





CHAPTER SEVEN

Access & Movement

This chapter demonstrates how the site will be accessed and served by a multi-modal transport strategy connected to the existing wider movement network. Street hierarchy, sustainable movement strategies and inclusive design solutions are described.

7. Access & Movement

7.1 Site Access

As part of this Outline Planning Application, several strategic highways infrastructure elements are designed in detail. A route for the realigned A29 is proposed through the strategic allocation to relieve pressure on the existing transport network. The application provides full details for the entire A29 re-alignment to facilitate the ability to deliver the road in a timely manner and not rely on subsequent applications, and the detailed design of the A29 has been developed in accordance with guidance from West Sussex County Council (WSCC). Various access points to the site have been designed to connect to key routes and provide access to various modes of transport as shown on the diagram opposite.

VEHICULAR ACCESS

Three vehicular access points into the site (1,2,3) are designed to connect to the realigned A29, which also provide walking and cycling routes. This section of the proposed realigned A29 ties into the first part of the proposed A29, delivered by WSCC and known as A29 Phase 1 (subject to planning permission reference WSCC/052/20). The development will also provide a new roundabout on Barnham Road, which forms the main site access (1).

The southern connection of the realigned A29 is south of the Lidsey Bends and will be in the form of a new roundabout with an associated reduction in traffic speeds in this area (4). The route of the realigned A29 will pass over the railway via a bridge. Additional connections to the west of the site will be provided by the East-West Link Road, where the connection will be provided by Cala development (3), and to the south, the Hanbury Link (5).

PEDESTRIAN & CYCLE ACCESS

Additional access points for pedestrians and cyclists are also proposed through linkages between new routes within the site and a diverted PRow. Two of these connections are provided along the site's eastern boundary (6&7) and northern boundary (8&9).

KEY

- Planning Application Boundary
- Realigned A29
- Vehicular access
- Existing A29
- West Coastway railway line
- East-West Link Road

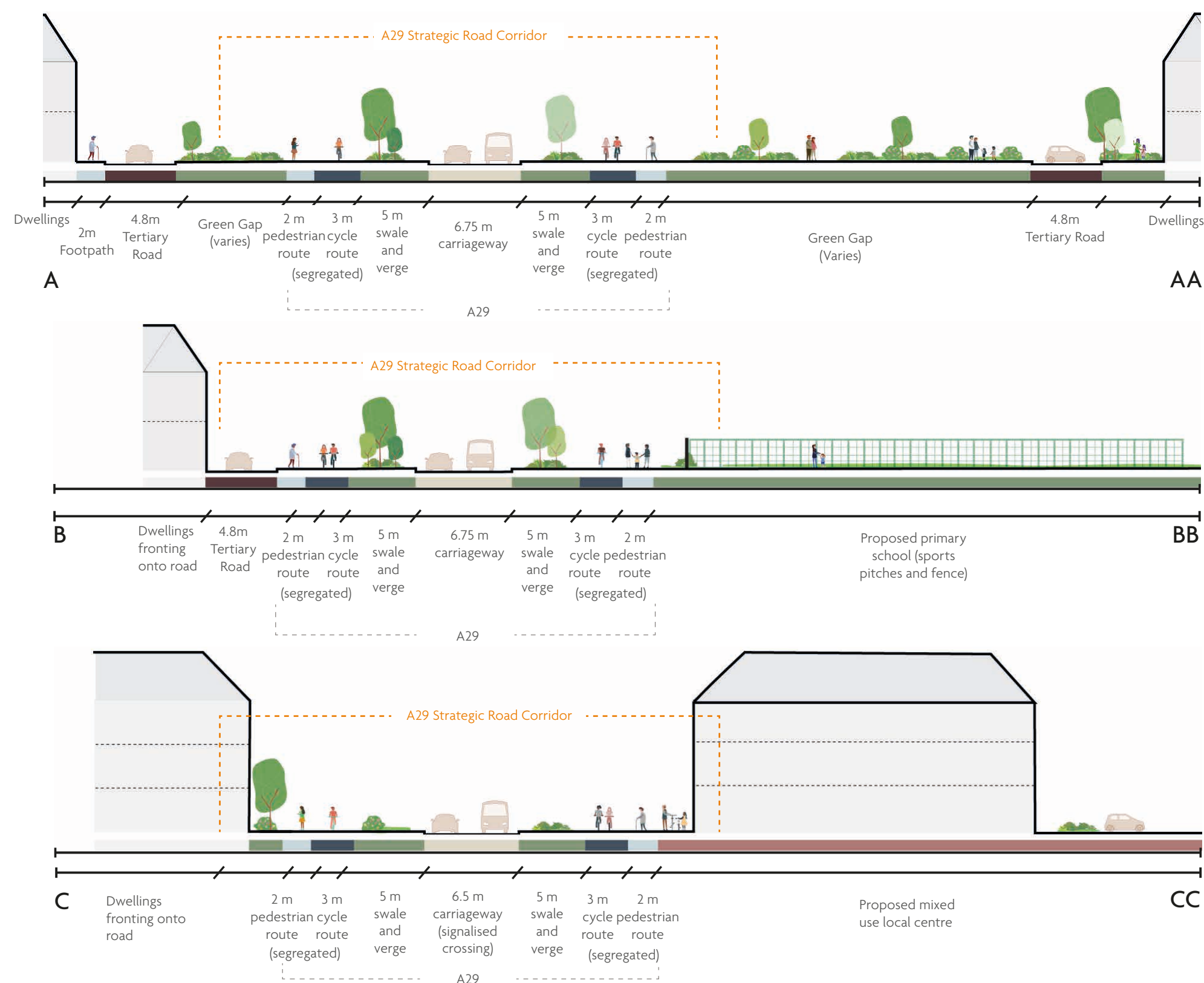
- 1 Access from Barnham Road Roundabout
- 2 Access from A29 bridge crossing over railway
- 3 Access from Westergate (downgraded A29) via East-West Link Road
- 4 Southern vehicular access
- 5 Hanbury Link Vehicular access
- 6 Pedestrian/cycle access to Barnham station
- 7 Pedestrian and cycle access along existing PRow
- 8 The Boweries pedestrian link
- 9 Pedestrian link from Church Lane



Site Access Plan

7. Access & Movement

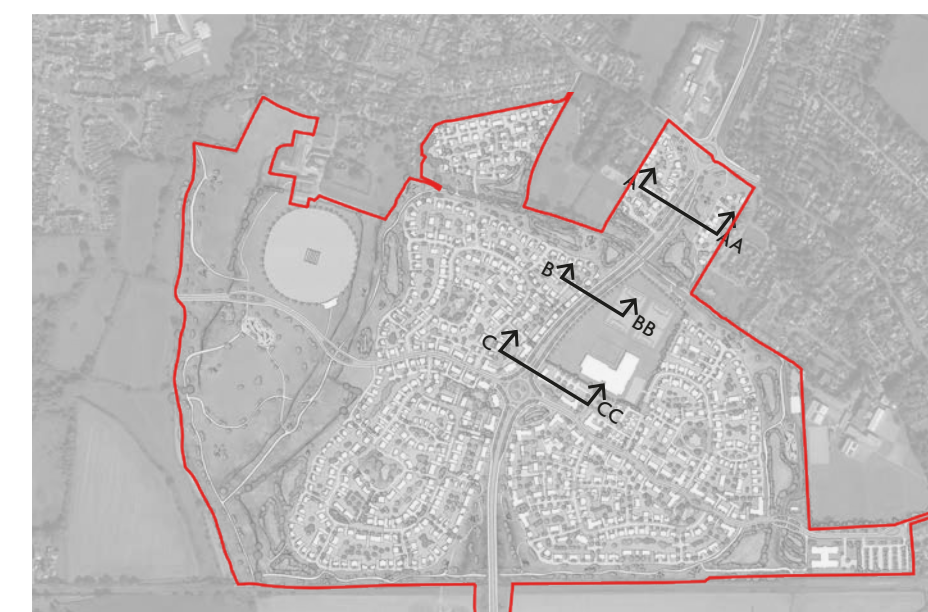
7.2 The A29



The realigned A29 is a strategic link that aims to relieve traffic congestion. It is designed as a 30mph single carriageway (6.75m reducing to 6.5m at signalised crossings) and creates a safe and pleasant environment for pedestrians and cyclists through a segregated footway/cycleway. For permeability, a number of pedestrian crossing points across the A29 provide connectivity east to west. Between the carriageway and footway/cycleway, landscaped verges include swale features for surface water run-off along with clusters of street trees. Bus stops and services are expected to be provided along the realigned A29 to provide further connections to the wider area and will continue to be discussed with Stagecoach during determination. For more detail on the design of the A29, please refer to the detailed drawings submitted as part of this application.

The interface between the A29 and residential parcels is dictated by the area between the residential parcels and the segregated pedestrian and cycle route along the A29. This interface area includes a potential earthworks zone necessary for the construction of the road (the extent of earthworks and road landscaping will be agreed upon via condition in the application). Any residual land within this zone can form part of development parcels within the site boundary, south of the railway; this land will be used for temporary landscaping until the adjacent residential parcels come forward under separate applications.

Three sections illustrating the design for the A29 are included on this page. For more detail on the built form interface along the A29, please refer to Sections B & C of the Design Principles Document.



A29 Sections Key Plan

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7.3 Street Hierarchy

STREET HIERARCHY

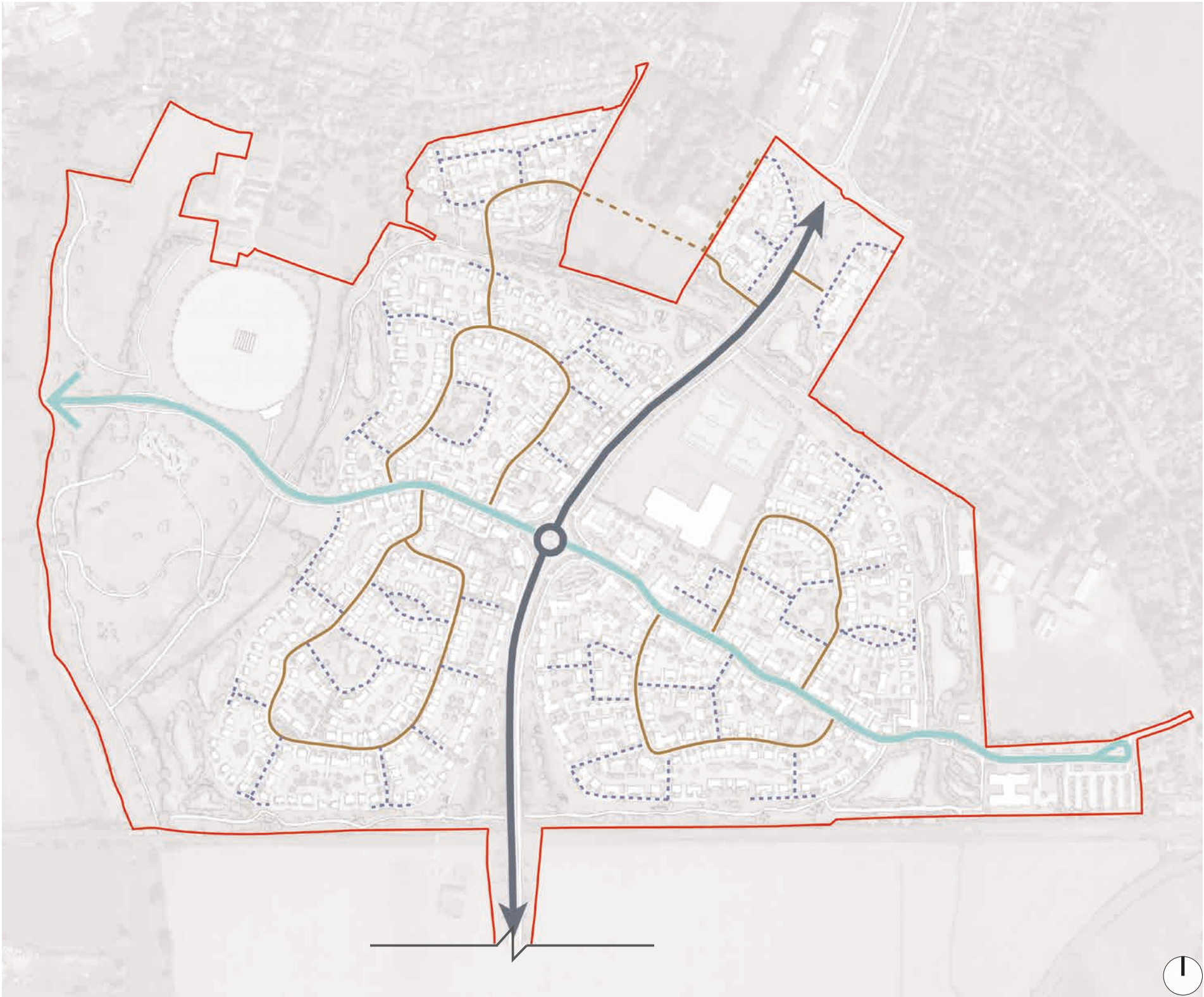
The development will promote a legible and permeable network of roads, and the drawing opposite illustrates the key routes proposed at BEW Parcel SC1.

The realigned A29 will be a strategic route, principally designed to distribute wider vehicular movement. While it will provide access to and through the site, its primary function is to support improved wider connectivity and alleviate the current pressure on the network.

A well-connected network of roads will provide access through the site to new homes and mixed uses. The movement network has been developed in accordance with a road hierarchy, with strategic roads connecting to existing infrastructure, the East-West Link Road running through the centre of the site will feed off this route and link new neighbourhoods. Secondary roads will connect to the East-West Link Road and in combination with tertiary roads will connect to homes and mixed uses within development parcels. Further detail on the character of each road type is included on the following page.

The location of the internal road network is indicative and will be defined through detailed design stages. Further detail on the proposed relationship between built form and the proposed street network is provided in Section B of the Design Principles Document.

- KEY**
- A29 - Strategic highway
 - East-West Link Road
 - Secondary roads (indicative alignment only)
 - Secondary road (Outside OPA Boundary)
 - ... Tertiary roads (indicative alignment only)

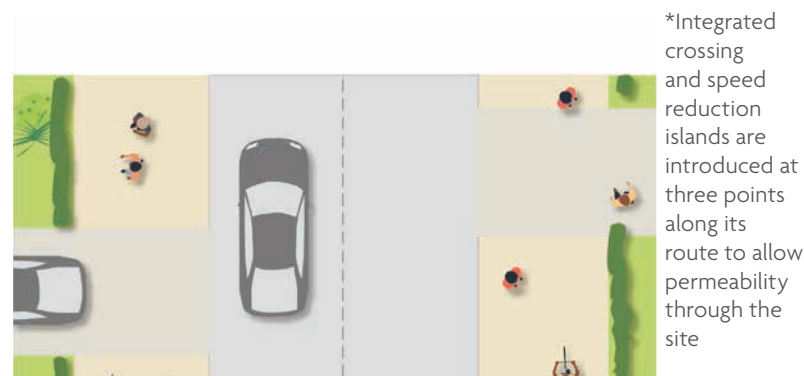
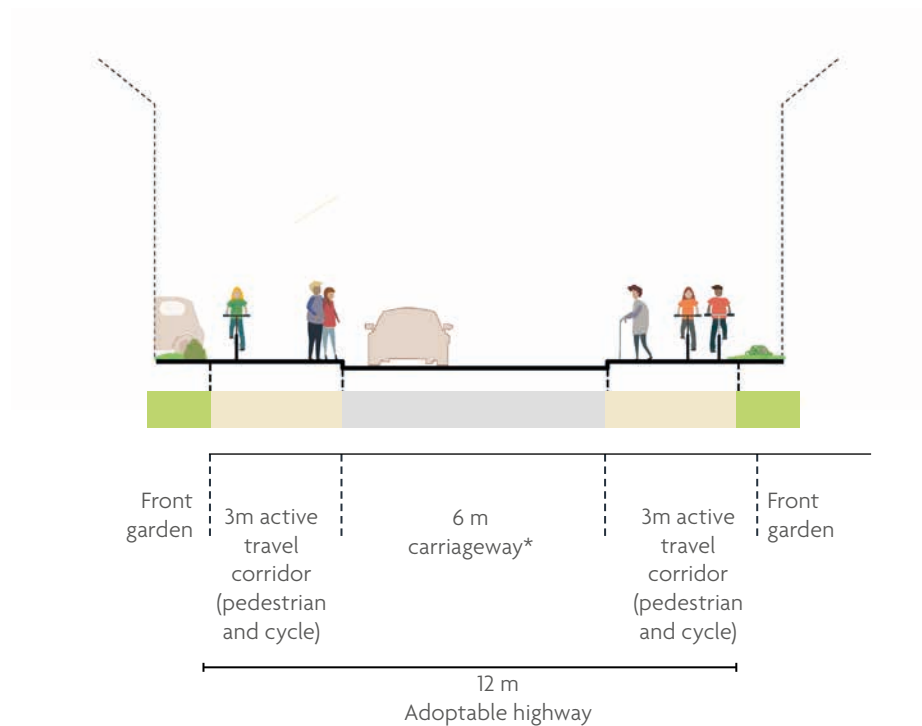


Street Hierarchy Plan

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7.3 Street Hierarchy

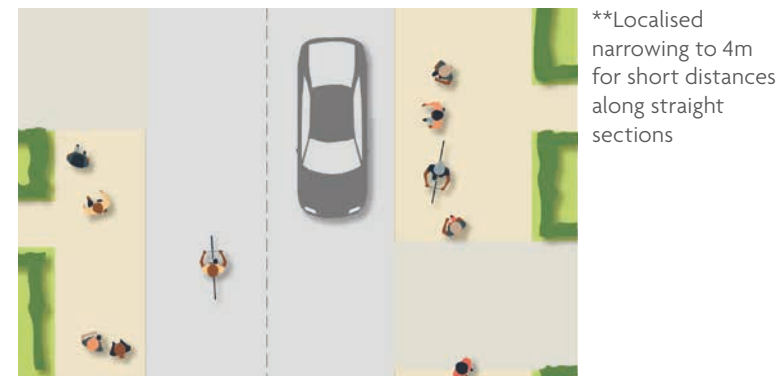
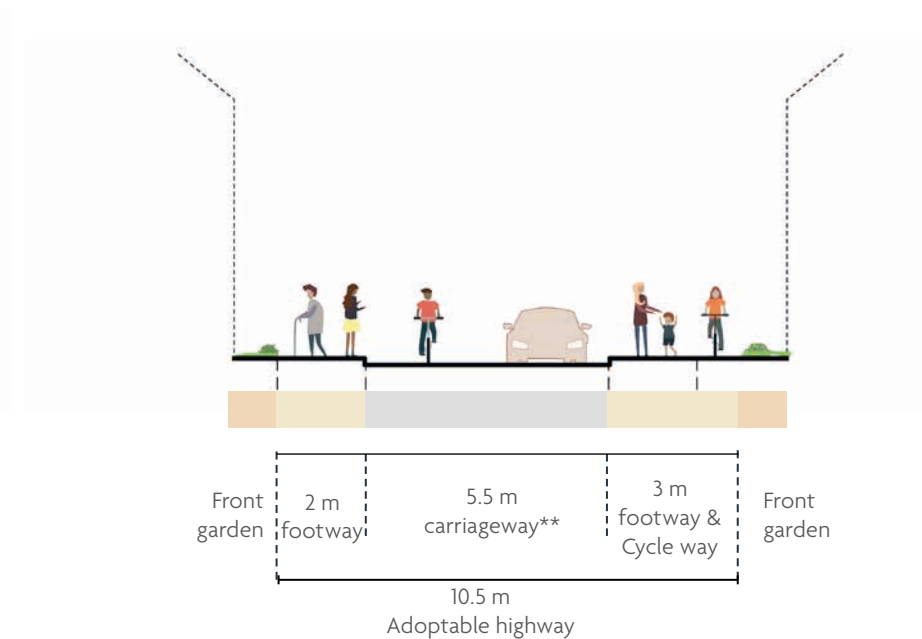
EAST-WEST LINK ROAD SECTION- TYPICAL



East-West Link Road plan and section

The East-West Link Road is designed as a low speed, 20mph route connecting east to west within the site. The road will vary in character along its route and integrate with several crossing points. The road terminates to the east at the car park adjacent to Barnham Station and connects west to the existing alignment of the A29. Further detail on streets and the relationship of roads to built form, please refer to Sections A & B of the Design Principles Document.

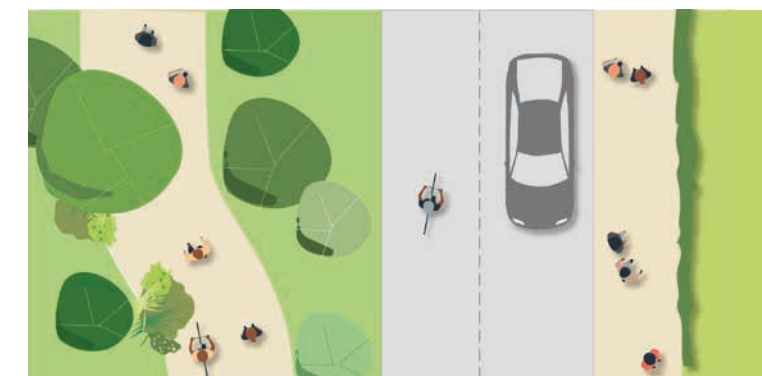
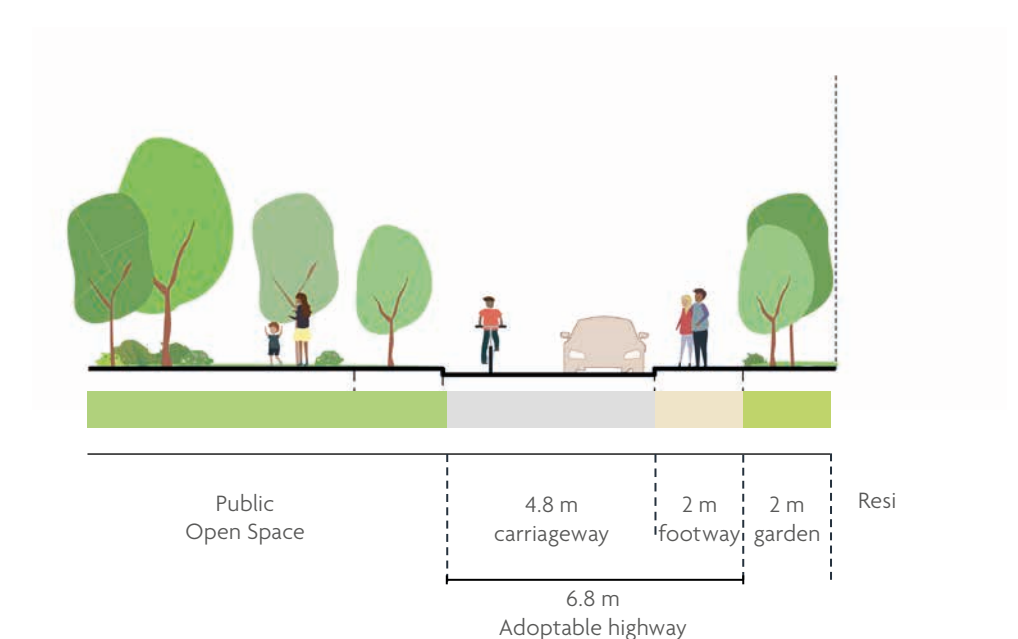
SECONDARY ROAD SECTION- TYPICAL



Secondary road plan and section

A series of smaller loops, secondary roads are designed as a low speed, maximum 20mph route and to provide routes through the site and serve the residential neighbourhoods and mixed use areas. The secondary road design will depend upon the layout of the development parcels it is intended to serve. Where appropriate, variations to provide increased areas of landscaping, horizontal deflection and surface treatment should be used to slow traffic and create interest along the street. Further detail on streets and the relationship of roads to built form, please refer to Sections A & B of the Design Principles Document.

TERTIARY ROAD SECTION- ALONGSIDE OPEN SPACE



Tertiary road plan and section

Typically, tertiary roads will only be used by people living in or visiting that area and will be narrower and less formal in character than secondary roads. Variations to provide increased areas of landscaping, horizontal deflection and surface treatment can be used to slow traffic and create interest along the street. Tertiary roads may have a dropped kerb line and no road markings to encourage reduced speeds and enable pedestrian priority, and occasionally parking along the road may occur. Further detail on streets and the relationship of roads to built form, please refer to Sections A & B of the Design Principles Document.

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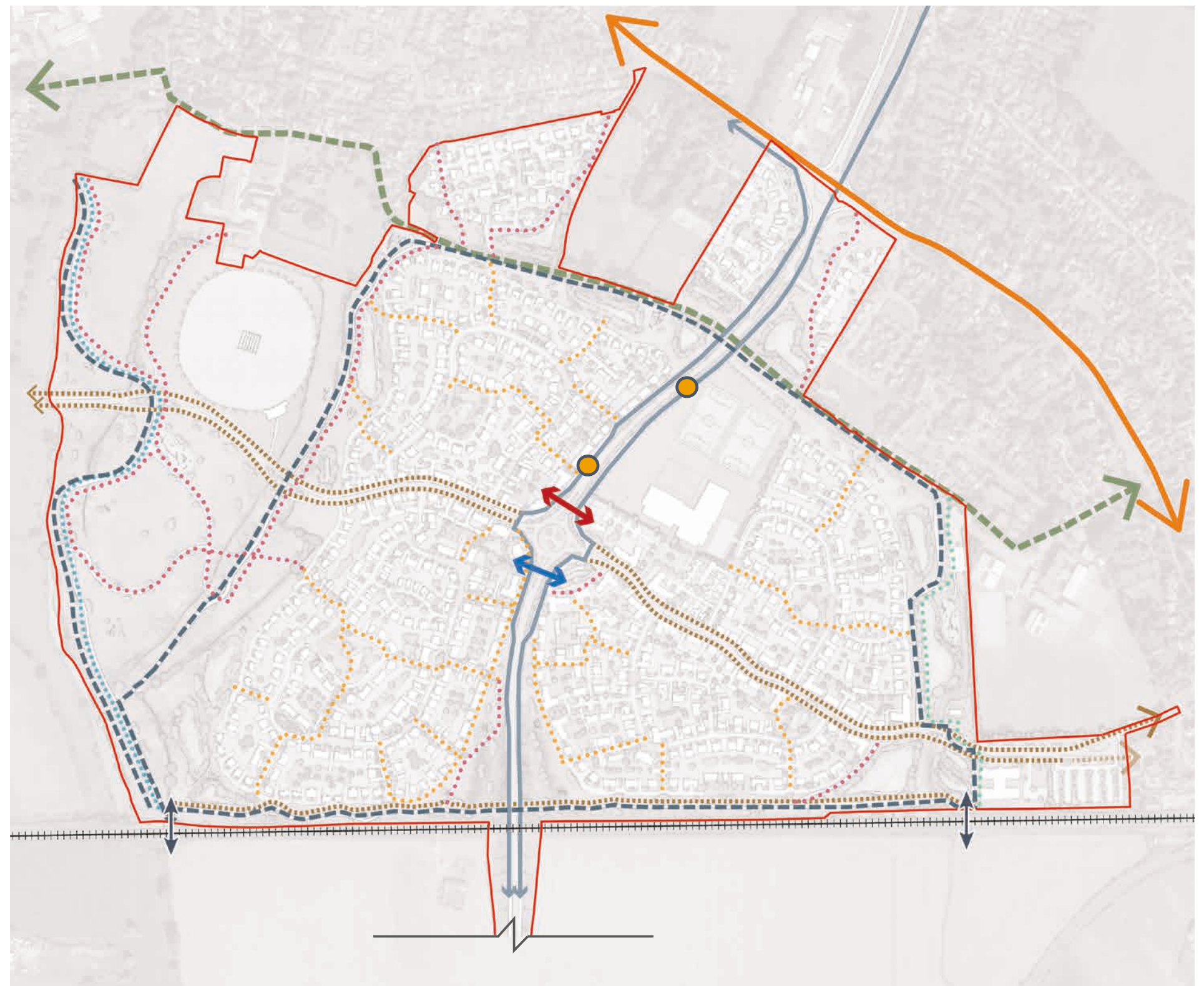
7.4 Sustainable Movement

The illustrative masterplan promotes a network of active travel routes to make these the most attractive way of travelling across the site. The proposed footway and cycleway network will be coherent, safe, comfortable, and attractive, as per the latest national guidance. These routes will include those which are faster and direct, while also including slower-paced leisure and recreation routes, including wellness trails. The routes comprise a combination of on and off-street infrastructure, with segregated foot and cycleways, provided north to south along the A29 and a shared route along the East-West Link Road. Several crossings are proposed to encourage permeability, with the majority of these at-grade, including at intervals along the A29. Routes will include wider links, including linkages to the south of Barnham Road and a new cycle route along the Lidsey Rife as part of the 'South Downs to Coast' strategic route.

The proposal will promote sustainable modes of travel. A green link and proposed off-road segregated cycle route for pedestrians and cyclists will be provided east to west to connect Barnham Station and St Philip Howard Catholic School to Church Lane in Eastergate. The existing Public Right of Way (PRoW) towards the eastern perimeter of the application boundary will be redirected to tie in with proposed routes and crossings. In addition, a network of tree-lined paths exclusively for walking and cycling will link to these routes and are proposed to run around the site. A wellness trail is expected to provide a slower, more circuitous route around the site for predominantly exercise and leisure journeys. The design of the streets and how people use them will need to be considered when the characters of the individual neighbourhoods are being defined and will be covered in more detail in the Design Principles Document. The Neighbourhood Centre is approximately within a 1.5km walk of Barnham station, which would take between 15-30 minutes depending on age and ability.

KEY

- Planning Application Boundary
- Railway Line
- Segregated footpath and segregated cycleway
- Proposed off road path shared by pedestrians and cyclists
- ↔ Potential for future extension of routes south with crossing integrated with railway
- Proposed off road segregated cycle route for pedestrians and cyclists
- ↔ Controlled crossing
- ↔ Uncontrolled crossing
- Proposed extension of South Downs Cycle route
- Proposed realigned Public Right of Way (PRoW)
- Proposed footpaths
- Pedestrian permeability within parcels
- Potential for wellness trail
- Existing 66 bus route (To Yapton / Bognor Regis and Chichester)
- Potential bus stop



Sustainable Movement Plan

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7.4 Sustainable Movement



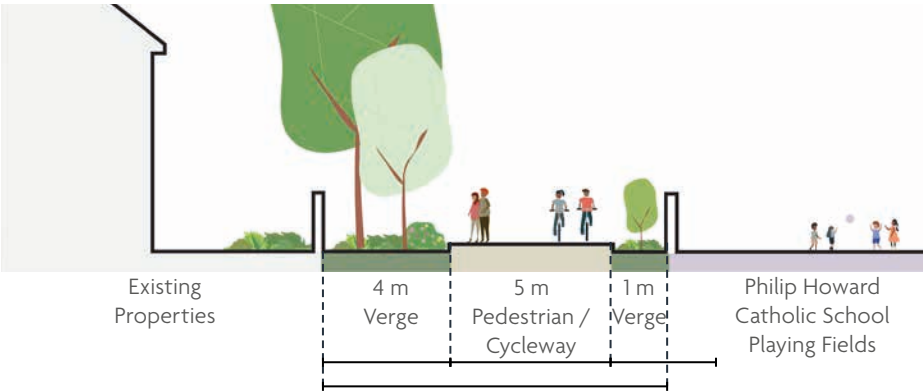
Artist's impression looking along the East-West Link Road

PUBLIC TRANSPORT

The A29 is designed at a width to accommodate a high quality, frequent bus service. In addition, bus stops will be provided along the length of the road at a regular spacing to ensure pedestrian accessibility to the stops, as is indicated on the Sustainable Movement Plan. Discussions are ongoing with Stagecoach on the exact details of the bus service to be provided, but it is likely to be routed along the realigned A29 for a section of the route. The introduction of real-time information at bus shelters at key locations along the route and the use of technology, including smart ticketing and real-time phone apps, will be explored with the bus operator. The supply of bus vouchers to new residents would also be explored as part of the overarching Framework Travel Plan for the site. The routing of any potential public transport routes, including bus routes, will be confirmed through detailed design stages to increase connectivity and accessibility for the proposed development and support a reduction in the number of cars.

CONNECTIONS TO BARNHAM RAILWAY STATION

Barnham railway station is in close proximity to the site, with all of the site within 2km (equates approximately to a 25-minute walk) of the station. Barnham station provides access direct to Bognor Regis, Chichester, London, Brighton, Portsmouth and Southsea, and more, with frequent service. Barnham station benefits from 62 cycle parking spaces, but current has limited car parking capacity. The proposed terminal car park will provide approximately 200 spaces for visitors to the station, and this will facilitate and encourage more use of the station and rail service, meaning short journeys by car from surrounding area to the station but fewer longer car journeys on the surrounding highway network. A specific 'Barnham Station Link' will be provided as part of the delivery of the individual development parcels, which will provide direct access by sustainable modes to Barnham station. Please refer to the Framework Masterplan Document for additional information on the Barnham Station Link.



Illustrative Section of Barnham Station Link

Total width of 10 m

7. Access & Movement

7.4 Sustainable Movement

PEDESTRIAN & CYCLE CROSSING POINTS

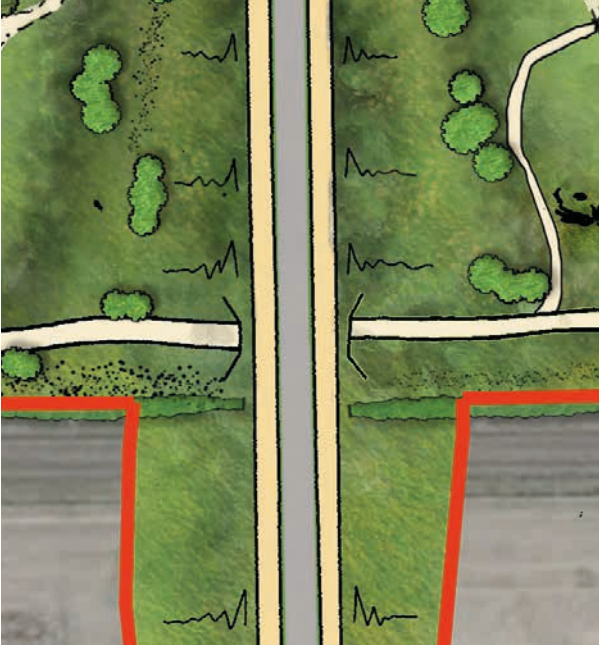
This page demonstrates the various pedestrian and cycle crossing points which are fixed as part of this application. These crossing points form a key part of the design of the East-West Link Road. The green link crossing of the A29 will be an important crossing for school children, and likely to be heavily used at certain times of the day.



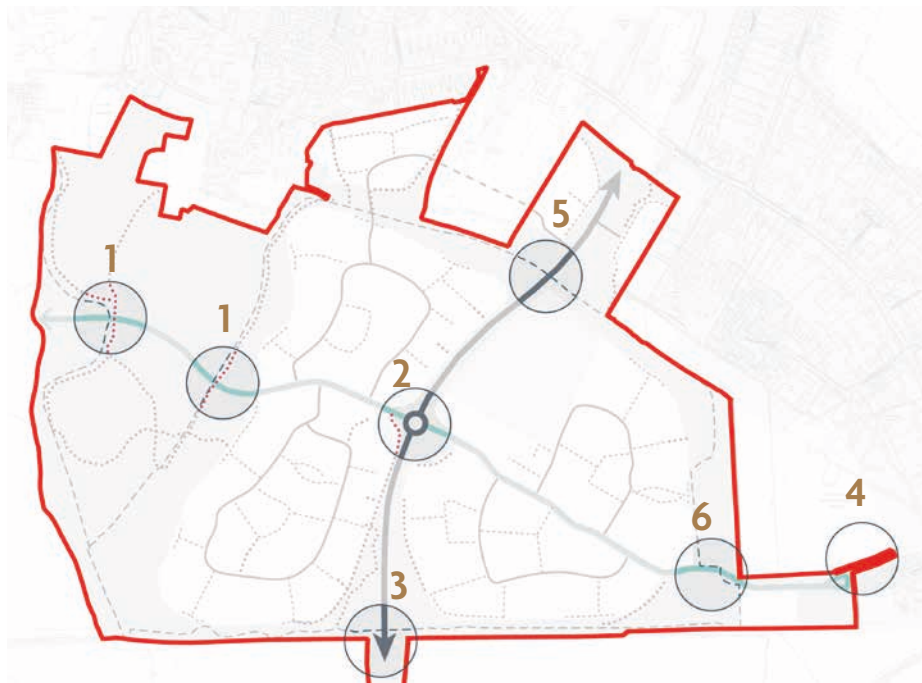
1 North to south pedestrian and cycle crossing of East-West Link Road - an at-grade crossing with a landscape island in the centre of the road



2 A29 & East-West Link Road roundabout - key points of crossing to access the Neighbourhood Centre



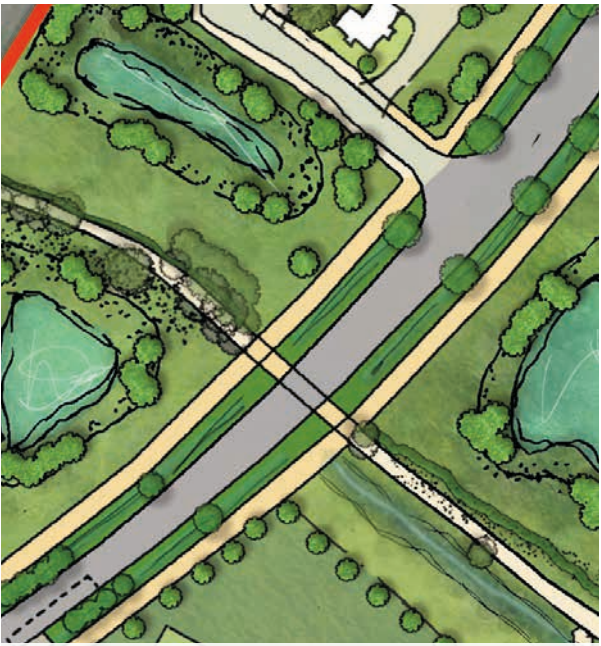
3 Pedestrian and cycle route under A29 bridge over railway provides additional east to west permeability



Crossings Location Plan



4 Barnham Station Link provides pedestrian and cycle connections to Barnham station



5 The Green Link crossing is an important signal controlled crossing, likely to be heavily used during school drop off/collection times



6 North to south pedestrian and cycle crossing of East-West Link Road - an at-grade crossing with a landscape island in the centre of the road



Artist's impression looking north from the linear park towards Cricket Pitch and East-West link road crossing

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7.5 Parking Strategy

VEHICULAR PARKING STRATEGY

Car parking can have a significant influence on how well a development works. The amount, type and location of car parking generally affect the character and appearance of streets. Therefore, it is highly important to consider parking arrangements and an appropriate parking strategy.

Car parking will be provided in line with the masterplan’s sustainability principles, local guidance and national best practice. Reserved Matters Applications will be expected to deliver the appropriate level of vehicular and cycle parking but ensure it does not dominate the built environment.

Car parking should be carefully integrated into the development in a manner that reduces its impact on the public realm. The parking should be safe and secure, and layouts must accommodate the safe passage of emergency, delivery and refuse collection vehicles. On-plot or on-street parking will be provided where applicable, including vegetation and trees, and with the implementation of street furniture. EV charging points will also be provided where possible.

The car parking requirement depends on the number of bedrooms and the parking behaviour zone (PBZ) into which the development falls. Requirements are set out in Table 2 of the WSCC Guidance on Parking at New Developments Document (an extract is included opposite). The proposed development is located in parking behaviour zone 2 (PBZ2).

The detail of the layout and quantum of spaces will be included in the submission for future Reserved Matters Applications, and more detail on the principles are included within the Design Principles Document.

A terminal car park at the eastern end of the East-West Link Road will provide additional parking provision (up to 200 spaces), providing easy access to Station. The station link also provides opportunities for cycle parking/storage.

CYCLE PARKING & STORAGE

Cycle parking will be provided according to the latest WSCC and Arun DC guidance and relevant national guidance. The car and cycle parking provision will be provided in line with WSCC principles A, B, E and F (listed below).

- **Principle A:** Accommodating parking demand – Parking provision should be sufficient to accommodate parking demand while exploiting the potential for sustainable travel, minimising adverse effects on road safety, and avoiding increased on-street parking demand.
- **Principle B:** Electric Vehicle Charging Infrastructure – ‘Active’ charging points for electric vehicles should be provided at a minimum of 20% of all parking spaces with ducting provided at all remaining spaces where appropriate to provide ‘passive’ provision for these spaces to be upgraded in future.
- **Principle E:** Design Considerations – Developers will be expected to provide balanced, mixed, and flexible parking provision and ensure that all spaces are usable without creating highway safety issues such as vehicles overhanging footways. This should reflect best practices as set out in national guidance and best practice, such as ‘Manual for Streets’, and ‘Car Parking: What Works Where’, to ensure the high quality design of parking provision.
- **Principle F:** Sustainable Drainage – Parking areas should adopt sustainable drainage systems (SuDS) to minimise the risk of flooding in the County as part of a drainage strategy for the development.

Number of Bedrooms	Number of Habitable Rooms	PBZ1	PBZ2	PBZ3	PBZ4	PBZ5
1	1 to 3	1.5	1.4	0.9	0.9	0.6
2	4	1.7	1.7	1.3	1.1	1.1
3	5 to 6	2.2	2.1	1.8	1.7	1.6
4+	7 or more	2.7	2.7	2.5	2.2	2.2

Residential Parking Demand (spaces per dwelling): Table 2 Extract from WSCC Guidance on Parking at New Developments

Number of Bedrooms	Number of Habitable Rooms	Cycle Provision (per unit)
Houses	Up to 4 rooms (1 & 2 bed)	1 space
Houses	5+ homes (3+ bed)	1 space
Houses	Multiple Occupation	1 space
Flats	Up to 3 rooms (1 & 2 bed)	0.5 space (if communal storage otherwise same as 1 & 2 bed house)
Flats	4+ rooms (3 + bed)	1 space

Minimal levels of cycle provision: Extract from WSCC Guidance on Parking at New Developments

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7.6 Inclusive Design

Inclusive design aims to create places without barriers and enables everyone to participate independently in day-to-day activities without undue effort, separation or special treatment.

Particular consideration must be given to the requirements of the Equality Act 2010, which now supersedes previous legislation, including the Race Relations Act 1976 and the Disability Discrimination Act 1995.

THE EQUALITY ACT (2010) & ‘DISABILITY’

The Equality Act has been in force since October 2010 and replaces, amongst other legislation, the Disability Discrimination Act (DDA). However, the same underlying philosophy regarding discrimination on the grounds of disability applies, and the duties placed on the physical design of the built environment remains unchanged. In summary, the Equality Act 2010 aims to protect nine identified ‘protected characteristics’, of which ‘Disability’ is one. The Equality Act provides legal rights for disabled people in the areas of:

- Employment;
- Education;
- Access to goods, services and facilities;
- Buying and renting land or property; and
- Functions of public bodies.

The Equality Act, although not prescriptive, includes an intent to offer disabled people an accessible environment that does not discriminate against them because of their impairment. Statutory regulations and recommendations for the built environment provide parameters for how development can achieve an accessible environment. Compliance with these regulations and recommendations is not proof that Equality Act issues have been addressed. They do, though, go a long way to ensuring such issues are considered.

In the Act, the term ‘disability’ includes not only disabled people but also people who have an association with a disabled person (e.g. Carers and parents) and people who are perceived to be disabled.

THE PROPOSALS

The proposed development will adhere to the best practice guidance provided by the Department of Transport and set out in ‘Inclusive Mobility, A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure (2002)’.

Safe access to buildings will be achieved by treating the proposed new neighbourhood as a pedestrian and cycle-friendly environment, where vehicular speeds are limited through traffic calming and careful design of vehicular routes. Principles advocated by Manual for Streets and Manual for Streets 2 are applicable and have been considered in developing the illustrative masterplan for the site.

Whilst designing streets, the following must be considered; A maximum longitudinal gradient of 5% is desirable. For tertiary roads, a gradient of 6% may be acceptable. In the steeper part of the site, a maximum gradient of 8% is acceptable.

The development will be designed and built in full accordance with the best practice guidance provided by the Department of Transport and with the Building Regulations, which set out technical standards for the quality and performance of buildings.