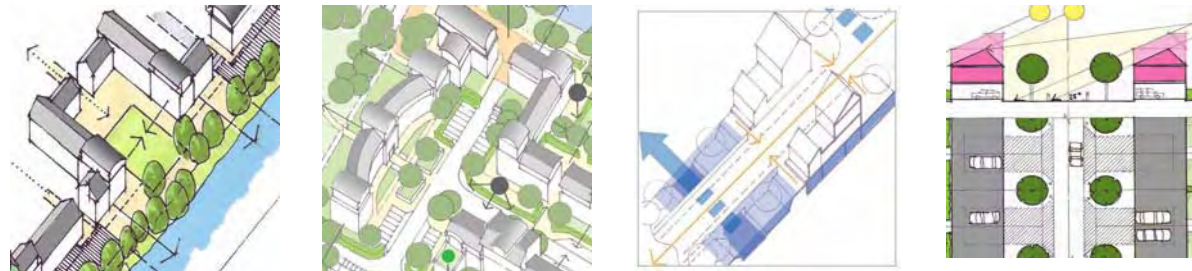


CRAYFORD TOWN CENTRE

A Residential Design Code

September 2008



Introduction

This design code sets out the Council's aspirations for the design of new housing in Crayford town centre. It contains plans and sketches to illustrate policies in the Crayford Strategy and Action Plan, leading towards the preparation of design briefs in consultation with land owners and their design teams.

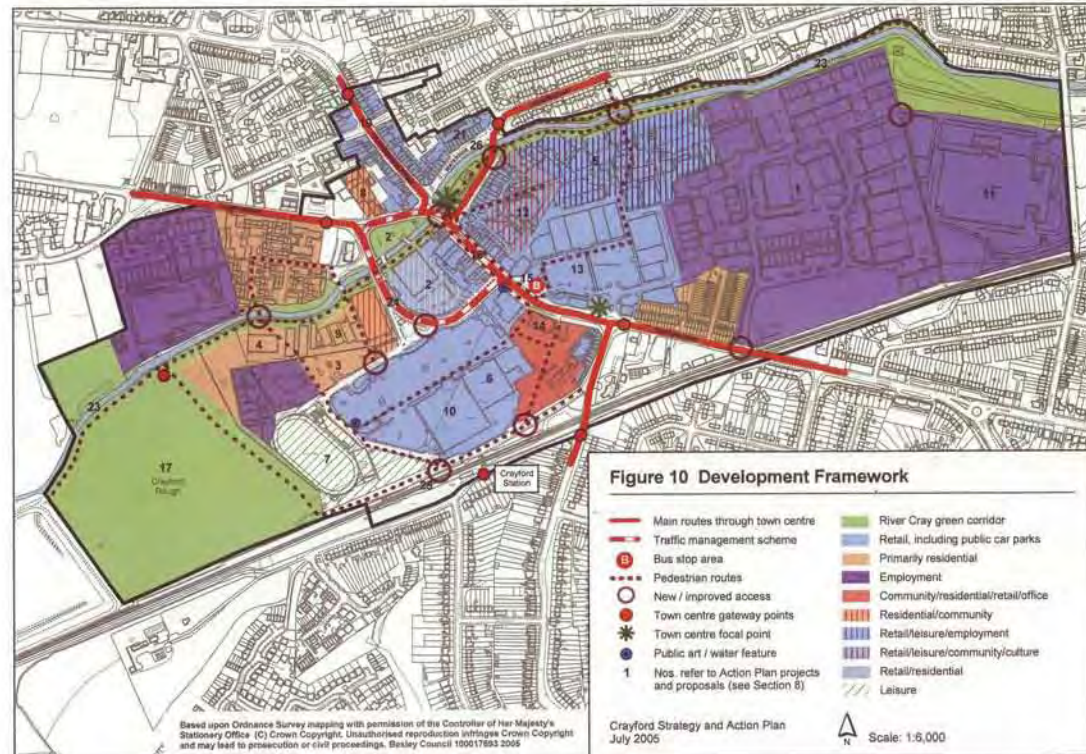
The code is based on existing Council policy:

- (a) Bexley Unitary Development Plan ((2004)
- (b) Crayford Strategy and Action Plan (2005)
- (c) Design for Living - Bexley's Residential Design Guide (2006). It should be read together with ;
- (d) Crayford Town Centre - Design and identity Guide (2006)

"A design code is a set of 3-dimensional site-specific design rules or requirements for development. It is informed by a spatial masterplan or other form of urban design proposals and describes the rules through words and graphics".

Building Sustainable Communities : The Use of Urban Design - CABE November 2003

The aim of this code is to encourage good contextual design, both traditional and contemporary. It acknowledges Crayford's architectural and industrial legacy, dating back to the Victorian period. It takes into account current policies for sustainable development, including the use of renewable energy sources, water conservation and material and water management. A high priority is given to the improvement of the River Cray corridor as a strong feature within the town.



Plan reproduced from Crayford Strategy and Action Plan (2005)

PLAN 1

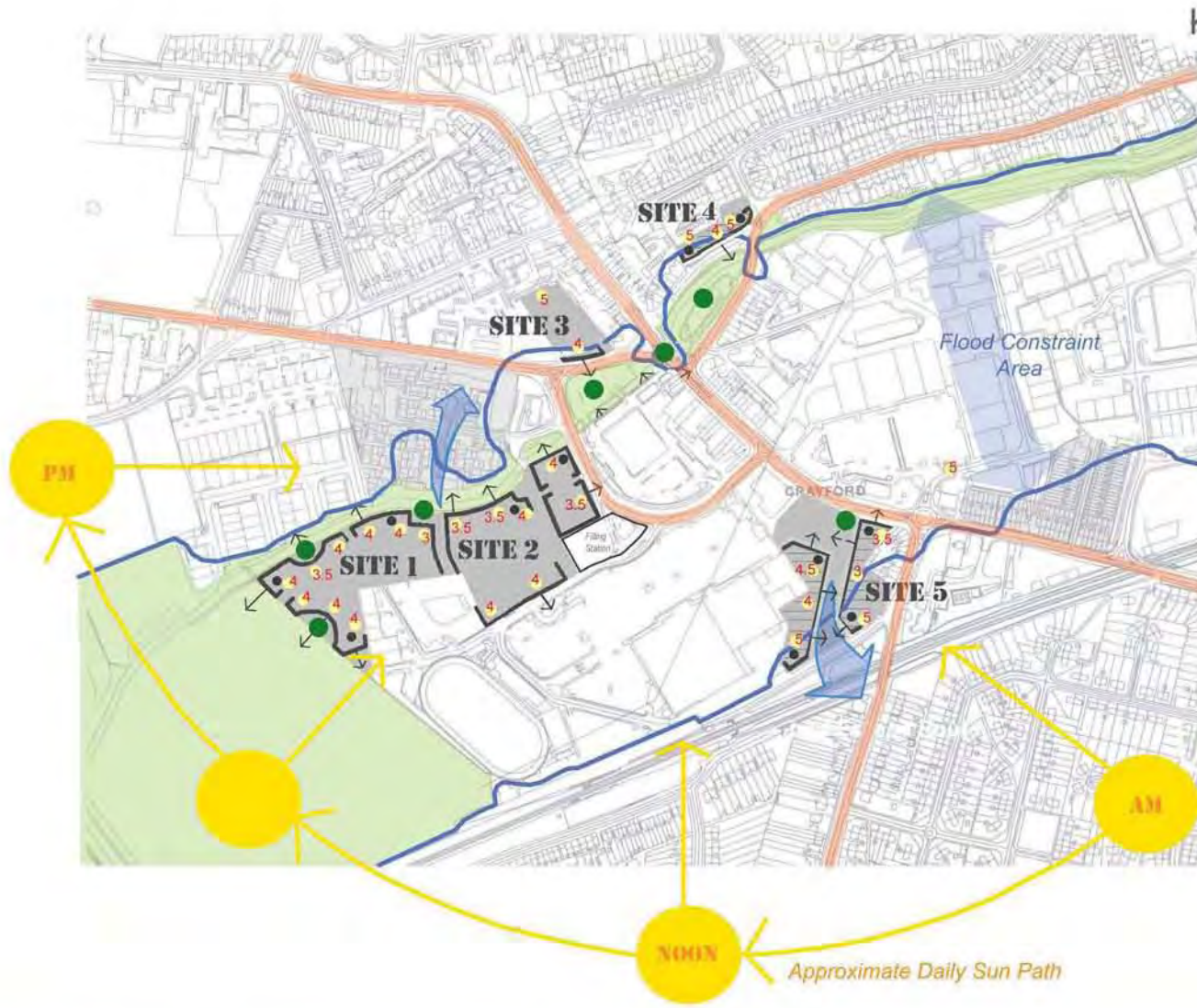
The code has three main sections:

- (1) Policy framework
- (2) Urban design and
- (3) Building design

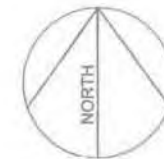
The code concludes with some examples of good practice that give an indication of the quality of design expected by the Council in Crayford.



PLAN 2



- KEY**
- 1** Primary residential opportunity
 - Existing residential
 - 4** Mixed use commercial / retail with residential above
 - 3** Indicative building height (number of storeys)
 - Built frontage enclosure
 - Key corner focal element
 - Flood constraint boundary
 - Direction of dry escape in the event of flood
 - River Cray corridor and Crayford Rough open space
 - Key open space improvement
 - Town centre through routes



The code framework plan and principles set out the Council's strategic aspirations for Crayford Town Centre.

1 Appropriate Density

Ensure residential development density is appropriate to the urban setting of Crayford town centre and is within the limits identified in Bexley's adopted policy, as indicated in the Council's Residential Design Guide: *Design for Living* (2006). Within the immediate town centre area, proposed densities should be 200-450 habitable rooms per hectare for houses and 450-700 habitable rooms per hectare for flats.



2 Market and Affordable Housing Needs

Provide a mix of unit types and work with Registered Social Landlords (RSL's) to ensure that a target 35% of houses and apartments are affordable, in accordance with Bexley Council's *Affordable Housing Supplementary Planning Document* (March 2006). The required amount of affordable housing on a particular site will depend on local constraints and proven development costs. Generally a 70:30 split between rental units and shared ownership units in Crayford town centre will be required, although this should be discussed with the Council's Housing Department



3 Flood Escape Routes

Ensure safe evacuation is available from town centre sites within the flood constraint area to higher ground, in the event of a 1:100 year flood, for residents and the emergency services in accordance with the requirements of PPS25 *Development and Flood Risk* (2006). The developer will be expected to consult the Environment Agency on the requirements of each site.



4 Network Connections

Ensure new vehicular, cyclist and pedestrian layouts integrate well with the existing town centre road and public transport network and primary site access points. Reinforce existing patterns of vehicular and pedestrian communications around a site. Provide natural surveillance of routes from adjacent housing.



5 Respect Existing Streetscape

Ensure new development respects existing building lines along street frontages, in order to reinforce the boundaries of urban blocks within Crayford town centre, and the new building line proposed along the key River Cray Corridor and riverside walk.



6 Building Heights

Ensure that the building heights and massing of new developments respect the context of adjacent developments and are appropriate to the site. The heights shown on the Code Framework Plan are indicative. Developers are expected to provide a variety of heights; for example by providing corner features and lower buildings in the middle of the block to let sunlight through to the riverside and private open spaces.



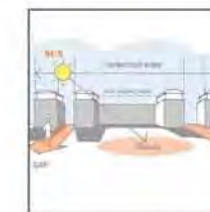
7 Open Space Provision

Provide a minimum of 45% of the site area (including balconies, decks and roof gardens) as amenity space, unless there are alternative recreation and leisure facilities nearby (e.g. Crayford Rough). See Bexley's Supplementary Planning Document : *Design for Living* (2006).



8 Open Space and Orientation

Locate new amenity space so that it is welcoming, usable and enjoys sunlight throughout the day. Public art should be provided in accordance with the Council's Supplementary Planning Document: *Design for Living* (2006).

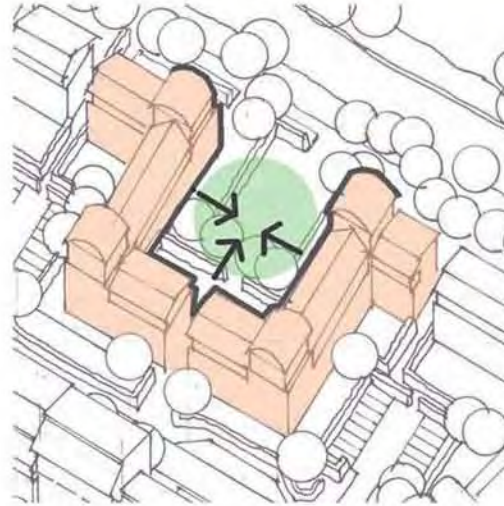


9 Quality Open Space

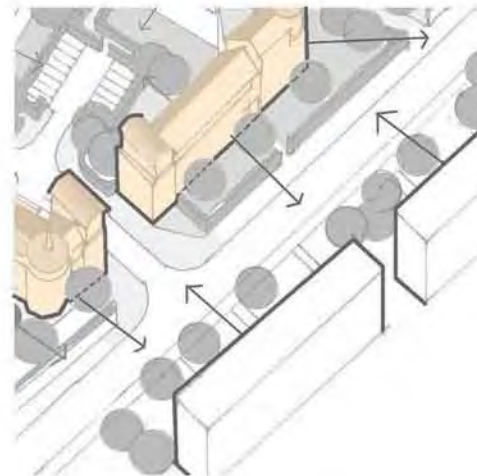
Provide high quality leisure opportunities within existing open space (e.g. Crayford Rough and River Cray Corridor).



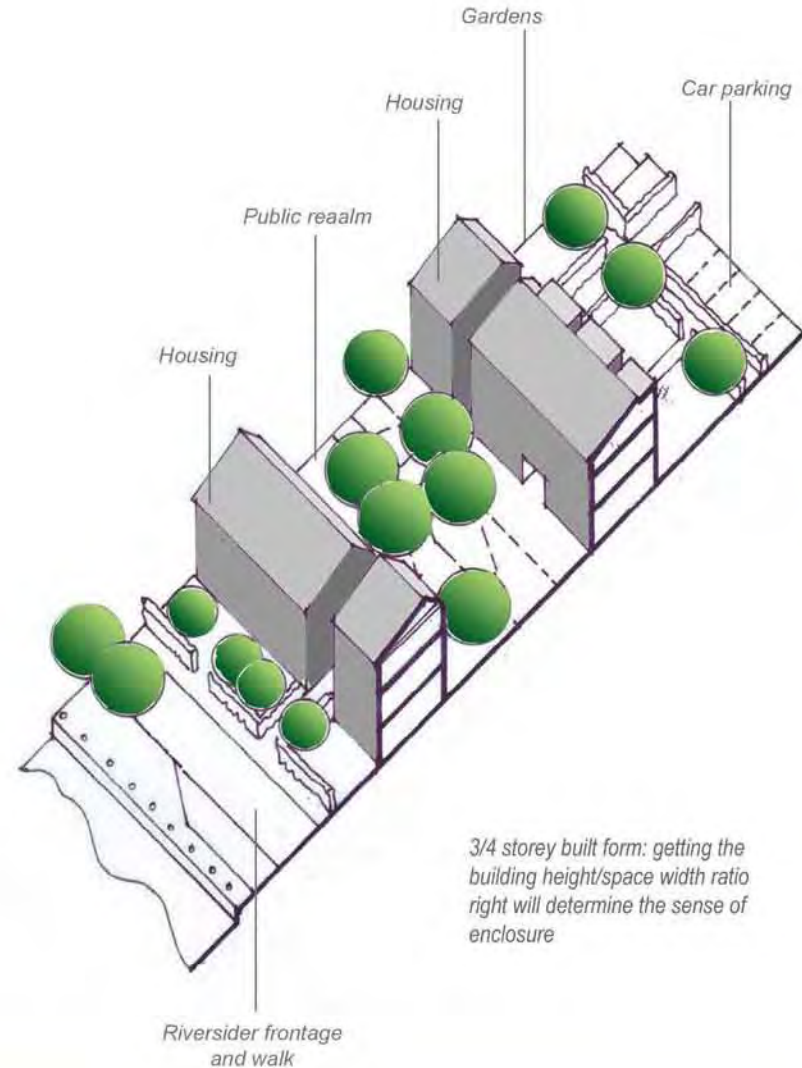
This section of the code features three different street types to illustrate design guidance for housing, apartments, street and space between buildings. The illustrations assume that ground floor levels do not have to be raised. Two further options that assume levels have to be raised to avoid a 1:100 year flood event are illustrated on sheets 11 and 12.



New buildings should create a usable space and a sense of enclosure

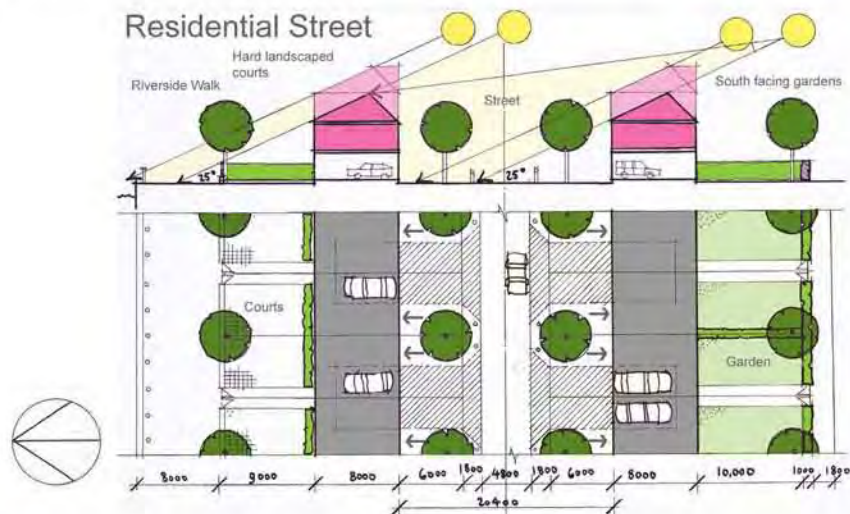
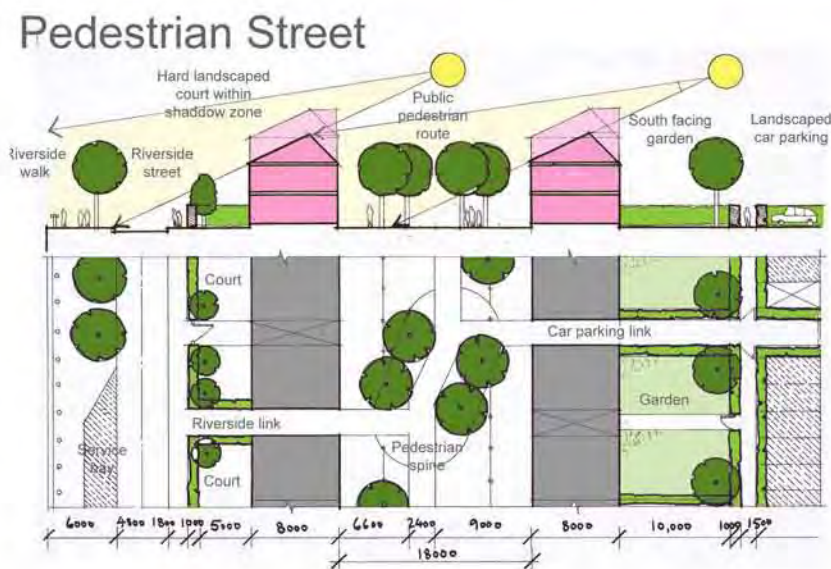
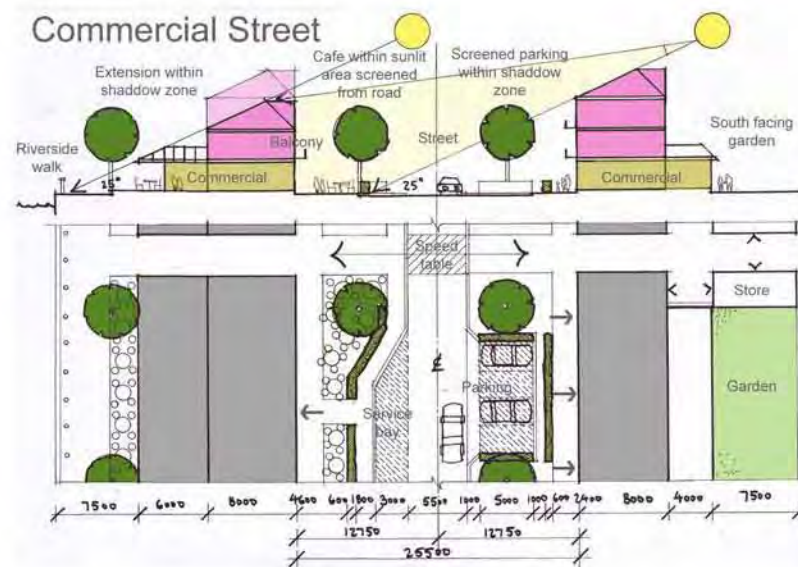


New development should reinforce the street frontage



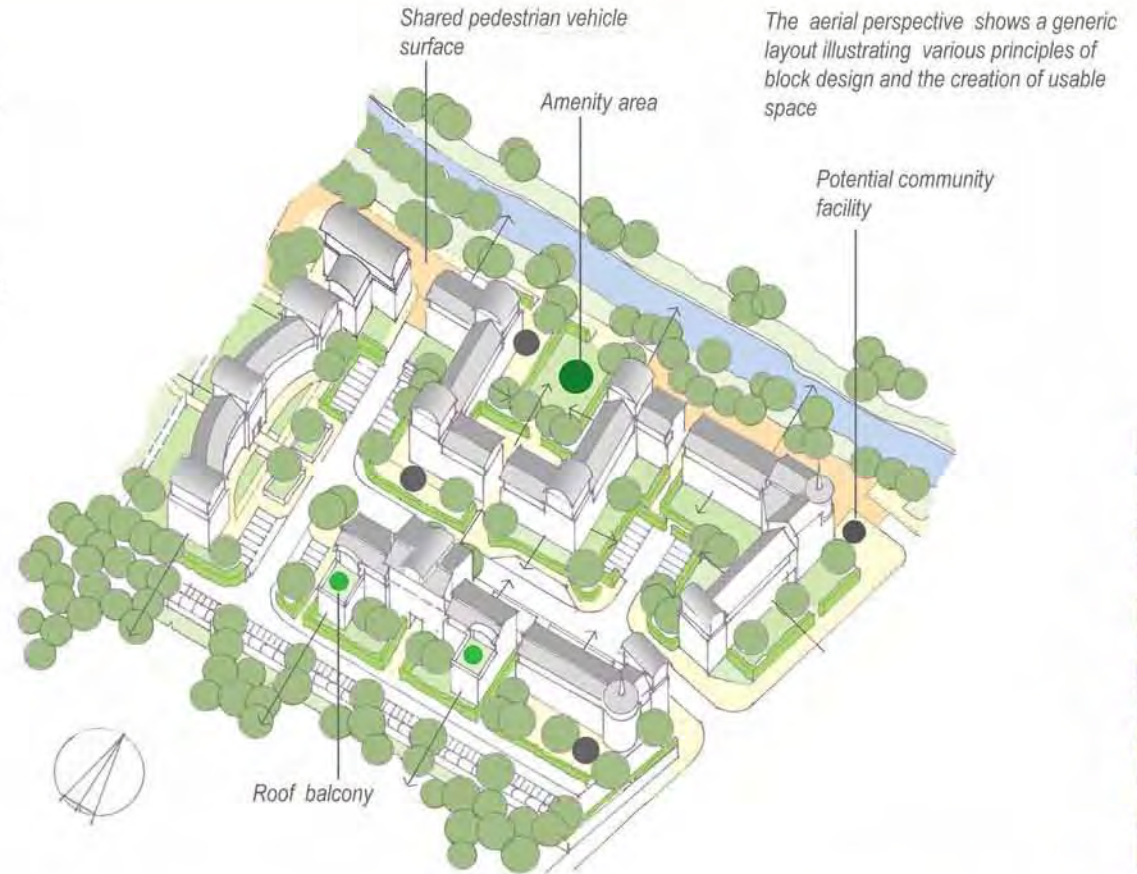
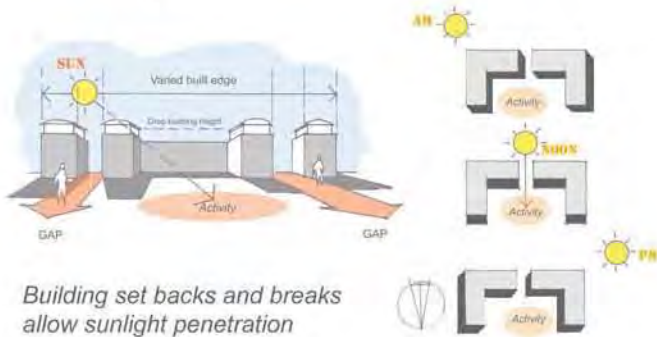
3/4 storey built form: getting the building height/space width ratio right will determine the sense of enclosure

- 1 Develop a hierarchy of commercial, residential and pedestrian-only streets and courts to structure the layout of the development.
- 2 Ensure that the widths of new streets and courts are sufficient to reflect their function and respect privacy between opposing residential properties, without being so wide as to lose any sense of enclosure or diminish the containment of vistas. Allow at least 22m between facing windows of habitable rooms, as stated in Bexley's *Design for Living SPD (2006)*. Note that, offset, oblique or inset window designs may allow street widths to drop below 22m and create variety without infringing the key privacy principle (as also illustrated in *Design for Living*).
- 3 Ensure that building heights and boundary treatments, relative to street or court width, are sufficient to create a sense of enclosure. A ratio of 1:2 is preferred, so that for example the built edge along 20-25m wide streets should be 3-4 storeys high.
- 4 Define space within streets and courts and use landscaping and boundary treatment so that there is a clear hierarchy of space: public, semi-public, semi-private and private.
- 5 Ensure backs of buildings are screened from perimeter roads at all times as advised by CABE.



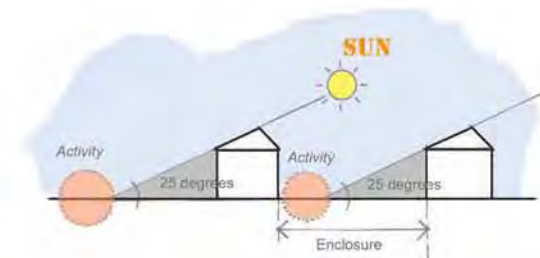
This sheet uses an illustration of a hypothetical riverside development to show the importance of light and space in planning pedestrian and amenity areas.

- 1 Community facilities should be positioned to take advantage of nearby natural features, microclimate, orientation and the availability of sunlight. For example, locate outdoor cafes on east, south or west frontages with an interesting outlook and locate car parking in shaded areas.
- 2 Ensure layouts incorporate sufficient setbacks and breaks in the built frontage to allow sunlight to penetrate through to footpaths and/or amenity space on the north side of frontages.



- 3 Locate children's play areas and grassed amenity space in areas which are welcoming, overlooked and receive direct sunlight, wholly or in part. Where balconies provide the only outdoor space within properties they should be capable of accommodating seating, be sunlit and screened as far as possible from noise, air pollution and overlooking.

- 4 Select roof forms which maximise the penetration of sunlight into properties and gardens within the development and create skyline interest.



This sheet sets out and illustrates guidance for the relationship between buildings and spaces, including access, natural surveillance, active uses and landscape design.

1 Use variations in the building line, height, articulation, building elements, materials and colour, to create rhythm along the street frontage.

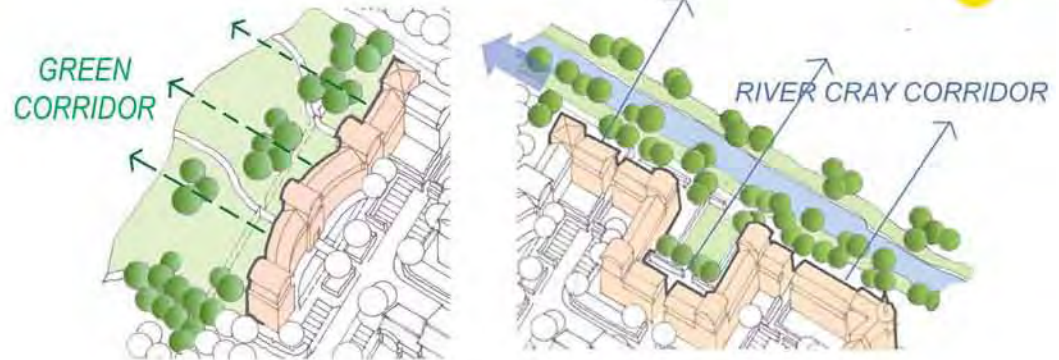


3 Ensure all residential units or groups of units have direct access to the street, including those located above other uses, and highlight entrances.



4 Ensure the fronts of buildings, and therefore the main habitable rooms, face the street, pedestrian routes, or the River Cray corridor (if orientation permits). Avoid positioning backs of buildings against the street as this distracts from the quality of the street scene (See Bexley's SPD *Design for Living* 2006).

2 Ensure that buildings and plot boundaries form an active, well-designed and sympathetically-landscaped backdrop to natural features, such as riverbanks and green space. Use semi-transparent edge planting and railings along boundaries to provide an uninterrupted visual link between building facades and open space.



Housing should overlook green open space and the River Cray corridor

5 Where ground floor residential development has to be adjacent to distributor roads, ensure protection is provided from air pollution, vibration and noise by block planting, solid boundary treatment, insulation and double or triple glazing in accordance with PPS23: *Planning and Pollution Control* (2004) and PPG24: *Planning and Noise* (1994).

6 Incorporate elements of mixed use at street level, where this is appropriate to a particular scheme, to provide active frontages, links with town centre uses and contribution to the creation of a high quality environment, in accordance with PPS6 *Planning for Town Centres* (2005).



Shop fronts at Ipswich providing an active frontage

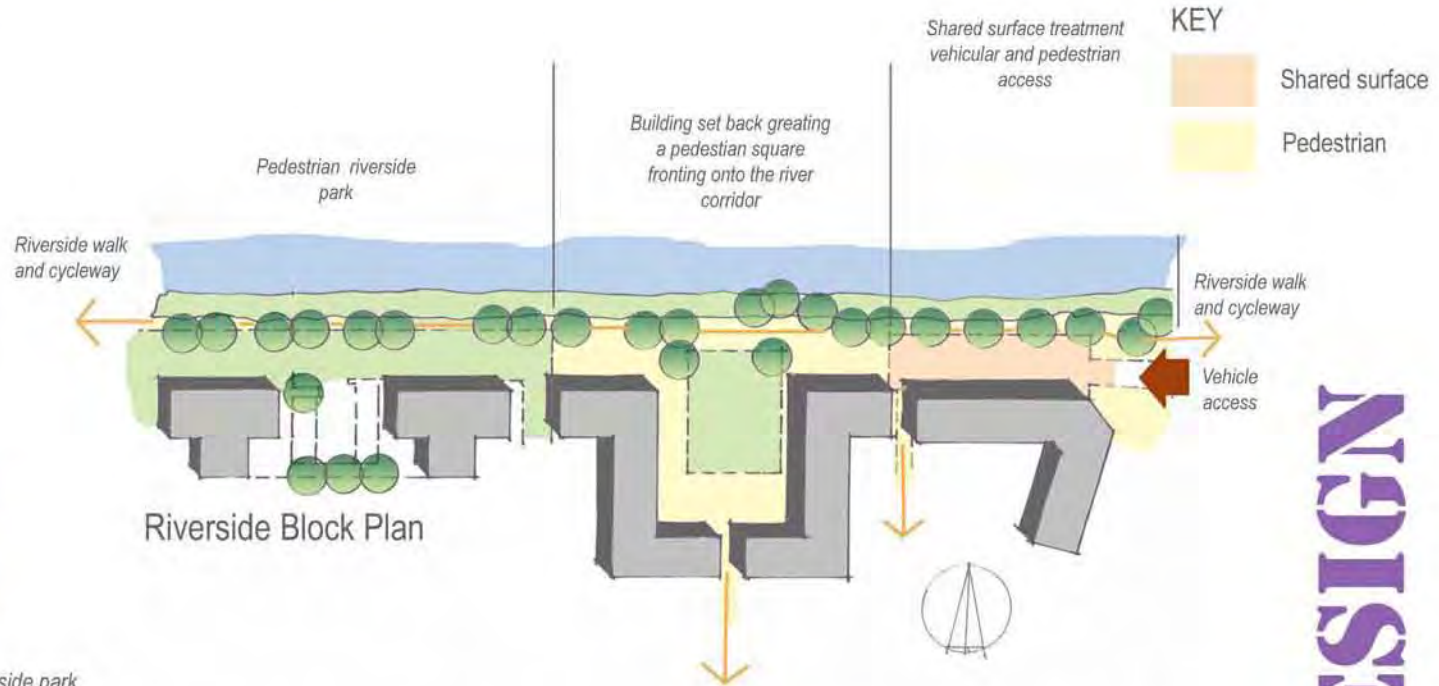
Trevor Home Architects

This sheet shows the importance of the River Cray for neighbouring housing development and illustrates ways of designing the link between housing, private space and waterfront access.

1 The built edge of new development along the banks of the River Cray should reflect the character of the immediate context, with denser, more urban development closer to the town centre and less dense pavilion style structures located in the vicinity of major open space, woodland or parkland.



2 Create a sequence of urban design spaces, experiences, and events along the River Cray corridor between the proposed built edge and the river by exploiting the potential for variety in the following: access arrangements, surface treatment, the proximity of the built edge to the river bank, the treatment of the river bank, the height and continuity of the blocks forming the built edge and the scale, proportions and character of the amenity spaces contained by the edges.



3 Ensure all units along the built edge are provided with vehicular access, either from the river bank or from an internal street or court.

4 Consult with Natural England to ensure that all proposals for sites along the river bank, or works to the river bank itself, comply with specialist ecological advice on the preservation and encouragement of natural habitats.

This sheet outlines and illustrates ways of designing for safety and security in new housing schemes.

- 1 Ensure that new development provides passive surveillance of streets, courts, pedestrian/cycle ways, cycle facilities and car parking areas in accordance with best practice set out in *Secured by Design*.

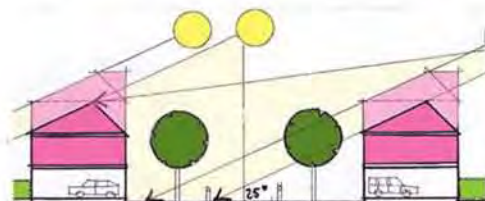


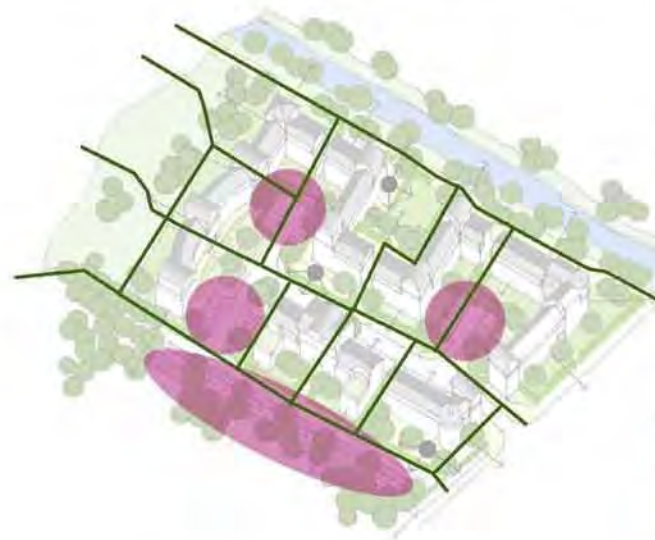
Illustration of secure car parking within housing development



- 2 Incorporate car parking so that it reinforces the quality of the street scene within new developments, in accordance with the standards set out in the Council's UDP.

- 3 Ensure that car parking is provided as close to the owner's home as possible.

- 4 Ensure surface car parking is overlooked and well lit, to make it secure, and integrated into the development through the effective use of landscaping to reduce its visual impact. Town houses should incorporate garages accessed directly off the street or at basement level, if residential development has to be raised to avoid flood risk.



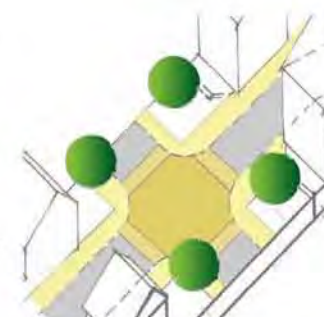
Secure car parking and pedestrian cycle links

KEY

- Secure overlooked car parking
- Integrated network of pedestrian/cycle links

- 5 Maximise pedestrian and cycle links throughout the town centre by incorporating a clear network of safe, well-lit, integrated paths and walkways that follow desire lines.

- 6 Control vehicle speeds in streets through speed tables, changes in road geometry, and/or conspicuous pinchpoints.

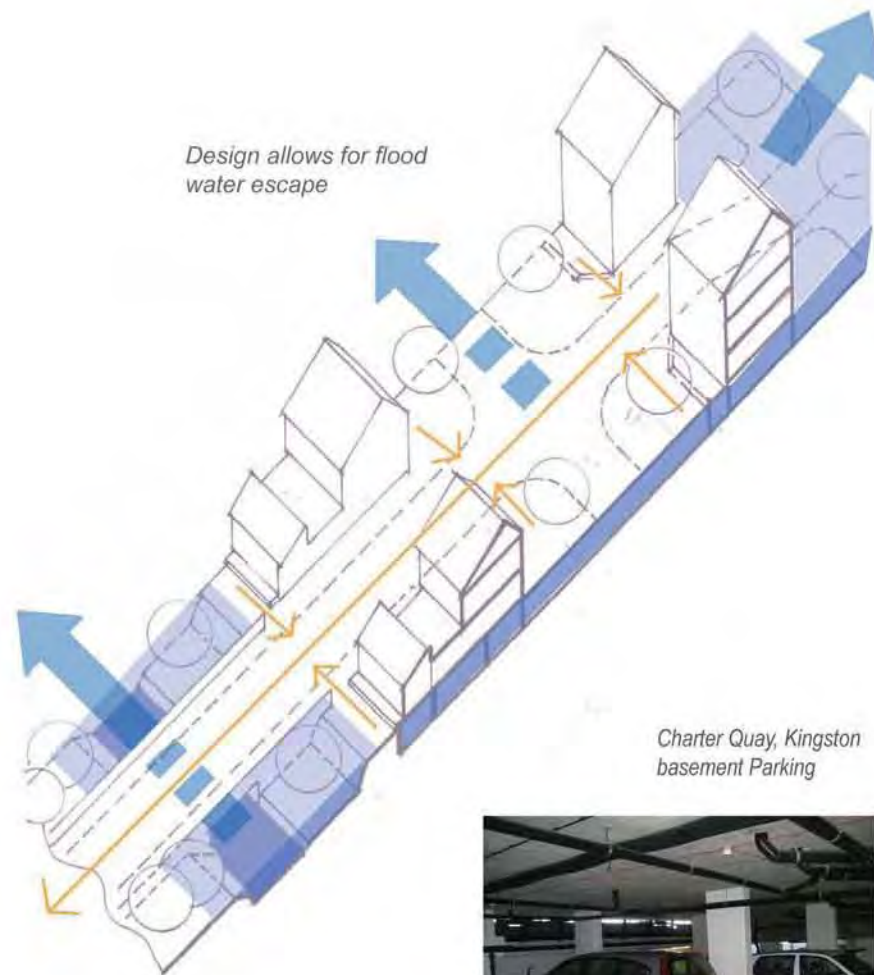


Residential traffic calming

This section uses plans and cross-sections to illustrate the means of protecting residents from flooding in the event that the Environment Agency requires habitable rooms to be raised 1.5m above ground level, or more.

This section of the Code uses a north-south section and plan through the River Cray and Site 1, following the line of a potential Flood Escape Route. This is to illustrate potential design solutions in the event that the street level and lowest residential floor level have to be raised +1.5m or +2.5m above existing ground level.

- 1 Ensure that no residential floor space is located below the 1:100 flood datum level, in accordance with the requirements of PPS25 *Development and Flood Risk* (2006).
- 2 Ensure that safe dry evacuation is achievable from all residential floor levels to surrounding higher ground.
- 3 On sites where mixed use is being considered, in consultation with the Environment Agency, consider the location of car parking and other non-residential uses below raised street and residential floor levels (commercial, leisure or light industrial compatible with residential, storage, workshops etc.). Ensure that there is no overall loss of flood capacity.
- 4 Incorporate appropriate design measures to ensure the free flow of flood water through sites within flood plain.

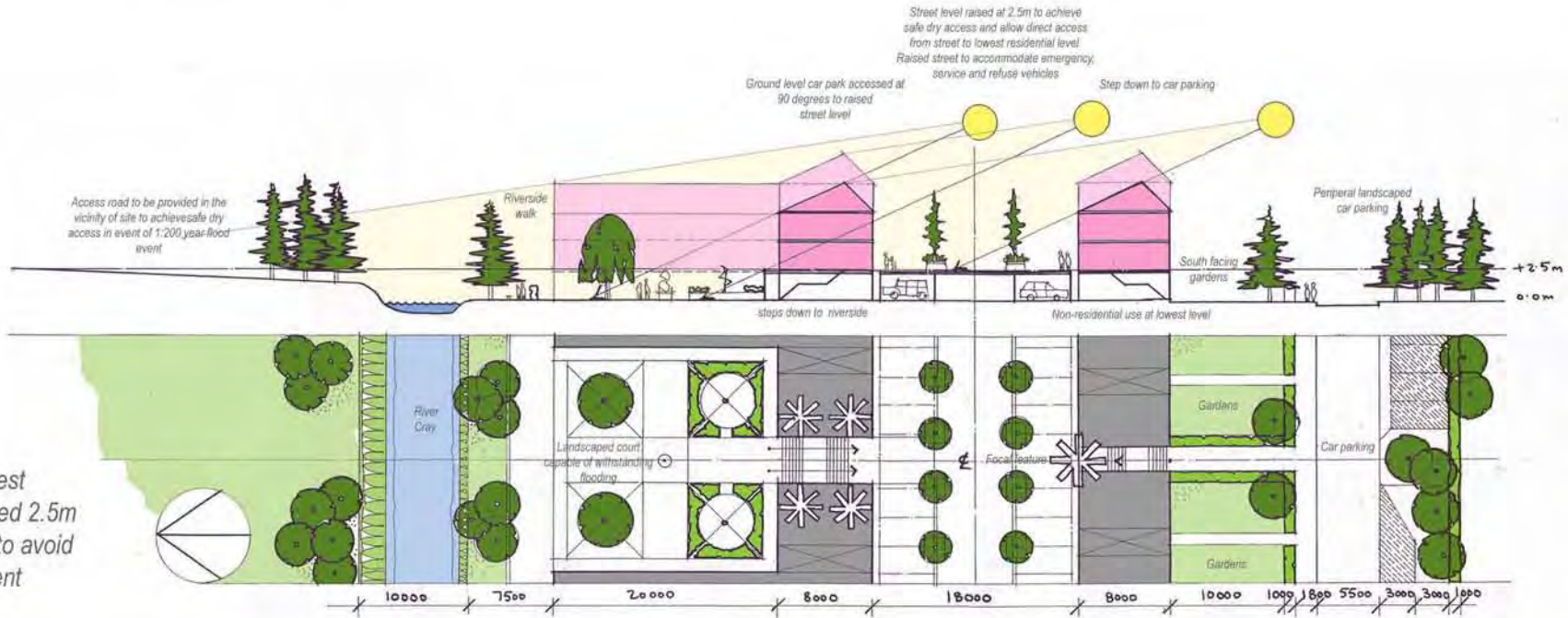
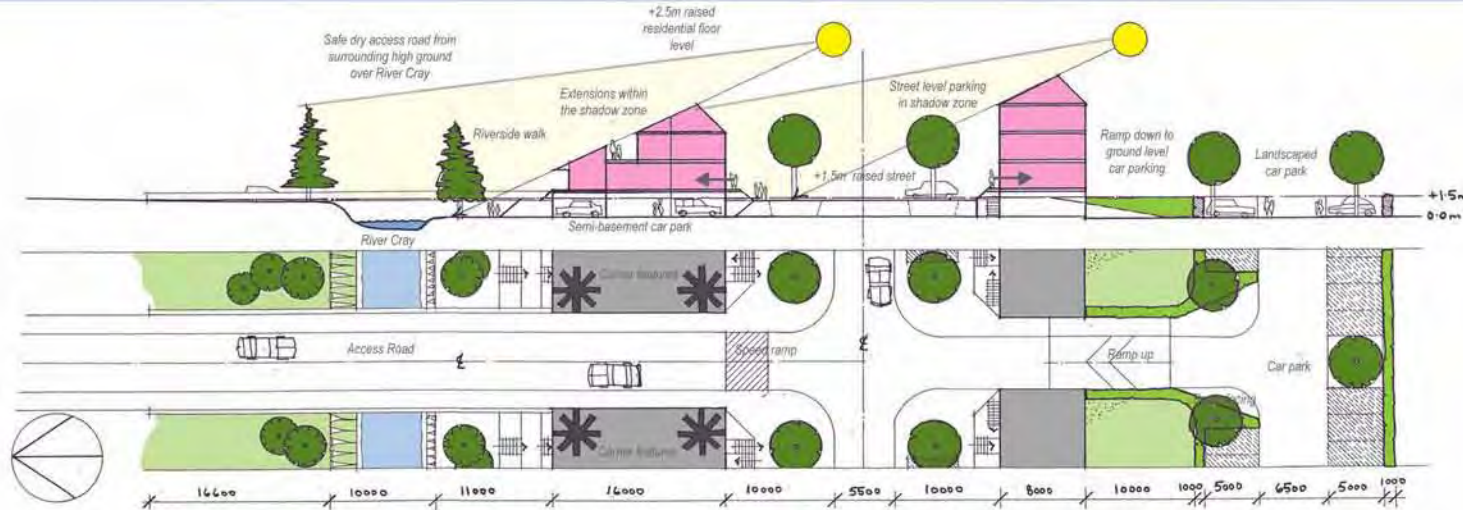


Charter Quay, Kingston
basement Parking



The axonometric shows a typical escape route

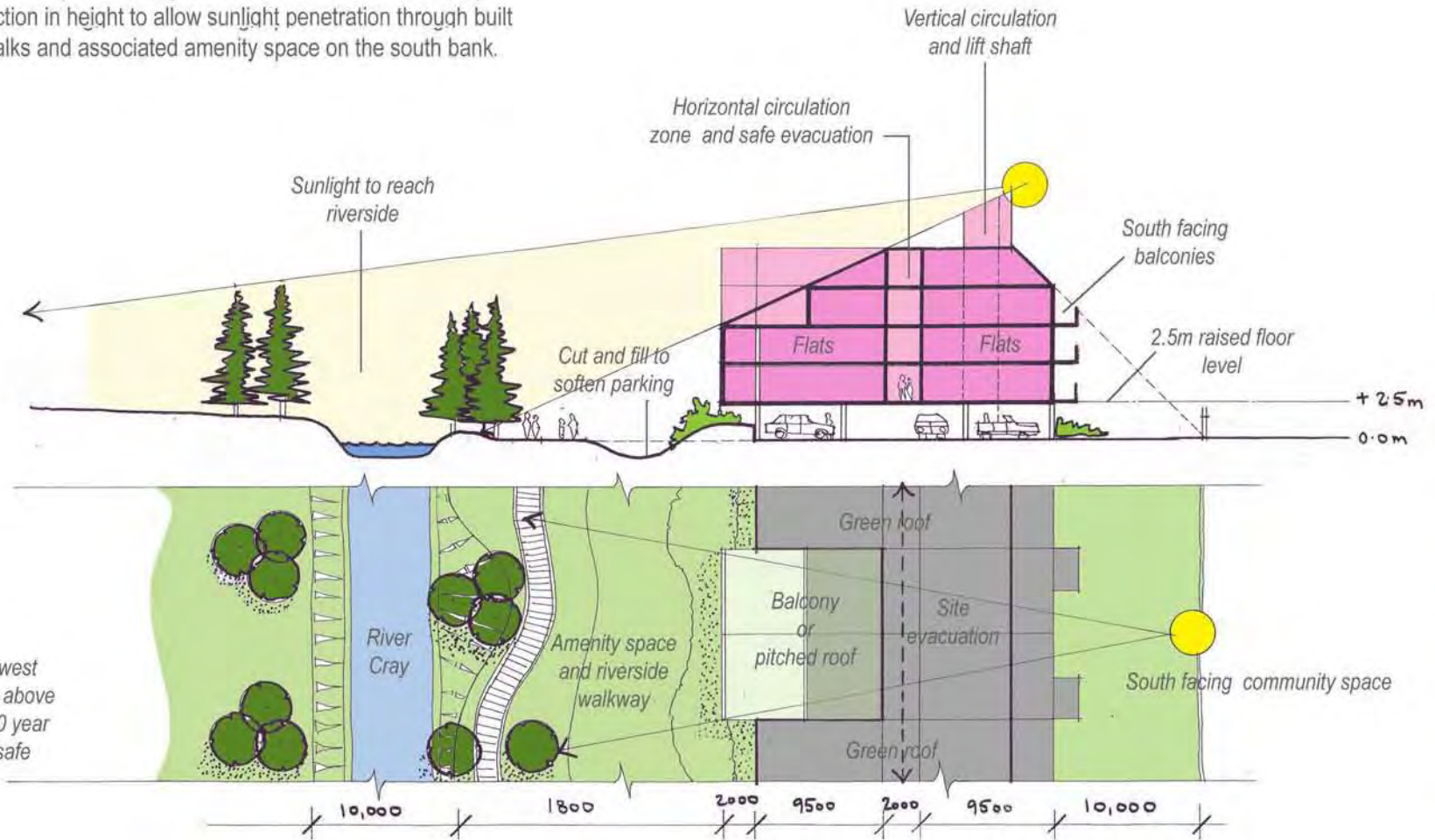
Street level and lowest residential level raised 1.5m above ground level to avoid 1:100 year flood event



Street level and lowest residential level raised 2.5m above ground level to avoid 1:100 year flood event

Principle

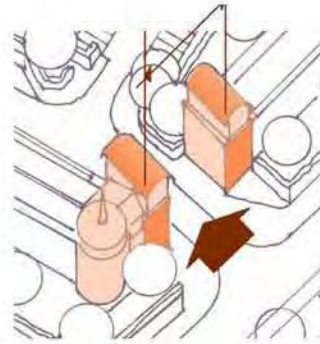
Ensure sections of linear development along the south bank of the River Cray have a set back or reduction in height to allow sunlight penetration through built form to reach riverside walks and associated amenity space on the south bank.



Indicative sketch showing lowest residential level raised 2.5m above ground level to avoid a 1:100 year flood event and to allow for safe evacuation.

This sheet outlines some of the ways in which the form of new housing development can be used to create visual interest

1 Highlight vehicular and pedestrian gateways and access points through local variations in building height, form, materials and colour and particularly by the use of taller marker buildings.



GATEWAY



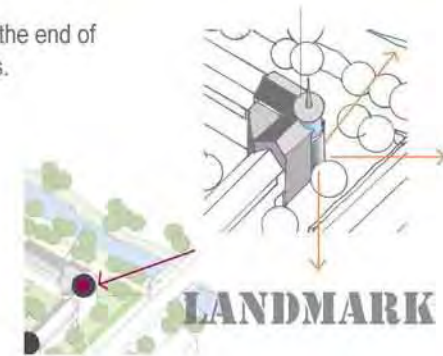
- KEY**
- Landmark public art
 - Landmark focal building
 - Building corner feature
 - Major vista

2 Highlight corners by variations in building line, height, form, materials and colour.



CORNER FEATURE

3 Locate focal features at the end of vistas to terminate views.



4 Incorporate and accentuate views of prominent topographical or built features, e.g. the River Cray, Crayford Rough, Crayford Clock Tower and the hill-top Church of St Paulinus etc.



Clock Tower

5 Create landmarks, such as public art, to allow residents and visitors to orientate themselves within the development.



Birmingham City Centre



Kew Riverside

This section refers to Crayford's existing built form and the way in which new housing should reflect that context. It also makes suggestions for the way in which proposed building elements should be treated in design terms

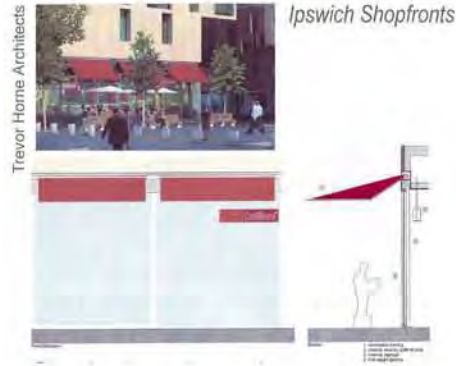
In the town centre Crayford's existing residential stock is characterised by 2 to 3 storey parades of flats, faced with red or brown brick, above ground floor shops, with pitched or flat roofs. Around the periphery can be found terraces of 2 storey red brick houses under double pitched slate roofs. Crayford's industrial legacy is conspicuous in many areas, not least in the prominent Crayford Town Hall, formerly a works canteen. The prevailing architectural character in the town centre is distinctly suburban/industrial with robust, functional, no-nonsense design, comprising red or brown brick, grey slate, pitched or flat roofs and occasionally an exposed structural frame. Along the River Cray corridor, however, the mood softens with neo-Tudor gables and a more widespread use of white render.

- 1 As recommended by CABE and the GLA, select traditional or contemporary architectural forms which echo, or respond to, the character of Crayford's town centre in general and the specific site in particular, in order to reinforce local identity.
- 2 Contemporary design should seek to reinterpret building forms and elements which are characteristic of Crayford town centre wherever possible, to provide a link with the past.

Existing Crayford building character



- 3** Architectural quality should be maintained in the design and construction of all building elements including shop fronts.



- 4** Ensure entrances are well-designed and welcoming, acting as clear visual markers of access points. Integrate storm porches and/or canopies as appropriate.



Charter Quay

- 5** Use double pitch, mono pitch and/or barrel roofs with dormer and gable features to provide skyline interest, and to assist with the collection of solar energy. Where flat roofs are appropriate they should be accessible for amenity space and designed to be attractive when viewed from higher ground.



- 6** Position windows so as to meet internal sunlight and daylight requirements and to ensure maximum passive surveillance of the external environment. Select window styles to reinforce the overall architectural vision. Consider the introduction of smaller windows on south facing elevations or brise soleil above any large expanse of window on south facing elevations to reduce summer heat gain.

- 7** Position balconies on south, east and west frontages to take advantage of natural sunlight and to create elevational variety.



Marina Place Hampton Wick

Suggestions are given in this section for the use of materials and colour in new housing design

- 1 Use sustainable traditional or modern materials to reinforce Crayford's emerging character.
- 2 The choice of materials should follow a rigorous analysis of the site's immediate town centre context to achieve the required complementary or contrasting effect.
- 3 Use colour appropriately and selectively so that new development reinforces a high quality urban context, or contrasts successfully with a poor quality environment.
- 4 Consider maintenance when selecting materials and colour.
- 5 Consider energy efficiency and sustainability when selecting building materials

The key objective in selecting appropriate materials for new development within Crayford town centre is to devise a strong, coherent palette, which will, with time, allow a distinct and more-unified urban character to emerge. Rather than importing a style from elsewhere, this character must build on the strengths in the existing townscape and for Crayford this equates to its historic residences in brown or red brick with white render under tile or slate and its industrial legacy, again in red brick with blue engineering brick banding or base and exposed painted steel under slate or metal sheeting.

Of necessity, however, this historic palette must be expanded in breadth and depth and brought up to date to reflect technological progress and current environmental considerations. Consequently, in addition to the prevalent use of brick, red and/or cream metric clay tiles within a painted structural frame can also give a strong industrial aesthetic and provide echoes of the town's industrial past. Likewise, with the choice of window frames; powder coated steel may provide a more energy efficient solution than natural timber in certain new developments. Consideration of sustainable design and renewable energy sources also demands that solar panels, photovoltaic cell tiles, brown & green roofs and cladding in the form of timber boarding from renewable sources also joins the mix. The final palette cannot be drawn too loosely, however, otherwise individual projects will continue to appear as unrelated, architectural "objets d'art", contributing little to the creation of a strong, coherent, identity that says, "This is Crayford". Whether building in a traditional or contemporary architectural idiom, the designer's first thought should be "how can my building contribute to Crayford's emerging sense of place?" The limited palette of materials identified in this Code will assist in achieving this aim.



Walls



Roofs

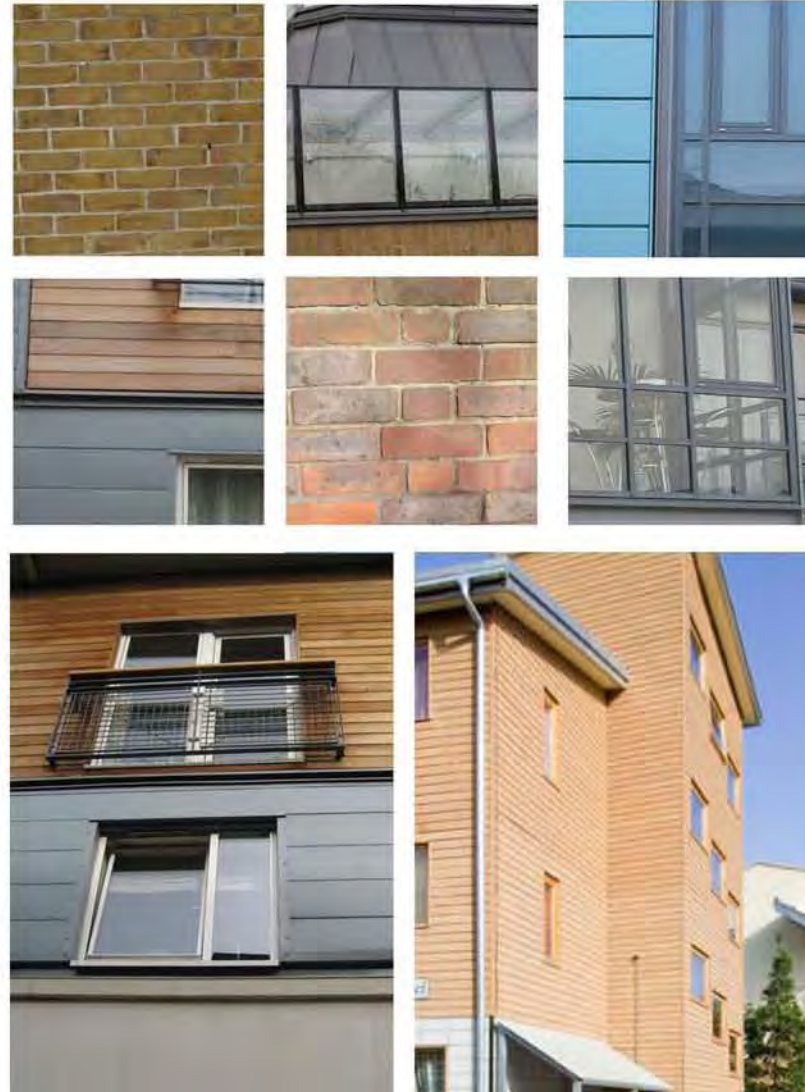


Balconies and Windows



6 Consider using a limited palette of materials and colours to “brand” new residential developments within Crayford Town Centre. An appropriate palette could comprise:

- Walls:**
 - Red brick or blue engineering brick in various bonds including stack bond.
 - Red or cream clay tile in stack bond (Ibstock Elementrix or similar)
 - Silver or colour powder-coated finish to outer skin of composite insulation panels
 - White or red coloured render
 - Cedar boarding with conspicuous vertically -aligned fixings
 - Double /triple glass panels with tinted glass
 - Glass blocks
- Roofs:**
 - Pre-weathered zinc sheeting with raised seams
 - Curved (barrel) or free form metal decking
 - Metric slate or tile
 - Photovoltaic cell tiles
 - Green roof
 - Paved or tiled roofs permitted only if amenity access provided
- Windows:**
 - Timber with natural stain, wax or paint finish
 - Extruded metal with internal insulation and powder coated finish
- Balconies:**
 - Painted steel channel structure with infill panels of woven steel mesh or cable or punched steel plate
- Shopfronts:**
 - Traditional frontages - see *Crayford Town Centre Design and Identity Guide*, March 2006
 - Contemporary Frontages - clear planar glazing
 - Recessed fabric canopy
 - Internal neon signage
 - Shopfront to be illuminated at night
 - Security grills to be internal and open mesh



Materials Palette

This page sets out Bexley's commitment to sustainable design principles in new housing (It is not intended to illustrate schemes that are acceptable aesthetically).

- 1 Minimise energy consumption with development layouts that reduce wind chill and maximise natural ventilation (passive cooling). Use land form, layout, landscaping, orientation of streets, courts and buildings and appropriate materials to maximise cooling and avoid solar gain in the summer.

- 2 Ensure developments achieve a Code for Sustainable Homes Level 3 and a BREEAM Very Good/Excellent sustainability rating in line with PPS1 *Delivering Sustainable Development* (2006) and *Renewable Energy* (2004), through the use of:
 - (a) resource and energy-efficient construction (inc. high thermal mass and green roofs, e.g. Accordia development in Cambridge).
 - (b) Community heating schemes.
 - (c) Combined heat and power (CHP) schemes, e.g. BedZed, Sutton, Surrey.
 - (d) Small-scale renewable and low carbon energy schemes (inc south facing photovoltaic cells or solar panels, e.g. BedZed, Sutton, Surrey).

To this end, ensure at least 10% of the energy consumed in new developments comes from an on site renewable energy source, a decentralised renewable source or a low carbon energy source.

- 3 Use environmentally-sustainable and locally-sourced construction materials where possible, e.g. BedZed, Sutton, Surrey. Having regard for PPS1, seek a 50% reduction in construction waste and a 30% reduction in construction costs through the use of off-site prefabrication methods and recycled construction materials, e.g. Beaufort Close, Lille Road, West London.

- 4 Provide facilities to include space for storage of recycling materials within buildings and, where appropriate, larger communal facilities in larger developments.

- 5 Utilise Sustainable Urban Drainage Systems, pay attention to the potential contribution to be gained from water harvesting from impermeable surfaces and encourage layouts that accommodate waste water (grey water) recycling, in line with the Consultation Draft Supplement to PPS1 *Planning and Climate*.

- 6 Ensure the internal layouts of houses are sufficiently flexible to cater for the changing needs of the occupants, in line with Lifetime Homes principles.

Sedum Roof



BedZed, Sutton, Surrey



Beaufort Court,



Accordia, Cambridge

This sheet explains Bexley's approach to the design of the public realm. The points are also generally relevant to the design of private and semi-private spaces, which are expected to be complimentary in standard and design.

- 1 Select street furniture, signage and lighting designs which are in keeping with colours and materials of the proposed development and as specified in *The Crayford Design and Identity Guide* (March 2006).
- 2 Consider principles of sustainability and re-use when selecting street furniture.
- 3 Where groundwater table levels permit, use permeable surface (e.g. gravel, unit paviers/setts, grass, planting beds, tree grids etc.) externally to allow the incorporation of Sustainable Urban Drainage Systems (SUDS) and reduce run off. Alternately, non-permeable surfaces will allow water harvesting, but require storage reservoirs to be incorporated into layouts.
- 4 Use permeable hard landscaping and shade tolerant plants only in areas of permanent or partial shade.
- 5 Ensure soft landscaping is appropriate for the purpose (screening, edging, amenity etc) and location (orientation, degree of exposure, proximity to car pollution etc).
- 6 Encourage planting of native species of trees and plants in preference to imports, particularly along the River Cray Corridor and Crayford Rough, to support local flora and fauna.
- 7 Consult Natural England to ensure proposals incorporate greenways and other measures required to accommodate native or resident species.



Street furniture



Landscape Screening



Surface water

PERMEABLE SURFACE