7.3 OLD GROVE PLACE

OPEN SPACE

GREEN/BLUE INFRASTRUCTURE

- Entrance Green incorporates retained tree groups, creating a mature feel and enhancing the strong sense of arrival.
- Mature trees help to visually integrate the development with the surrounding woodland context creating an attractive approach into the development.
- Woodland ground flora is proposed landscape planting scheme underneath the trees comprising a mixture of shade tolerant shrubs, ornamental grass and tall herbaceous plants to reinforce the existing woodland character and to create an attractive arrival space.

FRONT BOUNDARY TREATMENTS

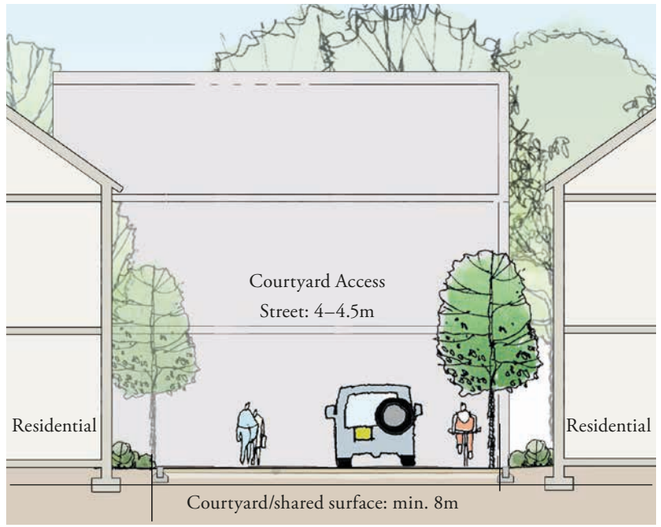
- Formal boundary treatment softened by landscaping.
- Along the eastern side of Crow Drive, the boundary will be defined by a connecting garden wall with woodland ground flora planting in front, to soften the interface with the public realm.
- Within the courtyards, planting or hard paved areas will be used to demarcate public and private space.
- Estate railings with planting behind will define the boundary on the western side of the Entrance Green, fronting Crow Drive.
- Timber posts to demarcate the edge of the Entrance Green and other public open spaces (may also incorporate lighting).

STREET CHARACTER

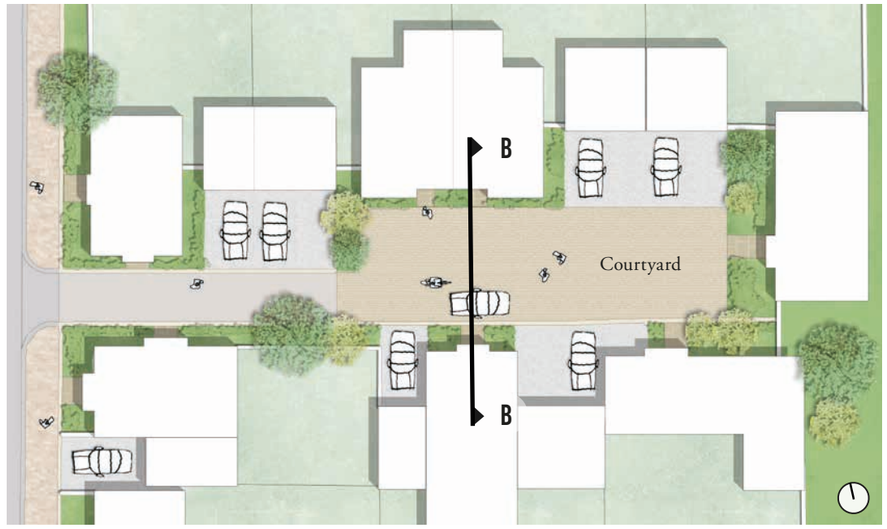
- Relatively formal along main streets with a good degree of enclosure – cars to be set back behind the building line.
- Courtyards designed as pedestrian priority with emphasis on creating welcoming shared communal spaces and reducing impact of parked cars.

Refer to Access & Movement chapter in the DAS

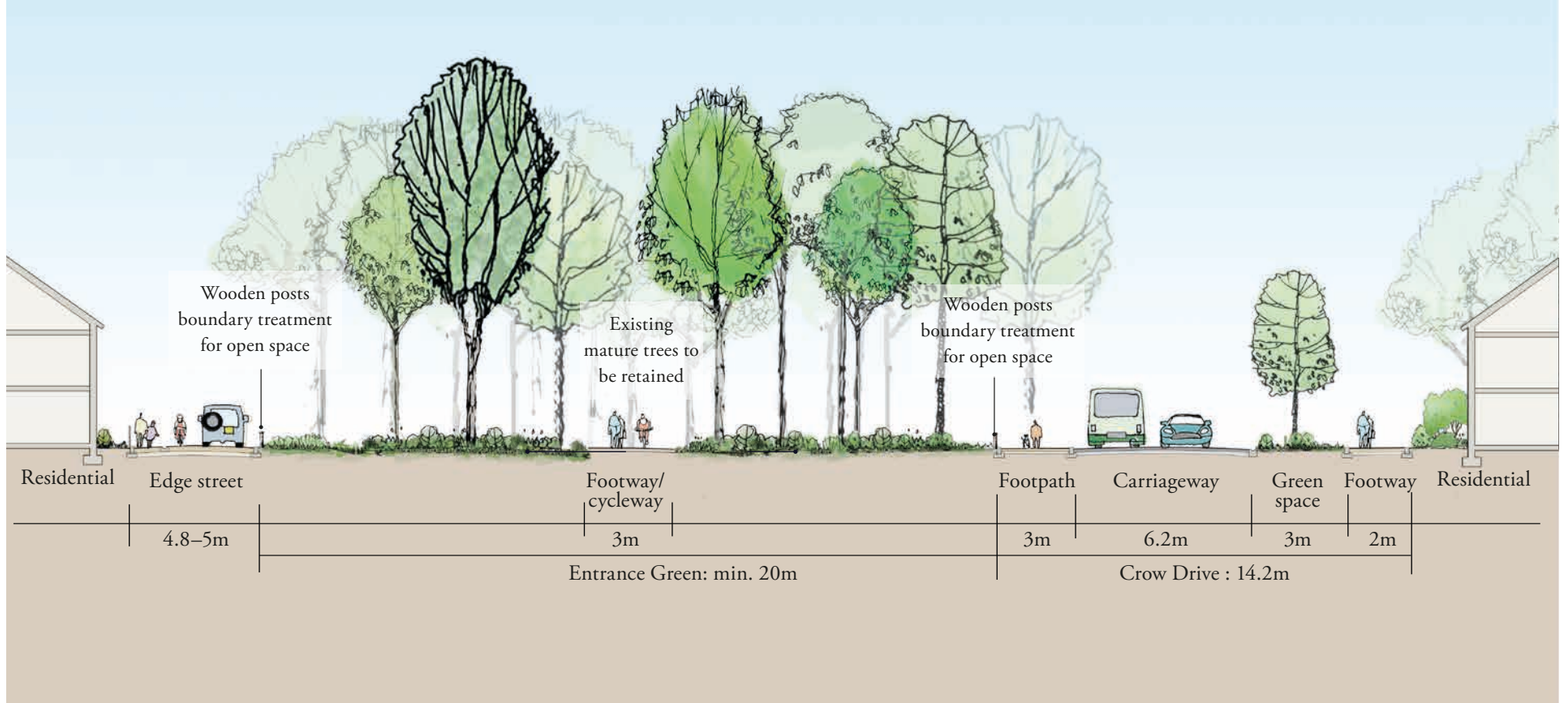
Example of footway/cycleway through entrance green – The Avenue, Saffron Walden



Illustrative Street Section BB – Courtyard



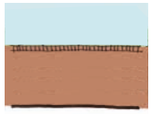
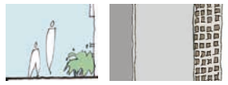
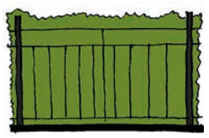
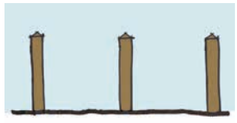
Illustrative Plan – Courtyard

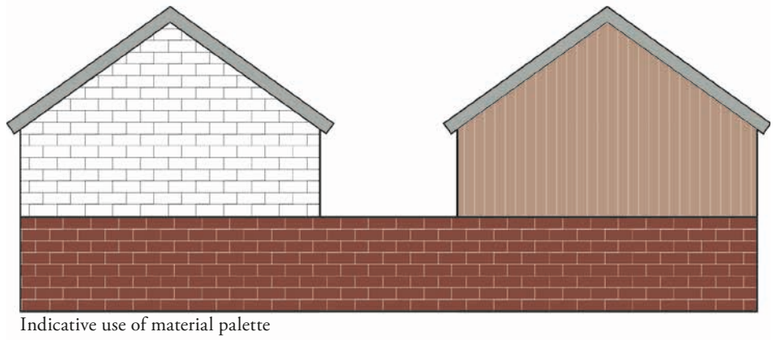


Illustrative Street Section CC – Entrance Green

ARCHITECTURAL DESIGN

FRONT BOUNDARY TREATMENTS

TYPOLOGIES	DESCRIPTION	EXAMPLES
Connecting Garden Wall 	• Total height – 2.4m max • The material must be the same material as the adjoining house • Clipped hedge of continuous species	
Planting Area Or Hard Paved 	• Height – maximum 600mm • Set back maximum 2m • Low clipped hedge with shrub planting • Suitable in the shared surface courtyard	
Estate Railing 	• Height – 1.2m max • Building set-back minimum 2m • Powder coated black metal railings with gates to match • Varied shrub planting behind	
Timber Posts 	• Height – maximum 800mm • Suitable for demarcating the edge of key public green spaces • Lighting can be incorporated into design	



Indicative use of material palette

BUILT FORM

- **Up to 2.5 storeys with occasional feature buildings up to 3 storeys** (refer to Building Heights Parameter Plan 00556I_PP02).
- Mainly large detached and semi-detached houses.
- A contemporary interpretation of the Arts and Crafts style with varied elevation composition with steep pitches arranged around a shared courtyard.
- Feature elements such as wide porches, bay windows and balconies and/or brick chimneys used to emphasise key buildings and elevations.
- Large picture windows are encouraged to create strong connections between the inside and outside of buildings.

FACING MATERIALS

- Primarily red-multi brick at base level, and a mix of white brick and timber boarding above ground level. Buff brick and dark stained timber as feature materials.
- Generally lighter colours, with darker materials used for emphasis on landmark/corner dwellings and garages.
- No change of material for connecting garden walls to create an appearance of continuity.

Primary Materials – Top

White brick

Natural coloured timber cladding

Primary Materials – Base

Red-multi brick

Secondary/Feature Materials

Pale buff brick

Dark stained timber cladding

Roof

Red tiles

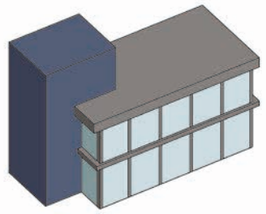
Dark grey tiles

Precedent of floating garden wall – The Avenue, Saffron Walden

Precedent of courtyard housing – The Avenue, Saffron Walden

7.4 INNOVATION & EDUCATION HUB

The Innovation & Education Hub provide a new high quality, R&D and technology focussed business and education campus in Sevenoaks. *A variety of employment opportunities* will be provided to allow people to both live and work at Fort Halstead. By providing a range of unit sizes on site, new businesses will have the space they need to *develop and grow over time.* The hub includes *a primary school* with secure grounds in close proximity to the village centre facilities.



Illustrative view of Crow Drive towards the Innovation and Education Hub

7.4 INNOVATION & EDUCATION HUB

URBAN DESIGN

KEY LAYOUT PRINCIPLES

- Primary school located at the heart of the hub, with safe crossing points to the Village Centre. It must have a secure boundary.
- The school drop-off will be accessed from the employment entrance, however will be segregated off to provide a safe child-friendly environment.
- Office, research and development and workshop uses, creating the opportunity for a varied, enterprising community of businesses.
- Relatively formal, generally orthogonal groupings of buildings, defining a series of courtyard spaces varying in both size and shape with some containing retained trees.
- Key existing buildings retained and reused.
- Buildings maximise active frontage to Crow Drive on the western edge and form an attractive entrance to the innovation and education campus.
- Retained cottages create a focus for views south along Crow Drive.

FRONTAGE CHARACTER

Dual Employment Frontage

- Buildings are dual aspect, with views to Crow Drive and existing woodlands.
- Carefully landscaped parking areas to the inward facing and side frontages of buildings.

Courtyard Employment Frontage

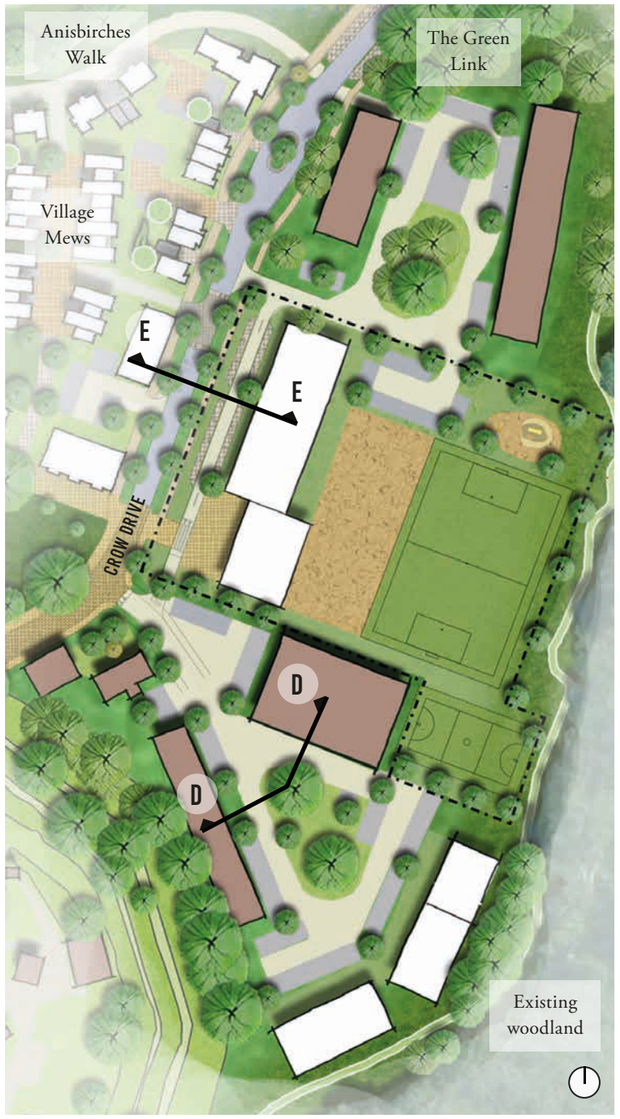
- Employment uses of varying types and size.
- Create sense of enclosure around open space.
- Located at different angles to each other to create informal-shaped block.
- Carefully landscaped shared courtyard with parking and loading areas in front of buildings.

School Frontage

- The building aligned with the existing street frontage which also provides sufficient drop-off area.
- Building frontage design to respond to the important views from the Village Green and provide sufficient level of privacy.

BOUNDARY TREATMENTS

- Hard paved and/or planted area at front of buildings providing privacy strip.
- Tall brick walls to screen service areas. Secure fence around the school site.
- Timber/metal posts used to define pedestrian zones to protect trees and planted areas within courtyard areas (may also incorporate lighting around green edges).



Eastern Hub – Illustrative Masterplan

Eastern Hub – Extract from Layout Plan

7.4 INNOVATION & EDUCATION HUB

OPEN SPACE

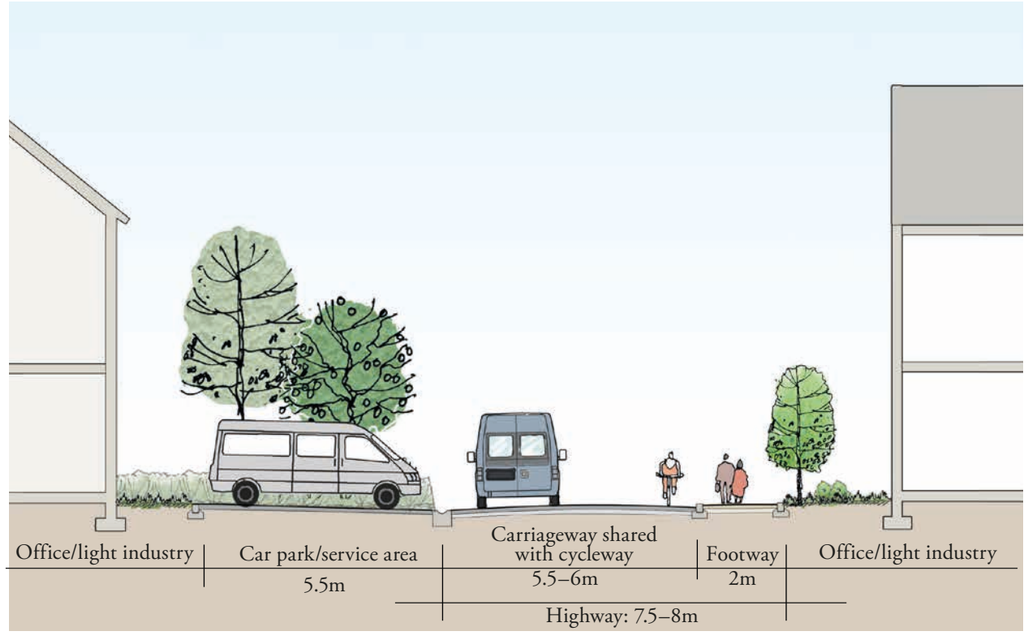
GREEN/BLUE INFRASTRUCTURE

- Single species trees set at regular intervals along Crow Drive to define strong avenue character.
- Pockets of existing trees retained and enhanced as amenity green spaces within the layout.
- Courtyard spaces sensitively landscaped to provide opportunities for social interaction and avoid over dominance of car parking.

STREET CHARACTER

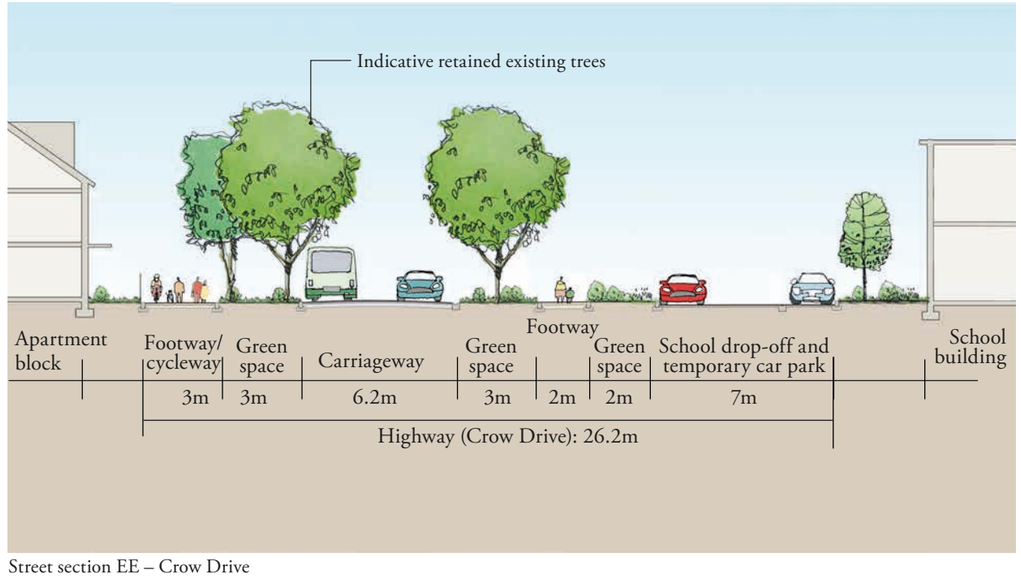
- Parking areas broken up with green spaces to accommodate landscape and/or tree planting and minimise visual impact.
- Appropriate traffic calming measures included within the access roads and parking areas to limit vehicle speeds and encourage pedestrian and child friendly environment.
- Appropriate levels of parking provided alongside secure and convenient cycle storage facilities.
- Service access for light industrial uses located to the back/side of buildings, with main building entrance for pedestrians at front, accessed from central courtyard space.
- School building to be set back from Crow Drive to provide a generous drop-off and temporary parking area.
- The size and location of service areas and waste storage facilities carefully considered and discretely placed to avoid visual intrusion and nuisance from daily use.

Refer to Access & Movement chapter in the DAS

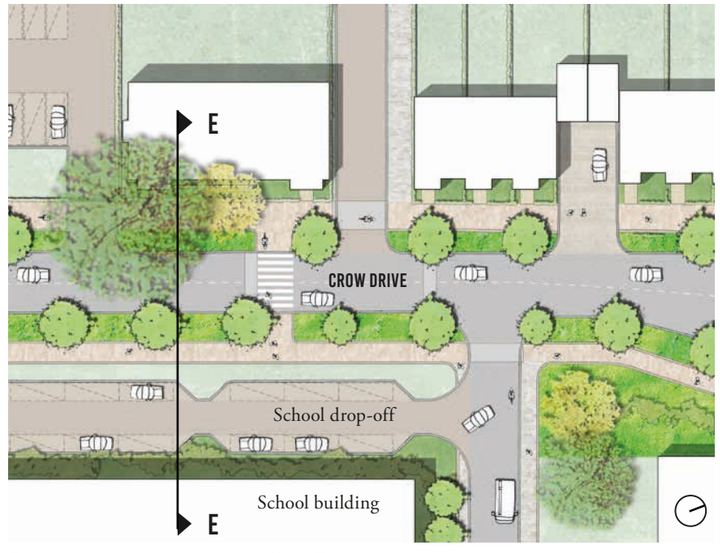


Street section DD – Street in Innovation Hub

A1 building to be retained



Street section EE – Crow Drive



Street plan – school drop-off and Crow Drive

7.4 INNOVATION & EDUCATION HUB

ARCHITECTURAL DESIGN

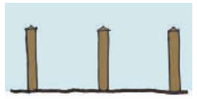
BUILT FORM

- Up to 3 storeys in height (refer to Building Heights Parameter Plan 0055bI-PP02).
- Simple forms, inspired by large rural buildings, with contemporary detailing.
- Massing and roof form carefully controlled buildings appearing over bulky.
- Sensitive retained buildings as well as new residential buildings on the other side of Crow Drive.

FACING MATERIALS

- Predominantly dark coloured metal cladding and large glazed areas, particularly at building entrances.

FRONT BOUNDARY TREATMENTS

TYPOLOGIES	DESCRIPTION	EXAMPLES
Planted Area or Hard Paving 	• Height – maximum 600mm • Set back maximum 2m • Low clipped hedge with shrub planting • Suitable along the Mews shared surfaced streets	
Timber Post 	• Height – maximum 800mm • Suitable for demarcating the edge of key public green spaces • Lighting can be incorporated into design	

Primary Materials

Dark grey or black metal cladding

Large areas of glazing

Secondary/Feature Materials

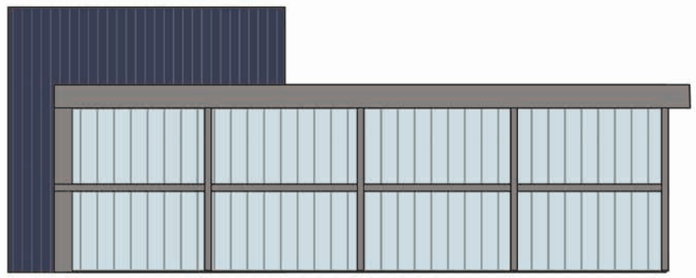
Timber cladding

Dark coloured weatherboarding

Roof

Flat roofs

Solar PV tiles or panels



Indicative use of material palette

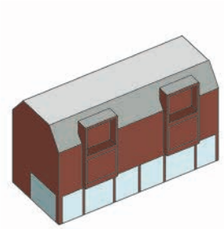
Office/R&D buildings at Alconbury Weald, Huntingdon

Innovation Hub at Alconbury Weald, Huntingdon

7.5 VILLAGE CENTRE

The Village Centre forms the beating *heart of the development* where both employment and community uses come together. It sits to the north of the Fort, encompasses the retained and refurbished 'Q' buildings as well as providing a new village green to the east of Penney Road. The village centre will provide a *range of uses and facilities* for the new community including a food store, café, community hub (with space for a GP consulting room), a gym, flexible work space, a nursery as well as space which can accommodate older people's housing.

Illustrative view looking towards the Village Green



Caption

7.5 VILLAGE CENTRE

URBAN DESIGN

KEY LAYOUT PRINCIPLES

- Retain and refurbish existing buildings of historic and architectural interest as the key feature for the Village Centre.
- New buildings to the west of Grade II listed building Q14 should have full 3 storeys, with the 4th storey set back in order to respect the setting and protect the view of its western elevation from the Fort (more detailed guidance can be found in the Village Centre Design Guide).
- Maximise active frontage to all areas of public realm and minimise gaps between buildings to ensure good degree of enclosure.
- Buildings at key locations within the plan, such as at gateways and buildings terminating vistas, are defined as feature buildings. These should have a distinct character reflecting the importance of their location and proximity to existing historic buildings, whilst also providing a means of effective wayfinding.
- Building frontages facing the Village Square and Village Green should be distinctive in both form and silhouette, providing an appropriate back-drop to these important spaces that lie at the heart of the new community.
- Potential older people's housing area to be located adjacent to the Village Centre, with potential communal facilities fronting the Village Centre.

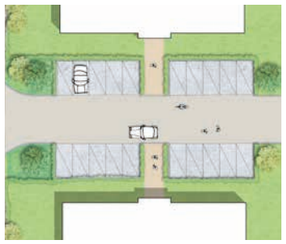
FRONTAGE CHARACTER

Mixed-Use and Employment Frontage

- Continuous, formal frontage facing onto key public spaces.
- Consists of **mixed-use** and **office** blocks with a consistent building line and where possible with gaps only for access to parking and pedestrian routes.
- It is encouraged that all buildings are dual aspect to provide sufficient overlooking onto public space and shared parking areas.
- Similar setback to create a strong rhythm and continuous building line.
- Separate buildings entrances for residential and other uses to be located on the outward-facing elevation
- Unified roof profile.
- Car parking typologies: **communal, on-street visitor.**

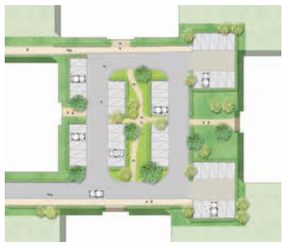
CAR PARKING TYPOLOGIES

TYPOLOGIES	DESCRIPTION
Communal	• Communal parking areas are used predominately for apartment blocks and employment buildings



For Residential buildings:

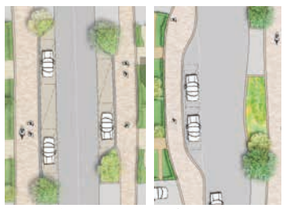
- Parking areas will be located to the rear of buildings, away from key public spaces and frontages.
- Residential parking areas will contain no more than 20 parking bays.
- There should be no more than 5 spaces in a row without landscaping between them.
- Walls should be used to clearly define the entrances to rear parking courts as well as screen parked cars from the street and create a good sense of enclosure.
- Parking areas will be overlooked and appropriately lit at night



For Mixed-Use and Employment buildings:

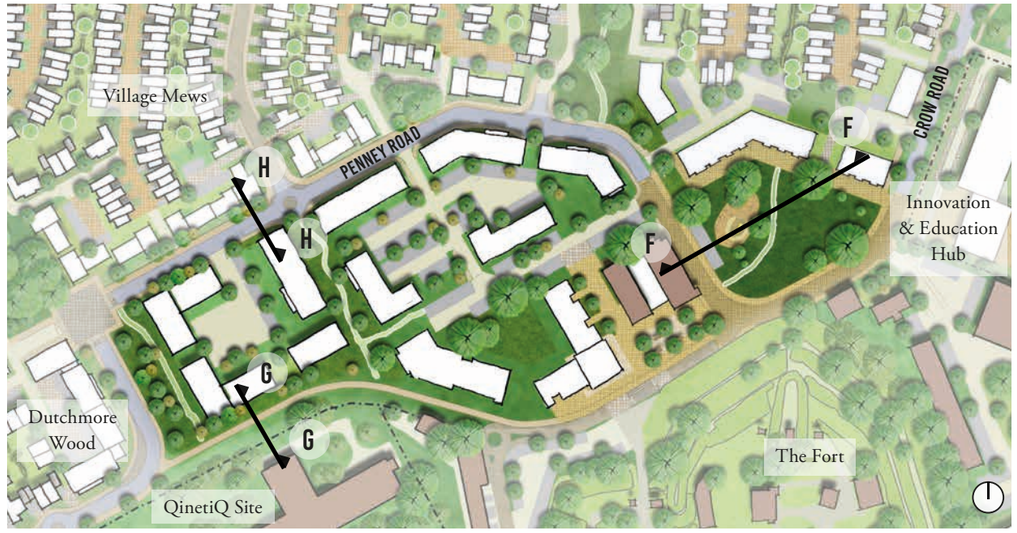
- A larger number of cars can be served from a single parking area, but it would need to be sensitively designed and considered on a case-by-case basis.
- No more than 6 spaces in a row without landscaping
- The layout of parking to be formed to create a rhythm to the landscape
- Parking areas to be positioned behind buildings and away from key frontages to avoid dominating public open spaces with vehicles.

On-Street Visitor Parking

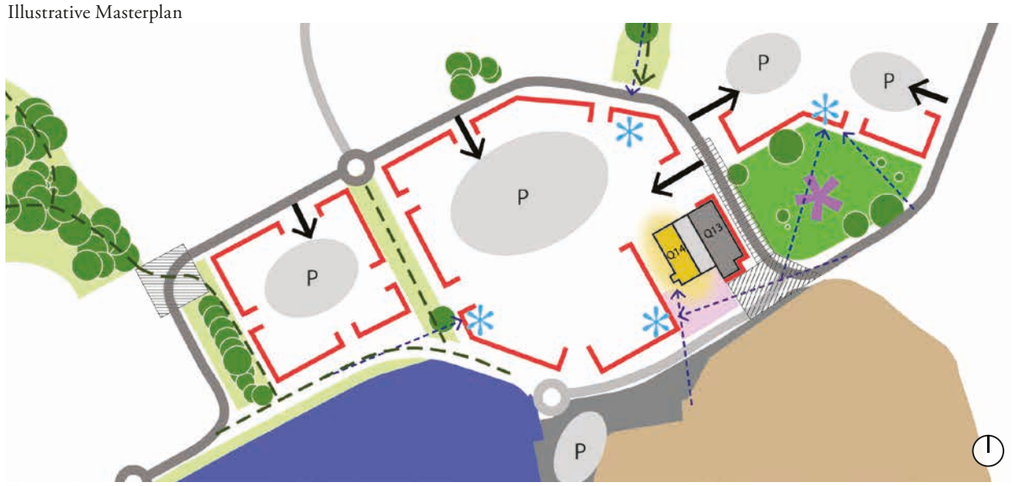


Formal Informal

- Designed to prevent parking on verges and pavements
- Max. 3 parallel parking bays without landscaping between them
- Marked bays should be a minimum 2.4m wide x 6m long



Illustrative Masterplan



Extract from Layout Plan

Key

- Important view
- Mixed-Use and Employment Frontage
- Feature building
- Indicative access onto development parcel
- Shared footway/cycleway
- Traffic calming junction measure
- P — Indicative shared courtyard with car parking
- Existing tree to be retained where possible
- Grade II listed building and setting
- Existing building to be retained
- Village Square
- Village Green
- Indicative location of LEAP

OPEN SPACE

GREEN/BLUE INFRASTRUCTURE

- Create a clear sequence of open spaces from the Fort to the Green Link, including the Village Square and Village Green, with continuous shared footway/cycleway with a minimum width of 3m wide.
- The Village Green should have some formality in its layout, responding to the surrounding built environment, but also reflecting the more naturalistic character typical of the commons and greens found within the local area.
- Outdoor facilities: an equipped play area to be provided in the Village Green.
- A minimum of 5m green space should be provided between QinetiQ's fence line and proposed footway/cycleway.

STREET CHARACTER

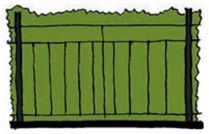
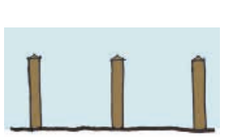
- General character: relatively formal with a good degree of enclosure.
- Vehicular accesses onto the mixed use and employment areas should be located from Penney Road and Lennard Jones Road.

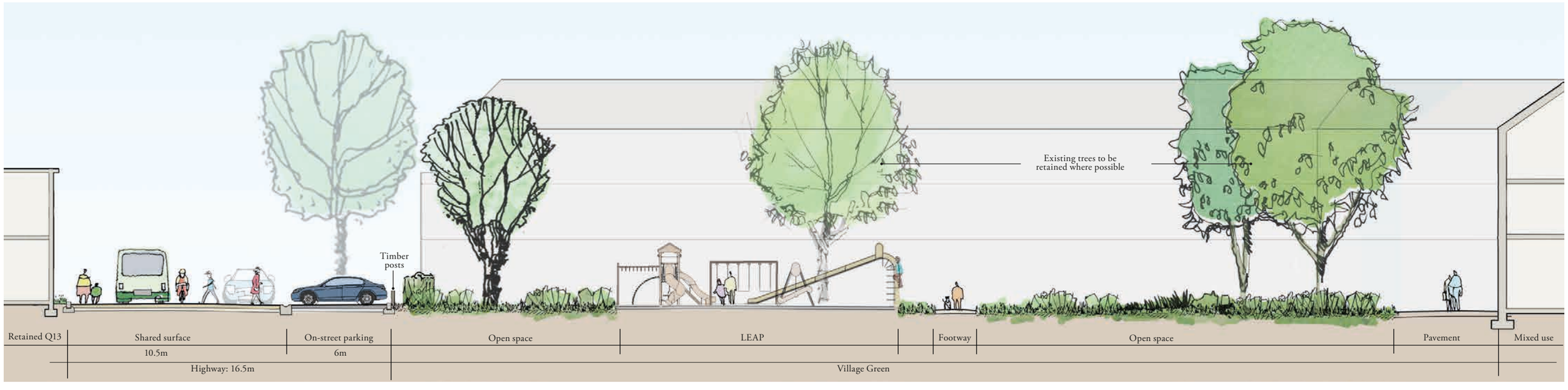
FRONT BOUNDARY TREATMENTS

- Railing on low wall with hedge.
- No boundary, set back planted area or low wall for mixed use Village Centre and Employment.
- Wooden posts for Village Green.
- 1m service zone minimum clear of vegetation is required between the QinetiQ's demise and fence line. QinetiQ's fence line should sit within their demise.

Refer to Access & Movement chapter in the DAS

FRONT BOUNDARY TREATMENTS

TYPOLOGIES	DESCRIPTION	EXAMPLES
Low Wall/Railing on Low Wall With Hedge 	• Total height – 1.2m max • Powder coated black metal railings with gates to match • Clipped native hedge of continuous species • This boundary treatment is appropriate for the Innovation Quarter and Mixed-Use areas	
Planted Area Or Hard Paving 	• Height – maximum 600mm • Set back maximum 2m • Low clipped hedge with shrub planting • Suitable along the shared surfaced streets in the mews	
Timber Post 	• Height – maximum 800mm • Suitable for demarcating the edge of key public green spaces • Lighting can be incorporated into design	

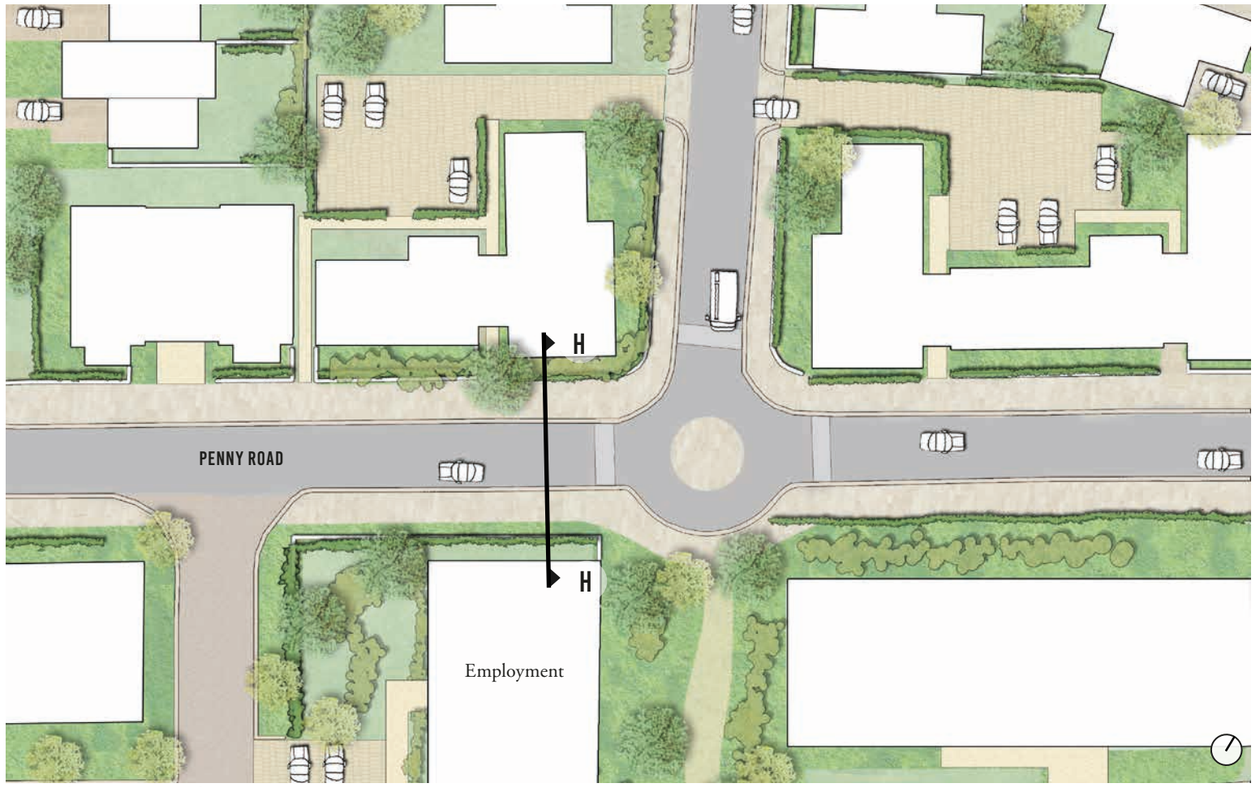


Street Section FF – Village Green

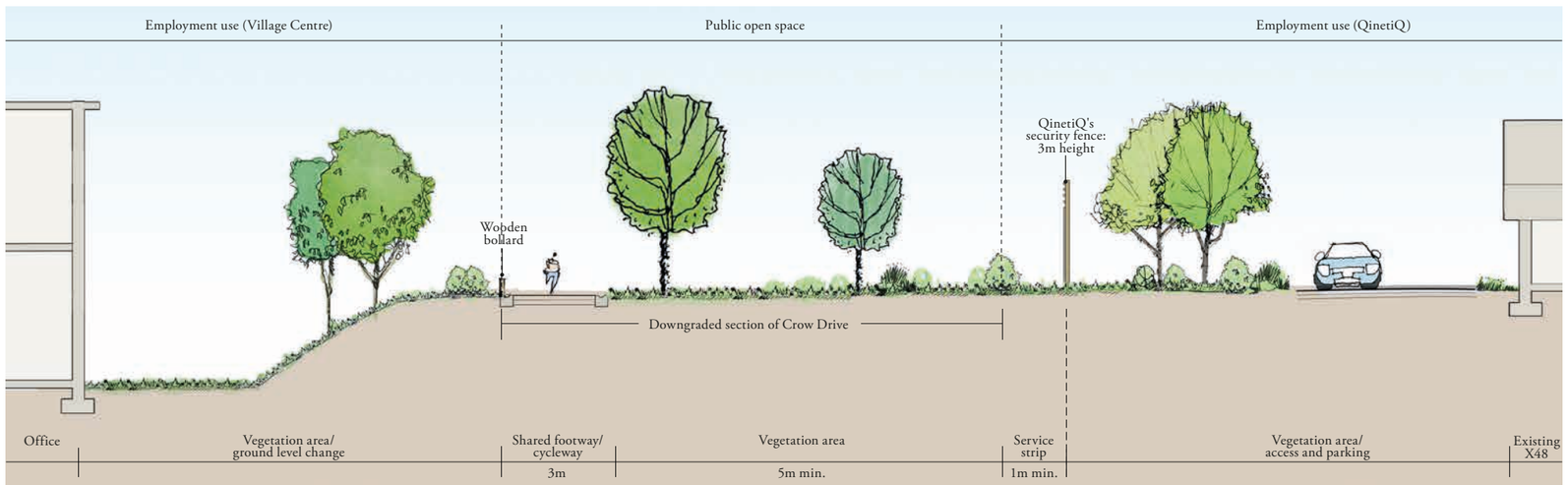
7.5 VILLAGE CENTRE

OPEN SPACE

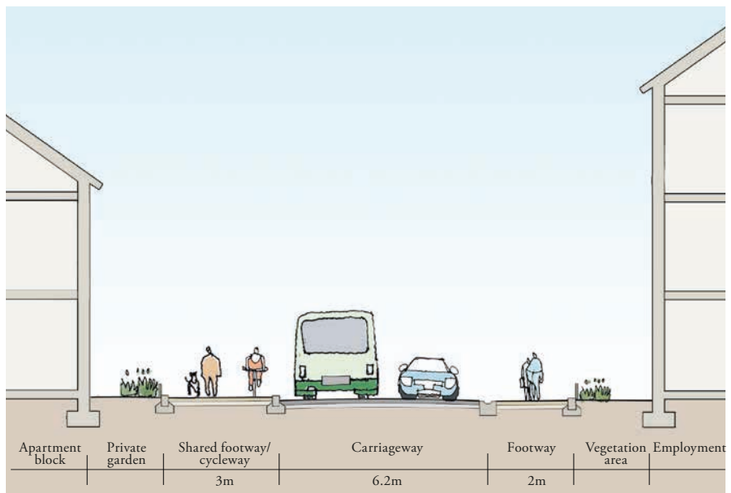
Illustrative Masterplan



Street plan – Penny Road



Street section GG – Crow Drive and interface with QinetiQ



Street Section HH – Penney Road

ARCHITECTURAL DESIGN

BUILT FORM

- 3–4 storeys, with mixed-use area up to 4 storeys; employment area and residential area up to 3 storeys. (Refer to Building Heights Plan 00556I-PP02).

ARCHITECTURAL CHARACTER

- High-quality contemporary design, taking inspiration from the retained buildings in the Village Centre.
- Buildings adjacent to retained buildings should have flat roofs. Remaining buildings in the village centre should have a mixture of pitched and flat roofs.
- Both the residential and employment buildings in the village centre should be consistent in architectural style and language.

MATERIALS

- Red brick and red multi-brick as primary material, secondary use of white painted bricks and timber cladding. Red clay tiles and greys tiles to be used for pitched roofs.
- Crittall style windows on the new buildings and crittall style windows with mandatory T-shape glazing bars on the refurbished buildings in the Village Centre.

Primary Materials


Red Brick


Red-multi brick

Secondary/Feature Materials


White painted brick


Timber cladding

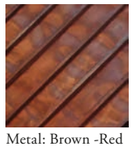
Roof


Red tiles


Grey slate tiles

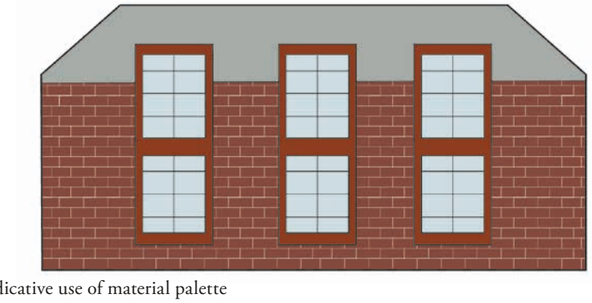
Windows


Crittall with T-shaped profile


Metal: Brown -Red cladding

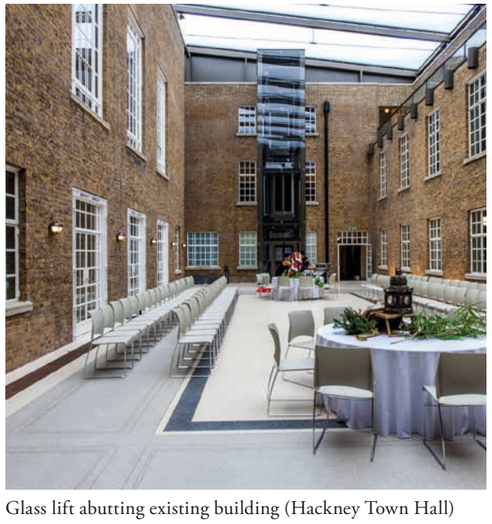

Apartments with ground floor mixed-use (Great Kneighton, Cambridge)

Precedent image of refurbished listed building (Barry, Wales)


Indicative use of material palette


Older people's living accommodation (Lenton Flats, Nottingham)


Precedent image of ground floor use (Nieuwe Park, Rozenburgschool)

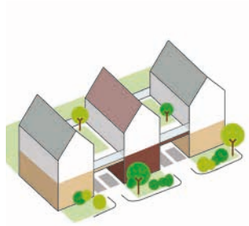

Glass lift abutting existing building (Hackney Town Hall)

7.6 VILLAGE MEWS

Village Mews *forms the heart of the residential neighbourhood,* sitting immediately to the north of the Village Centre. A series of intimate shared-surface streets lined with link-detached homes form *a number of attractive routes for pedestrians and cyclists,* while discouraging vehicles, creating *a family friendly neighbourhood* with easy access to the Green Link and other amenities.

Indicative density range: 50–60 dph (refer to indicative density plan in Chapter 6.2)

Illustrative view along shared-surface Mews Street showing carefully balanced allocation of space between pedestrian, landscape and vehicular requirements.



7.6 VILLAGE MEWS

URBAN DESIGN

KEY LAYOUT PRINCIPLES

- Similarly sized, linked homes fronting onto a series of intimate shared-surface streets running north-south through the parcel.
- A small number of detached and semi-detached homes creating more informal frontage to public green space.
- Small apartment blocks along the southern edge of the parcel create a sensitive transition to the larger blocks in the Village Centre.
- Level changes sensitively incorporated into the layout through careful arrangement of homes and well-considered retaining walls within back gardens.
- Feature buildings with special architectural treatment to be used in key locations.

FRONTAGE CHARACTER

Regular Frontage

- Consists mainly of **terraced dwellings** or **apartment blocks** with **detached units** at key locations (e.g. on corners).
- Small spacing between buildings and similar setback to create strong building line along the primary vehicular route.
- Car parking typologies: **communal/shared courtyard.**

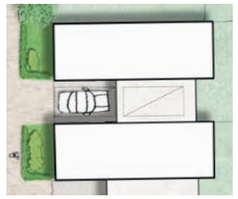
Stepped Frontage

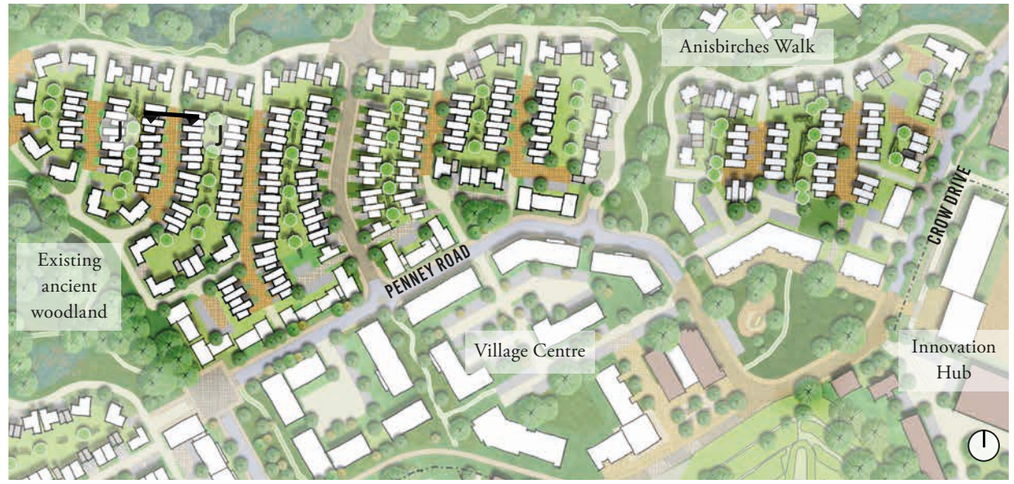
- Consists of predominantly **detached and semi-detached** houses.
- Building line steps to create visual interest and variation in the street scene.
- Varied roof profile.
- Car parking typologies: **on-plot corner, on-plot between buildings.**

Mews Frontage

- Strong repetition of **terraced dwellings** of similar forms.
- Minimal spacing between homes to create a high degree of enclosure.
- Similar setback to create strong rhythm and building line.
- Unified roof profile.
- Car parking typologies: **on-plot between dwellings, on-street visitor parking.**

CAR PARKING TYPOLOGIES

TYPOLOGIES	DESCRIPTION
On-Plot Corner 	• Located around the corner from main dwelling frontage • Usually serves individual dwelling on corner plot, but may serve more than one (e.g. a terrace of houses) providing up to a maximum of 4 spaces • Parking bay(s) enclosed by brick garden wall
On-Plot Between Dwellings 	• Parking spaces must be set behind the building line (an exception may be made where the dwelling is set back from the back of footway by more than 4m) • Parking spaces will be provided in either car ports or integral garages • Along the mews streets, structures to accommodate parking spaces must be attached or linked to the property, with the exception of housing fronting onto green space, where detached garages may be permitted • No more than two cars allowed in tandem parking
Communal/ Shared Courtyard 	• Communal parking areas are used predominately for apartment blocks • Parking areas will contain no more than 20 parking bays. • There should be no more than 5 spaces in a row without landscaping between. • At the entrance(s) to rear parking courts, walls should be used to clearly define the entrance, screen parked cars from the street and create a good sense of enclosure.
On-Street Visitor Parking 	• Designed to prevent parking on verges and pavements • Max. 3 parallel parking bays without landscaping between • Marked bays should be a minimum 2.4m wide x 6m long



Illustrative Masterplan

Extract from Layout Plan

7.6 VILLAGE MEWS

OPEN SPACE

GREEN/BLUE INFRASTRUCTURE

- Street trees and incidental landscaping planted regularly within the street scene.
- No significant green spaces within development parcel – access to surrounding green areas prioritised.

FRONT BOUNDARY TREATMENTS

- Generally narrow, hard paved or planted area at front of homes providing privacy strip.
- Timber posts to define public open spaces (may also incorporate lighting around green edges).
- Low native hedge with planting behind.

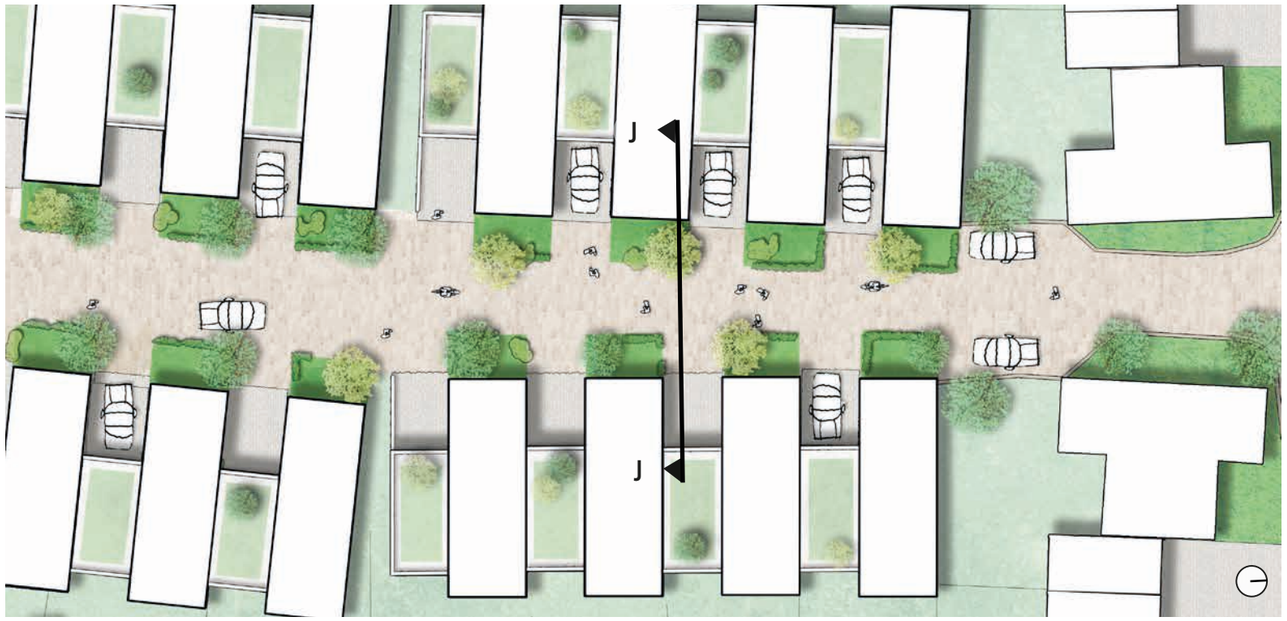
STREET CHARACTER

- Mews streets designed to naturally slow traffic and encourage social interaction by their restricted width (carriageway max. 5m wide), attractive shared-surface character and inclusion of street trees/landscaped areas.
- Vehicles parked in between homes, behind building line, typically in car ports.
- Limited on-street parking for visitors only.
- No white lines to demarcate carriageway

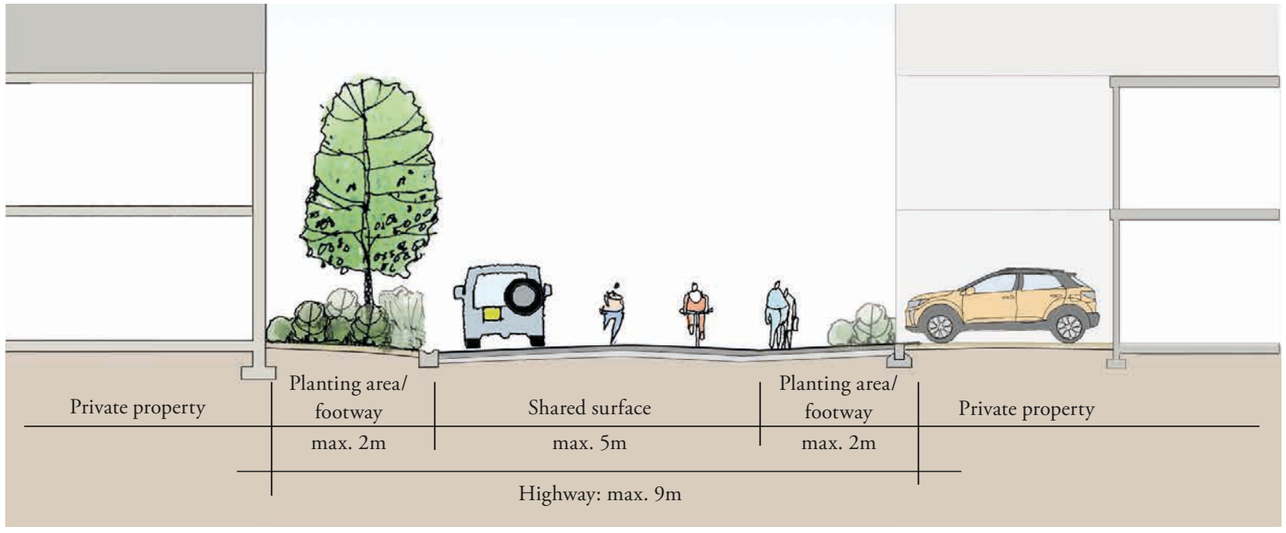
Refer to Access & Movement chapter in the DAS

FRONT BOUNDARY TREATMENTS

TYPOLOGIES	DESCRIPTION	EXAMPLES
No Boundary 	• Plot boundary defined by distinct change of surface material (e.g. cobbles) or by the edge of private lawn in front of the building	
Planting Area or Hard Paved  	• Height – maximum 600mm • Set back maximum 2m • Low clipped hedge with shrub planting • Suitable along the Mews shared surfaced streets	
Timber Posts 	• Height – maximum 800mm • Suitable for demarcating the edge of key public green spaces • Lighting can be incorporated into design	



Illustrative street plan – Mews street



Illustrative street section JJ – Mews street

ARCHITECTURAL DESIGN

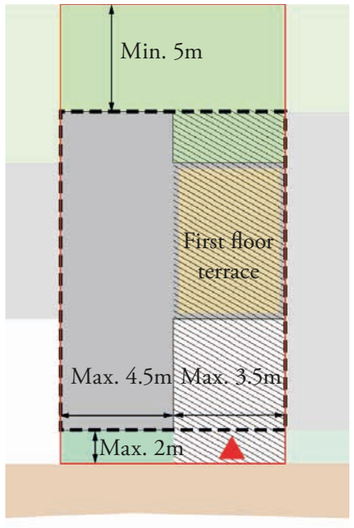
BUILT FORM

- Simple architectural forms and limited materials with repeated rhythm gives the area a strong character.
- More urban forms with clean lines, softened by subtle textures and layering of façade elements.
- Houses of up to 3 storeys, and 3 storey apartments on southern edge.
- Narrow fronted house types with street-facing gables prevalent, plotted as linked or semi-detached.
- On the mews street, street-facing gables will be no wider than 4.5m and parking zones a maximum of 3.5m.
- Along the mews streets, smaller private rear gardens are encouraged with minimum depths of 5m.
- Where smaller private rear gardens are proposed (less than 8m deep) an alternative private amenity space will need to be included i.e. first floor terrace.
- Where larger private rear gardens are proposed (more than 8m deep), more conventional house types may be utilised.

FACING MATERIALS

- White brick for the top, and red multi-bricks and pale buff bricks used as base materials, with lighter materials used in narrower streets to reflect more light.

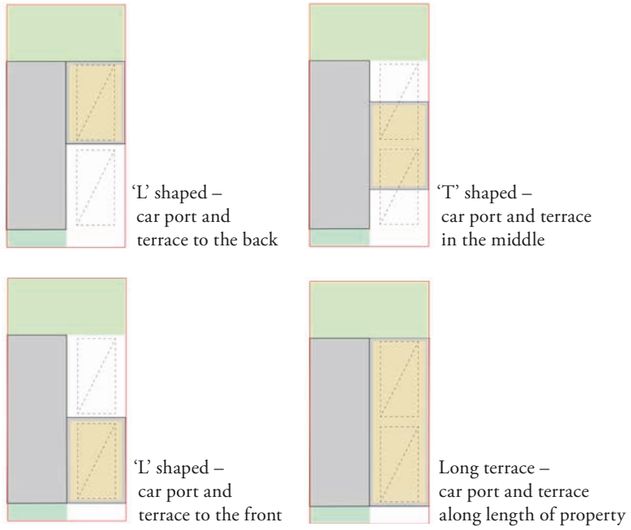
NARROW-FRONTED PLOT LAYOUT EXAMPLE



Key

- Indicative plot boundary
- Indicative build zone
- Indicative building footprint
- On-plot parking/garage zone
- Front/side garden as defensible space (private amenity space)
- Back/side garden (private amenity space)
- First floor terrace (private amenity space)
- Vehicular access

ALTERNATIVE PLOT LAYOUT OPTIONS



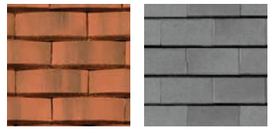
Primary Materials – Top

White brick

Primary Materials – Base

Pale buff brick | Red-multi brick

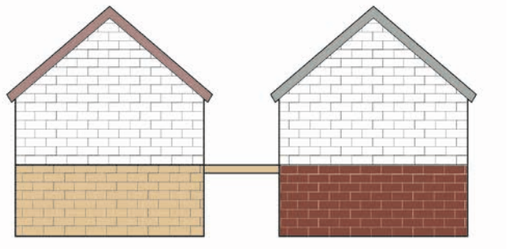
Roof



Red tiles | Grey slate tiles

Precedent of visitor parking on a Mews street (Denwenthorpe)

Precedent image showing a narrow fronted housetype with first floor terrace (Newhall)



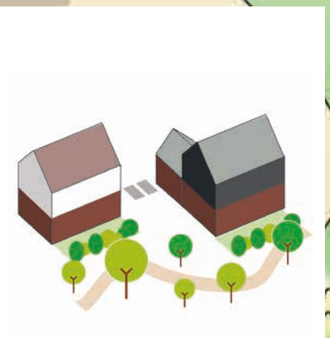
Indicative use of material palette

Precedent of lighter materials used to reflect more light (Lavenham, Housing by Project Orange).

7.7 ANISBIRCHES WALK

Anisbirches Walk is the central green link through the site, connecting and drawing in the two ancient woodland edges at either end. This Green Link provides the setting for the main east–west pedestrian and cycle route through the village, with houses nestled within the existing mature landscape. A staggered arrangement of built form on either side of the Green Link creates an *interesting and varied* frontage while providing good levels of passive surveillance to ensure *a safe and welcoming space* at all times.

Indicative density range: 35–45 dph (refer to indicative density plan in Chapter 6.2)



Illustrative view along green link showing shared pedestrian/cycle route

URBAN DESIGN

KEY LAYOUT PRINCIPLES

- Dwellings of various sizes forming an active frontage to the main east-west Green Link.
- Predominantly large detached houses on the northern side, arranged at a variety of angles in a consciously informal manner and with no vehicular access along the green space.
- Generally smaller, semi-detached homes on the southern side, arranged in a more ordered way and forming frontage to a series of private drives along the green edge.
- Homes along the northern edged are accessed via shared courtyards at the rear.

FRONTAGE CHARACTER

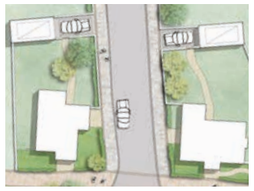
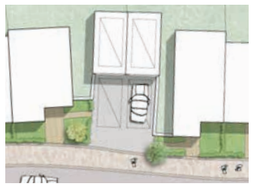
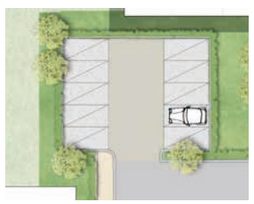
Staggered Frontage

- **Detached** dwellings of different form
- A mix of wider and narrower gaps between buildings reinforces informal character of the setting.
- Varying set back from the public realm creates organic frontage line.
- Buildings positioned at different angles to the space or route they face, and to each other.
- Optimising views of green space.
- Car parking typologies: **on-plot corner; shared courtyard; rear parking courts (for apartments only).**

Stepped Frontage

- Predominantly **semi-detached** with **detached** dwellings in key locations (e.g. at corners, location terminating views from green space).
- Building line steps to create visual interest and variation in the street scene.
- Varied roof profile.
- Active house frontages overlook the Green Link and provide natural surveillance.
- Car parking typologies: **on-plot corner; on-plot between dwellings; rear parking courts (for apartments only).**

CAR PARKING TYPOLOGIES

TYPOLOGIES	DESCRIPTION
On-Plot Corner 	• Located around the corner from main dwelling frontage • Usually serves individual dwelling on corner plot, but may serve more than one (e.g. a terrace of houses) providing up to a maximum of 4 spaces • Parking bay(s) enclosed by brick garden wall
On-Plot Between Dwellings 	• Parking spaces must be set behind the building line (an exception may be made where the dwelling is set back from the back of footway by more than 4m) • Parking spaces will be provided in either car ports or integral garages • Along the mews streets, structures to accommodate parking spaces must be attached or linked to the property, with the expectation of housing fronting onto green space, where detached garages may be permitted • No more than two cars allowed in tandem parking
Shared Courtyard Parking 	• Parking to be accommodated in allocated spaces, car ports or detached car barns • Parking spaces to be accessed from the shared courtyard space • Max 4 spaces in a row separated by landscape • No more than 6 spaces in a single car port or barn structure • Natural surveillance required from adjacent dwellings • Flat over garage (FOG) house types are encouraged with this parking arrangement to provide natural surveillance
Rear Parking Courts 	• Communal parking areas are used predominately for apartment blocks • Parking areas will contain no more than 10 parking bays. • There should be no more than 5 spaces in a row without landscaping between. • At the entrance(s) to rear parking courts, walls should be used to clearly define the entrance, screen parked cars from the street and create a good sense of enclosure.

Illustrative Masterplan

Extract from Layout Plan

- Feature building
- Indicative access onto development parcel
- Indicative internal street
- Indicative edge street
- Indicative mews street
- Shared footway/cycleway
- Existing trees to be retained where possible
- Indicative location of LEAP
- Indicative location of MUGA
- Stepped frontage
- Staggered frontage

7.7 ANISBIRCHES WALK

OPEN SPACE

GREEN/BLUE INFRASTRUCTURE

- Green Link incorporates retained mature trees as focal points, helping to create a mature landscape from the start.
- Planting has an informal, semi-natural character providing a soft transition to the built form.
- Naturalistic play area included within the space encourages social interaction.
- Green Link is the key shared pedestrian/cycle route through the village, providing good, off-road connections to the Village Green, Village Centre and the Fort.

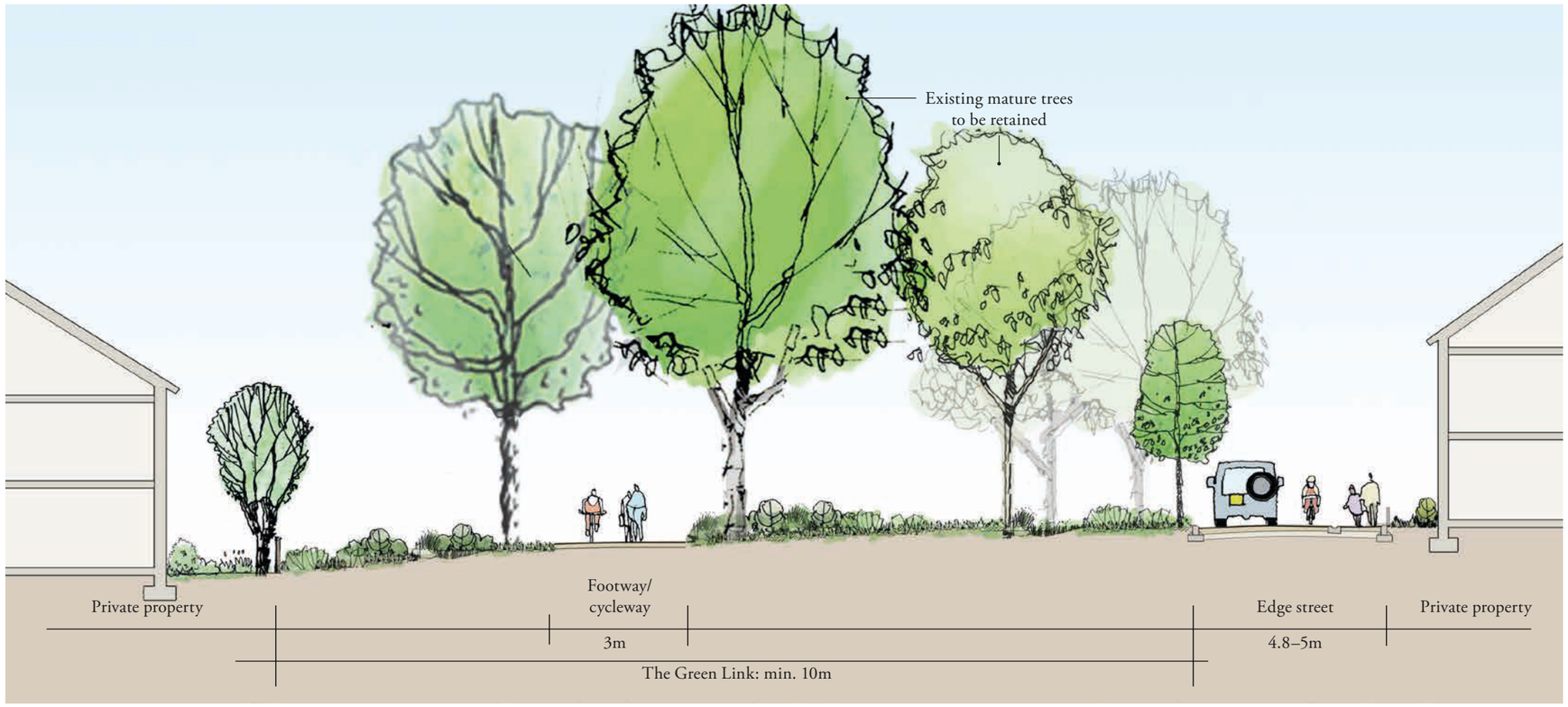
STREET CHARACTER

- No vehicular access along the northern edge of the Green Link. Access to homes to be provided from the north.
- Informal, edge streets on the southern edge of the space provide limited access to homes without through traffic to limit impact on quality of space.
- Vehicular access to green areas to be restricted through careful landscaping and appropriate use of timber bollards.

FRONT BOUNDARY TREATMENTS

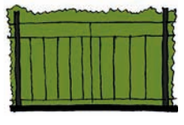
- Generally open and naturalistic.
- Boundary defined by estate railings and/or native hedge to provide privacy and simultaneously maintain openness.
- Timber posts used to protect edges of Green Link from encroachment of vehicles (may also incorporate lighting).
- Low woodland ground flora and shrub planting, planted in drifts beneath trees to create strong naturalistic green setting.

Refer to Access & Movement chapter in the DAS

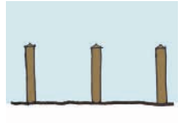


Section KK – The Green Link

FRONT BOUNDARY TREATMENTS

TYPOLOGIES	DESCRIPTION	EXAMPLES
Low Hedge / Estate railing 	• Height – 0.9m–1.2m max • Building set-back minimum 2m • Clipped native hedge of continuous species • Post and wire fence integral to the hedge while it establishes • Powder coated black metal railings with gates to match	
No Boundary 	• Plot boundary defined by distinct change of surface material (e.g. cobbles) or by the edge of private lawn in front of the building	

FRONT BOUNDARY TREATMENTS

TYPOLOGIES	DESCRIPTION	EXAMPLES
Planting Area 	• Height – maximum 600mm • Set back maximum 2m • Clipped native hedge with shrub planting • Suitable along the mews shared surfaced streets	
Timber Posts 	• Height – maximum 800mm • Suitable for demarcating the edge of key public green spaces • Lighting can be incorporate into design	

ARCHITECTURAL DESIGN

BUILT FORM

- **Up to 2.5 to 3 storey homes to the north of the Green Link, up to 3 storey homes to the south** (refer to Building Heights Parameter Plan 00556I_PP02).
- High-quality, contemporary homes with generous balconies and large areas of glazing overlooking the Green Link.
- Mainly detached and semi-detached dwellings.
- Occasional, small villa-style apartment buildings on key corners.

FACING MATERIALS

- Predominantly red bricks with dark stained or white painted timber cladding above ground floor, to emphasise horizontality, with special materials used to highlight feature buildings.

Primary Materials – Top

Dark stained timber cladding

Naturally stained or white painted timber cladding

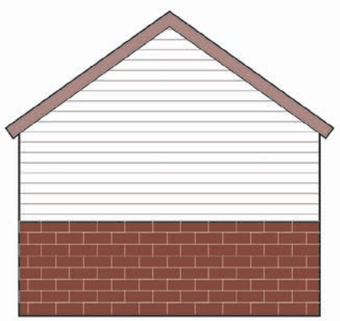
Primary Materials – Base

Red-multi brick

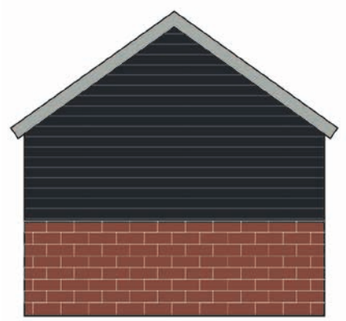
Roof

Red tiles

Dark grey tiles



Indicative use of material palette

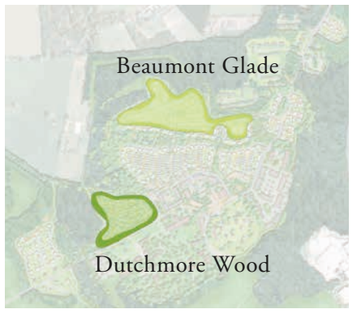


Precedent for Green Link fronted house type (Alford Road, Cranleigh)

Precedent for Green Link fronted house type (Alford Road, Cranleigh)

Precedent for Green Link fronted house type (Guildford Barracks, Surrey)

7.8 BEAUMONT GLADE & DUTCHMORE WOOD



The character of Beaumont Glade and Dutchmore Wood is defined by their role in *creating a transition* between the ancient woodland along their northern and western edges and the areas of higher density housing towards the Village Centre. Both display an *informal, organic character* at the woodland edges and a more *formal character towards the centre* and alongside key vehicular routes, with Dutchmore Wood incorporating a number of small apartment blocks along its southern edge where it is closest to the Village Centre.

Indicative density range: 20–35 dph for Beaumont Glade, and 50dph for Dutchmore Wood (refer to indicative density plan in Chapter 6.2)

Illustrative view looking towards Beaumont Glade from woodland edge

7.8 BEAUMONT GLADE & DUTCHMORE WOOD

URBAN DESIGN

KEY LAYOUT PRINCIPLES

- Large detached and semi-detached homes fronting onto ancient woodland along northern edges of the parcels.
- Smaller link-detached and semi-detached homes form regular frontage to central streets. Small apartment blocks define key street corners in Dutchmore Woods.
- In Beaumont Glade, groups of mews style houses around a series of north-south shared-surface streets with a more intimate character create views out towards the woodland edge and the Green Link.
- In Dutchmore Woods, semi-detached and terraced homes group around shared-surface streets and spaces in the centre of the parcel.
- Level changes sensitively incorporated into the layout through careful arrangement of homes and well-considered retaining walls within back gardens.

FRONTAGE CHARACTER

Regular Frontage

- **Semi-detached** dwellings along primary vehicular routes with **apartment blocks and large detached units** in key locations (e.g. at corners).
- Consistent typology and arrangement.
- Aligned with the street frontage to create strong building line along the primary vehicular routes, with some exceptions to define areas of special character.
- Minimal gaps between buildings to create a high degree of enclosure.
- Garages and driveways set behind the building line, with some use of rear parking.
- Car parking typologies: **On-plot frontage, on-plot between dwellings, communal.**

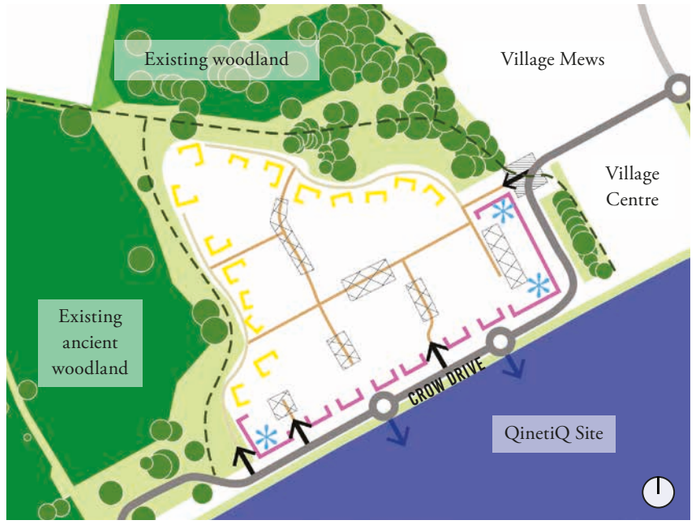
Staggered Frontage

- Predominantly **detached** and occasional **semi-detached** dwellings of different form.
- A mix of wider and narrower gaps between buildings to reinforce informal character.
- Variation in setback from the public realm to create organic frontage line.
- Buildings positioned at different angles to the space or route they face, and to each other.
- Frontage may include the rear/flank walls of garages, linked to dwellings by garden walls.
- Optimising views of green space from plot.
- Car parking typologies: **on-plot corner, on-plot between dwellings, shared courtyard, forecourt.**

Illustrative Masterplan – Beaumont Glade

Illustrative Masterplan – Dutchmore Wood

Extract from Layout Plan – Beaumont Glade



Extract from Layout Plan – Dutchmore Wood

- Feature building
- Indicative access onto development parcel
- Indicative access to QinetiQ site
- Indicative internal street
- Indicative edge street
- Indicative mews street
- Traffic calming junction measure
- Shared footway/cycleway
- Existing trees to be retained where possible
- LEAP
- Regular frontage
- Staggered frontage

7.8 BEAUMONT GLADE & DUTCHMORE WOOD

OPEN SPACE

CAR PARKING TYPOLOGIES

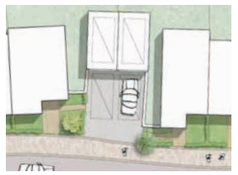
TYPOLOGIES	DESCRIPTION
On-Plot Frontage	

- Max 4 spaces in a row separated by landscape
- Not to serve more than 8 dwellings on any one side of the street
- Chevron parking can be used if desired

On-Plot Corner

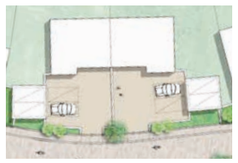
- Located around the corner from main dwelling frontage
- Usually serves individual dwelling on corner plot, but may serve more than one (e.g. a terrace of houses) providing up to a maximum of 4 spaces
- Parking bay(s) enclosed by brick garden wall

On-Plot Between Dwellings



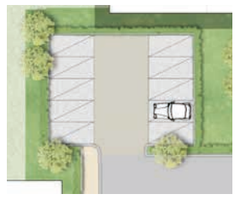
- Parking spaces must be set behind the building line (an exception may be made where the dwelling is set back from the back of footway by more than 4m)
- Parking spaces will be provided in either car ports or integral garages
- Along the internal streets, structures to accommodate parking spaces must be attached or linked to the property, with the expectation of housing fronting onto green space, where detached garages may be permitted
- No more than two cars allowed in tandem parking

Forecourt



- Applies to large dwellings only
- Front boundary will be walls, railings or hedgerows
- Gates to be inward opening
- Maximum width of access from street 3m

TYPOLOGIES	DESCRIPTION
Communal/Shared Courtyard	



- Communal parking areas are used predominately for apartment blocks
- Parking areas will contain no more than 20 parking bays.
- There should be no more than 5 spaces in a row without landscaping between.
- At the entrance(s) to rear parking courts, walls should be used to clearly define the entrance, screen parked cars from the street and create a good sense of enclosure.

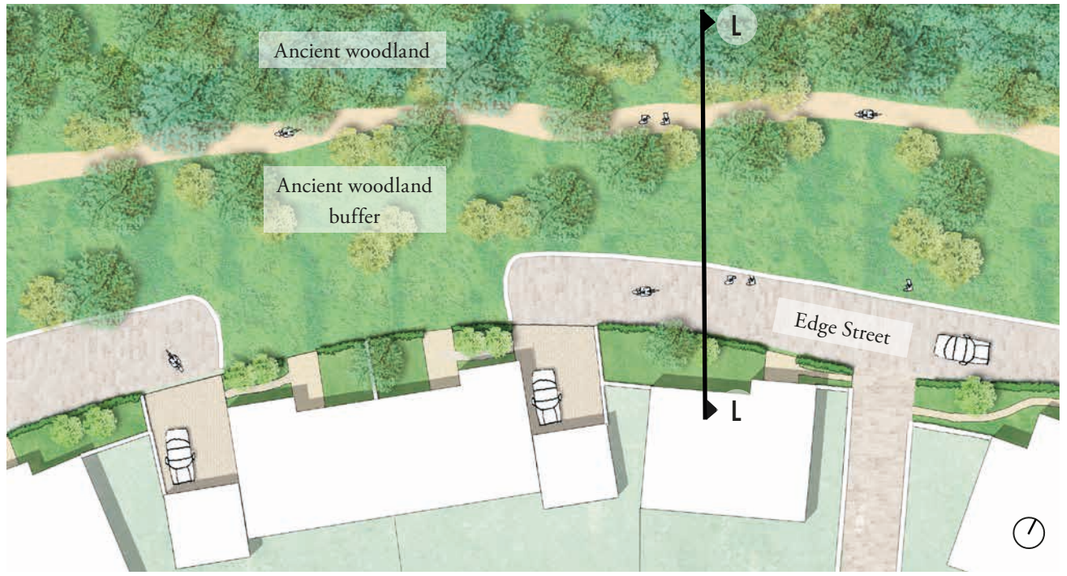
GREEN/BLUE INFRASTRUCTURE

- Where existing mature trees can be retained they should provide a focus for 'Pocket Greens' within the centre of the parcels.
- Public footpath incorporated within the 15m wide buffer to the Ancient Woodland.
- Play area and SuDS ponds incorporated within green space to north of parcels.

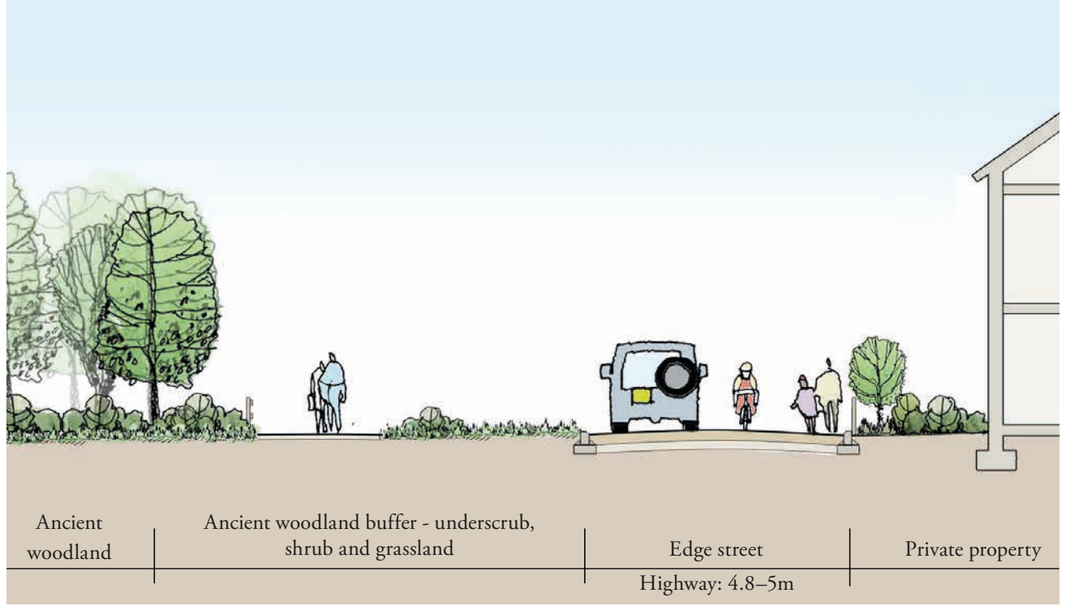
STREET CHARACTER

- Lanes along the woodland edge should feel secure and private and not be continuous
- Vehicular access to green areas to be restricted through careful landscaping and appropriate use of timber bollards.

Refer to Access & Movement chapter in the DAS



Street plan – Edge street



Street section LL – Edge street

7.8 BEAUMONT GLADE & DUTCHMORE WOOD

ARCHITECTURAL DESIGN

FRONT BOUNDARY TREATMENTS

TYPOLOGIES	DESCRIPTION	EXAMPLES
Native Planting 	• Suggest 0.5m high native ground cover planting to create more naturalistic interface, possibly with low railing integrated	
No Boundary 	• Plot boundary defined by distinct change of surface material (e.g. cobbles) or by the edge of private lawn in front of the building	
Picket Fencing With Hedge or Shrub Behind 	• Height – 1.2m max • Painted timber in light grey or other suitable pale colour, with gates to match • Low clipped hedge and/or shrub planting behind • This boundary treatment is appropriate for use	

FRONT BOUNDARY TREATMENTS

- Transitioning from open and naturalistic to the north of the parcels to more formal in the south.
- Low hedge/area of shrub planting along northern woodland edge.
- Picket fence with hedge or shrub planting behind, transitioning to low wall with hedge.
- Timber posts to protect edges of open space and prevent inappropriate vehicular access.

BUILT FORM

- High-quality homes of contemporary design with a distinctly rural character.
- Principally 2 storey with some 2.5/3 storey dwellings providing added emphasis on key corners or acting as vista stoppers.
- A mix of detached, link-detached, semi-detached and terraced dwellings.

FACING MATERIALS

- Predominantly buff and dark blue brick or dark stained timber cladding with red-multi brick as a feature material. Variety of materials used across both parcels, responding to the transition between adjacent parcels.

Precedent for materials (The Avenue, Saffron Walden)

Precedent for materials (Derwenthorpe, York)

Primary Materials

Pale buff brick

Dark stained timber cladding

Blue brick

Secondary/Feature Materials

Red-multi brick

Roof

Red tiles

Dark grey tiles

Indicative use of material palette

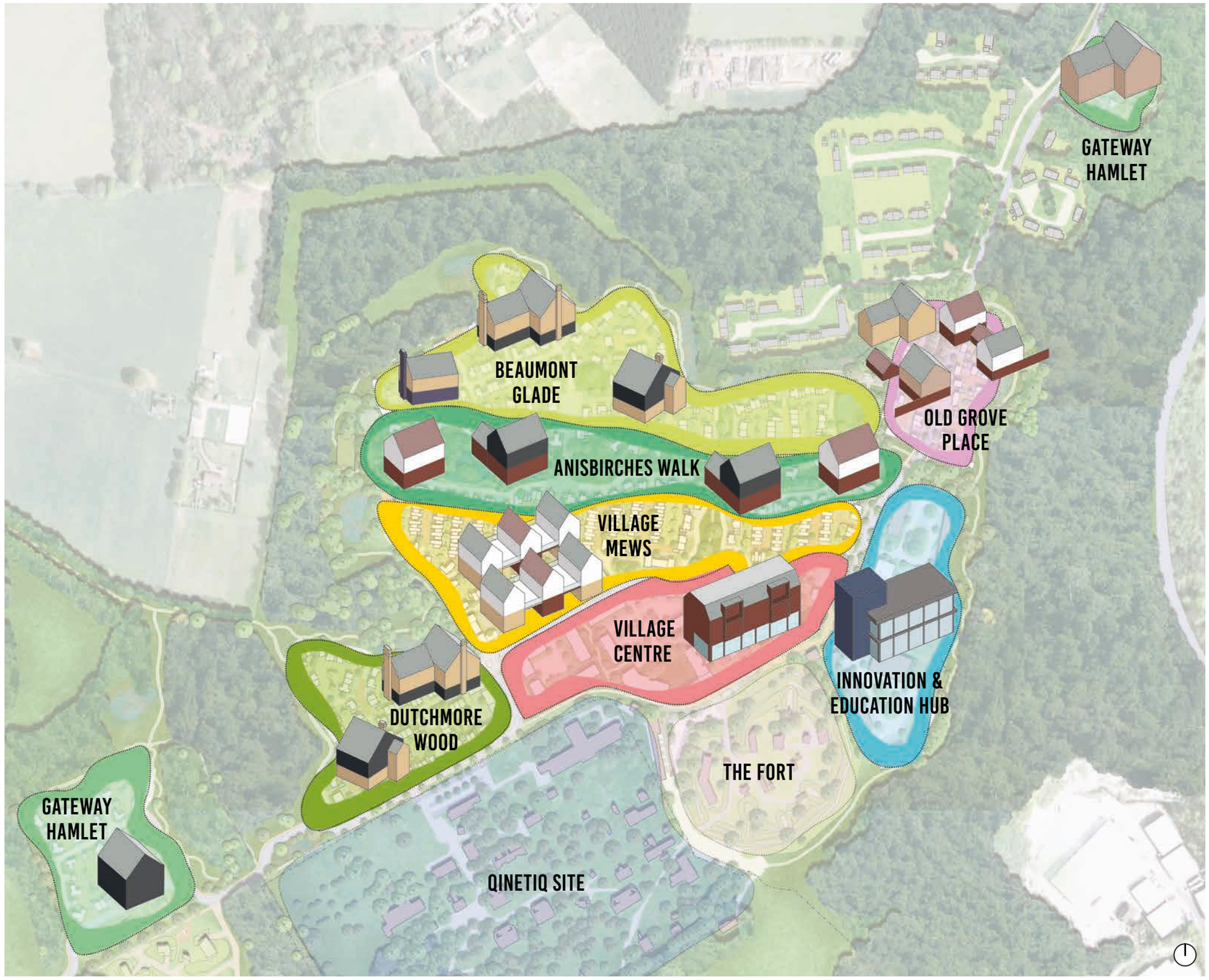
Precedent for woodland edge (Ockford Park, Godalming)

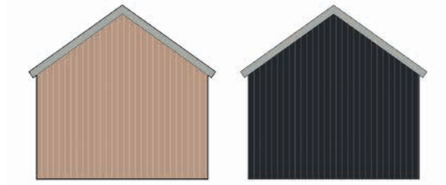
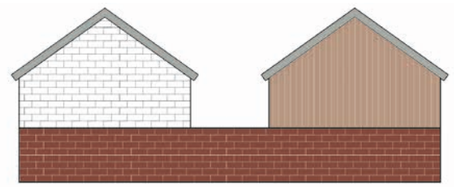
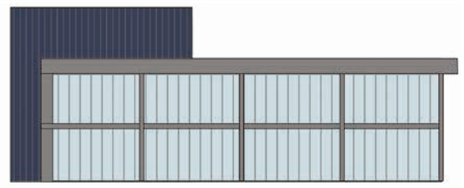
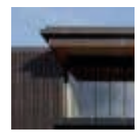
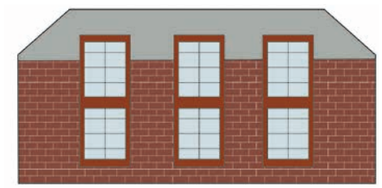
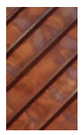
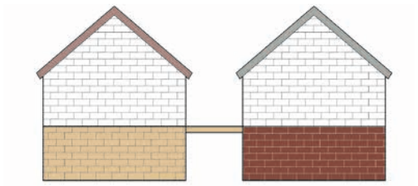
7.9 MATERIALS

MATERIAL PALETTE

Sustainability, local distinctiveness and variety are three key principles influencing the exterior palette of materials at Fort Halstead. By using local materials, the character and identity of the area is reinforced and the need for material transportation is reduced. Depending on context, contemporary materials can be used to produce innovative and unique buildings. Materials vary throughout the new village to reinforce the different character areas within the site and create a legible place.

The table on the following page demonstrates the combination of different character areas within Fort Halstead.



HAMLETS			TOP	BASE	FEATURE	ROOF
Gateway Hamlets		• Dark stained timber cladding – Western Gateway • Natural coloured timber cladding – Eastern Gateway	 Dark stained timber Western Gateway  Natural coloured timber Eastern Gateway		 Red-multi brick  Dark grey or black metal cladding	 Red tiles  Grey slate tiles
Old Grove Place	 Floating wall	TOP • Natural coloured timber cladding • White brick BASE • Red-multi brick	 White brick  Natural coloured timber cladding	 Red-multi brick	 Pale buff brick  Dark stained timber cladding	 Red tiles  Dark grey tiles
Innovation & Education Hub		• Predominantly dark coloured metal cladding and large glazed areas, particularly at building entrances	 Dark grey or black metal cladding  Large areas of glazing		 Timber cladding  Dark stained timber cladding	 Flat roofs  Solar PV tiles or panels
Village Centre		• Primary use of red brick and red multi-brick, secondary use of white painted bricks and timber cladding. Red clay tiles and greys tiles to be used for pitched roofs.	 Red brick  Red-multi brick		 White brick  Timber cladding  Metal: Brown-red cladding	 Red tiles  Dark grey tiles  Crittall
Village Mews		TOP • White brick BASE • Pale buff brick • Red-multi brick	 White brick	 Red-multi brick  Pale buff brick		 Red tiles  Grey slate tiles
Anisbirches Walk		TOP • Dark stained timber cladding • Naturally stained or white painted weatherboard BASE • Red-multi brick	 Dark stained timber cladding  Naturally stained or white painted weatherboard	Red-multi brick		Red tiles Dark grey tiles
Beamount Glade & Dutchmore Wood		TOP • Pale buff brick • Dark stained timber cladding BASE • Pale buff brick • Blue brick	Pale buff brick	Dark stained timber cladding Blue brick	Red-multi brick	Red tiles Dark grey tiles

8. ACCESS & MOVEMENT

8.1 ACCESS STRATEGY

HIGHWAY ACCESS STRATEGY

The Crow Drive access from Polhill will remain as the main access to and from the new village at Fort Halstead. A new roundabout has been designed to improve the quality of that access and the design has been agreed in principle with Kent County Council Highways (see drawing on p.168). The scheme will improve access and egress to/from the site and has sufficient capacity to cater for the whole Fort Halstead development. The scheme incorporates enhanced safety of access for both pedestrians and cycles.

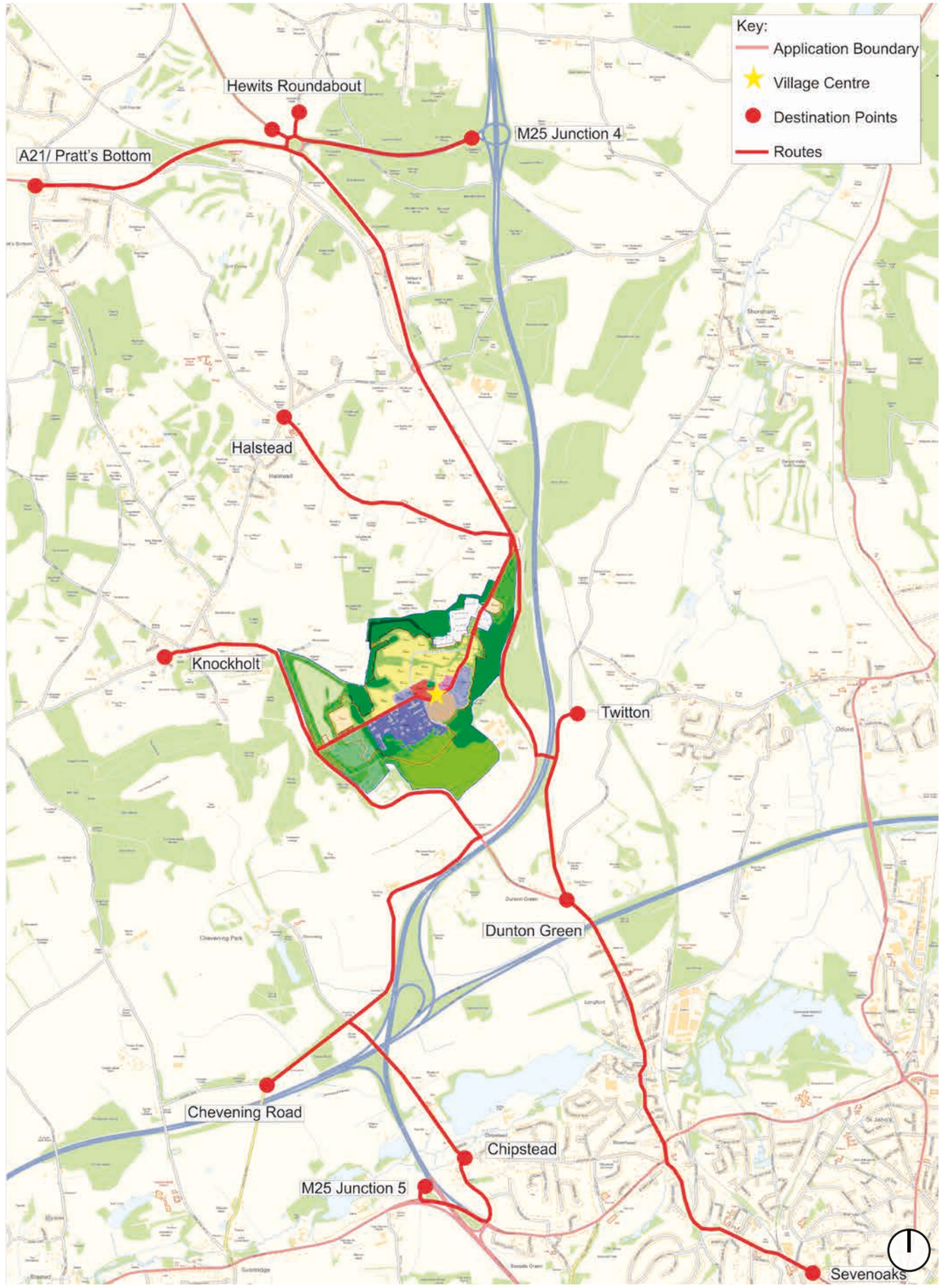
Kent Highways has confirmed that they will require the existing secondary access onto Star Hill Road to be retained in order to provide best practice for masterplanning and suitable arrangements in the event of the main access becoming blocked by either an accident or due to road works.

The masterplan has been designed to encourage the new community to use the main Polhill access through the use of appropriate traffic calming measures combined with a more circuitous route to the secondary access.

In order to enhance safety, a new 40 mph speed limit together with a new entry treatment is proposed for Star Hill Road—this has been agreed in principle with Kent Highways. Visibility splays will also be improved at the Star Hill site access, again to enhance safety.

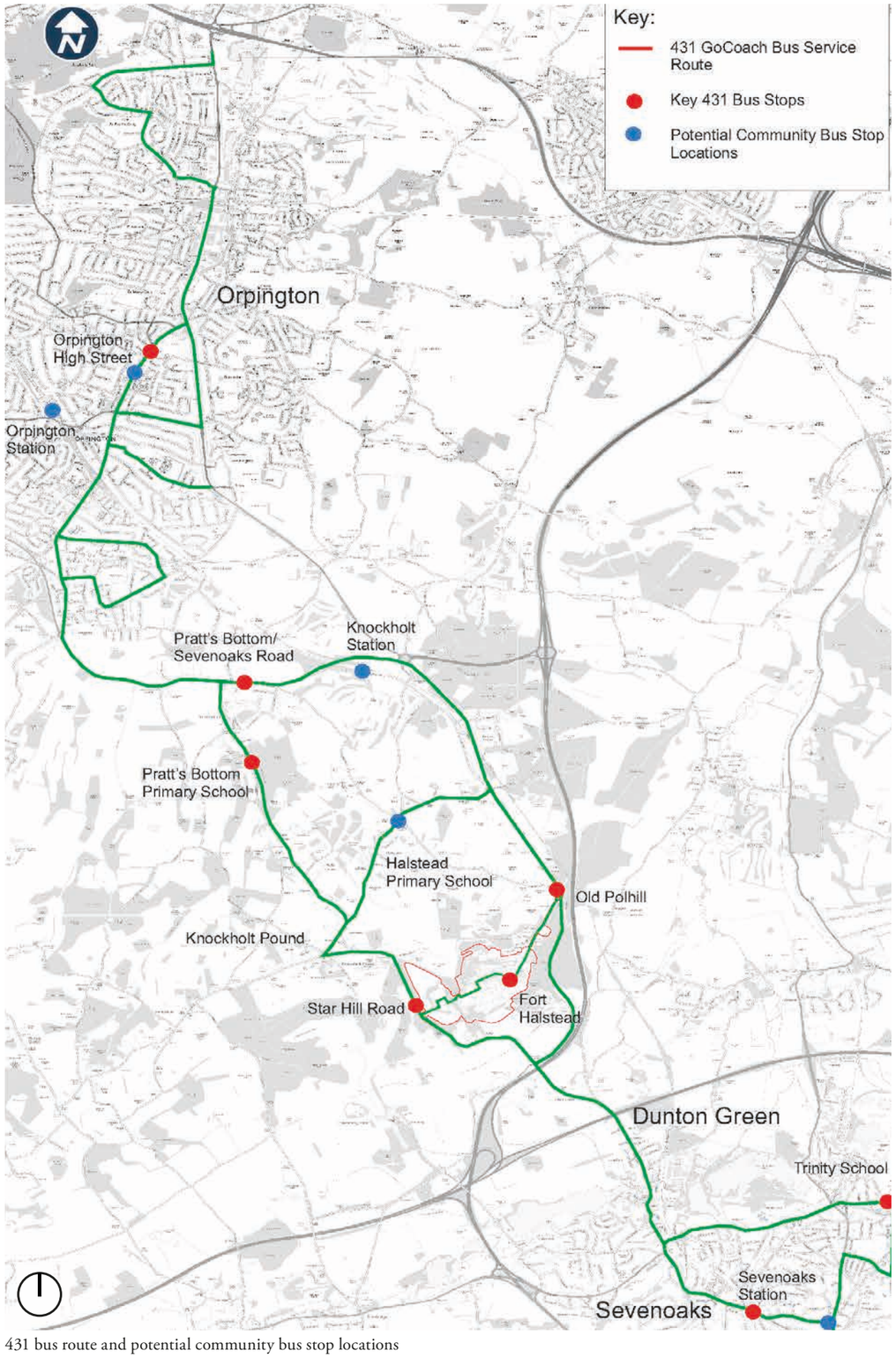
TRAVEL PLAN

A framework travel plan will be submitted as part of the planning application. This will include a package of measures aimed at encouraging the use of non-car modes of transport. It will also include details for monitoring trip generation for the new Fort Halstead village and identify a remedial strategy should mode share targets not be achieved.



Highway access routes

8.2 PUBLIC TRANSPORT



431 bus route and potential community bus stop locations

431 BUS SERVICE

Positive discussions have been held with Go Coach, the operators of the 431 bus service (Orpington High Street to Sevenoaks) with a view to rerouting the service so that it serves the Fort Halstead site. This would provide access to secondary schools in Sevenoaks (Knowle Academy and Trinity Schools) as well as to town centre facilities in both Sevenoaks and Orpington and to the Riverhead Tesco superstore.

COMMUNITY BUS

As previously, the strategy includes the provision of a new high quality, community bus service to operate from the site. This would provide a bespoke service tailored to meet the needs of the new residential and business community.

As such, it is proposed that this service would:

- Provide a link to one or more rail stations to meet the requirements of commuters at the beginning and end of the day. This would most likely provide a link to Orpington Station as well as potentially Knockholt;
- Provide a more flexible service during the of peak period, for example to provide access to Sevenoaks or Orpington.

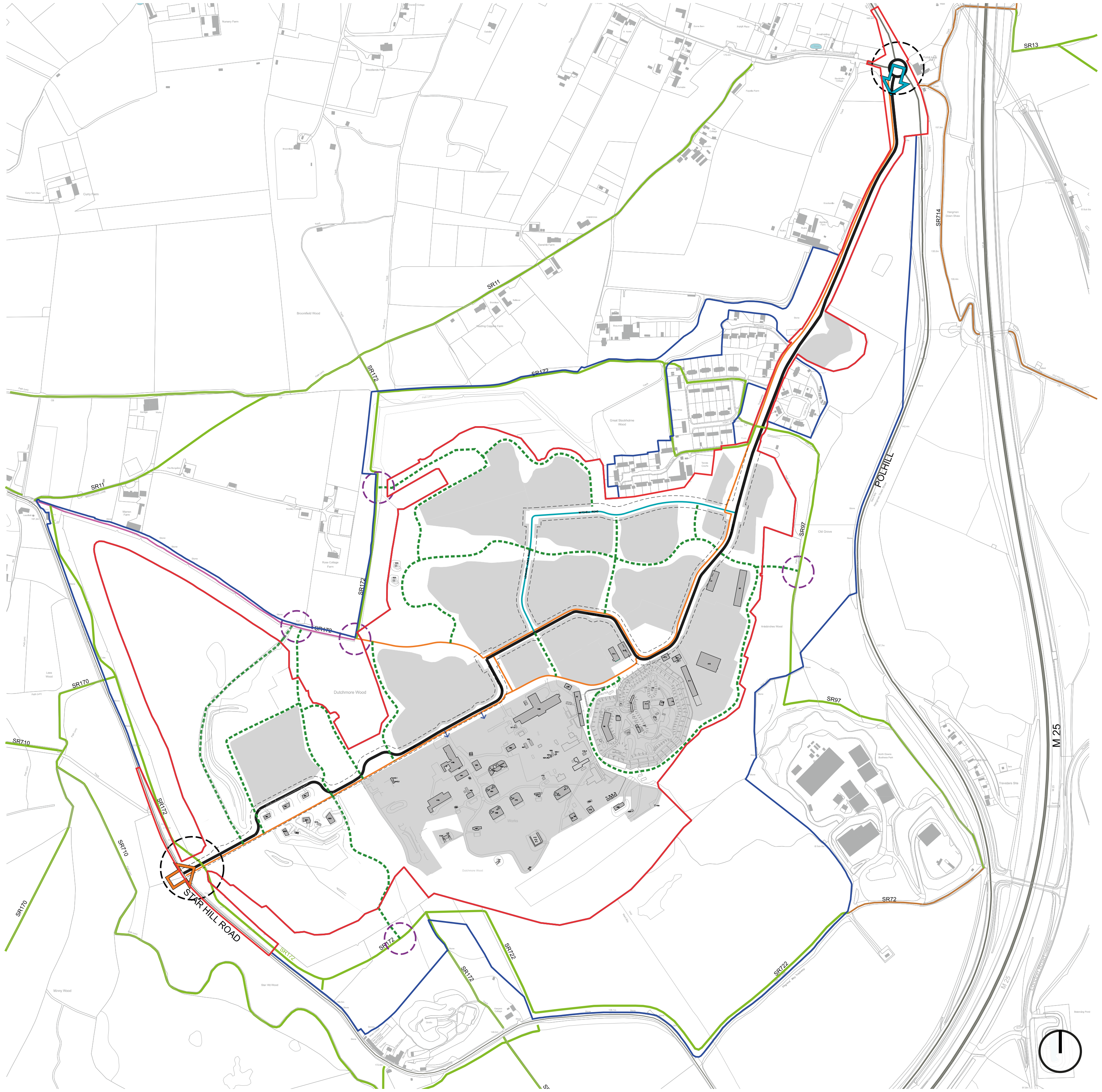
Community bus at Caterham Barracks, Surrey

Community bus at Caterham Barracks, Surrey

8.3 ACCESS & MOVEMENT STRATEGY

A network of different types of proposed routes contributes to the permeability of the development. It is designed to encourage walking through the development by creating routes that are attractive, direct and overlooked. Less rigid, more organic character of the street network responds to the existing landscape and surrounding woodlands and highlights countryside character of the development.

The proposed hierarchy of routes will deliver a comprehensive network of high quality pedestrian and cycle routes across the site providing convenient, accessible, safe, comfortable and attractive facilities for all users.



Key

- Application boundary
- Applicant's Land ownership Boundary
- Development Parcels
- Existing building for potential retention
- Existing public rights of way (PROW)
- Existing bridleway
- Existing road
- Main access – all modes
- Secondary access – all modes
- QinetiQ Ltd. access point
- Junction improvement
- Crow Road/Primary Road
- Corridor for primary road*
- Secondary road
- Indicative strategic shared footway cycleway
- Indicative secondary shared footway cycleway
- Connection to existing footway network

8.4 INDICATIVE STREET HIERARCHY

Indicative street hierarchy plan

The street network serving the new homes will be based on interconnected streets, shared surfaces and courtyards. The distinctive street hierarchy is designed to provide legibility and easy navigation through the site for residents and visitors. It includes the main road, secondary, tertiary and edge streets each with different layouts and dimensions. Easy access for service and emergency vehicles is ensured by providing several accesses to each development parcel.

Key

- Primary street
- Secondary street
- Tertiary street
- Edge street
- Shared courtyard
- Mews street
- Employment & education parcel access
- School drop-off

8.5 WALKING & CYCLING ACCESS

The masterplan prioritises the movement of pedestrians and cycles through the site. This is achieved by the following interventions:

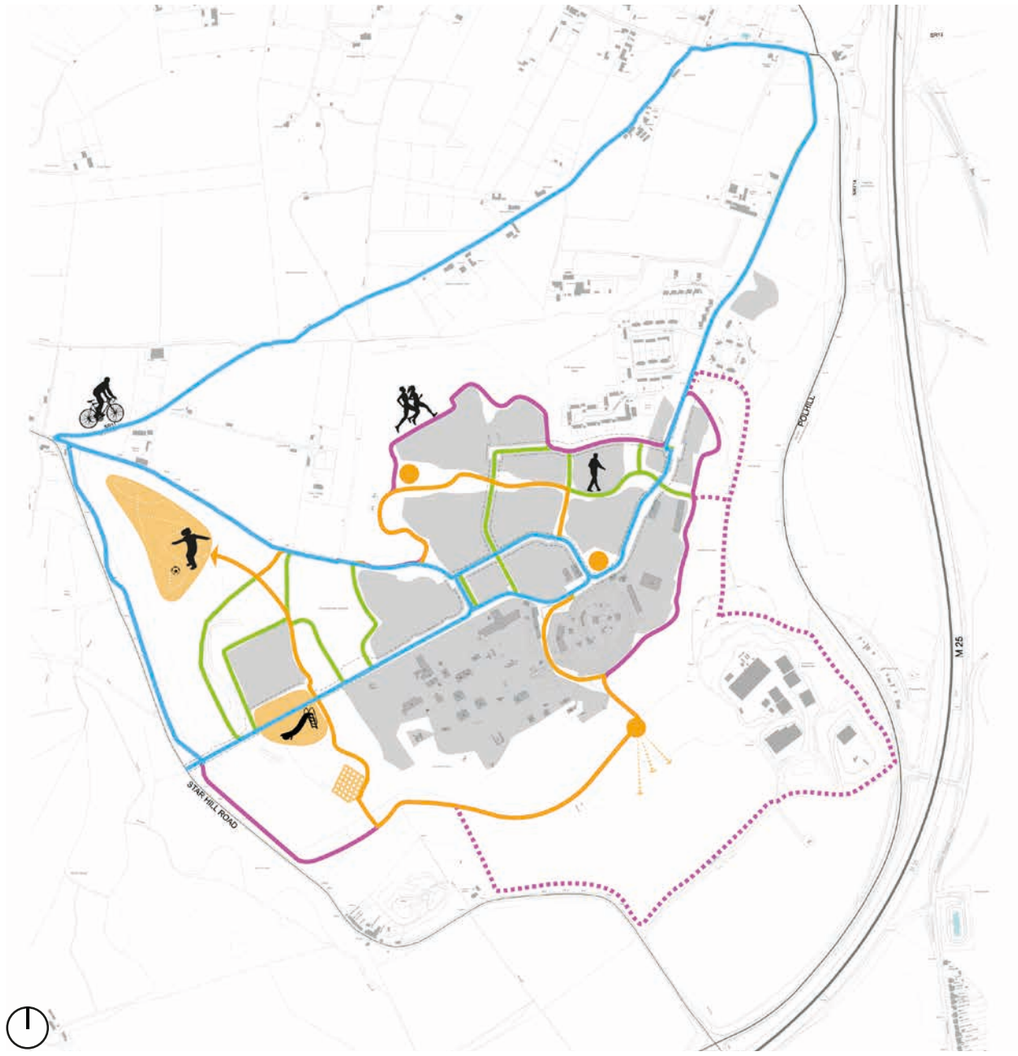
- Reduce traffic speeds – design of streets in accordance with requirements for a 20 mph zone;
- Provide a new off-road cycle route through the site between the Polhill access to the Site access and Knockholt Pound;
- A series of "green links" provide other safe shared use pedestrian/cycle links through the site.

Off-Site Enhancements

As with the approved scheme, the village, as well as the wider community, will benefit from the following enhancements:

- New on-road cycle lanes between Polhill and Shanklands Roundabout as well as cycle facilities at the upgraded site access junction. In particular, these enhancements will provide safer access to Knockholt Station;
- Proposed 40 mph speed limit on Star Hill;
- Lighting of the M25 underpass on the bridleway linking Polhill and Filston Way.

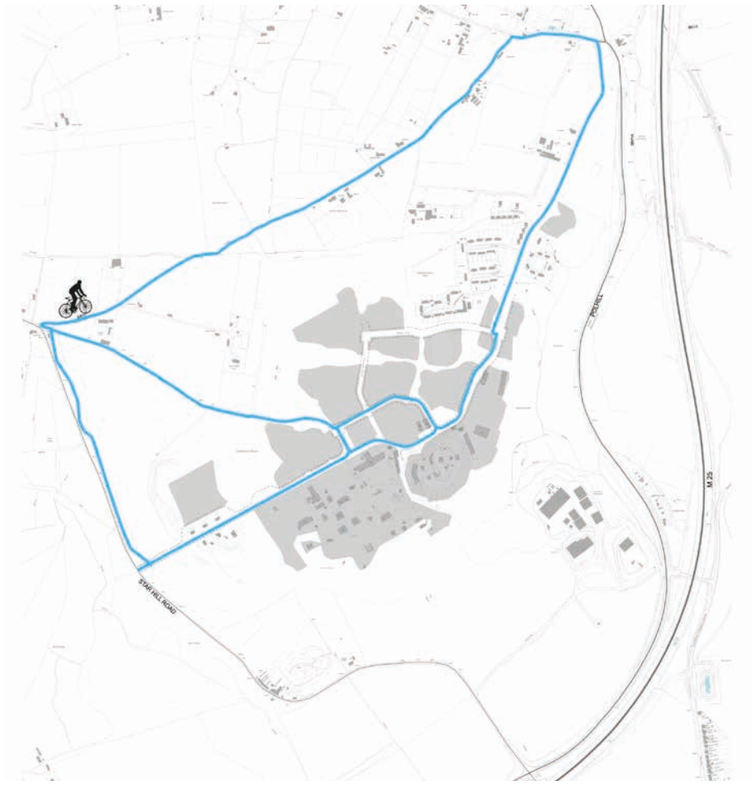
ALL ROUTES



Key

- Indicative cycling route
- Indicative pedestrian routes
- Indicative running route
- Indicative extended running route
- Indicative recreation route

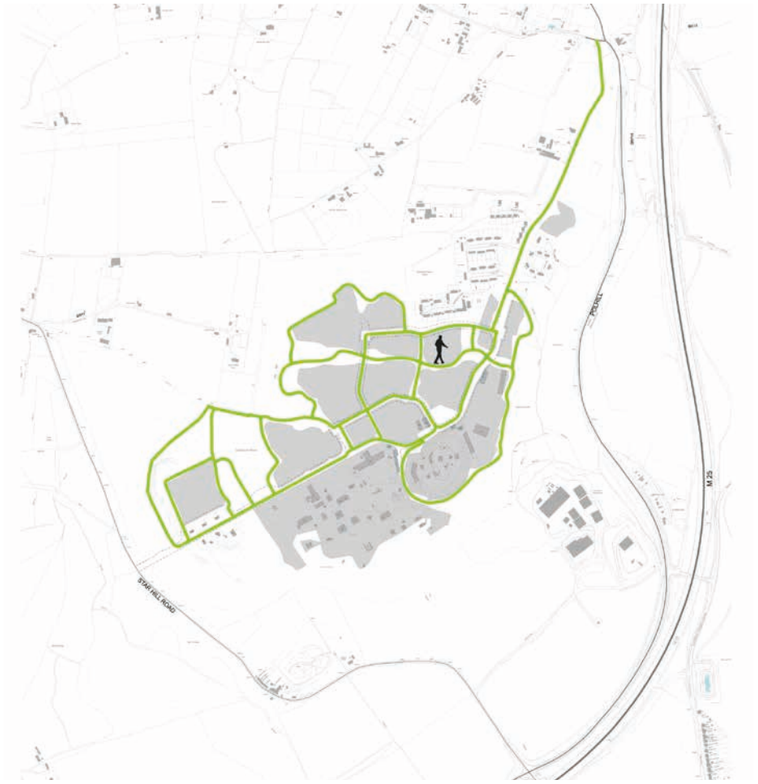
CYCLING



5.6km of cycling route

8.5 WALKING & CYCLING ACCESS

FOOTPATH NETWORK

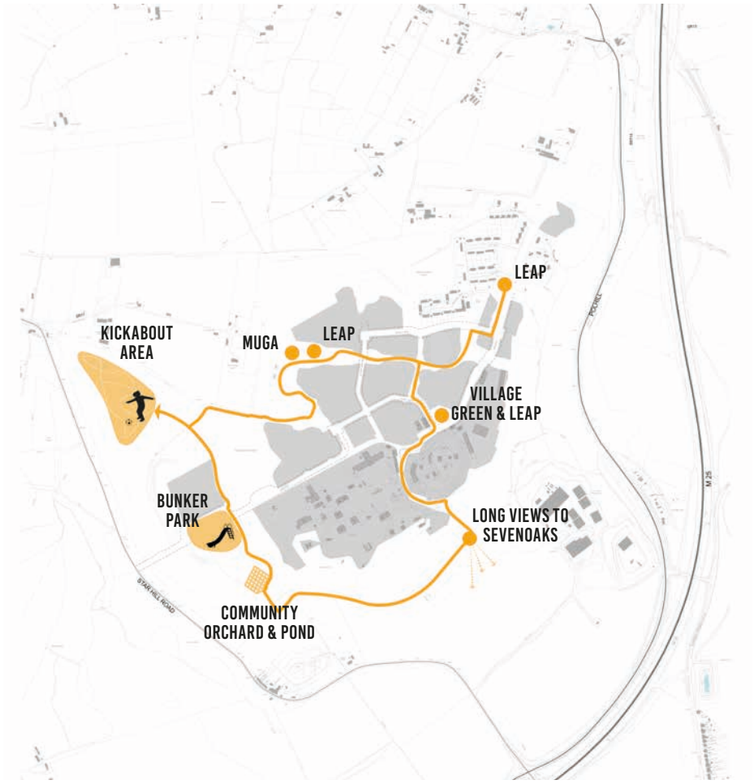


7km of walking routes within the neighbourhood

RUNNING ROUTE

5km of primary route +2.7km of extended route

RECREATION NETWORK



3.6km route connecting all recreational activities in the neighbourhood together

8.6 GENERAL DESIGN GUIDANCE

A LEGIBLE AND PERMEABLE* STREET NETWORK

Fort Halstead has been designed to be a walkable neighbourhood—a place where a range of useful facilities are within a short walking distance of all homes. This encourages people to walk and cycle rather than use the private car for short trips, but in order for this to happen, it is important that the street network is legible and permeable.

The illustrative street hierarchy plan shows a connected network of streets within the site. These form a clear hierarchy, each serving a particular function, from Crow Drive, the primary route running through the site, to the tertiary and edge streets, which are principally designed to accommodate the residents of the adjacent homes. The aim of this hierarchy is both to define a clear pattern of movement within the site and create a variety of attractive, characterful streets.

The location and alignment of Crow Drive and the secondary route is fixed and predominately follows the existing and historic alignment, with the exception of a few locations where deviation has been introduced to incorporate traffic calming measure and encourage slower vehicular movements. The location and alignment of all other street types are shown illustratively. While there is scope for some deviation from the illustrative layout, detailed proposals should follow the principles set out in this chapter, particularly in respect of the hierarchy between different street typologies.

The following detailed principles should be adhered to.

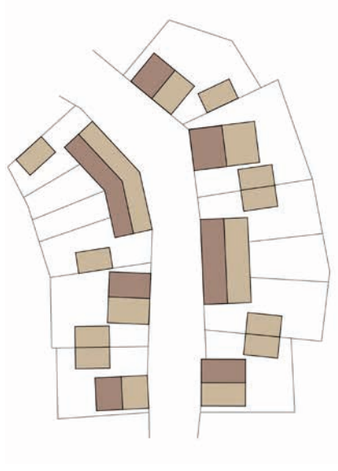
- Streets should interconnect—many cul-de-sac, gated and one-way streets will not be acceptable. The only exception may be at edge streets serving a small number of homes, but only if it can be designed to adequately accommodate the servicing of dwellings and does not sever pedestrian and cycle movements through the wider area;
- Each street should be designed to encourage the particular activities intended to take place within it.

STREET ALIGNMENT

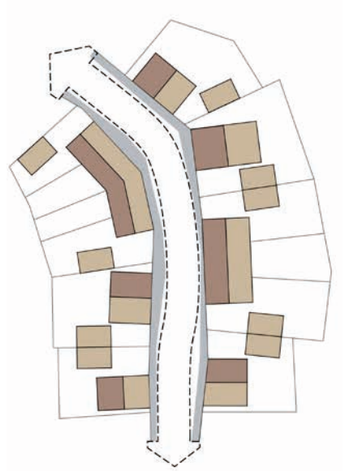
The detailed alignment of streets should be determined by the arrangement of buildings along them and the desire to create varied, interesting places.

- All streets should be designed to naturally slow traffic by visual cues such as built frontage, on street parking, horizontal deflections, landscape and surface materials
- Long straight sections of street should generally be avoided. Where this is not practical, additional measures such as those set out above will be required to limit speeds

*In urban design terminology, a ‘permeable’ street network is one which has a variety of pleasant, convenient and safe routes through it. It encourages walking and cycling and makes places easier to navigate through. Conversely, urban forms which lack permeability, e.g. those severed by arterial roads, or with many long culs-de-sac, are considered to discourage movement on foot and necessitate longer journeys by car.



Buildings and gardens are placed to define the preferred urban form.



The space left between is available to form the carriageway and is tracked for movement and for the provision of places where people may park their vehicles.

8.6 GENERAL DESIGN GUIDANCE

JUNCTION DESIGN

Cross roads and T-junctions will be the most common forms of junctions within the street network. In order to allow pedestrians to follow straight desire lines when crossing streets, it is important that junction radii are kept as small as possible.

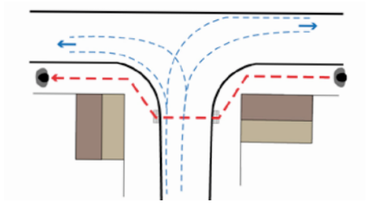
- Vehicle tracking should be undertaken to test designs and achieve tight radii at junctions.
- Radii should generally be less than 6m (to be determined by swept path analysis) with the less trafficked streets achieving a minimum of 4m. Exceptions to this may be made for junctions with the primary road where 6m radii may be required.
- It is acceptable for large vehicles to use the opposite carriageway when turning in areas where traffic is moving at 20mph.
- Widening the street near the junction can help achieve tighter radii.
- Where on-street parking is provided near junctions, wider car parking bays may be used to allow visibility splays to be maintained.
- Street trees can also be located within these visibility splays to allow continuity of street trees.

The adjacent diagrams illustrate this approach, which is also explained in Manual for Streets 1.

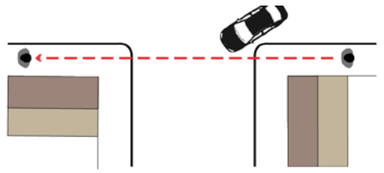
CONSTRUCTION DETAILS

- At the corners of all junctions or other vulnerable areas, footways or other hard-standings should be constructed to the same quality as the carriageway to avoid being damaged by vehicles overrunning the footways or parking.
- The placement of trees, tree pits and utilities should be carefully considered at design stage to ensure a holistic design of the sub base and surfaces to ensure longevity.

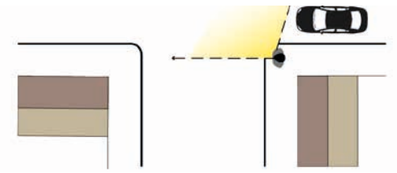
KEY STREET GEOMETRY PRINCIPLES



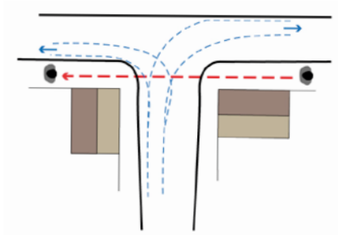
Larger radii force pedestrians to deviate.



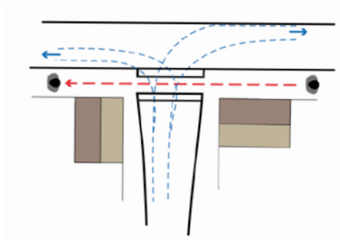
Tighter radii allows pedestrian desire line to be maintained and vehicles turn slowly (10–15 mph)



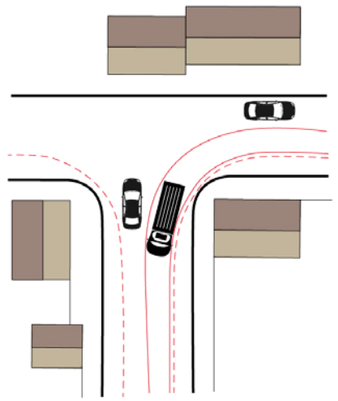
- Pedestrian does not have to look further behind to check for turning vehicles
- Pedestrian can easily establish priority because vehicles turn slowly.



Side street widens at junction & narrows further back to allow smaller radii. Smaller radii allow pedestrians to cross more easily.



Best solution includes raised surface for easier pedestrian crossing.



- Tighter kerb radii can be used with a wider carriageway. The refuse vehicle turning requirement is still contained within the space, yet vehicles do not dominate.
- By using the same concept of tracking, wider carriageways can be set out to generate tighter junctions. These have much better calming effect on traffic speed.

8.7 CROW DRIVE

INTRODUCTION

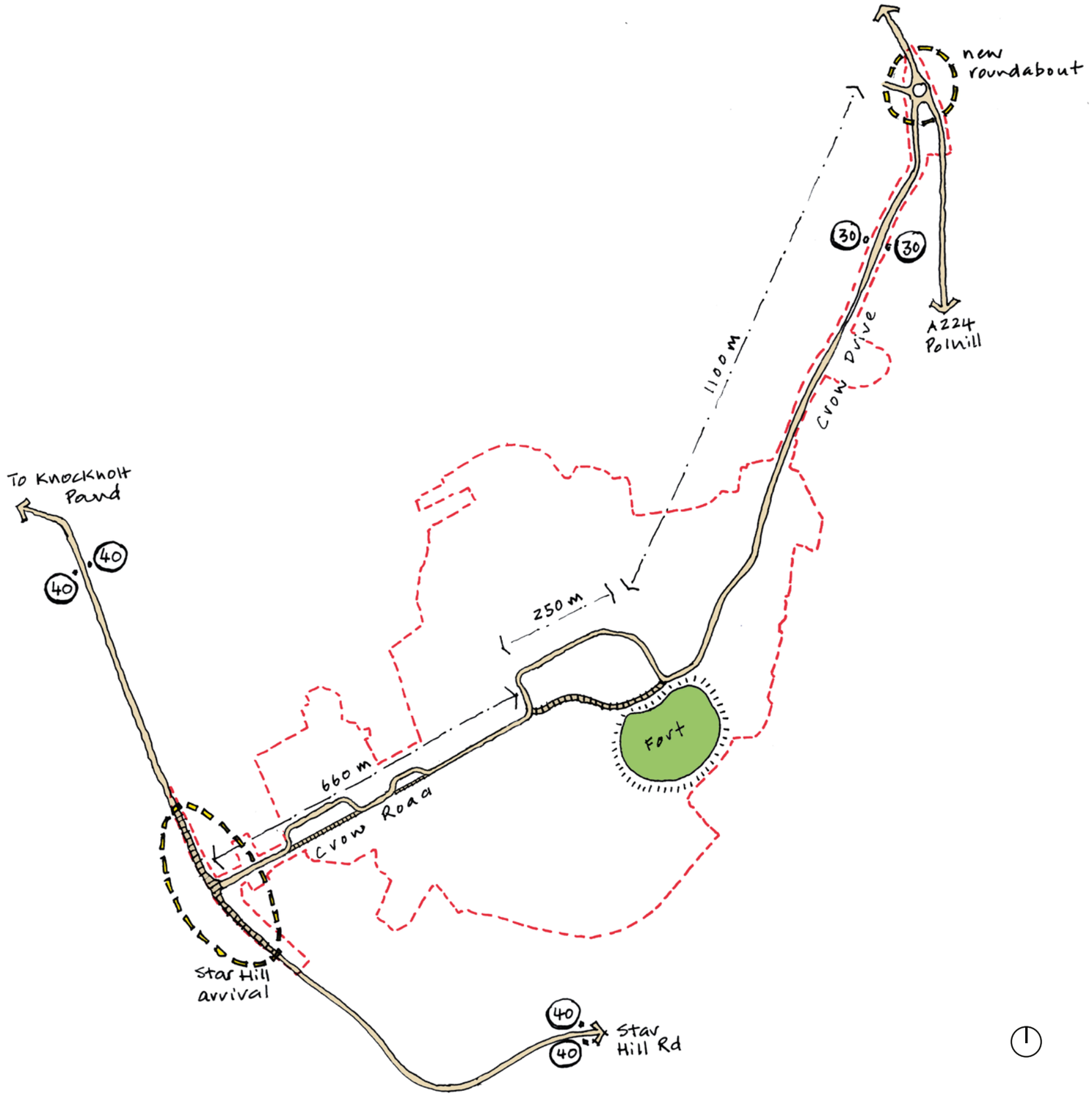
Streets make up the majority of the public realm within Fort Halstead and the detailed design of these streets will play a key role in establishing the character of the place as a whole and the different character of the neighbourhoods within it.

The proposal combines best practice in design, embracing *Manual for Streets* and the adopted *Kent Design Guide*, to deliver a new exemplary residential environment for all to enjoy.

Crow Drive is the main route into Fort Halstead from both Polhill and Star Hill. Crow Drive will vary in character and respond to its surrounding built character. The following chapter sets out guiding design principles for future reserved matter applications to ensure the quality and delivery of these different characters.

Text and diagrams set within an orange box are used to indicate mandatory design principles that *must be followed* to ensure the development will be of a high quality.

Mandatory Design Principles



8.7 CROW DRIVE

GENERAL PRINCIPLES

Throughout Crow Drive vehicular speeds will be restricted to 20mph or less. The exception to this is the short stretch of the Crow Drive connecting to the Polhill where a 30 mph limit will be applied in order to allow drivers to adjust their speed from leaving the nearby highway network.

The width of the carriageway is 6.2m which will accommodate a bus route. On the northern side of the Crow Drive there will be on a minimum of 2m footway and on the southern side a 3m minimum shared cycle and footway.

Kerbs with a high upstand should be used on the boundary between verge and carriageway to prevent unwanted parking on the green verge. On street parking should be only provided within parallel parking bays and where possible inset between the trees.

LIGHTING ON CROW DRIVE

The lighting along Crow Drive and across the development should aim to reduce sky low, luminaire intensity and light intrusion and thus limit visual impact at night. These issues can be addressed by the careful selection of luminaries that would neither project light upwards nor throw too much light directly onto objects (thereby reflecting back upwards). Whilst reduced levels of illumination is encouraged, no compromise should be made in respect of safety in health, safety and welfare of operatives and visitors.

Key light design measures should include:

- Lighting should be to the minimum level necessary to provide the required level of illumination;
- LED lights are recommended that enable increased control, improve colour definition, and save on energy;
- Luminaires should be designed and oriented to restrict light directionality only to the areas necessary. This should include double asymmetrical luminaires and full horizontal cut-off designs to prevent light spill;
- Lighting should be zoned to provide higher lighting levels along main routes (albeit whilst aiming for minimum standards of illumination); lower lighting levels on minor roads; and no light at all on out outward facing private drives;
- If security lights are to be provided on houses these should be of a full horizontal cut-off design with appropriate accessories to prevent light spill. They should also be fitted with motion sensors with timers set to the minimum value;
- The design to be as uniform as possible.

For more detail on the lighting strategy please refer to the Lighting Assessment Report.

CROW DRIVE

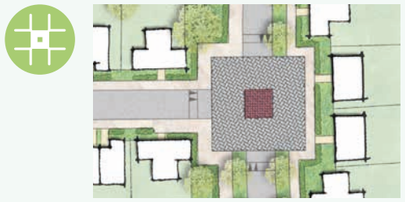
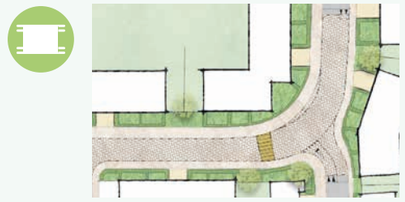
GENERAL HIGHWAY FEATURES

Speed limit	20 to 30
Min. carriageway width	6.2 m
Footway/cycleway	2m footway on one side; 3m 3m shared footway/cycleway on the other side or in the green space
Cycleway forward visibility	20m
Longitudinal gradient	<10%
Cross fall	<10%
Bus access	Yes
Street lighting	Yes outside of 20mph zone and within 20mph zone at locations to be determined
Distance between speed restraints features	60m - 80m within 20mph Speed Limit Zone
Junction visibility x	2.4m
Junction visibility y	>25m within 20mph zone, 43m outside
Max longitudinal gradient	8% (gradients may only be increased if unavoidable due to local topography)
Cross section gradient	1.0% to 5.0%

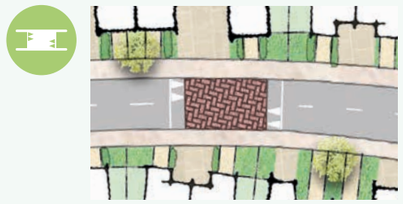
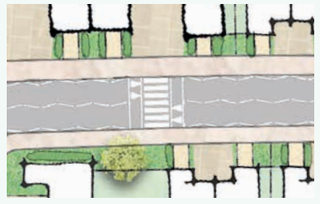
8.8 TRAFFIC CALMING MEASURES

Traffic calming measures aim to encourage safer, more responsible driving and reduce traffic speeds. Traffic calming measures to be designed into Fort Halstead include mini-roundabouts, square-abouts, shared surfaces, table tops, road humps, speed cushions and eyots.

In the Kent Design Guide Chapter 'Making it happen-highways', the maximum length of straight road between speed control features within 20 mph zones is generally 60 to 80 metres.

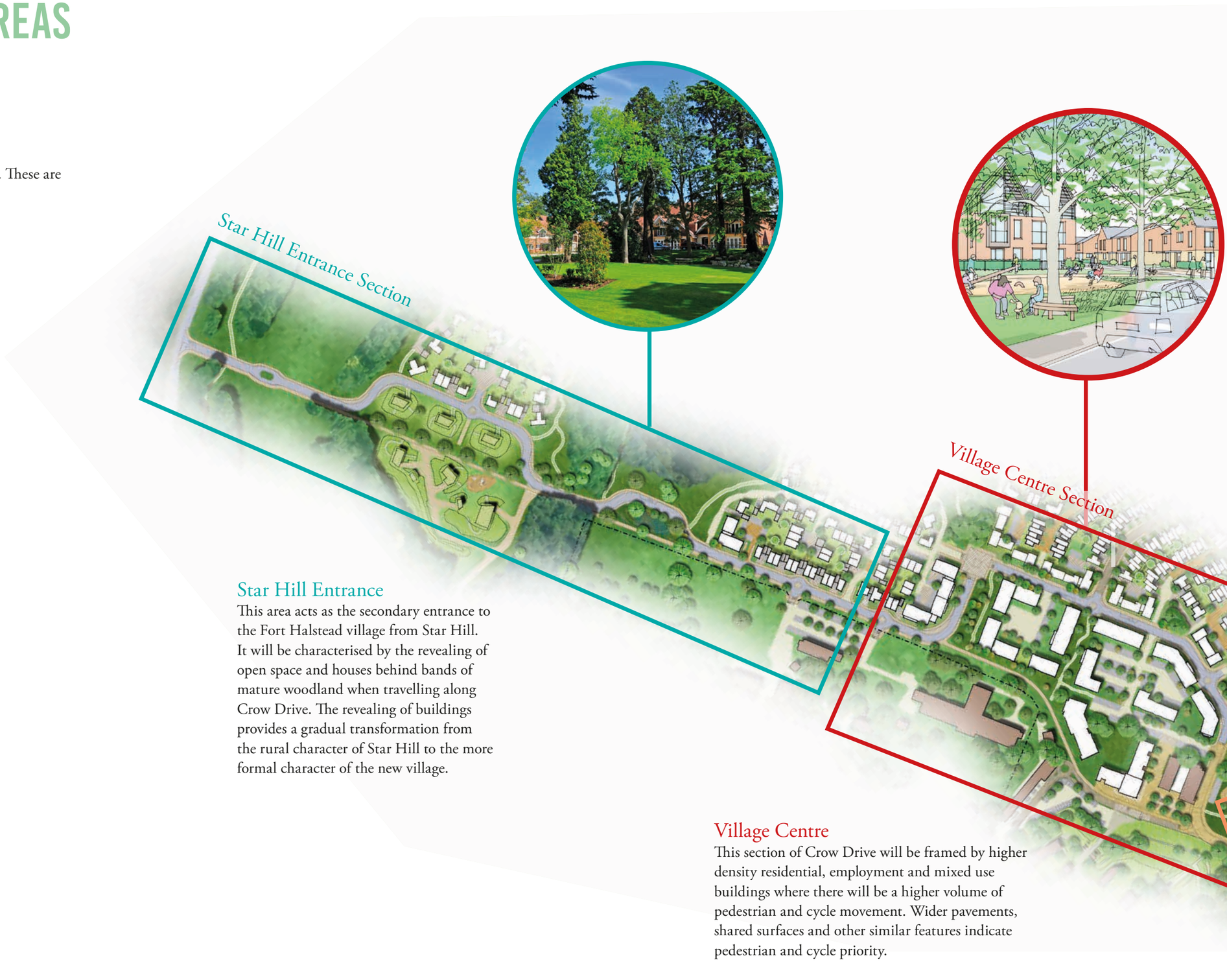
TYPOLOGIES	DESCRIPTION	PRECEDENT
Mini-roundabout 	• The central dome may be up to 6 metres in diameter and raised to a maximum of 75mm in the centre. The dome height should be in proportion to the roundabout diameter, i.e. for a 2m central island the dome should be raised to a maximum of 50mm in the centre. This should be lowered if buses or frequent HGVs need to cross it. • The edge should be flush within a tolerance of 6mm above the adjacent road surface and the dome can be finished in cobbled or similar material.	
Squareabout 	• Squareabouts will take the form of a village square type arrangement, including a raised square central dome similar to the mini-roundabouts above.	
Shared surface 	• Shared space is an urban design approach that minimises the segregation between modes of road user. This is done by removing features such as kerbs, road surface markings, traffic signs, and traffic lights. • Use of contrasting materials allows legibility and understanding between pedestrians and vehicle drivers.	
Overrun strips 	• Overrun strips allow larger vehicles to negotiate bends and narrowings without significant visual widening of the main carriageway surface. • Overrun strips can be formed of a raised shoulder, the edge no greater than 25mm above the carriageway channel line, and can be formed of an edge kerb and cobbled or other similar material differentiating from the carriageway material type.	

8.8 TRAFFIC CALMING MEASURES

TYPOLOGIES	DESCRIPTION	PRECEDENT
Table tops 	• Ramps at the commencement of table junctions and speed tables shall be 1.125 metres long, laid at a gradient of 1 in 15 (6.7%). The maximum height of any vertical deflection in Kent is 75mm. • For adoptable roads KCC require humps and tabletops to be formed of tegular type blocks, of a standard colour palate to be agreed with KCC. Ramps can be formed of a contrasting colour material, to the specification dictated by KCC.	
Road humps and cushions 	• Hump spacing of 60–80 metres is required for 20 mph zones when used in a series	
Eyots 	• Eyots are traffic islands in the centre of the carriageway taking the form of an over-runnable edge strip and a solid central island planter. • The edge of the overrun strip should be flush within a tolerance of 6mm above the adjacent road surface. Eyot geometry will be dictated by vehicle swept path analysis.	

8.9 CHARACTER AREAS

There are 4 key character area along Crow Drive. These are illustrated here.



Star Hill Entrance

This area acts as the secondary entrance to the Fort Halstead village from Star Hill. It will be characterised by the revealing of open space and houses behind bands of mature woodland when travelling along Crow Drive. The revealing of buildings provides a gradual transformation from the rural character of Star Hill to the more formal character of the new village.

Village Centre

This section of Crow Drive will be framed by higher density residential, employment and mixed use buildings where there will be a higher volume of pedestrian and cycle movement. Wider pavements, shared surfaces and other similar features indicate pedestrian and cycle priority.

8.9 CHARACTER AREAS

Tree-lined Avenue

This area will be characterised by street trees planted in a formal arrangement on each side of the street.

Woodland Arrival

The Woodland Arrival will be characterised by the surrounding mature woodland and will create a strong landscaped entrance to the development. Generous grass verges and clusters of houses create a sensitive transition to the village.