treatments, lighting, street furniture, car parks, structures, play equipment, storage areas, cycling facilities, signage, areas of gravel, boulders, water feature and other elements in the external works.

Softworks Drawings

iv|166 Detailed design drawings for all proposed soft landscaping features. These should include earthmoving and changes to site contours, removing or filling with soil, including levels information or cross sections to indicate any significant changes in levels. Also: areas to be seeded, covered by turf or planted with trees, shrubs, groundcover, herbaceous planting, hedges, natural watercourses, ponds, etc.

iv|167 Planting Plans must be shown on drawings at an appropriate scale and must include a plant schedule

Figure iv:21 - Planting Plans and Materials Schedules

with the following information:

- Name of Plant Species (English and Latin names).
- Number of plants in each specific planted area (or location and number of trees).
- Size of plants to be planted, whether bare-root or container grown.
- Density of plants to be planted – how many plants per m2 of planted area.

Phasing Plans

iv|168 For larger developments proposals, phasing plans for the delivery of open spaces and GI are required. Phasing plans are often tied to geographic development parcels or to a development trajectory but GI networks frequently need to function as a strategic component as they can provide access to and connections between development sites.

iv|169 Where appropriate, on larger scale proposals, the early delivery of open space provision is desirable and is usually required prior to the occupation of adjacent housing.

iv|170 Phasing plans will usually be discussed at the pre-application stage.

Implementation

iv|171 Developers are strongly advised to employ a landscape consultant to supervise the implementation of the approved landscape scheme to ensure that the work is carried out in accordance with the approved plans and specifications.

Landscape Management

iv|172 Adequate provision for maintenance and management of the scheme should be put in place following completion. Landscape professionals should consider maintenance and management issues from the outset of the project.

iv|173 Genuinely sustainable development depends on appropriate long-term management and maintenance of the site's assets, to ensure that the landscape scheme continues to be effective in the future

iv|174 The landscape Institutes document Profitable Places states that "*... green infrastructure, as with any other type of infrastructure, depends upon regular maintenance to maximise the benefits. Creating a long-term management plan in tandem with the landscape-design phase and involving residents directly in the management can be a cost-effective solution.*"

Figure iv:22 - Examples of Landscape Management Plans

iv|175 Further information can be found on the following link:

Profitable Places: Why Housebuilders invest in Landscape

iv|176 Planning consent for residential development will routinely, include a landscape implementation and maintenance condition whereby, for five years following planting, any soft landscape elements that are removed, die, become severely damaged or become seriously diseased must be replaced during the next available planting season with plants of similar size and species.

iv|177 It is essential however that public open spaces and other amenity areas that are not within residential gardens are properly maintained beyond this five year period and in perpetuity.

Options for Management

iv|178 The future maintenance of Green Infrastructure is very important, to make sure that it is able to fulfil its function and that it continues to have a positive impact on the locality.

iv|179 Green Infrastructure can be transferred by the developer to a private management company, another suitable organisation, or to the Council, if deemed to be the most appropriate option.

iv|180 The most appropriate option will be decided on a site by site basis, through discussion with the Council. All future maintenance will be carried out by this organisation and the developer must make sure that they are provided adequate funding.

iv|181 Appropriate management options are:

- Cheshire East Council
- Charitable-status Management Trust for example Wildlife Trust
- Co-operatives and partnerships
- Community Development Trust
- Private management company/trust
- Voluntary organisations
- Parish and Town Councils

Management Plans

iv|182 Where open space areas are not adopted by CEC/Ansa, the Planning Department will require the submission and approval of a Landscape Management Plan either through planning condition but more usually, particularly where public access issues or protected species are involved through S106 agreement with the Developer.

iv|183 Sensitive management of wildlife habitats is essential - such as woodlands, woodland edge, ponds and wetlands, wildflower meadows, unimproved grasslands - particularly where there are protected species.

iv|184 Appropriate management of recreation and amenity areas is also vitally important - such as equipped play areas [LAPS, NEAPS, MUGAS etc] informal play spaces and amenity areas for people of all age groups and abilities. In addition to the soft landscape features the plan must cover maintenance and replacement of hard surfaces, fencing, street furniture etc.

iv|185 The open space areas on residential estates generally have both nature conservation and recreation/ amenity value and the management plan usually combines both aspects and is generally called a Landscape and Habitat Management Plan (L&HMP).

Scope of a Landscape & Habitat Management Plan

iv|186 The format and content will vary but should include the following:

- Introduction
- Land ownership and management responsibilities
- Long term landscape design and nature conservation objectives
- Maintenance specifications for all hard and soft elements including replacements when necessary
- Maintenance schedules (usually in table format):
- Establishment period and long term Management:

  Timing and frequency of all operations

  Plan monitoring and review arrangements and timescales
- Appendices

  Landscape masterplan drawing (and other drawings to be read in-conjunction)

iv. Green Infrastructure & Landscape Design Checklist:

Does the Landscape Strategy demonstrate a thorough understanding of its context?

Does the Landscape Strategy demonstrate a thorough understanding of its context:	M	M	M
Has the landscape character been taken account of:	M	M	M
Has a full evaluation of exiting landscape features been done? e.g. physical & ecological; their retention, protection and enhancement as appropriate:	M	M	M
Have the landscape designations been respected: e.g. public rights of way, SSSI, TPOs	M	M	M
Do the hard materials chosen reflect the vernacular as identified in part one? If not what is the justification for the proposed materials:			
Are the planting species appropriate to the character area, the street hierarchy and the scale of space available:	M	M	M
Is the quality of all materials proposed appropriate in relation to the design intent and setting:			
Have Landscape mitigation proposals been provided where appropriate:	M	M	M
Do the proposals have a green and blue infrastructure network integrated into the layout which connects out to the wider green infrastructure:	M	M	M
Have CEC's strategic GI goals been addressed within the proposal:			
Has there been the adequate provision for maintenance and management of the scheme following completion:	M	M	M

Does the development address BfL12?

Q5	Character:	M	M	M
Q6	Working with the site and its context::	M	M	M
Q7	Creating well defined streets and spaces:	M	M	M
Q11	Public and private spaces:	M	M	M

iv. Green Infrastructure & Landscape Design Precedents:

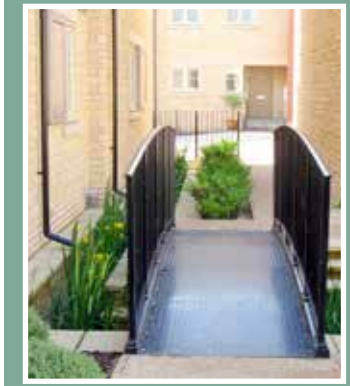
Existing Green Infrastructure

Location: The Pavilions, Macclesfield

- Residential development built on a former Hospital site.
- The existing green infrastructure on the site was used as a guide to inform the layout.
- The masterplan was designed to include large areas of Public Open Space consisting of existing tree lined avenues.

Sustainable Urban Drainage

Location: Riverside Court, Stamford



- High density SUDs redevelopment on the site of an old electricity substation.
- Demonstrates full 'management train' to manage urban run-off .
- The use of most of the site for cars and pedestrians precluded the use of conventional soft techniques like swales, basins and ponds. Instead it made the most of permeable block paving to store urban run-off in an urban design form.

Community Food Production

Location: Accordia, Cambridge

- Designed as part of a strong existing landscape framework.
- Generous communal gardens with spaces for food production, courtyards, roof terraces and large balconies replace traditional gardens.
- A high density housing scheme consisting of 212 houses and 166 apartments with 47 homes per hectare.

v. Sustainable Design Principles

v|01 Many aspects of sustainability have been covered in earlier parts of this guide. This section aims to bring together the aspects of sustainable design that influence the overall quality and functionality of housing and how those should be incorporated into new development in the Borough. It breaks this down into three sub sections: spatial, passive and active sustainable design.

v|02 Sustainability in terms of design and construction means choosing sites which are well related to existing facilities and opportunities for employment, designing in flexibility for changes of use, lifestyle and demography. This means designing for energy and resource efficiency, creating flexibility in the use of buildings, public spaces and service infrastructure and introducing new approaches to transportation, traffic management and parking.

v|03 As part of the D&As or a separate sustainable design strategy, the designer will be required to explain how the approach to sustainable design has been developed as part of the overall design concept along with details of the approach.

Spatial Sustainable Design

v|04 Residential sites should be selected which are easily accessible by all forms of transport and located close to existing facilities, jobs and shops to minimise the use of private motor vehicles.

v|05 By default therefore, sites within or adjacent to existing towns and villages are more sustainable than those set out within the open countryside, unless they are of a size to support the development of a mix of uses including community facilities, shops, offices and industry and include good transport connections, other than private vehicles.

Social Infrastructure

v|06 Sustainable communities require a healthy mix of social and economic infrastructure alongside housing in order to function well. Housing that is not appropriately connected to such uses can impact upon life style and encourages patterns of living that are less sustainable. This impacts on quality of life, are discussed in chapter vi.

v|07 For larger developments it is important to plan for mixed uses as both current and future opportunities. This can be accomplished by integrating appropriate infrastructure as part of the development, such as schools, local shops and community facilities but also by in-building flexibility within the design of the place and individual buildings to allow the neighbourhood to 'grow' and diversify alongside the community itself. Designing for this is an important part of place shaping.

v|08 Small to moderately sized new developments will need to relate well to established facilities, whilst larger scale development proposals shall include purpose provided infrastructure required to support the community both in the short and long term, with sufficient flexibility in the design for that to evolve with the community.

Encouraging Walking, Cycling and use of Public Transport

v|09 As described previously in Part 2iii, new developments should be designed to accord with Manual for Streets. This means that the majority of streets should prioritise pedestrians and function as socially important spaces. The high quality design of streets and other public spaces, with a priority for pedestrians will encourage more cycling and walking, whilst safe and attractive connections to other neighbourhoods and facilities and amenities will promote inclusivity and greater use of community infrastructure.

v|10 New development should capitalise on access to train and bus services, and for larger development, to provide for bus transport within the layout. Alongside this planning obligations could be used to help establish and support the service to the community.

v|11 Cycling provision should be considered from the outset, including provision of appropriate, secure cycle storage in public spaces and at people's homes. The 6Cs and the Cambridge design guide provides useful guidance regarding appropriate provision.

The 6Cs Design Guide

Cambridge Design Guide

v|12 In areas within established urban centres and larger strategic developments, higher density development should be encouraged at public transport nodal points and in centres themselves, both to support sustainable transport choice and mixed uses within those centres.

Protection of Natural Resources

v|13 Spatial sustainable design should also seek to safeguard, where possible, air quality, ground and surface water and the best and most versatile agricultural land.

Mix of Uses

v|14 As stated above, sites supported by a good mix of uses, either in the surrounding area or on site are more sustainable than standalone housing developments with poor access to such facilities.

v|15 Therefore the contextual appreciation is key to understanding the surrounding opportunities in terms of local facilities and the potential ease of accessing them. Proposals should demonstrate the level of access to and the time and distance to walk to facilities in the local area as well as the proximity of bus stops and train stations.

Passive Sustainable Design

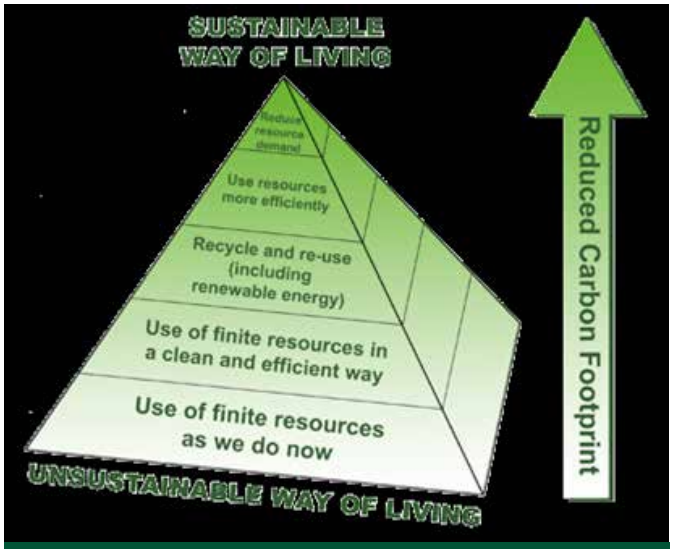
Layout & Orientation

v|16 Ensuring good levels of daylight into a development reduces the need for artificial light with passive solar gain reducing the need for space heating and increasing duration that areas of public realm can be used through the day.

v|17 The key to optimising the solar potential of a site is to orientate buildings broadly south which then creates a street pattern running east to west. There is flexibility however with the ability to move 30 degrees away from due south. In addition the front of houses on one side of the street may take best advantage of solar potential with the rear of properties taking advantage on the opposite side of the street.

v|18 Strict adherence to the above would result in a wide spacing of buildings lower densities and weakening street enclosure and so a balance needs to be struck.

Figures v:01 - Shaded Avenue



Figures v:01 - Sustainability Pyramid

Trees & Shade

v|19 The need to provide shade in the public realm becomes more important as global temperatures increase, to ensure that spaces are still usable in the height of summer by all members of the community in terms of age and mobility.

v|20 Trees offer the opportunity to shade users, shelter them from wind and rain and provide an aesthetic quality to urban spaces. In addition, trees absorb carbon dioxide and capture particulates in terms of pollution and dust, aiding in reducing levels of asthma and other breathing related illnesses.

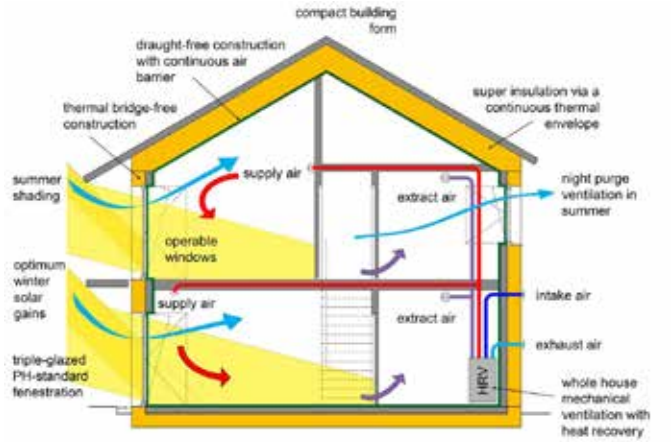
Active Sustainable Design, Construction & Occupation

v|21 Building upon the passive environmental design discussed previously, the design, construction and use of buildings and spaces further contributes to delivering sustainability within new development. These aspects of active design are addressed in turn.

Measures of Sustainability

v|22 The Infrastructure Act has now come into force with changes to both the Building and Planning Acts. This will mean that energy efficiency is now dealt with through the updated Part L of the Building Regulations and not the Code for Sustainable Homes which has been cancelled.

v|23 Passivhaus is an energy performance standard that has emerged from Germany but which has been employed internationally, including in the UK. It can be applied both to housing and non-housing development. The functional definition of a Passivhaus is:



Figures v:02 - Passivhaus

"A Passivhaus is a building, for which thermal comfort can be achieved solely by post-heating or post-cooling of the fresh air mass, which is required to achieve sufficient indoor air quality conditions – without the need for additional recirculation of air"

v|24 This passive approach to the building design means that minimal additional heating is required to maintain the comfort and usability of the home, substantially reducing carbon emissions and running costs.

Thermal Efficiency and Energy Reduction

v|25 Once passive elements have been considered, building design should focus upon a fabric first approach to maximising the energy efficiency of the development. This is based on the premise that reduced resource demand will lead to more sustainable living and a smaller carbon footprint for new development.

v|26 Increasingly, both nationally and locally, there is focus upon the availability and cost of energy. For the short to medium term the UK is facing both increased energy prices but also a reduced gap between capacity and demand, particularly at peak times. Population increase set against reduced energy production places the country at risk of energy shortages in the future. It is for this reason that Cheshire East Council has established its energy framework and has partnered with Ovo Energy to create Fairer Power with the aim of eliminating fuel poverty and providing greater fuel security for its residents.

v|27 Managing energy usage through construction is a key principle of sustainable design and construction. Enhanced thermal performance and energy management makes homes more energy efficient, improves their comfort, reduces running costs, and reduces the carbon footprint. For developers it makes them more saleable and this will become more important in the future as energy prices rise.

v|28 Key issues to consider are:

Step 1 Thermal Performance

- Orientation and detailed design of buildings and spaces to harness passive opportunities
- Enhanced air-tightness to reduce heat loss and improve comfort
- Enhanced thermal insulation to substantially improve the SAP rating, using 'green' insulation
- Windows and doors that minimise heat loss
- Balanced mechanical (with heat recovery) or passive ventilation to ensure good air quality
- Using thermal mass within the construction to help heat in winter and cool in summer

Figures v:03 - Thermal Efficiency

Step 2 Energy Management

- Use of sun tubes, fenestration and orientation to maximise natural light and reduce heat loss
- More efficient electrical appliances and lighting (including solar lighting for outdoor areas)
- More efficient conventional boilers and electric heating systems (such as some of the recent storage heater systems)
- Designing for future climate change and increased temperatures – use of thermal mass, solar shading, natural and mechanical ventilation, inclusion of water and greenery within designs (urban cooling)
- Smart metering – by 2020 these will be rolled out across the country

v|29 It should be stressed however, that statutory minima in respect to thermal efficiency will be delivered through the updated Building Regulations.

Renewable Energy and District Heating

v|30 There are various renewable or low carbon energy scenarios for different scales of development. However, this should be based upon a genuine and comprehensive assessment of what is appropriate

for a particular development. In other words, it should form part of the overall sustainability strategy and not be viewed in isolation. Renewable energy may not indeed be necessary or even viable if a successful passive design and/or fabric first approach is adopted.

v|31 Consequently, it is not appropriate to discuss all potential scenarios within this guide but to stress the importance of, and to advocate a genuine approach to, developing an inclusive sustainability strategy alongside and as part of the design process, rather than seeing this as an afterthought or separate consideration.

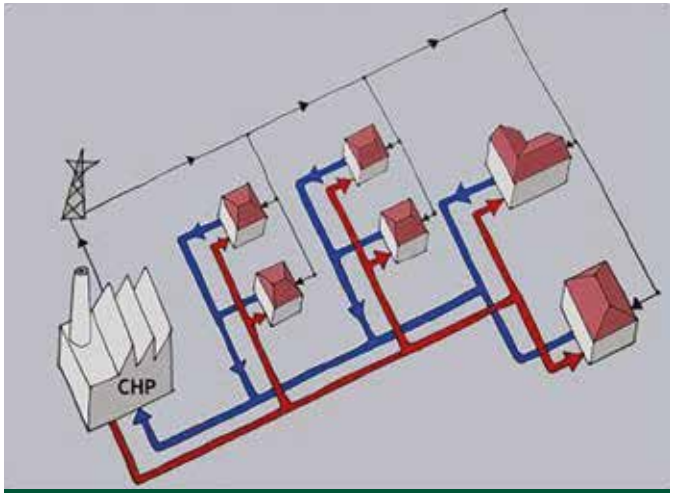
Cheshire East's draft Renewable Energy SPD

v|32 Some of the principal renewable technologies and approaches and their relevance are discussed below:

De-centralised or District Heating

v|33 Large scale renewable/low carbon energy is often delivered via a district heating system, where a neighbourhood or grouping of buildings/uses is served via a de-centralised heat or combined heat and power network. The advantage is that it is more efficient in environmental terms than a centralised or property by property system, such as individual boilers. This can be made even more sustainable by linking it to a source of waste heat such as from an industry, anaerobic digestion, or heat generated from a renewable source such as biomass. Often however, district heating engines are powered from the natural gas supply.

v|34 District heat is most effective where it entails higher density development and/or mixed uses and it is designed in rather than retrofitted. Cost can be significantly reduced by designing the network into



Figures v:04 - District Heating System

the scheme and delivering it alongside the other infrastructure (I.e. alongside the other utilities).

v|35 District heating is one of the priorities under the Council's Energy Framework. Furthermore, it is anticipated that the escalating energy efficiency and carbon reduction requirements of the Building Regulations over the next few years, alongside improved technologies and increased fossil fuel pricing, could make district heating more attractive and viable for a certain scale and type of development.

v|36 Policy SE9 of the Local Plan Strategy sets out the Council's objectives for district heating setting thresholds for residential and non-residential developments, whilst SE8 Renewable and Low Carbon Energy provides more general support for renewable and low carbon energy schemes, where they are appropriate to the site and its wider context.

v|37 Where district heating is not deemed feasible for the scheme in isolation, it should be designed to enable ease of installation through layout and detailed design, to more readily allow its future installation.

Other forms of Renewable or Low Carbon Energy

v|38 In addition to District heating and CHP, other forms of renewable/low carbon energy are highlighted by the policy:

- Solar thermal and pv on southern roof slopes
- Biomass serving individual building or communal CHP schemes, particularly for rural locations
- Anaerobic digestion
- Community hydro power schemes
- Heat pumps, particularly in off grid locations
- Deep geothermal (particularly the western part of the Borough)

v|39 The potential for inclusion of low carbon and renewable energy technologies should be part of the considered and balanced strategy for delivering an environmentally sustainable development. Given the advances in technology, it is also important to maintain flexibility in approach during the life of the design guide.

Figures v:05 - Solar PV

Water Management

v|40 Increasingly water will become a scarce and more valuable resource, particularly in higher density urban areas with a high demand. It will also be increasingly relevant to ensure that adapting to climate change and the frequency of extreme weather events, including flash flooding are integral to scheme design. The issue of sustainable urban drainage is specifically considered at chapter iv however, in respect to building design the following principles should be considered:

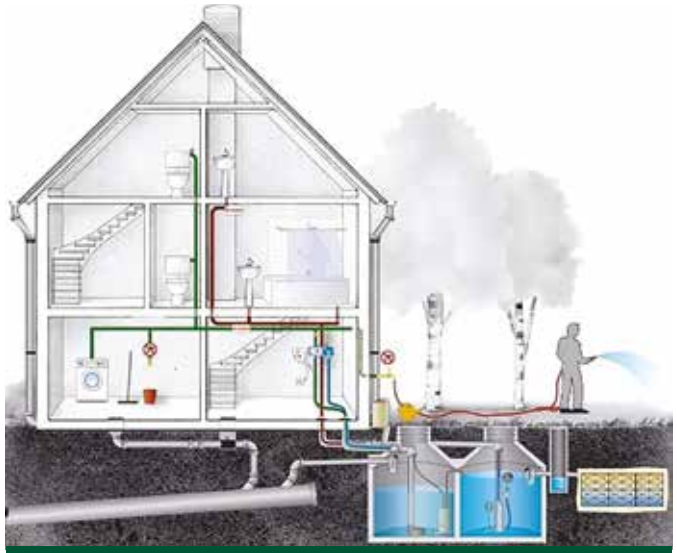
Step 1 Reducing Consumption

- Low flow fittings with aerators to showers and taps
- Inclusion of water efficient appliances
- Dual flush and limited volume toilet cisterns
- Landscape schemes incorporating drought tolerant species

Step 2 Recycling water (harvesting)

- Collection for watering of plants and car washing
- Natural irrigation designed into landscape
- Re-using waste water (grey water) for irrigation, toilet flushing etc.

v|41 The Building Regulations 2015 (Part G), relating to water efficiency require a maximum consumption of usable (potable) water of 120 litres per person per day in new housing. This does include the option for planning authorities to attach a condition on planning permission reducing this to no less than 110 litres per day, which would then have to be complied with under the Building Regulations. Such a requirement should be set out in the Local Plan and would be applied on a scheme by scheme basis.



Figures v:06 - The Water Saving House

Materials and Construction

v|42 The sustainability of materials used in the construction of housing will be important to the overall sustainability of the development. This should have regard to the local context as outlined previously in both Part 1 and earlier in Part 2. Materials selection should also take account of embodied energy (method of manufacture, source, transportation and recycled content) as well as their thermal/engineering properties.

v|43 Ideally materials should be locally sourced where possible, helping to tie the development into the local vernacular and should be sustainably produced and designed to be recyclable. Where possible, materials should also be from recycled sources. Materials should also be specified from the BRE Green Guide and suppliers should supply EMS certification and/or Chain of Custody certificates.

v|44 Modern methods of construction (MMC) and other technological advances can help to reduce construction time, reduce waste and increase quality standards, thus making development more cost effective to developers and resulting in a more consistent end product. However, the designer should also not lose sight of the overarching design objectives for the scheme.

Whole Life Costs

v|45 This should be built into the design process from the outset to ensure that short termism doesn't undermine the design quality or long term sustainability of new development. This is especially important in the context of the public realm, including street design. Well sourced and specified natural materials often work out as cost effectively on a whole life basis when compared against less suitable, man-made materials. This needs to be a factor in deciding on designs for public space and potentially buildings.

Information and Communication Technology

v|46 Information and communication technology (ICT) is moving at a rapid pace and is changing the way we live our lives. It has the capacity to enrich but also to undermine quality of life and communities.

v|47 Cheshire East Council is actively promoting the roll out of Superfast Broadband as part of the Connecting Cheshire Initiative. In May 2014 the Council of the European Union also adopted new rules to make it "easier and cheaper" to roll-out ultrafast broadband networks, such as fibre optic infrastructure and specifically that all new builds (and those undergoing major renovation) after 31st December 2016 should be "high-speed ready". In addition they also called for a voluntary "Broadband-Ready" label on buildings with high-speed access.

Figures v:07 - Home Working

v|48 Within Cheshire East, all new development will therefore be required by planning condition to 'accommodate information and digital communications (ICT) networks as an integral part of all appropriate new developments.' In short, to provide for integral high speed broadband rather than it being left for householders to retrofit.

v|49 Alongside the connection to ICT, providing housing that enables a dedicated home working/study area within the design will enable the opportunity for more people to work from home. This has benefits in making neighbourhoods more active, promotes efficiency, helps reduce traffic congestion and contributes to people being able to achieve a better and more flexible work/life balance; all ingredients toward a more cohesive and healthy community.

v|50 For larger developments with community and/or employment uses then a hub or centralised ICT gateway to enable access to quality ICT connection should also be included, potentially linked to uses such as a café, crèche or other complimentary use to improve accessibility and viability.

Waste and Recycling

v|51 New development must be designed to enable residents to more effectively minimise and recycle locally. Adequate provision needs to be made for waste and recycling storage both inside and outside the home, whilst layouts need to enable collection. This needs to cater for the present system of waste management but also be flexible enough to allow for changes in the future.

v|52 Communal based systems for certain types of waste could also be considered, for example garden waste for composting, particularly where allotments also form part of the design. Alternatively, composting facilities could be provided on a home by home basis alongside other low key, cost effective, measures such as rainwater butts.

Sustainable Living

v|53 The way in which people live in their homes has influence upon overall sustainability. This also has a bearing on quality of life, which is discussed later in Part 2, Chapter vi of the Guide. Whilst it is inappropriate to dictate lifestyles, providing people with the opportunity to live and behave in a certain way and explaining the implications can reinforce the measures included as a design response, further reinforcing sustainability. Conversely, inappropriate lifestyles can undermine the sustainability of new development. Resident information packs are a simple way of providing information to residents on sustainable lifestyles.

Figures v:08 - Drought Tolerant Landscaping

Adapting to Climate Change

v|54 Part 2, Chapter iv provides information about the design of Sustainable Urban Drainage Systems. However, there are other ways in which design can help build resilience to the predicted changes in climate. More extreme weather events are anticipated in future, such as higher levels of rainfall in single events and flash flooding. SUDs are one way that the effects of flood events can be better managed, but, on plot solutions could also be employed, including specifying oversized guttering to capture more run-off and other forms of rainwater harvesting.

v|55 Building design itself may need to be adapted to withstand more extreme weather and higher summer temperatures, both from a structural perspective, but also for the comfort of the occupants, as discussed earlier in this section.

v|56 The inclusion of more landscape and bluescape within development, the design of spaces and landscape, the inclusion of more trees and shading and designing for tolerance to more extreme weather patterns should all form part of an approach to designing for climate change.

v. Sustainable Design Checklist:

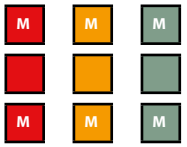
Has a sustainable design strategy been set out in the D&As or separately?

Is the site well located in terms of spatial sustainability?

Is the site well located adjacent to an existing settlement with facilities which can support growth:

Is the site of a size that it requires on-site facilities and a greater mix of uses to ensure its sustainability:

Is the site well connected to encourage walking, cycling and use of public transport facilities:

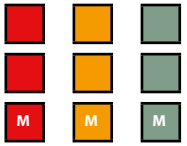


Does the development deliver passive aspects of sustainability?

Does the orientation of the layout exploit passive solar gain, utilising topography and existing features to minimise energy use:

Do the landscape proposals include for the use of trees and planting to offer shade and cooling of the public realm, open spaces and play areas:

Does the design properly consider provision for cyclists, including storage in the public realm and within homes:



Does the development deliver active aspects of sustainability?

Has active sustainability been adequately considered within the design of the buildings:

Has the Passivhaus approach been adequately considered:

Has a 'fabric first' approach to thermal performance been adopted by the developer on the development:

Has 'energy management' been considered in the proposals i.e. maximising use of natural light, thermal mass, efficient appliances/boilers and smart metering:

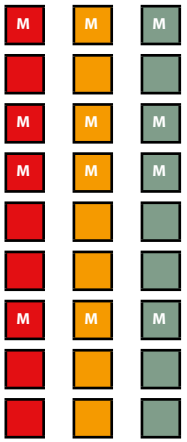
Is the site of a size to develop opportunities for district heating and has that been adequately considered:

Have other micro-generation systems been considered i.e. Solar thermal or electric, ground/air source heating and or biomass CHP systems etc:

Is water conservation tackled in terms of efficient sanitary ware, drought tolerant landscapes and rainwater harvesting etc.:

Have the selected materials come from a sustainable source, preferably a local sustainable source:

Do the proposals ensure working from home is achievable in terms of the internal layout of the house types and the supply of Superfast Broadband:



v. Sustainable Design Precedents:

Eastern Gateway, West Bromwich

Location: Town Centre

Context: Historic/Conservation Area

- Mixed-use development of houses, apartments and office space
- Photo-voltaic panels fitted to each home
- Close to existing shops and other services
- Existing buildings of good quality retained and integrated
- Safe and attractive pedestrian links to Dartmouth Park, High Street and the wider town centre.
- Streets designed for access by public transport

Upton, Northampton

Location: Urban Extension

Context: Greenfield Development

- Range of sustainable technologies including green roofs, micro CHP, PV systems and rainwater harvesting.
- Sustainable urban drainage solutions including swales and porous paving. SUD's infrastructure creates an ecological network linking Upton with the Upper Nene River Valley and the surroundings.
- Range of community uses including primary school, local centre, medical centre and nursery.
- Diverse dwelling types, sizes and tenure mix to cater for people with different incomes and at different stages of their lives.
- Improved pedestrian and cycle links on and around the site.
- Materials: All developers to use recycled or local, sustainably sourced materials.
- Water conservation: high efficiency fittings (e.g. low volume toilets, spray taps) used.

Manor Kingsway, Derby

Location: Infill Site

Context: Brownfield Development

- Cycling encouraged through cycle storage provision within each residential unit (extended garage or shed).
- Swales designed to be used as public open space.
- Visual differences between tenure minimised.
- Clear hierarchy of green spaces including arboretum.
- Porous block paving defines parking bays.
- Bin holding areas used in some instances to reduce travel distances for householder and refuse collectors.
- Tree-lined boulevard with central reservation provides strong green character to main street and summertime shade/shelter.

vi. Quality of Life

vi|01 Quality of Life (QoL) is about the general well-being of individuals and communities. Like sustainability it has a wide range of contexts, including design, environment, healthcare, politics and employment.

vi|02 In the context of this design guide we will be focussing on design related opportunities to improve the Quality of Life in residential situations and other aspects of QoL impacted upon by design.

Can Quality of Life be influenced by Design?

vi|03 Many related aspects of QoL can be influenced by good design. Figure vi:01 illustrates these various aspects in the form of jigsaw pieces. The following paragraphs provide a supporting narrative to the related potential design impacts.

Quality of Design

vi|04 Creating places of high quality provides individuals with a sense of belonging to a community.

vi|05 Well designed homes and environments which provide a balance of personal privacy with good surveillance of the public realm reduce the perceptions of crime and the actual occurrences of crime and general antisocial behaviour.

vi|06 Reduced levels of crime maintains a strong environment and thus induces a sense of pride in the places in which people live, reducing personal stress and strengthening feelings of security and community confidence.

Sport & Recreation

vi|07 Larger development sites that can accommodate sports pitches will directly influence healthy lifestyles by providing direct access to formal sports such as football, cricket, rugby, tennis, hockey etc.

Figure vi:01 - Quality of Life Jigsaw

vi|08 However smaller sites providing informal open spaces and good footpath/cycleway connections around the site and to the wider green space networks and sports facilities can still encourage formal sports participation and also encourage 'Green Exercise' in the form of walking, cycling, jogging, running and informal sports such as kickabouts, other ball games, hide and seek etc. whilst being exposed to nature and the elements.

Identity

vi|09 Creating a strong and unique development, based on a sites context and features provides an instantly identifiable identity and sense of place.

vi|10 A strong identity in a new development not only physically grounds the development in its context but also provides new residents with a sense of belonging, community and can help bind existing and new residents together.

Open Spaces & Green Spaces

vi|11 Physically the colour green is known to be calming and soothing in itself. Therefore developing a strong external environment based on a green infrastructure network of linked open spaces offers the opportunity to not only participate in active recreation as discussed earlier, but also passive recreation. Providing space to relax, unwind, read, think and generally calm the mind. Studies in Japan have shown that residents walking down green avenues and through open spaces live much longer.

vi|12 In addition, green spaces can be used to grow food, encourage the digging over of an allotment or take fruit from a community orchard promoting healthy eating, locally produced food and provides exercise in a practical and productive way. This can also help to reinforce a sense of community and friendship.

Public Realm

vi|13 The creation of a strong public realm in which people wish to spend time and interact with neighbours and the wider community is important on all scales of development and careful thought needs to go into the design of the layout and location of main areas of public realm to ensure they are attractive and well used.

vi|14 Interaction and meeting of residents helps to build a strong community spirit which directly contributes to a good quality of life.

Employment & Job Satisfaction

vi|15 The construction phase of developments can provide jobs directly and pump money into the local economy providing indirect benefits towards employment.

vi|16 In addition new residents to an area can provide critical mass and footfall for existing local businesses, whilst on larger sites, opportunities for employment would exist through a mix of uses in the form of local centres and employment supporting the developing neighbourhood.

vi|17 New homes also offer the opportunity to work from home with the advancement of Superfast broadband and/or the provision home office space or live/work facilities within the housing mix.

vi|18 Employment opportunities and job security in a high quality environment add to job satisfaction, provides financial security and independence and thus helps to improve Quality of Life.

Living Conditions - Homes not Houses

vi|19 Other improvements to quality of life are related to creating living environments for individuals and families which meet their day to day needs. Homes need to provide communal living spaces for the family to share without conflict whilst ensuring private spaces such as bedrooms can accommodate individuals or couples and provide reasonable levels of storage for their belongings.

vi|20 Homes should be designed to provide sufficient natural light and an outlook from a window(s) for habitable rooms. This is especially important in accommodation utilising roofspaces.

vi|21 Storage space is a key issue in modern homes and needs to be considered in terms of space inside the home, garages and gardens to ensure habitable rooms are not cluttered with items usually tucked away in cupboards etc.

vi|22 The Technical Housing Standards - Nationally Described Space Standard is a planning standard relating to the minimum space requirements for new housing. New housing should therefore provide space at least in accordance with the standard or preferably exceed it to create liveable homes.

Technical Housing Standards

vi|23 Housing should also be designed to consider the needs of different age groups and family circumstances. Lifetime Homes principles could be considered to create housing that meets current as well as future needs and which allows adaptability to respond to changing life circumstances.

Lifetime Homes

Leisure & Entertainment

vi|24 Ensuring development has good access to other uses in terms of cafés, restaurants, pubs, leisure centres, theatres,cinemas, galleries, museums and shops are key to ensuring a good quality of life.

vi|25 By linking to such facilities, either locally or ensuring good transport links sub-regionally freedom of choice and a good level of entertainment can all contribute to an improved Quality of Life.

Sustainable Living

vi|26 Development must work with the local environment and take cognisance of global environmental concerns in terms of energy use, airtightness, insulation and good light levels has the knock-on effect of reducing energy bills and improving the internal environment, which, in turn improves well being and reduces financial worries and thus Quality of Life. Many people also actively want to minimise their environmental impact, to make them feel they are not impacting on future generations.

vi|27 Providing opportunities for self-build on larger housing developments gives people further choice in meeting their housing needs and lifestyle choices. Self build also offers the opportunity to create distinctive and memorable buildings within developments, either as sites in their own right or as pockets or key building locations within larger development sites.

Health Impact Assessments

vi|28 Good health is related to good quality housing and developments, well designed streets and neighbourhoods, good transport systems, opportunities to experience leisure and cultural services, and access to activities and green spaces. These factors are known as the wider determinants of health and if they are considered at the planning and design stage can improve physical and mental health of the population.

vi|29 Health Impact Assessments (HIAs) are important tools in determining the potential benefits of a development, and negative impacts that might occur. Cheshire East Council now required a HIA to support major applications. Initially this would be in the form of a Rapid Impact Assessment and only if this demonstrated there were significant potential health impacts, would a fuller study be required.

vi|30 As part of the health impact assessments, consideration should be given to ensuring that the design of new development does not expose residents to noise and other forms of pollution that would adversely impact upon their emotional and physical wellbeing.

Designing Places Healthy

Measures of Happiness

vi|31 Happiness is often defined as a 'Good Life', rather than just an emotional state. It is therefore closely linked to a good Quality of Life as discussed earlier in this chapter.

vi|32 It is acknowledged that happiness is not particularly something which is easy to define or measure, it can mean different things to different people. However as an emotional response to 'place' and thus to 'design' the concept of happiness and making people happy through the design process, as well as ensuring the quality of the end product meets the expectations of communities, should therefore be of paramount importance to developers.

vi|33 If the quality of the end product is excellent which is manifested physically inside and out, creating a home rather than just a house that fits the aspirational lifestyle of the potential residents, then that product sells quickly and ensure good profitability. A fact proven in past studies.

vi|34 Surely therefore 'happiness' as a concept is worth bearing in mind by developers, their design teams and as importantly their land buyers, quantity surveyors and sales teams when it comes to determining the viability and deliverability of homes and the quality of the environments in which they sit.

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vi. Quality of Life Checklist:

Has Quality of Life been properly addressed in the proposals?

Has a good quality design been produced as set-out in previous chapters of this guidance:	M M M
Do the proposals offer opportunities for active recreational activities, formal or informal:	
Will the development have a strong identity, thus ensuring residents have a sense of belonging:	
Have the proposals developed a strong green infrastructure network, and if so, is there a good mix of recreational uses included within it:	
Have spaces been developed within the public realm to allow residents to meet casually and aid the development of community cohesion:	
Will the development of this site contribute to the local economy in term of jobs created and support for existing businesses:	
Does the internal layout of proposed homes comply with the Technical Housing Standards - Nationally Described Space Standard, providing adequate 'family space' and storage:	M M M
Does the site benefit from good access (locally and regionally) to creative and cultural facilities and events:	
Do the proposals actively promote sustainable living to potential residents:	
Does the Rapid Impact Assessment demonstrate there are no detrimental health effects by developing this site:	M M M

vi. Quality of Life Precedents:

Highgate, Durham

Location: Town Centre

Context: Historic/Conservation Area

- Large, well-proportioned homes providing high standard of living accommodation.
- Good internal storage space including walk in wardrobes.
- Strong character and identity with traditional Georgian house forms, plans and elevations.
- Improved pedestrian route to the railway station.
- Steep slope provides long distance views across the city, rooting the development within its context.
- Excellent pedestrian links to the city centre offering good range of shops, services and jobs.
- Generous windows create light interiors.
- All houses have private gardens as well as access to a small public garden above the development that offers dramatic glimpses of the cathedral and city.

Trumpington Meadows, Cambridge

Location: Urban Extension

Context: Greenfield Development

- Local centre including primary school and shops within 5 minute walk of most residents.
- Range of formal and informal open spaces and children's play spaces, including a 60ha Country Park, orchards, allotments, multi-use games areas and a tennis court.
- High quality public realm including shared surface squares and lanes promote opportunities for social interaction.
- Local identity strengthened by retention of key views to local landmarks including Anstey Hall and Trumpington Church.
- Designed to prioritise pedestrian and cycle movement. Hierarchy of cycle routes created including routes for commuters.
- Cycle use encouraged by providing storage space in garages or sheds – promoting health and historical connection between cycling and Cambridge

Queen Elizabeth Park, Guildford

Location: Infill Site - Shared Space

Context: Brownfield Development

- A new square provides community focus with uses including a community centre, children's nursery, health and fitness centre, supermarket and 25 small business units.
- Range of sustainable transport initiatives, including a bus service running through the site, adoption of 'homezone' principles to give pedestrian priority and new footpaths to the local school
- Integral garden rooms or conservatories connect interiors and exterior of homes.
- Dwellings are designed to be spacious, and provide light and air, as well as benefiting from the fine views.
- Good integration of the new housing with the established residential neighbourhoods that surround the site.

Conclusions

01 This residential design guide provides the basis to inform discussions between developers, their consultants and Cheshire East Council.

02 The council welcomes the opportunity to engage with developers in a positive manner around issues of design.

03 The council therefore asks developers that they ensure their in-house design teams and/or employed consultants have the require skill sets to deliver developments in line with the guidance enclosed and that those teams utilise BfL12 as a collaborative discussion tool and structure for the design process.

04 Cheshire East will expect all residential developments, to follow good design practices and deliver high quality homes set into creatively designed places.

05 To reiterate, the purpose of this residential design guidance is to provide developers, their agents and design teams with a framework of advice to aid them in developing designs which will:

- Be responsive to the context and environments into which they are set and provide a strong design vision for the site;
- Follow a logical design approach, underpinned by Building for Life 12 (BfL12), which in turn is illustrated and justified in the application through the Design and Access Statement, Masterplan and/or Design Codes if so required;
- Provide information and guidance on the requirements of design related highways, environment and drainage consultees to ensure their concerns and issues do not get repeated over again;
- Set out **minimum standards** for design which the authority will expect to see delivered on residential projects in the district;
- Provide developers with a clear steer on what Cheshire East expects of them in terms of design related information submitted as part of a planning application;
- Provide reassurance to existing communities that development taking place within their settlements and neighbourhoods will be delivered to a high standard, and;
- Ensure the delivery of quality developments in Cheshire East which reflects the prestigious and much sought after location within the wider North West of England.

06 A number of interrelated design tools will underpin design policies in the Local Plan.

07 The tools will aim to not only improve design quality, but also enable communities and elected members to better participate and articulate design concerns through the planning process, provide a mechanism to recognise, support and celebrate good design in the planning process and resist design that is poorly considered and not of the quality expected in the Borough.

08 The tool kit will consist of the following elements:

- Local Design Review Panel
- Proactive Use of Building for Life 12
- Promoting masterplanning and design coding
- This design guide, adopted as a Supplementary Planning Document

09 Where developers follow this guidance and demonstrate thoughtful and responsive proposals, and/or have responded positively to the design review and BfL12 processes, Cheshire East will ensure that their approach to design is positively considered in the planning process.

"The aim of this guidance is to reduce the antipathy of our communities towards residential development in Cheshire East, but also provide the means to defend against poor or inappropriately designed development.

This will be achieved by ensuring that homes should be of great quality, located in appropriate places, offering a quality of life, but also ensuring the character of those special places is not harmed."

Glossary:

Accessibility The ease with which a building, place or facility can be reached by people and/or goods and services. Accessibility can be shown on a plan or described in terms of pedestrian and vehicle movements, walking distance from public transport, travel time or population distribution.

Adaptability The capacity of a building or space to respond to changing social, sociological economic and market conditions.

Amenity Something that contributes to an area's environmental, social, economic or cultural needs. The term's meaning is a matter for the exercise of planners' description, rather than being defined in law.

Appearance Combination of the aspects of a place or bulking that determine the visual impression it makes.

Architecture and build environment centre A building or organisation that provides a focus for a range of activities and services (such as discussions, information, exhibitions, training, collaboration and professional services) resisting to design and planning.

See www.architecturecentre.net

Area appraisal An assessment of an area's land uses, built and natural environment and social and physical characteristics.

Authenticity The quality of a place when things are what they seem: where buildings that look old are old, and where the social and cultural values that the place seems to reflect did actually shape it.

Background building A building that is not a distinctive landmark.

Backland development The development of sites at the back of existing development, such as back gardens.

Barrier An obstacle to movement.

Best value The process through which local authorities work for continuous improvement in the services they provide. Local authorities are required to challenge why a particular service is needed; compare performance across a range of indications; consult on the setting of new performance targets and show that services have been procured through a competitive process. Councils are subject to independent best value audits by the Best Value Inspectorate, an offshoot of the Audit Commission.

Block The area bounded by a set of streets and undivided by any other significant streets.

Brief This guide refers to site-specific briefs as development briefs. Site-specific briefs are also called a variety of other names, including design briefs, planning trends and development frameworks.

Building element A feature such as a door, window or cornice that contributes to the overall design of a building.

Building envelope guidelines Diagram(s) with dimensions showing the possible site and massing of a building.

Building line The line formed by the frontages of buildings along a street. The building line can be shown on a plan or section.

Building shoulder height The top of a building's main façade.

Built environment The entire ensemble of buildings, neighbourhoods and sites with their infrastructure.

Built form Buildings and structure.

Bulk The combined effect of the arrangement, volume and shape of a building or group of buildings. Also called massing.

Character appraisal Technique (particularly as developed by English Heritage) for assessing the qualities of conservation areas.

Character area An area with a distinct character, identified as such so that it can be protected or enhanced by planning policy. The degree of protection is less strong than in a conservation area.

Character assessment An area appraisal emphasising historical and cultural associations.

Charrette See design workshop.

Collaboration Any arrangement of people working together; such as between departments, between councillors and officers, within partnerships between local authorities, between local authorities and developers, and with the public.

Conservation area advisory group A group of people with specialist knowledge, which meets regularly or occasionally to advise a local authority on the merits of planning applications, or other planning and design issues in a conservation area.

Conservation area character appraisal A published document defining the special architectural or historic interest that warranted the area being designated.

Conservation area One designated by a local authority under the Town and Country Planning (Listed Buildings and Conservation Areas Act 1990) as possessing special architectural or historical interest. The council will seek to preserve or enhance the character and appearance of such areas.

Context (or site and area) appraisal A detailed analysis of the features of a site or area (including land uses, built and natural environment, and social and physical characteristics) which serves as the basis for an urban design framework, development brief, design guide, or other policy or guidance.

Context The setting of a site or area.

Countryside design summary A descriptive analysis explaining the assorted design relationship between the landscape settlement patterns and buildings. From this analysis the document draws principles that can be applied to the development in the area and sets out the implications of the choices open to designers. As supplementary planning guidance prepared by a local authority, the summary can encourage a more regionally and locally based approach to design and planning. It can also provide the context for individual communities to prepare village design statements.

Defensible space Public and semi-public space that is 'definable' in the sense that it is surveyed. Derived from Oscar Newman's 1973 study of the same name, and an important concept in securing public safety in urban areas, defensible space is also dependent upon the existence of escape routes and the level of anonymity which can be anticipated by the users of the space.

Density The mass or floor space of a building or buildings in relation to an area of land. Density can be expressed in terms of plot ratio (for commercial development), homes or habitable rooms per hectare (for residential development); site coverage plus the number of floors or a maximum building height; space standards, or a combination of these.

Design advisory panel A group of people (often architects) with a specialist knowledge which meets regularly or occasionally to advise a local authority on the design merits of planning applications or other design issues.

Design and Build An arrangement whereby a single contractor designs and builds a development rather than a contractor building it to the design of an independent architect. Design and build generally produces buildings that are relatively cheap and easy to build using the methods with which the builder is most familiar. Standards of design are often low.

Design audit An independent assessment of a design, carried out for a local authority by consultants, another local authority or some other agency.

Design champion A person responsible for ensuring that a particular organisation – a local authority, regional development agency, health authority or government department for example – promotes high standards of design throughout its work.

Design code A document (usually with detailed drawings or diagrams) setting out with some precision the design and planning principles that will apply to development in a particular place.

Design co-ordinator One who manages the design process in a development project, particularly liaising between the developer and the local authority.

Design guidance A generic term for documents providing guidance on how development can be carried out in accordance with the planning and design policies of a local authority or other organisation.

Design guide Design guidance on a specific topic, such as shop fronts or house extensions, or relating to all kinds of development in a specific area.

Design policy Relates to the form and appearance of development, rather than the land use.

Design principle An expression of one of the basic design ideas at the heart of an urban design framework, design guide, development brief or design code. Each such planning tool should have its own set of design principles.

Design quality indicator A method of assessing the quality of buildings in terms of 'build quality', 'functionality', and 'impact'. It was developed by the Construction Industry Council and launched in 2003.

See www.dqi.org.uk

Design standards Produced by districts and unitary authorities, usually to quantify measures of health and safety in residential areas.

Design statement A developer can make a rep-application design statement to explain the design principles on which a development proposal in progress is based. It enables the local authority to give an initial response to the main issues raised by the proposal. An applicant for planning permission can submit a planning application design statement with the application setting out the design principles adopted in relation to the site and its wider context. Government advice (Planning Practice Guidance Note 1) encourages an applicant for planning permission to submit such a written statement to the local authority.

Design workshop A participative event ranging in length from a couple of hours to several days, which brings together a range of people (often local people and professional architects) to discuss design issues. A workshop may or may not use techniques of collaborative design. Also known as charrette.

Design-led development (or regeneration) Development whose form is largely shaped by strong design ideas.

Desire line An imaginary line linking facilities or places which people would find it convenient to travel between easily.

Development appraisal A structured assessment of the characteristics of a site and an explanation of how they have been taken into account in drawing up development principles.

Development brief A document providing guidance on how a specific site of significant size or sensitivity should be developed in line with the relevant planning and design policies. It will usually contain some indicative, but flexible, vision of future development form. A development brief usually covers a site most of which is likely to be developed in the near future. The terms 'planning brief' and 'design brief' are also sometimes used. These came into use at a time when government policy was that planning and design should be kept separate in design guidance. The term 'development brief' avoids that unworkable distinction.

Development control the process through which a local authority determines whether (and with conditions) a proposal for development should be granted planning permission.

Development form See form

Development plan Prepared by a local authority to describe the intended use of land in an area and provide a basis for considering applications. Every area is covered either by a unitary development plan or by a development plan comprising more than one document is structure plan and a local plan and sometimes also other plans relating to minerals and waste.

The development plan sets out the policies and proposals against which planning applications will be assessed, its context is set by national and regional planning policy guidance.

Development Statutory defined under The Town and Country Planning Act 1990 as' the carrying out of building, engineering, mining or other operation, in, on, over or under land or the making of any material change in the use of any building or other land'. Most forms of development require planning permission.

Development team (The people working together to bring about a particular development (i) local authority officers working collaboratively in dealing with development proposals rather than each carrying out their own section's responsibilities individually.

Elevation (i) An external face of a building (ii) A diagrammatic drawing of the external face (iii) The height of a site above sea level.

Enabling development (i) Commercial development whose profitability makes possible a related development or restoration of social, historic or environmental value. (ii) Development (such as building an access road) that is necessary for carrying out another development.

Enclosure The use of buildings to create a sense of defined space.

Energy efficiency the result of minimising the use of energy through the way in which buildings are constructed and arranged on site.

Enquiry by design A form of urban design and planning charrette or workshop in which stakeholders in a proposed development , including local authorities, residents, developers, landowners, voluntary groups, employers and retailers, collaborate in producing a masterplan through a workshop that can last up to a week.

Eyes on the street People whose presence in adjacent buildings or on the street make it feel safer.

Façade The principal face of a building

Feasibility The appropriateness of development in relation to economic and market conditions.

Fenestration The arrangement of windows on a façade.

Figure ground (or figure and ground diagram) A plan showing the relationship between built form and publicly accessible space (including streets and the interiors of public buildings such as churches) by presenting the former in black and the latter as a white background, or the other way round.

Fine grain The quality of an area's layout of building blocks and plots having small and frequent subdivisions.

Flagship project One intended to have the highest profile of all the elements of a regeneration scheme.

Floorplate The area of a single floor of a building.

Form The layout (structure and urban grain); density, scale (height and massing), appearance (materials and details) and landscape of development.

Grain See urban grain

In-curtilage parking Parking within a building's site boundary, rather than on a public street or space.

Indicative sketch A drawing of building forms and spaces which is intended to guide whomever will later prepare the actual design.

Landmark A building or structure that stands out from the background buildings.

Landscape The appearance of land, including its shape, form, colours and elements, the way those (including those of streets) components combine in a way that is distinctive to particular localities, the way they are perceived and an area's cultural and historical associations.

Layout The way buildings, routes and open spaces are placed in relation to each other.

Legibility The degree to which a place can be easily understood by its users and the clarity of the image it presents to the wider world.

Lifetime homes With an emphasis on accessibility. Lifetime Homes have a number of design features which make the home flexible enough to cope with whatever comes along in life. Part M of the Building Regulations require all new homes to include Lifetime Home features.

Live edge Provided by a building or other feature whose use is directly accessible from the street or space which it faces; the opposite effect to a blank wall.

Local distinctiveness The positive features of a place and its communities which contribute to its special character and sense of place.

Massing The combined effect of the arrangement, volume and shape of a building or group of buildings. This is also called bulk.

Mixed uses A mix of complementary uses within a building, on a site or within a particular area. 'Horizontal' mixed uses are side by side, usually in different buildings. 'Vertical' mixed uses are on different floors of the same building.

Mobility The ability of people to move around an area, including carers of young children, older people, people with mobility or sensory impairments, or those encumbered with luggage or shopping.

Movement People and vehicles going to and passing through buildings, places and spaces.

Natural surveillance (or supervision) the discouragement to wrong-doing by the presence of passers-by or the ability of people to see out of windows. Also known as **passive surveillance (or supervision)**.

Node A place where activity and routes are concentrated.

Performance criterion/criteria A means of assessing the extent to which a development achieves a particular functional requirement (such as maintaining privacy). The concerns with a standard, which specifies more precisely how a development is to be designed (by setting out minimum distances between buildings for example).

Permeability The degree to which a place has a variety of pleasant, convenient and safe routes through it.

Permitted development Small scale, often domestic, development which does not require formal planning permission provided it complies with criteria set out in Government legislation.

Perspective A drawing showing the view from a particular point as it would be seen by the human eye.

Placecheck A type of urban design audit advocated by the Urban Design Alliance. A local collaborative alliance or partnership uses checklists to investigate how a place can be improved.

Planning for real A participation technique (pioneered by the Neighbourhood Initiatives Foundation) that involves residents and other stakeholders making a model of their area and using it to help them determine priorities for the future.

Planning inspectorate Government agency which administers the Planning Appeals system.

Plot ratio A measurement of density expressed as gross floor area divided by the net site area.

Proactive development control Any process by which a local authority works with planning applicants to improve the quality of development proposals as early as possible in period before a planning application is submitted.

Public realm The parts of a village, town or city (whether publicly or privately owned) that are available, without charge, for everyone to use or see, including streets, squares and parks. Also called public domain.

Scale The size of a building in relation to its surroundings, or the size of parts of a building or its details, particularly in relation to the size of a person.

Section A drawing showing a slice through a building or site.

Settlement pattern The distinctive way that the roads, paths and buildings are laid out in a particular place.

Sight line The direct line from a viewer to an object.

Strategic view The line of sight from a particular point to an important landmark or skyline.

Street furniture Structures in and adjacent to the highway which contribute to the street scene, such as bus shelters, litter bins, seating, lighting and signs.

Topography A description or representation of artificial or natural features on or of the ground.

Urban design The art of making places. Urban design involves the design of buildings, groups of buildings, spaces and landscapes, in villages, towns and cities, and the establishment of frameworks and processes that facilitate successful development.

Urban design framework A document setting out how development plan policies should be implemented in a particular area where there is a need to control, guide and promote change. Such areas include transport interchanges and corridors, regeneration areas, town centres, urban edges, housing estates, conservation areas, villages, new settlements, urban areas of special landscape value, and suburban areas identified as being suitable for more intense development.

Urban grain The pattern of the arrangement and size of buildings and their plots in a settlement; and the degree to which an area's pattern of street-blocks and street junctions is respectively small and frequent, or large and infrequent.

Urban structure The framework of routes and spaces that connect locally and more widely, and the way developments, routes and open spaces relate to one another.

Vernacular The way in which ordinary buildings were built in a particular place before local styles, techniques and materials were superseded by imports.

Village appraisal A study identifying a local community's needs and priorities.

Village design statement An advisory document, usually produced by a village community, showing how development can be carried out in harmony with the village and its setting.

Visual clutter The uncoordinated arrangement of street furniture, signs and other features.

Walk band A line on a map or plan showing the furthest distance that can be walked from a particular point at an average pace in a certain time (usually five or ten minutes).

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