



Existing Site Plan Analysis

4

Movement

Introduction

This chapter of the design codes provides Design Guidelines & Mandatory Rules for the design of proposed routes within the KMV OPA.

4.0 Movement

4.1 Street hierarchy, junctions and crossings

The proposed hierarchy of streets, junctions and crossings have been guided by the existing surrounding routes and natural desire lines through the largely impenetrable existing site.

The design codes for movement and access have been formulated to ensure a legible, safe, permeable, and vibrant development.

The delivery of a successful scheme relies on these well-connected routes with different roles and characters which will be essential in creating legible and cohesive spaces.

Streets, routes and crossings must be designed to strengthen connections to adjacent key locations such as the train station, church, prison and neighbouring development Huntley Wharf and to future areas of development to the east on the remainder of the retail park.

Streets, routes and crossings must create a clear hierarchy of streets and spaces that connect with Reading Town Centre.

Streets, routes and crossings must respond to the local vernacular and character to inform planting and material palette.

Streets, routes and crossings to maintain and enhance a continuous wildlife corridor to north boundary and create new links.

All pedestrian movement routes must be delivered in locations set out within the Parameter Plans to ensure permeability throughout the development. Illustrative hierarchy of pedestrian routes within the KMV OPA site as shown in the adjacent diagram.

Streets, routes and crossings must be designed to be safe, with high levels of surveillance and designed to reduce the fear of crime.

Secondary and Tertiary Movement routes, which play a key role in enhancing permeability across the site should be designed as welcoming, lively and diverse spaces as part of the public realm proposal.

Proposed cycle stores and cycle routes to be designed in compliance with either LTN 1/20 and/or Gear Change standards to ensure safe connections onto the surrounding network.

Street Hierarchies across the centre of the site and to the periphery are defined within Section 5 Public Realm

- o *Primary: 4.5m cycle routes across the primary thoroughfare to Kenavon Drive and Forubury Road*
- o *Secondary: Vehicular access, both for residential parking into the basement and for servicing vehicular access*
- o *Tertiary: Pedestrian circulation across the site*

Design of all streets, routes and footways must consider DfT's 'Inclusive Mobility A Guide to Best Practice on Access

to Pedestrian and Transport Infrastructure' (2021) and must be in accordance with national guidance documents including The Approved Document to Part M of the Building Regulations, BS8300 and other relevant national/ local standards as a minimum.

Microclimate and Movement Analysis Studies must be carried out prior to the RM stage to inform design of Primary, Secondary and Tertiary routes and their relationship with key public realm spaces.

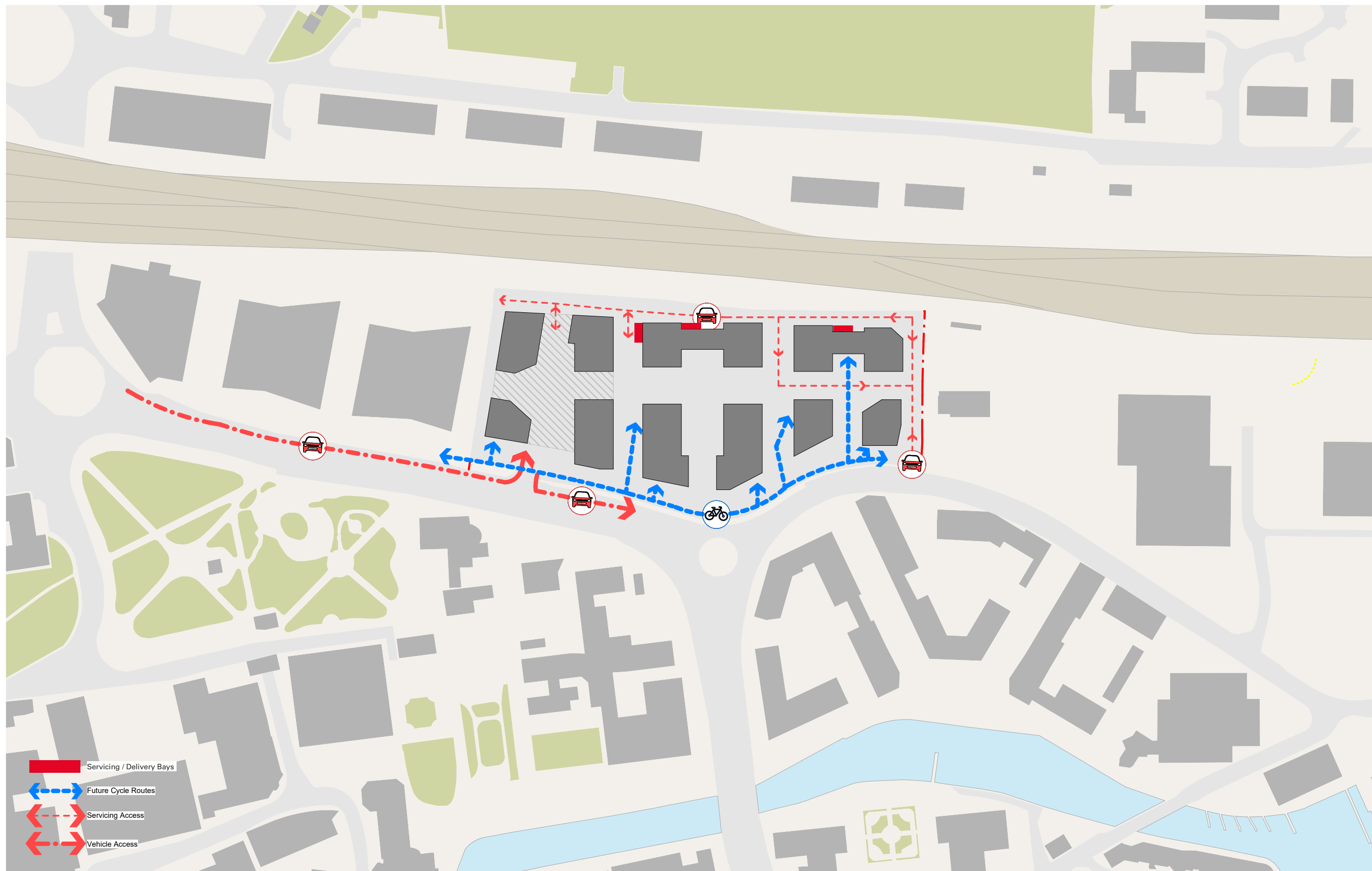
Design code guidance and requirements for streets will depend on their Character Areas as set out in Public Realm Section 5

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More specific requirements and guidance on street characters and design components is provided in Public Realm Section 5

For further information on responding to building lines and key views, please refer to Built Form Section 6.

Servicing and waste collection will utilise allocated zones within the hardscaping, allowing service vehicles to pull into dedicated delivery and/or servicing bays, ensuring no obstruction to traffic or pedestrian movement



Site-wide Proposed Vehicle and Cycle Movement Diagram

4.0 Movement

4.2 Type and direction of route (walking, cycling and vehicles)

The type and direction of routes has been carefully refined to ensure all user requirements are satisfied. The adjacent Illustrative sitewide plan, along with KMV OPA Parameter Plans, describe key movement and access routes within the site. Following requirements and guidelines are identified to create a successful movement network as part of KMV OPA:

Clear width for pedestrian footways and footpaths must be a minimum of 2m, unless specified otherwise.

Elements such as street furniture, planting, signage, and lighting must be arranged to minimise clutter and ensure minimum clear footway widths are maintained. Refer to Public Realm Section 5 Street Types for further information on minimum requirements.

Vehicle access must be designed to maintain service and emergency access to all parts of the development.

Cycle parking must be provided throughout the development in secure and convenient areas in compliance with RBC Transport and Highway Guidance.

Cycle parking requirements must be determined early in the RMA design process and must be provided within the built development either/or integrated adjacent within key public realm spaces and near building entrances to promote sustainable modes of transportation.

Emphasis on pedestrian priority crossings must be established through changes in surface material, level crossing points for pedestrians (i.e., dropped kerbs / raised tables), safe and inviting public realm design, and suitable traffic calming measures to reduce vehicle speeds.

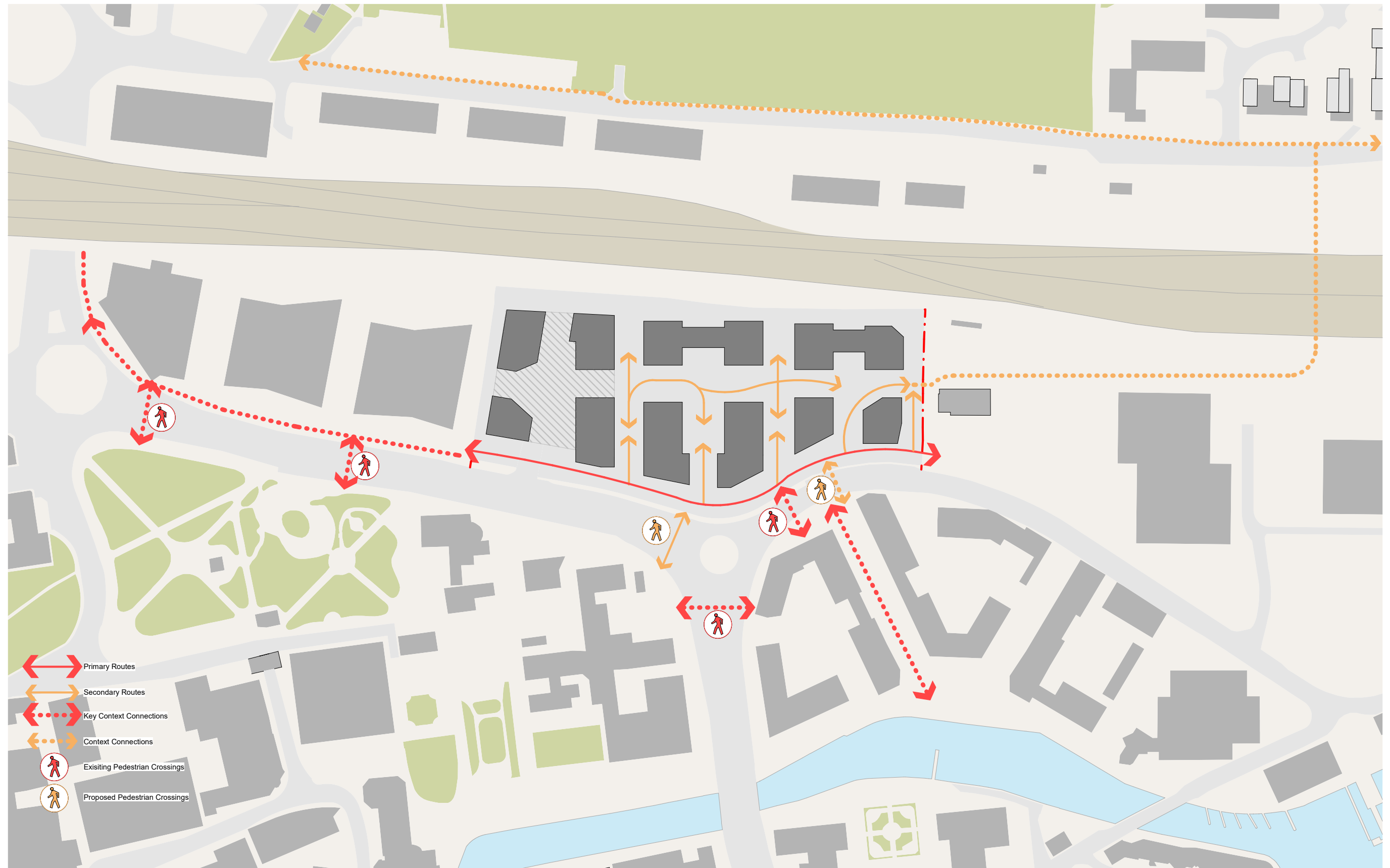
Footpaths and cycle ways to be designed in such a way that they are co-located and integrated into the sitewide strategy, and not segregated or isolated.

Design philosophy to include to include for inclusive street design across all streets :

- o Ramp Gradients 1:21 maximum
- o No switchback ramps
- o Accessible access to all buildings required
- o Level thresholds throughout scheme
- o No revolving doors to be introduced
- o Seating:
 - every 50m
 - to have perch rests circa. 800mm
 - space for wheelchairs
 - tactile at crossing / top of steps
 - visually distinct surface material colours for different uses



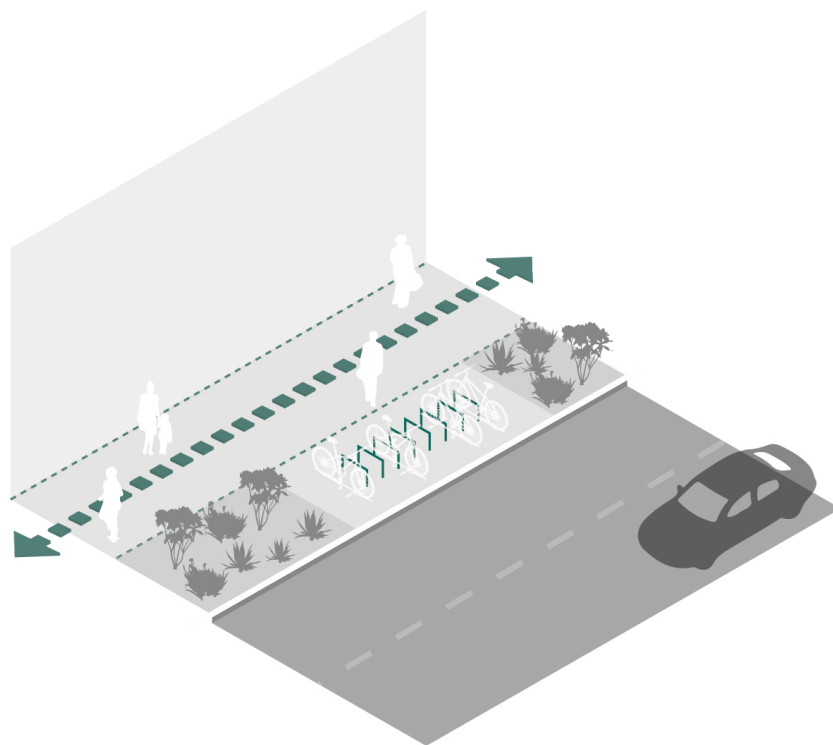
Illustrative examples of pedestrian priority crossing detailing.- Raised Crossing (Copenhagen Crossing), Tactile roadway surfaces, Surfacing change and build-out at crossing.



Illustrative Pedestrian Movement Diagram - Establishing Links with Adjacent Developments and Key Surrounding Buildings & Infrastructure

4.0 Movement

4.3 Cycle parking Diagrams



Cycle parking positions coordinated with routes, street furniture and planting to avoid clutter

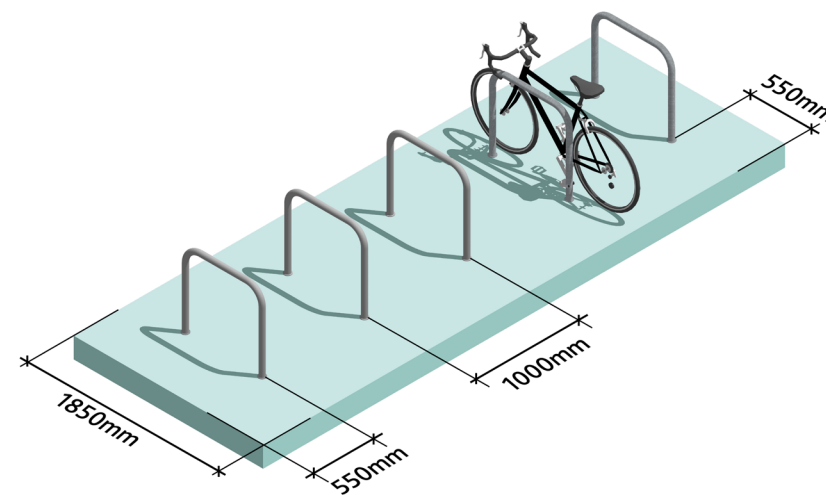


Fig. 48 - Illustrative example of recommended minimum spacing for Standard cycle parking arrangement.

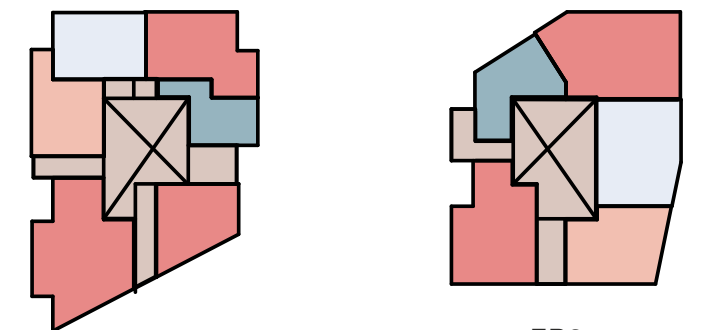
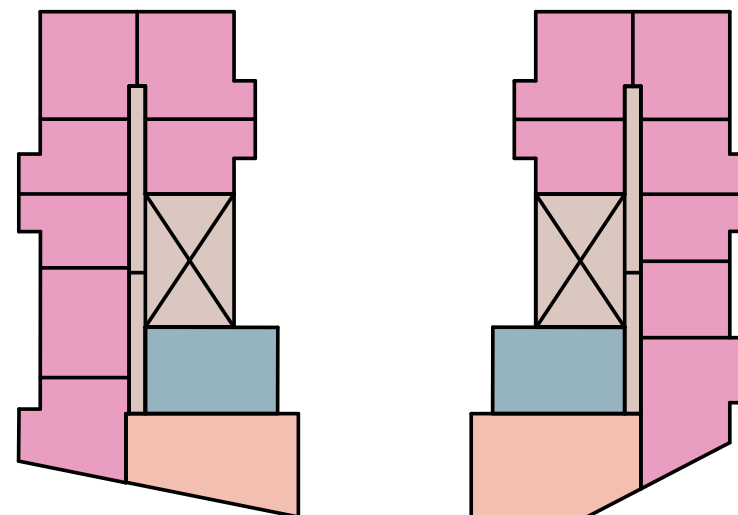
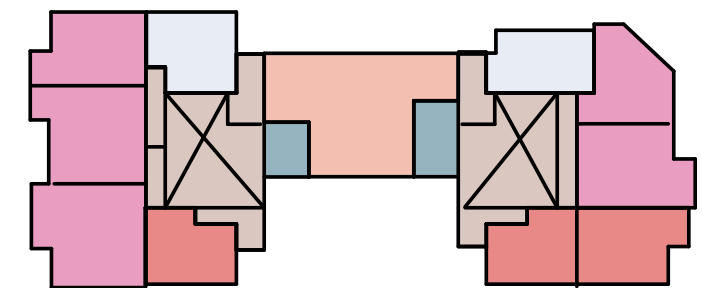
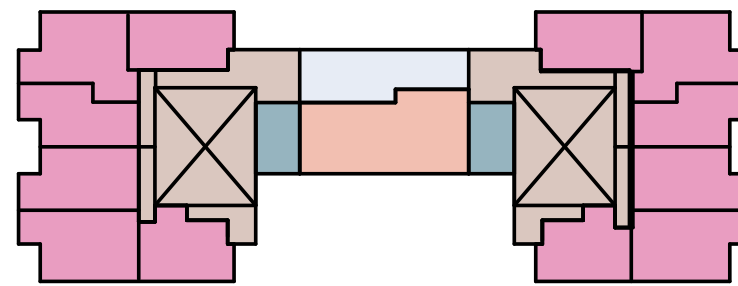
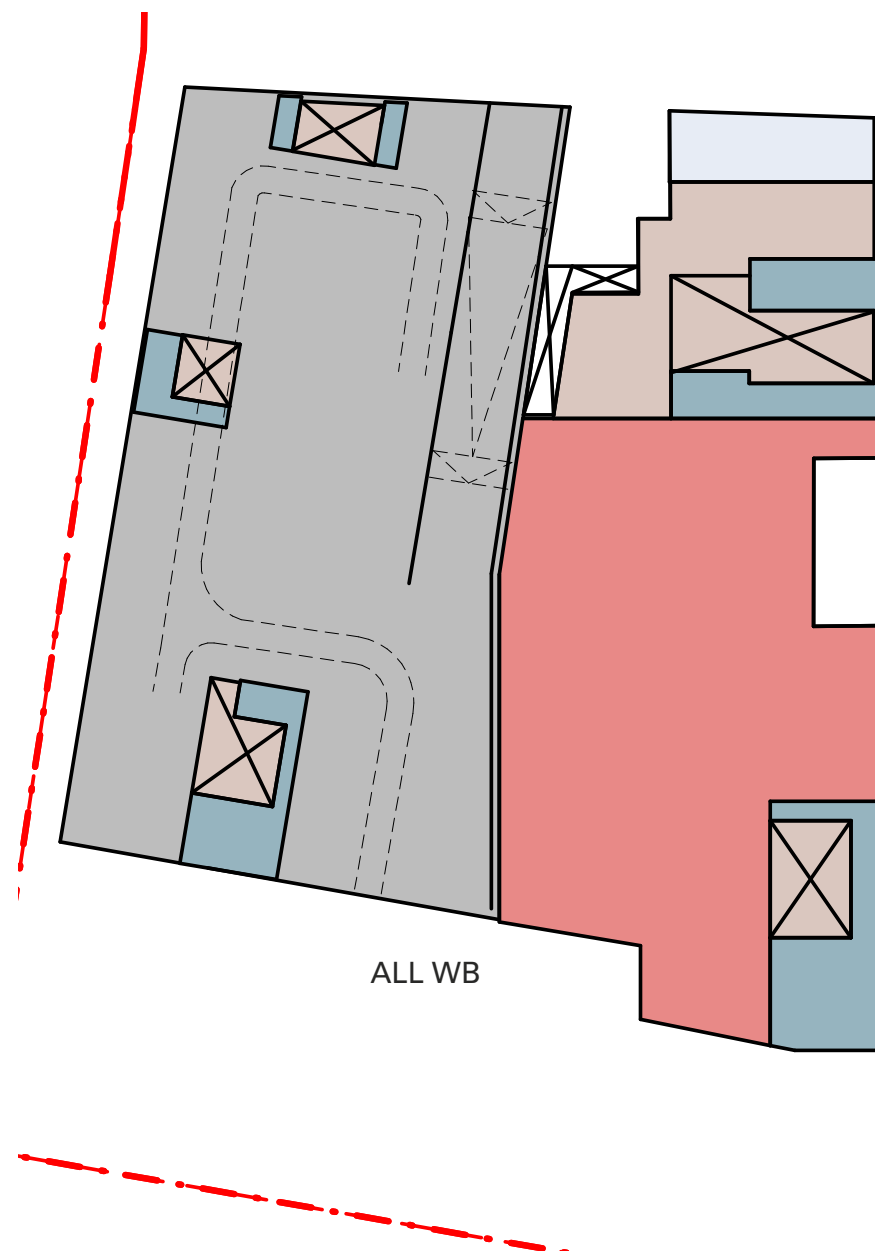


Cycle parking integrated within landscape



Poorly planned cycle parking strategy results in clutter and discourages use

- Parking and Car Circulation
- Plant
- Residential Lobbies
- Commercial Units
- Cycle Stores
- Circulation and Core
- Residential Units



Illustrative Scheme - Residential Cycle Parking Locations

5

Public realm & Nature

Introduction

This chapter of the design codes provides Design Guidelines & Mandatory Rules for the Public Realm and Nature elements that should be provided in the QM OPA.

5.0 Public Realm & Nature

5.1 Public Realm and Nature - Mandatory Fixes

The following mandatory sitewide rules must be adhered to across all aspects of the design for the Public Realm and Nature.

- The public realm proposals must deliver a coordinated network of public realm spaces, street and tertiary routes in locations set out within these design codes, and as identified on the Mandatory Public Realm and Nature Plan.
- Public realm should incorporate biodiverse landscape features, visual natural amenity, contribution to hydrological functions as well as spaces for movement and access and play.
- Design of public open spaces within the residential character areas must maximise soft landscaping to contribute to the overall green infrastructure of the Site.
- SuDS features must be coordinated with future drainage and sustainability strategies and must be landscape-led at reserved matters stage and must be included across the site.
- Tree planting opportunities should be maximised in public realm across all areas, including the use of large canopy trees where space allows.
- Tree planting must align with aims of the Reading Borough Council adopted Tree Strategy (2021)
- Tree planting will be coordinated with service routes, hard surfacing and other structures to ensure sufficient soil volume for the species to achieve its maximum potential
- Lighting must be coordinated with tree planting and designed to minimise detrimental impact on wildlife.
- Future RMA applications must deliver key open spaces

identified on the parameter plans and described in these Design Codes.

- The street furniture suite including seating, litter bins, bollards, and lighting must be coordinated to ensure a consistent design language across the site.
- The proposal for each area must follow the sitewide coordination codes and then the area specific codes described in this document.
- All public realm spaces including streets, footpaths and footways must be lit in accordance to statutory regulations.
- Proposed site levels in future RMAs must ensure that all areas of the site are accessible. Streets and Footways must be designed in accordance with national guidance documents including; The Approved Document to Part M of the Building Regulations, BS8300, and other relevant national/local standards and good practice guides.
- Proposals must create a clear hierarchy of streets and spaces that connect with Reading Town Centre, and adjacent developments such as Huntley Wharf to the south.
- Proposals must create a multifunction public realm that integrates latest thinking in green and blue infrastructure.
- Proposals must put pedestrian and cyclists first using shared space.
- Proposals must establish routes and loops for active and passive recreation

- Proposals must provide access for all enabling those with limited mobility free access to streets and spaces.
- Proposals must respond to the local vernacular of street materials and the wider landscape and townscape that form **Reading's Character**
- Proposals must respond to the heritage of local sites and adjacent developments.
- Proposals must establish thresholds to building frontages to allow ownership and personalization of spaces.
- Proposals must maintain service access for National Rail and diverted below ground services (refer to Design and Access Statement for further details on the Sewer Diversion and its requirements)
- Proposals must maintain and enhance a continuous wildlife corridor to north boundary and provide new green links to adjacent or nearby wildlife corridors.
- Base Landscape soil depths at ground and over structure must achieve a minimum 1000mm depth consisting of growing medium.
- Biodiversity / Blue / Green Roofs will deliver a minimum of 200mm of growing medium.
- Loading allowance for landscape over structure will be 20 kN/m² and allow for a 1000mm depth soil profile without the need for upstand planters.

5.1 Public Realm and Nature - Mandatory Fixes

Mandatory Fixes

- Soft boundary and service infrastructure
- Multifunctional public realm spaces
- Linear Park with Rain Gardens
- Biodiverse and playable green streets
- Green and Blue Roofs
- Exciting thresholds
- Defensible spaces
- Terraces



5.2 Public Realm Hierarchy

The development is to provide a hierarchy of public and semi private spaces as follows.

Plummery Gardens

A primary greenway / linear park incorporating the primary pedestrian and cycle route along the length of the southern site boundary - circa 250m long (development frontage) and 10m-20m wide including pavement on the north side of Forbury Road. This linear greenway will feed directly into the primary public space provided by the development - eastern square, with onward links provided to the east to connect to future development to the eastern connection back to Kenavon Drive.

Primary Eastern Square

A destination readily accessible from Plummery Gardens provides informal play elements, breakout space for A3 use and space for events.

This square is to provide a focus for community events with some commercial frontage and links which respond to the Huntley Wharf development to the south and future links to the East

Secondary Western Courtyard

A secondary space to provide a communal residents garden with space for play, seating and residents events.

Secondary Central Garden

A secondary space to be provided in the heart of the residential area to provide seating and play opportunities.

Green Streets

Green links connecting the north and south boundaries of the site with onwards views to the north, and connections to the south. Green Streets to be vehicle free routes with generous planting, seating and informal play opportunities. Access for emergency vehicles only.

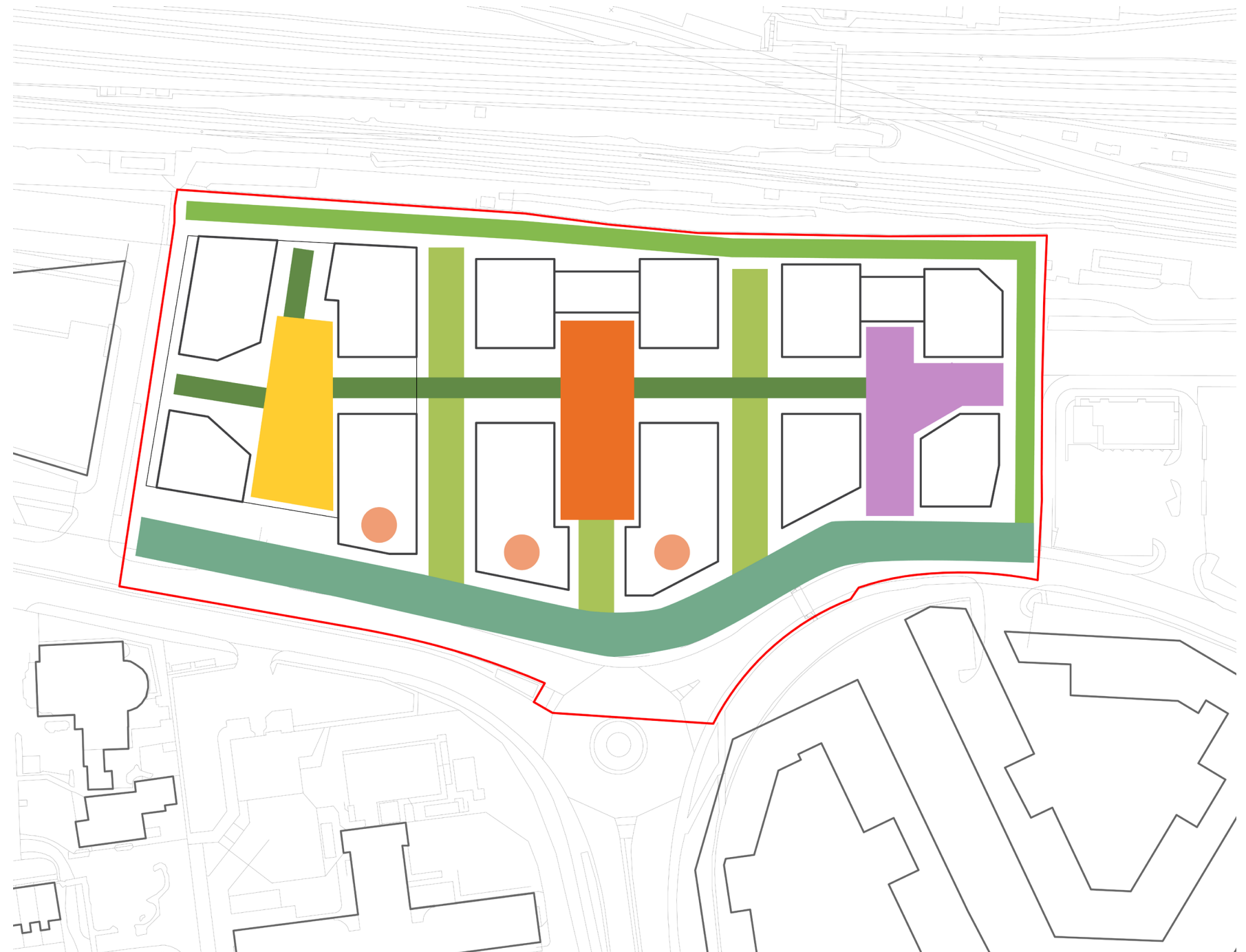
Green Lanes

A east west link to be provided to connect the two squares, with informal connections to the boundaries of the site, allowing onwards views. A generous route providing seating, planting and informal play opportunities, with access for emergency vehicles only.

5.2 Public Realm Hierarchy

Public Realm Hierarchy

-  Plummery Gardens / Linear Park (including walkway and rain gardens): 10m minimum width up to 15m excluding the 2m wide pavement to the Forbury Road
-  Eastern Square / Primary Public Space: 1500m² minimum area
-  Western Courtyard / Community Gardens: 1500m² minimum area
-  Central Woodland Gardens : 2000m² minimum area
-  Green Streets / Secondary Routes): 20m minimum width
-  Service Infrastructure (including roadway & hedge planting): 12m minimum width
-  Green Lanes / Tertiary Routes: 15m
-  Residents Roof Terraces



5.3 Links and Connections

Links and Connections

A clear hierarchy of vehicle, cycle and pedestrian routes that connect with Reading Town Centre and adjacent assets, while providing a safe, legible and permeable environment where pedestrians take priority will be provided.

The key links will connect key destinations and landscape assets and provide separation between development parcels to create an attractive setting.

The links are to provide strategic north, south, and east, west links between key elements in the Public Realm plan, connecting and engaging the community with the wider landscape.

The links will incorporate habitat creation, with water attenuation and play elements wherever possible.

Street design requirements are to be read in conjunction with coding in Movement Chapter 4.

Refer to Chapter 6 Built Form and Chapter 7 Use for further detail on building alignment requirements and adjacent ground floor uses that interface with the street-scape.

The hierarchy of links to be provided as follows:

1. A clearly defined route along the southern boundary of the site - a minimum of 4.5m wide - for pedestrians and cyclists - separated from the road by a generous landscape zone - and connecting with onward links east, west and southwards.
2. A minimum of 2 north, south secondary pedestrian, cycle and emergency vehicle routes from the southern primary route into the development, open to views to the north - minimum width 4.5m.
3. A tertiary and local connector route east to west across the centre of the site linking the secondary routes, and the two public spaces to create a well connected and permeable scheme.
4. A minimum of 2 primary vehicle access points into the development from the south.
5. Service, car park access and car club spaces to be from the northern edge of the development. The Servicing Strategy must be fully coordinated early in the design process during RMAs for all street types and access and loading bay requirements must be incorporated within landscape design.
6. Onwards connections to future development on the site to the east from the primary green square/eastern square and connections south to Huntley Wharf through Plummery gardens/ linear park.

Function

The Links must create a safe pedestrian environment, predominantly free of vehicles, that promote active lifestyles and sustainable modes of transport. They must incorporate a mosaic of habitats to form an important contribution and connectivity to the wider habitat features across the site.

The Links and Connections may include attenuation features as part of the side-wide drainage strategy where shown.

Size/Scale

Minimum 15-20 m from building frontage to building frontage Min 4.5m vehicle route for emergency vehicles. Min pedestrian route if separate 2m.

Location

As shown on the public realm hierarchy plan

Features

The links should include educational features through a combination of signage and information boards to encourage interaction between residents and wildlife.

They should provide safe and clearly defined pedestrian route-ways between landscape assets. Generous provision of seating should be provided at regular intervals.

5.3 Links and Connections

A clear hierarchy of vehicle, cycle and pedestrian routes to be provided as follows:

1. A clearly defined route along the southern boundary of the site - a minimum of 4.5m wide - for pedestrians and cyclists - separated from the road by a generous landscape zone to Huntley Wharf 15m wide minimum - and connecting with onward links east west and southwards.
2. A minimum of 2 no secondary pedestrian, cycle and emergency vehicle routes from the southern primary route into the development - minimum width 4.5m.
3. A tertiary route east to west across the centre of the site linking the secondary routes, to link the two public spaces and to create a well connected and permeable scheme.
4. A minimum of 2 primary vehicle access points into the development from the south.
5. Service access and car park access to be from the northern edge of the development.



Wider Links & Connections

-  Primary Pedestrian Walkway - min. 4.5m pedestrian / cycle / emergency + maintenance vehicles
-  Green Streets (pedestrian/cycle/emergency) - min. 4.5m pedestrian / cycle / emergency + maintenance vehicles
-  Service Infrastructure - min. 6m roadway, 2m footway
-  Green Service Route - min. 6m roadway, pedestrian priority
-  Local Connector Pedestrians - min. 2m footway - private links through residents gardens
-  Primary Vehicle Entrances - min. 2no. from Forbury Road and Kenavon Drive respectfully

5.4 Amenity Play and Activity Provision

Amenity, play and activity provision is seen as key to the success of the development in creating a vibrant and happy community.

A variety of amenity, play and activity areas are to be provided:

1. Amenity Spaces: minimum 4 no.

Clusters of seating and outdoor tables positioned to encourage social interaction within the two primary courtyards, the pocket park and green streets

Seating and outdoor tables to be provided so that there is variety in outlook, and micro-climate.

2. Eastern Square:

This to be located within the Eastern Square to provide a water feature, with generous overlooking seating.

3. Community Space and Woodland Garden: 1 no.

This to be located within the Western Courtyard to provide a minimum of 5 play features.

4. Doorstep Play: minimum 4 areas

Incidental play features to be provided within the Green Streets - minimum 2 areas, and semi private residential courtyards- minimum 2 areas

5. Activity Areas: minimum 2 no.

Activity areas to be provided to offer activity opportunities for older children and adults - could include table tennis or an outdoor gym.

Play Spaces should be developed to encourage the following:

- Emotional well-being
- Physical well-being
- Social Development
- Citizenship
- Appreciation and Enjoyment of Nature

All amenity, play and activity areas must be accessible via multi-user routes, promoting active and safe journeys from home to play space.

Play space must be well lit as appropriate to location and usage.

Play spaces should be enclosed by mounds and planting or low walls and sensitively integrated into areas of adjacent public realm.

Play spaces should be designed to provide a combination of activities including:

- Walking
- Sliding
- Socialising and eating
- Jumping
- Swinging
- Construction and making
- Balancing
- Running
- Role play and make believe
- Experience of nature

5.4 Amenity Play and Activity Provision

The characteristics and quality standards expected for the amenity, play and activity spaces is as follows.

In developing further detail designs for RMA submissions, reference should be made to Reading Borough Council's latest guidance. Guidance from ROSPA, FIT and Play England must be referenced.

1. Overarching Quality Standards

Located within a green street or lane, or community courtyard and close enough to pedestrian routes or dwellings to enable informal surveillance, whilst allowing for the necessary buffer zones.

- *Accessible by foot without the need to cross busy roads and located in closed proximity to a bus stop (route permitting).*
- *Linked directly to pedestrian hard surfaced paths and with secure parking provided for bicycles*
- *Accessible to people with disabilities over as much of the site as is reasonably possible. This is to include provision of a hard surfaced path throughout the area, of minimum width 1.5m and maximum gradient 1 in 20.*
- *Attractive and stimulating environment for both active and passive play; designed for aesthetic cohesion to a unified these and suited to local context.*
- *Play equipment designed and installed in accordance with EN1176 and EN1177. Equipment selected and positioned so as to avoid the possibility of views into neighbouring properties.*

- *Impact absorbing surfaces beneath and around the play items to comply with EN1176 and EN1177. All surfaces in the play area effectively drained to enable all year round use.*
- *Seating with back, for parents or carers, generally made from hardwood timber with deep ground fixings.*
- *Creatively designed and suitably located seating also provided for children in order to encourage social play.*
- *Ancillary features such as seating, picnic tables and little bins must be provided.*
- *Signage to name the site and welcome the user, also to indicated constraints on use and provide contact details of the managing agent. It is essential that dogs are discouraged, at least through the signage, but sometimes also through planting*
- *Dog fouling bins on the perimeter of the green space or park in which the play area is located.*
- *Suitable trees and shrubs strategically placed to provide areas of shade and play opportunities without obstructing informal surveillance to provide appropriate screening/sound barrier effect between play area and neighbouring properties.*
- *All plants selected are tough and resistant to damage with low maintenance requirements and not poisonous, thorny or otherwise hazardous (berries should be avoided even if they aren't poisonous). Plants also selected for seasonal colour, scent and to attract butterflies.*
- *Slopes are encouraged, but no slope should exceed a gradient of 1 in 3 if mowing is required. Steeper feature mounds can be considered if maintenance is by strimmer or the mound is made of artificial material.*

- *Best positioned beside a well used pedestrian route.*
- *Practice guidance from Rospa, FIT and Play England must be adhered to.*
- *All timber used must be FSC Certified.*
- *Away from exposure to prevailing winds.*

Doorstop Play Areas

These must meet the generic requirements detailed above plus also possess the following specific characteristics and features:

- *The main activity zone (min. 100sqm) blends into a landscaped buffer zone to form a minimum overall size of 400sqm.*
- *A landscape buffer zone of minimum 10m between activity zone and nearest dwelling - 20m where facing habitable rooms within 5minutes walking distance of home (300m)*
- *Designed by a landscape architect or specialist consultant to provide for both physical activity and general relaxation/socialising in an attractive landscape setting. Suitable for use by younger and older children alike.*
- *Include informal play features for balancing (eg stepping logs, rocks) and agility (e.g. nets, boulders)*
- *All features should be designed to be well drained, slip resistant and durable.*
- *A minimum of 5 play experiences for children up to 6 years of age as a minimum.*