

8.10 WOODLAND ARRIVAL



The Woodland Arrival forms an informal edge to the residential neighbourhoods, with a woodland character. Generous grass verges and soft, open frontages create a transition to the village.

This section connects Fort Halstead to Polhill (A224). The street will be framed by green space on both sides providing a rural character within existing woodland. Vehicular movements will be calmed naturally by eyots, humps, mini-roundabouts and pedestrian crossings. The main entry point to the 20mph zone will be calmed by a 28m ICD (inscribed circle diameter) compact roundabout with a solid/landscaped central island.

The transition from the Woodland Arrival to the Tree-Lined Avenue and from Star Hill Entrance to the Village Centre should be marked by a feature such as a raised courtesy crossing and a welcome signage.

WOODLAND ARRIVAL

HIGHWAY

Speed limit	 to 
Width of adopted highway	Varies
Minimum carriage width	6.2 m
Footway/ cycleway provision	min. 2m footway on one side, 3m shared footway/ cycleway on the other side
Highway verge	max. 8m wide

HIGHWAY FEATURES

Bus route	Yes
On-street parking	No
Traffic-calming features	Yes – raised table top, eyot, road hump, mini-roundabout, compact roundabout
Road markings	100mm if required
Centre line radii	Varies

WOODLAND ARRIVAL

ACCESS

Junction spacing	60m min for adjacent roads, 15m for opposite
Minimum junction visibility	2.4 x 43m within 30mph, 2.4m x 25m within 25mph zone
Kerb Radius	Determined by swept path analysis, although a starting point should be 4m or less
Direct vehicular access to properties	No

PAVING MATERIALS

Carriageway	Asphalt
Kerbs and Edging	To be agreed with KCC
Footway	Asphalt or block paving

LIGHTING

Carriageway	To be agreed with KCC depending on tree coverage
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Location of Woodland Arrival



Precedent image of woodland arrival, Moscow



Precedent image of glimpsed views through mature trees, Boxgrove Gardens, Guildford

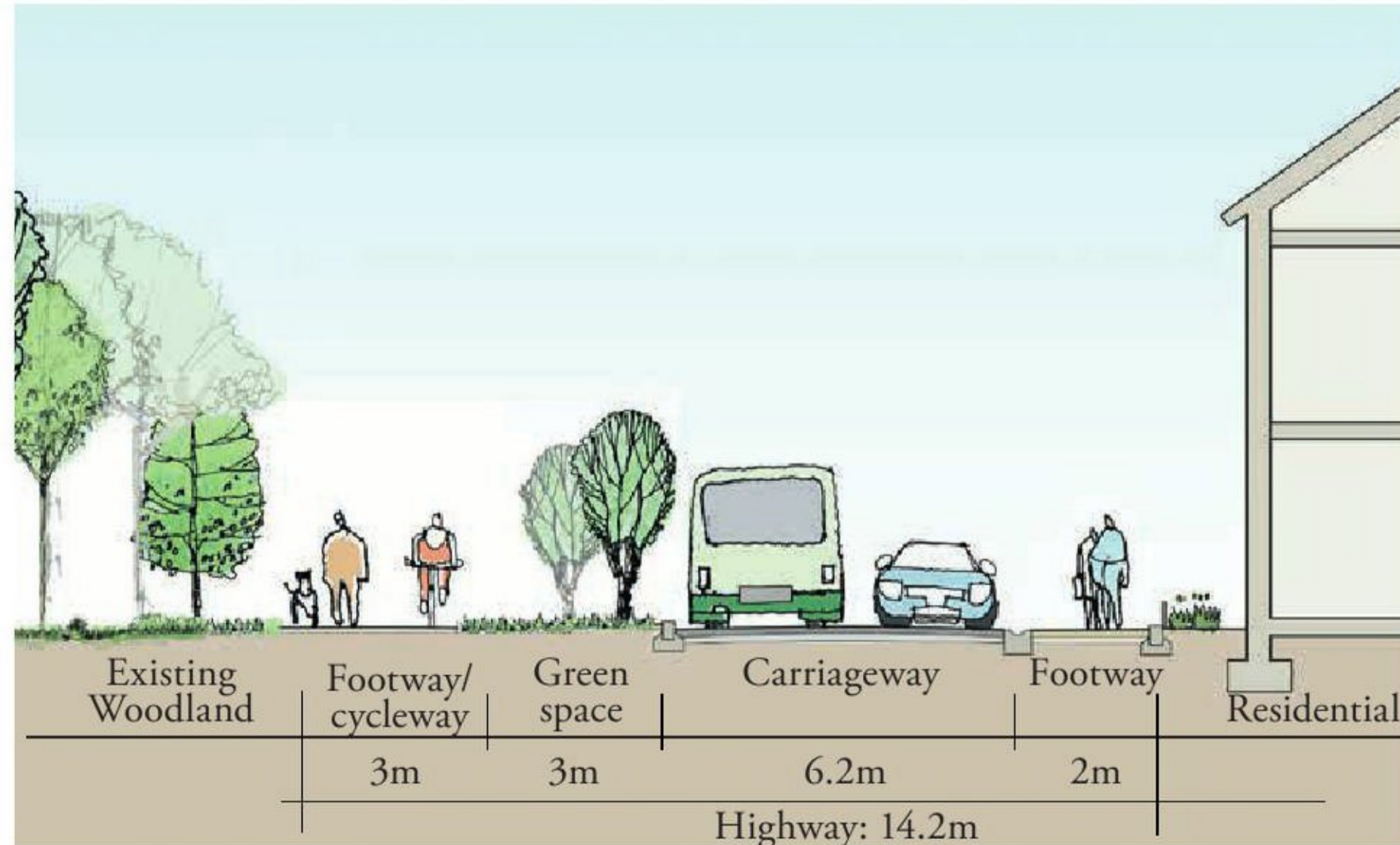
8.10 WOODLAND ARRIVAL



Existing housing along Crow Drive



Precedent image of informal green space within woodland setting, Boxgrove Gardens



Indicative section 1 - 1


8.11 TREE-LINED AVENUE

This area will be characterised by large street tree species planted in a formal arrangement on each side of the street. A shared surface pedestrian cycle route runs parallel to the north of the avenue adjacent to the green space.

There will be on-street parking and a pedestrian crossing in the Anisbirches Walk section.

TREE-LINED AVENUE

HIGHWAY

Speed limit	
Width of adopted highway	Varies
Minimum carriage width	6.2 m
Footway/ cycleway provision	2m footway on one side, 3m shared footway/ cycleway on the other side
Highway verge	min. 3m on both sides

HIGHWAY FEATURES

Bus route	Yes
On-street parking	Yes – parallel
Traffic-calming features	Shared surface, raised table top, Eyot, road hump, squareabout
Centre line radii	In accordance with Kent Design Guide

TREE-LINED AVENUE

ACCESS

Junction spacing	To be agreed with KCC
Minimum junction visibility	2.4 x 25m
Kerb Radius	Determined by swept path analysis, although a starting point should be less than 4m
Direct vehicular access to properties	Yes – restricted at junctions

PAVING MATERIALS

Carriageway	Asphalt, tegular block
Kerbs and Edging	To be agreed with KCC
Footway	Asphalt, tegular block

LIGHTING

Carriageway	To be agreed with KCC depending on tree coverage
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Location of Star Hill Entrance Section

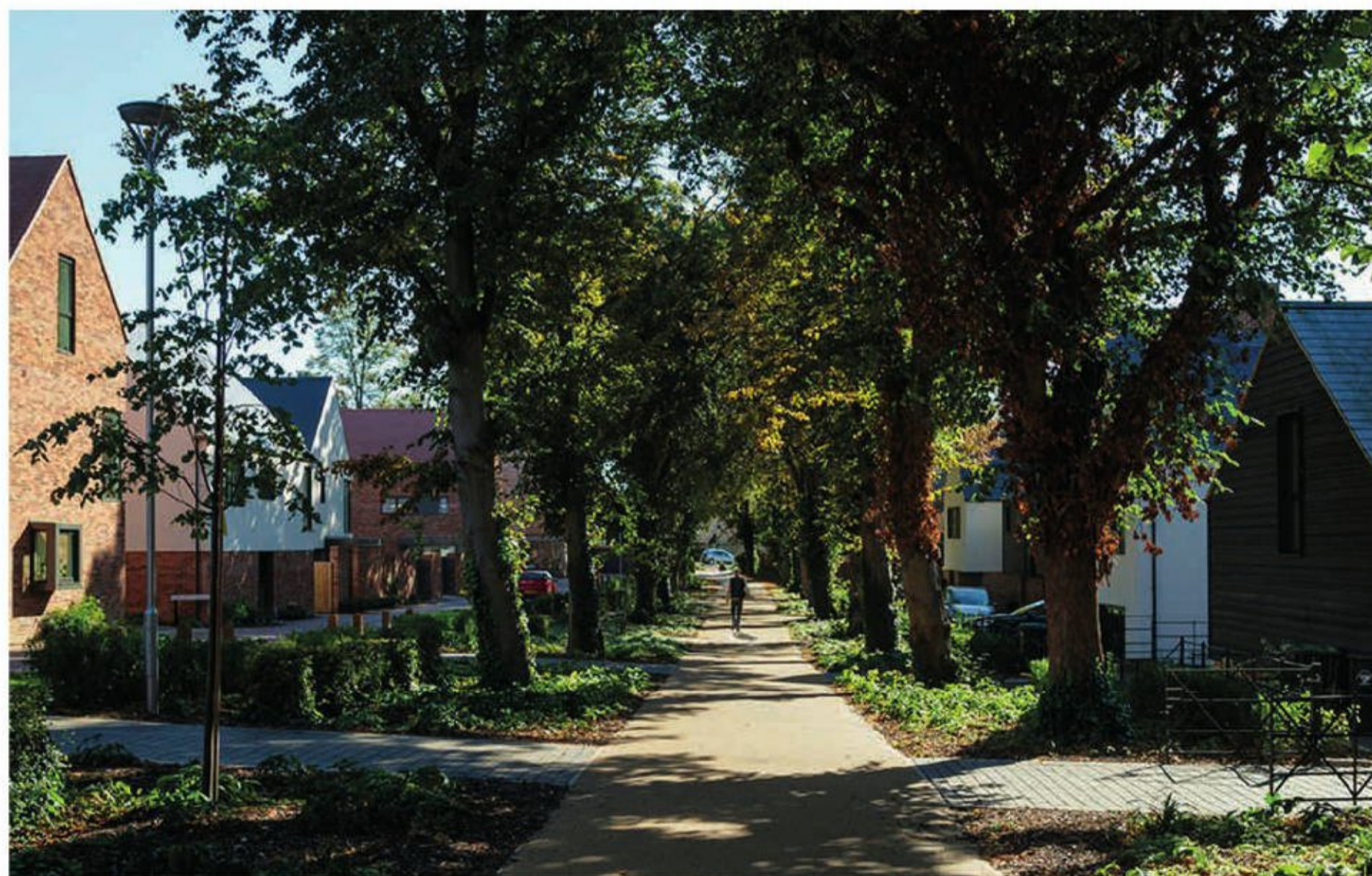


Artist impression of the Tree-Lined Avenue



Precedent image of The Avenue, Saffron Walden

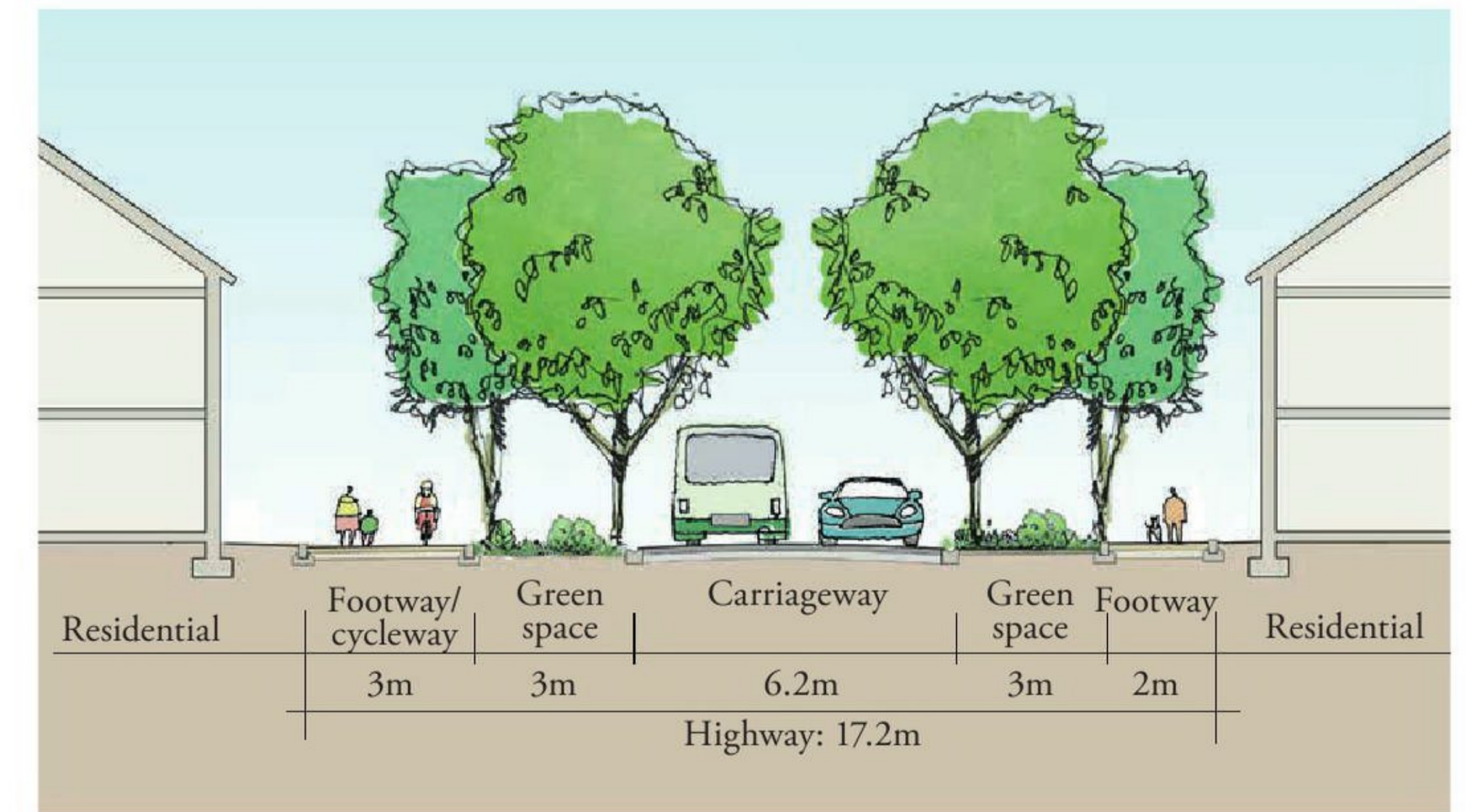
8.11 TREE-LINED AVENUE



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



Existing treed area at the approach of Fort Halstead



Indicative section 2 – 2

8.12 VILLAGE CENTRE

The Village Centre section will have a higher volume of pedestrian movement than the typical sections of the Avenue and therefore requires wider pavements and other features that signify pedestrian priority.

The pavement will run up to property boundaries to allow shop fronts in a traditional high street design. Special paving will mark pedestrian crossing points on desire lines and the design of street furniture, lighting, public art and soft landscaping will emphasise the civic importance of the place.

Where Crow Drive runs along the edge of the Village Square and Village Green, it will form an integral part of the square with the carriageway and adjoining pedestrian space at the same level. Changes in material rather than standard kerbs should be used to demarcate pedestrian priority and parking areas.

Bus stops will include raised platforms to allow easy boarding. Tactile paving must be used to indicate safe crossing places for blind and partially-sighted pedestrians.



Location of Village Centre Section

VILLAGE CENTRE		VILLAGE CENTRE	
HIGHWAY		ACCESS	
Speed limit		Junction spacing	To be agreed with KCC
Width of adopted highway	Varies	Minimum junction visibility	2.4 x 25m
Minimum carriage width	6.2 m	Kerb Radius	Determined by swept path analysis, although a starting point should be less than 4m
Footway/ cycleway provision	2m footway on one side, 3m shared footway/ cycleway on the other side	Direct vehicular access to properties	No
Highway verge	No verges	PAVING MATERIALS	
HIGHWAY FEATURES		Carriageway	Asphalt, regular block
Bus route	Yes	Kerbs and Edging	To be agreed with KCC
On-street parking	Only permitted around the village green	Footway	Asphalt, regular block
Traffic-calming features	Yes – mini-roundabouts, squareabouts, shared surface, overrun strip	LIGHTING	
Road markings	If required	Carriageway	To be agreed with KCC
Centre line radii	In accordance with Kent Design Guide	QINETIQ	
		Security fence line	3m (max) high fenceline with a service strip clear of vegetation, to be located 1m (min) from QinetiQ's demise (for details of fenceline refer to diagrams in the Star Hill Entrance character area)

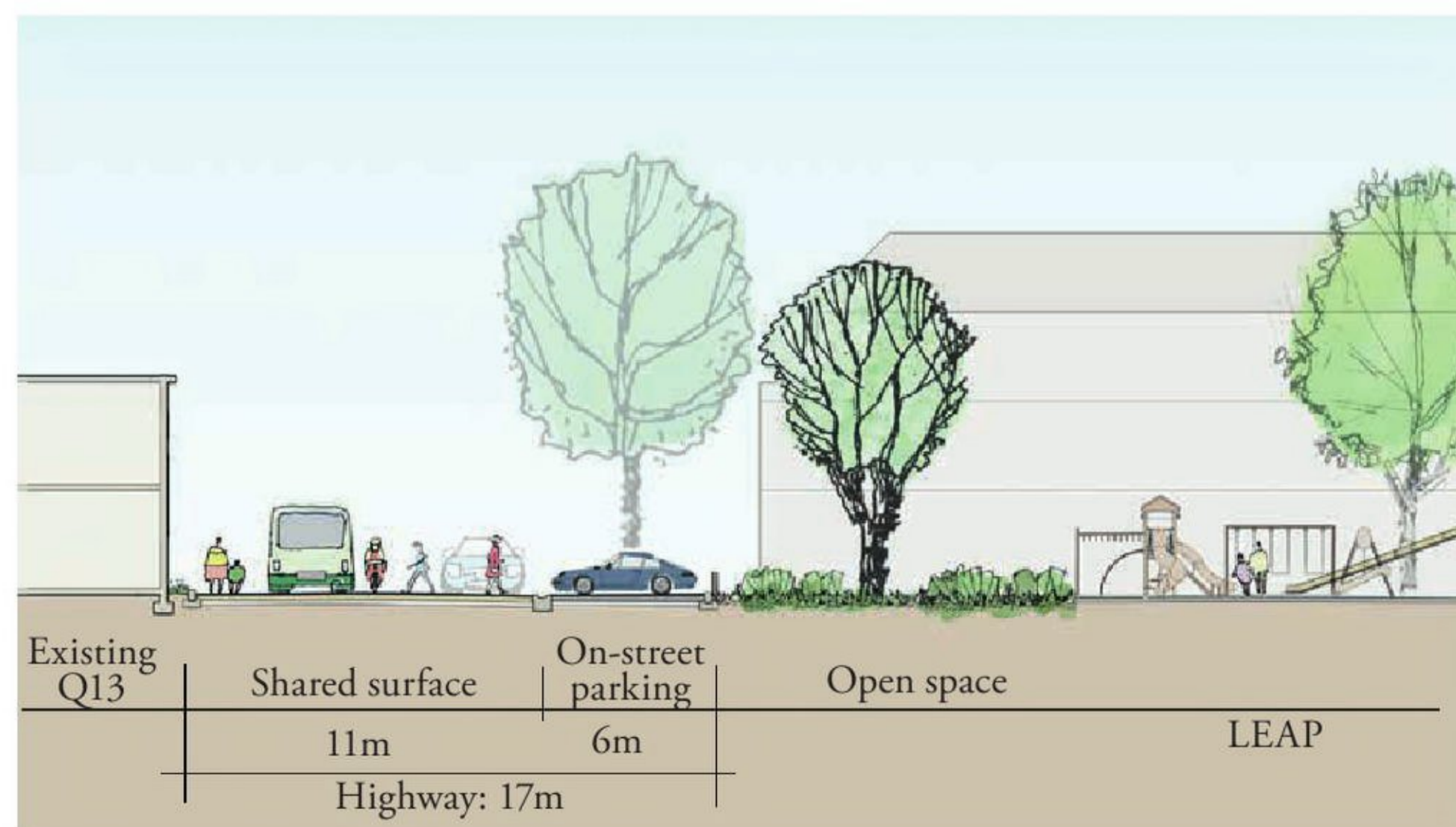
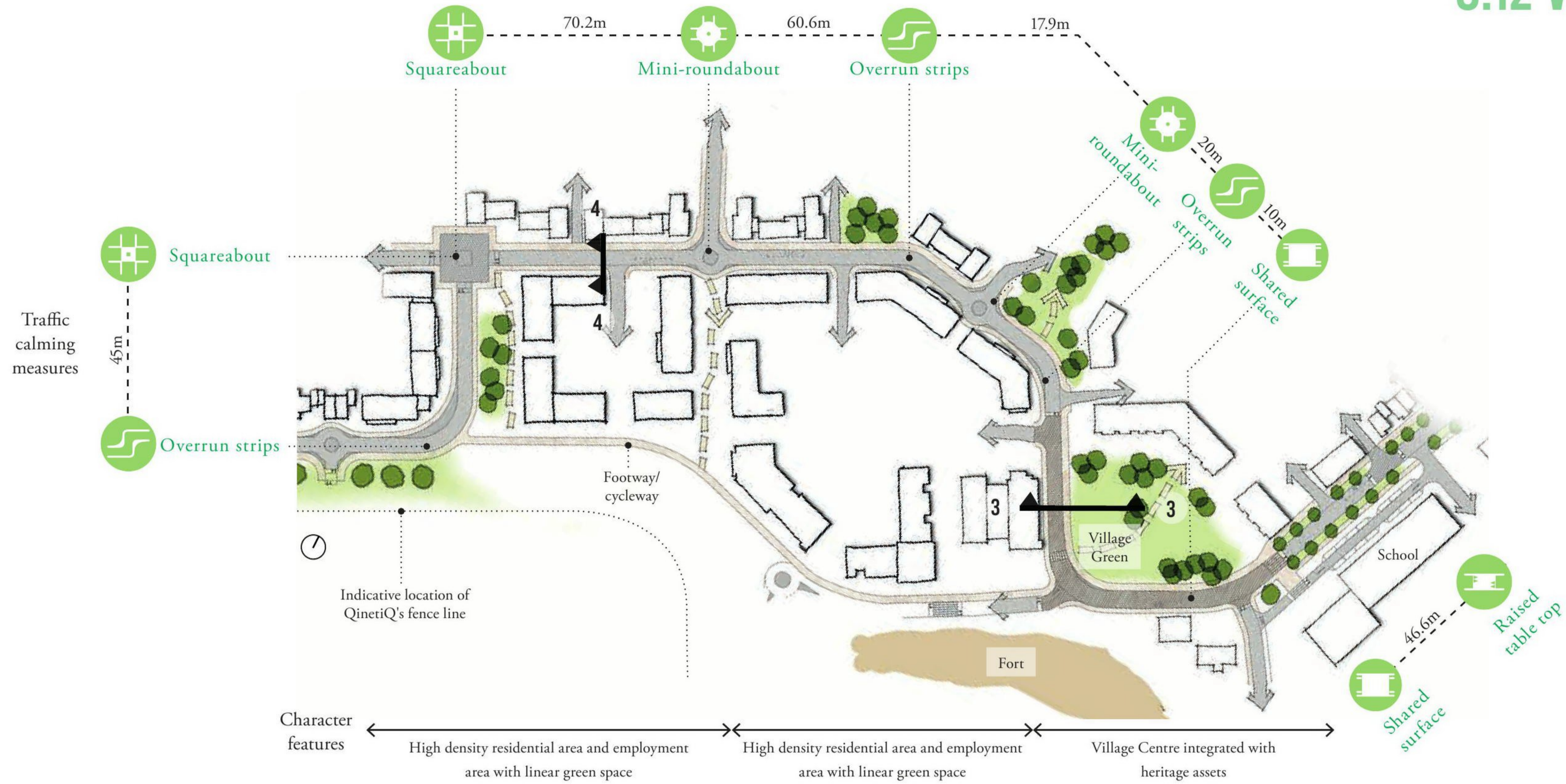


Artist impression of the Village Green

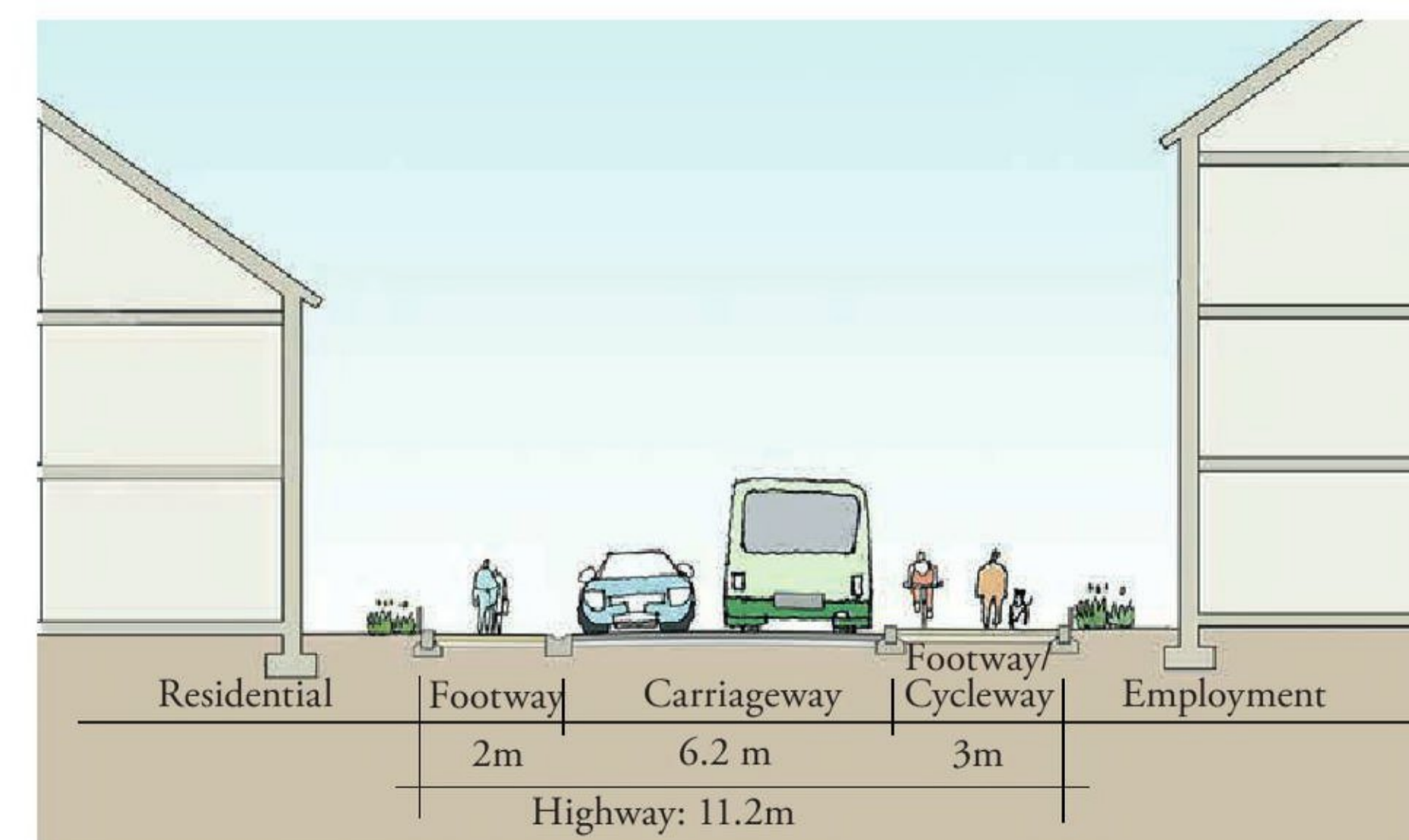


Precedent image of streetscape framed by higher density housing – Newhall, Essex

8.12 VILLAGE CENTRE



Indicative section 3-3



Indicative section 4-4


8.13 STAR HILL ENTRANCE

This section is the secondary route into Fort Halstead from Star Hill to gradually introduce the Fort Halstead village by going through open space within woodland and catching a glimpse of high quality housing at the entrance.

The design of the route incorporates an eyot with formal mature trees at the entrance and zigzag turns to create points of interests, reduce speed and provide a pedestrian-friendly environment with the green space and play area.



Location of Star Hill Entrance Section

STAR HILL ENTRANCE	
HIGHWAY	
Speed limit	
Width of adopted highway	11.2 m
Minimum carriage width	6.2 m
Footway/ cycleway provision	2m footway on one side, 3m shared footway/ cycleway on the other side
Highway verge	N/A
HIGHWAY FEATURES	
Bus route	Yes
On-street parking	No
Traffic-calming features	Yes – eyots, table tops, overrun strips and mini-roundabouts
Road markings	100mm
Centre line radii	Varies



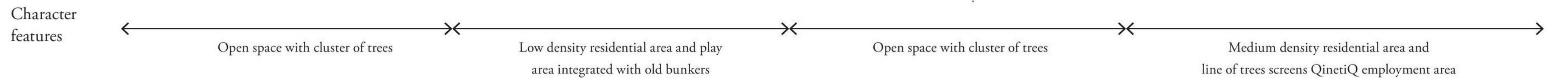
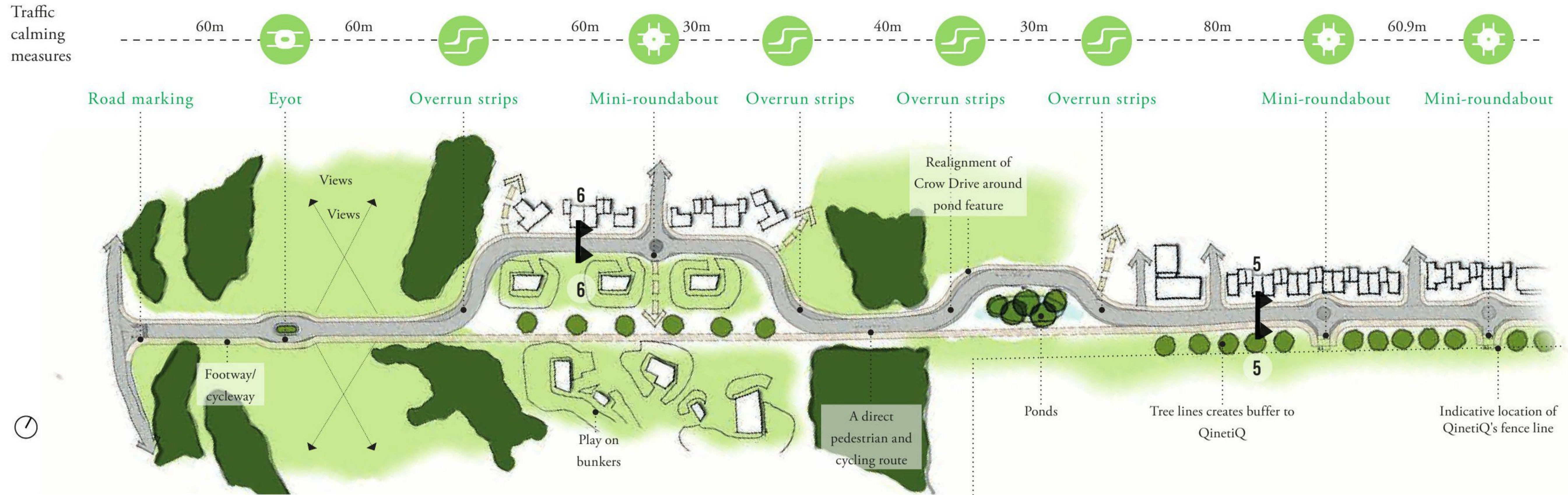
Artist's impression

STAR HILL ENTRANCE	
ACCESS	
Junction spacing	60m min for adjacent roads, 15m for opposite
Minimum junction visibility	2.4 x 43m
Kerb radius	Determined by swept path analysis, although a starting point should be less than 4m
Direct vehicular access to properties	Yes – restricted at junctions
PAVING MATERIALS	
Carriageway	Asphalt
Kerbs and Edging	To be agreed with KCC
Footway	Asphalt/block paving
LIGHTING	
Carriageway	To be agreed with KCC depending on tree coverage
QINETIQ	
Security fence line	3m (max) high fenceline with a service strip clear of vegetation, to be located 1m (min) from QinetiQ's demise

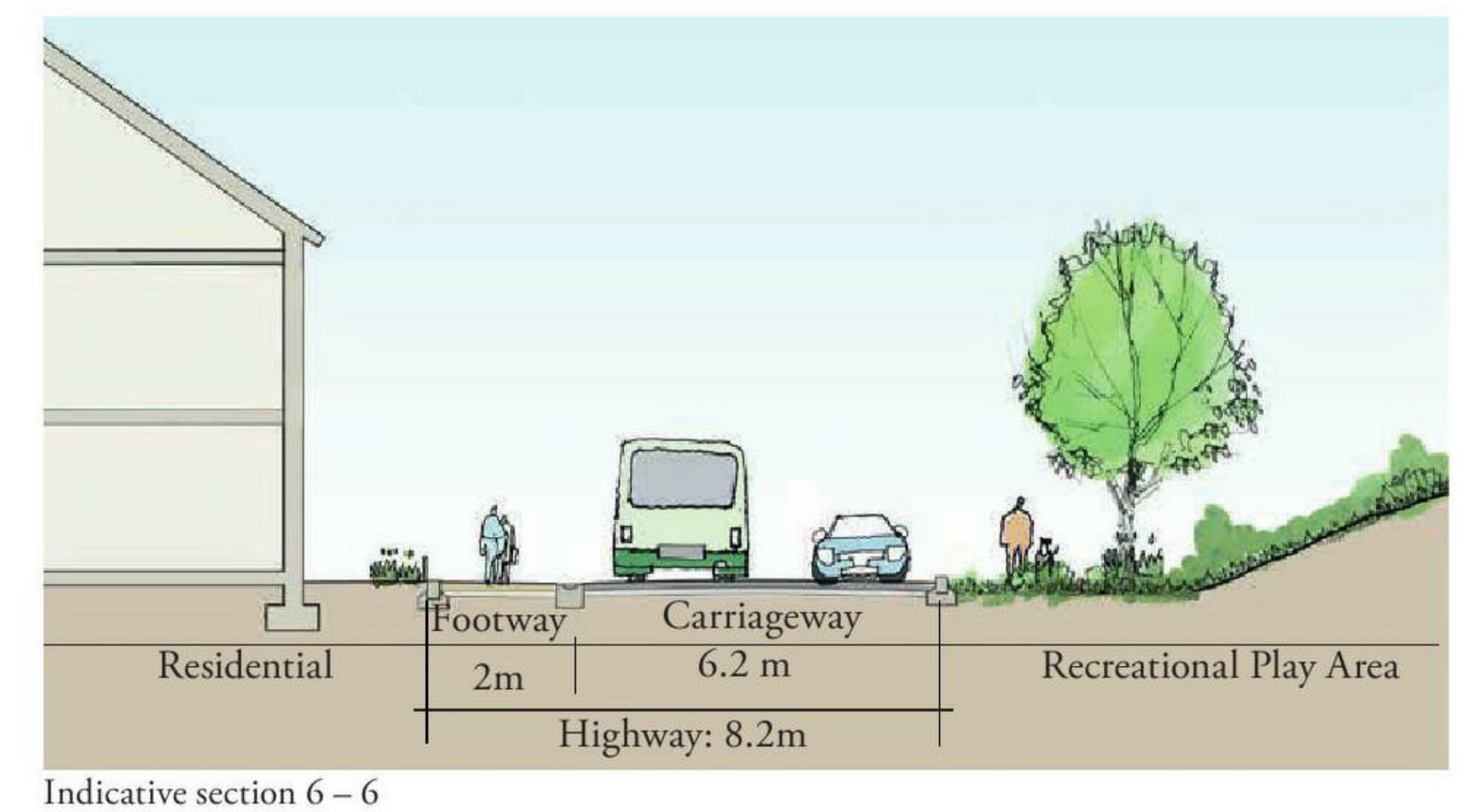
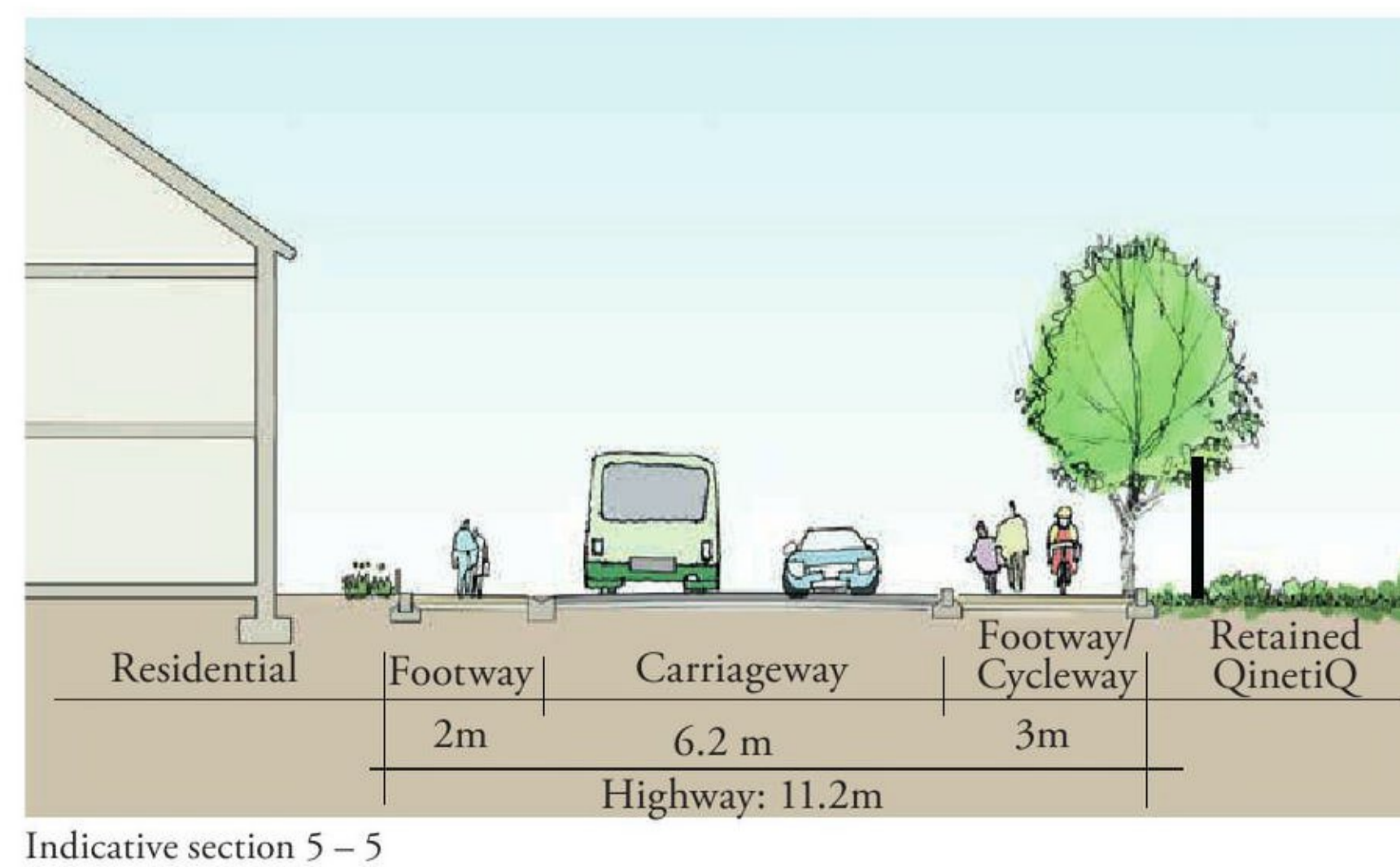
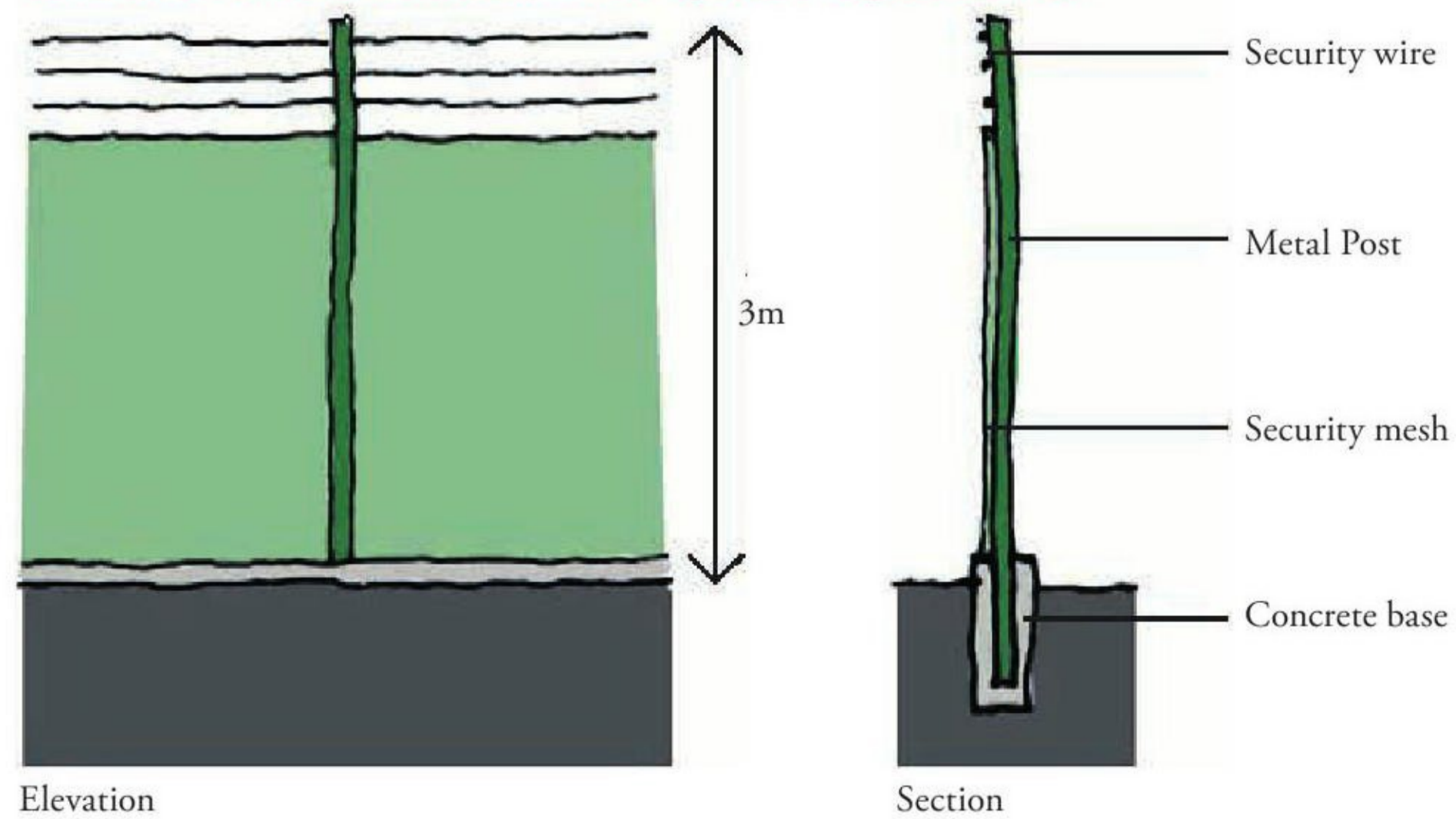


Shared footpath cycleway through landscape – Graylingwell Park, Chichester

8.13 STAR HILL ENTRANCE



INDICATIVE DETAILS FOR QINETIQ'S FENCE



8.14 SURFACE MATERIALS

The following materials represent a preferred palette for the public realm and open spaces at Fort Halstead.












The adjacent table provides a matrix of streetscape materials, which sets out the typical standard required with specific products to be agreed at a later stage.

More bespoke materials for key public spaces should also be agreed at detailed stage. The landscape and public realm materials must be selected to uphold the highest standards of ethical and sustainable procurement.

Consideration should be given to the materials supply, durability, longevity and ease of replacement or replication.

PRINCIPLES:

- Material colours must be muted and of natural tones to complement rather than detract from the buildings and landscape setting.
- A range of appropriate adoptable materials should be used in order to reinforce the street hierarchy and create a safe, comfortable neighbourhood identity.
- The materials palette must also adapt to accommodate the evolving sustainable drainage strategy, for example, by using pervious paving or permeable bound surfacing systems.
- Unnecessary road markings should be avoided as much as possible to reduce road clutter and maintenance costs.
- Avoid white and yellow lining, except on Crow Drive and the Secondary Street.
- Where street lining are deemed absolutely necessary 50mm white centre lines and 50mm wide primrose or yellow lines should be used, not 100mm lines.
- The use of different coloured paving is encouraged to demarcate carriageways, footway/cycleways and parking spaces (particularly on shared surface streets).

STREET TYPE:	CARRIAGEWAY	KERBS/EDGING	SHARED FOOTWAY/ CYCLEWAY	CROSSING POINTS	RAISED JUNCTIONS
Primary roads	Asphalt 	Natural stone or textured concrete 	Asphalt or block paving 	Tactile blister paving or tactile corduroy paving or conservation tactile paving	Concrete road hump or block paving for raised table
Shared surfaces	Block paving 	Flush natural stone or textured concrete or conservation style kerbs 	Block paving 	N/A	Block paving
Parking	Asphalt or block paving 	Natural stone or textured concrete or conservation style kerbs 	N/A	N/A	N/A
Footpaths in public open spaces	Formal open space: surface course resin bound gravel or natural stone paving Informal open space: self binding gravel 	Aluminium edge restraint, concrete, pressure treated timber edging boards. 	Block paving or resin bound paving 	N/A	N/A
Community hub/ Civic spaces	Surface course resin bound gravel or concrete block paving	Aluminium edge restraint	N/A	N/A	N/A

8.14 SURFACE MATERIALS

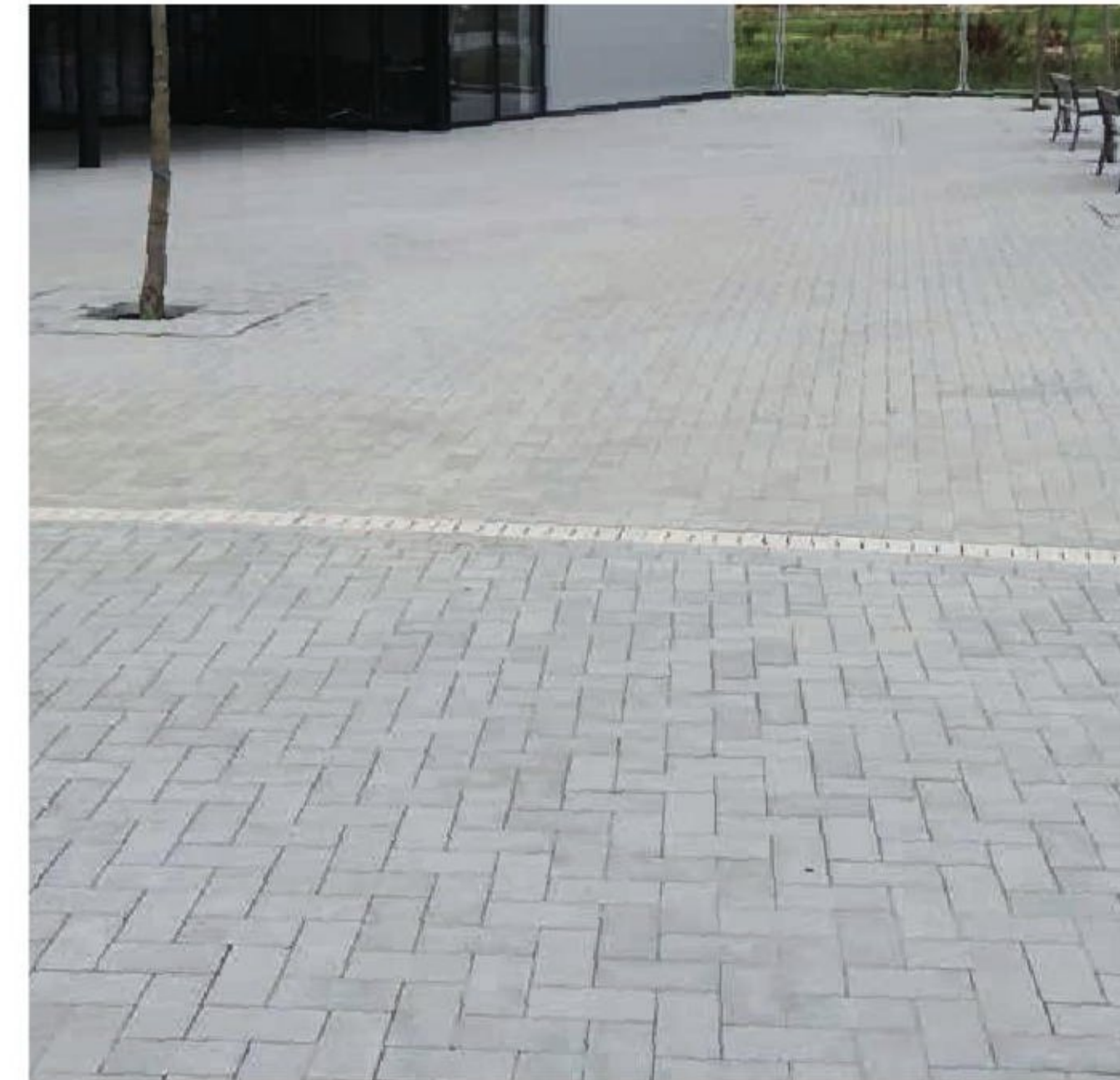
HARD LANDSCAPE MATERIALS MATRIX



An example of primary roads in asphalt surface



An example of crossing points with tactile blister paving



An example of shared surface concrete block paving



An example of defined parking areas with concrete kerbs and block paving



An example of formal open space footway/cycleway – buff resin bound gravel with aluminium edge restraint



An example of informal open space footway – buff self binding gravel with timber edging



An example of village centre/square spill out areas featuring natural stone or concrete block paving



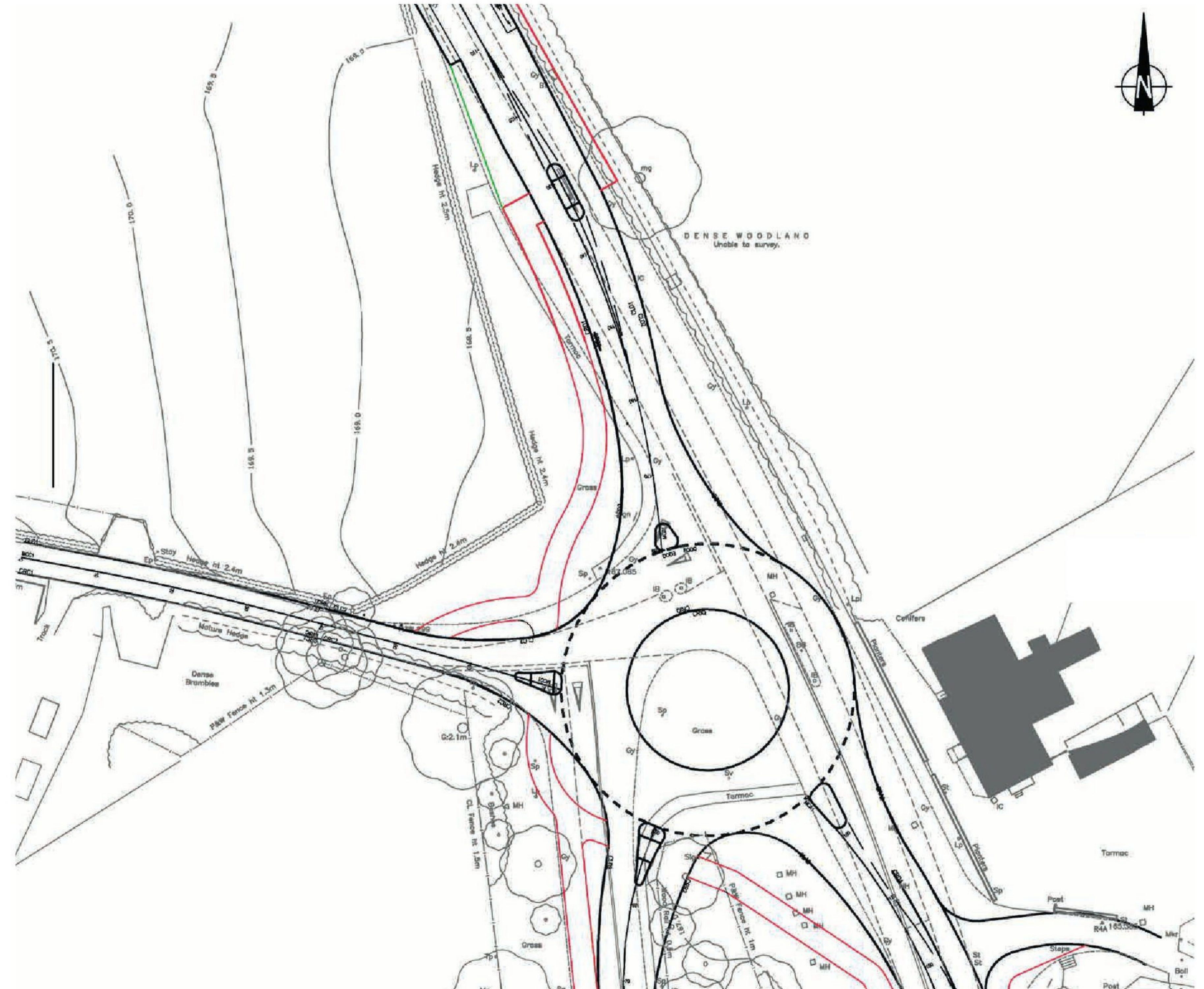
An example of carriageway/shared surface in resin bound gravel and block paving

8.15 OFF-SITE IMPROVEMENTS

PROPOSED NEW ROUNDABOUT AT THE POLHILL SITE ACCESS

The primary access point to the site is via Crow Drive and A224 Polhill to the north of the site. This junction will be upgraded as follows:

- New roundabout promotes the Polhill access as the main gateway to the site;
- Provides a safe means of negotiating the junction;
- Addresses perceived safety issues of the existing priority junction;
- Includes safety provisions for pedestrians and cyclists.



Key
— Cycle and pedestrian shared footway

Diagram showing pedestrian and cycle provision around roundabout at Polhill site access.

8.15 OFF-SITE IMPROVEMENTS




PROPOSED STAR HILL ROAD JUNCTION

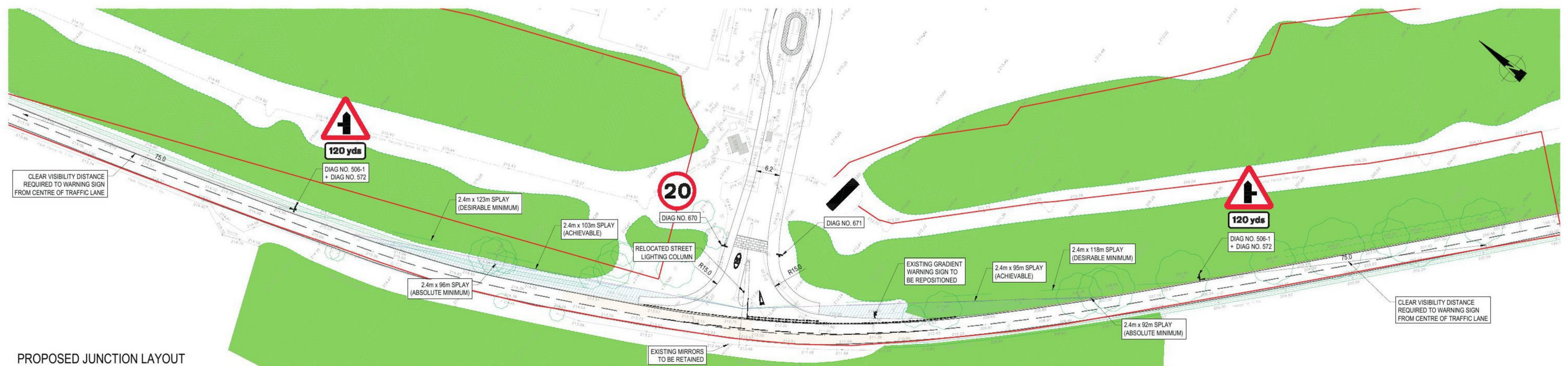
In accordance with the requirements of the Kent Design Guide, for developments of more than 300 dwellings, the secondary access to the site will be improved to provide a safe access point at the site's south west corner. This junction will be upgraded as follows:

The speed limit on this section is unrestricted therefore speeds up to 60 mph are permitted. However, design speeds have been chosen based upon mean and 85th percentile speeds actually recorded on this section.

Visibility splays have been used based upon the parameters and formulas given in chapter 10 of Manual for Streets 2.


Key

-  Application boundary
-  Area of land where foliage to be cut back and tree canopies raised (where practical).
-  High friction surface



PROPOSED JUNCTION LAYOUT





9. TECHNICAL STRATEGIES

9.1 HERITAGE & CONSERVATION STRATEGY

The proposed development will retain and enhance all designated heritage assets within the site, while those unlisted buildings of greatest importance will also be retained. The main Fort, which is designated as a scheduled monument and includes a number of listed buildings, will be converted to a heritage centre with associated conservation works to retain the structure and carry out necessary repair works. The other listed buildings within the site will be retained and repaired, with historic features reinstated to better reveal their significance.

These listed buildings will be carefully integrated into the new development by the considered design of the scheme and the provision of a heritage trail. The siting and design of the new buildings will retain or open up new views of the heritage assets, while the heritage trail will provide a key journey through the history of the site and the different listed and unlisted buildings, which date from the 19th century to the late 20th century. Interpretation boards will be provided which will assist in demonstrating the evolution of the site and the key buildings, activities and events that took place in Fort Halstead.



Key

- 1 Retained Q13 and Q14 for office/ research
- 2 Retained bunkers R58 and R59
- 3 Bunker Park
- 4 Long views toward Sevenoaks
- 5 The Fort
- 6 Retained buildings (A10, A11, A13 and A14) for office/ research and light industry
- 7 Retained buildings (A1 and A3) for office/ research and light industry



Diagram showing locations of and connections between heritage assets

9.1 HERITAGE & CONSERVATION STRATEGY



Photo map of heritage assets with movement connections

9.2 ECOLOGY STRATEGY

The Ecology Strategy proposed for Fort Halstead village is based on three key concepts:

1. Retention and Enhancement of Important Habitats

The ecological baseline data collected from a broad range of surveys completed between 2006 and 2019 has informed the design of the Fort Halstead village masterplan. Based on ecological advice Fort Halstead village has been designed to minimise potential impacts on important habitat features in accordance with the mitigation hierarchy (avoid, mitigate, compensate); most notable is the retention and protection of ancient woodland and calcareous grassland habitats.

In accordance with the Forestry Commission and Natural England's Standing Advice: "Ancient woodland, ancient trees and veteran trees" a 15m buffer will be implemented between all areas of retained ancient woodland and proposed built environment. This buffer will ensure no damage to roots, and will be planted with a range of native habitat types to provide ecotones between the woodland edge and adjacent habitat areas. Targeted woodland management will also be undertaken to enhance the structural diversity of the woodland area, including techniques such as coppicing, canopy thinning and planting of new native woodland flora.

The calcareous grassland located on the scarp slope to the southeast of the village footprint will be retained, protected and enhanced through the implementation of a programme of appropriate management. This management will include the use of targeted conservation grazing using sheep (where possible) and cutting regimes, with all arisings removed in order to keep the nutrient content within the substrate low. In addition, monitoring and management of encroaching coarse vegetation and scrub will be undertaken to maintain an open sward. Appropriate management will also be implemented for other semi-natural grassland habitats on site to ensure that their ecological value is preserved and enhanced.

The overall effect of the retention and enhancement of existing high value habitats will be not only to maintain a valuable habitat mosaic that is of intrinsic value, but also to provide optimal conditions for a range of protected and notable fauna including bats, dormice, breeding birds, reptiles and, importantly, pollinating insects.

2. Maintaining Favourable Conservation Status of Flora and Fauna

The baseline surveys and assessments completed at the Site have identified a broad range of notable ecological receptors, including roosting and foraging bats, [REDACTED] dormice, breeding and wintering birds, reptiles and invertebrates. At the core of the Ecology Strategy for the Site is the need to avoid any breach of legislation relating to protected and notable species, whilst also implementing appropriate avoidance and mitigation measures in accordance with the mitigation hierarchy to maintain and enhance their favourable conservation status. The proposed approach to avoiding and mitigating for impacts on these key receptors includes:

- Roosting bats – decommissioning of bat roosts in buildings and trees under Natural England licence, coupled with the provision of new roosting opportunities within both the built environment and retained greenspace on site.
- Foraging bats – maintain and enhance habitat connectivity to avoid fragmentation, including sensitive design of lighting proposals to maintain dark corridors.
- [REDACTED]
- Dormice – habitat loss will be minimised but, where unavoidable, work will be completed under Natural England licence. Retained habitat will be enhanced to increase the carrying capacity of the site for this species.
- Birds – work with the potential to disturb nesting birds will be timed to occur outside the peak breeding window, or will be subject to appropriate ecological controls. Habitat for breeding and wintering birds will be enhanced through provision of a variety of new nesting features and appropriate habitat management.
- Reptiles – where work will disturb habitat that supports reptile species, mitigation will be implemented to ensure reptiles are removed from the area to be impacted. Appropriate habitat management, including the provision of a range of new hibernacula and refugia, will be implemented to ensure that the site continues to provide ample habitat to support the existing reptile population.
- Invertebrates – the Fort Halstead village has been designed to retain important invertebrate habitats, including several notable grassland areas. The future habitat management proposals will allow the value of the site to invertebrate species to be maintained and enhanced.

3. Green Infrastructure and Ecological Connectivity

At the core of the existing ecological value of the site is the size and connectivity of blocks of semi-natural habitats, most notably woodlands and grasslands but also including blocks of scrub, scattered trees and hedgerows. The overall effect is to create a coherent green mosaic that provides ecologically rich ecotones and has direct connectivity to woodland and farmland with strong boundary hedgerow networks off site.

The village has been designed to fall within existing built environment/ brownfield land, with impacts on existing green space minimised. Targeted landscaping, coupled with the enhancement of retained habitats through appropriate management, will ensure that fragmentation of habitat is avoided and the Site continues to provide an important ecological function in accordance with Chapter 15 of the National Planning Policy Framework. This will also be reflected in the design of the lighting strategy for the Site, which will take into account the presence of sensitive ecological receptors such as bats and badgers; and through the provision of appropriate features to ensure that species such as terrestrial mammals are able to permeate through the site without risk of harm from increased traffic and human presence.





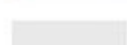





9.3 DRAINAGE STRATEGY



Surface water drainage strategy

Key

	Application boundary		Water flow routes
	Forest		Attenuation pond
	Development parcels		Borehole
	Road		Below ground storage hole

Existing site records show that surface water is collected by means of a piped drainage network to a series of outlets at the low-lying periphery of the site. The outlets facilitate dispersal of water to undeveloped land including woodland where it is allowed to infiltrate into the ground.

Whilst this method of surface water management offers sustainable benefits in terms of its ability to recharge the natural ground water system, support biodiversity and facilitate improvements to water quality through filtration, it is not considered robust enough to serve a future residential development.

In accordance with the hierarchical approach to sustainable drainage systems promoted by the National Planning Policy Framework, disposal at source by means of infiltration systems is the favoured solution for surface water management.

Ground investigations have concluded that soils within the depth range of a traditional chamber or trench soakaway are not conducive to an efficient drainage system. However, borehole soakaways, which are known to be effective in this area of the South East, have been chosen to meet the 'drainage at source' criteria mentioned above.

The alternatives to a borehole soakaway solution are less desirable as outlined below:

- Discharge to the nearest watercourse; the nearest watercourse is 1km away. Due to topographical constraints water would need to be pumped to a suitable outfall in order to reach the watercourse. Whilst technically feasible, this option is not favoured because of its reliance on pumps which require a constant source of power and regular maintenance.
- Discharge to the nearest foul sewer; the nearest foul sewer is close to the eastern edge of the Site. It comprises a 225mm diameter sewer which would not have capacity to receive surface water as well as foul. Notwithstanding, it is the policy of the Local Sewerage Undertaker to maintain separate systems of foul and surface water drainage for all new developments.

Based on initial borehole soakaway tests an infiltration rate of 2.138×10^{-4} m/s has been used to model an arbitrary drainage network aligned with the emerging masterplan. The model revealed that in order to prevent flooding in the 1 in 30 year rainfall event a series of strategically placed borehole soakaways would be required in conjunction with attached storage ponds. The modelling also concluded that any flooding caused by a 1 in 100 year rainfall event (plus a 40% allowance for climate change) can be contained within the boundary of the site.

The boreholes will be positioned to serve a particular catchment, which will assist with phased development of the site. The attached ponds will become active as the boreholes surcharge during peak events. The water level will then subside as the soakaways drain within the required criteria of half emptying within 24 hours. The ponds can also be adapted to incorporate a means of filtration by making the base deeper than the outlet, thus trapping silt and debris which can be periodically removed. This arrangement would ensure that a proportion of the pond remains wet which will support biodiversity, and when incorporated with landscaping and other green infrastructure can be a local amenity.

The proposed surface water drainage network leading to the borehole soakaways will incorporate connections for individual buildings as well as roads and paved areas. In accordance with SuDS best practice, the network will incorporate swales and filter drains wherever practicable.

Due to topographical constraints foul drainage will need to be pumped to the nearest public sewer in the same way that the existing system does.

9.4 SITE LEVELS STRATEGY

Existing site levels range from a high of circa 218m AOD in the vicinity of the western entrance, to 191m AOD at the northern site boundary and 182m AOD at the eastern entrance. Gradients range from 1 in 13 in the north to 1 in 317 in the east.

Existing building levels vary according to their location and size. Many of the larger buildings span changes in level that allow level access at one end but are partially buried at the other. Most of them are detached and sporadically positioned to accord with existing topography.

Due to the nature of the proposed development buildings levels will need to be far more closely related to achieve appropriate density. To accomplish this, retaining features are needed to facilitate raising and lowering of site levels to form development areas with gradients of no more than 1 in 20.

In addition to forming developable areas due consideration is also given to retention of trees, particularly at the perimeter of the site, and maintaining existing levels along Crow Drive which is an arterial route through the site and a buffer to the scheduled monument and existing retained development to the south.

A ground modelling exercise was undertaken aimed at creating developable areas whilst reaching a balance of cut and fill to minimise off-site site traffic movements that might otherwise be required to import or export material. The resultant analysis of proposed site gradients is shown below.

Key

- Application boundary
- Wider site boundary
- Development parcel boundary
- Proposed retaining wall
- Existing retaining wall
- 15m buffer from ancient woodland



Proposed contours and levels

9.5 UTILITIES STRATEGY

WATER SUPPLY

A new water supply will be provided to the site by Thames Water.

The new water main will connect to the existing infrastructure in Knockholt Pound situated to the West of the site. The new main will run along Star Hill Road and enter the site at the Star Hill entrance.

New Thames Water distribution across the site following the road and footpath routes will supply all the new and existing properties.

There may be some off-site reinforcement of the network required as the result of this and other developments on the Thames Water network. If required, this will be part of Thames Water ongoing programme of renewing and reinforcing the network.

FOUL DRAINAGE

The existing Thames Water gravity foul drain system exits the eastern side of the site towards Polhill.

It has been advised by Thames Water that the existing outfall has sufficient capacity to serve the existing residential properties and the new proposed development.

A CCTV survey of the drainage system has indicated that the existing outfall is in a good and serviceable condition and suitable for re-use.

The gravity foul drainage system across the development site will be totally renewed to suit the layout of the new properties, all of which will be connected to the existing Thames Water network. Once the new sections of the gravity drainage system are installed and operational, the system will be adopted by Thames Water.

RAINWATER DRAINAGE

The existing system of soakaways / run off, will be retained for the existing residential properties.

For the new and refurbished properties which form part of the planning application, new surface water drainage will be provided incorporating above and below ground attenuation ponds discharging into a series of drainage bore holes.

The existing surface water drainage system serving the newly formed QinetiQ area will be retained.

No surface water will be discharged into the foul drainage system.

ELECTRICAL SUPPLIES

Separate to the infrastructure serving the existing residential properties, there is a High Voltage UKPN electrical supply which serves the existing DSTL site.

This supply Leaves the A224 and crosses the field South of the quarry and enters the development site East of the Fort.

UKPN will extend the High Voltage supply to feed a number of substations across the development site. The substations will each feed an area of residential and commercial properties depending on load and location.

All retained buildings will be provided with a new metered UKPN supply, which will allow the end users to choose and switch energy suppliers as required.

As part of the works it will be necessary to upgrade the supply to the site to meet the needs of the new development, the final design and timing of this reinforcement will depend on the final timescale and phasing of the development works.

TELECOMS

There is an extensive existing telecoms cable network serving the existing site. This telecoms network will be adapted and renewed as required to meet the requirements if the new development.

CONCLUSION

In conclusion, relatively early in the development process the existing residential properties will be provided with a new Thames Water supply which will allow them to be separate and not dependant on the existing DSTL site. This supply will also provide Fire Hydrants in the footpaths allowing the Fire Brigade access to water in the normal way.

The other utility services to the existing residential properties, including electricity, drainage, and telecoms, are supplied separately to the DSTL site and will remain unaffected by the development.

The development site will be provided with new utility services with power, water and foul drainage for each building being directly connected to the relevant utility provider.

All properties will have a utilities electrical meter which will allow the occupier to choose and switch – when required – their electricity provider. All buildings (new and existing) in the final development will be supported with new infrastructure directly by the Utility providers.

9.6 ENERGY, WASTE & RECYCLING STRATEGIES

ENERGY STRATEGY

The following energy strategy is proposed:

- It is proposed that the buildings will be designed with high levels of energy efficiency. This is likely to include low fabric and window U-values, low air leakage and thermal bridging. These specifications will ensure that the development achieves a 7% improvement over a proposed regulated building regulations scenario.
- Decentralised energy measures have not been proposed because the site is not within an area where a district heat network exists and CHP has been shown to be economically unfeasible due to the lack of diversity in heat loads on the site and the high thermal performance criteria adopted.
- Air Source Heat Pumps and 1,120m² of solar PV, equating to a 160kWp solar PV system is specified, achieving a 49% improvement over a proposed regulated building regulations scenario.
- Cumulatively, the energy strategy specifications achieve a 56% reduction over the proposed building regulations scenario.

For further details, please refer to the Energy Strategy prepared by CBRE.

EMERGENCY ACCESS AND SERVICING

Emergency vehicles will be able to access the Site from either the A224 (Polhill) or from Star Hill Road. The design of the roads will allow for emergency access to all parts of the Site.

Servicing vehicles will be encouraged to access the Site via the A224. The masterplan minimises the need for service vehicles to turn.

There will also be some on-street parking available for visitors, deliveries and servicing if required. The servicing and parking requirements of the employment area have been discussed with KCC and they are sufficient to meet the current standards.

REFUSE COLLECTION AND STORAGE

Refuse storage and collection will be designed according to the relevant policies by KCC.

Housing layouts will be designed to minimise the need to reverse refuse collection vehicles (RCVs). An access route with site turning circles will be provided to ensure that RCVs will not be expected to reverse a distance in excess of 20 metres in order to gain access to either bin-stores or specified locations for the placement of household waste containers.



Solar PV system integrated into the roof tiles at Graylingwell, Chichester



Refuse and bike store at Upper Longcross, Surrey

9.7 DESIGNING OUT CRIME



Homes overlooking streets



Encouraging safe routes for walking to school

PRINCIPLES

Community safety is a key component of any successful place and an important design aim has been to establish the framework for a new neighbourhood that will feel safe and secure at all times, encouraging full use of its streets and spaces by all sections of the community.

In order to achieve this we have referred to key guidance documents prepared by the police as part of their Secured by Design initiative, and in particular the document 'Safer Places - The Planning System and Crime Prevention'. This sets out seven principles which help to design out crime and define successful, safe places.

1. Access and Movement

Places with well-defined routes, spaces and entrances that provide for convenient movement without compromising security.

2. Structure

Places that are structured so that different uses do not cause conflict.

3. Surveillance

Places where all publicly accessible spaces are overlooked.

4. Ownership

Places that promote a sense of ownership, respect, territorial responsibility and community.

5. Physical Protection

Places that include necessary, well-designed security features.

6. Activity

Places where the level of human activity is appropriate to the location and creates a reduced risk of crime and a sense of safety at all times

7. Management and Maintenance

Places that are designed with management and maintenance in mind, to discourage crime.

DESIGN RESPONSE

To ensure the village achieves these principles, the masterplan provides the following:

- A clear hierarchy of permeable routes. The local street network provides direct links along desire lines, connecting residents to both existing and new areas. Pedestrian, cycle and vehicular movement will be integrated within the site and to the surrounding areas.
- All routes will be overlooked to ensure safety. Landmark features will help people to navigate within the new neighbourhood. The movement network will connect to existing routes to provide an integrated community.
- A village centre providing a good mix of appropriate uses to support the needs of the whole community.
- An illustrative layout designed to facilitate the creation of a secure back-to-back perimeter block arrangement.
- Whilst respecting and responding to the existing landscape setting of the Site, the village has been designed to create attractive streets and usable spaces with good surveillance. Public spaces, SuDS and areas of woodland will be overlooked to maximise safety and create a safe and attractive setting for homes.
- A significant open space network providing a well-defined range of uses for exercise and leisure.
- Communal spaces will create focus points for the village and concentrate activity in these specific areas.
- There will be a clear definition between public and private spaces with a variety of boundary treatments such as planting or fencing. Rear gardens will provide high-quality intimate environments. Front gardens will have a clear definition between public and private. Shared amenity spaces are designed to foster local ownership.
- A new primary school with appropriately defined secure grounds.
- A detailed design and management plan for public open spaces will be undertaken and agreed with SDC.

There are also a wide range of security related issues which will need to be considered as part of the detailed design of subsequent reserved matters applications. These include:

- The arrangement of buildings on a plot and where the entrances and windows are located;
- Specification of doors and windows (particularly locks);
- The design of landscape spaces and boundary treatments; and
- Layout and location of parking spaces





10. DELIVERY

10.0 DELIVERY

INDICATIVE PHASING

Due to the scale of the site, the development will need to be delivered in phases. The following diagrams show how the development may come forward in the future and illustrates how key development infrastructure and open space will be delivered alongside the housing.

The indicative phasing has been considered in relation to a number of important factors:

- A realistic build rate for new homes;
- Early delivery of employment use;
- Access for construction traffic to and from the site;
- How this traffic will move through the site with minimum disturbance to residents when part constructed; and
- When non-residential buildings should be provided, to ensure there is sufficient demand to make them viable from the start.

MANAGEMENT

The development will be subject to the formation of a Management Company or Community Trust and the established of a Management Scheme.

The Section 106 will include provisions for the formation of a Management Company or Community Trust which will have responsibility for the management of, amongst others, the:

- Fort and Historic Interpretation Centre;
- The Community floorspace;
- Ecological areas, or areas of grassland and woodland identified in the LEMP;
- Open space areas and play areas; and
- All public roads, ways and paths not adopted by the highway authority.



PHASE 1 (2020–2023)

Infrastructure to be delivered:

- Securing QinetiQ in X-enclave and fence
- Securing and protecting buildings to be retained and trees/landscape
- Demolition of existing buildings and asbestos removal
- Remediation, cut and fill, and landscape management
- Primary road (Crow Drive, Penney Road) and secondary road



PHASE 2 (2023–2026)

Infrastructure to be delivered:

- Mixed-use Village Centre, including refurbished buildings Q13 and Q14
- Village Green
- Village Square
- Innovation and Education Hub, including primary school, refurbished buildings A1, A3, A10, A11, A13 and A14
- Green Link and public open space including LEAP, SuDs ponds and footway/cycleways

APPROX. NO. OF HOMES DELIVERED IN PHASE 2: 250
ACCUMULATIVE NO. OF HOMES: 250



PHASE 3 (2026–2029)

Infrastructure to be delivered:

- Green Link and public open space, including LEAP, MUGA, SuDs ponds and footway/cycleways
- Village Centre Employment Area
- The Fort

APPROX. NO. OF HOMES DELIVERED IN PHASE 3: 200
ACCUMULATIVE NO. OF HOMES: 450



PHASE 4 (2028–2030)

Infrastructure to be delivered:

- Public open space, including the community recreational area, LEAP, SuDs ponds and footway/cycleway
- Ecologically enhanced grassland/ mitigation zone
- Refurbished bunkers

APPROX. NO. OF HOMES DELIVERED IN PHASE 4: 250
ACCUMULATIVE NO. OF HOMES: 700



PHASE 5 (2029–2031)

Infrastructure to be delivered:

- Public open space, including SuDs ponds and footway/cycleways

APPROX. NO. OF HOMES DELIVERED IN PHASE 5: 50
ACCUMULATIVE NO. OF HOMES: 750





11. EVALUATION

11.1 HEALTHY PLACEMAKING

Public Health is an increasingly important matter on the agendas of local, national and international policy makers. This emerges in parallel with an increasing realisation that the way neighbourhoods of all sizes are planned and connected has a major part to play in alleviating a wide range of 'avoidable' health problems.

Built form, open space, movement and parking strategies all need to be balanced to create sustainable, liveable, healthy environments. Research shows that well-designed places that encourage regular exercise in daily life reduce our susceptibility to a wide range of diseases including heart problems, type 2 diabetes and cancers, whilst good air quality limits asthma and other respiratory illnesses.

Better health improves life quality and reduces time lost at work, thereby raising the productivity of businesses and the prosperity of employees. Reduced traffic congestion saves time and avoids boredom, tiredness, frustration and 'road rage'. Good placemaking produces convenient and harmonious environments that overcome many of these negative impacts and create healthier, wealthier societies.

The table to the right demonstrates some of the main health problems that can be positively influenced by good placemaking. It shows how the design of the masterplan has the potential to enable people to lead healthier lives, benefitting both new and existing residents.

The health problems and the active ways to address, which have been shown in the table, have been identified through research into multiple publications; primary sources which include:

- Halpern, D. (1995) 'Mental Health and The Built Environment'. London, Routledge.
- Jones, R. & Yates, G. (2013) 'The Built Environment and Health: an evidence review'. Glasgow, Glasgow Centre for Population Health.



11.1 HEALTHY PLACEMAKING

	Main Health Problems	Cardiovascular diseases, type 2 diabetes, (often referred to as 'avoidable' diseases), several forms of cancer		Respiratory illnesses including asthma	Mental health problems	Transport related accidents
	Causes	Sedentary lifestyles and lack of exercise	Poor diet and food poverty	Poor air quality	Loneliness and isolation through limited social interaction and fear of crime	Interaction of vehicles, cycles, pedestrians
	Active ways to address causes	Enable exercise in normal patterns of daily life	Provide education, accessible facilities and available green spaces such as community gardens	Limit the causes and effects of vehicular emissions	Provide community facilities and safe, sociable and productive environments	Good urban and transport design
Measures included at Fort Halstead						
1	Walkable neighbourhood—walking, cycling and use of public transport have priority over the car	✓		✓	✓	✓
2	Cluster of community uses including a community building on the village green with potential uses for a drop-in GP, pharmacy, flexible space for classes, meetings and community events and a food store for healthy eating	✓	✓	✓	✓	✓
3	Community orchards will be a local source of fresh food and improvement of life quality	✓	✓	✓	✓	
4	New primary school in central location accessible via green routes, and with limit to parking for drop-off/pick-up zones	✓	✓	✓	✓	✓
5	Play-on-the-way scheme to encourage parents to walk their children to school	✓	✓		✓	✓
6	The Innovation Hub provides a new high quality, R&D and technology focussed business campus	✓		✓	✓	✓
7	A series of 'Green fingers' extending throughout the residential area, provides areas of public open space, pedestrian links, allows for tree retention, and provides habitat corridors between areas of Ancient Woodland	✓	✓	✓	✓	✓
8	Provide a new, attractive and well-lit off-road cycle route through the site between the Polhill Site access and Knockholt Pound	✓		✓	✓	✓
9	Reroute bus service to directly serve the Fort Halstead site linking the wider area (Sevenoaks and Orpington)	✓		✓		✓
10	The provision of a new high quality, community bus service	✓		✓	✓	✓
11	Controls on size and access times of heavy goods vehicles to commercial units			✓		
12	Slow speed shared spaces, 20mph or less throughout	✓			✓	✓
13	Main street has been designed with traffic calming—pinch points and crossings—to encourage walking and reduce the likelihood of transport related accidents.	✓		✓	✓	✓
14	The mews streets are designed to be pedestrian priority to encourage walking and cycling and reduce likelihood of accidents through lower vehicular speeds.	✓		✓	✓	✓
15	Secure bike storage at home and at new bus stops in village centre to encourage cycling	✓		✓	✓	✓
16	A car-club will be made available within the proposed Fort Halstead village encouraging less vehicle ownership			✓		
17	Encourage community stability and diversity through 'Lifetime Homes' compliance and 100% wheelchair designed dwellings	✓		✓	✓	✓

11.2 SUSTAINABILITY MATRIX

METHODOLOGY

JTP have developed a matrix to review environmental responsiveness under a number of broad categories. Each category includes features at a variety of scales from site wide issues to those at the level of individual homes.

The matrix is used as a design tool, allowing early discussions among the project team about the feasibility and appropriateness of various strategies for a specific site. It also encourages early consideration of significant cost constraints and allows sensible decisions to be made about the most cost effective way of achieving an environmentally responsive scheme.

ASSESSMENT

The Fort Halstead masterplan incorporates a significant number of environmentally responsive design features as set out in the adjacent table.



EFFICIENT USE OF RESOURCES	ENERGY STRATEGY	WASTE STRATEGY
<p>The site itself is currently occupied by Dstl and QinetiQ as a military research complex. The development will make use of brownfield land.</p> <p>The complex cut and fill strategy minimises the amount of material being taken off site. Through the design process vehicle journeys were reduced from 6920 to 250, (equating to 3,250m³ of material rather than 90,000m³).</p> <p>A number of existing buildings are being retained and converted, including concrete bunkers. The Village Centre incorporates the restoration of two existing buildings Penney (Q14) and The Q (Q13).</p> <p>The proposed development will ensure the retention of mature trees and other established landscape features; new connections and improvements for pedestrians and cyclists throughout; preservation and enhancement of the site's character.</p> <p>The site will be remediated and decontaminated prior to redevelopment.</p> <p>The proposal retains the historic tank roads and uses these as future streets within the new neighbourhood.</p> <p>All non-developable land is being used as public open space.</p>	<p>Building orientation and layout have been designed to maximise natural lighting, maintaining a good level of privacy through orientation and location of parking and planting.</p> <p>The energy strategy supports a fabric first approach to new development, minimising energy demand from the outset. All buildings within the application will exceed Building Regulations Part L by energy efficiency measures alone.</p> <p>Sevenoaks DC policy SP5.2 requires 10% reduction in total carbon omissions through on-site installation of decentralised, renewable or low carbon energy sources.</p> <p>Sevenoaks DC Draft Local Plan July 2018 requires all new non-domestic development (including conversion) to achieve BREAAAM Excellent. This will be applicable for all the non-residential buildings at Fort Halstead.</p> <p>Under current Building Regulations the strategy consists of 1,120m² of PV (160kWp) and building level Air Source Heat Pump systems equating to an 8% improvement over baseline regulated CO2 combined with 4% saving from energy to 12% saving. Under the proposed Building Regulations scenario where the carbon factor of electricity is reduced to 0.23 this 12% saving increases to 56%.</p>	<p>Refuse stores and collection points have been designed into the layout and conveniently located for both residents and refuse vehicles on collection day.</p> <p>Refuse swept path analysis has been checked to ensure the development is accessible to refuse vehicles.</p> <p>Composting facilities are proposed in the community garden and adjacent to the community orchard.</p> <p>Design guidance requires that refuse stores to employment areas are discretely placed and that the servicing strategy is to the rear or side of buildings rather than the front.</p>

11.2 SUSTAINABILITY MATRIX

GREEN INFRASTRUCTURE		BLUE INFRASTRUCTURE	MOVEMENT STRATEGY	SOCIAL INFRASTRUCTURE
<p>The site sits within the High Weald Area of Outstanding Natural Beauty and Green Belt. Development is limited to brownfield land to minimise impact in this sensitive landscape setting.</p> <p>The development proposes the retention and enhancement of existing ancient woodland, other woodlands and chalk grasslands.</p> <p>New green links are proposed which connect landscape assets i.e. woodlands and recreation areas. The new linear Green Link connects the heart of the neighbourhood to the countryside beyond, providing corridors for wildlife and play. New footpath routes around and through the neighbourhood are provided which all connect into the wider network.</p> <p>Existing trees and hedgerows have been retained where possible. Additional native woodland and tree planting will be incorporated.</p> <p>A long term management plan for open space will be established in order to protect and enhance ecologically valuable habitats for the future.</p> <p>The provision of a community orchard helps to connect future residents with nature and provide access to seasonal produce.</p>	<p>The Play strategy includes the provision of an informal kick-about area to the west of the site, a MUGA, 4 LEAPs and a number of LAPs.</p> <p>The proposal also includes a number of other walking routes, cycling routes, running routes and a recreational route all of which are illustrated in the DAS.</p> <p>The design of the lighting strategy for the Site, which will take into account the presence of sensitive ecological receptors such as bats and badgers; and through the provision of appropriate features to ensure that species such as terrestrial mammals are able to permeate through the site without risk of harm from increased traffic and human presence.</p> <p>The masterplan proposes the retention and enhancement of existing high value habitats. This will deliver a valuable habitat mosaic that is of intrinsic value, but also provide optimal conditions for a range of bats, dormice, breeding birds, reptiles, and, importantly, pollinating insects.</p>	<p>The site is located in high ground. The risk of fluvial flooding is low and therefore no special measures are required to mitigate this risk in the design of development.</p> <p>There is a significant reduction in hard standing on the site enabling more porous surfaces and reducing surface run-off.</p> <p>There are a number of new ponds and basins proposed across the masterplan as part of the drainage strategy, furthermore, there are a number of borehole soakaways, underground tanks and swales all of which reduce surface water run-off and assist with attenuation and infiltration.</p> <p>Swales are integrated along the Green Link adding to the landscape amenity and providing flood storage.</p>	<p>The masterplan has been designed in such a way to favour the primary Polhill access and ensure that the Star Hill is used less frequently and intensively.</p> <p>The re-routing of an existing bus service and provision of a specific community bus provision will support non-car modes of transport.</p> <p>The proposals include a wide range of traffic calming measures throughout the scheme reducing vehicular speed and ensure a safe and pedestrian-friendly environment for residents and discouraging through movement of vehicles.</p> <p>The layout includes raised surface at prominent key junctions in the Village Centre that aim to calm vehicular traffic and provide safe places to cross for pedestrians and cyclists.</p> <p>The proposals include a new attractive and well-lit off-road cycle route through the neighbourhood between the Polhill Site access and Knockholt Pound.</p> <p>New sustainable movement routes are proposed including a 5.6km cycling route, 6.9km of walking routes, 4.9km extending a further 2.7km running route and a 3.6km recreational route linking a range of new facilities on site.</p> <p>Policy compliant cycle storage is provided in the buildings included in the detailed planning application.</p> <p>The Polhill access improvements assist with pedestrian and cycling movement at the entrance to the site.</p>	<p>Significant employment opportunities are provided as part of the proposals reducing need to travel.</p> <p>The Village Centre forms the heart of the village as both an employment area and a community hub for the new residents including a community building, flexible working accommodation, a gym, a nursery, a food store, a café and a primary school.</p> <p>The development will provide a range of much-needed market and affordable housing of different sizes, including the potential for over-55 housing.</p> <p>The proposals include an interpretation trail explaining the site's history and reinforcing its identity and character as part of the new village.</p> <p>The mix and variety of housing proposed enables people to down-size and up-size without leaving the Village community.</p> <p>All new homes are likely to include space for home working, include natural ventilation, have balconies to all apartments and meet the BRE guidelines on daylight/sunlight.</p> <p>10% M4(3) dwellings are proposed.</p>



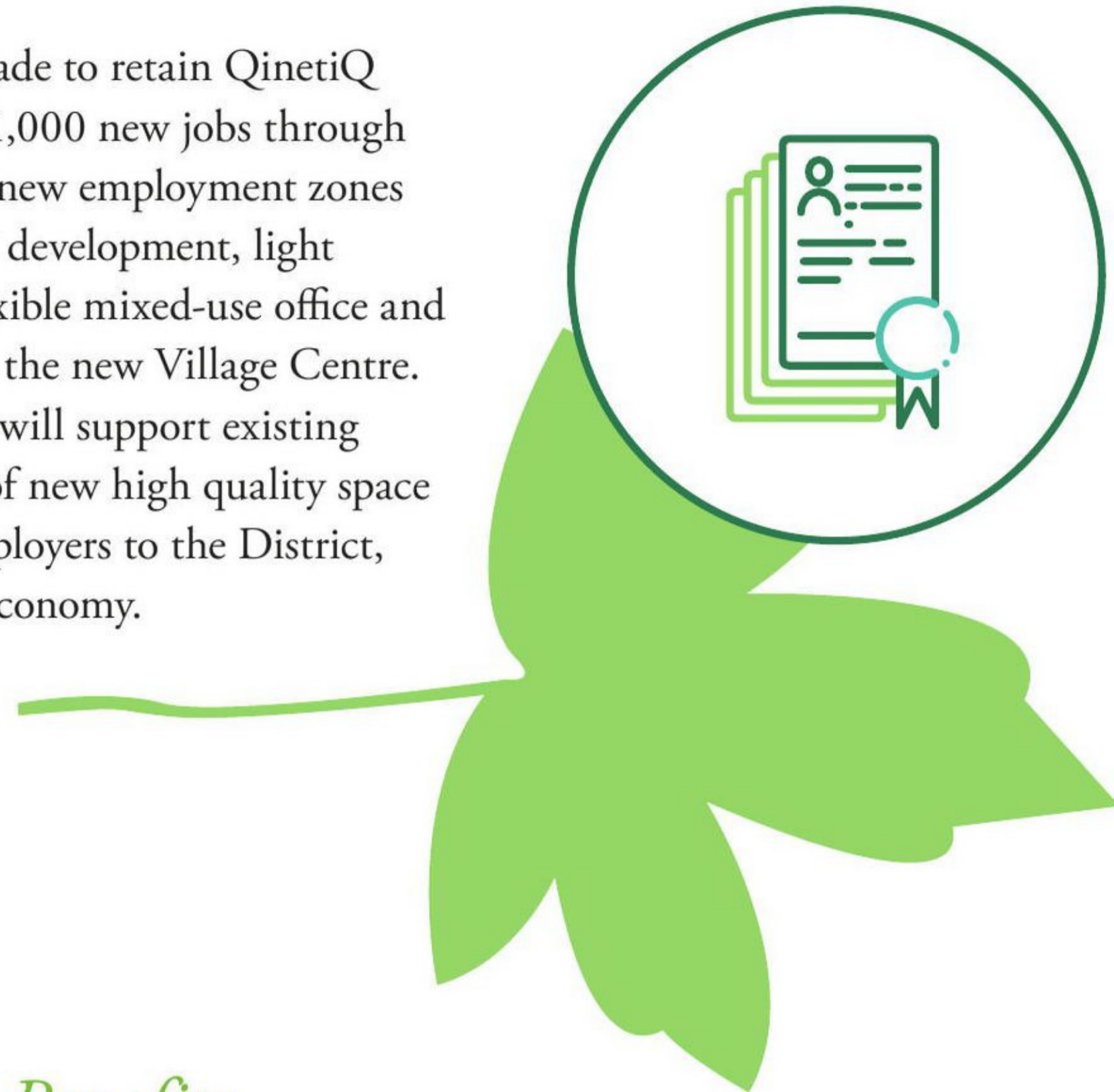


12. CONCLUSION

12.1 SUMMARY OF BENEFITS

New Jobs

Provision will be made to retain QinetiQ on site and create >1,000 new jobs through the creation of two new employment zones of office/research & development, light industrial space, flexible mixed-use office and innovation space in the new Village Centre. The space provided will support existing businesses in need of new high quality space and attract new employers to the District, boosting the local economy.



New Homes

Fort Halstead village will provide a range of much-needed market and affordable housing types, including the potential for over-55 housing. The site will contribute to meeting Sevenoaks District Council's housing need and its required five year housing land supply.



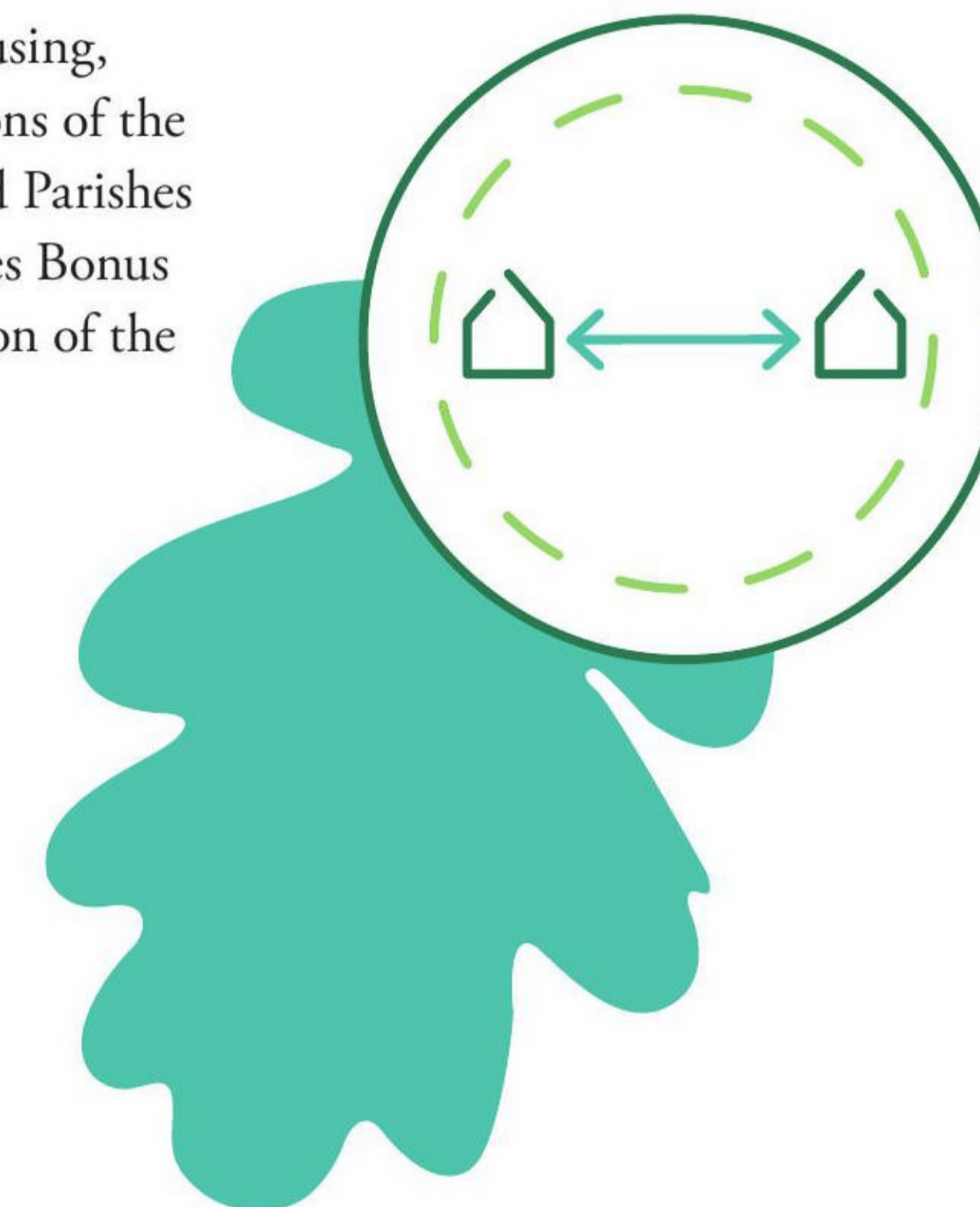
Community Benefits

The site will provide facilities to support and integrate the new residents and employees, centred around the Village Centre hub of mixed-use community space, nursery and useable managed open space for a range of recreational uses. Now secured and private, post-development, the site will be accessible to the public via footpath and bridleway connections. This provides access not only to the built development, jobs, homes and services but also the open recreational land for the enjoyment of the local landscape.



District-wide Benefits

The scheme will provide affordable housing, CIL and S106 contributions. Obligations of the infrastructure needs of the District and Parishes will be met and significant New Homes Bonus payments made throughout the duration of the delivery of Fort Halstead village.



11.1 SUMMARY OF BENEFITS

Heritage conservation

The opening of the site and Fort to the public offers significant heritage benefits to preserve the story of Fort Halstead, its heritage assets and setting. The Fort area will be managed as a heritage feature, and existing key and significant buildings will be refurbished and reused to form the next chapter in the site's important history.



Infrastructure

Through the Fort Halstead village, major utilities will be upgraded, including water, electricity and high speed broadband. This is a critical early phase and will manage the impact of the site as it is developed out and occupied. Detailed conversations are underway with a number of statutory authorities in relation to site-wide infrastructure installation.



Sustainable Transport

The proposals have been thoroughly assessed from a transport perspective, in conjunction with pre-application engagement with Kent County Highways officers. The masterplan has been designed in such a way to favour the primary Polhill access and ensure that the Star Hill access is used less frequently and intensively. A number of off-site measures are proposed which will enhance the local area and network, and the re-routing of an existing bus service and provision of a specific community bus provision will support non-car modes of transport.



Landscape & Biodiversity

The overall landscape character of the site, within the broader AONB context, will be protected and enhanced in perpetuity as part of the scheme. The key biodiversity features, including the ancient woodland, will remain untouched by Fort Halstead village and a long-term package of management benefits will be secured through the planning permission. The AONB context of the site has informed the proposals in terms of ensuring that its natural beauty and identified special qualities are protected and enhanced, and new recreational opportunities provided.





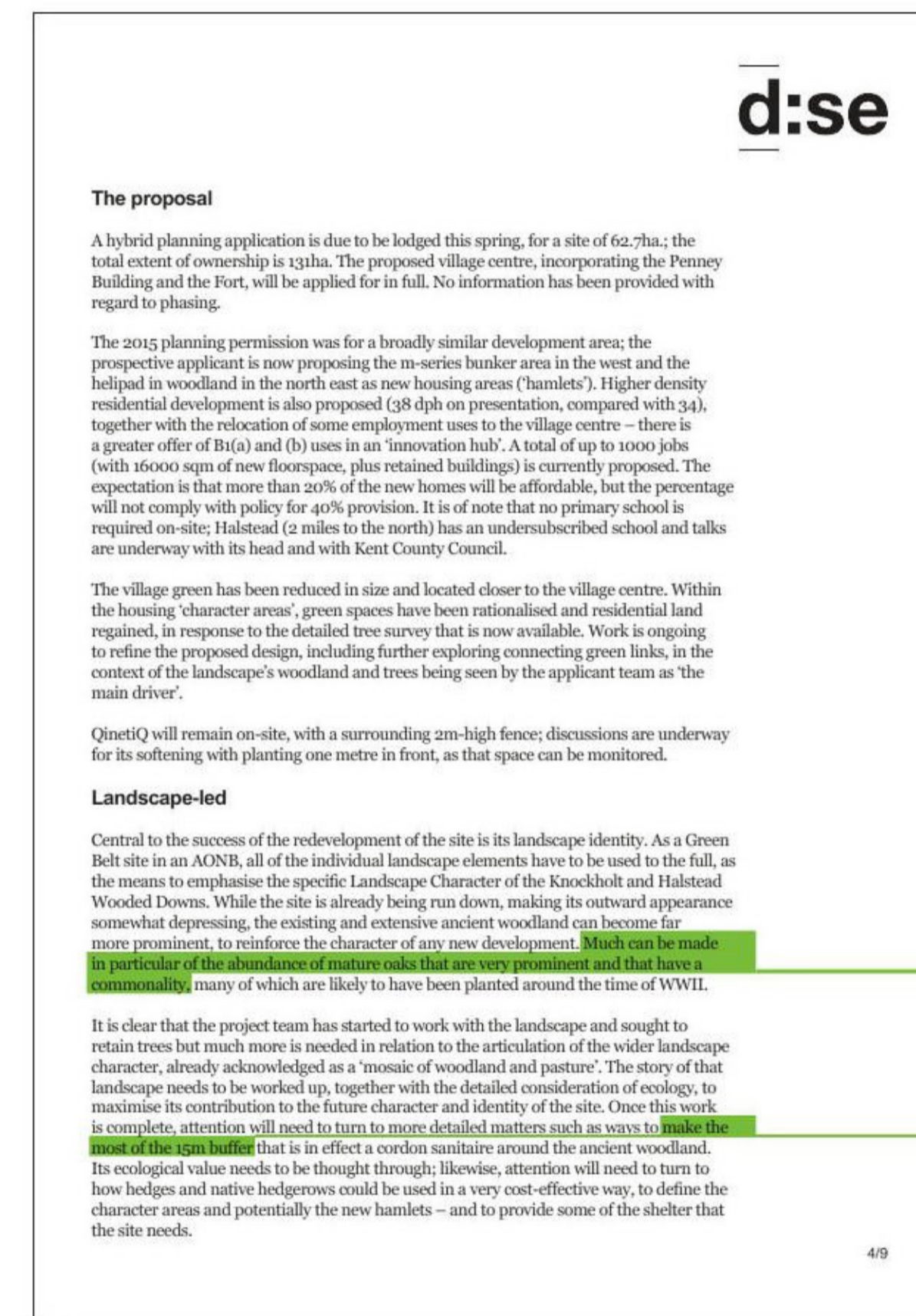
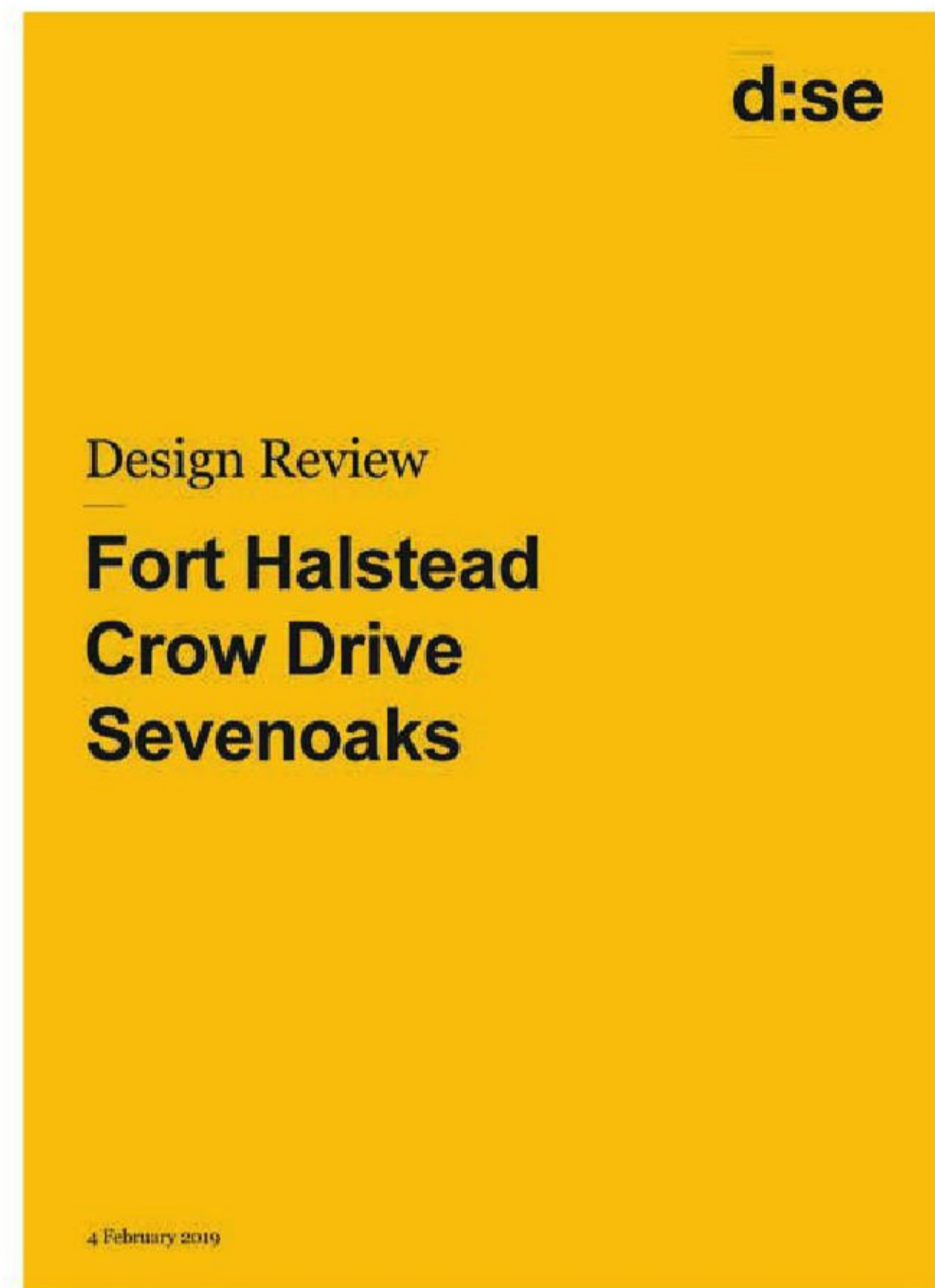


APPENDIX

APPENDIX A: DESIGN REVIEW PANEL SUMMARY

The following text was provided as a report summary by the Design South East panel following the Design Review Meeting held on 23 January 2019.

The Design Team Response to comments are found below the relevant quoted passage.



LANDSCAPE-LED

"Much can be made in particular of the abundance of mature oaks that are very prominent and that have a commonality".

"...make the most of the 15m buffer".

"...[hamlets] could feel very detached and remote from the rest of the community – and particularly from the village centre at its heart."

Response

Following the DRP the design team reviewed the approach to landscape and have developed a much more coherent network of green routes, seeking to preserve trees and better connect the landscape assets across the site. The Green Link has been enlarged significantly, creating a more substantial central green way and is directly linked to the Village Green.

APPENDIX A: DESIGN REVIEW PANEL SUMMARY

QUALITY AND DISTINCTIVENESS

"... it is not yet of the necessary exemplary quality".

"Much more exploration ... needs to be presented, so as to demonstrate how the scheme as a whole will create an attractive place to live and work, and a viable new community with good pedestrian connectivity and the right mix of uses".

"... the site's wider context and its connections with existing movement corridors are key".

"... Crow Drive becoming a through route."

Response

Since the DRP the design team have worked closely with SDC to develop detailed design guidance for all the character areas which seeks to capture the quality of the proposals and the distinctive differences in character across the neighbourhood. Overall this guidance—which is extensive—will help to ensure the quality of the scheme is exemplary and specific to Fort Halstead's unique context.

ARRIVAL TO THE VILLAGE CENTRE

"... the village centre also needs to appear from Crow Drive as the termination of a vista",

"... arrival at the Fort and the village centre needs to be celebrated".

Response

The revised layout to the Village Centre considers the arrival through a sequence of unfolding views the last of which is terminated by a feature building (Block 2) which addresses the square. The walk-through animation that has been developed helps to illustrate this sequence and demonstrate that the Village Centre is suitably celebrated.

CROW DRIVE ENTRANCE ROUNDABOUT

"... cyclists and pedestrians not being deterred".

Response

The roundabout design has been developed to ensure safe routes and crossings for both pedestrians and cyclists detailed drawings can be found in Chapter 8 of this document.

MUGA LOCATION

"... a re-sited and well-overlooked MUGA should be provided."

Response

We have reviewed the position of the MUGA and it has been relocated to the western end of the Green Link near the NEAP. This focuses play and recreation areas together with direct access to the adjacent residential neighbourhoods.

FOOD GROWING

"... provision of allotments is an important element".

Response

The masterplan now includes a community orchard area to the West of the masterplan near bunker park and a community growing area to the rear of Block A/B.

d:se

The ecology that lies beyond the ancient woodland and good quality grasslands of high ecological value should also help drive character; in addition to larger sets in the X-series of buildings. Other natural capital that has been, or that will be identified in surveys should be used to help the development achieve a biodiversity net gain.

Lastly, there will need to be a whole area management plan secured by s106 planning obligation; this should be supported by a business plan to ensure future management is properly resourced. This should be considered essential if the proposal is to be fully 'landscape-led'.

Place making

Fort Halstead presents many challenges and opportunities for creating a sustainable new neighbourhood. Its linearity is one of its greatest constraints; the proposed masterplan therefore has to try and ensure that elements of the development do not become detached and the community disjointed as a consequence. While it is a worthwhile objective to seek to maximise the use of developable land, the future residents of the two newly-added outliers (the proposed 'hamlets') could feel very detached and remote from the rest of the community - and particularly from the village centre at its heart.

Otherwise, and acknowledging that there is an adopted Plan allocation and a 2015 planning permission for a 450-home, employment-led development at Fort Halstead, the new proposal adding 300 more homes - as currently presented - raises the concern that despite being previously developed land, it is not yet of the necessary exemplary quality to start to satisfy legal requirements for AONB and heritage assets, nor to be consistent or comply with Green Belt and other policy (particularly policies protecting ancient woodland, and for promoting local distinctiveness in new development).

Much more exploration - based on evidence derived from the study of land use, development and layout options - needs to be presented, so as to demonstrate how the scheme as a whole will create an attractive place to live and work, and a viable new community with good pedestrian connectivity and the right mix of uses in what may be perceived as a relatively remote location. These options would include: exploring how to develop the Fort and listed buildings as a visitor attraction; and conceptualising how the business base and employment would grow here (both with and without the additional residential element). This work may well have already been undertaken; expressing the exploration of such options would help justify the scale and mixed-use content of the proposed planning application - and help increase certainty for the landowner over its longer-term future.

Sustainable integrated transport

This new community should be given the opportunity for walking, cycling and public transport to be their most attractive travel options and it is not clear as yet how this will be achieved. The proposed links within the site through green landscapes for pedestrians and cyclists are enclosed in terms of not encroaching further on ancient woodland. They do however need to be worked-up in detail, such that it would be possible to use a clear narrative to promote the development as one where, for example, everyone can use them safely and e.g. to reach the village centre without crossing a road. Ultimately, the framework of greenways provided for moving around the site should mean that residents and employees can dispense with using their cars, once here.

5/9

d:se

More importantly, the site's wider context and its connections with existing movement corridors are key to the creation of a sustainable community. It is understood that there is an existing public footpath routed around the outside of the current perimeter fence, and a route is proposed to Knockholt Pound for pedestrians and cyclists; a plan should be provided that demonstrates how the site then connects further afield and links with surrounding towns and villages and their amenities/ facilities.

Retaining the narrow, historic tank roads for the most part appears sensible as a principle, as is maintaining a 20-mph speed limit on Crow Drive; both however create challenges in the context of elected members and local residents resisting Crow Drive becoming a through route. Worthwhile discussions with Kent County Council are already taking place, with attractive and sensible proposals emerging e.g. for chicanes and regularly-distanced, planted islands being developed for enabling slower-moving through traffic. Crow Drive in the vicinity of the village centre should not however be downgraded to such an extent that rerouted or community buses cannot pass through; traffic ought to be minimised and slowed to possibly create pedestrian priority zones but not removed altogether, as the new centre needs to be as accessible as possible, so as to form the heart and focal point of the new community. To this end, the desire lines from all areas within the development should be considered. At the same time, the village centre also needs to appear from Crow Drive as the termination of a vista when travelling along Crow Drive; arrival at the Fort and the village centre needs to be celebrated e.g. with a relatively taller building (a 4-storey new building as currently shown may suffice). This suggested approach to desire lines, and the interrelationships between travel and playing with the heights of buildings to create vistas and their termination, would be most compelling if taken throughout the illustrative masterplan.

The proposed roundabout providing access to Crow Drive in the north east would enable the fast movement of traffic, but its land take is significant. In detailed junction design, consideration should also be given to cyclists and pedestrians not being deterred/inhibited by its design. The avoidance of severance will be important in the context of encouraging safe, non-car mode use for school journeys.

Health-promoting environment

The well-designed and well-connected pedestrian and cycling routes within, around and beyond the site that are referred to above are also essential parts of promoting a healthy lifestyle offer at Fort Halstead.

While the replacement of two existing tennis courts is endorsed, the proposed relatively isolated and oddly-chosen location for a multi-use games area (MUGA) and the absence of any formal sports pitches at present should be reconsidered. While it is understood that the site's AONB designation has led to the sports pitch decision, it requires clear justification/ alternatives. To encourage a desirable intensity of activity and discourage anti-social behaviour, a re-sited and well-overlooked MUGA should be provided.

There are currently no areas proposed for food-growing. If this new community is to be sustainable, the provision of allotments is an important element that would complement homes that only have small gardens. There appears to be scope in the illustrative masterplan to intensify the residential areas, to find allotment space.

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APPENDIX A: DESIGN REVIEW PANEL SUMMARY

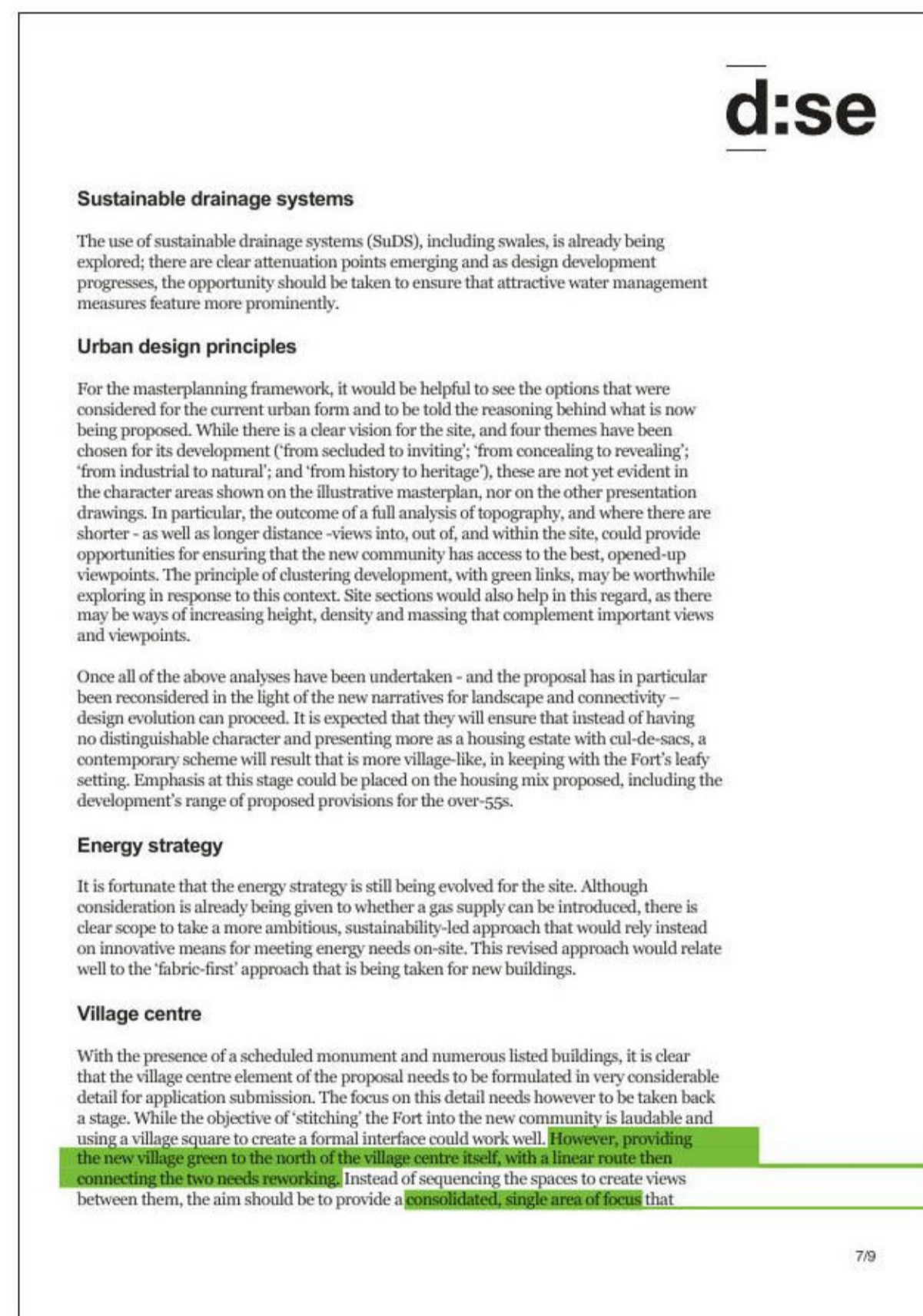
VILLAGE CENTRE LAYOUT

"However, providing the new village green to the north of the village centre itself, with a linear route then connecting the two needs reworking."

"...provide a consolidated, single area of focus".

Response

Following the DRP we reviewed the layout of the Village Centre and the links to the Village Green and in collaboration with SDC we relocated the Village Green to the east of Q14 on Crow Drive. This serves to place it in the heart of the neighbourhood directly opposite the Fort and immediately visible upon arrival into Fort Halstead. This has served to create a more consolidated single area of focus as recommended by the DRP.



CAFÉ LOCATION

"... a ground floor café and employment/ co-working space in both buildings, needs careful reconsideration in terms of inappropriateness."

Response

The café is now proposed in Block C fronting the Village Green and is no longer in Q14.

DENSITY

"Proposing higher residential densities than currently would also beneficially help to retain/ create more open space. A higher density in addition would help the proposed community uses in the village centre to flourish".

Response

Since the DRP we have reviewed the proposed developable areas and densities. We were proposing an average density of 38DPH, this has now been increased to 43DPH. This has been achieved by increasing the density of parcels in and close to the Village Centre and also by giving more space over to landscape and water attenuation in more sensitive areas of the site.

