8.7 Creating the urban structure

8.7.1 The importance of the street and urban block
The ‘street’ is the most robust urban structure and has stood the test of time, as most of the best historical precedents demonstrate. Developers will be expected to adopt a traditional street based approach to the layout of the extension. Widespread use of typical cul-de-sac development is not appropriate. The Council will look more favourably upon downgraded streets and mews solutions for more intimate residential streets, which whilst restricting through movement of traffic ensure pedestrian and cyclist permeability.

8.7.2 The urban block is an organising structure which is flexible, can accommodate different uses and allows areas to change over time. It facilitates good overlooking of the street and restricts access to the rear of properties, creating a clear distinction between ‘front’ and ‘back’. It allows scope for gardens, parking and servicing within the block, which has the benefit of reducing parking pressures and its visual consequences on the street.

8.7.3 The size of the block has a direct correlation with the permeability of an area for pedestrians, and therefore smaller block sizes are encouraged. However, in some instances, particularly in mixed use blocks, the size may be increased. It is appropriate to create a grid of streets around the block structure. In the more ‘urban’ locations where densities are higher this grid should be of a regular form which corresponds with the linearity of the streets. As densities decrease across the site more varied, irregular street grids are appropriate and desired.

8.7.4 Continuity and enclosure along individual streets should be ensured through adherence to the principles discussed in section 8.8. Buildings of a similar height, scale, massing and proportions should face onto the street at either side of the road. This approach will define the public realm and enclose key spaces, allowing good natural surveillance and security.
8.7.5 Development proposals should create a legible layout, whereby the articulation and orientation of streets and buildings will enable people to find their way around. Important views and vistas should be terminated by buildings to provide visual linkages through the residential areas, and landmarks proposed in appropriate locations - for example at the entrances into new character areas / sub areas / spaces on key routes.

8.7.6 Developers should reflect the following principles in their proposals:

- **Cul-de-sac layouts should be used only in exceptional circumstances,**
- **Urban blocks should be designed to facilitate good pedestrian permeability and should generally be of between 50m and 90m in dimension,**
- **In the higher density areas blocks should have an east / west bias in terms of their length, to maximise solar orientation,**
- **There should be a clear distinction between the front and back of properties within the block,**
- **Additional dwellings / complementary uses can be included within internal spaces, where larger blocks and parking areas are proposed to aid natural surveillance, ownership and security,**
- **There should be a limited number of access points to internal block spaces and direct pedestrian links to properties from the rear,**
- **Entrances to internal block spaces should be via well supervised routes (ideally carriage arches) and be clearly delineated as semi-private space through threshold demarcation and changes in surfacing treatment.**
8.7.7 The generic block principles diagram (above) illustrates a potential block structure which accommodates internal courtyard parking. Whilst this approach is advocated as a way of overcoming on-street parking pressures, it is not appropriate in all parts of the extension area, and may be more suited to the higher density parts of the neighbourhood. Where these solutions are proposed, designers need to consider security issues, access arrangements, ownership and long-term management and maintenance responsibilities carefully. These issues are discussed in greater detail in section 8 and 8.8.

8.7.8 Creating local distinctiveness character and identity
Local distinctiveness and a sense of place are essentially about the physical characteristics of places and our relationship with them. It is as much about the commonplace as the rare, about the everyday as much as the endangered, and about the ordinary as much as the spectacular. In this way the character of the urban extension and its sub areas should be collectively comprised of key buildings and general building types, predominant styles and historical associations.

8.7.9 Whilst the Council does not wish to see a pastiche approach to new development, the presumption must be in favour of encouraging change which positively contributes to and enhances the character of the area, and develops a new identity for the urban extension. To this end, the expansion area needs to be developed to have its own distinct, but complementary identity. Designs which encompass principles of energy conservation and resource recycling will be particularly encouraged and could lead to the development of a distinctive new building aesthetic (refer to section 8.15).
8.7.10 The strongest local vernacular can be found in the surrounding historical villages. The Council will support an approach which attempts to re-interpret the positive characteristics of these existing areas in a contemporary way. Developers will be expected to demonstrate how they have drawn upon the building traditions of Kettering and its surrounding villages in any design proposals. However, it is not just buildings which create character, it is the layout of the street and relationships with open space. This necessitates consideration of the interrelationships between building, street and space at every level of the design process, from masterplan to detailed design and internal layout.

8.7.11 Key generic characteristics which developers could respond to as the basis for the development of a new identity include:

- Shallow plan building forms with ‘L’ or ‘T’ shaped extensions,
- Steep roof pitches and ‘green’ roofing materials,
- Stone walling as a unifying feature,
- Simple uncluttered building elevations,
- Limestone/ironstone - material textures and colours,
- Village greens and arrival greens,
- Traditional street proportions and characteristics,
- Variety in street and pavement widths,
- Properties addressing linear watercourses.

8.7.12 Table 1 overleaf provides an overview of the 3 main character areas and an indication of the general approach to development. Within these broad character areas there is scope to provide a wide range of housing and develop distinctive sub areas, which will help to create a legible urban structure and enhance identity. Variety and character along individual streets should be ensured through the layout, street pattern and combination of different types of housing with a number of complementary elevational treatments.

8.7.13 The table overleaf summarises the key components of character and suggests the main design principles which should be used to inform design and development proposals within each of the character areas.

Backdrop buildings play an important role

Traditional streetscapes provide scope for interpretation

Incorporating existing landscape can mature development and provide character
### Key design principles for each character area

<table>
<thead>
<tr>
<th>Component of character</th>
<th>The Village</th>
<th>The Poplars Area</th>
<th>The Spinneys Area</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Street proportions</strong> - The height and width of the street in section, this creates the scale and sense of enclosure</td>
<td>Taller properties predominantly 3-4 storeys, to create high degree of enclosure, higher proportion of apartments. No or small front gardens.</td>
<td>Traditional scale streets predominantly 2-3 storey with some individual 4 storey buildings at appropriate locations. Small front gardens</td>
<td>Domestic scale streets, 2-3 storey properties, larger front gardens create more spacious street proportions</td>
</tr>
<tr>
<td><strong>Building form</strong> - The forms of built development including aspects such as storey height, massing, shape and scale</td>
<td>Rectangular forms perpendicular to street to create terraces / townhouses, apartments parallel to street. Larger scale, taller properties and bulkier apartment buildings.</td>
<td>Traditional scale rectangular forms, with subordinate extensions and additions to form L and T shaped footprints. Principal wide frontage to face streets, some perpendicular.</td>
<td>Traditional scale larger detached , semi detached properties, square or rectangular plan. Massing of built form broken up along street</td>
</tr>
<tr>
<td><strong>Plot width</strong> - The typical width of individual development plots or dwelling frontages along a street</td>
<td>Narrow plots, frontages facing street, larger rectangular plots for apartment buildings and square plots for corner development.</td>
<td>Wider plots relating to wide frontage properties, some variation with narrower plots for buildings perpendicular to street.</td>
<td>Larger, wider plots with more space between properties</td>
</tr>
<tr>
<td><strong>Building line set back</strong> - The set back of the building frontage from the front boundary of the property</td>
<td>Linear building line, small 0-1 m threshold / front garden or properties located to back of pavement.</td>
<td>Subtly staggered and varied building line along organic streets 1-2 m front ‘mini-gardens’ or buildings sited to back of pavement.</td>
<td>Properties set back to form constant building line, small-medium sized front gardens 3-7 metres suitable along edges of extension area</td>
</tr>
<tr>
<td><strong>Frontage composition</strong> - The proportion and arrangement of the vertical plain of frontages addressing the street</td>
<td>Building dominated, narrow plan frontages creating vertical repetition of building elements and strong urban edge to street.</td>
<td>Varied frontage composition linked by outbuildings, carpentry / carriage arches and short stretches of walling</td>
<td>Broken frontage with space between buildings, garden walling / boundary treatment to link properties</td>
</tr>
<tr>
<td><strong>Facing / construction materials</strong> - The palette of construction materials, colours, textures and finishes to external walls</td>
<td>More contemporary / formal materials, including glass, steel, red brick, timber paneling and render finishes.</td>
<td>Mix of red brick closer to higher density areas, softer shades palette near to open space. Ironstone / sandstone for key buildings.</td>
<td>Emphasis on softer material palette including sandstone and ironstone finishes, potential for timber and thatch.</td>
</tr>
<tr>
<td><strong>Roof types</strong> - Construction materials for roofs and their forms including pitch, gables, hips, dormer windows</td>
<td>Mixture of roof forms, pitched for buildings with traditional aesthetic, mono-pitch / butterfly roofs or variations for contemporary. Avoid flat roof types.</td>
<td>Predominantly pitched roof forms following similar pitch angle along streets - steeper pitches including living accommodation.</td>
<td>Predominantly pitched with higher proportion of steep pitched roofs and materials to reflect surrounding village character</td>
</tr>
</tbody>
</table>

*Table 1*
The Village

Higher density, mix of uses, formalised character

The Poplars Area

Medium density, primarily residential, traditional characteristics

The Spinneys Area

Lower density, informal character, larger properties

Illustrative images are intended to show general principles for each core character area, but do not advocate an architectural approach
<table>
<thead>
<tr>
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<th>The Spinneys Area</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Front boundary</strong> - The space, materials and type of any front boundary wall or fence between the public and private realm</td>
<td>Privacy strips defined by surface treatment. Small front garden bounded by railings, consistency of colour across plots, brick walls used as appropriate. Brick bond brick type or render to complement architecture. Bespoke arts railing to be considered. Stretches of one type of treatment used as appropriate to create continuity.</td>
<td>Small front garden bounded by simple railings, consistency of colour across plots, brick walls used for side and front gardens as appropriate. Brick bond brick variety and render to complement architecture. Increased use of hedge planting, using appropriate evergreen species in locations with more informal character. Stretches of one type of treatment to create continuity.</td>
<td>Encourage private green space to front of property. Trees permitted in larger gardens, hedge planting using appropriate evergreen species and/or simple railings. All gardens enclosed. Stretches of one type of treatment used as appropriate to create continuity. Hedges used at key intersections and thresholds.</td>
</tr>
<tr>
<td><strong>Landscape structure</strong> - The existence and typical composition of street planting</td>
<td>Street planting predominantly tree planting. Use of appropriate trees with seasonal or particular interest at key locations. Tree planting used to reinforce legibility of street hierarchy (and green links or pedestrian routes as appropriate). Single species treatment in formal layout to create a formal character on higher order roads, potential mixed species and random centres on lower order roads to create informal character. Species and specifications selected to reinforce character as appropriate. (Ref to sections on public realm and transport networks).</td>
<td>Some grass verges, with street tree planting. Use of appropriate trees with seasonal or particular interest at key locations. Tree planting used to reinforce legibility of street hierarchy (and green links or pedestrian routes as appropriate). Potential mix of species and random centres on lower order roads to create informal character. Species and specifications selected to reinforce character as appropriate.</td>
<td>Some grass verges, with street tree planting in key areas. Use of appropriate trees with seasonal or particular interest at key locations. Use of native species arranged in groups or stands carefully located within the open space network to offset built mass with green mass i.e. green space and green structure (Ref adjacent areas). Tree planting used to reinforce legibility of street hierarchy (and green links or pedestrian routes as appropriate). Potential mix of species and random centres on lower order roads to create informal character. Species and specifications selected to reinforce character as appropriate.</td>
</tr>
<tr>
<td><strong>Open space</strong> - The type of formal or informal open space and its relationship to buildings and its landscape composition</td>
<td>Urban spaces considered at key intersections, outside important buildings, and carefully located to create dynamic a streetscape. Green space to be well overlooked, built form pulled up close to edge, streetscape designed to create strong relationship with space.</td>
<td>Green space to be well overlooked, built form pulled up close to edge, streetscape designed to create strong relationship with space. Incidental street spaces placed within the streetscape to have attractive hard and soft landscape treatments appropriate to built form and character.</td>
<td>Green space to be well overlooked. Transition at rural edge of development carefully designed to settle built form by pulling green fingers into development. Green space to be well overlooked, and to flow up to built form at certain points. An informal landscape character might be most appropriate in this area.</td>
</tr>
<tr>
<td><strong>Parking</strong> - Arrangements and provision related to the building / dwelling / street</td>
<td>Rear courtyard parking, limited parking on-street. Parking associated with centre married into the public realm e.g. car parking to form one function of multi-use areas. Parking associated with dwellings to adopt various methods, minimum number of garages accessed off street.</td>
<td>On-street parking limited. Some integral garages and on plot parking to side of property permitted. Parking platforms not permitted. Parking courts within street blocks and within-curtilage parking at rear of property permitted. Parking courts to be designed spaces - Mews and Courtyards to be considered overlooking parking areas.</td>
<td>On-street parking limited. Carefully sited garages and car ports permitted - where they add to the streetscene. Parking platforms not permitted. Parking courts within street blocks and within-curtilage parking to the side and rear of property permitted.</td>
</tr>
</tbody>
</table>

Table 1 (continued)
The Village

Higher density, mix of uses, formalised character

The Poplars Area

Medium density, primarily residential, traditional characteristics

The Spinneys Area

Lower density, informal character, larger properties

Illustrative images are intended to show general principles for each core character area, but do not advocate an architectural approach.
8.7.14 Variety and unity
Within each of the character areas and sub areas, designers are challenged to create a coherent approach to building form and aesthetic. This will require developers to work together to prepare complementary designs or further, more detailed, design guidance / codes for character areas.

8.7.15 Most towns and villages are comprised of one-off special buildings and a backcloth of more ordinary designs. It is the latter of these two building types that these sections focus upon, as they have the greatest potential for determining character. One-off buildings and landmarks, by definition, should have the potential for development of individual identity.

8.7.16 Much discussion of character often focuses upon material choices. However, the individual elements of which buildings are composed also have a key role to play in determining the character of an area. Building elements include; doors, windows and surrounds, porches, roofs, lighting, gutters, pipes, balconies, garage doors, etc. It is the consistent arrangement and repetition of a number of similar building elements in a variety of different building forms that combine to create an overall architectural approach which has integrity. This has nothing to do with architectural style, but rather the application of contextually informed principles of good urbanism.

8.7.17 Other elements which can add or detract from local character are described in ‘Better Places to Live: By Design’ as ‘interface elements’ such as cycle and bin stores, boundary treatments, alarm and meter boxes, service entries and lighting. Service elements should be hidden from view, either behind boundary treatments or within porches / front storage space. Again, boundary treatments, walls, fences and hedges should generally be of a consistent style within character areas.

8.7.18 When all these elements are brought together in a considered way, the sum of the parts adds up to a coherent whole. In this way proposals will be judged against their ability to contribute to the development of a collective character.

8.7.19 In order to encourage a varied but coherent character, designers and developers should:

- Work together with the Council to develop detailed guidance for backcloth buildings within each of the character areas,
- Consider the proportions, scale and qualities of existing building elements in and around Kettering,
- Develop a common palette of building elements and variants which can be applied within specific character areas,
- Avoid artificial ‘stick on’ building elements which do not respond to local building traditions,
- Give careful consideration to the design of interface elements and their cumulative effect on character.
8.7.20 Both examples (shown to the left) have been designed with reference to the vernacular characteristics of their different contexts and both are Building for Life (silver) award winners. The schemes show a wide variety in building forms, but a common unity of elements which give them a strong character.

8.7.21 Building form and massing

The building form and scale of the different buildings in each of the character areas have an important influence on the qualities of place. The spatial form of traditional village centres in the local area is generally building dominated, with a strong sense of enclosure created by almost continuous frontages along the roads. The buildings line the roads which in turn generally follow the contours. Houses are either built against one another or are linked by connecting walls positioned at the back edge of the footways.

8.7.22 Many of the buildings in the surrounding villages reflect local building traditions. They are rectangular in plan and of single room depth with steeply pitched gabled roofs running along their lengths. Buildings built in the 19th century and later have been designed with shallower roof pitches.

8.7.23 Many of the buildings within the traditional streets are rectangular and shallow plan, with later larger rectangular properties located in more spacious grounds. Typically the shallow plan buildings have additional floorspace provided in the form of additions or extensions, which appear subordinate to the principal building. These will often be in the form of single and two storey projections to the rear of the principal building, forming L or T shaped plans, or lean-to and gabled extensions to the side. These shapes provide greater opportunity to create varied street layouts and are much better suited to informal ‘organic’ layouts.
8.7.24 Often developers have concentrated on trying to enclose the maximum floor area within a minimum built envelope for a minimum frontage width. Related to this is the use of developers’ standard house types which increasingly tend to be detached, square in plan and all with the same relationship to the road. However, by abandoning hidebound rules such as these it is possible to fit more houses on the site for no extra cost and with no loss of amenity, whilst creating streets with character.

8.7.25 In response to the desire to create attractive, varied streets with continuous frontages (particularly in the Poplars area), designers should:

- Develop alternative shallow and square plan house types which provide the same space and facilities, but which combine more attractively into groups and street scenes and allow more flexibility of layout,
- Seek to create wide frontage, shallow-plan properties that combine to form L shapes, T shapes and corner-turning units. This can include large, four or five bedroom houses with on-plot parking for three or more cars, which nevertheless are capable of joining onto other houses to compose strong street frontages.

8.7.26 In the low density edge of extension areas, a variety of both rectangular and shallow plan housing forms are encouraged. In the higher density areas around the Village character area, it is more appropriate to develop a greater proportion of narrow frontage / deep plan housing, such as terraces and town houses, which provide a more land efficient layout. These forms are also appropriate fronting the more important streets in the movement hierarchy. These forms combined with a higher proportion of apartments lend themselves to a linear / regular arrangement of streets, and block patterns.

8.7.27 Corner buildings
Corner buildings (apartments or houses) are especially important because they have two frontages providing the potential to form strong townscape elements and landmarks. Standard housing units often result in blank walls, and special designs should be considered to ensure surveillance in both directions. In response, corner buildings should:

- Step up in height at appropriate locations to help legibility and define key spaces,
- Avoid blank walls / frontages as buildings turn the corner.

Good example of corner apartments

Good example of corner dwellings

A standard unit that fails to address the corner
8.7.28 Roof forms
The roofscape is particularly important at east Kettering considering the nature of the topography and the potential for long distance views. The desire is to break up the roofscape when viewed from a distance by alternating the siting of properties along the street (either parallel or perpendicular).

8.7.29 More contemporary roof designs are appropriate in the lower lying areas of the site, where densities are higher and mixed use / employment uses are more common. Similarly they can be used effectively to accentuate the landmark properties of key buildings, particularly from wider views outside the new settlement.

8.7.30 Traditional pitched roof forms are more in keeping with the locality and reflect the existing outlook over the town from the Ise Lodge ridgeline. Therefore, more traditional forms are more appropriate on the slopes and the middle part of the extension area. Nevertheless, a general approach which seeks to create variety in the roofscape will be encouraged.

8.7.31 Where traditional roof forms are used they should be:
- Pitched at a steep angle, preferably 45 degrees or steeper,
- Similar within character areas, along the street, and next to neighbouring properties,
- Designed so that the ridge line is either parallel or perpendicular to the street,
- Simple in form with gable ends rather than hipped.

8.7.32 Roofs offer a potential surface for the mounting of photovoltaics and solar heating systems, and this factor should be considered when determining roof pitches, particularly for south facing elevations. Steeper roof pitches will help in this respect. Monitors and skylights are appropriate within the roof and can help to generate a more contemporary aesthetic. However, these elements should not visually dominate the surface area of the roof.

8.7.33 Dormer windows and chimneys are a characteristic of the area and may both be used to add variety to the roof form. Dormer windows should be small so as not to dominate the roof and should be wholly accommodated in the roof, or break through the eaves lines. Dormer windows should generally have pitched roofs for buildings with a traditional aesthetic.
8.7.34 Chimneys can add greatly to the architectural richness of building forms, and are often significant elements in the roofscape. However, it is important that they are designed as strong and meaningful forms and have a legitimate purpose. They should not be simply ‘stuck on’ for aesthetic reasons. They can be linked to internal ventilation systems and offer the opportunities to incorporate micro renewable technologies such as certain wind turbines, where these are integrated into the design in a sensitive way.

8.7.35 Height and scale
In general, the urban to semi-rural character and edge of settlement context suggests development which is of a traditional domestic scale. However, throughout the extension area the scale of development will vary in response to the density gradients, public transport accessibility, the route hierarchy and landscape, and topographical considerations.

8.7.36 For the purpose of this guidance, storey height is taken to be the distance from the ground to the building eaves, however additional accommodation can be included in the roof space where the ridgeline is no greater than 3 metres in height from the top of the upper storey. Where the ridgeline exceeds this height the building can be considered to have an additional storey of accommodation. This requirement is brought about by the steep roof pitches and large roof elevations characteristic of the locality. Repetition and interpretation of these roof forms is encouraged, however this should not have a detrimental effect on building heights and street proportions.

8.7.37 In general, across the site, residential dwellings should be between 2 and 3 storeys in height. Taller development, including apartment buildings, offices and commercial blocks could be taller (4-5 storeys) and should be concentrated in the higher density areas of the site around the village centre. Here the topography is less pronounced, and buildings will be less visible from long distance views. A taller landmark building (of 6-7 storeys) could be appropriate within the village centre at a landmark location (the precedent of church spires within the wider landscape is a strong characteristic) however this building would have to be of exceptional design and be subject to extensive visual impact assessment from within the site and surrounding area.

8.7.38 Taller dwellings lining key routes are a desirable characteristic prevalent in the town. In this situation, taller houses and buildings of 3-4 storeys are appropriate in order to provide a greater degree of enclosure to the wider routes in the movement hierarchy, and enhance natural surveillance. Similarly, taller properties and a greater proportion of apartments are more appropriate alongside and enclosing open spaces, to enhance their amenity potential and create a strong edge to the open space. However, off these key routes and spaces, residential streets should consist of 2 and 3 storey buildings stepping up to 4 storey to articulate corners.
Within each of the character areas and the residential sub areas:

- Buildings should be of a similar height along a street,
- Buildings should help to articulate the street hierarchy and aid legibility,
- There should be no sudden changes in building height, and
- Development should either step up or down by no more than a storey in height per property.

8.7.40 Visual richness

All new buildings, be they residential, commercial, mixed use or community, should be well proportioned and designed to a human scale, whatever their height or massing. Development is of a human scale if its size, position and details relate to passers by in a way that makes them feel comfortable rather than intimidated.

8.7.41 This involves designing buildings so that their individual elements are related to the proportions of a human figure. Windows, doors, porches, balconies and other elements should be of a scale to which a person can relate. Designing to human scale also involves using materials and external finishes which follow these rules. In general, smaller more intimate materials and building elements should be concentrated at ground floor level where they are more open to view and closer to the pedestrian environment. At ground floor level, buildings and boundary treatments should be visually rich and contain a greater degree of detail.

8.7.42 The number and composition of elements on the building’s façade, and the contrasting relationships between them determine visual quality, richness and interest. Wherever possible the three dimensional qualities of buildings should be emphasised to add depth, shadow and interest to the façade. This can be achieved by observing the traditional qualities of buildings in the town. Windows are recessed, eaves overhang walls, projections, porches and bays reach out into the public realm and corbelling overhangs from elevations.

8.7.43 In more contemporary designs, use of balconies offers opportunities to create greater depth. Whatever the architectural aesthetic, changes in materials and detailing should relate to the design of the building and its architectural integrity, not be added in an arbitrary way to create interest or mimic a style. Similarly, fake / pastiche details which do not relate to the simple, non fussy local building traditions are not appropriate and should be avoided.

8.7.44 Shop front design

Shop fronts can have a major impact upon the character and quality of the neighbourhood centres and the village. Good shopfront design can enhance the pleasure of shopping and strengthen the appeal of neighbourhood centres. Either modern or traditional shopfronts are appropriate, however they should reflect the
character and architectural style of the upper floors of the building, maintain the distinction between separate buildings in a terrace, be constructed of appropriate materials and be well proportioned and detailed.

8.7.45 The following key design principles should be considered in relation to shop front design:

- Glazing should be maximised to increase transparency and optimise the display area creating visual permeability and depth. This promotes a lively rather than dead frontage,
- Frameless glazing systems are encouraged where possible, however, framed solutions which are sympathetic to the building may also be considered,
- Structural openings should be respected. Frontages should be set within them and positioned back from the front face of the building. Signage and other items should not extend onto the front face unless the building’s design indicates that this would be appropriate,
- Materials used should be durable and of sufficient strength to resist knocks and abrasions and provide a long term solution,
- Measures required to resist vehicle attack should be identified and incorporated at design stage, in a way that does not detract from the appearance of the development,
- Retailers are encouraged to employ security measures such as shutters behind the frontage and behind glazing,
- The frontage should maximise the depth of reveals, accentuating the 3D modelling of the building’s elevation,

- Signage must be limited to the ground floor unless designed into the fabric of the building,
- All types of signage solutions should be considered as appropriate, i.e. internal (behind the glazing), external on the fascia and both illuminated and non-illuminated.

8.7.46 Materials

It is anticipated that prescription of materials will be dealt with primarily through agreement of detailed design codes for new development areas in line with the broad principles outlined in table 1 on page 60 and 62. Therefore this section focuses upon the key properties that the Council will expect developers and designers to consider in their approach to material selection. In general the Council will seek to ensure that
8.7.47 Facing and roof materials should be selected with reference to the range of local and regional materials characteristic of the locality. There is a consistency of colour and texture to the buildings throughout the surrounding villages, mainly because of the limited range of local walling and roofing materials available historically. This includes limestone and ironstone facing materials, and roofs of thatch, Collyweston stone slates or Welsh blue slate. The use of these materials for important new buildings, or those at important locations will be particularly welcomed.

8.7.48 Whilst it is acknowledged that the potential for widespread use of these specific materials is constrained, designers are challenged to think creatively how the traditional characteristics and qualities can be replicated through the use of contemporary materials. For example, this could include undertaking a colour study of the existing town and surrounding area to inform material selection and develop an appropriate palette of locally relevant colours. Similarly, it could involve the town centre, where a broader range of potentially relevant local materials to inform selection choices exists.

8.7.49 Contemporary alternative materials could include brick, render, timber and rainscreen/cladding panels selected with reference to the properties of the traditional areas. A higher proportion of glazing within an elevation will also help derive a more contemporary aesthetic and facilitate greater light penetration, which helps to meet sustainable design objectives.

8.7.50 When undertaking material selection developers and designers will be expected to:

- Develop further detailed design guidance / codes covering materials through pre-application discussions,
- Reflect existing traditional materials in surrounding villages and materials found in town,
- Ensure there are no ozone depleting substances in building materials,
- Use long life materials that discourage later replacement with more advanced features,
- Use materials from sustainable sources.

materials demonstrate sustainable properties. This is important as it is the embodied energy within the fabrication of construction materials and the material composition which (like the efficiency of building design) has a significant effect upon the environment.
8.7.51 **The layout and design of employment areas**

The places where people want to work, do business and visit have their own character and identity. To attract investment, trade and employees, industry and business must present a welcoming image and pleasant public face. This is especially the case for larger employment areas such as those proposed for East Kettering.

8.7.52 In turn this requires developers to think how business premises are contributing to the area. Attention to layout and good quality landscaping can help to overcome many of the issues traditionally associated with the urban design of such uses.

8.7.53 Transcending the tedium of conventional low cost employment buildings to provide a setting that is more engaging to staff and customers alike, should be an objective of all actors involved in the design processes at east Kettering. This is particularly the case for new office buildings where viability margins tend to be greater than for other lower order uses. To create a quality contemporary environment for business, the same participants are challenged to think creatively around the broad set of principles outlined below.

8.7.54 In addition to the finer grained mix of uses located in and around the neighbourhood centres, two significant employment areas are proposed in appropriate locations. It is envisaged that within the two employment areas there will be a broad range of B1, B2 and B8 uses. The employment area shown on the indicative development framework to the north of the A14 provides a business gateway at the southern end of the high street as part of the mix of uses along this route. Here there is an opportunity to develop a higher proportion of commercial offices, providing a high quality edge at this arrival point. The offices would also benefit from an outlook over the grassland area and would be located within a short walking distance of the village centre across the town park. The employment area shown to the south of the A14 would also benefit from good accessibility and therefore may be attractive to a range of enterprises.

8.7.55 Many of the issues associated with employment uses can be mitigated through good design. Access, servicing, siting, massing and amenity of adjacent uses are key design considerations when considering the planning of the employment areas. These areas have the potential to become active parts of the new neighbourhood, contributing to the mixed use characteristics of the area and supporting the vibrancy of the village centre. These relationships need to be considered in the design and planning of the employment areas.

8.7.56 In order to create attractive and secure employment areas developers will be expected to develop a street structure based around the aforementioned block principles and adhere to the following guidance;
8.7.57 Parking

- Parking should not be allowed to dominate development plots visually and should be sensitively laid out within the development,
- Parking should be broken up into smaller bays of not more than 10 spaces and designed as an integral part of any landscape treatment,
- Ideally, parking areas should be located to the rear of any buildings and be screened / framed by buildings or landscape elements wherever possible. Where this is not feasible, parking areas should be situated to the side of the main structures, or in an area that is obscured from view,
- For functional industrial buildings, creative approaches that seek to overcome standardised blandness in this type of building design will be particularly welcomed;
- Blank exterior walls should be avoided and made more interesting through simple techniques such as breaking the elevations up into smaller parts either by line, colour, or the introduction of new elements,
- Areas of glazing are encouraged and are particularly effective as they allow visual permeability into the body of the building.

8.7.58 Service access

- Developers must incorporate satisfactory servicing arrangements, ideally to the side or rear of buildings,
- The design of service areas should be based on the maximum number of vehicles likely to use the area at any one time,
- The areas should be located in a position to avoid conflicts with other areas of the site (e.g. pedestrian routes, car parks) whilst loading / unloading takes place.
- Does the building maximise use of the site?
- Is the building orientated in an east-west direction to maximise solar gain, and does the design consider how light can penetrate the structure?
- Will the chosen materials give the building a long life span or be capable of being recycled?
- Has the building been designed in a manner that makes it easy to adapt - e.g. could it be easily subdivided at a later date, or extended?
- Have methods to reduce energy / water consumption been considered?
- Has the ecological value of the site been increased through landscape treatment?

8.7.59 Site layout and building design

- Developers should endeavour to orientate active parts of any building (i.e. entrances, reception areas, offices) toward the street frontage. In turn the most visually interesting and actively used facades of the building will be open to public view,
- Focus environmental improvements / landscape within the highly visible space created in front of the buildings,
- In terms of massing, larger building blocks and arrangements should be broken down into constituent parts wherever possible to avoid large monolithic blocks,
- Developers should encourage visually interesting skylines by using the roofs of buildings creatively,
8.8 Attractive streets and spaces

8.8.1 This section tackles design principles for the public realm. In this case public realm has been defined as the spaces between the built form, focusing on the streetscape and key urban spaces excluding green spaces and recreational spaces which are covered in section 8.12 ‘Creating a green heart to the community’.

8.8.2 The public realm can clearly express the quality of the place. It is one area of the development which everyone will experience. A high quality public realm will aid legibility, placemaking and the overall character of the development. The local authority will work with developers to devise appropriate open and green space strategies, as well as design guidance to support these within specific development parcels.

8.8.3 The indicative framework expresses a street hierarchy based on the county’s guidance which can be seen in the table below and referred to in section 8.2. By using a clear hierarchy of streets, the movement network becomes more legible. This hierarchy should be supplemented by the integration of urban spaces with the open and green space strategy. Local spaces and landmarks will help to reinforce important nodes and points of interest in the framework. This may include small squares associated with a local district centre, through to town parks, which may provide amenity greenspace as well as outdoor sports and play facilities, e.g. NEAPS/LEAPS to a wide area. The treatment of the streetscape should express this hierarchy and allow for all appropriate activity along each street.

8.8.4 Design guidance given as part of this document is also broadly based on the emerging Manual for Streets information. Detailed design guidance produced by developers as part of design codes for the site must take into account particular information on street design given in this document. A draft copy of the manual can be downloaded at www.manualforstreets.org.uk and it is anticipated that the final document will be published in March 2007.

8.8.5 The highest order road required to service this level of expansion is a Local Distributor, and the quality of this route will be important in setting the tone of quality across the extension area. The indicative framework highlights this as a potential High Street, embracing particular treatments at a Village Centre (shown below as High Street axo). This street would have a particularly formal character, making it memorable to the large number of people who would use it. There may also be opportunities to reinforce the importance of activity at the Village Centre by providing a distinct local space, e.g. a small square or town park (Shown below as Market Square axo).

8.8.6 Public transport corridors offer opportunities to create routes which aren’t dominated by cars and these routes may benefit from a more informal character. The scale of these routes should encourage them to be used as good walking and cycling corridors. The indicative framework sets up a public transport corridor...
between Ise Lodge north and the expansion area. This might be designed to incorporate an east-west green link working with and enhancing existing site features to create an attractive non-car route and memorable gateway.

8.8.7 The character of the lower order streets will be much more residential in scale. It is envisaged that local spaces such as greens and small urban squares might be settled in this street pattern, improving accessibility to public space and creating unique settings. Some of the road types e.g. mews and courtyards, would form memorable spaces and add to the character.

8.8.8 The key principles of designing a high quality public realm are set out here as a guide to creating a consistent approach to street design and appropriate integration of urban spaces in the townscape. With the core objective to create attractive streets and spaces within an appropriate and well designed public realm network.

8.8.9 This can be expanded to seven key principles in which the design for the public realm must:

- Create streets which are clear, uncluttered and well connected to destinations sensitively integrating access for all, including disabled, youth and elderly people,
- Propose a diverse network of routes which are attractive, welcoming and comfortable to invite greater non-car movement,
- Promote safe and secure public areas,
- Create a legible and memorable place by responding to the street hierarchy, character and significant events in the townscape,
- Integrate appropriate local urban spaces to reinforce character, a sense of place and amenity,
Ensure appropriate levels of parking provision are sensitively integrated into the public realm,

Create a public realm which aids successful traffic management and seeks to put people before cars (including carefully integrating public transport and cycleways),

Embrace the best design solutions, keeping in mind functionality, services and long term maintenance.

8.8.10 Inclusive design and access
It is important that the new expansion helps to create streets which are clear, uncluttered and well connected to destinations, sensitively integrating access for all, including disabled, young and elderly people. All parts of the public realm need to be accessible to all ensuring that everyone can get to and move through the place on equal terms regardless of age, disability, ethnicity or social grouping.

8.8.11 The Indicative framework clusters schools, parks, and shops where appropriate, these are all located at important intersections in the movement network allowing good connectivity from public transport. In strategic design terms the new development must carefully integrate transport at appropriate destinations, including appropriate parking provision, bus stops, drop off, taxi ranks, minibus access. Designs for the new development should contrive to cluster key destinations, where sensible to do so, reducing walking distances.

8.8.12 In general terms developers will be expected to ensure:
- All public areas be accessible by everyone without undue effort;
- The public realm is designed to prevent the need for special treatment or separation of users;
- Public areas are safe and within reason predicable allowing a good level of comfort for all users;
- Materials and street furniture are suitable and can be maintained to ensure ease of movement for everyone.

8.8.13 Street qualities

8.8.14 Definition and design of a street network
It is important to create a clearly defined network of roads and spaces. A good quality public realm aims to design a diverse network of routes which are attractive, welcoming and comfortable to invite greater non-car movement and create a public realm which aids successful traffic management and seeks to put people before cars (including carefully integrating of public transport and cycleways).

8.8.15 The character of the streets in the Indicative Framework is discussed above. More detailed information on street design across the network is given here.

The network of new streets must;
- Seek to accommodate appropriate activity, e.g. paths should widen in busy areas such as the Village Centre and include cycle parking,
- Create a legible network reinforced through treatments, including tree planting and materials. Reinforcing character areas, for example, at the Village Centre treatments should be relatively formal and in residential areas generally more informal,
- Accommodate cycling and walking in some form, either in shared or defined zones,

8.8.16 The street hierarchy set out in section 8.2 Making The Connections is based on the County's emerging guidance. Northamptonshire’s guidance on street design has been expanded in Table 2 and the streetscape sections below to take in additional recommendations on character, activities and traffic management.

8.8.17 It is suggested that this information is subject to further exploration with the council in line with proposed road layouts and hierarchy.
Street Hierarchy and Qualities

<table>
<thead>
<tr>
<th>NCC street typology</th>
<th>Illustrative Framework typology</th>
<th>Designed Speed</th>
<th>Movement /vehicles</th>
<th>Carriageway width and Street Proportions (height /width ratio)</th>
<th>Edge treatments</th>
<th>Characteristics</th>
<th>Other uses</th>
<th>Traffic management opportunities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Distributor</td>
<td>Main Road I High Street - general Main Road II High Street - Neighbourhood Centre</td>
<td>30mph</td>
<td>All movement / all vehicles on own side of carriageway. No direct access to dwellings. Limited on-street parking</td>
<td>7.3m (or 6.75m with Bus Lay bys) 1.3</td>
<td>Minimum 2m footways to one side, 3m combined footway/cycleway to other. 4-6m width pavement beside active frontage in Neighbourhood centre. Additional 1.2m for verges or street furniture zones as appropriate. All street furniture in first 0.4m behind kerb</td>
<td>'Greened' Urban Street Tree lined, informal and formal boulevard as appropriate. Active frontage. Good degree of enclosure. Street well overlooked. 2-4 storey buildings.</td>
<td>One side foot/cycle path. Cycle parking at appropriate destinations. Bus stops. Sitting, meeting people. Art</td>
<td>Alignment of street designed to limit traffic speeds. Limited shared surfaces associated to open space. Raised crossings. Tables at junctions</td>
</tr>
<tr>
<td>Public Transport Corridor</td>
<td>Bus priority lane</td>
<td>30mph</td>
<td>All movement / all vehicles on own side of carriageway. No direct access to dwellings</td>
<td>6.0m 1.3</td>
<td>Minimum 2m footways to one side, 3m combined footway/cycleway to other. Additional 1.2m for verges or street furniture zones as appropriate. All street furniture in first 0.4m behind kerb</td>
<td>Green gateway, informal landscape character. 3-4 Storey building set back. Possibly shared surface to carriageway to create less defined roadway in the green space</td>
<td>One side foot/cycle path. Bus stops. Where adjacent to green gateways SUDs considered for road drainage. Art</td>
<td>Bus gates</td>
</tr>
<tr>
<td>Neighbourhood Centre</td>
<td>Neighbourhood Centre Local Centre (see Local Distributor for East Kettering)</td>
<td>20mph</td>
<td>All movement / all vehicles on own side of carriageway. No direct access to dwellings</td>
<td>Varying dependant on size and facilities of centre. Minimum 5.5m 1.3</td>
<td>Minimum 2m footways to one side, 3m combined footway/cycleway to other. Additional 1.2m for street furniture zones. All street furniture in first 0.4m behind kerb</td>
<td>Tree lined street, informal planting</td>
<td>One side foot/cycle path. Cycle parking at appropriate destinations. Bus stops. Sitting, meeting people. Art</td>
<td>Raised crossing points. Car parking. Pinch Points at crossings. Shared surfaces</td>
</tr>
</tbody>
</table>

Small front gardens give privacy and private space, while maintaining a sense of enclosure by keeping built form close to the road

Services in first 1.5m of footpath. Service area subtly demarcated

Boulevard tree planting outside Village Centre-this might be informal trees at random centres ornamental varieties of natives

Signage and streetlighting in first 400m

Limited on street parking, no access to dwellings from street

Combined foot/cycle ways passing key destinations

Cycle parking at key destinations

School site

Public Transport Corridor
Public transport corridor

- High density 3-4 storey buildings might respond to the scale of the gateway
- SUDS from plot might be accommodated in green gateway
- Carriageway: Scale of lighting to suit human scale of footpath and carriageway

Neighbourhood centre

- Uncluttered wide pavements in front of shops allowing easy movement and opportunities for retail to spill out onto street
- Some on-street parking through Village Centre bays broken up with widened pavements for trees and street furniture
- Raised crossing possibly some shared surface through Village Centre
- Street furniture/lighting and signage grouped together to reduce 'street clutter'
- Informal definition of space to park (Boulder Shown) Aid permeability and overlooking to park Village Centre can borrow from park character to define memorable place

Kettering Urban Extension: Strategic Design Guidance
January 2007
# Street Hierarchy and Qualities

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</thead>
<tbody>
<tr>
<td><strong>Linked Access Collector</strong> (suitable for 200-400 units)</td>
<td>Main residential access road, Primary road in high density areas</td>
<td>20mph</td>
<td>All movement / all vehicles on own side of carriageway. Limited direct access to dwellings, on-site turning required</td>
<td>6.0-6.75m 1.3/ 1.2</td>
<td>Minimum 2m footways to one side, 3m combined footway/cycleway to other. Additional 1.2m for verges or street furniture zones as appropriate. All street furniture in first 0.4m behind kerb</td>
<td>Tree lined, informal planting. Relatively small front gardens related to road width. Good degree of enclosure. Street well overlooked. 2-3.5 storey buildings</td>
<td>One side foot/cycle path. Bus stops. Car and Cycle Parking. Garages accessed off street not permitted</td>
<td>Alignment of street designed to limit traffic speeds. Parking layout, pinch points along street, shared surface areas.</td>
</tr>
<tr>
<td><strong>Major Access Collector</strong> (suitable for 61-200 units)</td>
<td>20mph</td>
<td>All movement / all vehicles on own side of carriageway. Access to dwellings, cul-de-sacs not permitted</td>
<td>5.5m 1.3/ 1.2</td>
<td>Minimum 2m footways to one side, 3m combined footway/cycleway to other. Additional 1.2m for verges</td>
<td>2-3.5 storey buildings, Informal tree planting in verges. Verges managed to give interest and create informal character. (e.g. bulbs/some long grass etc)</td>
<td>One side foot/cycle path. Bus stops. Car and Cycle Parking</td>
<td>Parking, pinch points along street, shared surface areas. (Formal traffic calming measures at 60m centres if appropriate)</td>
<td></td>
</tr>
<tr>
<td><strong>Minor Access Collector</strong> (suitable for 21-60 units)</td>
<td>20mph</td>
<td>Refuse vehicles and delivery vehicles entering using on side of road. Refuse vehicles passing car throughout. Access to dwellings</td>
<td>4.8m 1.1.5</td>
<td>2m to either side minimum</td>
<td>2-2.5 storey buildings, over looking road. Some street trees species and centres to create low key informal character. Less enclosure, larger front gardens. Front garden to offer opportunities for greening street. Small street space carefully integrated for residents’ amenity</td>
<td>Parking, Walking, Cycling on road. Some amenity space for sitting, meeting people, LAP play</td>
<td>Parking layout, pinch points along street, shared surface areas. Road alignment designed embracing ‘street’ spaces to reduce traffic speeds</td>
<td></td>
</tr>
</tbody>
</table>

**Linked access collector**

- Scale of lighting to suit human scale of footpath and carriageway
- Carriageway
- Street furniture zone
- Footway/Cycleway
- 2.0m min footway
Major access collector

- Narrow gardens create more character with 3 storey buildings
- Services within footpaths
- Lighting for both vehicles and pedestrian/cyclists. Lower columns used to re-enforce residential scale of street
- Combined footpath and cycleway to one side well overlooked and related to key destinations
- Direct vehicular access to property from the street permitted

Minor access collector

- Some on street parking - Tree planting in between
- Opportunity for substantial planting in larger front gardens - helping to ‘green’ streets
- Generally 2 storey buildings
- Lighting at appropriate scale for residential street
- Shorter gardens in more urban, high density areas
- Direct vehicular access to property permitted
## Street Hierarchy and Qualities

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</tr>
</thead>
<tbody>
<tr>
<td><strong>Access Way</strong></td>
<td>Low density and medium density areas</td>
<td>10mph</td>
<td>Refuse and emergency vehicles access</td>
<td>4.8m (or between 4.1-5.5m where widths of less than 4.8m where minimal on-street parking. First 10m from junction to be minimum 4.8m 1:1.5)</td>
<td>2m to either side minimum. Or 2m to one side and 1.1m service strip to other. OR Shared surface allowing comfortable movement for pedestrians</td>
<td>2-2.5 storey buildings, over looking road. In areas of urban character good level of enclosure, smaller front gardens and footpaths, in less urban areas less enclosure, shared surface. Small street space carefully integrated for residents' amenity</td>
<td>Parking, Walking, Cycling on road: Some amenity space for sitting, meeting people, LAP play</td>
<td>Surface materials Shared surfaces/ pedestrian priority. Pinch points. Parking layout. Road Alignment.</td>
</tr>
<tr>
<td><strong>Access area</strong></td>
<td>Public Courtyards</td>
<td>10mph</td>
<td>Refuse and emergency vehicles access</td>
<td>4.8m 1:1.5</td>
<td>0.5-1.5m privacy and access strip (incorporating part of 1.1m service strip to each side minimum)</td>
<td>2-2.5 storey buildings, scale of 'courtyard space' to relate well and create good sense of enclosure, good overlooking of space. Smaller street space carefully integrated for residents' amenity</td>
<td>Parking, Walking, Cycling on road: Some amenity space for sitting, meeting people, LAP play</td>
<td>Surface materials Shared surfaces/ pedestrian priority Integrate street spaces Street furniture</td>
</tr>
<tr>
<td><strong>Mews</strong></td>
<td>Mews High and medium density areas</td>
<td>10mph</td>
<td>Refuse and emergency vehicles access</td>
<td>Varying - minimum 4.1m, min or 1.1m hard strip to create shared surface. 1:1.5</td>
<td>0.5-1.5m privacy and access strip (incorporating part of 1m hard strip to each side minimum) NB: localized widening to allow passing</td>
<td>2-2.5 storey buildings, scale of mews to relate well and create good sense of enclosure, good overlooking of space</td>
<td>Parking, Walking, Cycling on road. Materials and street furniture</td>
<td>Shared surfaces/ pedestrian priority</td>
</tr>
</tbody>
</table>

### Access way

- **Buildings at eastern side of extension low density - buildings along access ways in higher density areas 3-4 storeys (See public transport corridors)**
- **Stone on-street parking permitted. Direct vehicular access to property permitted**
- **Varied sizes of larger front gardens to reinforce residential character**
- **At eastern edge landscape buffer varies widths to brook. Structural planting staggered to prevent 'green' walls of block planting**
- **Open and filtered views to cycle/footpaths through landscape to aid natural surveillance**

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![Diagram](image-url)
Access area

- Privacy strip and access area in front of property
- Shared surfaces to create space
- 2-3 storey buildings
- Stepped frontage to vary enclosure
- Opportunities for some small defined public open space
- Some parking in front of property, some within curtilage
- Frontages stepped to vary enclosure
- Good overlooking of space
- Minimum 0.5m privacy strip
- Parking permitted to front of property
- 0.5m - 1.5m outside front doors

Mews

- Shared surface to create unified space
- Frontages stepped to vary enclosure
- Minimum 0.5m privacy strip
- Parking permitted to front of property
8.8.18 Enclosure and continuity
The scale and relationship between buildings and the street help to make well designed places and creates an appropriate streetscene. Controlling the enclosure and continuity of the street will help to create a legible and memorable place by responding to the street hierarchy, character and significant events in the townscape.

8.8.19 The degree of enclosure is set by the relationship between the building height and the width of the street. For example, a high level of enclosure, where buildings are pulled up tight to the carriageway, creates a strong urban character.

8.8.20 On the whole, the East Kettering expansion sits across an urban to semi-rural environment. The illustrative framework would suggest that higher density development is located close to the village centre, creating a slightly more urban character. It is envisaged that the nature of the streetscene will become more informal towards the edges of the expansion area.

8.8.21 The enclosure of the street should respond to the following principles:
- Streets should have a height to width ratio which corresponds to their role in the road hierarchy. The Urban Design Compendium and draft Manual for Streets sets out information on height to width ratios which should be used as a guide,
- Size of front gardens need to be carefully considered, responding to intended street character.
Parking on-street and on-plot needs to be carefully considered so it does not compromise street enclosure;
Street spaces are encouraged at appropriate locations however their design should work with the intended levels of enclosure.

8.8.22 The degree of enclosure along a street is also, in part determined by the continuity of frontage, this refers to the alignment of the buildings along the street and the breaks in frontage. Where less continuity is required, for example where the built form crumbles into the broader rural landscape at the edges of the development the scale of space around buildings could be increased.

8.8.23 There are several ways to create successful continuous frontage this should be through:
- Terraced/linked buildings, excluding garages and outbuildings;
- Short stretches of high garden walls fabricated to visually tie into built form;
- Joining buildings across access points, e.g. archways into courtyards.

8.8.24 Where massing is reduced to respond to site location and there is less continuity in the built form the integrity of the street character should be kept using:
- Linked boundary treatments;
- Continuous street tree planting and verges;
- Lighting designed to create a human scale set to a regular rhythm;
- Careful use of a limited palette of materials on the street.

8.8.25 It should be noted that continuous frontage does not mean linear frontage and points of interest created by stepping building forward and back, introducing small street spaces or altering the alignment of the road at suitable points will create a more diverse street scene and aid legibility.

8.8.26 Active frontages and overlooking
It is important that streets are animated; and promote safe and secure public areas, that there is the potential for activity to spill out from buildings and that this might be overlooked. Windows and
access points onto the streets offer this connection; more formal activities which are visible from or open onto the street for example, cafes and shops should also be embraced at suitable locations.

8.8.27 The articulation of the building frontage should also be considered. Vertical structure, rhythm, building orientation and projections such as bays and porches can help to animate a street. Activating the front of buildings creates good overlooking providing natural surveillance; this encourages greater use of the street which in turn helps to increase security.

8.8.28 There are a number of situations highlighted in the indicative framework which should benefit from active frontage:

- All streets must have good ground floor uses, stretches of basement garages and dead frontage are not acceptable,
- Opportunities for activity to spill out onto the street should be embraced at important places. e.g. Cafes, shops,
- Active frontage should address all key non-car routes,
- Balconies and projections such as bays and orangeries, should be considered at key intersections in the townscape.

8.8.29 Definition of space
All spaces within the townscape should have an appropriate function; often a building layout is determined with little thought to spatial considerations leaving left over or poorly integrated spaces. Public, private and semi-private spaces should be incorporated and clearly distinct boundaries defined to reinforce their roles. Left over space without purpose can become an eyesore and a nuisance, it can be unclear who should or how it is to be cared for.

8.8.30 Only the key public open spaces can be shown on the illustrative framework. These areas should be carefully sited respecting the existing site features and their intended function within the new development. The definition of these spaces and how they might sit in the urban context is discussed in section 8.12 Open Space Networks.

8.8.31 The following criteria should be applied to the design of smaller public spaces, private and semi-private spaces;

- The intended ownership of space should be clearly defined and treatments to these spaces should ensure they are fit for their role, for example gardens must have clear boundaries adding to personal privacy and security,
- The layout of the development should be fully considered and all external spaces should be integrated in the design,
- Public space should be welcoming and invite use; they should be related to nodes of activity and associated to key pedestrian routes,
- Public open space should have clear entrance points or should merge into the wider townscape so they are easy to access,
Semi-private spaces are a special situation and these shared private spaces should offer opportunities for community use - controlled by the shared owners. These spaces should be welcoming and attractive but clearly set outside the public domain.

8.8.32 Front gardens particularly, need to be well considered in the context of the street scene. Poor boundary treatments and inappropriate plot size can have a negative effect on enclosure and the character of the street. Developers will be expected to follow design principles set out in ‘By Design’ in this respect in the following ways:

- Zero setbacks create an intimate environment and are encouraged in high density areas e.g. the village area; however threshold details and servicing/storage have to be carefully considered,
- Where less enclosure is required (such as in the Poplars area) a modest setback should be considered. A set back of around one metre can offer privacy and storage. There is less enclosure, so street character has to be handled sensitively in other ways. Opportunities should be explored to ‘green’ the street by introducing planting to these mini gardens, hard landscaping will create a more urban character and should be incorporated where appropriate,
- Larger gardens of between 3-7m are appropriate at the edges of the expansion in less dense areas and can provide structure and setting to dwellings creating a less urban character. The boundary of these should be carefully considered to create unified character and control enclosure. Parking platforms are discouraged.

8.8.33 Quality of public spaces
It is important to integrate appropriate local urban spaces to reinforce character, a sense of place and amenity. Within a well designed public realm there are distinct spaces which help make a place special. The more significant are often neighbourhood or local spaces generally situated at key intersections or important destinations, for example town squares, village greens or local parks.

8.8.34 It is also important to recognise that spaces may attract uses that, whilst not planned for, could well have been foreseen, e.g. skate boarding within the urban public realm. This often reflects a lack of appreciation of user demands for facilities or perhaps the displacement of particular groups. It is necessary to take due cognisance of such users and activities by making appropriate provision, and/or protecting or designing out features that would otherwise attract unwanted attention.

8.8.35 There is also the need for smaller or incidental spaces set along streets and at less significant intersections. These street spaces should have visual amenity whilst potentially offering informal recreational amenity for example by providing comfortable places to meet, sit or play.
8.8.36 The character and type of space needs to respond to the location in the townscape. It is felt that a neighbourhood space should be located in the village centre and a small square or town park should be considered here. The illustrative framework and supporting information on the centre shows how both might be incorporated. Village greens or local parks associated to local centres would help to gather activity together and possibly provide a focus for the local areas. Centres within the Spinneys and Poplars areas have ‘small’ parks associated to them.

8.8.37 The neighbourhood and local spaces should:

- Be clustered with appropriate destinations, e.g. at centres;
- Be well overlooked, though spaces do not have to be completely surrounded by active frontage there should be active areas;
- Have good access and egress points associated to the key pedestrian routes, it is envisaged that the town ‘park’ could form part of a large north-south linear green corridor and that it, as all other spaces, is crossed by good east-west green links;
- The spaces should be ‘designed’, embracing a unique character for each;
- Contain the appropriate functions for each type of open space.

8.8.38 This document covers incidental spaces within the public realm as street spaces. These small but important spaces should:

- Be integrated in the design of the street, they should have appropriate purpose in creating interest, aiding legibility or providing areas for activity these can not be left over or scraps of space;
- Add value to the streetscene, have a designed quality, carefully considered materials including planting;
- Have a clear plan for the management of these spaces.

8.8.39 Public courtyards and homezones are two examples of shared street spaces and should be carefully designed to embrace the notion of public space over road space. They will occur in the residential areas. These shared spaces should:

- Be designed spaces not simply areas of shared surface,
- Be integrated in the townscape as part of a wider context traffic management strategy,
- Encourage low vehicular speeds through the space and pedestrian priority,
- Contain places for local people to gather, play and park bicycles and a certain number of cars, where this is not to the detriment of the other functions.

8.8.40 An appropriate public realm strategy needs to be agreed between the council and the lead developer. This will include materials, maintenance and layout.
8.8.41 Tree planting
Tree planting can add significantly to the quality and character of the street, providing aesthetic relief from the built form, visual ties with existing mature vegetation, shade and seasonal highlights. Tree planting should reflect the street hierarchy in terms of scale, ultimate height and form. Streets that are wider and with a greater building set back are more likely to be able to accommodate larger trees. The form of a tree e.g. whether it is fastigiate, broadly columnar or weeping, is also influenced by the space available for tree growth. Building lines, the requirements for natural light street lighting and site lines, are all matters to be considered in making appropriate tree selections as well as the local climate and soils. Appropriate tree species should be agreed with the local authority.

8.8.42 The location of trees should also consider the position of services and building foundations to avoid long term problems of shading. Close integration with the layout of roads and buildings is essential to ensure the long term success of planting. The preparation of tree pits is important in terms of planting materials and drainage, the use of root barriers may also need to be considered near buildings and services.

8.8.43 Utilities and services
The design of utilities must be integral to the development both for maximum efficiency but also to avoid visually and physically adversely impacting upon the landscape and public realm, for example: by limiting tree planting and disrupting surface materials with service covers. Developers will be encouraged to use a common service trench in providing services and to limit the impact upon the public realm in terms of construction, repair and maintenance.

8.8.44 Street furniture
Street Furniture includes seating, signage, litter bins, bollards and lighting. It is important that street furniture should present a co-ordinated image in terms of style and colour. The use of a co-ordinated palette can reinforce a sense of place adding character and distinction. The urban and green/open space network can also benefit from the use of a carefully selected palette of street furniture, strengthening linear routes whilst helping to define individual spaces through particular themes e.g. timber or steel. Long term management and maintenance considerations should be taken into account in selecting street furniture and it should be agreed with the local authority.

8.8.45 Street furniture can also reinforce the street hierarchy, particularly through street lighting. Appropriate lighting can:
- Improve safety and a sense of well being,
- Improve access and egress,
- Expand periods of use,
- Create a greater sense of identity and legibility.

8.8.46 A lighting strategy should be developed and agreed with the local authority in order that there is a coherence and consistency to the lighting of the public realm.

8.8.47 Art in the public realm
It is important that some elements of art are included in the public realm. They create interest, foster ownership, and help to make a place special.

8.8.48 There maybe opportunities to embrace art at the key approaches to the development such as the green gateways illustrated on the framework plan. Dynamic pieces of environmental art, for example earth sculpture, might also be considered within larger areas of the green network e.g. the Greenway spine. The village and local centres might benefit from more subtle pieces integrated into the built form.

8.8.49 An arts strategy for the development should be prepared by the lead developer for delivery throughout the expansion area, highlighting how art in the landscape will:
- Occur at important events in the townscape, crossroads, squares, possibly at the end of vistas,
- Be encountered occasionally in surprising and unlikely places to provoke interest,
- Either stand alone or be integrated into the fabric of the built form and landscape e.g. earth sculpture, feature railing or objects for play.
8.8.50 It is envisaged that this strategy will cover the design of signage, boundary treatments, sculpture, lighting, mosaic and play areas and should also highlight how new residents can participate in developing art for East Kettering in the longer term.

8.8.51 Accommodating the car
An overarching objective for the new extension is to create walkable neighbourhoods, encouraging local people to move away from using their cars. To encourage this modal shift a number of key movement principles are set out in section B. However, there is need to differentiate between car use and car ownership. Even though new patterns of travel are encouraged, people are still likely to own a car and will therefore require parking spaces. Cars will need to be accommodated and parking provision should be carefully considered to ensure appropriate levels of provision are sensitively integrated into the public realm, whilst balancing the desire for spaces close to the home in safe and attractive locations.

8.8.52 Parking provision in East Kettering will be predominantly in residential areas, however there will need to be particular consideration as to how the cars are accommodated in shopping areas, offices, schools and other community buildings. PPG 3 and PPG 13 along with the County’s guidance on street design and parking should be used to inform provision. General guidance is give below along with more detailed information on parking in residential and shopping areas.
8.8.53 Integrating parking successfully and seamlessly in the public realm throws up many challenges and there are a number of key ideas which should be incorporated, including:

- Promoting a layout which embraces a clear street character not dominated by car parking,
- Considering a variety of methods to accommodate the car to find the best mix,
- Allowing a certain amount of appropriate on-street parking along lower order streets in the hierarchy helping to animate the street,
- Preventing car parking from creating unusable and unattractive places for pedestrians and non-car users,
- Providing parking which is convenient, safe and secure.

8.8.54 The parking at village and local centres should be integrated into the public realm in order to support accessibility and the economic vitality of the centres. The general guidance above should be followed however the following opportunities should be explored:

- Parking areas split up to create smaller areas closer to destinations,
- Parking integrated into the townscape to reduce the visual impact possibly underground parking within buildings or within a market square,
- On-street parking in Local centres and in low order roads in neighbourhood centres.

8.8.55 Off street parking increases land requirements for new housing, in order to use land more efficiently and encourage non-car movement the amount of off street provision the county guidance permits is less than 1.5 spaces per dwelling. This type of parking can be seen in two ways as within curtilage and private courtyard parking.
8.8.56 Within curtilage parking should:

- Include occasional basement or integral garages however integral garages should be used sparingly as this type of ‘ground’ floor use can create dead frontage onto the street,
- Discourage car platforms and private drives to the front of property and where appropriate to include this type of provision locate it between properties or in shared drives to the rear,
- Include only limited garages spaces which should be sensitively integrated to prevent dilution of street continuity;

8.8.57 Private courtyards will:

- Accommodate no more than 10 vehicles,
- One of these spaces will be a dedicated space, as discussed below,
- Have some overlooking from property,
- Have clear and easy access to property,
- Be visually attractive, and in some instances create opportunities for activity e.g. LAP’s or seating areas,
- Accommodate cycle parking.

8.8.58 Parking on streets has to be handled carefully; the public realm should not be dominated by cars however the associated activity can help to animate a street.

8.8.59 On-street parking and direct access to properties and parking areas is not permitted along the higher order roads. It is envisaged that buildings will front these streets and parking for these areas is accessed from linked access collectors (Table 2). Lower order roads should have a mixed approach to parking provision and on-street parking animating the streets will have a large part to play in this.

8.8.60 Where on street parking is included it should:

- Be incorporated as short runs of parking bays (maximum 5 bays) integrated into the street scene by interspersing them with street trees and spaces,
- Aid traffic calming in residential areas e.g. parking layout in homezones, pinch points along streets,
- Be visually integrated with the pedestrian zones, reducing the dominance of the carriageway,
- Be well overlooked and close access to dwellings,
- Not create a barrier to pedestrian or cycle movement,
- Be carefully considered in the design of street spaces, for example, public courtyard spaces and homezones, (see previous section on Quality of Public Spaces).
8.8.61 The County guidance requires that 1:10 parking spaces in residential areas should be:

- Reserved for people with disabilities and young children;
- Well distributed around the development;
- Located close to access to homes;
- Incorporate appropriate signage, road marking and level access being mindful of street clutter.

8.8.62 Additional spaces might also be designated for drivers who car pool or drive electric cars.

8.8.63 Management and maintenance considerations

When the public realm is implemented it should look attractive. Over time, with age, use and poor management it can degrade and as a result create a negative impression of a place. It is important that the design of the public realm embrace the best design solutions, keeping in mind functionality, services and long term maintenance.

8.8.64 Spaces which are well managed and maintained encourage a sense of ownership and responsibility. Well maintained and attractive spaces also encourage people to use them, increasing interaction, natural surveillance and feelings of safety and security. Poorly maintained spaces can provide opportunities for crime, in particular landscaped areas, which can obscure visibility and increase opportunities for undetected crime and antisocial behaviour.

8.8.65 The following principles should be adhered to:

- Long term management and maintenance arrangements for any public or semi-public space should be established from the outset. Resources, ownership and responsibilities should be identified and agreed,
- Choice and positioning of planting should be carefully considered, so as not to obscure visibility and increase fear of crime,
- Public and semi-public spaces should be designed to enable easy maintenance.

8.8.66 The lead developer will be required to work with the Council and produce a public realm strategy as part of more detailed design guidance or codes. Management and maintenance considerations should be agreed with the Council and presented in this document.

8.8.67 The document should consider:

- How and who maintains streets, local spaces and streetspaces,
- Where services are incorporated, avoiding conflict with vegetation and the resulting reinstatement of materials to a good standard if access is required,
- If all replacement materials and furniture can be obtained for the foreseeable future,
- Materials which are easy to keep clean,
- How vegetation is managed to promote good growth and a diverse environment.

8.8.68 Within each development area, individual developers will have to adhere to the detailed guidance. Any particular management considerations for bespoke spaces will need to be discussed and agreed with the Council prior to implementation.
8.9 Reducing opportunities for crime through environmental design

8.9.1 To create a successful high quality neighbourhood, where people want to live, people must feel safe and secure. It is well publicised that the design and layout of buildings and spaces in between have an impact on crime, fear of crime and anti-social behaviour. It can also affect the reputation of an area constraining its potential for long term sustainability.

8.9.2 Supplementary Planning Guidance (SPG) for Planning Out Crime in Northamptonshire was adopted county-wide in February 2004. It provides detailed guidance on incorporating safe and secure design principles into all new developments. Principles relate to layout, spaces between buildings, natural surveillance, landscape design, safer centres and commercial areas, lighting, parking and public transport facilities. Developers will be expected to demonstrate how they have taken account of this guidance.

8.9.3 All new development will be expected to be designed to ‘Secure by Design’ accreditation standards. Further detail on ‘Secure by Design’ should be obtained from Northamptonshire Police. ‘Secure by Design’ is a minimum standard for safety and security and adds value to the County’s SPG. This will involve detailed consideration of the guidance below at all spatial scales.

8.9.4 Activity and natural surveillance
Natural surveillance has a fundamental role to play in creating safe and secure places. Areas which are well used throughout the day and well overlooked, feel safer and therefore create places where people want to spend time. As a result, there is more activity which in turn increases surveillance. This increases the opportunity for criminal activity to be seen and therefore can deter criminal or antisocial behaviour.

8.9.5 To increase activity and natural surveillance, the following principles should be adhered to:

- **Public areas including**: streets, footpaths; cycle paths; play areas; open space; and car parking should be well overlooked. This is important for the green routes, green wedges and village centre. Areas should be well lit to increase safety.
- **Buildings should front the street and provide active frontages**, blank frontages should be avoided,
- **A mix of uses, housing types and sizes can increase activity throughout the day which increases presence and surveillance. This is particularly important for the village centre, as a focus for the community,**
- **Ensuring that increased overlooking does not compromise the privacy of residential areas.**
8.9.6 **Access and movement**
Creating safe and secure movement networks are essential to encourage people out of their cars and to walk, cycle or use public transport. This has both environmental and health benefits for the community. The indicative framework offers the opportunity to create safe routes to schools, utilising the green network. For further detail on the movement network see section 8.2. To create accesses and movement networks which feel safe, routes need to be overlooked and well designed. If such networks are created, they will be well used, which in turn reinforces natural surveillance.

8.9.7 To create safe and secure access and movement networks, the principles below should be followed:
- **Routes must be well defined and legible, with good visibility at each end,**
- **Footpaths and accesses should be well overlooked and well used,**
- **Routes should be of a generous width, to avoid the feeling of enclosure, which can be threatening,**
- **Routes should be well lit, to increase feelings of safety and facilitate surveillance and provide greater opportunity for crime and antisocial behaviour to be detected,**
- **Routes should have a purpose, with a balance reached between permeable layouts and creating surplus routes which provide more escape routes for criminals,**
- **Access and footpath networks to the rear of buildings should be controlled.**

8.9.8 **Ownership**
Public and private spaces with a clear role and well defined boundaries promote a sense of ownership and responsibility. Public space without a purpose can encourage vandalism and abuse which reduces the feeling of safety. If the ownership of space is unclear, it increases the chance of crime / antisocial behaviour going unchallenged.

8.9.9 The following principles should be promoted:
- **Private space should be well defined and enclosed, for example through the use of fences, walls, gates, hedges or changes in surface treatments,**
- **Public and semi-public spaces should have a clear purpose and not just become ‘left over space’,**
- **All spaces should be designed to have a clear function.**

8.9.10 **Security features**
In some circumstances it is necessary to include appropriate security features, for example fences and shutters. However, such measures must be well integrated with the design of the building, and therefore must be an important consideration from the outset. Security measures which are not integrated into the design and layout of a building or space can actually dominate the space and increase fear of crime.
8.9.11 When considering the use of security features, the subsequent principles should be followed:

- **Where shutters are needed, internal shutters should be provided.** They should also be as transparent as possible to maintain window shopping views and interest. This reduces vandalism, fly posting and minimises the impact on the streetscene - which increases feelings of safety. This will need to be considered in the village and local centres,

- **If well designed, bollards and gates can be attractive features.** It must be ensured that bollards do not hinder pedestrian movement, particularly for those with disabilities,

- **CCTV equipment should be located in suitable locations which do not have a negative impact on visual amenity of an area.** They should be located where they have adequate protection from tampering. CCTV should not compromise the design quality of buildings. This will be particularly relevant to the village centre,

- **Fences play an important role in enclosing space, and defining ownership / access arrangements.** Key considerations when selecting fencing include:
  - **Height** - fences should be a suitable height, to discourage access, but not to create a fortress appearance,
  - **Colour** - fences should, where appropriate be a colour which will minimise visual impact,
  - **Visual permeability** - it is often appropriate to allow views through a fence to aid surveillance and avoid the creation of hiding places,
  - **Robustness** - material selection and build quality should ensure longevity and easy maintenance.
8.10 Illustrative Axonometric - Residential Areas

- Properties fronting open space to maximise residential amenity and surveillance
- Changes in street orientation create variety within streetscape
- Height of development responds to route hierarchy
- New play space located within homezone. Good overlooking and a key green link to park
- Car parking integrated as part of ‘design’ of homezone
- Tree lined main road informal grouping of trees denotes character
- Courtyard space well over looked. Scale of space allows flexible use in combination with live work unit
- Parking courts, designed as attractive spaces to promote flexible use and welcoming places to park cars
- Use of locally relevant building forms used to create linked street frontages
- 3/4 storey properties create strong edge to green wedge
- Behind the property parking solutions
- Landscape treatments used at significant thresholds
- Existing hedgerow retained in green link
- Use of locally relevant building forms used to create linked street frontages
- Potential for live-work workspace integrated within residential blocks
8.11 Better community buildings by design

8.11.1 Social and community infrastructure is an essential element of creating a sustainable community. The development framework indicates that schools and other community facilities should be easily accessible to all residents, by a choice of transport mode, particularly walking, cycling and public transport.

8.11.2 Provision of high quality educational facilities
At East Kettering there is an opportunity to provide high quality educational buildings and grounds. The Government and other organisations, such as CABE have ambitions to raise the standard of the built environment of schools, which is considered to play a very important role in the quality of teaching and learning.

8.11.3 The indicative development framework provides a secondary school in the centre of the extension, adjacent to the village centre and along the primary route network. It therefore benefits from proximity to: shops and facilities provided at the village centre; the primary route network and public transport services. This location also maximises the number of people within a reasonable walking distance of the school.

8.11.4 A recent publication by CABE (21st Century Schools, July 2004) outlines the key design elements that schools in the future should include:

- **Flexible** - in terms of scale, timescales, supporting a variety of uses, flexible layout and agile design solutions,
- **Inspiring** - school buildings should be inspiring for those learning, working and visiting,
- **Supportive** - the design should support effective teaching and a wide range of experiences,
- **Involving** - schools buildings should be opened up for use by the wider community.

8.11.5 The location and elements of the design of secondary and primary schools will differ. The key design principles below should be followed:

8.11.6 Secondary school design principles
- Residents should be within a 20 minute walk of a secondary school (approximately 1500m),
- The secondary school should be located close to the village centre which will promote linked trips and reduce reliance on the private car. This will enable the school to be integrated with other community facilities in the village centre,
- The secondary school must relate well to the hub of public transport provision, to minimise reliance on the car for school journeys. This public transport system must connect the urban extension and secondary school with Kettering town centre,
- The opportunity should be taken to design ‘extended schools’ which provide a range of facilities and services to the wider community e.g. shared sports facilities, learning resource centre or adult evening education. This reinforces the need to locate this facility adjacent to the village centre to maximise linked trips and make best use of the most accessible location. Any proposals for such a facility must take into account security concerns, as it raises issues of detailed design, ownership and running/operational costs.

8.11.7 Primary school design principles
- Residents should be within a 10 minute walk (approximately 600-800m) of a primary school. As a result, primary schools should be dispersed to maximise their accessibility,
- Primary schools should be located close to the primary or secondary route network and accessible by a choice of transport mode walking, cycling, public transport and the car.

8.11.8 General principles for the design of education buildings
- All educational buildings should benefit from safe and secure routes from residential areas. These routes must be well overlooked and maintained, to encourage walking as an alternative to driving to school,
- Educational buildings need to be flexible and inspiring places (in line with CABE and other national guidance).
8.11.9 **Provision of high quality health facilities**

As with schools, there are also opportunities to create well designed health facilities. Health centres can be designed to deliver a range of facilities under one roof. CABE has outlined key elements of a successful healthcare building, these include:

- **Good integrated design** - considering how a building can contribute to the local environment and integration with public transport;
- **Public open space** - creating an attractive setting
- **Carefully considered layout** - in terms of circulation space, reception points, light and ventilation, storage and furnishings
- **Adapting to future changes** - enabling flexibility
- **Out of hours community use** - encouraging use of this easily accessible space.

8.11.10 The following principles should be promoted:

- **Extensive consultation with the existing community** will be required regarding the planning and design of new medical facilities,
- **New residents** should generally live within walking distance of a health centre,
- **The health facilities** should be located within the village centre to maximise linked trips,
- **A pharmacy** should be located within or next to a medical centre for ease of access,
- **A health centre** must be located close to the pedestrian and public transport network,
- **Proposals for health centres** should be subject to NEAT (NHS Environmental Assessment Tool) and AEDET (Achieving Excellence in Design Evaluation Tool) assessments.

8.11.11 **Provision of a high quality community centre**

Community centres can be a resource and focus for community interaction. They can be flexible spaces which provide a range of functions. Many of the principles relating to health facilities are equally relevant to community centres. They should be well integrated into the community within mixed use centres; easily accessible and have the ability to adapt to future needs. They can also provide a focus for activity throughout the day and evenings and there is potential for this to link with the secondary school.

8.11.12 The following design principles should be demonstrated:

- **Most residents** should be within 800m of a community centre,
- **Community centres** should be located in the village centre and potentially local centres, close to other facilities. This will encourage its use and reinforce the use of other facilities in the centres,
- **As a focal point** for the existing and new residents, community centres should be of a high design quality and have a positive design aesthetic,
Community buildings must be accessible to all and also easily reached by safe and secure foot, cycle and public transport networks.

8.11.13 Other social and community facilities

All other social and community facilities, for example, public houses, post offices and places of worship, should also be provided within a sustainable urban extension, to meet the needs of the new community.

8.11.14 The following design principles should be carefully considered:

- All social and community facilities should be provided within or close to the village centre or local centres. This will create a focus for services and facilities which will be mutually beneficial to the different uses,
- Social and community facilities should be accessible to all and also easily reached by safe and secure foot, cycle and public transport networks. This will encourage linked trips to be made and also make best use of the most accessible location within the new community. It also provides a focal point for community activity, creating a lively and vibrant village or local centre,
- Community centres should be of a high design quality and have a positive effect on local residents in order to be a focal point for the community,
8.12 Creating a green heart to the community

8.12.1 The landscape setting is vitally important to the success of the expansion, helping to establish the character of East Kettering and providing opportunities for recreation, biodiversity and healthy living. Responding sensitively to the existing greenfield site characteristics and drawing through a sensible open space framework should drive the strategic layout of the development.

8.12.2 Open space networks can include an array of different types of space, from formal urban spaces to semi-natural green space. The location and character of these will help shape East Kettering. The network of ‘green’ spaces and distribution of recreation is discussed in this section. *(Civic spaces, which fall broadly within the public realm for example squares, village greens and gateways are discussed in section 8.8)*.

8.12.3 Open space is split up into the various typologies set out in PPG 17 Planning for Open Space Sport and Recreation and the Borough’s emerging quantity standards. Using these definitions, parks, public gardens, allotments and natural/semi natural space will form the core of the open space network. Formal facilities such as children’s play, sports and youth provision will sit within this network and in some cases within the spaces described in the public realm.

8.12.4 This section aims to discuss open space and:

- The qualities and general design principles of the open space network,
- Strategic green infrastructure and potential to integrate ideas from the River Nene Regional Park,
- Biodiversity, ecology and sustainable activity including opportunities to feed into Northamptonshire’s Biodiversity Action Plan,
- Long term management implications.

8.12.5 Emerging quantity standards have been used in the indicative development framework, however developers should enter into discussion with the Council at an early stage to reach agreed targets relating to the scale of the development and potential opportunities to meet shortfalls across the Borough.

8.12.6 Qualities and general design guidance principles of the open space network

The landscape character and context of the network will have a significant impact on the character of the ‘place’ as well as providing the setting for an array of activities. The landscape setting should reflect the highest standards and design aspirations for its type.
8.12.7 The indicative development framework seeks to present a clear open space concept within which the various types of space and networks can be accommodated. The concept outlined in the illustrative framework embraces four key elements:

- A substantial linear park called the ‘Greenway Spine’;
- A green edge;
- Supporting green links and
- Local open spaces.

8.12.8 These areas are designed to capture and retain many of the existing significant landscape features and respond to the nodes of activity illustrated on the development framework.

8.12.9 The greenway spine
The greenway spine cuts north-south through the centre of the expansion area. It is envisaged that this large open space would create a significant park able to accommodate a variety of linked activities, character and habitats. Generally informal in character, it is thought it might become formal parkland at key nodes of activity or intersections, for example the village centre and local centre in the Spinneys area. This landscape corridor might also embrace some of the sports and play provision. The linear nature of the greenway allows good access and egress to the open space from across the area and encourages the relationship across the space promoting visual and physical links across the development. It is envisaged that the landscape will reinforce the unique character areas while providing a unifying element across the whole area.

8.12.10 The green edge
The green edge predominantly relates to accommodating the Alledge Brook and siting the development in the broader landscape, which is discussed in section 8.14 Responding to the Edges. However this linear space is also intended to accommodate appropriate activities such as allotments, recreation routes and habitats associated to the brook.

8.12.11 The green links and local spaces
Green links are primarily the east-west corridors, designed to act as conduits for
ecology, movement of pedestrians, cyclists and water. They have recreational value as routes and in this concept are used to connect local spaces and facilities across the development. The links are designed to accommodate existing features, and weave through the development to reinforce key events in the townscape for example creating green gateways into the development or thresholds to character areas.

8.12.12 A clear concept helps to create a legible framework, making a variety of different open spaces easy to locate and therefore more accessible.

8.12.13 Generic design guidance is given below for the layout of the open space network and is supported by more specific guidance for the various forms of open space within the PPG 17 typology.

8.12.14 The open space network will need to balance a range of considerations and demands but the overriding ambition is to retain visual/landscape character as well as habitat values. The network should:

- Meet quantitative targets set by the Borough for PPG 17 typologies and relevant deficits of open space,
- Respond appropriately to the regional landscape character,
- Draw together and improve Green Infrastructure (GI) throughout the area,
- Protect and include appropriate wildlife corridors and habitats,
- Create varied open space experiences with diverse recreational appeal, including considering the recreational needs of visitors and tourists,
- Consider how open space and formal recreational provision can be used appropriately and safely,
- Create a network of open space sensibly threaded through the development providing walkable, accessible spaces, appropriately located for their type,
- Provide a context for comfortable and safe non-car movement that does not create barriers to appropriate movement across the development area,
- Ensure open space is integrated throughout development - including employment areas;

8.12.15 Open spaces typologies and guidance

Within the open space network will be a number of different types of open space. This section briefly describes the character of the different open space typologies which will be expected to be provided within the extension and outlines key principles that will influence their design. For the purposes of this guidance PPG 17 typologies also used by the Borough Council are set out.
8.12.16 Parks and gardens
This is generally considered to represent formal provision, though some parts of large district or country parks might take on the role of many of the typologies.

8.12.17 Local spaces, parts of the Greenway Spine and the Green Edge are thought to provide park provision in the open space concept and potential locations highlighted in relation to the illustrative framework on the Landscape Opportunities Plan (shown overleaf).

8.12.18 Formal parks provision should:

- Have a good relationship between open space and the built form - promoting the value of open space in the townscape,
- Be consistent with guidelines for the accessibility of open space in terms of walking distance/time from homes,
- Be well connected within the movement and open space networks, located at key intersections or nodes of activity,
- Provide a hierarchy of parks required for the expansion, including any deficit across the Borough, and containing good facilities and functions appropriate to the role,
- Locate provision designed to meet Borough wide deficit to allow good access from the wider area,
- Be managed in order to maintain a variety of landscape treatments to the highest quality,
- Ensure that the design does not compromise personal safety and particularly is well overlooked and has clear access and egress.
Landscape Opportunities

This concept shows potential locations for open space in relationship to the illustrative framework, only area and accessibility standards have not been applied.
8.12.18 Natural and semi-natural green space
This includes many ecological habitats and landscape characters e.g. wooded areas, grassland, wetland, water bodies and courses. Areas of this type of green space contribute to the existing landscape character and the new development should carefully and respectfully integrate and enhance this as appropriate.

8.12.19 The indicative framework and open space opportunities plan highlights how this type of space might be included in the expansion. Using the semi-natural character as the overarching quality and structure into which all other types fit might help the development respond to the semi-rural context particularly along the eastern edge. Important existing habitats including the Spinneys and the Neutral Grassland Reservoir indicated in the Strategic GI are also embraced and enhanced.

8.12.20 This type of open space should:
- Incorporate substantial wildlife habitats and GI not precluding these functions within other typologies,
- Be designed with appropriate functions, opportunities and management through discussion and agreement with the Borough, The River Nene Regional Park, Rockingham Forest Trust and any other third party deemed relevant,
- Ensure that any proposed changes to existing and proposed waterways are discussed and agreed with the County Council’s Highways Authority, or their agent, and the Environment Agency,
- Ensure all proposals consider management implications and demonstrate how they can be met,
- Consider sustainable management techniques where practical, for example grazing land.

8.12.21 Green corridors
This is taken to mean linear green landscapes including cycleways, and rights of way. This type of open space has an important movement function for both wildlife and recreation as they are often associated with hedgerows both of which should be carefully integrated across the scheme.

8.12.22 There are many linear elements in the existing landscape including rivers and avenues. The Open Space Concept suggests a number of additional corridors including the green links, the reinstated historic avenue, and to some degree, the Alledge Brook corridor though the green edge.

8.12.23 Green corridors across the development should:
- Incorporate existing and potential GI corridors, including hedgerows,
- Create a legible and sensible network of green routes, which are well overlooked and connect spaces as part of the wildlife and open space network,
- Ensure the network includes good cycle ways and rights of way to encourage the use of recreational routes and connections to the wider existing network,
Ensure appropriate management regimes are put in place for a variety of landscape treatments to ensure the quality of environment in the long term.

8.12.24 Outdoor sports facilities
This would include sports facilities with natural or artificial surfaces, publicly accessible provision and privately owned facilities where public access is permitted. The illustrative open space opportunities plan illustrates a number of areas where sports provision could be provided. These are in some instances located close to key destinations but more importantly located close to green links and within good walking distances for the expansion and the wider area.

8.12.25 Sports provision should:
- Include appropriate facilities in terms of need for the immediate and broader area through discussions with the Borough Council and reference to the County’s Playing Pitch Assessment, 2002,
- Deliver the highest quality public facilities. For example publicly managed facilities and partnerships including dual use school grounds and commercial provision with agreed public access. The provision of these managed facilities would need to be discussed and agreed with the Borough prior to inclusion as part of sports provision,
- Provide appropriate ancillary facilities. Lighting, parking, toilets and changing provision should all be considered,
- Provide facilities that are accessible and inclusive, with a cluster of facilities located at key destinations and on good pedestrian and cycle routes. Design of the areas should be carefully considered to provide a user friendly environment,
- Provide for a range of abilities, for example, club level to community facilities as appropriate,
- Have access arrangements and long term maintenance implications agreed prior to inclusion in the development.

Recreational routes should be well overlooked

A range of outdoor sports facilities should be provided
8.12.26 Amenity greenspace
In this section amenity is taken to mean informal recreation spaces. Small incidental spaces included in the design of the public realm are referred to in section 8.8 Attractive streets and spaces. Informal areas are important flexible spaces allowing a range of impromptu recreational opportunities. These spaces would occur throughout the expansion area within an open space network and particularly integrated within development areas as local greenspaces.

8.12.27 Amenity green space within the expansion area should be designed to maximise its value, including:

- Informal, imaginative play,
- Socialising,
- Exercise,
- Habitat creation and education,
- Aesthetics,
- Views, and
- Opportunities for artwork.

8.12.28 Amenity greenspace should also be designed so that they are:

- An important component of the scheme and not left over spaces. These areas can be integral to the quality of the place, for example, they might be village greens that make a key visual amenity contribution to the locality,
- Are overlooked, particularly at entrances to the spaces,
- Be of a suitable size to allow appropriate use of space - e.g. kick about, running, dog walking, comfortable seating area. The location of appropriate uses should form part of the overall open and green space strategy which is to be agreed between the developer and local authority,
- Designed and located in a manner which will not cause nuisance to adjacent land uses. Building in factors such as; natural surveillance, a sense of ownership, strong effective management and sufficient maintenance budgets are essential. See section 8.9.

8.12.29 Provision for children and teenagers
These types of spaces might include play areas, skateboard parks, outdoor basketball hoops, and other more informal areas (eg ‘hanging out’ areas, teenage shelters). The quality of these spaces is important as they can provide exciting recreational opportunities for the young and encourage a healthy and active lifestyle.

8.12.30 The Local Authority will expect children’s play spaces to be provided strategically using the traditional National Playing Fields Association ‘LEAP’ and NEAP standards as a basis for minimum provision. It will also welcome innovative proposals to augment these areas with other types of play facilities. This applies both to the disposition of areas across the development and their play activity content. Early discussion of mechanisms to secure appropriately phased provision will be required and it is anticipated that house builders will contribute to a strategic fund.
8.12.31 The open space opportunities plan (page 106) illustrates potential locations for such provision related to the illustrative framework. It should be noted that this diagram illustrates potential opportunities to site play close to appropriate destinations for example, schools, centres close to sports provision and within key public spaces. It does not describe the level of provision and accessibility requirements. Developers should agree these with the Borough Council.

8.12.32 This type of provision should:

- Include play facilities in line with the Council’s emerging PPG 17 requirements which expand and rationalise National Standards set out by the NPFA in line with Borough Council need,
- Be well overlooked, whilst respecting appropriate buffer zones,
- Be accessible and inclusive, easy to reach and welcoming for children of all abilities. They might be located at key intersections and nodes of activity. It is recommended this might include clustering play areas close to schools and other family destinations,
- Be of the highest quality establishing a designed space to inspire and welcome children,
- Be designed for the age group they intend to serve, to discourage inappropriate use by older children,
- Be sensibly located to aid parent and guardian supervision. Potentially clustering age defined play areas,
- Provide a variety of safe opportunities for teenagers taking into account the particular requirements of this age group. Predominantly social needs and ‘showing off’ behaviour.

8.12.33 Community landscapes including allotments, community gardens, farms and orchards

Growing food on allotments can form a part of a healthy lifestyle however allotments are not always well used and success is very much based on take up. There are a number of established allotments close to the Grange Estate and one allotment group has been running a successful healthy eating scheme. These schemes should be researched with help from the Borough and any ideas and opportunities which can be used to promote allotments in the new expansion area agreed and pursued.

8.12.34 Other community landscapes should also be considered. These might include gardens, orchards and farms. However the viability and long term administration of these projects will have to be carefully considered and agreed prior to inclusion in the development.

8.12.35 The illustrative framework identifies a number of potential areas for these types of space; located in the green edge close to green links, in the south of the site on existing agricultural land and in the north western corner close to existing allotment schemes. Discrete yet accessible areas might be appropriate for allotments; locations which are visible in the townscape might be suitable for ‘designed’ orchards or gardens.
8.12.36 Community landscapes should:

- Be located within walking distance of homes and on major routes. Exact walking distances should be confirmed with the Borough Council,
- Be carefully integrated into the urban framework. Spaces do not have to be well overlooked but must not diminish the visual amenity of the townscape,
- Where appropriate be secure and gated, with controlled access,
- Where food production is a prime objective, be located with respect to quality of soil, aspect and micro-climate,
- Contain all facilities to encourage use; for example allotments should include a good water supply, toilet facilities, community site hut and information point. Some car and cycle parking should be provided to help growers transport equipment and produce,
- Allow approx 250sqm per allotment plot. The number of individual allotments should be agreed with the Borough Council.

8.12.37 Cemeteries and churchyards

This type of open space forms part of the broader townscape but might not be required in the expansion. Discussions as to the inclusion of this type of space should be held with the Borough Council to agree any appropriate new locations or supplement to existing provision.

8.12.38 Private outdoor space

Over recent years there has been a trend for smaller and smaller private gardens. This is in part due to requirements for higher density standards, but also relates to a desire from housebuilders to maximise the number of units on any land parcel. The Council are keen to see adequately sized gardens, across all property types, as advocated by PPS3 (Housing). The density gradients advocated in this document allow scope for this to happen (average density of 35 dwellings per hectare across the site).

8.12.39 Accessible countryside in urban fringe areas including footpaths and recreation routes

Linking into welcoming recreational routes crossing the countryside can have health and education benefits for local people as well as form part of broader tourism initiatives. Development at the urban fringe should allow good access to the countryside and there are a number of existing footpaths and bridleways emanating from within and across the site which offer opportunities for connections to new footpaths. The open space concept shows east-west green links crossing the site connecting to the existing system of footpaths and bridleways.
8.12.40 There will be an emphasis on the retention and extension of the existing bridleway and footpath network and the orientation of the routes. These existing networks have been considered as part of the indicative open space framework. Developers will be expected to do likewise and ensure that these routes are retained and enhanced as part of the open space and movement networks.

8.12.41 Access to countryside should be promoted through:

- Retention and extension of existing bridleways and footpaths,
- Good routes across the site ensuring connections from the existing edge of Kettering to the wider countryside are retained,
- A network of routes crossing the site including recreational routes connected into the existing footpath system,
- A clear and well signed system of footpaths connecting key destinations,
- The promotion of the new footpath connections through healthy living initiatives and footpath information, developers should support this and ensure routes are well publicised.

8.12.42 Civic spaces
Civic spaces and other hard surfaced areas designed for pedestrians are discussed in section 8.8 Attractive Streets and Spaces

8.12.43 Other opportunities for open space
The PPG 17 typology is comprehensive though there is room for other types of open space which should be included where appropriate. Open space provision can accommodate many diverse activities, ideas and opportunities and this should be covered in the development proposals. Ideas including events space, possibly for festivals or community gatherings; opportunities to include educational initiatives for example interpretation boards or trails; or even community structures such as pavilions, bandstands or small shelters might also be considered.

8.12.44 Strategic green infrastructure
An open space network for East Kettering has to identify all the potential opportunities to draw through elements of Green Infrastructure (GI), and meet targets based on the information set out in the GI Strategic Framework Study, it should also dovetail with any local GI strategy emerging with the KUE masterplan proposals. GI is taken to cover all aspects of public and private green space from green roofs to woodlands.

8.12.45 The core aims for the County’s strategic GI is to embrace and enhance:

- landscape character,
- diversity of landscape,
- ecology,
- cultural heritage,
- local distinctiveness,
- leisure, recreation and tourism opportunities.
8.12.46 The strategic GI (shown overleaf) has been transposed into the indicative development framework. This includes a Sub-Regional GI corridor along the River Ise, a local GI corridor connecting the Sub-Regional GI corridor to Thrapston and beyond, two Spinney’s recorded as Bio-diversity Resources and an area of Neutral Grassland Habitat Reservoir. The indicative framework uses an open space network to build on the existing GI elements, identified above and establishes a new spur off the Local GI corridor. The extended local corridor is formed by a new Greenway Spine and the re-established western and central Boughton Avenues, and makes connection to the River Ise Sub-regional corridor in the North of Kettering and the Boughton House and grounds. A secondary corridor is established along the Alledge Brook at the green edge, protecting the brook and associated features and linking to the existing inter-village footpath network. The neutral grassland reservoir is protected in a south-eastern green gateway as part of the green link connecting it to various other habitats.

8.12.47 GI within the new development should:

- Work with the existing strategic GI initiatives and significant GI across the site,
- Incorporate appropriate opportunities to include new GI which will promote a strong new landscape character with diverse landscape treatments and habitats within the broader structure,
- Support particular initiatives to include well integrated non-car movement networks and sustainable urban drainage,
- Be discussed with the River Nene Regional Park team. Any GI targets should be identified and opportunities to work with RNRP agreed.

8.12.48 Existing mature trees are considered an important and valued asset. In view of this:

- All existing trees should be retained unless it can be conclusively demonstrated that site infrastructure requirements outweigh their visual or ecological contribution and there is no alternative to their removal,
- The potential impact of site infrastructure work on every retained tree will be evaluated including consideration of the implications for groundwater movement (either obstruction or compaction) and measures to minimise detrimental effects agreed with the Local Planning Authority,
- A formal assessment in accordance with BS 5837:2005 Trees in relation to construction - Recommendations will be made of every retained tree within the boundary of a planning application for built development, or in proximity (as defined in the Standard) to the boundary,
- Reference should also be made to the National House Building Council’s (NHBC) guidance in relation to the locality of trees to residential properties and their root systems (in relation to both existing and future trees).

8.12.49 Biodiversity, ecology and sustainable activity

The open space network must have an ecological function. It is important to create a complete network of wildlife corridors and opportunities for wildlife reaching across the site. Protecting and enhancing existing habitats within the open space network will reduce the impact of the development on existing species. Retaining significant elements will also form the building blocks for a robust biodiversity framework, which will need to be presented as part of the development proposals.

8.12.50 The Local Authority expects developers to ensure the following standards are achieved:

- BREEAM/EcoHOMES ratings of a minimum of ‘Excellent’ are achieved in providing environmentally sustainable buildings and environs;
- Building for Life-Silver standard as a minimum.

8.12.51 With respect to biodiversity, the principle is to minimise damage to the existing local ecology and, where possible, to enhance it. Where damage to functioning ecosystems, their associated habitats and species is unavoidable, measures must be proposed to mitigate and compensate for these impacts. New ecological enhancements should be implemented with regard to the Biodiversity Action Plan.
Landscape Context
8.12.52 The County’s Environmental Sensitivity Assessment states that the most sensitive areas of biodiversity are the Alledge Brook, grassland slopes and woodland copse habitats. These are also identified in the GI strategy as the Neutral Grassland Habitat Reservoir, the Spinney’s, and Alledge Brook. At a local level there are many hedgerows and a number of ditches crossing the site.

8.12.53 These existing ecological resources provide habitats for a number of protected species which have been recorded on the site including great crested newts, bats, badgers and barn owls. Information outlining species found on the site and measures taken to protect habitats should be presented to the Borough Council, RNRNP and English Nature at an early stage for discussions around retention and incorporation of wildlife habitats.

8.12.54 The Greenway spine, green edge and existing river Ise corridor create robust landscape elements in the illustrative framework designed to capture many significant existing features. The green links that cut east-west across the site pick up many other key features, including, hedgerows, ditches and the neutral grassland which is protected as part of an illustrative green gateway in the south-west of the area.

8.12.55 As part of any potential Sustainable Urban Drainage (SUD) system an integrated network of ditches, water meadows, swales, brooks and water bodies can be considered. These can offer a variety of wetland habitat and should be considered and integrated where appropriate.

8.12.56 A new biodiversity network for the expansion area should:

- Ensure significant existing habitats are integrated and enhanced,
- Support opportunities through the development to meet Northamptonshire Biodiversity Action Plan targets e.g. the creation of 500Ha of native woodland across the county by 2010,
- Consider opportunities to retain and enhance some wooded areas as nature conservation areas without public access. Ecology reports suggest Shafts Spinney as such a possibility,
- Promote the integration of potential habitats ‘outside’ the open space network, for example boundary treatments such as hedgerows, gardens, street spaces and trees. These can be integrated into the biodiversity strategy to cast a fine green net across the rest of the development,
- Integrate and enhance existing GI,
- Retain hedgerows except where it can be conclusively demonstrated that there is no alternative to their removal,
- Implement a strategic programme of hedgelaying,
- Ensure hedgerows are only breached where there is no alternative; services should be carefully tunnelled underneath with minimal root severance.
8.12.57 Implementing landscape framework, advanced planting

The complex delivery and maintenance of the open space network will need careful consideration. A good working relationship between the Borough Council, the River Nene Regional Park Team and the Lead Developer needs to be fostered and mechanisms for ensuring that high quality landscape is at the heart of the new development agreed and put in place as early as possible.

8.12.58 It is important that the phasing and implementation of the landscape framework is logical. If the open space network is to protect habitats, and act as a conduit for movement and potentially a SUD system; its creation should ensure that elements relating to these particular functions can be put in place early in the construction phase.

8.12.59 Planting structural vegetation well before the construction of the built form will allow plants to become established and help to settle the development in the landscape. This might also be a consideration in the establishment of temporary planting to preserve visual amenity during construction and shelterbelts (if they are to be included). New landscape features will need to be protected in the same way as retained, during construction.

8.12.60 It is envisaged that planting along the green edge, the reinstated Western Avenue and supplementing existing habitats (for example the Spinney’s) would form part of the advanced works illustrated on development framework.

8.12.61 Advanced landscape and planting should:

- Be protected during the construction phase, to ensure all landscape elements to be retained are not lost during the build out of plots,
- Be illustrated in the phasing strategy for the new development and agreed with the Borough Council.

8.12.62 Long term aspirations for management

It is critical at the outset to understand how different areas will be managed. Identifying who will have management responsibility and ensuring that the levels of maintenance required for certain types of landscape can be met financially, and the maintenance skills required are available.

8.12.63 It is important that a collaborative approach to the long term management is undertaken. There are a number of opportunities to structure a management vehicle for a high quality and varied open space network which might be explored, discussions between the lead developer, the Borough Council and The River Nene Regional Park should consider:

- Management Companies and Trusts,
- Council management,
- Management of areas by other bodies for example partnerships with RNRP, Rockingham Forest, the Forestry Commission,
- Public/private partnerships for example managed sports facilities.

8.12.64 Viable and integrated approaches to the management of all open space will need to be agreed in advance of implementation. Where areas of open space are considered for adoption by the Borough Council a detailed and costed management plan for the maintenance of areas should be provided for agreement. The Borough Council is also likely to require developers to maintain them for not less than three years prior to adoption in order to be certain that planting is establishing and will grow on to achieve the design objective. The Borough Council will also require a commuted maintenance payment providing for a period of ten years from the date of adoption.
8.12.65  The design should consider opportunities to include alternative management methods which might be considered more sustainable, reducing the environmental impact of the spaces.

8.12.66 Consideration might be given to:

- *The use of informal landscape treatments which might require less intensive management regimes,*
- *Siting new landscape habitats at appropriate locations to benefit from microclimate, aspect, soil, seed bed and water movement,*
- *Linking where appropriate, landscape types so they can be easily managed,*
- *Design landscapes which might be managed with limited chemical or mechanical intervention,*
- *The use of traditional non mechanical maintenance methods for example grazing areas,*
- *Technologies which reduce long term interventions and ensure good establishment of planting for example the incorporation of mycorrhizae fungi at implementation.*

8.12.67  One of the objectives in the NBAP is to ‘disseminate good quality information about parkland management’. Management plans for the opens spaces should be shared to help meet this objective.
8.13 Making the most of the natural assets

8.13.1 Bringing significant existing landscape structure through the design of the new development will at a strategic level shape the development areas. The response to site influences including topography, drainage and existing vegetation offer opportunities to sensitively site and orientate development, new open spaces and roads.

8.13.2 Using attractive retained features in the new development can create unique landmarks and reinforce distinct areas. Mature planting around the areas can also provide a well established landscape structure in which to settle new development, helping to mitigate potentially negative views and reduce the impact of massing. Working with the existing landform and wildlife corridors will reduce the impact of the development on the wider area and its resources, making it more sustainable.

8.13.3 This site is fairly unusual as it is essentially a greenfield area and as such there are a number of good landscape elements which can and should be retained. The River Nene Regional Park team are producing a suite of information for the Northamptonshire Environmental Character Assessment. This information sets out the existing landscape character and should be used to settle the development in the broader context and help influence the character of the new development, particularly the landscape framework.

8.13.4 To the north of the site outlined by the developer boundary is a significantly constrained area. Studies carried by NCC to review environmental sensitivity shows that this area has high landscape and cultural heritage sensitivity and relatively high biodiversity sensitivity.

8.13.5 The Ise valley, remnants of the western Broughton Avenue and a number of archeological finds are significant elements across this part of the site. Grouped with the visual sensitivity relating to the open aspect and wide views up to and beyond Weekly and Warkton this part of the area is felt to be the most unsuitable for development. It is felt that the predicted growth of 4500 new homes and the associated landscape provision can be comfortably accommodated in the southern / eastern part of the site.

8.13.6 Within the restricted development area the Alledge Brook and associated ditch system and various spinneys form the most visually dynamic elements. The indicative development framework picks up these key features and suggests their use in forming sensible edges to development. In the case of the spinneys it is thought that the mature planting close to the eastern edge of the expansion area would help to off-set the mass of the built form. To the south of the site is an area of neutral grassland which should be protected and integrated. The illustrative framework proposes a green gateway from the south eastern approach- this would benefit from the open character of this grassland habitat.
Combined Environmental Sensitivity

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8.13.7 It is suggested that the Alledge Brook and associated ditch system is viewed as a potential mechanism for creating a SUD system for the development. An extended network and new attenuation ponds might be used to collect and control run off from both the road system and new plots. The illustrated open space network is closely associated to the potential SUD arrangement, the landscape forming a conduit for the system and by virtue of this function in draining the site, defining the layout of development plots and infrastructure. Existing flood zones within the site and in the broader area should be reviewed and any proposals should ensure there is no significant impact outside the development.

8.13.8 The indicative framework illustrates ditches at the edge of the greenway spine to help define the edge of the space and provide interest. The same premise is used along the green links and gateways. It is suggested this will form part of the unique character of the new development, whilst referencing the character of villages such as Grafton Underwood where the stream runs beside the main road through the village.
Existing Landscape Features
8.13.9 These watercourses have been used in the framework to reinforce thresholds to ‘villages’ in the development. In the spinneys area, the watercourse defines the entrance to this part of the development and might create a memorable feature associated to a new local centre.

8.13.10 The site is crossed by many hedgerows and several belts of tree planting, these linear elements form a wildlife network and structure across the site. The illustrative framework captures many of these elements in the open space network and implies that these corridors are improved and linked. In particular it is felt that the western Boughton Avenue should be considered for reinstatement however this is a special situation and the impact of this structural planting should be carefully assessed.

8.13.11 The design of the illustrative framework has been shaped to take in many of the existing hedgerows. Green links respond to the hedge network, embracing verges and green gateways along roads. The edges of green space and location of school grounds have considered opportunities to encompass hedges as boundary treatments. Existing hedgerows should preferably be retained within the public realm. Should this not be feasible, measures to mitigate against the potential future loss or deterioration in hedgerows which have become part of private curtilage should be demonstrated. It is thought that hedgerows should for the most part be preserved and enhanced in public places, though consideration can be give to incorporating them in private property.

8.13.12 The selection of appropriate native species to enhance hedgerows and reinstate the avenue should be discussed and agreed with the Borough’s Landscape Architects. There are a number of species that one might expect to find across the site and these should be considered in the appropriate locations including:

- Alnus glutinosa - Alder
- Crataegus monogyna - Hawthorn
- Fraxinus - Ash
- Prunus spinosa - Blackthorn
- Quercus - Oak
- Salix caprea - Goat Willow
- Salix fragilis - Crack willow
- Tilia x europaea - Common Lime
  (particularly in the Boughton Avenues)

8.13.13 Careful consideration should be given to species selection across the site both in terms of enhancement of existing and new. On the whole it is felt that the ‘rural’ character of this location should be reflected by the use of native species. Species selection should be discussed and agreed with the Borough’s Landscape Architect.

8.13.14 In general terms the topography slopes gently to the east, and there are two elevated areas which broadly form ridgelines. Following growth patterns across Kettering it can be seen that development has occurred up to and along ridgelines. Bearing this in mind the elevated area around Poplars Farm with its large field pattern presents one of the least constrained locations for development along with the ridge running north-south beside Alledge Brook. Other north-south areas responding to the topography and landscape characteristics broadly set up the three main character areas set out in the illustrative framework. These ridges have long south-east facing slopes and offer opportunities to orientate development to benefit from solar gain.
8.13.15 Topography has been used to create a memorable experience of moving round the new development. The change in levels across the site provide long and wide views from the south-eastern corner looking east. A new access point as indicated on the framework could embrace these views creating a distinct threshold to the site. The new neighborhood centre is located at a low part of the site, routes would gently slope towards the centre creating a sense of approach. The figure above shows how the illustrative framework has been related to topography.

8.13.16 Historic features should also be recognised and, wherever possible, incorporated into the development. It is important to realise that key features within the landscape may not only have an important visual and ecological value, but also social, cultural and community ones which contribute to a sense of identity and well being. Existing features such as the major tree avenues, also discussed in section 8.14, are distinct local features which should be appropriately protected and responded to in future development proposals in terms of design and long term management.

8.13.17 The following guidance should be considered regarding the strategic integration of existing features in the development framework:

- **Built development is discouraged in the north of the site, west of Warkton Lane due to landscape sensitivity, however, new open space and habitats which dovetail with the existing landscape elements are encouraged. The reinstatement of the Western Avenue should be considered,**
Important landscape features and Green Infrastructure should be embraced and incorporated within a sensible layout where possible within the open space network; These should include:

- Shaft Field Spinney,
- Stubbs Spinney,
- The Osier Bed,
- Alledge Brook and associated ditches and water bodies.
- Hedgerows and hedgerow trees.
- The area defined as neutral grassland habitat reservoir in the Strategic Green infrastructure and,
- The Boughton Avenues.

Opportunities should be embraced to use existing mature landscape features to reinforce an established landscape setting for development,

Areas with the least number of physical constraints such as open areas and parts of the site with a large field pattern should be considered for development alongside opportunities for integrating more sustainable expansion, for example topography and building orientation,

Designs should embrace existing landscape features to help reinforce memorable places and aid legibility. Crossing watercourses, open spaces or woodland blocks at intersections might be considered.
8.14 Responding to the edges

8.14.1 Integration at the urban edge
It is important that the urban extension creates a complementary relationship with the existing settlement edge at its eastern fringe. The ambition is to create a seamless transition between Ise Lodge and Barton Seagrave residential areas and provide direct routes into the extension and village centre, for the benefit of these communities. This involves respecting the scale of development at the existing urban fringe and creating a hierarchy of routes which fuse together the existing movement networks with those proposed for the urban extension.

8.14.2 The integration diagram (shown overleaf) illustrates how a permeable network of streets and pedestrian linkages can be created at the urban edge to facilitate these aspirations. A block structure should be developed following the axis of existing streets. The example shows how Ridgeway Road could be extended northwards to link with the new public transport access into the extension from Warkton Lane which joins at the junction with Deeble Road and provides a route westward toward the town centre. This route along with the other northern access onto Warkton Lane would be reserved for bus / pedestrian / cyclist access only in order to minimise adverse impacts of higher levels of traffic, which would be focused on the southern access points to the extension area.

8.14.3 The framework illustrates the main eastern vehicular routes into the extension area from improved junctions with Barton Road. It is anticipated that these routes would be designed to cater for localised traffic only and include bus priority measures- again placing the emphasis upon public transport and directing vehicular traffic flows to the southern A14 junctions.

8.14.4 In the illustrated scenario Poplars Farm Road and the eastern spur from Ridgeway Road would provide pedestrian / cyclist only links into the new residential areas. Similarly streets are orientated to provide direct pedestrian linkages to St Catherines Road and Warkton Spinney.

8.14.5 Existing properties back onto the extension area and have long gardens. It will be appropriate to mirror this situation with new development which backs onto these properties and locks rear gardens together to create a block structure along the urban edge. It is important that new development is of a similar height, scale, massing and density to existing properties at this edge in order to create a complementary relationship which will help to offset the loss of amenity these residents will experience. From the edge new development should step up in height and density toward the village centre where higher densities are appropriate.

8.14.6 The indicative development framework (shown on page 37) and the diagram overleaf illustrate the opportunity to create a continuation of the central Boughton tree avenue southward along Warkton Lane, and into the new extension area. This would provide a setting for built frontage to mirror existing property i.e. dwellings set behind an access road and wide tree lined verges to the side of Warkton Lane.
Integration Diagram

- Re-instatement of Western Broughton Avenue
- New open space/green provides setting for historic Broughton Avenues
- Extension of Broughton Avenues along ridgeline provides green routes to re-instated Western Avenue and screens views from West
- New development mirrors existing situation on Western side of Warkton Lane
- Pedestrian/cyclist only links developed at eastern end of Poplars Farm Road and from Ridgeway Road
- Properties fronting Warkton Lane enclosed within block structure consisting of properties of a similar height, scale, massing and density to match existing
- Density of development increases toward village centre/High Street
- Residential block structure developed around existing properties (dashed line) either side of Ridgeway Road

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Illustrative diagram showing how rear gardens should be locked together

Illustrative section showing how density and building height will step up toward village centre

Existing Properties  New Development

Existing Properties  New Properties
8.14.7 The stretch of the lane connecting Kettering and Warkton is not currently fronted by property. The indicative framework proposes that Warkton Lane is the edge of built development in the north-west, and therefore views to this edge across the open landscape would need to be sensitively handled.

8.14.8 The extension to the avenue along Warkton Lane would have the benefit of screening views from the west, and creating a linear tree belt along the ridgeline similar to the existing situation. It is also suggested that the open space network may flow into the area to the west of Warkton Lane allowing sensitively located planting and informal recreational opportunities to settle buildings in the landscape.

8.14.9 The setting of the historic avenues must be respected and development should step back from these features. The indicative framework and integration plan illustrate how a new area of open space / green could be created at this point with development fronting onto it to create a sensitive relationship with the avenue and provide an interesting and distinctive setting for the buildings.

8.14.10 The amenity of the small group of dwellings fronting the development site at Warkton Lodge also needs consideration. The Illustrative framework suggests that development might front these dwellings across open space. The quality of this space would need to be carefully considered, it is envisaged that this area might have a managed informal character borrowing from the quality of the historic avenues with a less geometric layout.

8.14.11 The illustrative framework presents the idea that the western historic avenue is reinstated, and brought into the open space network to connect to the river Ise corridor. This offers opportunities to re-establish the historic setting for the villages of Weekley and Warkton and create a landscape structure which would in part mitigate views towards the expansion.

8.14.12 In response, developers will be expected to:

- Integrate existing and new residential areas through a permeable network of pedestrian and vehicular routes,
- Provide bus priority measures at eastern access points along Barton Road,
- Provide bus / pedestrian / cyclist only access points from Warkton Lane,
- Ensure existing properties which back onto the site from Warkton Lane / Barton Road / Poplars Farm / Ridgeway Road are enclosed in a block structure, and gardens are locked together,
- Ensure these properties are matched by development of a similar scale and density to the rear in the new extension area,
- Create a density gradient which steps up from low density at the existing urban edge toward the new village centre,
- Explore opportunities for an extension to the central Boughton Avenue southward along Warkton Lane,
- Consider opportunities to front existing residential property located in the broader rural setting with new across sensitively designed open space,
- Ensure that the landscape context of the villages of Weekly and Warton are protected.

8.14.13 Integration at the rural edges

The eastern edge of the expansion area is possibly the most sensitive boundary to the site. The landscape context and views around the villages of Cranford St. John and Cranford St. Andrew and the broader rural area needs to be carefully considered within the development proposals.

8.14.14 The indicative framework illustrates a green edge to the east of the development area (see plan on page 102). It is envisaged that this would be a broadly linear landscape corridor following the alignment of the Alledge Brook. An informal landscape character is suggested for the edge in response to the Alledge Brook and wider rural landscape.

8.14.15 A dense screen of vegetation is not appropriate along this boundary. Layering the view to the edge of development is felt to be a more sensitive response. This can be done in a number ways by carefully locating open space and structural landscape. It is thought that the green edge shown might have an amorphous shape; flowing between development and tying into existing infrastructure for example some of the wooded spinneys and new green links.
There are also a number of elements which run through the spinney’s development area which may be visible for example tree planting along the local distributor (the main road) and local green spaces. All these elements in the indicative open space network could help break up the impact of development from the eastern aspect.

8.14.16 Decreasing the densities and increasing plot size as indicated will also bring open/green space in between individual properties. This ‘open’ townscape layout should be informal in character. This would be supported by the design and layout of buildings which respond sensitively to the rural context, without undermining the legibility of the development.

8.14.17 Structural landscape can be used in the green edge, however this should be done with great sympathy for the existing landscape character. Stands of trees located to offer controlled views of the edge of the expansion area are thought to represent a good landscape response and relate well to the existing spinneys. However it is important that these sit comfortably within the strong multi - functional concept for this part of the open space network.

8.14.18 In summary the rural edge of development should incorporate the following principles:

- The existing landscape context of Cranford St John and Cranford St Andrew should be preserved and new landscape abutting this area should add to the general rural character,
- The Alledge Brook and associated features should be respected within proposals for the rural edge treatment,
- The density, character, layout and materials used for the built form in this area, need to be carefully considered and should respond to the urban context,
- There should be a layering approach to the development edge. Drawing together built form, open space and structural landscape is preferred to mitigate views. Long stretches of development or green screen are discouraged,
- Opportunities should be embraced to create sensible spaces and routes as part of the open space network and connect into the existing network of footpaths and habitats.
8.15 Ensuring environmentally responsible design

8.15.1 It is important to recognise the impact of development and an increased population on the environment. It is also appropriate to consider the whole life cost of a building and how its design and specification can benefit consumers and users in the longer term. The scale of development envisaged for the urban extension represents a once in a lifetime opportunity to set a new precedent in sustainable building design and leave a positive legacy for future generations in Kettering. The Council will ensure that the opportunity to demonstrate an environmentally responsible approach is not missed. The Borough Council is committed to producing a sustainable urban extension on this site, and will ensure that all new development is environmentally responsible and constructed to the highest standards. This section sets out key requirements the Council will expect and provides an overview of potential measures which can help to deliver our ambition. Further sources of information are presented in this section.

8.15.2 Emissions of greenhouse gases, particularly carbon dioxide, are the main cause of climate change. The UK emitted more than 150 million tonnes of carbon dioxide in 2004 (carbon equivalent, MtC). Energy use in buildings accounted for nearly half of these emissions, and more than a quarter came from the energy we use to heat, light and run our homes. New homes make up less than 1% of the stock every year. However, by 2050 around a third of the housing stock will have been built between now and then. It is therefore vital that the construction of new homes, particularly in large scale urban extensions, move toward Carbon Neutral Development (CND).

8.15.3 In order to deliver CND a building must be zero carbon (net over the year) for all energy use. For example, a new home will need to deliver zero carbon for all the energy involved in cooking, washing, and electronic appliances as well as space heating, cooling, ventilation, lighting and hot water. This will require renewable or very low carbon energy in addition to high levels of insulation, etc (see outline of measures below). Good planning, urban design and architecture, plus quality construction and technological innovation are required in order to deliver these requirements and reduce the carbon footprint of new buildings. Good design and environmental performance are two sides of the same coin.

8.15.4 The Draft PPS on Planning and Climate Change (Dec 2006) suggests that Local Authorities should ‘focus on specific development opportunities to secure early application of higher levels of performance of nationally described standards, for example by expecting identified development proposals to be delivered at higher levels of the Code for Sustainable Homes’ (para 32).

8.15.5 Listed below are a series of sustainability attributes, which will be expected to be reflected as sustainability commitments in the masterplanning of the urban extension and incorporated in the design of schemes later submitted for planning approval.

8.15.6 The basic principles for achieving higher environmental standards which developers will be expected to adhere to, include:

- Ensuring future flexibility in the built fabric,
- Reducing demand for energy use,
- Providing energy from sustainable sources,
- Reducing demand for water,
- Making recycling / reducing waste easy,
- Making alternative transport modes attractive,
- Using sustainable materials and construction techniques.

8.15.7 Adherence to the guidance discussed earlier in this document and the principles outlined below, will help developers to meet the high environmental standards which are expected. These requirements and measures should be built-in to the scheme at an early stage, in accordance with good practice. This section must be read in conjunction with detailed guidance contained in Planning and Climate...

8.15.8 Developers will be expected to produce a detailed Sustainable Design Statement (as a supplement to the design and access statement) for all new developments within the extension area. This should complement the production of detailed design codes, in order to ensure sustainability issues are built in to the design process from the start. The Sustainable Design Statement should drive the overall design approach and should aim for exceptional standards. The statement should set out how the design and construction of buildings responds to the requirements of this section of the design guide and any relevant policy guidance which may increase in importance in the future (e.g. The Code for Sustainable Homes). The content and approach described in the Sustainable Design Statement should be agreed by all members of the design team, the developer and the Local Authority early in the process, and include Design Stage Ecohomes / Code for Sustainable Homes assessments where appropriate. Developers (and future housebuilders) will be expected to adhere to the sustainable design statement.

8.15.9 Minimum environmental quality standards

In order to meet the required aspirations for sustainable design and construction, the Council will use nationally established quality standards as a benchmark for all new developments. These standards are regarded as minimum requirements and are likely to become more stringent during the build out phases of the extension area as part of the move toward Carbon Neutral Development. As such, developers will be expected to follow the guidance set out in the Code for Sustainable Homes and any associated changes to the building regulations as they emerge.

8.15.10 They will be expected to meet or exceed Ecohomes / BREEAM ‘Excellent’ rating, or the equivalent Code level in the Code for Sustainable Homes. If as envisaged, the Ecohomes / BREEAM ratings are superseded and the Code becomes mandatory the Council will pursue standards according to the highest level of the code (level 6- Carbon Zero development. All new housing areas should meet Building for Life ‘Gold’ Standard, or ‘Silver’ Standard at the very minimum (further guidance on how to achieve the standard is given in section 3).

8.15.11 It is important to note that BRE will continue to maintain and operate the Ecohomes / BREEAM scheme during the transition to the Code for Sustainable Homes and any future guidance relating to non-residential buildings.

8.15.12 In addition, all homes should be designed to ‘Lifetime Homes’ standards and all new developments must receive ‘Secure by Design’ accreditation (for further guidance refer to section 8.9).

8.15.13 Demonstrator projects and green technologies

In order to push the environmental agenda forward, showcase new technology and construction techniques, improve the environmental credentials of the urban extension and foster an ‘environmentally responsible’ culture within the new community, the Council will require exemplar demonstrator projects within the overall urban extension. The demonstrator projects will be expected to improve greatly on minimum environmental standards and illustrate how emerging and trial technologies can be incorporated into the design of new buildings. It will be expected that the preliminary phases of development will be constructed to very high environmental standards (Code for Sustainable Homes, Level 6) in order to set a positive precedent for subsequent phases.

Exemplar demonstrator projects
8.15.14 Therefore, it is intended that the preliminary demonstrator projects are carbon neutral and will include the following types of sustainable design features:

- Photovoltaic panels,
- Micro wind generation,
- Micro / small scale CHP,
- Solar orientation and water heating,
- Heat recovery systems,
- Natural ventilation and lighting,
- Super-insulated building envelopes,
- Ground source heat pumps,
- Green / brown roofs,
- Rain water harvesting,
- Grey water recycling,
- Recycled and locally sourced materials,
- Group composting / food production,
- Zero construction waste to landfill.

8.15.15 Green design features must be considered throughout new residential areas, particularly where this will help to meet the minimum environmental standards set out above. Where these technologies are applied, they should form an integral part of the building design and not be an afterthought, ‘stuck onto’ the built envelope. This will require the use of architectural skills in the design of new homes and buildings (further guidance can be found in the Code for Sustainable Homes, 2006).

8.15.16 The level of development envisaged offers particular opportunities for developers to partner with suppliers of emerging technologies to benefit from the economies of scale associated with the size of the proposed expansion area.

8.15.17 The following sections provide an overview of some of the sustainability attributes the Council will expect to see implemented.

8.15.18 Designing for flexibility and adaptability

Buildings should be designed for the long term with the built in capacity to adapt and change to different uses in the future. Flexible buildings can provide occupiers with the opportunity to adapt their homes and workplaces to best suit their demands, without the need to move or undertake significant building works. They also allow adaptation to accommodate alternative sources of energy and new resource-saving technologies.

8.15.19 A key aspect of designing for flexibility and adaptability in new residential buildings is the Lifetime Homes concept. This advocates sixteen design features that ensure that a new dwelling will meet the needs of most households. The accent is on accessibility and design features that make the home flexible enough to accommodate “…the changing needs occurring throughout one
family’s lifetime - raising small children, accommodating the teenager with a broken leg, having grandparents to stay, mobility difficulties in old age - or...the varying needs of numerous changes of occupier in the same home (Joseph Rowntree Foundation, 1997).

8.15.20 Designing for flexibility and adaptability does not only apply to residential properties however, and the wider principles are just as applicable to commercial and industrial premises. This allows change and development to occur over a period of time, for example buildings near a neighbourhood centre that can be either residential, retail or commercial without significant interior or exterior alterations.

8.15.21 For all types of development the following principles should therefore be adhered to:

- Buildings should be designed with as large a floorplan free of supporting structures as possible to enable internally dividing walls to be easily moved to allow the maximum flexibility in the internal arrangement of the building,
- Buildings and their surrounding spaces should be designed to be adoptable for different type of accessibility - for example domestic / commercial access.

8.15.22 Residential development
- Design should take into consideration the standards for Lifetime Homes as advocated by the Joseph Rowntree Foundation,
- The use of shallow plan designs to allow the maximum potential for ground floor extensions at the rear without compromising daylight levels (this also reflects local vernacular as described elsewhere in this report),
- The use of steeply pitched roofs to allow the maximum potential for upwards expansion into roof space (this also reflects local vernacular),
- Designs should include vertical stacking of kitchens / bathrooms wherever possible to allow the maximum flexibility in the future of the building,
- Residential development on the edge of the district centre (where expansion of the centre is likely) should be designed to accommodate retail or commercial uses in the future with minimum conversion works, for example incorporating taller floor to ceiling heights, appropriate fenestration, etc.

8.15.23 Employment / commercial development
- Large floorplans are especially important in employment development as this will allow maximum flexibility through a potential lifetime of different occupiers and requirements,
- Designs / materials that allow the easy alteration to provide new access or close up access will allow for building to be subdivided / its reverse,
Designs should allow for easy external alterations to buildings, especially the construction of extensions either at ground or first floor, and the future subdivision / amalgamation of units.

8.15.24 Designing for reduced energy use
Conserving natural resources through the minimisation of energy use is a key objective of sustainable building design. At a strategic level the generation of energy from renewable or highly efficient sources should be explored with the Council. Consideration should be given to the opportunity for combined heat and power and wind turbines where these facilities can be sensitively accommodated in the overall layout. Similarly, micro generation technologies should be considered as a way of reducing the carbon footprint of new buildings and homes, to help achieve zero-carbon ratings. Such provision would go a long way in meeting the energy requirements of the urban extension and therefore should not be dismissed without due thought. Developers will be expected to demonstrate that they have considered these approaches in their sustainable design statement.

8.15.25 Reducing demand for energy should be the starting point for any sustainable energy strategy. Designers and developers should reduce the demand by;

- Maximising solar orientation and light penetration,
- Well insulated roof spaces and wall cavities,
- Improving the performance of the building envelope by over building regulations,
- Investigating the potential for off-site prefabrication,
- Reducing the need for mechanical cooling, by allowing buildings to be opened up on hot days and by encouraging good cross / stack ventilation,
- Using timers and thermostats as methods of controlling heating,
- Using environmentally friendly, locally sourced or recycled building materials with low embodied energy values,
- Provide all dwellings with eco-labeled white goods with a high rating, provide low energy light fittings and gas ovens,
- Providing space for cycle storage within the curtilage of residential properties, and secure cycle parking and showering facilities in non residential developments.

- Facilitating positive micro-climatic conditions through the layout of buildings, creation of shelterbelts and integration of landscape,
8.15.26 A particular opportunity to reduce energy demand relates to the size of the site and the topography, which offers potential to maximise solar gain whilst still being able to maintain a street pattern which is sympathetic to urban design objectives. For instance, part of the design solution, which is encouraged, is to produce streets with more substantial glazing facing south, whilst maintaining sufficient distance for the northern houses to benefit from the sun. In constructing to a higher density, courtyards may be used in parts of the site (for example the village), as these are the most efficient use of land. The developer should provide detailed justification for how this resource is to be best harnessed in their sustainable design statement.

8.15.27 A source of information and advice is the Building Research Establishment’s Energy Efficiency Office, who can illustrate the financial savings to businesses and householders for new buildings. Further guidance on the design and implementation of renewable energy sources can be found in Planning Policy Statement 22 ‘Planning for renewable Energy’, its companion guide and the Code for Sustainable Homes 2006.

8.15.28 Minimising waste and encouraging recycling
Minimising the generation of waste and reducing pollution should be a key objective for developers and designers throughout the design and construction process. This relates to the layout of buildings, their materials and the processes involved in their construction. In design terms, developers will be expected to encourage waste minimisation and resource recycling in the following key ways;

- Providing appropriate locations for the storage of rubbish and recycled materials as an integral part of the building design,
- Providing recycle collection points within the block structure and overall neighbourhood layout in convenient locations,
- Providing external composting bins to all properties with a private garden.

8.15.29 An approach to on site construction should also be highlighted in the sustainable design statement.

8.15.30 Designing to conserve water
There are many simple measures that can be incorporated into buildings to significantly reduce water consumption and save money. The latter of these considerations is particularly important to purchasers and occupiers with the growing charges associated with water supply and the additional pressures being placed upon water resources in the Growth Areas.

8.15.31 Developers will be expected to reduce water use in all buildings through the provision of:

- Water efficient products such as spray taps and dual flush toilets,
- A water butt in the garden for watering plants,
- Water efficient washing machines and dishwashers.
8.15.32 Where appropriate, developers should provide rainwater harvesting systems that use rainwater to flush toilets and grey water recycling systems that clean and re-use water from sinks and washing machines.

8.15.33 Landscape embracing the highest environmental ambitions
The design of the landscape for the expansion offers a number of opportunities to minimise the impact of new development. In the design of the infrastructure, the illustrative framework has been shaped to include potential opportunities for:

- Sustainable Urban Drainage (SUDs) and natural filtration methods incorporated to help reduce surface water run off and control water release and reuse from the site,
- A network of good non-car routes across the site,
- Locating new landscape typologies close to key destinations to reduce journeys.

8.15.34 Through detailed site investigation developers should also consider the following:

- Including shelterbelts, where appropriate and necessary to mitigate winds, improving the micro-climate and in turn reducing heat loss from buildings,
- Locating new landscape typologies to benefit from existing and proposed site conditions, working with the site not against it,
- Looking towards creating waste neutral impacts during construction. Contamination should be dealt with on site, cut and fill balanced on site, and materials reused (for example striped topsoil that can be salvaged and reused),
- Clustering landscape types with similar maintenance regimes, where appropriate, to reduce site to site movement,
- Including sustainable management methods designed in from the outset. Building in appropriate landscape types, treatments and scale of area to promote ideas such as grazed land, haymaking, coppicing and community management of landscape,
- Creating an on-site nursery as part of the of advanced planting of the site, temporary uses/contracts for part of the site to grow trees for timber and future planting could be looked into, this would help to reduce transport and movement costs.

8.15.35 Specific opportunities to reduce the impact of the development on resources should be considered and promoted throughout the public realm and open spaces in the development.
8.15.36 Within sustainable design statements, developers will be expected to present design codes and guidance for the expansion area. Landscape opportunities to conserve and recycle water for reuse in public and private landscapes, for example in cleaning and watering should be looked at carefully. Harnessing ground water from bore holes or capturing it as part of the SUD system along with grey water should be considered.

8.15.37 Technologies in the open space network to reduce the impact of development on resources, for example geothermal ground source heat, wind turbines, solar panels and water bore holes should be incorporated. Renewables can also be used to power elements of the public realm for example photovoltaics on street lights and sign lighting and the Borough Council would like to see investigation into the potential inclusion of this technology.

8.15.38 There may be opportunities to recycle materials existing on-site, including crushing materials suitable for reuse as hardcore and composting thinned out advanced planting. Domestic recycling points should be sensibly located within the new development to encourage use. Locations on key routes, transport nodes and other destinations should be considered. There may also be opportunities for providing litter bins in the new public realm with the option to separate waste for recycling, waste collections as part of the management of the public realm should be discussed with the Borough Council early in the design process.

8.15.39 By including landscape objectives for Eco-homes excellence embracing wildlife friendly planting and bird and bat roosts and using green roofs the biodiversity network across the site could be reinforced. The inclusion of green roofs would also reduce the urban heat island effect and in some cases provide additional open space.

8.15.40 The use of local materials within the landscape and public realm in the expansion area is felt to be crucial to the sustainability and local context of the area. All materials used the across the development should be made, shaped and transported without unreasonable impact on the environment and without detriment to the welfare of those producing the materials.

8.15.41 Long term maintenance aspirations for the new landscapes should be worked through designs from the outset. Opportunities to reduce the need
for chemical interventions such as fertilizers and weed killers, by use of green manure or mycorrhizal fungi to aid establishment should be part of the implementation process.

8.15.41 Community facilities, including sports provision should be built to the highest eco-standards as part of demonstrator projects e.g. pavilions and lighting powered by renewables and watering and cleaning needs met by grey water, stored water or water drawn from the site. The inclusion of designated and priority parking spaces for electric cars and car pool cars should also be considered at key destinations as a project.

High eco-standards for community facilities

8.15.42 Apprenticeships and local jobs managing and maintaining local landscapes should be encouraged by identifying and supporting local initiatives. Healthy living initiatives, including walking routes, healthy eating information and allotments schemes should also be promoted.

Healthy living promoted
9.0 Procedural guidance

9.1 This design guidance forms part of a suite of documents that need to be referred to when developing proposals for the area, including the emerging Core Spatial Strategy for Northamptonshire and Kettering Urban Extension Area Action Plan. This document outlines Kettering Borough Council and their partner’s policies and views on design issues, as they apply to the urban expansion area. It is a strategic document. Detailed masterplans, feasibility studies and site briefs will be prepared at appropriate times in the development process. Developers and other delivery bodies are encouraged to work closely with the local authority from the earliest stages to ensure the best possible outcomes for the town of Kettering.

9.2 Planning applications should be preceded by a series of constructive pre-application discussions with Kettering BC and other appropriate authorities. The local authority will require documents in support of Planning Applications:

- **Environmental Assessment**
  - Conservation area,
  - Listed buildings,
  - Trees,
  - Landscape character and sensitivity,
  - Natural environment,
  - Distant views,
  - Biodiversity.

- **Flood risk assessment**
- **Traffic assessment**
- **Travel plan**
- **Affordable housing provision**
- **Heads of terms for section 106 Agreement**
- **Health impact assessment**
- **Design and access statement**
- **Archaeology assessment**
- **Contamination assessment**
- **Noise assessment**
- **Habitat and species assessment**
- **Planning out crime checklist**
- **Retail development sequential test**

- **Site plans**
  - Indication of key infrastructure locations, i.e. schools, health care etc,
  - Indication of building heights, lengths and widths,
  - Phasing patterns/plans, identification of land parcels to be sold to house builders.

9.3 The above is a guide as to what should be provided, it is not exhaustive and Kettering BC reserves the right to make amendments and additions.

9.4 It is important that the applicant outlines how the initial design ambition can be translated into individual development phases.
A. Further reading

A.1 The planning framework
- Planning Policy Statements,
- Regional Spatial Strategy for the East Midlands (RSS8) (2005),
- Northamptonshire County Structure Plan (1996-2016),
- Kettering Local Plan (1995),
- Supplementary Planning Guidance documents (SPGs). Topics for the SPGs include accessible housing, affordable housing, urban design and street scene, open space provision and planning out crime,
- Adopted and Emerging LDF Documents, including Core Spatial Strategy for North Northamptonshire (Prepared by JPU) and background studies, Area Action Plan (AAP) for East Kettering Urban Extension, AAP for Kettering Town Centre, Statement of Community Involvement (SCI) (JPU), Development Control Development Plan Document (JPU) and Kettering Site Specific Proposals.

A.2 Value of good design / urban design and architecture
- Planning Policy Statement 1: Delivering Sustainable Development (February 2005),
- Planning Policy Statement 3: Housing (November 2006),
- By Design - Urban Design and the Planning System: Towards Better Practice (DTLR, 2001),
- Urban Design Compendium (English Partnerships & The Housing Corporation, 2000),
- Places, streets and movement: a companion guide to design bulletin 32 (DETR, 1998),
- Design and Access Statements - How to write, read and use them (CABE, June 2006),

A.3 Transport framework
- Northamptonshire County Council, Sustainable Transport Supplemental Urban Design Guide (NCC, emerging 2006),
- Parking SPG (Northamptonshire County Council, March 2003).

A.4 Attractive streets and spaces
- See the Value of Good Design / Urban Design and Architecture section above,
- Draft manual for streets - www.manualforstreets.org.uk and it is anticipated that the final document will be published in March 2007,
- PPS 3 (Housing) and PPG 13 (Transport),
- HRH The Prince of Wales’s Affordable Rural Housing Initiative, Creating a Sense of Place: A design guide (Business in the Community, February 2006),
- Design for Residential Roads (Northamptonshire County Council, November 2003),

A.5 Reducing opportunities for crime through environmental design
- Safer Places: The planning system and crime prevention (ODPM & Home Office, 2004),

A.6 Better community buildings by design
- Assessing secondary school design quality (CABE, July 2006),
- Being involved in school design (CABE, 2004),
- CABE (21st Century Schools, July 2004),
- NEAT (NHS Environmental Assessment Tool) and AEDET (Achieving Excellence in Design Evaluation Tool) assessments,
- Designed with care: Design and neighbourhood healthcare buildings (CABE, February 2006).

A.7 Creating a green heart to the community
- Planning Policy Guidance note 17: Planning for Open Space Sport and Recreation (July 2002) and Assessing Needs and Opportunities: a companion guide to PPG17 (September 2002),
A.8 Responding to the edges
- *Planning Policy Statement 3: Housing* (November 2006),

A.9 Ensuring environmentally responsible design
- *Draft Planning Policy Statement: Planning and Climate Change - Supplement to Planning Policy Statement 1 (December 2006),*
- *Building a Greener Future: Towards Zero Carbon Development (Communities and Local Government, December 2006) - Consultation Document,*
- *The Code for Sustainable Homes - A step-change in sustainable home building practice (December 2006),*
- *Urban design compendium (English Partnerships and the Housing Corporation, 2000),*
- *Northamptonshire County Council, Sustainable Transport Supplemental Urban Design Guide (NCC, emerging 2006).*