

A stylized map of West Cambridge, Massachusetts, rendered in white lines on a blue background. The map shows various streets and building footprints. Several areas are highlighted with dashed white lines and enclosed in circles. Lines connect these circled areas to a larger, semi-transparent blue circle in the center of the map, which also contains a dashed white outline of a building footprint. This central circle is further connected by lines to a solid white-outlined rectangle on the left side of the map, which also contains a dashed white outline of a building footprint. The overall design is clean and modern, using a monochromatic blue color scheme with white and light blue accents.

for approval

WEST CAMBRIDGE

OUTLINE PLANNING APPLICATION
DESIGN GUIDELINES

Credits:

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with:

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All of the drawings/diagrams in this document are provided for illustrative purposes only. This Design, Access and Landscape Statement is provided to support the planning application for the Proposed Development, and all details of access, appearance, landscaping, layout and scale are reserved within the parameters set out in the Parameter Plans & Statements and Environmental Statement

CONTENTS

INTRODUCTION

Vision for West Cambridge: A New Trajectory	6
Purpose of the document	9
Scope of the document	10
How the Design Guidelines work	11
Structure of the document	11

1. SITE-WIDE DESIGN GUIDELINES

1.1. Public Realm and Landscape	
1.2. Urban Structure	
1.4. Land Use and Amenities	
1.5. Massing, Roofscape and Skyline	
1.6. Access and Movement	
1.7. Existing Trees to be Retained	

2. KEY PLACES

2.1. West Forum	30
2.2. East Forum	34
2.3. The Green	38
2.4. Southern Ecological Corridor	44

3. STREETS AND GREEN LINKS

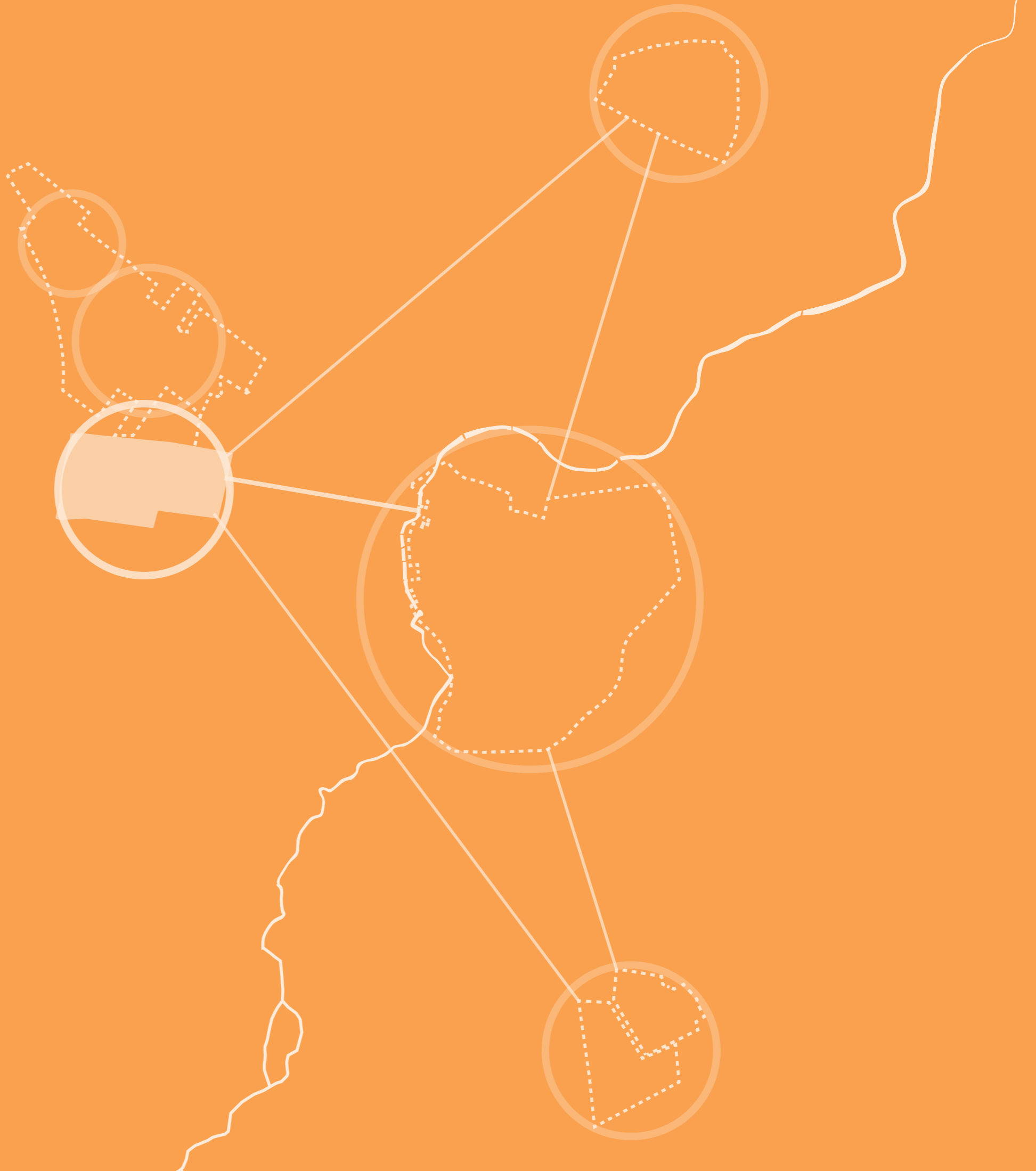
3.1. Introduction	52
3.2. High Cross (Primary Green Link)	53
3.3. JJ Thomson Avenue	55
3.4. Charles Babbage Road	58
3.5. Western Access / Ada Lovelace Road (Primary Green Link)	61
3.6. East Green Link	63
3.7. Central Green Link	64

4. SITE EDGES

4.1. Introduction	68
4.2. Madingley Road	69
4.3. Southern Edge	70
4.4. Clerk Maxwell Road	71
4.5. Woodland Edge	72

5. APPENDIX

14	5.1. Parameter Plan 1: Development Building Zones	76
16	5.2. Parameter Plan 2: Land Use	77
19	5.3. Parameter Plan 3: Access and Movement	78
20	5.4. Parameter Plan 4: Landscape and Public Realm	79
22	5.5. Parameter Plan 5: Maximum Building Heights	80
24		



INTRODUCTION

INTRODUCTION

Vision for West Cambridge: A New Trajectory

The University of Cambridge has identified West Cambridge as one of its key sites for growth, best placed for clustering of physical sciences and technology and collaboration with industry research.

The new masterplan proposals aim to establish a new trajectory for development and transform West Cambridge into a lively research campus, accessible and integrated with the City, and which can equally well accommodate users' interaction and demanding scientific processes. By facilitating research excellence and innovation the new site will help to retain and attract staff and enable future research growth, thus strengthening the University's international reputation.

Research and teaching will continue to be the primary uses on the site, strongly supported by amenities and commercial research workspaces which promote social life on the site and knowledge exchange. In response to this, the masterplan has been shaped by building and operating requirements of teaching, academic and commercial research as much as by requirements for social interaction, favouring a moderate density of built form which is well balanced with green, soft landscapes and well defined, enclosed public spaces with active uses.

The current piecemeal development on plots will be abandoned in favour of a Character Area based approach - where the site will comprise of a number of areas with distinct characters, structured around and brought together by a clear landscape and open space framework. The size and density of the Character Areas will be such to promote pedestrian movement and integration of buildings.

At grade car parks will be removed and parking relocated in multi storey structures located at the periphery of the site, enabling an increase in density but also an emphasis on cycle movement and pedestrian activity and comfort throughout the site.

The University has established five key objectives to deliver the vision and guide the Proposed Development:

- Optimise the amount of development on the site, supporting the City and Region as a world leader in learning, teaching, research and development;
- Support the commercialisation of knowledge through entrepreneurship and collaboration with industry;

- Create and sustain a high quality place by transforming the physical and social environment for site users and neighbours across the City;
- Deliver adaptable and efficient space to support viability and long term value creation;
- Deliver sustainable development, proactively investing in the quality of place and integration within the City.

The new Masterplan seeks to transform the site by recognising and building on a number of site-related opportunities, which will contribute wider benefits to the University and the City:

- Promote **sustainability** and improve the University's performance on a site unhindered by historic structures and dense urban form found in the city centre;
- **Sustainable transport strategy**, as the key tool for the transformation of the site, aiming to reduce the reliance on cars and domination of at grade car parks by improving **public transport**, concentrating car parks along the edges and thus freeing public space for **pedestrians and cyclists**;
- Provide a necessary space for a City-wide step change in **entrepreneurship and employment growth**;
- Cluster of University's Physical sciences and Technology disciplines, with their industry partners, which will establish West Cambridge as a place which lives and breathes **science and technology**, generating exciting technological achievements and innovation.
- Opportunities for academic events as well as **popularisation and promotion of science**, through evening lectures, festivals and community projects.
- **Public realm with adjacent shared facilities and amenities**, linking into a wider network of open spaces and pedestrian and cycle routes; and
- **Community uses**, further capacity in addition to existing sport and nursery provision, helping to promote healthy and balanced lifestyle of site users and wider community.

Development at West Cambridge will be incremental, with the initial stage 'Priority Projects' concentrating new academic development in the east, forming this new density and a renewed activity from the outset.



01. University Objectives



02. The West Cambridge site



03. West Cambridge Site - Existing condition



04. West Cambridge Site - Priority Projects



05. West Cambridge Site - Interim Condition



06. West Cambridge Site - Full Development



07. West Cambridge Full Development in wider local context (including the North West Cambridge Development)

Purpose of the document

This Design Guidelines document has been prepared in support of an outline planning application submitted by the University of Cambridge for the comprehensive development of the West Cambridge site.

The Design Guidelines (along with the Parameter Plans) establish a set of design parameters and principles for development at the site, and will act as a basis for informing, guiding and assessing future detailed proposals for individual parts of the site.

Like the Parameter Plans, the Design Guidelines are submitted for approval by the local planning authority. The Design Guidelines supplement the Parameter Plans by providing a greater level of articulation of the design and access intent in relation to key facets of the development proposals. These are considered by the applicant to be particularly important in creating a high quality, attractive, distinctive and sustainable environment for all site users.

These Design Guidelines will be a material consideration when determining Reserved Matters application for West Cambridge. Any variation to these Design Guidelines will only be possible with the agreement of the University of Cambridge and Cambridge City Council.

The Design Guidelines should be read in conjunction with the Design & Access Statement, where the Design and Access Statement describes and explains the key concepts and vision behind the proposed development.

The West Cambridge Outline Planning Application

Description of Development	Design and Access Statement	Design Guidelines	Other Planning documents
<p>Including Parameter Plans</p> <p>Parameter Plans:</p> <ul style="list-style-type: none"> 01 Development Building Zones 02 Land Use 03 Access and Movement 04 Landscape and Public Realm 05 Maximum Building Heights <p>In addition:</p> <ul style="list-style-type: none"> Application Boundary Demolition Plan 	<p>Including Design Principles and Illustrative Material</p> <p>Volume A:</p> <ul style="list-style-type: none"> 01 Introduction 02 Development context 03 Masterplan development process 04 Proposed development <p>Volume B:</p> <ul style="list-style-type: none"> 01 Illustrative Masterplan 	<ul style="list-style-type: none"> 01 Site-wide Design Guidelines 02 Key places 03 Streets and green links 04 Site edges 	<ul style="list-style-type: none"> 01 Transport Assessment 02 Environmental Statement 03 Planning Statement 04 Sustainability Statement 05 Energy Statement 06 Statement of Community Involvement 07 Waste Management Plan 08 Utilities Statement 09 Construction Environmental Management Plan

Scope of the document

This document sets out the Design Guidelines for the West Cambridge site. The Design Guidelines will be used to ensure high quality design is delivered at West Cambridge. They are intended to:

- Capture the design responses appropriate to each key element and character area at the application site, while allowing flexibility in the final design of the development;
- Provide a level of consistency so that the site as a whole is developed in a coherent manner consistent with the overall vision for the site;
- Communicate masterplan intentions to the various design teams which will bring forward individual development proposals over the life of the development; and
- Provide a balance between technical specificity and a concise description of what is required from detailed design proposals.

The document covers critical site-wide elements of the development, including:

- Public realm and landscape - relating to types and arrangement of open spaces across the site.
- Urban structure - relating to the location and treatment of building frontages, landmarks and gateway features, and the approach to integration of existing buildings.
- Land use and amenities
- Massing, roofscape and skyline - relating to height and massing of new buildings, landmark features and building profiles, and principles related to treatment of roofscape and skyline.
- Access and movement - relating to the location and treatment of vehicular, pedestrian and cycle routes, servicing, car parking and cycle parking.

In addition to the site-wide elements the document continues to describe Guidelines for key elements, which include:

Key Places:

East and West Forum: shall be key social focal points for the site. They are existing spaces, determined by the 1999 masterplan but will be transformed by new development and new arrangement and role within the public realm network.

The Green: shall be a series of connected open spaces that visually and physically connect from east to west through the central part of the site.

Southern Ecological Corridor: The Southern Ecological Corridor shall be formed along the southern edge and will incorporate the existing canal and a part of the existing Coton Footpath.

Guidelines for these spaces are provided in the Key Places section.

Streets

Transforming the nature of existing streets is essential to transforming the character of West Cambridge. These streets will contribute to forming a pedestrian and cycle network through the site. The key streets included are High Cross, JJ Thomson, Charles Babbage and Western Access/Ada Lovelace Road.

Guidelines for streets are provided in Streets and Green Links section.

Green Links

Green links are north-south elements which bring green character of key landscape corridors from the north and the agricultural fields from the south, deeper into the site. They are an important part of pedestrian and cycle network.

Majority of the Green Links have origins in spaces that are already existing on site and, because of this, will vary in size and character.

Some of the Green Links are associated with streets: High Cross (which leads to Girton Gap in the north), and Western Access/Ada Lovelace Road.

A few of the Green Links are existing spaces with a servicing role which will need to be maintained.

Guidelines for Green Links are provided in Streets and Green Links section and also within the Key Places Section.

Site Edges

Control of the site edges is aimed at ensuring that the development relates well to the surrounding context, responds well to heritage assets and mitigates and minimises visual impacts.



08. West Cambridge Character Areas

KEY

- OPEN SPACES
- SITE EDGES
- STREETS
- GREEN LINKS
- - - CLUSTERS
- 1 EASTERN CHARACTER AREA
- 2 JJ THOMSON AVE CHARACTER AREA
- 3 SOUTHERN CHARACTER AREA
- 4 WESTERN CHARACTER AREA
- 5 CENTRAL GREEN CHARACTER AREA
- 6 HIGH CROSS CHARACTER AREA
- 7 WOODLANDS CHARACTER AREA

How the Design Guidelines work

The Guidelines within this document are drawn from the Illustrative masterplan, which has been produced in support of the Outline Planning Application. This stands as a robust three-dimensional test of and response to: site conditions; the needs of the University; and ongoing consultation with key stakeholders.

The Document has four Sections: Site-wide Guidelines; Key Places; Streets and Links; and Site Edges

All Sections must be read together and in particular the Guidelines for Key Places should be cross referenced with built form and massing Guidelines within the Streets and Links Section.

For each of these elements, the document sets out principles and more specific guidelines to inform the development of detailed design proposals. Three types of principles/guidelines are included:

- **Mandatory**, which must be complied with (denoted by the use of 'must');
- **Strongly recommended**, setting out the preferred approach (denoted by the use of 'shall'). If there is any significant deviation from the preferred approach the alternative will need to demonstrate significant other benefits; and
- **Suggestive**, setting out one or more possible ways for the detailed design response to achieve the desired design outcome (denoted by the use of 'may be').

Reserved matters applications will be brought forward in accordance with the Design Guidelines as well as the Parameter Plans. Reserved Matters applications will need to demonstrate, through their Design and Access Statement, how the Design Guidelines have been taken into account in the evolution of detailed design proposals, and how the proposals comply with the mandatory elements of the Guidelines. Deviation from the Guidelines, including the mandatory elements, may be acceptable with the agreement of the local planning authority.

Review process

It is intended that this document, subject to agreement, will be reviewed at key stages in the development process to ensure that its Guidelines and content remain relevant and robust. This will ensure that this document remains responsive to changing conditions. For example a review of this document could happen towards the end of the Priority Projects/Phase 1 development process, when more will be known about the University's future requirements and need, as well as the forecast transport position.

Structure of the document

01 Site-wide Design Guidelines

Public realm and landscape structure
Urban structure
Land use and amenities
Massing, roofscape & skyline
Access and movement
Existing trees to be retained

Key issues:
Frontage types, length, multi-storey car parks
Massing, landmarks & rooftop plant
Existing trees to be retained and incorporated

02 Key places A new public realm

West Forum
East Forum
The Green
Southern Ecological Corridor

Key issues:
Character
Surface Treatment
Planting (inc existing)

03 Streets and green links Transformation of existing streets

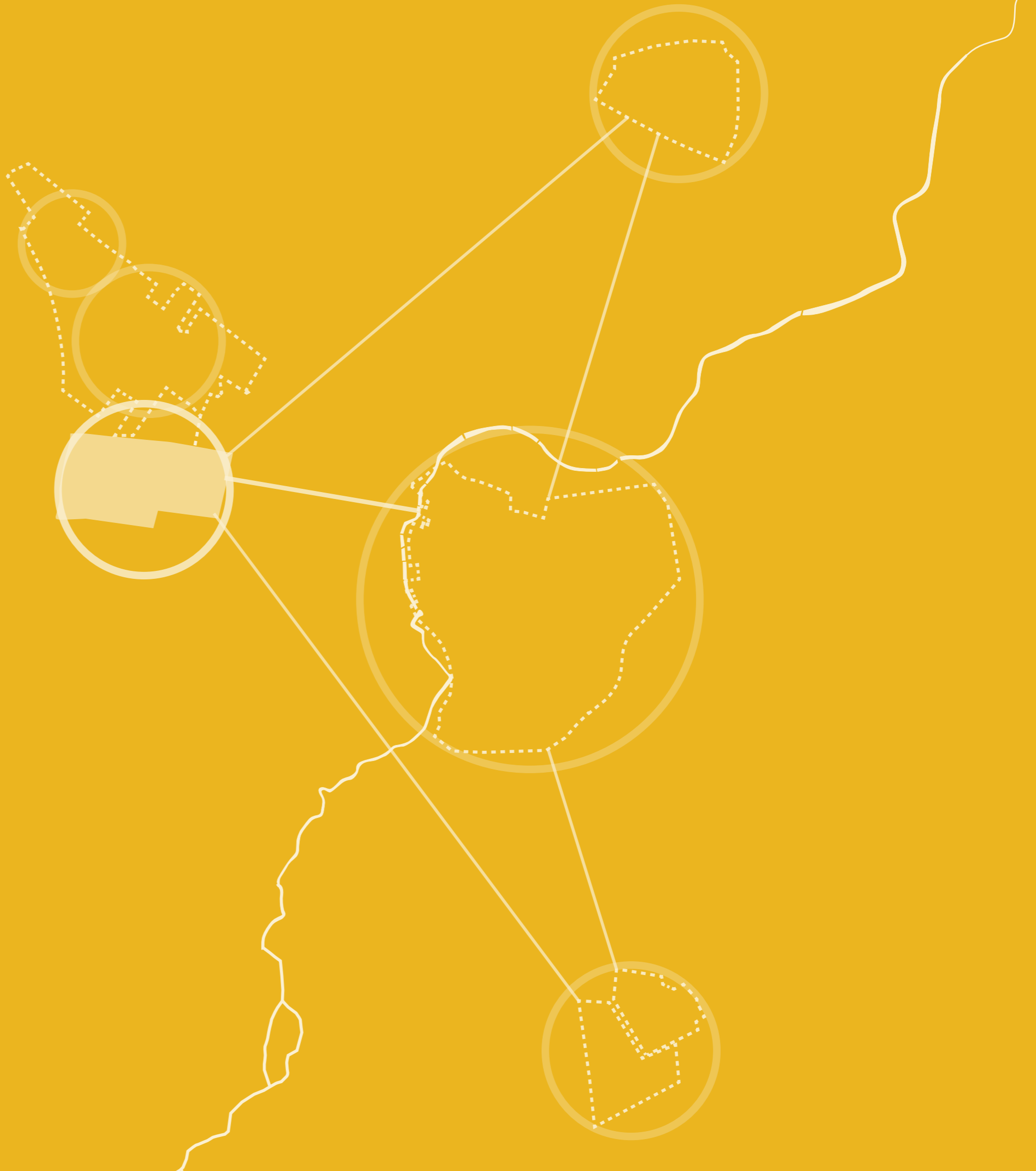
High Cross
JJ Thomson Avenue
Charles Babbage Road
Western Access/Ada Lovelace
Green Link

Key issues:
Existing/proposed sections
Street frontage
Street character
Planting (inc existing)

04 Site edges Integration and response to context

Madingley Road
Coton Footpath/Southern edge
Clerk Maxwell Road
Woodland edge

Key issues:
Frontage heights
Set backs



**SITE-WIDE
DESIGN GUIDELINES**

01

1. SITE-WIDE DESIGN GUIDELINES

1.1. Public Realm and Landscape

Public Realm Principles

The masterplan aims to provide a range of external spaces which are freely accessible by all site occupants. The design must include:

- Hard and soft landscaped areas
- Formal and less formal areas
- Consideration of safety and security
- Provision of a range of publicly accessible areas and more private areas
- Assessment of external daylight accessibility
- Provision of access for all abilities
- Consideration of the impacts of future climate change, providing a comfortable environment in hotter summers.

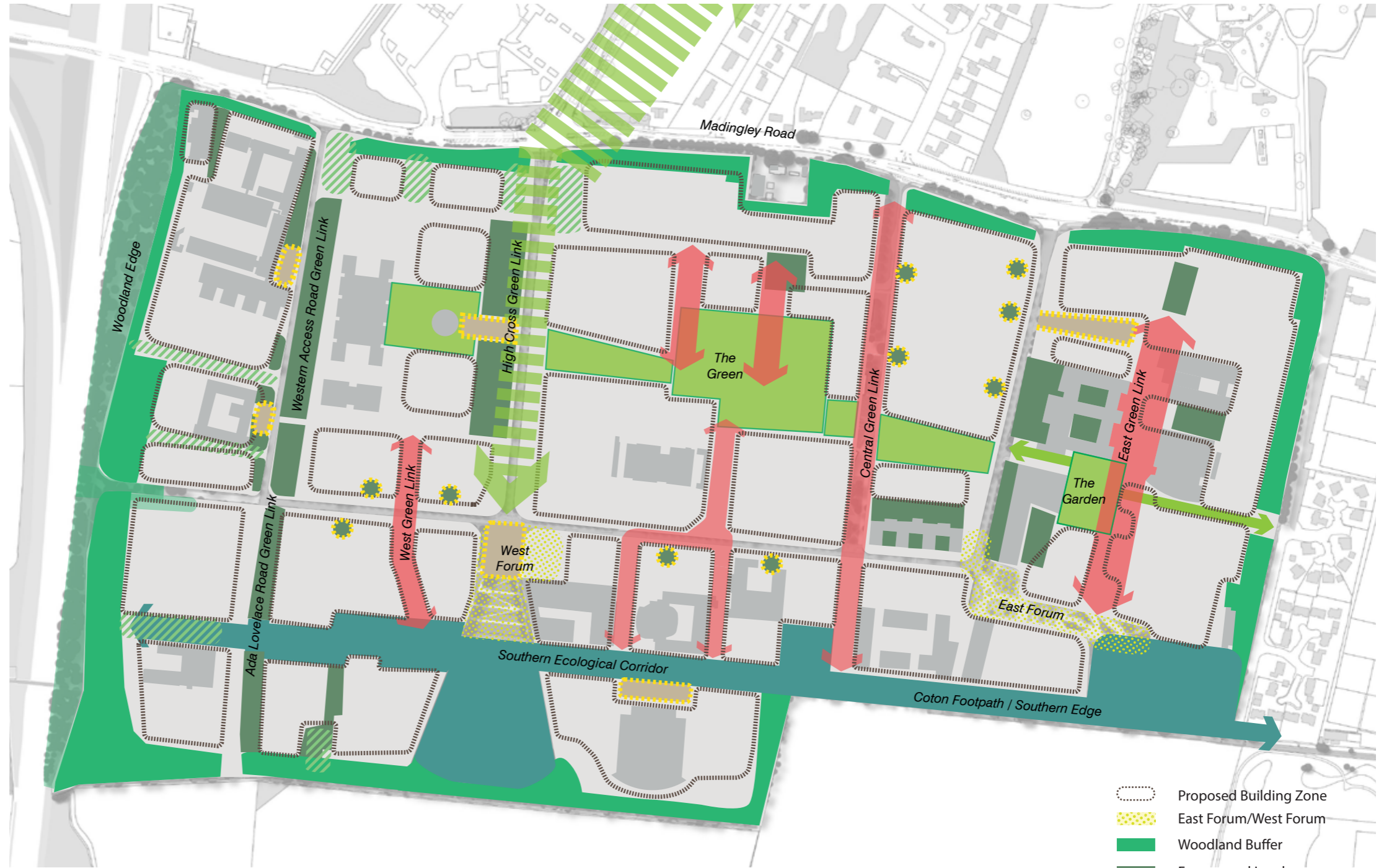
A site-wide SUDs approach shall be developed to integrate with existing infrastructure, which meets best practice guidance and achieves run-off targets.

Design must ensure that no potable water irrigation is required for landscape planting, including during the establishment phases. Planting which is either low irrigation, or which can use recycled water or rainwater must be provided.

The ecology design must take into account future climate change conditions:

- Preference must be given to drought resistant planting, to withstand warmer and drier summers.
- Planting which not require irrigation must be given preference.

Wherever appropriate, the design must include facilities and/or measures which allow site occupants to engage with site biodiversity and ecology. These could include signage and displays; educational measures and features; community gardens; rooftop gardens; water features engaging with people; and/or butterfly gardens. Some of these features may be temporary and introduced in interim phases.



09. Site-wide Public Realm and Landscape Structure

- Proposed Building Zone
- East Forum/West Forum
- Woodland Buffer
- Foreground Landscape
- The Green
- Existing Buildings
- Southern Ecological Corridor
- ▨ Additional Woodland Planting
- Green Links
- ▨ Ecological Corridor
- Arrival Square
- Pocket Landscape

Public Realm and Landscape Structure

The diagram on the previous page shows arrangement of different types of public realm and landscape across the site.

- West Forum and East Forum must be established as key social points on the site
- The Green must be formed as a series of connected 'gardens' connecting centrally from Clerk Maxwell Road to High Cross Road, capturing views of the Schlumberger building and, from higher levels, of City Centre landmarks. An uninterrupted theoretical visual (straight) line must be established between JJ Thomson Avenue and Schlumberger Research building. The sequence must include a large centrally located garden (The Green) and the Garden Space between Clerk Maxwell Road and JJ Thomson Avenue.
- Existing corridor along the southern edge must be softened with additional planting to form a more diverse ecological habitat. This space must provide a strategic east-west pedestrian/cycle route along its length. The upgraded canal shall connect West Lake and the East Pond and form the backbone of the site-wide drainage strategy.

A network of green links - north-south landscaped links must be established. The green links must include:

- East Green Link, a pedestrian only space connecting Department of Engineering cluster south to the East Forum spaces, partially located between the existing Computer Laboratory and Roger Needham and CAPE buildings.
- Central Green Link, an upgraded pedestrian and tertiary cycle link in location of the existing former access to the Vet School and service lane for the Southern Residences. This link must incorporate the existing group of high quality trees. At the southern end, this link must be wider to allow for additional landscaping.
- Additional landscaped zones along existing High Cross and Western Access / Ada Lovelace Road
- West Green Link, a pedestrian only link linking Southern Ecological Corridor, Charles Babbage Road and Schlumberger plot, West of West Forum
- Additional links between Southern Ecological Corridor, the Green and north from The Green.

Other types of spaces shall include arrival spaces located along key streets and access routes where they will provide high quality 'address' and visibility points for the site as a whole, clusters or individual buildings.

- There shall be two site wide arrival points, located at East and West Forum. These shall serve as key drop off/drop on points for the site. Guidelines for these spaces are provided in Key Places section.
- Further arrival squares may be located to serve particular developments in other parts of the site. The guidelines for these spaces are provided in Streets and Green Links section.

In addition, smaller scale foreground and pocket landscapes shall be formed in the locations shown - mostly along key streets and/or green links, by means of building set backs or variations in building line.

The guidelines for foreground and pocket landscapes are provided in Streets and Green Links section.

1.2. Urban Structure

The new masterplan aims to transform the West Cambridge site through promoting a new density of development. This density of development accommodates a greater population density which can support social amenities within the site. These amenities must be focused in key spaces and streets such as the East and West Forums, the Southern Ecological Corridor and The Green. New built form must define these spaces and be outward looking rather than inward turning.

Incorporating Existing Buildings:

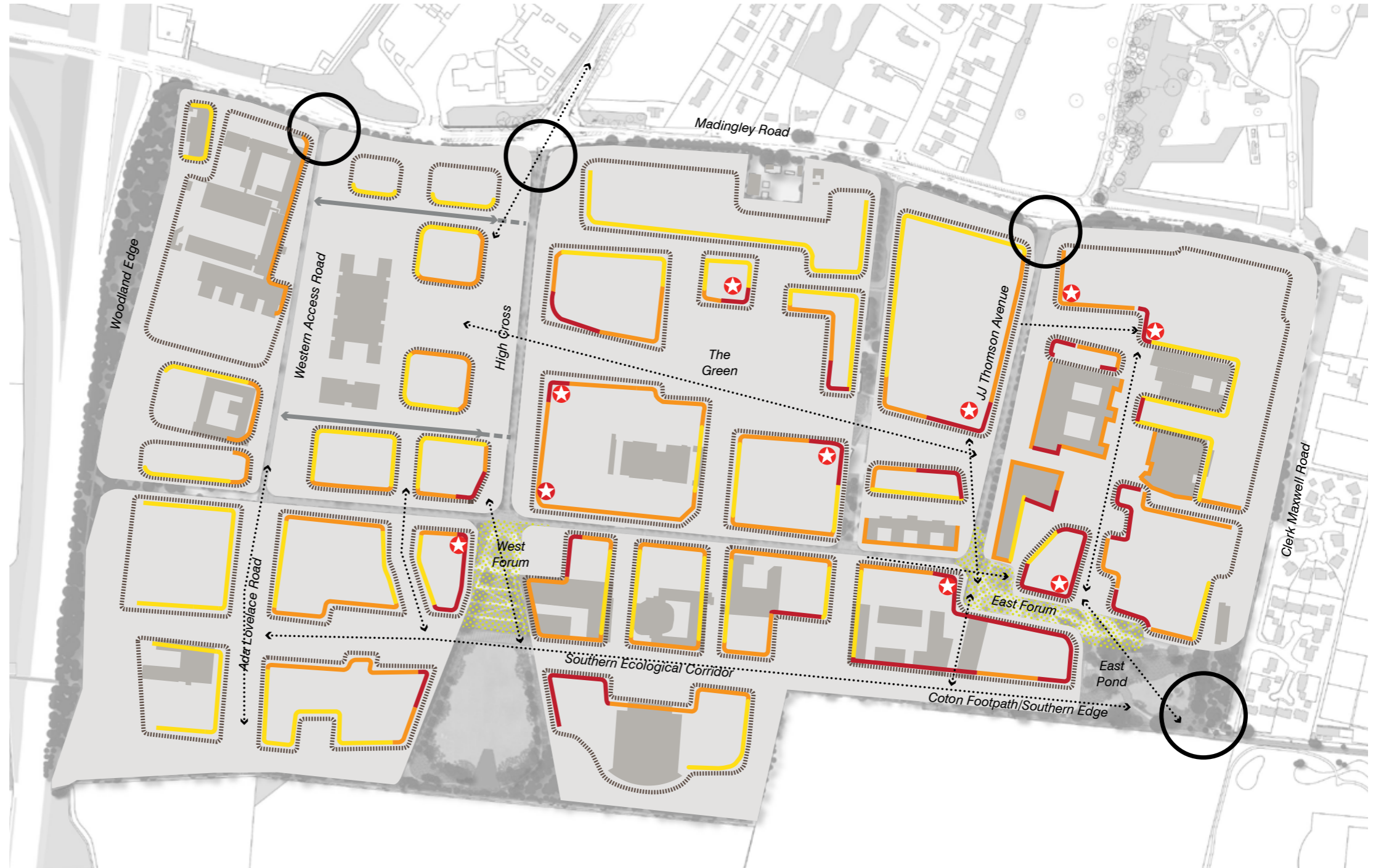
- New development must provide an appropriate setback from existing buildings to facilitate daylight/sunlight and ventilation into existing internal and external spaces.
- New development shall respond to the character, location and organisation of existing retained buildings.
- If existing buildings are to be remodelled, then they may be re-configured to increase their permeability and to provide primary or active frontages onto the principal spaces.

Urban Structure

- Masterplan design must allow for good levels of daylight to all external building facades, allowing view of the sky from all occupied areas.
- Where space use allows and where inlets can be at least 10m from sources of external pollution (car parking, roads, plant exhausts), design shall seek that all occupied areas have access to natural ventilation.

Gateways and Building Accents:

- Development shall form new gateways (visible high quality frontages and landscaping) at the entrances to the West Cambridge site from Madingley Road at JJ Thomson and High Cross Avenues.
- Development shall form a new gateway to the south at East Pond, with visible pedestrian routes towards East Forum and high quality frontages.
- Key accents shall be visually connected with particular open spaces (more guidelines about key building accents are provided in site-wide Massing, Roofscape and Skyline section and in place specific guidelines).
- Where buildings terminate other key views, built form may provide additional accents. Height may be increased at these points to create variety in skyline and massing, consistent with the approved building height parameters.



10. Site-wide Urban Structure

KEY

- Active Frontage
- Primary Frontage
- Secondary Frontage
- Proposed Building Zone
- - - - - Key Views
- ★ Key Accents
- Gateways

Frontage Types

A hierarchy of frontages has been defined for the site. This frontage strategy is set out on this and the next page and further described in other sections of this document.

Primary Frontages:

These frontages are highly visible, and are located to provide overlooking and enclosure to the principal spaces and key streets, namely: East and West Forum, The Green, the Southern Ecological Corridor, J J Thompson Avenue, High Cross, Charles Babbage, Western Access Road and East Green Link.

Facade Treatment:

- Primary frontages must be of high quality design and well articulated with fenestration, other façade elements and/or use of materials.

Activity / Overlooking:

- Primary frontages shall incorporate building entrances to new and existing development and provide a high degree of overlooking to public space.

Car Parking:

- Car parking access must not be located along these frontages at ground level.
- Car parking may be located within the ground or lower ground floors of these frontages, but must be well integrated into the frontage design and not reduce overlooking of the street or space.

Servicing / Plant:

- Provision for servicing and inactive/impermeable parts of the buildings must not be located in primary frontage locations.



12. Active frontages

Active frontages:

These are primary frontages that also support active interface between social spaces inside buildings and the public realm outside at ground floor level. Active frontages at West Cambridge are clustered around key spaces and important nodes such as: the East and West Forum spaces, East Pond, and at key points along The Green and the Southern Ecological Corridor. Active frontages are generally located on the most visible frontages of the plan, encouraging legibility of land uses.

Major entrances and lobbies to buildings can also be defined as active frontages (since they provide a high degree of activity in the public realm immediately related to them). These active frontages may be located along Charles Babbage Road, High Cross, JJ Thomson Avenue, Western Access / Ada Lovelace Road and Green Links within each of the Character Areas.

Active frontages may also appear on upper floors, relating to any social spaces that may be set above ground floor.

Facade Treatment:

- Ground floor active frontage must ensure interaction and visual connection between internal space and external public realm and should comprise glazed façades.

Activity / Overlooking:

- Ground floor active frontages shall comprise major building entrances, frontage to shared facilities and other active uses.
- Ground floor active frontages must provide a high degree of overlooking to adjacent public realm and key spaces.
- Activity from within the active frontage may spill-out into the public realm: for example cafe tables and chairs, outdoor teaching space, etc.



11. Active Frontages - entrances to buildings

- Active frontages - at upper levels: upper floor social spaces can bring additional variation and overlooking to key spaces and frontages. These elements shall be celebrated within the facade design and be able to contribute to the sense of activity within a space. These shall be provided on frontages overlooking The Green (providing views back to the city centre skyline) and on the Southern Edge (providing south facing views over open countryside).

Car Parking:

- Car parking and car parking access must not be located along these frontages at ground level.
- Car parking must not be visible within the ground floors of these frontages.

Servicing / Plant:

- Service areas and inactive/blank frontages must not be located at active frontage locations.

Secondary frontages:

These frontages are located where enclosure and definition of secondary/ancillary spaces is required. They are less visible frontages which overlook and enclose secondary spaces and streets such as: Ada Lovelace Lane and some of the Green Links.

Facade Treatment:

- These frontage types may have a lesser level of design articulation than primary frontages, but shall still provide a level of interest and articulation.

Activity / Overlooking:

- These frontage types shall provide enclosure to secondary or ancillary spaces.



13. Primary frontages

- Secondary frontages shall incorporate building entrances to new and existing development.

Car Parking:

- Car parking access may be located along these frontages but must be well integrated into the frontage design.
- Car parking may be visible within these frontages but must be well integrated into the frontage design.

Servicing / Plant:

- Service access/entrances may be located within these frontages. Care must be taken to minimise intrusion on the facade and incorporate into the design.

Other frontages:

These frontages are located along more secondary/tertiary edges and spaces and are the least visible frontages. They may relate to small courtyards, access lanes and face onto the Woodland buffer at the site edges.

Activity / Overlooking:

- These frontages shall provide screening, transition and edge resolution around tertiary spaces.

Car Parking:

- Car parking access may be located along these frontages but must be well integrated into the design.
- Car parking may be visible within these frontages but must be well integrated into the frontage design.

Servicing / Plant:

- These frontages can be used to “wrap around” service / utility buildings like data centre/parking/energy centre/ service frontages and tertiary edges



14. Secondary frontages

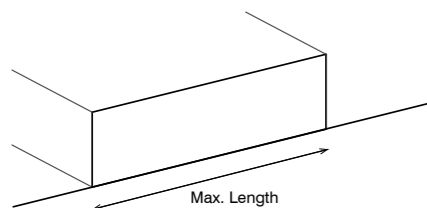
Frontage Lengths

It is anticipated that the type of buildings and uses that will occupy the West Cambridge site will require relatively large format floorplates. In addition, the masterplan strategy rests on the creation of large multi-storey car parking structures. These types of buildings and structures may give rise to long, unbroken frontages. To mitigate this and ensure that longer frontages can still contribute to creating character and street-scene, a set of guidelines are set out on this page to provide possible design strategies to minimise long, unbroken frontages.

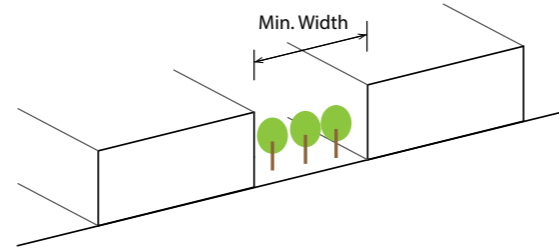
The choice of one or more strategies will depend on the location on the site: some strategies will be better suited for the site edges (for example using planting adjacent to woodland buffers), others will be required along streets or key spaces (for example varying rooflines and building lines).

- Frontages longer than 50m should be broken down by variation in build-to line, height or roofscape
- Frontages longer than 50m shall have a variety of architectural treatment related to architectural elements and/or materials
- Gaps, setbacks and variation in building line must be provided (further requirements are provided in the following chapters)
- Gaps and setbacks should be landscaped and should incorporate trees where possible

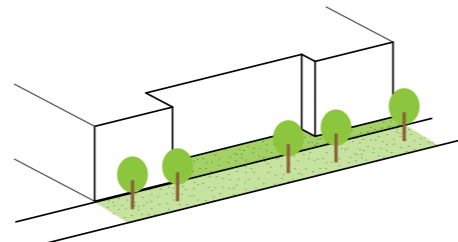
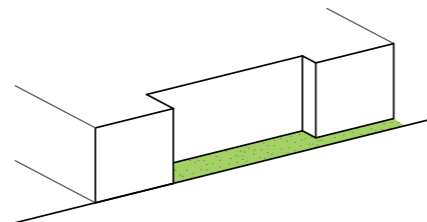
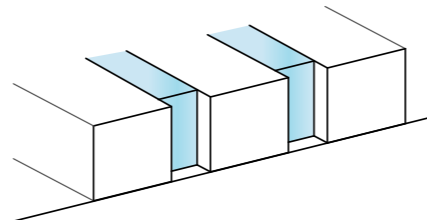
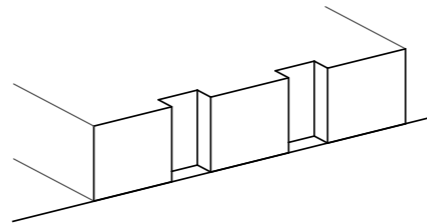
Maximum length of uninterrupted building frontages and/or rooflines will be limited and will be specified for different conditions in the chapters of this document.



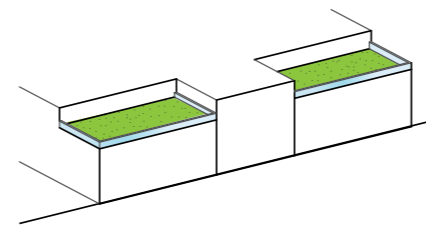
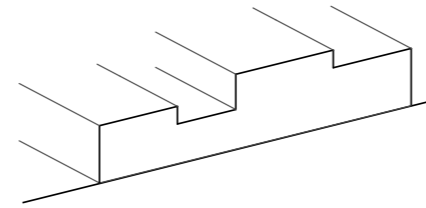
In a number of places, landscaped gaps and links are protected by parameter plans and/or design guidelines and their minimum width is defined. In addition to these gaps, where possible, landscaped frontage breaks should be introduced to break long frontages and provide additional greenery to the site.



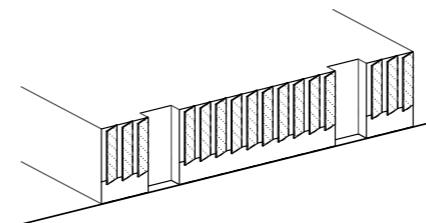
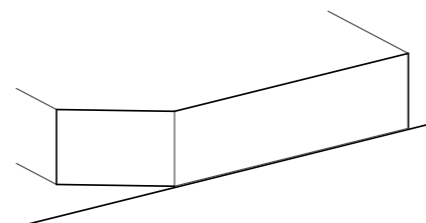
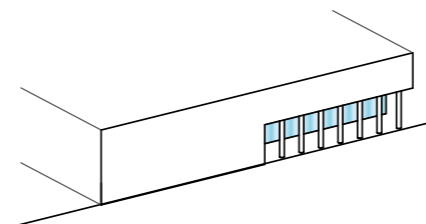
Variation in plan: by introducing indents, glazed gaps, partial building set backs (variation in building line), setbacks with foreground landscaping and trees etc.



Variation in rooflines: by variation in height or by partial setback of upper floors or arrangement of cores. Setbacks and lower parts of roofs may be usable terraces and edge planting or green/brown roofs may be considered.



Variation in facade elements and treatments: introduction of colonnades or overhangs, chamfers or treatment with different materials etc.



Facade Treatment

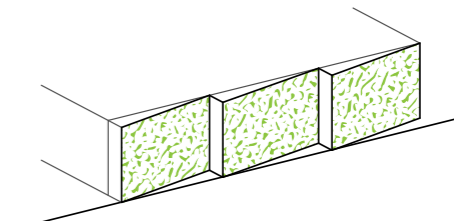
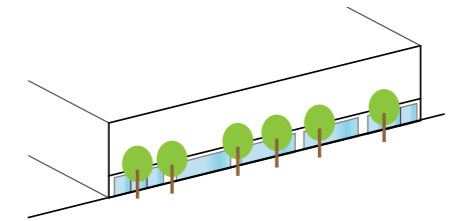
Treatment of façades shall be sensitive in scale and use of materials. Highly visible façades, located at sensitive edges and/or facing key open spaces must be treated using high quality materials and detailing. Materials for less visible façades need to be robust and designed to age well.

Transparent façades must be used for active frontages and frontages of publicly accessible parts of the buildings.

Wherever appropriate, transparent and translucent materials shall be used to provide insight from key open spaces and key public realm into social or important activities inside the buildings. This will enable the blurring of the boundaries between public spaces and the building interior.

Research buildings will have requirements for servicing areas and/or sensitive areas which will result in some blank façades. These façades must provide variation and interest through use of setbacks, varied roofline and appropriate use of materials and planting.

Use of planting: foreground planting and climbers on trellises, which could be particularly useful in cases of blank façades



1.4. Land Use and Amenities

The majority of uses on the site are academic or commercial uses and they are blend across the site. The academic and commercial allocation includes amenities with catering facilities of different types. In addition to these amenity spaces, there is a provision of catering and retail facilities categorised as A1-A5 uses. The main purpose of this section and the diagram on the right is to provide guidelines for location of these amenity spaces and their primary frontages.

There are two types of amenity zones identified on the plan:

Primary amenities zones: these are zones where amenities with site-wide reach and importance must be located. These include large catering facilities, clusters of meeting and teaching spaces, study/library space and other similar spaces.

Secondary amenities frontages: along these frontages amenities must appear at minimum sporadically and may be of smaller scale and local catchment, such as: cafés and smaller restaurants, entrances and entrance lobbies with extended social use.

- Primary amenities zones must be located in East and West Forum area and must have their active frontages facing these key open spaces
- Additional primary amenities must be located in extensions of East and West Forums, with visual connections between the Forums and their active frontages. These will include amenity zones on interfaces of The Green and JJ Thomson and West Forum and Southern Ecological Corridor.
- Secondary amenity frontages must be located along The Green, JJ Thomson and Charles Babbage Road, Southern Ecological Corridor and East Green Link
- If the provision of primary amenities exceeds spatial capacities at the primary amenity zones, they may be located along secondary amenity frontages. If this is the case, pedestrian routes an access in the public realm must be such that these spaces are visible and accessible to wider site users.
- There is a provision of sports and community use around the existing Sports Centre which shall be expanded in future. This is also the preferred location for a new nursery.



15. Land Use and Amenities

- East Forum/West Forum
- Existing Buildings
- Primary Amenities Zone
- Primary Amenities Frontage
- Secondary Amenities Frontage
- Sports & Community Zone
- Sports & Community Active Frontage

1.5. Massing, Roofscape and Skyline

Massing:

In accordance with the Parameter Plans, higher development must generally be located towards the centre of the site.

In addition, in the interest of forming a varied roofscape and skyline, key locations have been identified for taller elements. Taller elements are built elements that are higher than the general heights identified on the Parameter Plan—8m in height maximum above the general heights and must have a maximum footprint area of 1200 m².

The locations shown on the Parameter Plan are indicative only. Each location has been identified to mark the selected open spaces and respond to key views.

- Taller elements must have a visual connection with the open spaces they are associated with.

Any taller elements must be associated with one of the following locations:

- **JJ Thomson Avenue Gateway:** 2 locations. These provide a gateway accent and a visual presence on the arrival point to the eastern cluster. These locations respond to views from along JJ Thomson Avenue and from East Forum Lower Square along East Green Link.
- **East Forum:** 2 locations. These respond to views from approaches along both Charles Babbage and JJ Thomson Avenue and in addition provide visibility from the Coton Footpath. These also mark this primary space from views along JJ Thomson Avenue and Charles Babbage Road.
- **West Forum:** 2 locations. These locations respond to views from along the High Cross approach and mark this primary space from views from the lake and from along the Coton Footpath.
- **The Green:** 4 locations for taller elements. These locations have been selected to mark this key open space from a distance but also to provide variation along both frontages to the space. The location of these taller elements shall relate either to where the north – south green lanes or primary streets cross this space or to the more active areas within the public open space.

Roofscape and Skyline:

- Development must be located and formed in ways that ensure that the key public spaces are not excessively overshadowed, and good daylighting and sun penetration is allowed to key active/spill out spaces.
- Roof form and massing must vary to add visual interest and achieve an appropriate scale to different types of spaces.
- Development of uniform continuous roof lines of consistent height along the key open spaces, streets and green links must be avoided and preference must be given to compositions with varying roof lines and accents.
- Where buildings terminate key views, built form may respond with building accents. Height may be increased at these points to create variety in skyline and massing, consistent with the approved building height parameters.
- Where there are key building uses (such as social spaces) or location of key public realm spaces, built form shall respond with variation.
- The use of rooftop public or communal spaces or outdoor terraces may be considered to help to vary the skyline and provide views from development across to the city centre skyline and to open countryside to the south.



16. Composite heights plan - parameter plan with additional height restrictions indicated

KEY

	31.0 metres AOD		Building setback / further height restriction zones
	32.0 metres AOD		Woodland Buffer
	36.0 metres AOD		Existing Buildings
	37.0 metres AOD		Character Area Boundary
	38.0 metres AOD		Key Accents/Landmarks Stated AOD +8m for a footprint of up to 1,200m ²
	41.0 metres AOD		Zone for Location of Energy Centre Flue
	+18.0 Sample Ground Level Spot Height AOD		
	+18.0 Existing Heights AOD		
	+18.0 Proposed Heights AOD (Maximum)		

Rooftop Plant

Research laboratories with controlled environments, which are expected to constitute a significant proportion of buildings at West Cambridge, are likely to require large areas of plant and servicing. Impact of rooftop plant on building design and on open spaces must be considered.

Plant areas must be within the height envelopes set in the Parameter Plan 05. Flues may exceed the set heights by 8m.

The existing buildings on site already provide examples of a range of requirements for rooftop plant which can be expected and will require different approaches in design:

- Minimal plant - e.g. William Gates Building;
- Medium amount of plant – up to an additional storey of development (up to +5m) with a setback e.g. Electrical Engineering Building;
- Large amount of plant – plant required to occupy entire roof and/or up to 2 additional storeys of development (up to +8m) e.g. Chemical Engineering and Biotechnology or Material Sciences and Metallurgy buildings;
- Flues e.g. Physics of Medicine, Chemical Engineering and Biotechnology.

The following sets out the principles for each. Further location specific guidelines are provided in other sections.

Minimal Plant:

- Wherever possible, plant must be placed on roofs in locations where it will not be visible from the public realm;
- Screening around plant locations or parapets should be introduced to reduce visibility of plant locations;
- Long distance views should be considered in the location of plant and it should be considered as a way to add variation and interest in the roofscape.

Medium Plant: up to an additional storey of development +5m with a setback

- Parapets must be used to reduce visual impact of the plant on the public realm;
- This kind of plant must be considered as part of architectural concept design and building massing, in ways that provide additional interest to elevations
- Long distance views must be considered in the location of plant and it should be screened to reduce clutter and add variation and interest in the roofscape.

Large Amount of Plant: plant occupying entire roof and/or up to 2 additional storeys of development (up to +8m)

- This kind of plant must be considered as part of architectural concepts and building massing as additional storey of the building. The roof plant will unavoidably be visible from public realm and needs to be treated with appropriate materials.
- Visual impact of large plants must be reduced by breaking their volume and providing variation in rooflines

Flues:

- Where possible, flues will be screened and set back from main elevations to reduce their impact on public realm;
- If larger flues are required, they must be treated as part of architectural concept design and placed in ways that don't overwhelm key open spaces;
- Flues may be used to add variation and interest in roofscape.



17. Rooftop Plant - minimal - impacts can be minimised by setting back from frontage line



18. Rooftop Plant - medium plant integrated within the elevation of the building



19. Rooftop Plant - screening of a large amount of rooftop plant space



20. Rooftop Plant - flues can be above the Maximum Building Heights set in Parameter Plan 05

1.6. Access and Movement

The primary street network consists of four existing streets: High Cross and JJ Thomson Avenues; Charles Babbage and Western Access/Ada Lovelace Road. These streets will be retained and transformed in character. Additional secondary streets and access will be introduced.

More guidelines about the streets is given in the Streets and Green Links section. The following are the Access and Movement Guidelines that apply site-wide:

Vehicular Movement:

- The key streets must accommodate vehicular movement, bus movement, cycles and pedestrians.
- Bus stops must be accommodated in the locations shown and must be incorporated into the landscape design of the street.
- Pedestrian and cycle crossing points must be incorporated at key locations shown in the Streets and Green Links Section.
- Special paving and landscape features to crossings shall be used to reduce the dominance of vehicles, help to slow traffic and create a shared use space with pedestrian priority.
- Raised tables must not be used.
- Western Access Road will provide a new access point into the site from Madingley Road.
- A new access lane shall be introduced in the northern part of the site east of High Cross and shall connect to Madingley Road. This lane shall allow service access to buildings and access to car parking.
- Apart from the two provided above, no other new vehicular access points must be added from Madingley Road

Cycle Movement and Parking:

- Separate cycle routes must be provided along the key streets as shown on the diagram.
- A primary pedestrian and cycle route must be located within The Green and be joined with the primary cycle network that crosses the site from east to west.
- A primary strategic pedestrian and cycle route must be located within the Southern Ecological Corridor, and must continue westwards to the edge of the site, where it will connect to the Coton Footpath and the bridge over the M11.

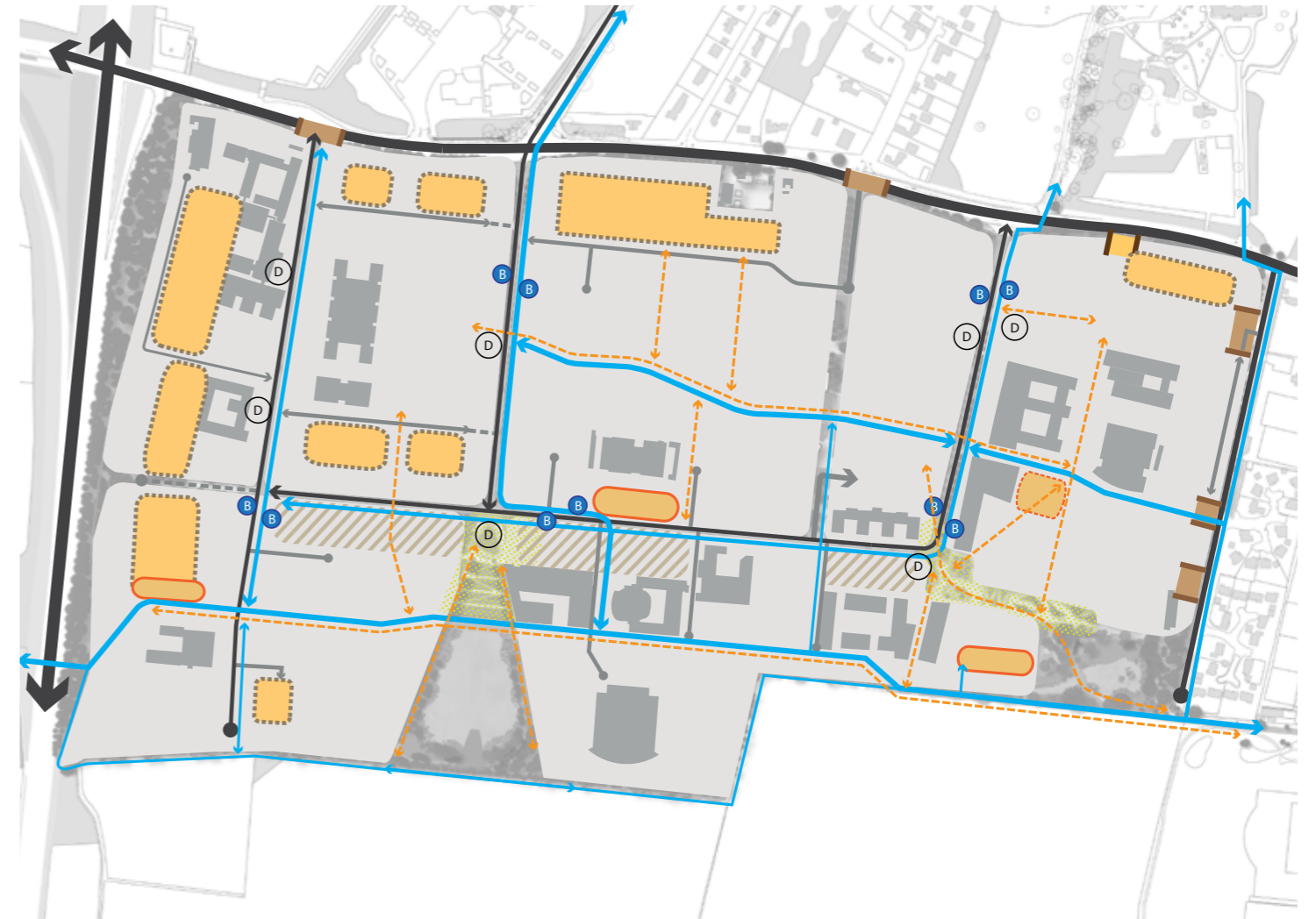
- Cycle parking provision must comply with Cambridge City Cycle Parking Standards.
- Cycle racks and stands must conform to design and dimensions set out in Cambridge City Cycle Parking Standards.
- Large areas of cycle parking shall not be located in the key spaces and shall be provided in the zones shown on the diagram opposite and also: within the ground/lower floors of any multi-storey parking structure; consolidated within covered cycle parking structures or hubs, or in secondary open spaces within the development. Main cycle parking hubs must be covered and be secure.
- Only limited/smaller areas of cycle parking for visitors may be provided within the principal open spaces. These shall be located close to shared facilities and/or building entrances.
- Cycle hubs, accommodating large numbers of cycle parks must be located adjacent to key cycle routes. These facilities shall be located within built form to ensure limited visual impact on the key adjacent public spaces.

Servicing:

- Servicing and service yards, must not be visible from the key spaces. Service yards shall be screened by new development or the woodland buffer.

Car Parking:

- Car parking must be consolidated into parking structures located in the zones indicated on the diagram: along the northern, western and eastern site edges - but not along the southern development edge, unless located behind a woodland buffer.
- Pedestrian routes to any car parking structure must be provided. Pedestrian routes and access shall be carefully considered to ensure that users can access the structures easily and safely.
- Lower ground or basement vehicular parking may be located along Charles Babbage Road.
- Car parking areas in basement or semi-basement shall not be visible and access shall be located away from the key streets.
- Some surface car parking may be permitted along the woodland buffer edge to the west and north of the site, provided it is properly screened



- Surface car parking within public realm shall be kept to a minimum (disabled parking and limited visitor parking only) and shall be integrated will into the public realm design.
- On street parking must be used for visitors/short stay, car club or disabled only.

- ⓑ Possible Bus Stops
- East Forum/West Forum
- Existing Buildings
- Cycle Parking Zone
- Cycle+MSCP/Parking Zone
- Pedestrian Route
- Cycle Route
- Vehicular Route
- Secondary Vehicular Route
- Vehicular Access
- Potential Cycle&Pedestrian Access Only
- Potential Parking Zone
- ⓓ Drop Off Areas
- Cycle Hub

Multi Storey Car Parking Structures (MSCPS)

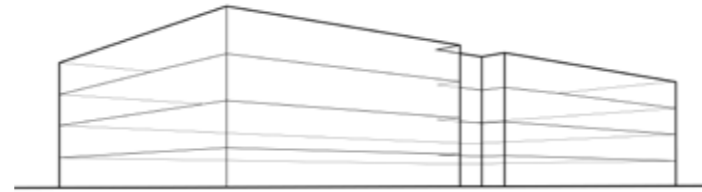
As part of the West Cambridge movement strategy a number of multi storey car parking structures are proposed. These will be located at the edges of the site to minimise traffic movements within the site, ensuring that a pedestrian and cycle orientated environment can be created and maintained.

Car parking structures must conform to height parameters and any additional height or frontage guidelines that are applied to their location. In order to achieve further articulation of these buildings, the following strategies shall be applied:

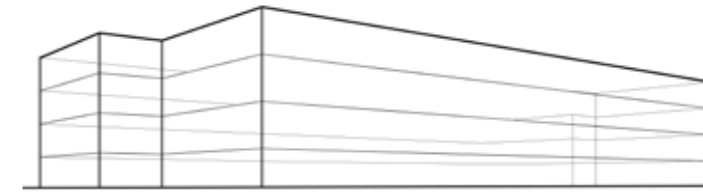
- Lengths of unbroken frontages on MSCP must be limited to 50m.

Longer frontage lengths shall be broken by introducing one or more of the following and/or similar measures:

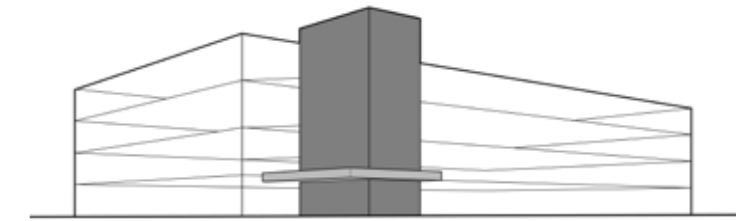
- Breaking massing by using indents and setbacks.
- Breaking the basic volume by conjoining smaller volumes of parking and/or by varying their heights; by introducing simple floor plate variations between different floors; by detaching or treating cores separately, etc.
- Making visible and accentuating pedestrian access points and formally separating vertical cores.
- Introducing variation in roof line by arranging cores, introducing oblique roof lines, varying roof elements or dimensions of facade elements, etc.
- Using vegetation: by planting trees along frontages; partially raising adjacent terrain and planting on it, by greening the façades with climbers and locating planters on upper levels, etc. Care must be taken to ensure that planting is located on appropriate elevations that will receive adequate sunlight for growth.
- Varying facade materials: either vertically or horizontally.
- Using transparent facade materials, especially on ground and top levels.
- Where possible, introducing other uses (such as cycle parking, storage facilities etc.) on ground floors, particularly in zones with higher visibility and footfall.



Variation in building line - breaking long car park frontage with a 'notch'



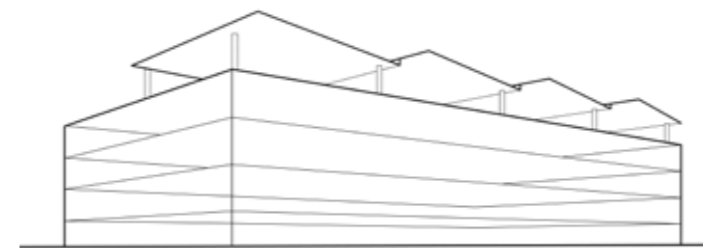
Variation in building line - sliding volumes to create pocket spaces



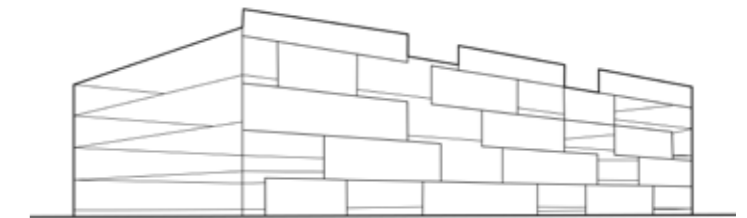
Variation in building line - celebrating cores and access points



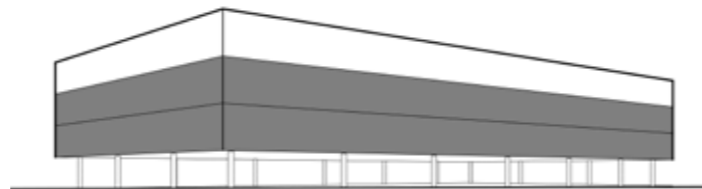
Variation in massing and roofline - set backs



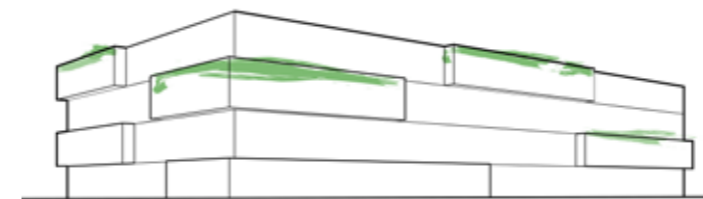
Variation in massing and roofline - creating rhythm and breaking the eaves line



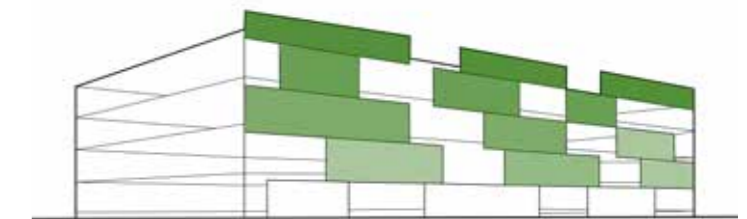
Variation in massing and roofline - breaking the eaves line



Materials - forming a base, middle and top



Materials - projections may be used to break up frontage and add planting



Materials - planting and vertical planting may be appropriate at the woodland edge

21. Car parking structures - consideration must be given to limiting frontage length and variation in massing and roofline and uses of materials



22. Parking structure in La Coruna: vertical variation in materials and variation in massing by treating the core separately



23. Natural materials



24. Climbing plants on simple screen structure



25. Celebrating entrances and cores

1.7. Existing Trees to be Retained

Tree Assessment:

These design guidelines are to be read in conjunction with Arboriculture Impact Assessment Report and are based on information captured February 2015 by Atkins Senior Arboriculturist.

Trees were surveyed and recorded as individual specimens and groups with their root protection zones. Trees were assessed to reflect arboricultural, landscape and cultural values and categorized A to C. The diagram to the right shows trees in dark green and medium green colour that must be retained wherever possible. The design of the service routes may require the selective removal of trees on the list, in particular, G057.

Mandatory specific trees to be retained: The dark green colour represents trees that are prominent specimens given their age, size and maturity and are all Category A (high quality) & B (moderate quality) specimens. These trees must be retained wherever possible and their root protection zone uncompromised. These are listed below by their individual or group number:

No.	Species	Category
024	English Oak	A1/2/3
028	Norway Maple	B1
032	Common Ash	B2
033	Sycamore	B2
034	Field Maple	B2
036	English Oak	A1
037	English Oak	A1
039	English Oak	A1
063	English Oak	A1/2/3
064	English Oak	A1/2/3
065	English Oak	A1/2/3
066	English Oak	A1/2/3
067	English Oak	A1/2/3
068	English Oak	B1/2/3
G037	Weeping Willow x8	B2
G038	Horse Chestnut	B2
G054	London Plane	B2
G057	Lime	A2
G059	Common Beech	A2
G064	Flowering Cherry	B2
G066	Silver Birch	B2
G067	Lime	B2
G068	Norway Maple	B2
G069	Silver Maple	B2
G070	Crab Apple	B2
G087	English Oak x2	B1/2/3



26. Specific trees to be retained

Mandatory groups of trees to be retained: Represented above in medium green colour, these trees must be retained wherever possible and their root protection zone uncompromised.

- Existing street trees are predominantly young specimens that form distinct avenues or formal lines of trees. The limited age of these trees reduces their arboricultural value at present however, over time this will increase with their maturity and it is the preferred approach to keep these trees where ever possible.

- Edges** These boundaries sustain linear belts of more mature trees and shrubs that provide full or partial screening to views into the site from these locations. These trees must be retain wherever possible and their root protection zone uncompromised. Infill planting, where needed to maintain screening, shall be with species appropriate to the conditions and similar to those found in the existing woodland groups.

Recommended trees to be retained: Represented above in light green colour, these trees shall to be retained wherever possible and their root protection zone uncompromised.

KEY

	Mandatory specific trees to be retained
	Mandatory groups of trees to be retained
	Recommended trees to be retained



27. Norway Maple tree 028



28. Lime tree group G057



29. Weeping Willow tree group G037



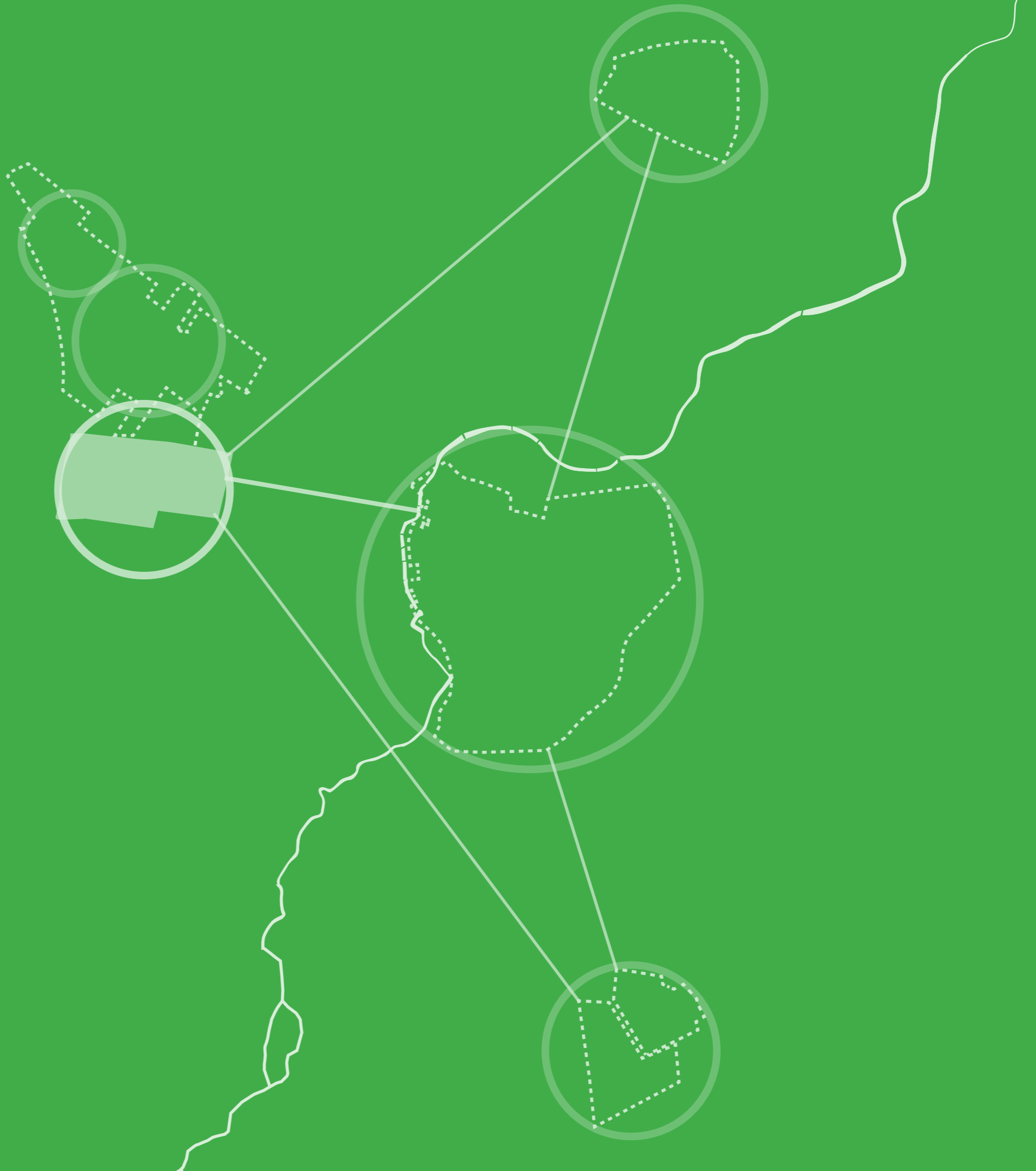
30. English Oak tree 066



31. English Oak trees 065, 064 & 063



32. English Oak trees 024



KEY PLACES

02

2. KEY PLACES

The proposed development is structured around four key places which will play a vital role in defining the character of the site. These are: West Forum, East Forum, The Green and the Southern Ecological Corridor.

In this section, guidelines are provided for each of these key places.

The guidelines refer to:

- Public realm and landscape, including their character and structure, and principles for landscape design;
- Urban structure; and
- Access and movement.

The guidelines are supported by indicative visualisations based on the illustrative masterplan, explaining key concepts and illustrating some of the guidelines.

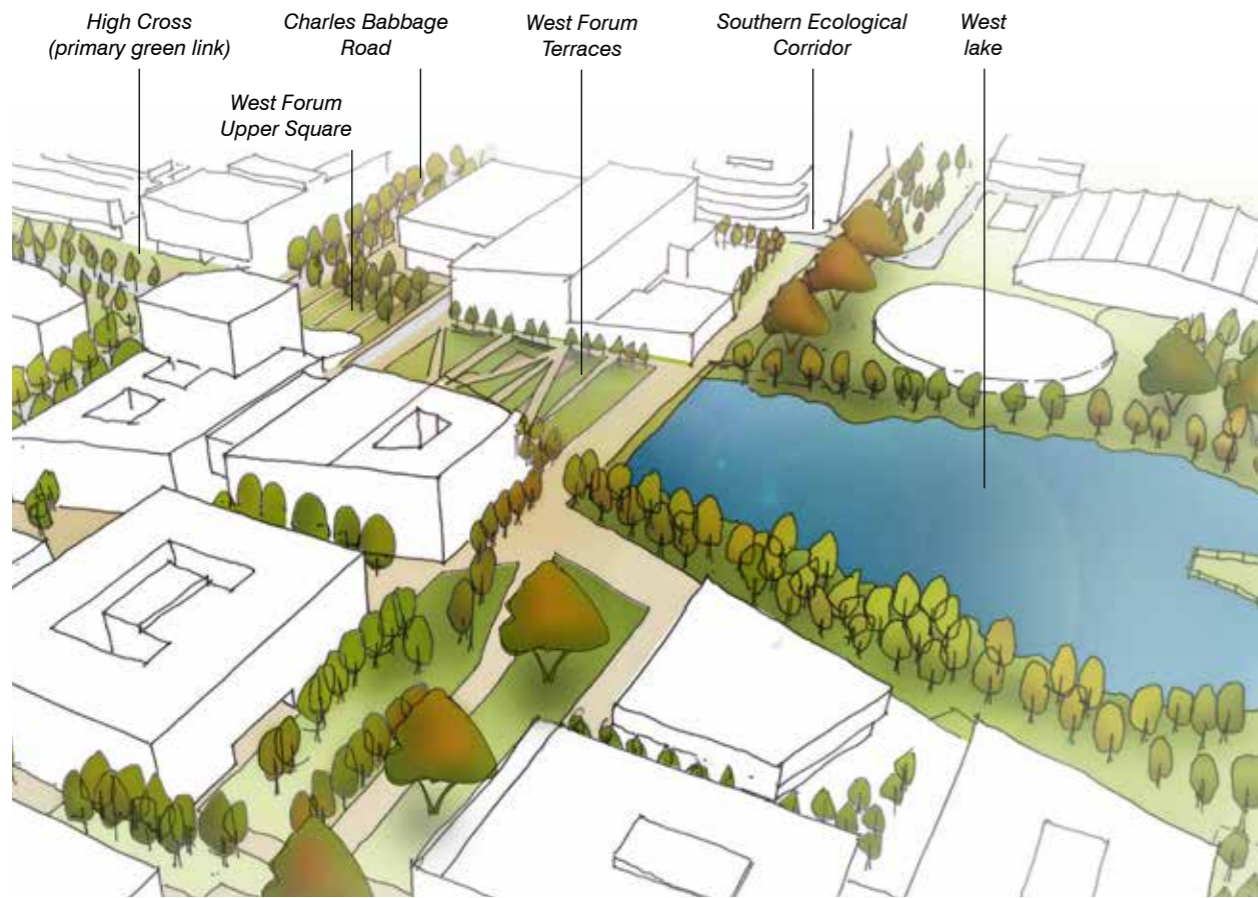
The following guidelines apply to all key places:

- Buildings fronting onto key places must be designed to provide interesting and articulated façades, with entrances, shared spaces and visual connections between outdoor and indoor spaces through extensive fenestration at ground floor, including use of glazed façades. Extensive blank walls to these frontages should be avoided.

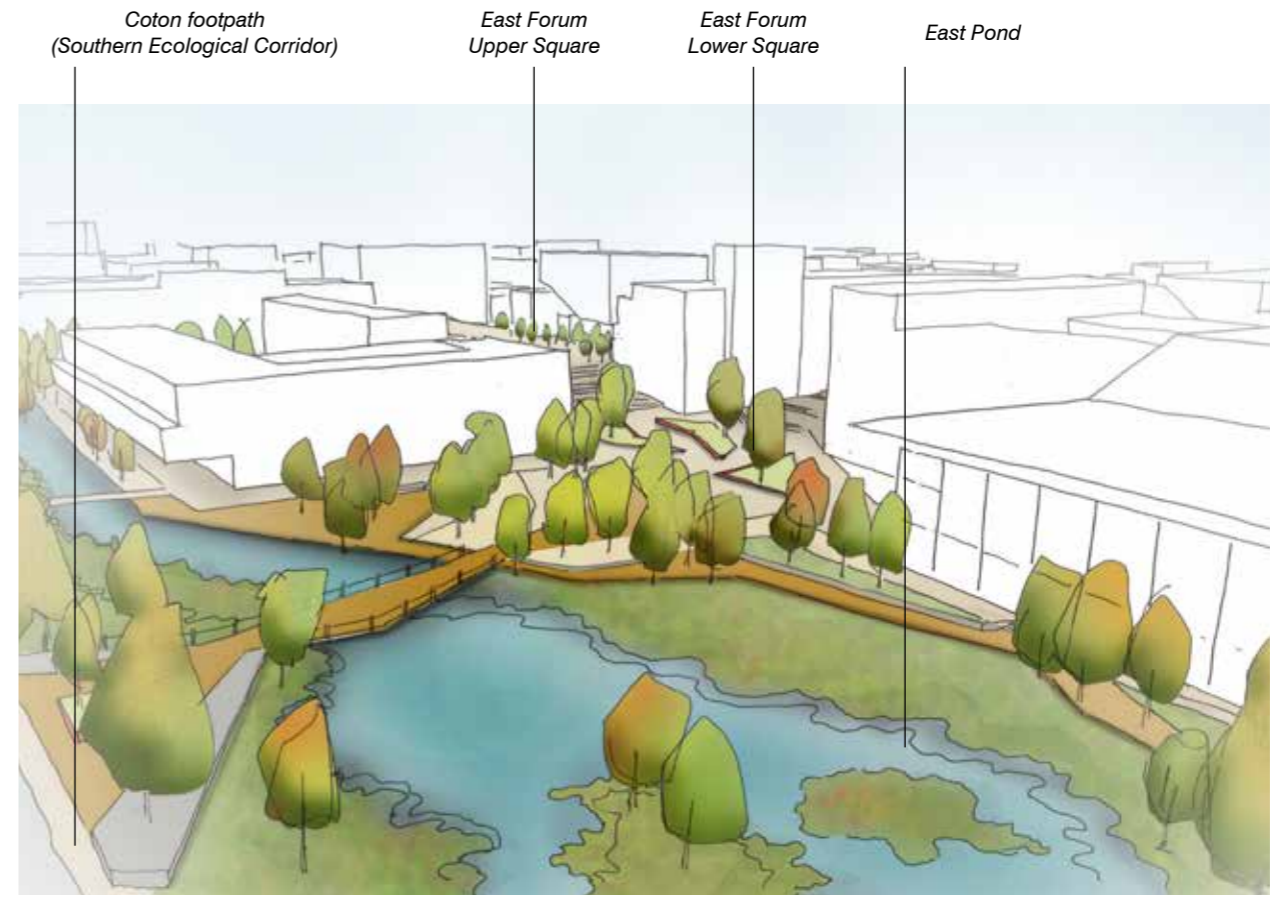


33. Key Places within the Site-Wide Landscape Structure

KEY	
	West and East Forums
	The Green
	Southern Ecological corridor
	Green links
	Woodland edge



34. West Forum



37. East Forum and East Pond / Southern Ecological Corridor



35. Southern Ecological Corridor



36. The Green

2.1. West Forum

Public Realm and Landscape

Character:

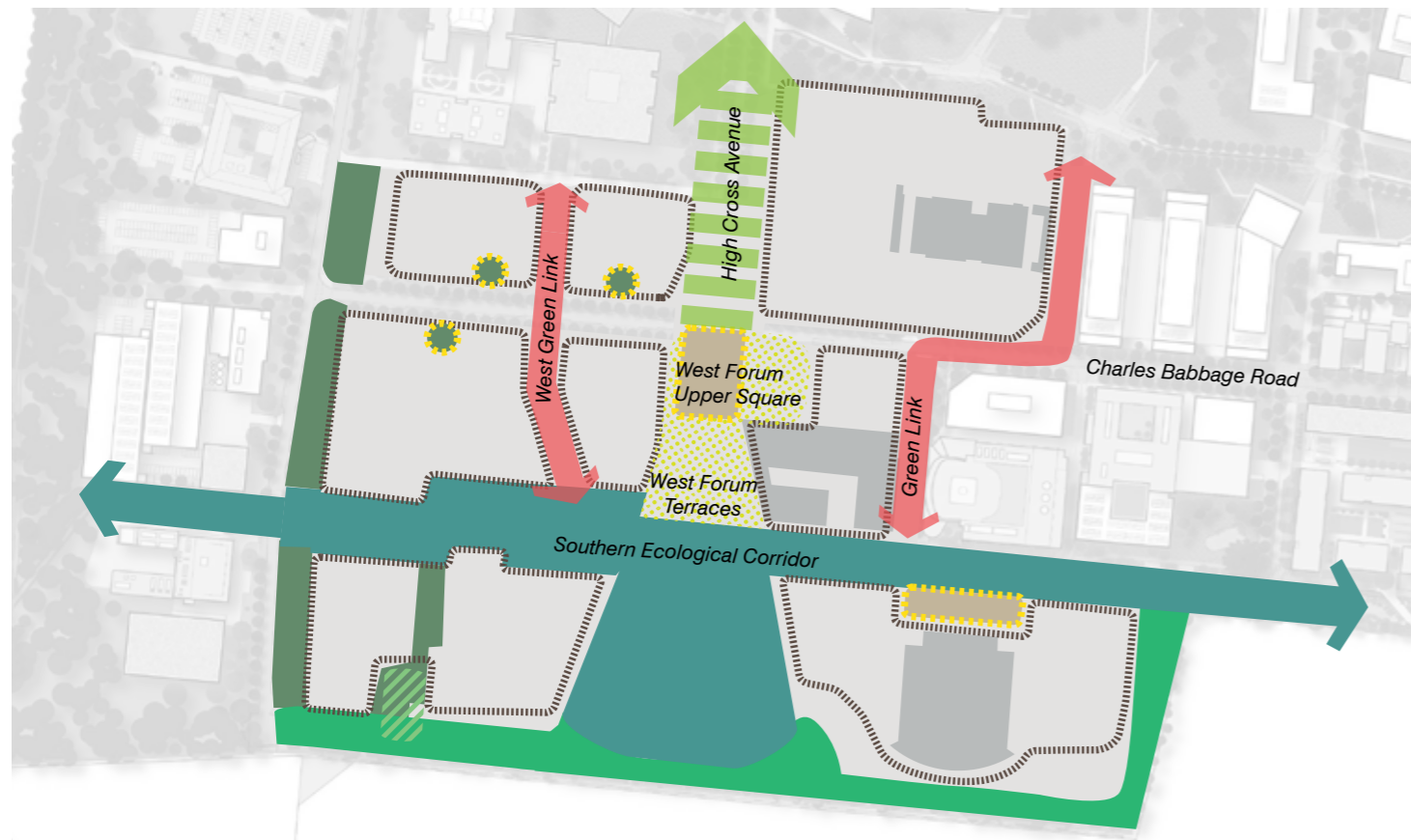
The West Forum has been designated as an important social hub. It is located at the end of High Cross Avenue and its junction with Charles Babbage Road, from where it connects down to Southern Ecological Corridor, with views over the agricultural fields.

The West Forum itself is composed of the West Forum Upper Square, a paved 'urban' plaza and the West Forum Terraces, a series of green terraces connecting to the Southern Ecological Corridor.

East and West of the West Forum are two Green Links which provide alternative routes between Charles Babbage Road and the Ecological Corridor.

The development around West Forum is of relatively higher density and transitions towards lower density, more informal development at the southern edge of the site.

-  Proposed Building Zone
-  East Forum/West Forum
-  Woodland Buffer
-  Foreground Landscape
-  The Green
-  Existing Buildings
-  Southern Ecological Corridor
-  Additional Woodland Planting
-  Green Links
-  Ecological Corridor
-  Arrival Square
-  Pocket Landscape



39. West Forum: Elements of open space structure

Landscape Principles

The spaces constituting West Forum must be provided with integrated street furniture, feature lighting promoting safe and attractive evening uses, integrated public art and have strong visual relationship with the built form around the edges of the space.

The Upper Square and Terraces should each have a distinctive character within an integrated whole. Integration of landscape shall be achieved through a common approach to lighting, street furniture and surface materials.

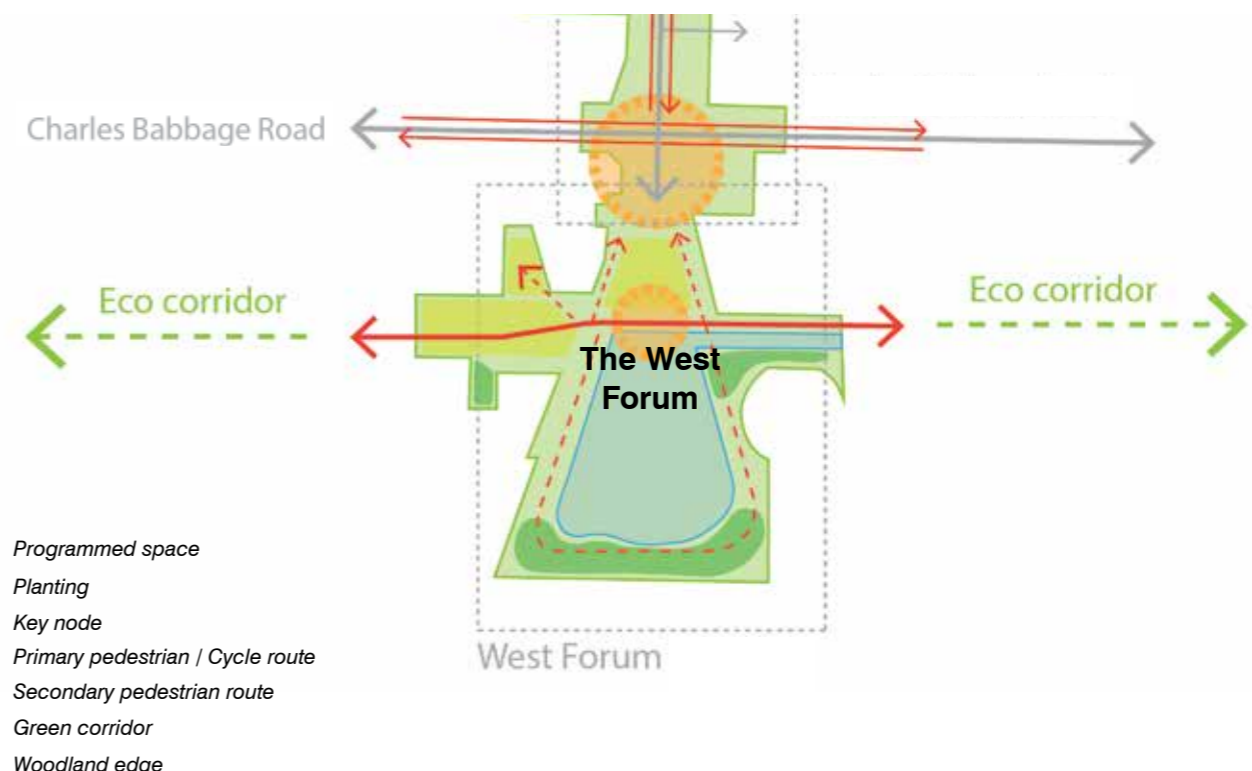
Each of the spaces associated with the West Forum need to incorporate and acknowledge their different role and character, yet form its part in a coherent series of connected spaces.

West Forum Upper Square:

- The West Forum Upper Square must be reconfigured in order to allocate a central drop on - drop off. This space must be designed so that it promotes pedestrian movement, minimises conflicts with vehicles and allows clear visibility of the West Lake and wider countryside to the south.
- The existing green features must remain and be integrated in the new layout & paving relaid for vehicular access.
- High quality surfaces must be used to indicate that this is an arrival and a focal point within the masterplan.

West Forum Terraces:

- The existing structure and ramp configuration shall remain.
- New hedges and grasses planting shall be incorporated through the slope to form / define new seating areas.
- New terraces shall be built into the terraces and designed to allow for seating and gathering.



38. West Forum: Public space structure, activity, uses and character.

Surface/paving treatment:

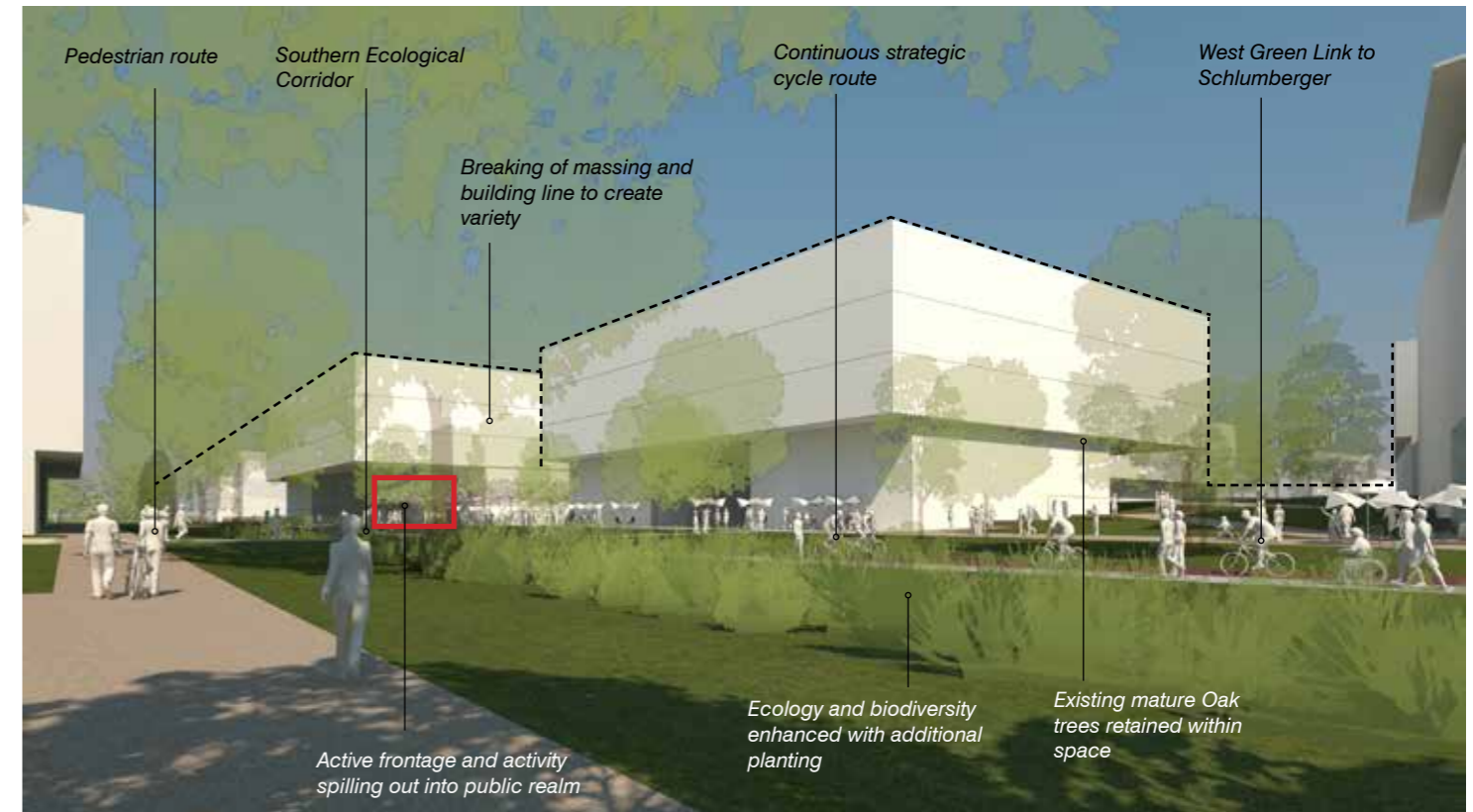
- The West Forum Upper Square shall have a higher percentage of paved area. The West Forum Terraces shall stay with the least amount of paved area with the exception of its pedestrian routes and formal seating areas.
- There must be unhindered paved areas along key pedestrian and cycle routes to allow ease of access and movement.

Bicycle Stands and Circulation:

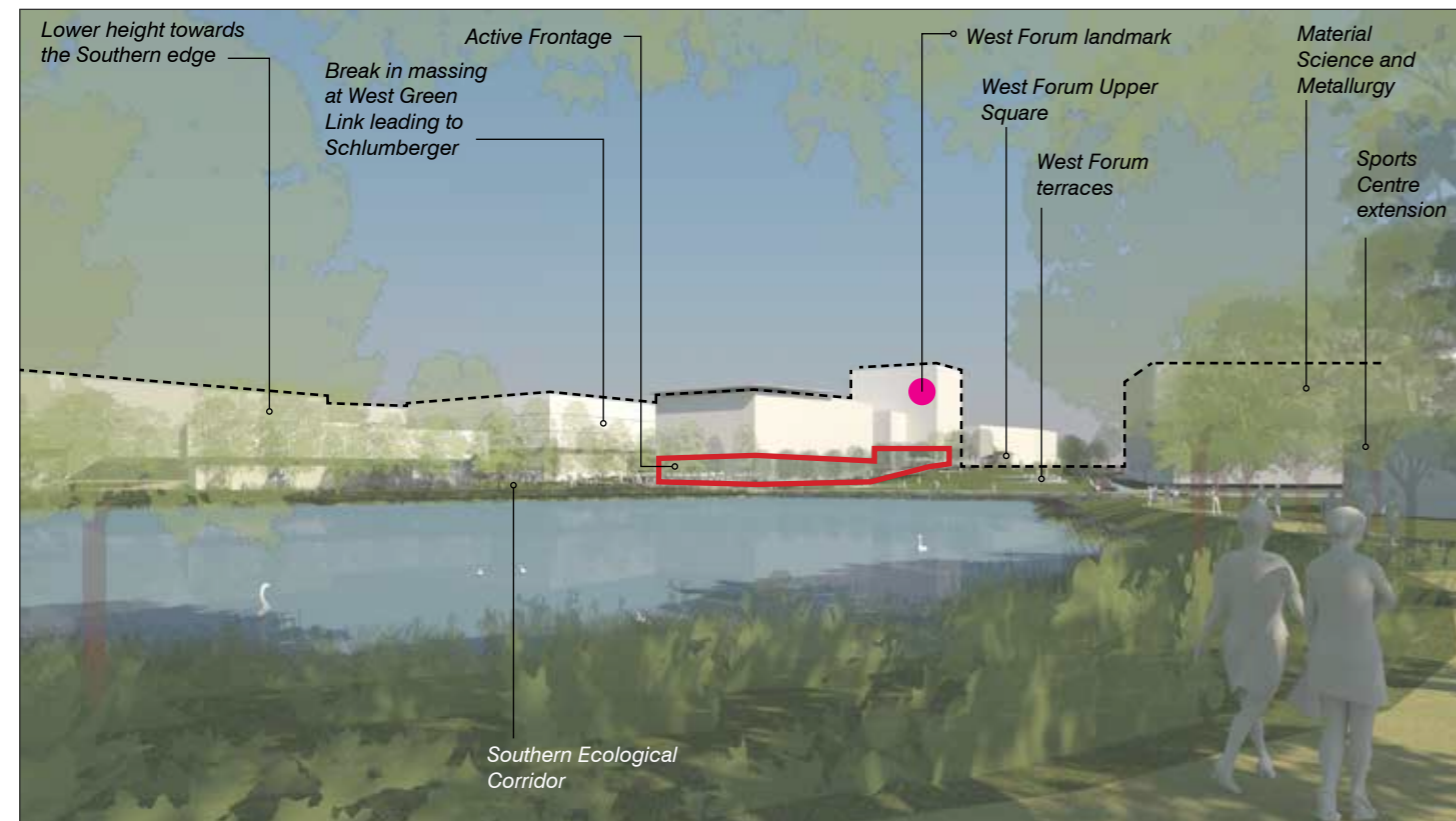
- Cycle movement must be discouraged within the West Forum Upper Square and through the West Forum Terraces.
- Cycle parking shall be kept to a minimum within the open spaces and be located within buildings.

Planting:

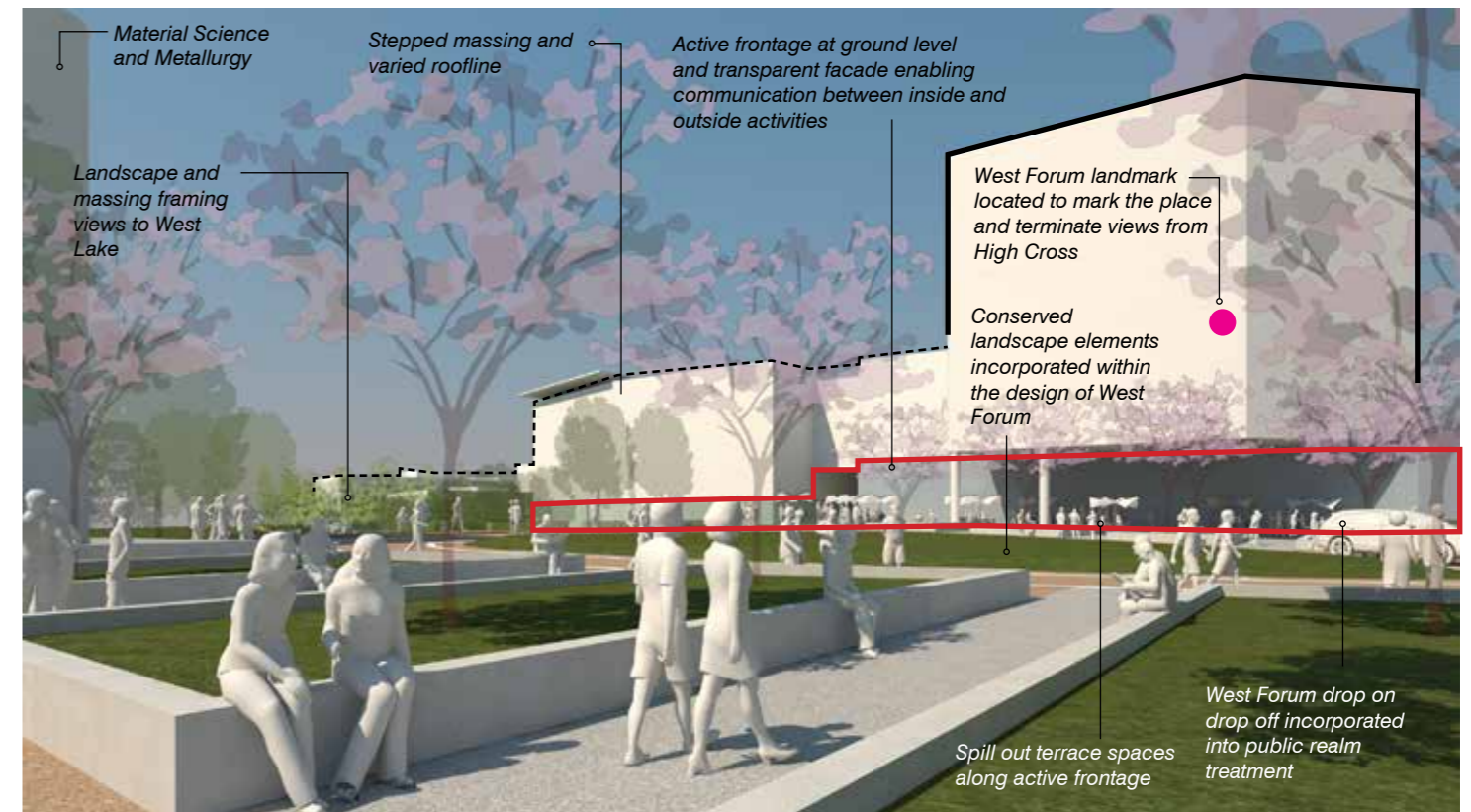
- The arrangement shall both reflect the formal arrangement along High Cross and the visual connection to the wider landscape in the Southern Ecological Corridor through a series of levels and mature tree avenues.
- Planting and landscape shall be relatively ordered along the West Forum Upper Square (tree grids) as well as the West Forum Terraces (existing trees kept) and more informal along Southern Ecological Corridor and West Lake.



40. West Forum Area - Southern Ecological Corridor with the view through the West Green Link on the right












42. West Forum Area - West Lake - Skyline and active frontages



41. West Forum Area - Upper Square

Urban Structure

The proposed urban structure aims to intensify the use of the area and increase enclosure of West Forum by removing surface parking and using the land for development. Frontage types and built form is organised to provide visual accents and activity to this key place and reinforce the surrounding open space network.

-  Proposed Building Zone
-  East Forum/West Forum
-  Existing Buildings
-  Active Frontage
-  Primary Frontage
-  Secondary Frontage
-  Key Views
-  Landmarks
-  Gateways



45. West Forum Area - Urban Structure

Landmarks, Building Accents and Gateways:

- Any taller elements must be located on the corners of High Cross and Charles Babbage Road and must have a visual connection with West Forum Upper Square. Also, these locations must respond to views from along High Cross and Charles Babbage Road. These locations serve to mark the West Forum spaces within the development.
- Other landmark features or building elements may be located to terminate key views and relate to key spaces, such as where the Southern Ecological Corridor meets the West Forum/West Lake space.
- Development shall form a principal frontage to the West Forum spaces. This frontage will be viewed from across the West Lake. Consideration should be given to use, materials, building line and skyline to ensure that a coherent urban element is formed.

Frontage Types:

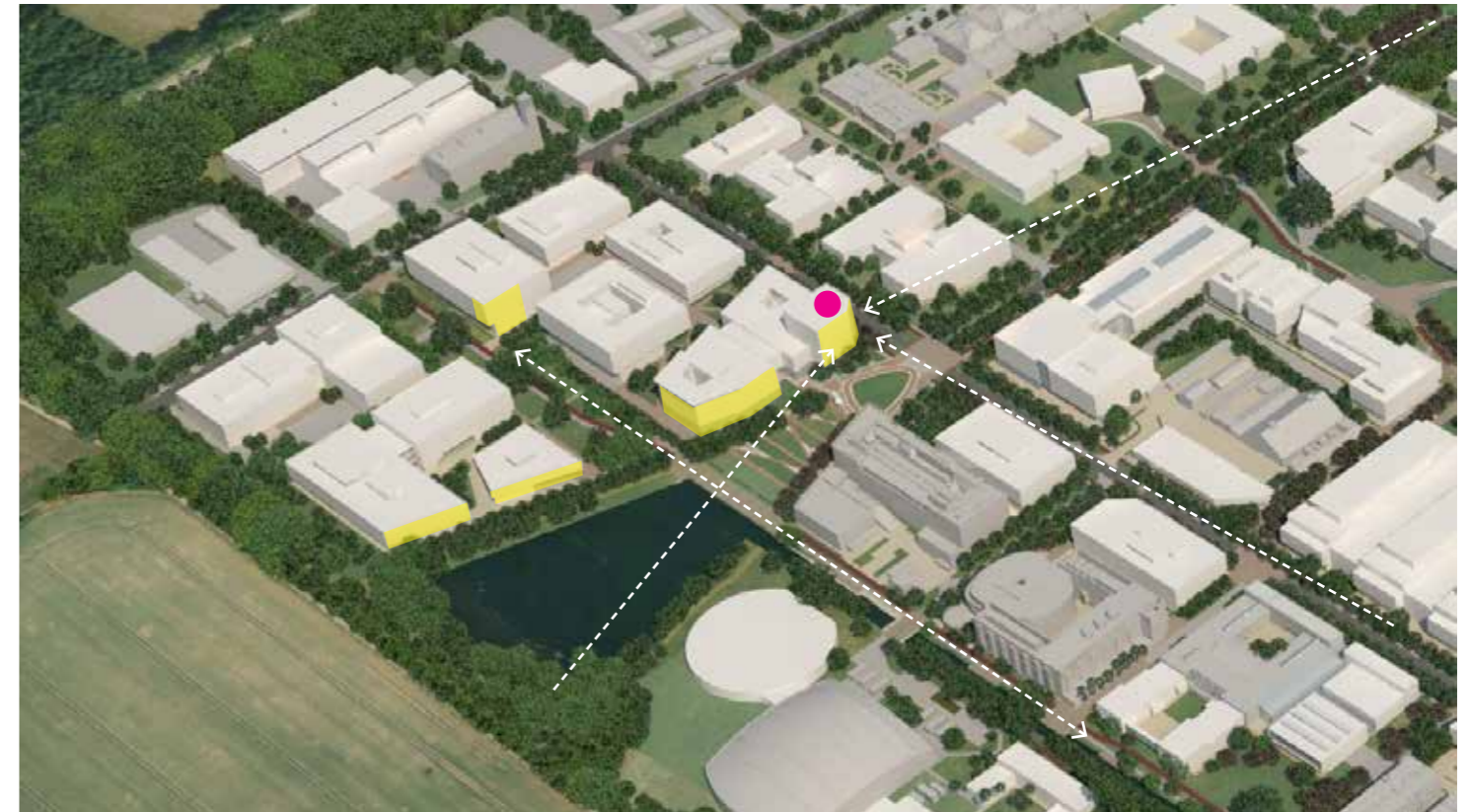
The diagram shows the location for the three types of proposed frontage: active, primary and secondary frontages:

Active Frontages: shall be primarily located in the new development along the west and partially east to form the new frontage to the West Lake and West Forum spaces. These shall have ground floor active uses, building entrances and lobbies. These uses shall have the opportunity to spill out into the public realm and parkland adjacent to the buildings.

Primary Frontages: shall extend along the Southern Ecological Corridor, Charles Babbage Road and High Cross Avenue. These frontages must ensure a coherent frontage and strong enclosure to these spaces.

Development along the southern edge must respond to long distance views. Long frontages here must be broken/varied and additional tree planting and landscape introduced to provide a softer, woodland edge.

Secondary frontages: more informal frontages shall be located further away from West Forum spaces.



44. Massing and Landmarks

Access and Movement

West Forum spaces and the Southern Ecological Corridor are pedestrian only spaces. Vehicular movement is rationalised and confined to key and secondary streets, as shown on the diagram.

Cycle Movement and Parking:

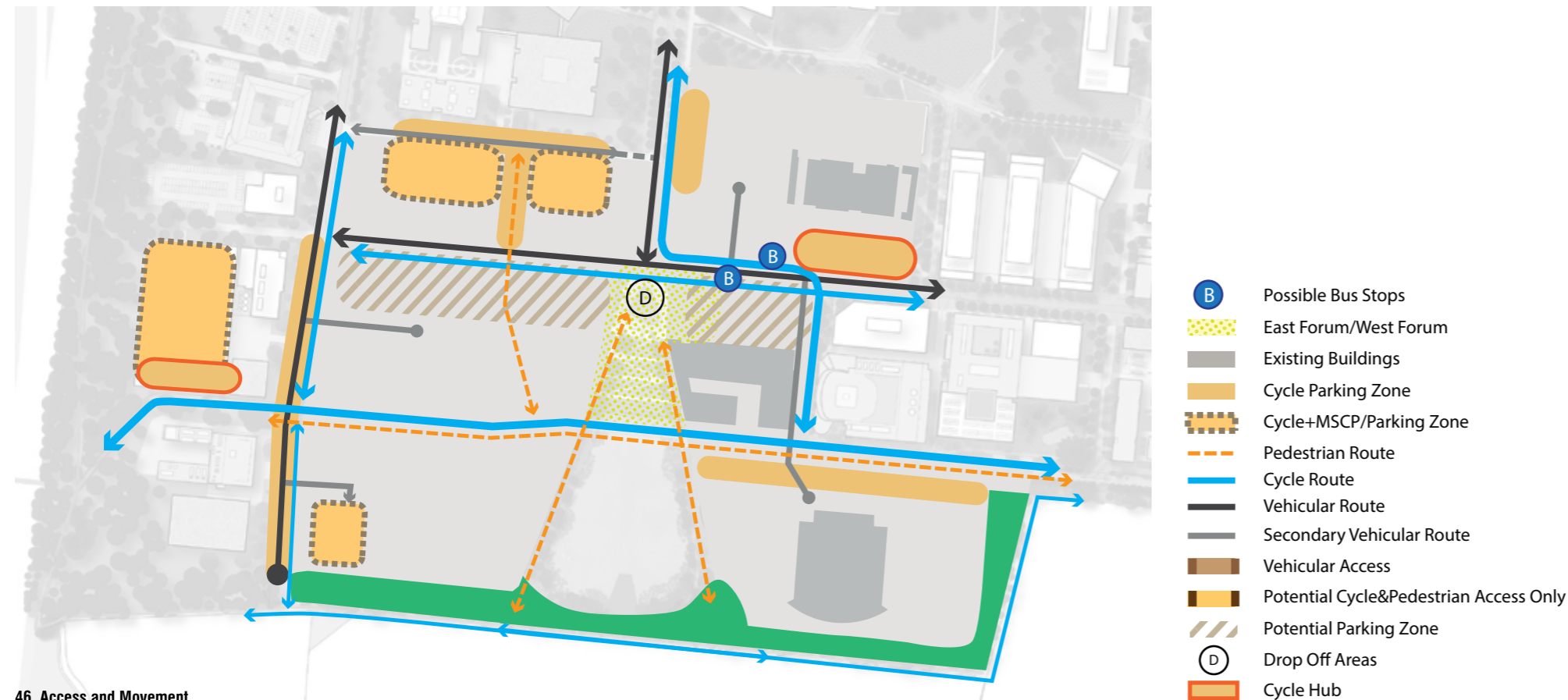
- A strategic pedestrian and cycle route must be provided through the Southern Ecological Corridor. Other dedicated cycle routes shall be located along Charles Babbage Road and High Cross Avenue.
- Cycle parking hubs may be located to the west of Ada Lovelace Road and accessed directly from the strategic pedestrian and cycle route, and to the north of Charles Babbage Road
- Other cycle parking areas may be located with other car parking structures and within the Green Link and along Charles Babbage Road.
- Large areas of cycle parking must not be located within the West Forum spaces and the Southern Ecological Corridor.

Vehicular Movement:

- Servicing shall be from Ada Lovelace Road. Some servicing may occur from Charles Babbage Road.
- There must be no vehicular access along the eastern frontage overlooking the West Forum spaces and West Lake.
- West Forum shall accommodate the primary arrival - drop off location.

Car Parking

- Car parking structures must be located away from West Forum (primarily to the west of the site) and linked by pedestrian routes.
- Additional car parking may be accommodated along Charles Babbage Road, using the topography of this part of the site to accommodate the car parking below street level, in a semi basement. Any parking along Charles Babbage Road must not detract from the quality of development frontage along this street.



46. Access and Movement

2.2. East Forum

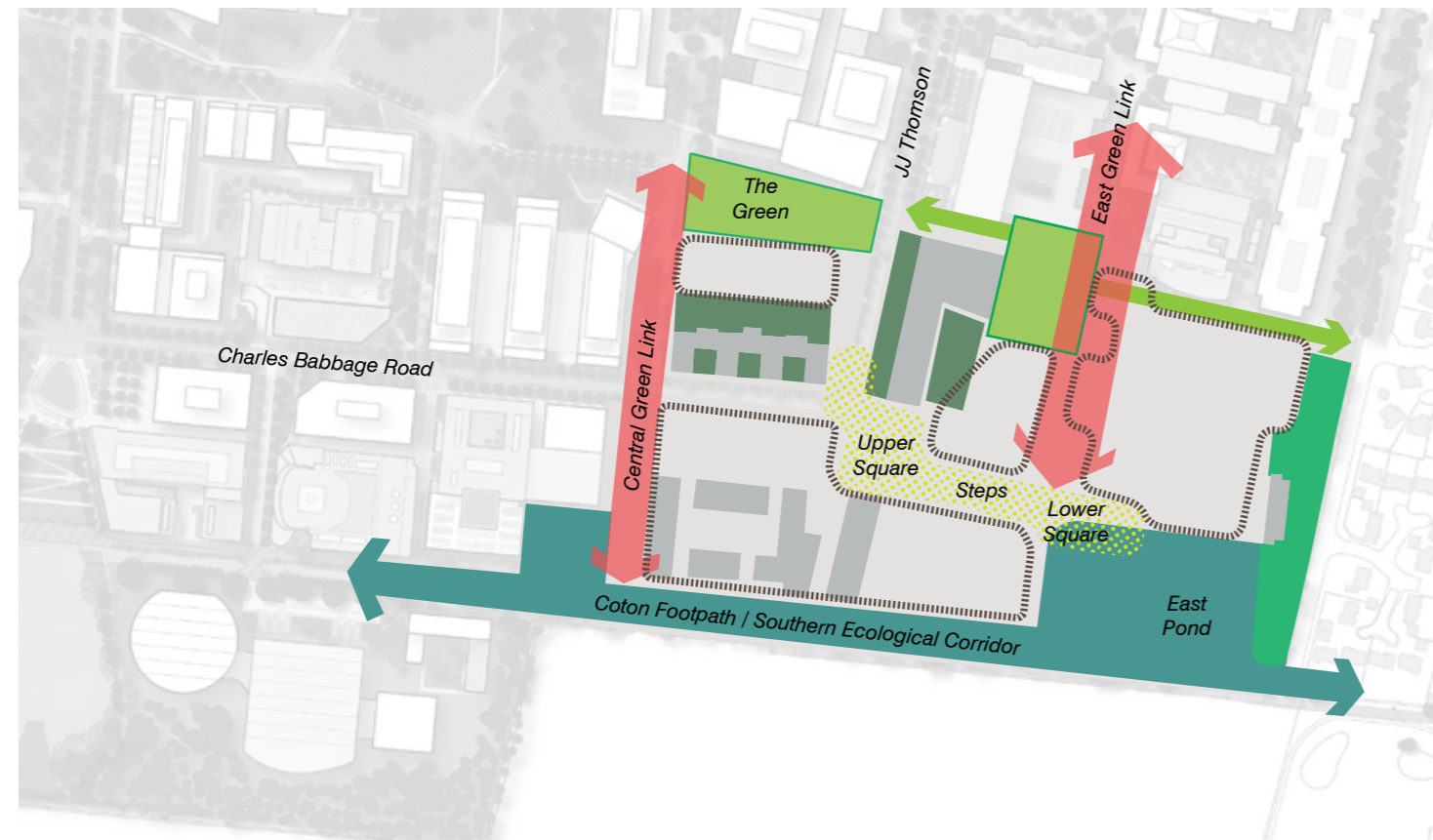
Public Realm and Landscape

Character:

The East Forum is conceived as a district social hub and outline designs have been developed to encourage activity around the plaza, coordinating with active frontages giving opportunity for people to rest, relax and people watch.

The East Forum is composed of the East Forum Upper and Lower Squares and the East Forum Steps joining the two spaces together.

Each of the spaces need to incorporate and acknowledge their different role and character, yet form its part in a coherent series of connected spaces.



47. East Forum Area: Elements of Open Space Structure

Landscape Principles

East Forum Upper Square:

- The Square will be the most active space within the East Forum spaces. This space must be designed so that it does not hinder pedestrian movement, allows clear visibility of destinations and routes and at the same time allow for active uses to spill out.
- The East Forum Upper Square shall provide spaces for spill outs from various shared facilities.
- High quality surfaces shall be used to indicate that this is a focal point within the masterplan.

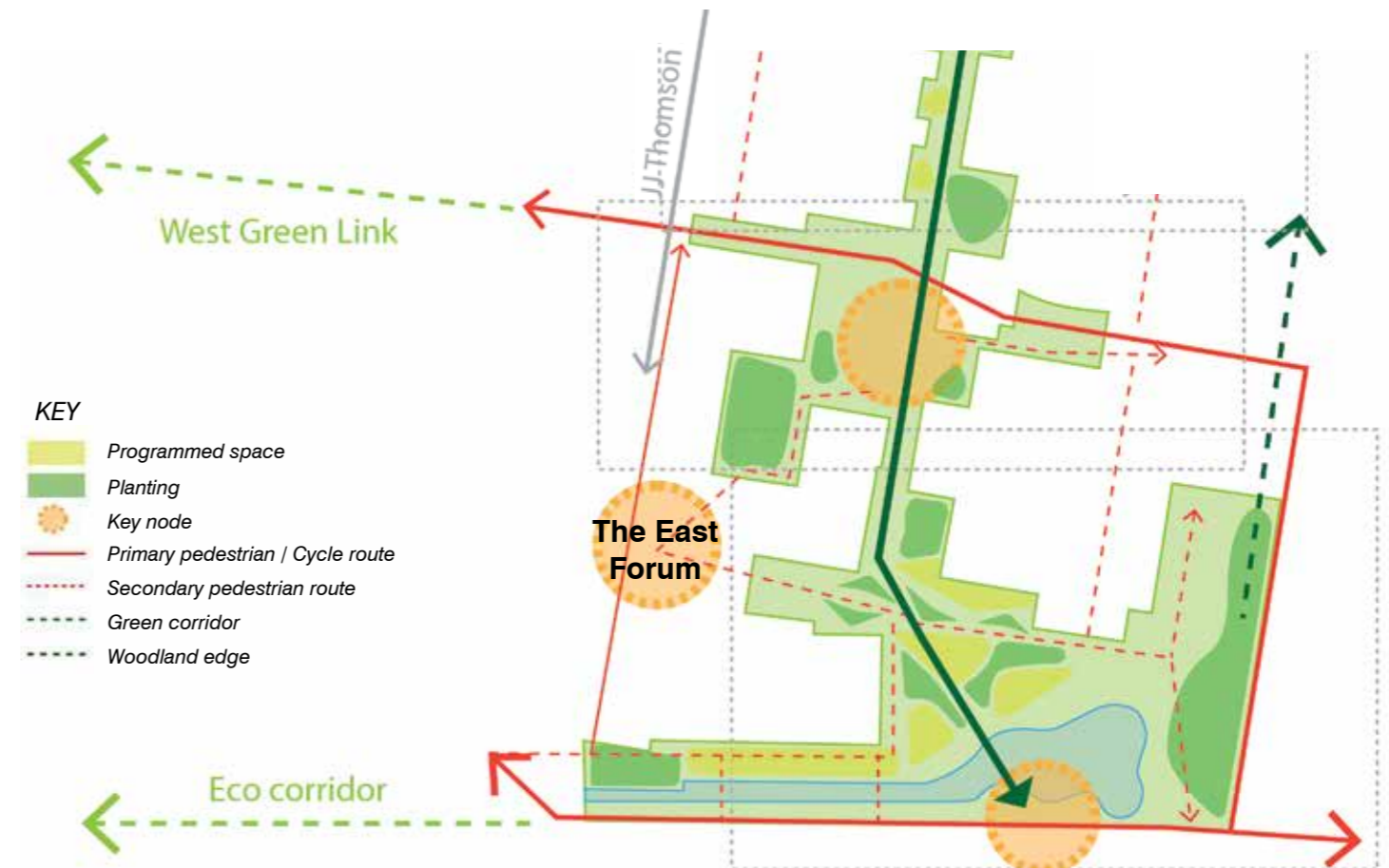
East Forum Lower Square:

- The Lower Square is a crucial node where several key pedestrian routes converge. The space must be carefully designed to minimise conflicts.

- The design must distinguish and allow for places where active uses can spill out of buildings, particularly along south facing frontages.

East Forum Steps:

- The space connecting the Lower Square and Upper Square should not only facilitate movement between these two spaces but also provide an informal congregation space. The steps & ramps should be designed to allow for informal seating and gathering and for activity to spill out from shared facilities and active buildings.
- An accessible route must be provided and ramps may be incorporated within the design of the steps for disabled access.
- Landscape planting may be incorporated through the steps at different levels.



48. East Forum Area: Public space structure, activity, uses and character.

Surface/paving treatment:

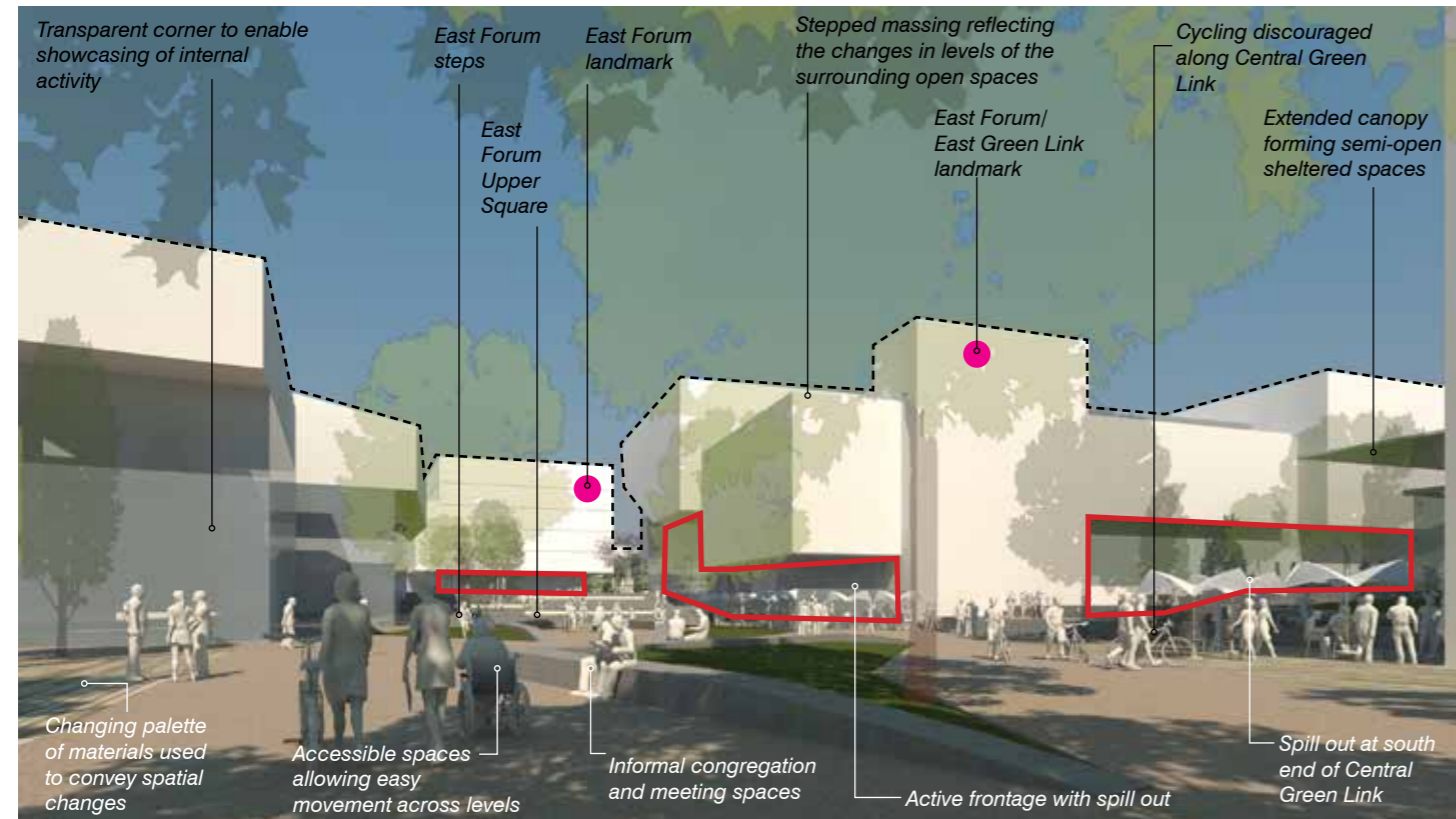
- The percentage of paved areas shall gradually increase from East Pond, which should have the least amount of paved area, to East Forum Upper Square which should have the most paved area.
- There must be unhindered paved areas along key pedestrian and cycle routes to allow ease of access and movement.
- The East Forum Upper Square and East Forum Lower Square being spaces of where multiple routes converge, must have landscape design that assists in orientation and wayfinding.

Bicycle Stands and Circulation:

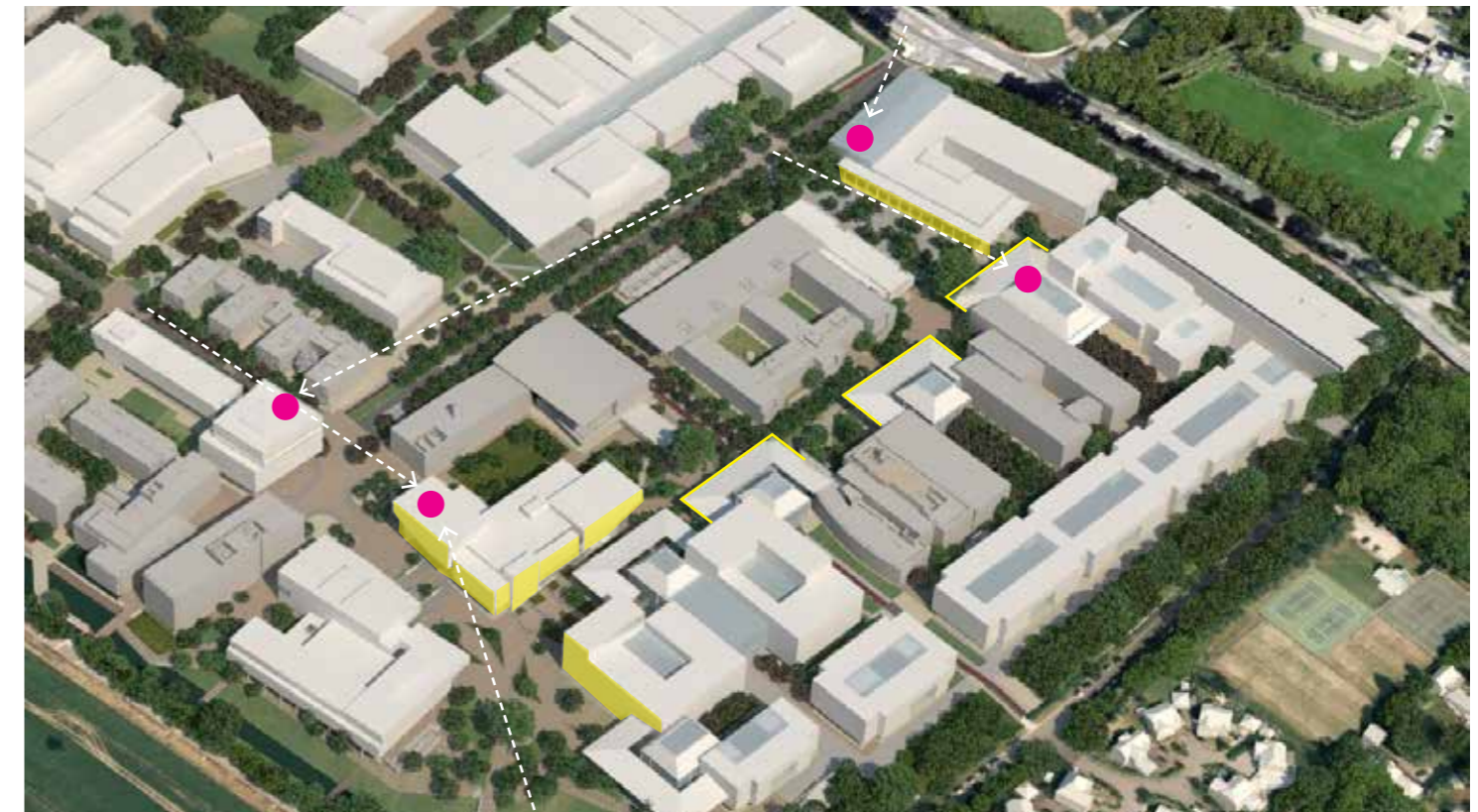
- Cycle movement must be discouraged within the East Forum spaces except along the southern and eastern edges of the East Pond.
- Cycle parking must be kept to a minimum within the spaces (a cycle hub shall be located within buildings within the Southern Character Area).

Planting:

- Mature tree planting shall be used to augment the street avenue planting and maintain the key views through to the Southern Ecological Corridors and rural hinterland beyond. A clear visibility of shared facilities and building entrances is important and care shall be taken to co-ordinate tree planting in conjunction to entrance lobbies.
- Landscape design shall gradually change from being informal/natural along East Pond to more ordered (tree grids) close to East Forum Upper Square.



49. East Forum Lower Square



50. East Forum Area - Massing and Landmarks

Urban Structure

The proposed urban structure of the East Forum Area aims to establish a new arrangement of open spaces, introduce new key pedestrian links and intensify the use of the area. Several open spaces will converge in this area and new landmarks will guide the movement between these open spaces.

Significant existing buildings are expected to be retained, including Physics of Medicine and the Maxwell Centre, Hauser Forum and Broers building, and the Northern Residences block which contains University housing with a day-care nursery on ground floor.

The re-arranged East Forum area will form a new gateway experience for those arriving at West Cambridge by Coton Footpath and those getting dropped off at East Forum.

The diagram on this page describes the urban structure framework and the arrangement of development frontage, landmarks, building accents and key gateways relating to this character area.

Landmarks, Building Accents and Gateways:

- Development must form a new Gateway experience to the south at East Pond, and form a high quality, highly visible southern frontage to this key space.
- Any landmarks/taller elements must be located in three locations: at the Upper Square (to mark the space and terminate views from JJ Thomson); The Steps, to mark the corner with north-south link and capture views from both Coton Footpath and Charles Babbage Road; and on the corner of JJ Thomson Avenue and The Green/Garden Space. This location responds to views from the East Forum Upper Square, ensuring that the two spaces communicate and are strongly visually connected.
- Where buildings terminate other key views, built form may provide building accents. Height may be increased at these points to create variety in skyline and massing, consistent with the approved building height parameters.

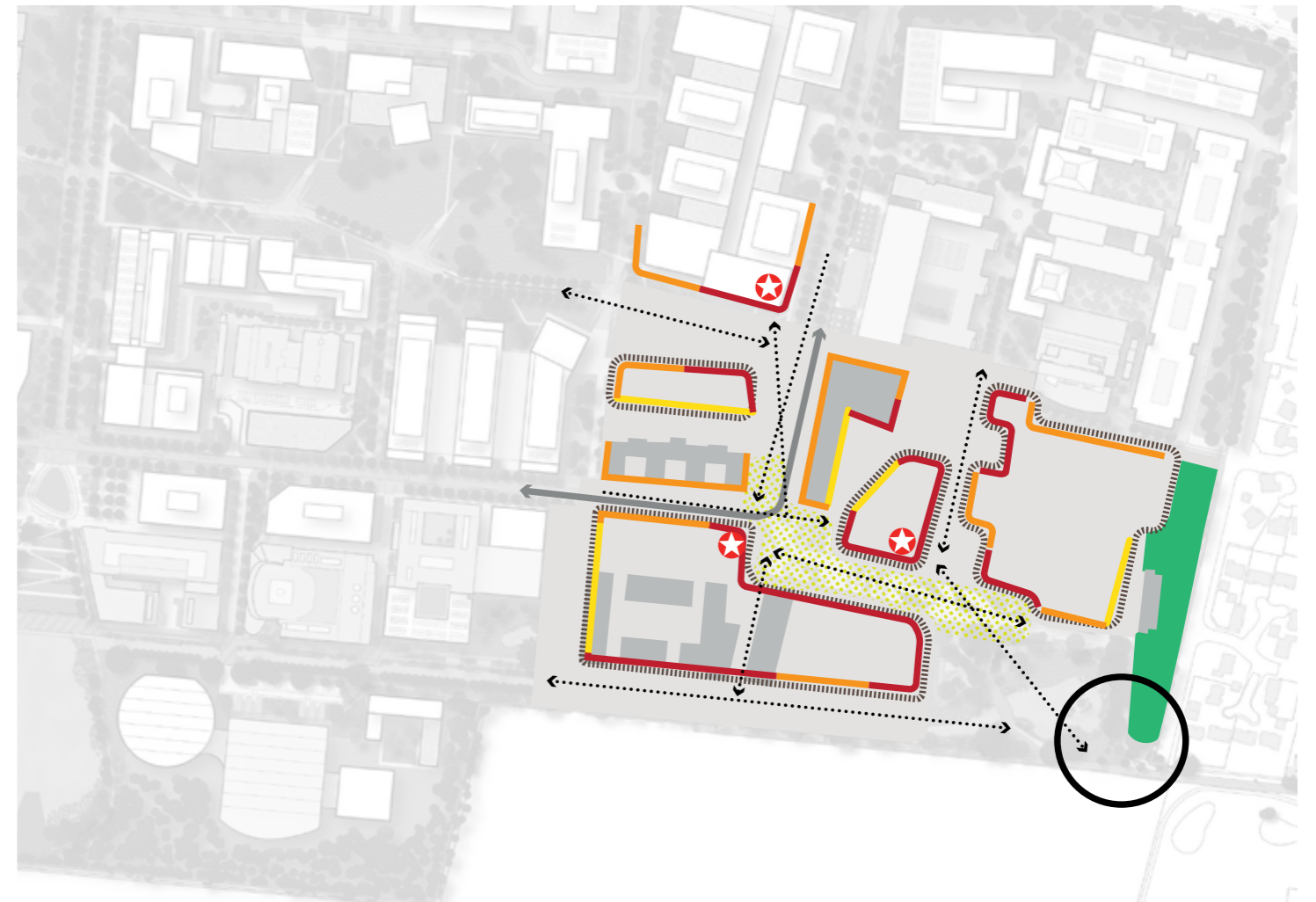
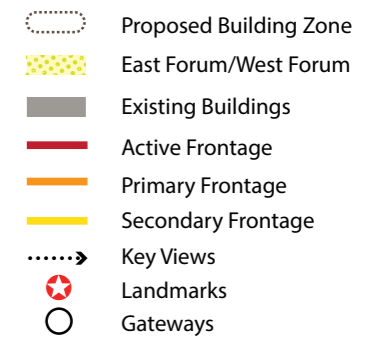
Frontage types:

Active, primary and secondary frontage types are organised to encourage high levels of activity within the East Forum space.

Active Frontages: shall be located primarily along the East Forum spaces, on the The Green/Garden Space and the East Green Link leading north from the Lower Square. This is to ensure a high level of activity, footfall and overlooking within these spaces.

Primary Frontages: shall be located to address other key space and streets, including JJ Thomson Avenue and Charles Babbage Road.

Secondary frontages: shall be located to address internal courts and secondary spaces within the development.



51. East Forum Area: Urban Structure

Access and Movement

The East Forum spaces are pedestrian only zones, restricted for both vehicular and cycle movement. Southern Ecological Corridor and the East green link are restricted for vehicles.

Cycle Movement and Parking:

- Primary cycle routes will be located along the edges of the area, as shown on the diagram.
- Strategic pedestrian and cycle route must be located through the Southern Ecological Corridor and between Clerk Maxwell Road and JJ Thomson Avenue and joining with the continuous pedestrian/cycle connection through The Green.
- Other cycle routes must be provided on both sides of JJ Thomson and Charles Babbage Road
- The pedestrian and cycle access on Madingley Road must be maintained
- Areas of cycle parking shall be provided in the zones shown on the diagram opposite and also: within the ground/lower floors of any multi-storey parking structure; consolidated within covered cycle parking structures or hubs, or in secondary open spaces within the development. Main cycle parking hubs, must be covered and be secure.

Vehicular Movement:

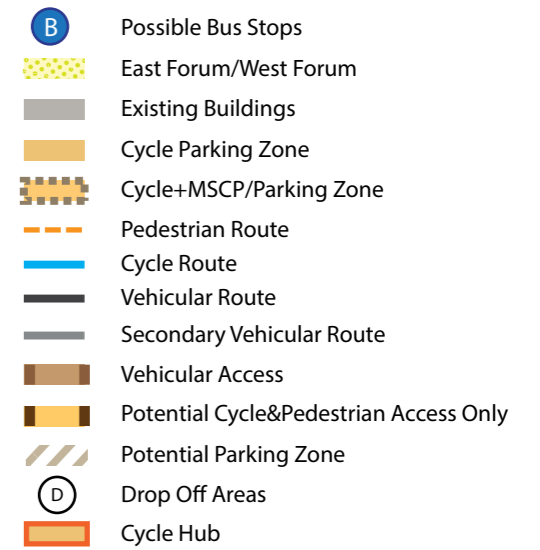
- Vehicular movements must be confined principally to JJ Thomson Avenue and Charles Babbage Road
- Vehicular routes between Clerk Maxwell Road and JJ Thomson Avenue must be avoided.
- New access points along Clerk Maxwell Road may be provided in accordance with the approved access parameters.
- Limited servicing shall be allowed, if required, from Clerk Maxwell Road along the east-west pedestrian and cycle link to serve only existing buildings and service structures.
- Principal pick-up/drop off facilities shall be located only on JJ Thomson Avenue and Charles Babbage Road.

Servicing:

- Service yards, and service movement shall be restricted to the lanes to the east of the area and the Central Green Link in the west (accessed from Charles Babbage Road).
- Service access routes shall be designed so as to not reduce pedestrian and cycle priority through Green Links.
- Service access shall be allowed from Clerk Maxwell Road.
- Limited servicing shall be allowed, if required, from Clerk Maxwell Road along the pedestrian/cycle route to serve existing buildings and structures.

Car Parking:

- Multi storey car parking structures must not be located in this area
- Car parking in basement and semi-basement shall be allowed in lower ground floors along Charles Babbage Road. These areas shall be well integrated into the building frontages and not compromise the overlooking of this street.



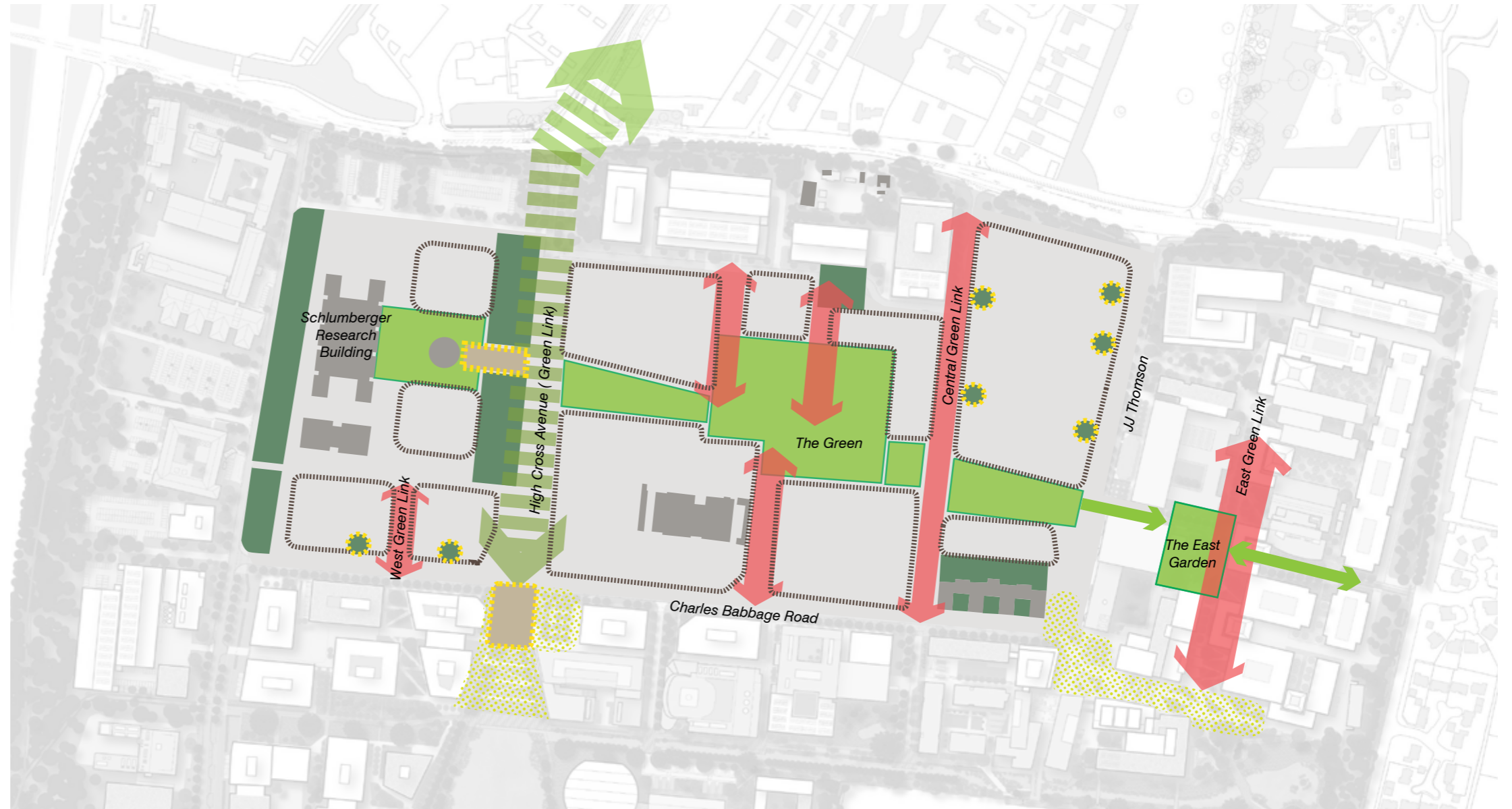
2.3. The Green

Character:

The Green is a substantial central green space and has an important part in the site-wide landscape network. It consists of several gardens which will be delivered in phases. The layout and design must distinguish the gardens, whilst forming a coherent series of connected spaces.

The layout and the edge of The Green will be defined through further design, respecting the planning parameters and preserving the existing trees wherever possible.

- The minimum width of the Green must be 40m along its entire length between JJ Thomson and High Cross Avenues.
- A central larger garden must be provided with minimum 100m width along 100m length.
- The Green must be a predominantly green space and must be landscaped in a way that creates a feel of a natural setting.
- Design must accommodate the main pedestrian path and cycle route.
- The design must consider provision of Sustainable Urban Drainage to collect water runoff from the foot & cycle path. This shall run alongside the foot & cycle path and be planted with a variety of species that are appropriate for the conditions.
- The Green, being a space where multiple routes converge, must be carefully designed to ensure that routes and desire lines are maintained and conflicts between cyclists and pedestrians are minimised.
- The design shall take advantage of the topography and views from the highest point of the site and maintain clear legible views from Schlumberger in the west to JJ Thomson Avenue in the east.
- A minimum of 2 open lawn areas of minimum 30x50m and minimum 15x30m must be provided for informal recreation. These must be located in areas not overshadowed by buildings.
- A distinctive landscaped Garden Space must be provided at the intersection of the east-west pedestrian and cycle route and the Central Green Link.



52. The Green Area: Open Space Structure

- The design and within the East Garden Space must be consistent with the design and materials for 'The Green' to the west.
- The design shall consider a range of uses relevant to adjacent buildings – outdoor spaces such as teaching breakout spaces, quiet gardens and informal activity spaces.

- Proposed Building Zone
- East Forum/West Forum
- Woodland Buffer
- Foreground Landscape
- The Green
- Existing Buildings
- Southern Ecological Corridor
- Additional Woodland Planting
- Green Links
- Ecological Corridor
- Arrival Square
- Pocket Landscape

Surface/paving treatment:

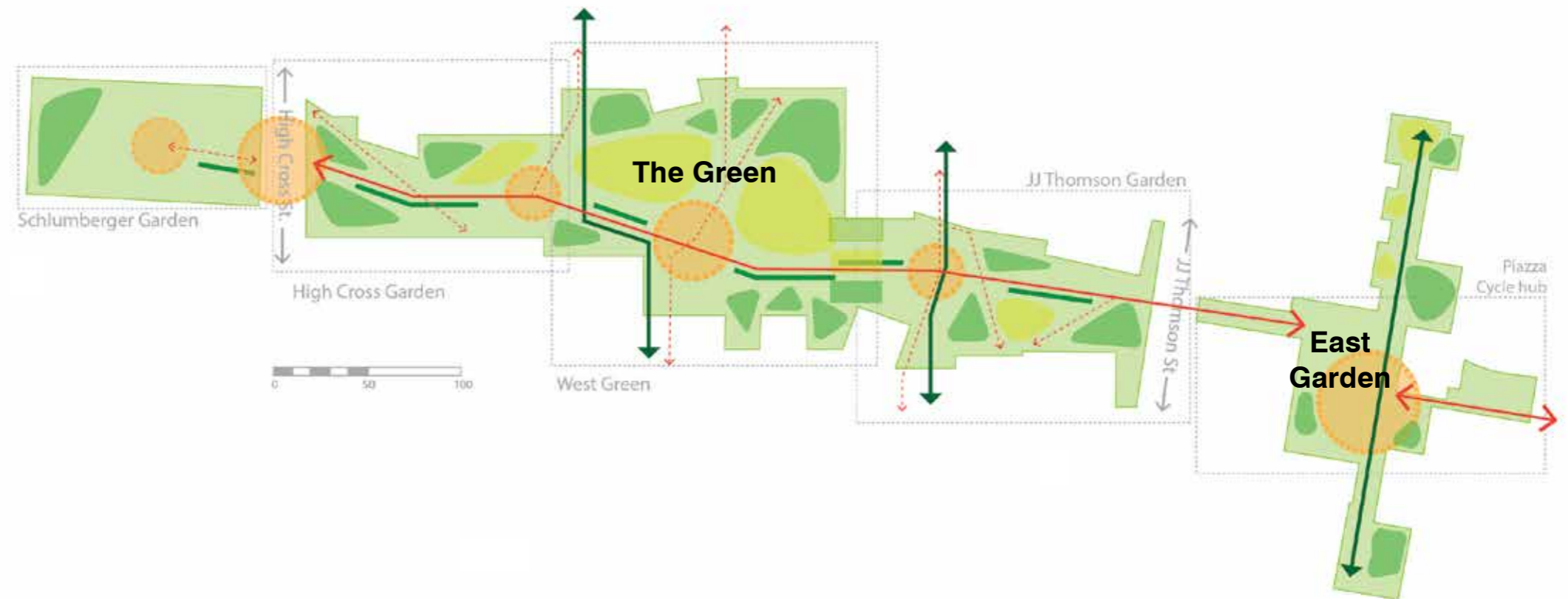
- The Green must be a predominantly green, recreational open space. The portion of soft surface should be minimum 70%. The paved area should be restricted to pedestrian and cycle routes and spill out spaces from active uses along the frontages.
- Small paved areas shall be provided along active building frontages to encourage activity to spill out and in places where ease of access and movement is required.
- In the East Garden, proportion of paving may be higher than 30% to accommodate pedestrian flows along the East Green Link

Bicycle Stands and Circulation:

- Cycle parking must be kept to a minimum within the space (cycle parking shall be located within or between buildings or on the adjacent Green Links).

Planting:

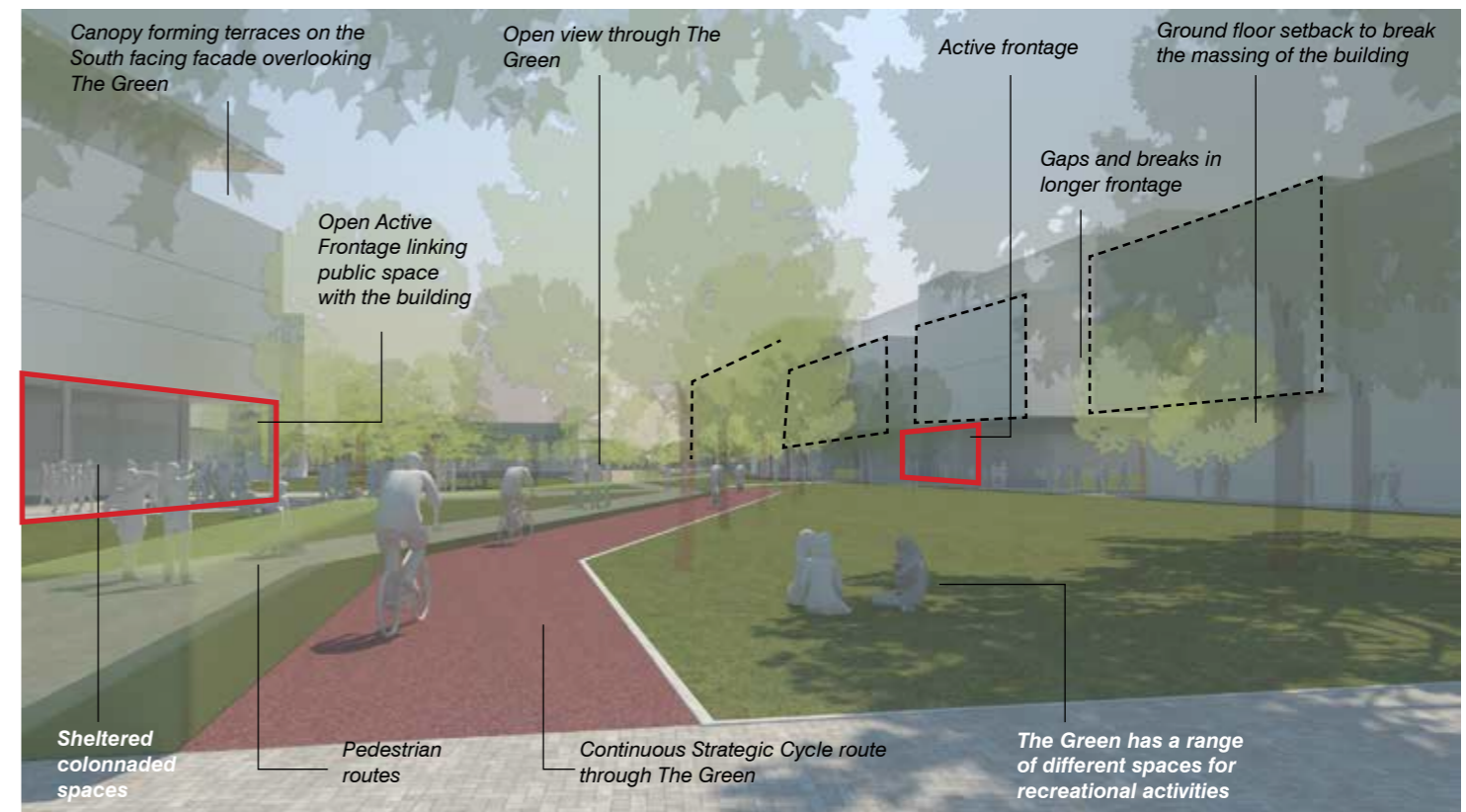
- Existing mature trees must be retained, wherever possible, and tree root zones protected.
- New tree planting shall be added to reinforce movement corridors, vistas and focal points.
- Planting shall be relatively ordered along the main pedestrian and cycle route. Selective avenue of trees and hedge planting may be incorporated along the main path to assist in orientation and wayfinding.
- Large feature tree planting must be provided at a minimum of 5 key locations such as The Green gateways or key nodes. Where large trees are planted they must be given the proper environmental conditions and space to grow to maturity.
- Planting and landscape shall be informal alongside the buildings, where it may partially cover the building frontages. Trees must not hinder key views and must allow clear visibility of shared facilities and building entrances.
- Any area between building frontage and edge of open space, should be landscaped in a way similar to The Green, without visible barriers such as fences. If hedges are planted, they must be located next to the building rather than marking the boundary.



53. The Green: Public space structure, activity, uses and character.

KEY

	Programmed space
	Planting
	Key node
	Primary pedestrian / Cycle route
	Secondary pedestrian route
	Green corridor
	Woodland edge



54. Central Green Area - The Green

Urban Structure

Due to location and configuration of The Green, the surrounding development is highly visible and plays an important role in defining and invigorating the public realm. Frontage types and built form must be designed to encourage activity within The Green.

The layout of The Green must allow long views of the Schlumberger Building and maintain it as a key site landmark.

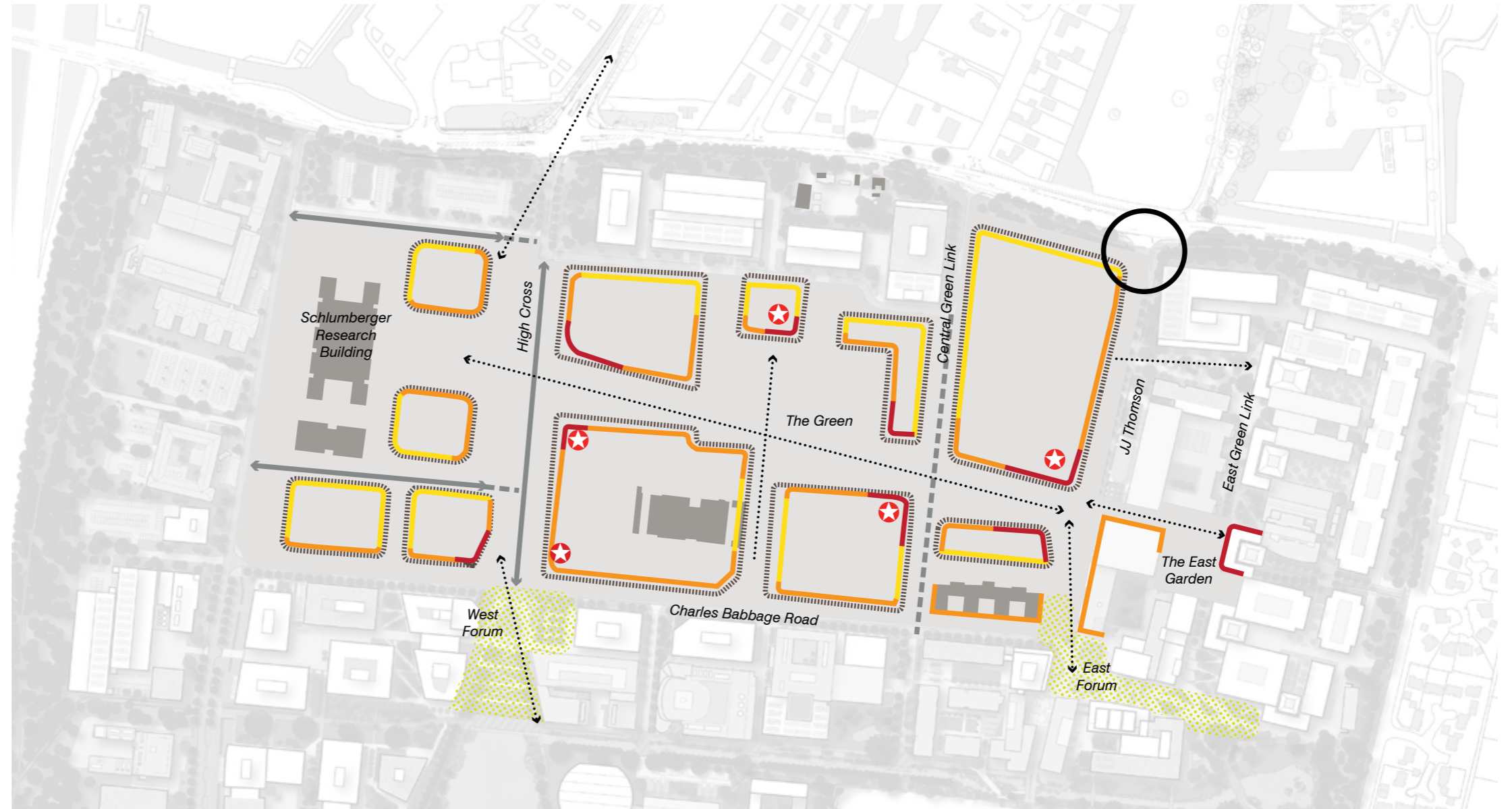
Massing to the south side of The Green must ensure that this key landscaped space has good daylighting and sun exposure.

Building zones facing The Green will also form new frontage to JJ Thomson and High Cross Avenues and Charles Babbage Road, contributing to their new character.

The diagram opposite describes the urban structure framework and the arrangement of development frontage, landmarks, building accents and key gateways within this character area.

Landmarks, Building Accents and Gateways:

- Any taller elements (landmarks) must be located at three locations along The Green on both north and south frontages or on the corner of JJ Thomson Avenue and The Green/Garden Space. The three locations are intended to ensure a varied roofline and punctuation along The Green, and to provide marker building elements to draw views and movement through the space. The corner location responds to views from the East Forum.
- The landmark locations may also relate to ground floor active uses and social spaces and may also terminate views from along the north-south Green Links.
- Development must be set back to form a new green gateway experience at the entrance to the West Cambridge site at High Cross.
- Other landmark features or building elements may be located to terminate key views and relate to key spaces, such as where The Green/Garden Space meets Green Links.



56. The Green Area: Urban Structure

- Proposed Building Zone
- East Forum/West Forum
- Existing Buildings
- Active Frontage
- Primary Frontage
- Secondary Frontage
- Key Views
- Landmarks
- Gateways

Frontage Types:

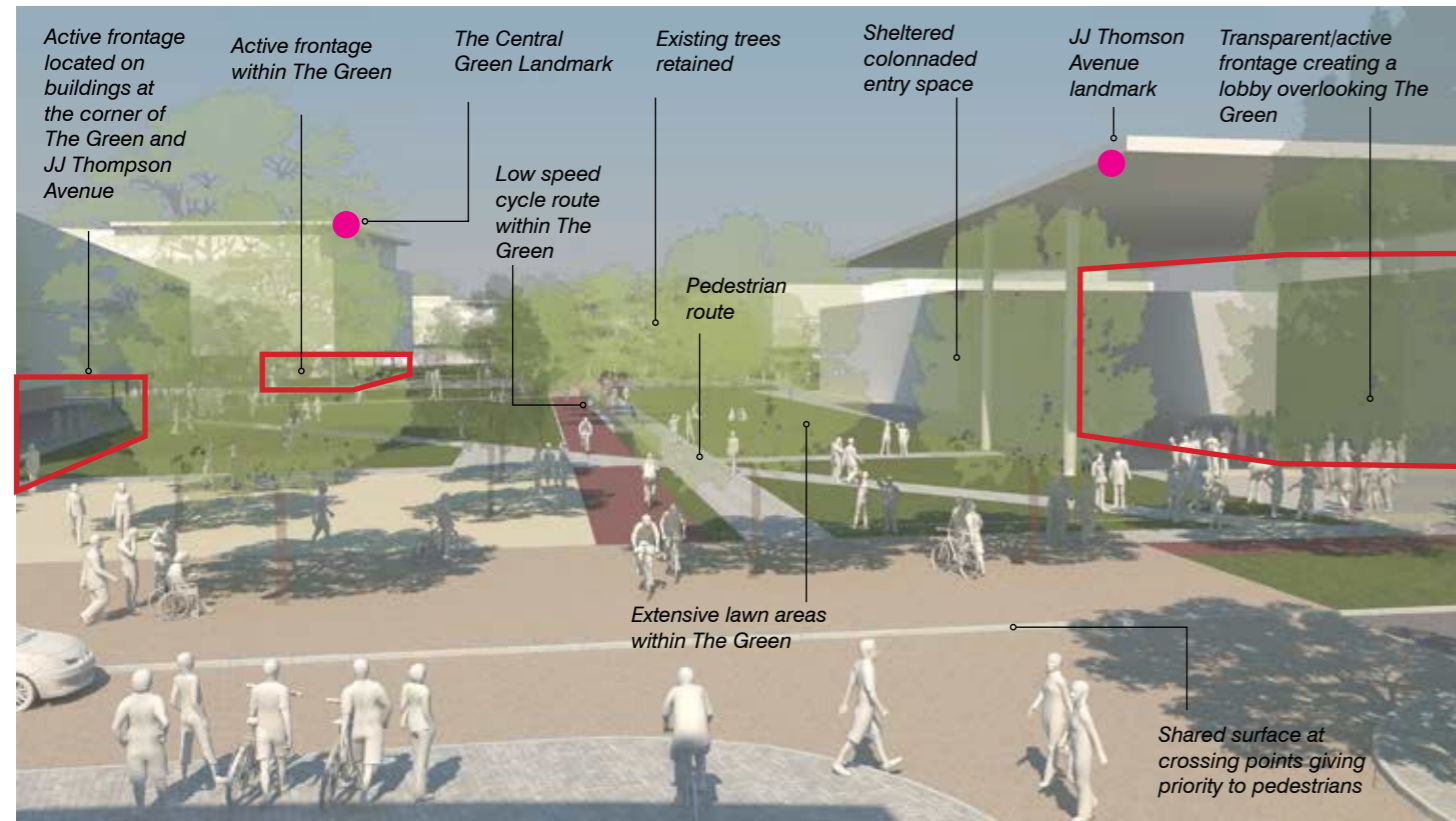
The urban structure diagram also shows the locations for the three types of proposed frontage: active, primary and secondary frontages:

Active Frontages: shall be primarily located at key locations along the north and south frontages of The Green, and in the new development facing The East Garden. These shall have ground floor active uses, or building entrances to activate these locations and help create the desired social activity within the space. These uses should have the opportunity to spill out into the public realm and parkland adjacent to the buildings.

At these active frontage locations consideration may be given to introducing high level social or active spaces and roof terraces, where they could provide key views back to the city skyline.

Primary Frontages: shall be located along The Green as well as along Charles Babbage Road, JJ Thomson and High Cross Avenues. These frontages shall ensure a coherent frontage and strong enclosure and overlooking to these spaces.

Secondary frontages: more informal frontages may be located along the Green Links and other lanes and courtyard spaces within the character area. These frontages must provide a degree of overlooking to the spaces. There is more flexibility in terms of locating service access along this frontage.



57. JJ Thomson Avenue Character Area - The Green

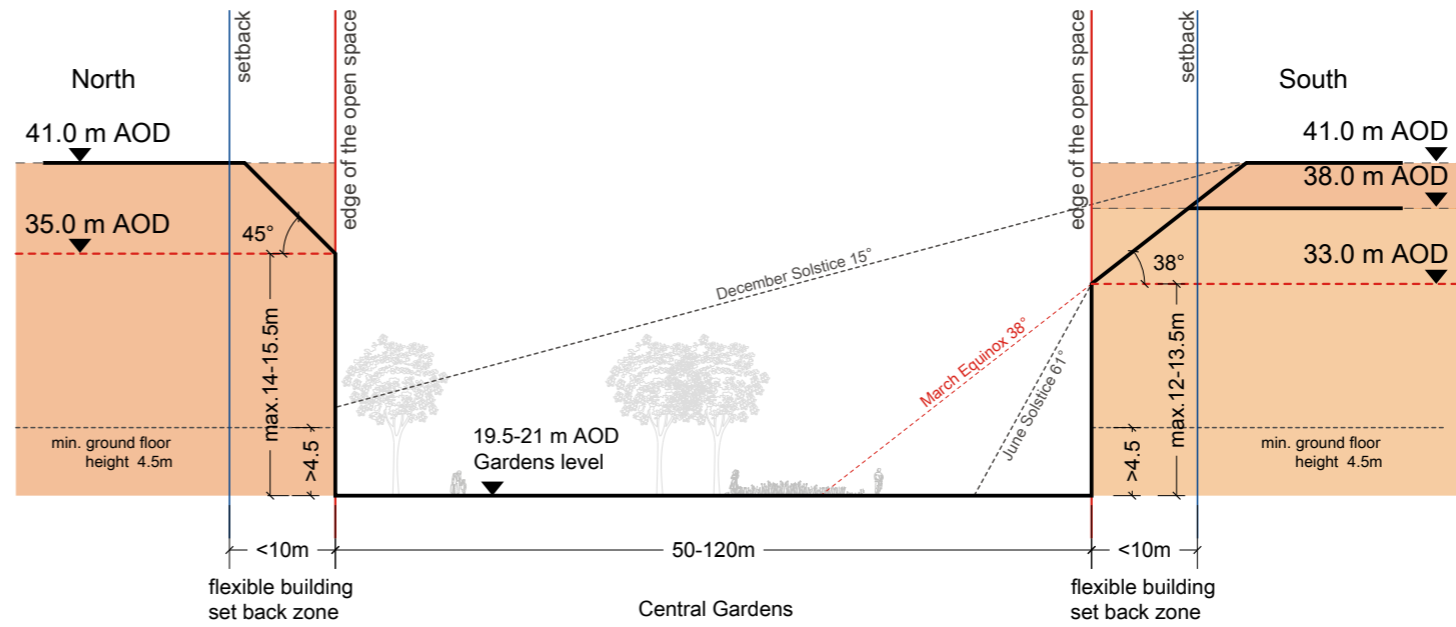


58. Central Green Area - Massing and Landmarks

Additional height considerations:

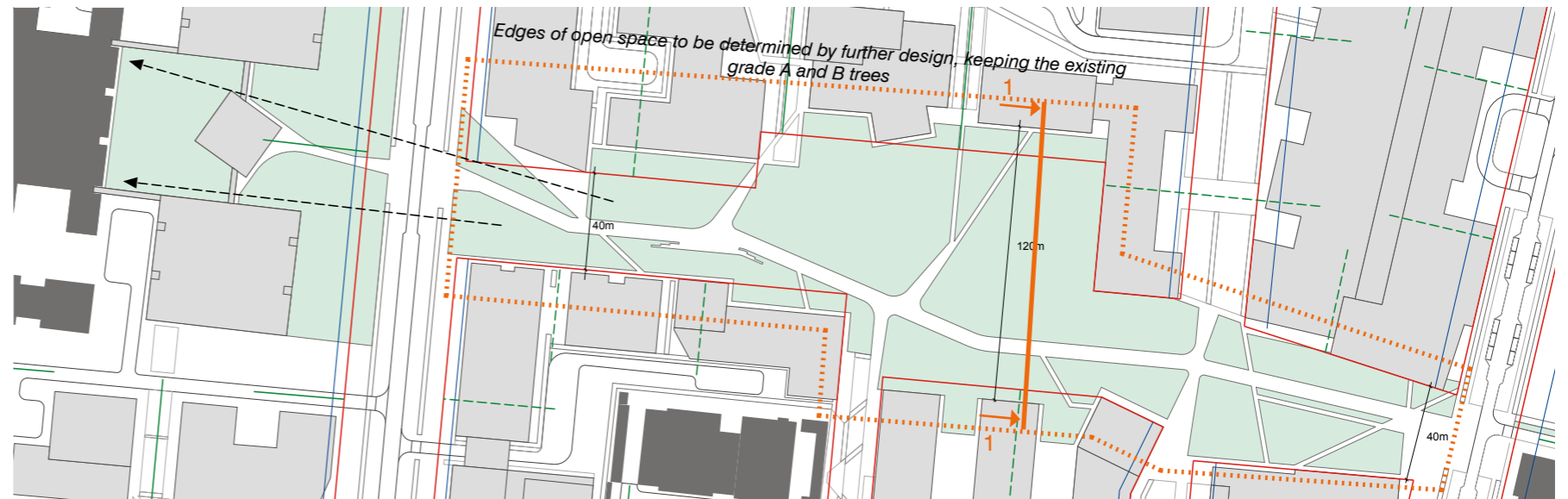
Additional height restrictions apply to the northern and southern frontages of The Green open space. The aim of these restrictions is to form a well scaled frontage to the space and allow for variation and interest. It is important to ensure that development does not overshadow key spaces within the space. Additional height restrictions do not apply for landmark/taller elements.

- Buildings may be built to the edge of The Green or be partially set back.
- Any area between building frontage and edge of The Green may be used for entrances or extended activities such as seating or seating with tables. These zones must not be used for service or any back of house purposes.
- The frontage must not exceed the set height of 33m AOD on the southern side and 35m AOD on the northern side of The Green, regardless of the width of the space at that point. Above those heights, the buildings must stay within envelopes which rise from the set maximum frontage heights to the heights set in parameter plans with angles of 45° (North) or 38° (South).
- Particular consideration should be made so rooftop plant spaces do not dominate the views from The Green: they must be set back or screened, or treated as part of the facade or otherwise carefully treated.



59. The Green Section 1-1 (Parameter Heights 38m and 41m AOD)

- KEY**
- Development Zone edge/ max. build-to line
 - Building set back zone
 - Indicative location for development Gap
 - - - Indicative location for frontage break
 - ⋯ Section Zone



60. Edges of open space

Access and Movement

In order to prioritise pedestrians and create a pedestrian friendly environment, vehicular movements must be restricted within the Central Green area.

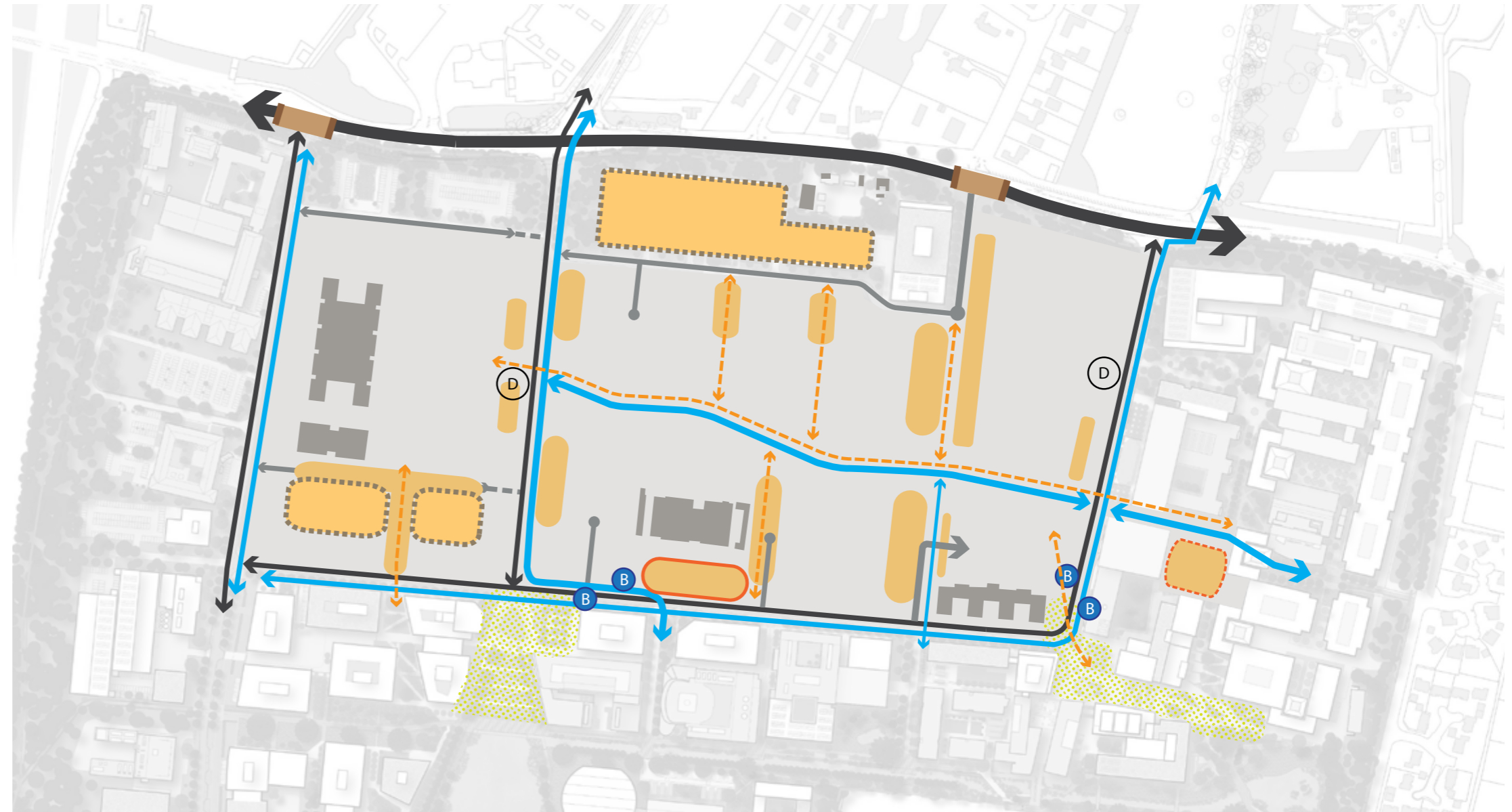
Vehicular movements shall be confined principally to the north side of The Green and the surrounding key streets, with some vehicular movement along the Green Links but not across The Green.

Cycle Movement and Parking:

- An uninterrupted cycle/pedestrian route must be provided between Clerk Maxwell Road and High Cross. This route forms part of the continuous pedestrian/cycle connection through The Green.
- Other dedicated cycle routes shall be located along JJ Thomson and High Cross Avenues.
- Areas of cycle parking shall be provided in the zones shown on the diagram opposite (generally along Green Links) and also: within the ground/lower floors of any multi-storey parking structure; consolidated within covered cycle parking structures or hubs, or in secondary open spaces within the character area.

Vehicular Movement:

- There must be no vehicular movement across or through The Green.
- A new access lane north of The Green shall provide service access to buildings and access to car parking from High Cross Avenue
- A new access lane south of Schlumberger Research buildings may be created if required.
- Principal pick-up/drop off facilities shall be located on High Cross, if required. Secondary locations for drop off may be along the northern access lane and within the Green Links.
- Drop-off facilities may be provided on High Cross, on JJ Thomson Avenue, along the new northern access lane or on the Green Links.



61. The Green: Access and Movement

Parking

- Car parking structures shall only be located in the zones indicated on the diagram above.
- Pedestrian routes to any car parking structure shall be provided and be carefully considered to ensure that users can access this structure easily and safely.

- B Possible Bus Stops
- East Forum/West Forum
- Existing Buildings
- Cycle Parking Zone
- Cycle+MSCP/Parking Zone
- Pedestrian Route
- Cycle Route
- Vehicular Route
- Secondary Vehicular Route
- Vehicular Access
- Potential Cycle&Pedestrian Access Only
- Potential Parking Zone
- D Drop Off Areas
- Cycle Hub

2.4. Southern Ecological Corridor

Character:

The Southern Ecological Corridor is an important east-west link in the overall landscape network. The design must distinguish places with individual character along the corridor whilst forming a coherent overall space.

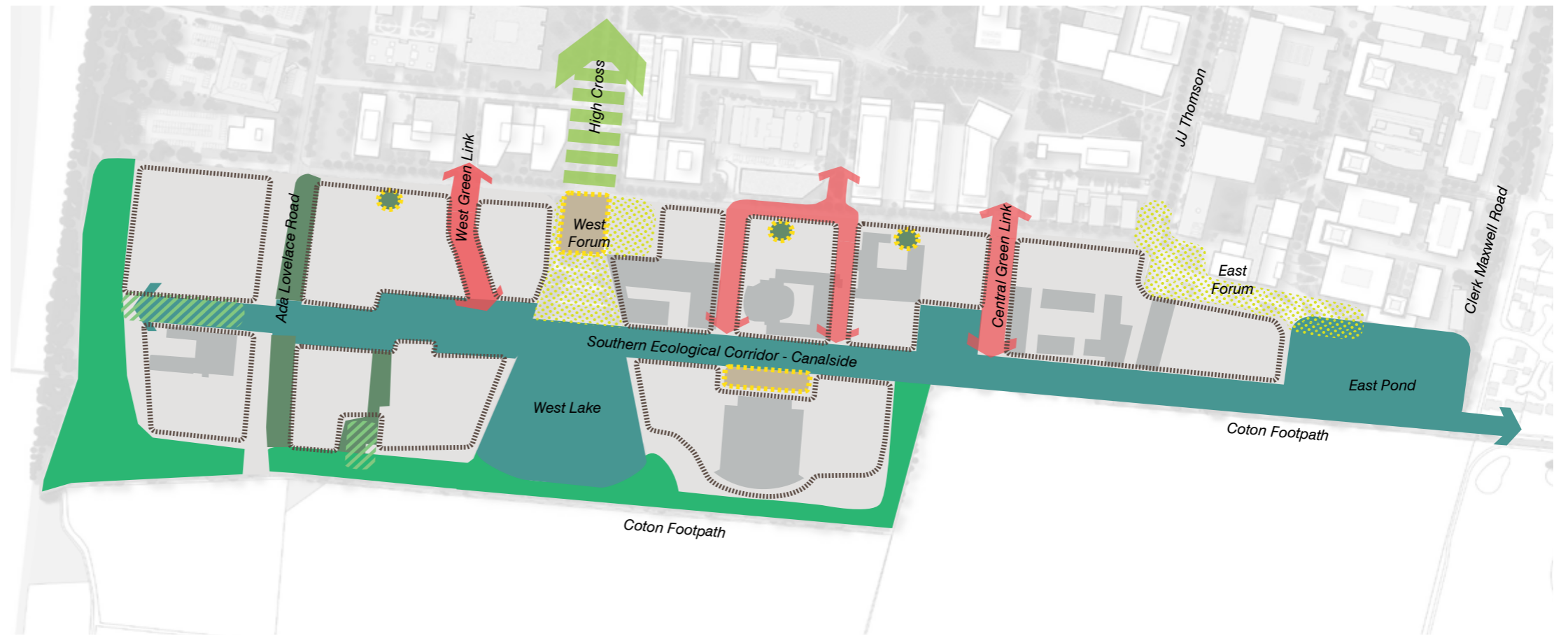
- The Southern Ecological Corridor must be a predominantly green space and must be appropriately landscaped to enrich the natural setting.
- Existing trees and hedgerows must be retained as far as possible, and their root zones uncompromised.
- Supplemental new planting to the southern edge shall ensure a soft edge to the development and a transition from the site to open countryside. Long views from the West Forum and green links site to the country side shall be carefully crafted.
- The Southern Ecological Corridor is a crucial route where several key pedestrian routes converge. The space must be carefully designed to ensure that routes and desire lines minimise conflicts.
- The existing water bodies must be re-profiled in line with the site-wide drainage strategy.
- Large feature tree planting must be provided at a minimum of 5 key locations. Large tree plantings must be given the proper environmental conditions and space to grow to maturity.

Canalside:

- The Canalside area must be designed to allow for seating and gathering.
- The main pedestrian path and cycle route must be retained and emphasized along the corridor in order to unify the overall network route for pedestrian and cyclists.

West Lake & East Pond:

- The West Lake & East Pond must be predominantly green spaces and must be appropriately landscaped to enrich the natural setting.
- These spaces must be an active space - the design of the space must provide places to dwell, south facing terraces and informal lawns.
- The East pond must become a new southern gateway into the site. The space must be visible from Coton Footpath and a new pedestrian only route must be provided between the Coton Footpath and the East Forum spaces.



63. Southern Ecological Corridor: Open Space Structure

- The existing pedestrian path must be retained around the West Lake to bring people closer to the water and promote recreational activity. It may be resurfaced or/and realigned if necessary.
- The East Pond space must provide a clear pedestrian link from Coton Footpath to East Forum Lower Square. A route over the pond may be considered and cycle movements must be discouraged along this route.

Green Links:

- The existing Green Links streets must be transformed to form pedestrian orientated spaces that incorporate pedestrian routes, cycle parking, hard and soft landscape and servicing for buildings along their length.
- Wherever the links are shared between pedestrian and service access, appropriate care must be taken to facilitate ease of access with least conflict.
- The new West Green Link must be a pedestrian only area with predominantly soft landscaping

Surface/paving treatment:

- The extent of paved areas must be restricted to key pedestrian and cycle routes and seating areas.

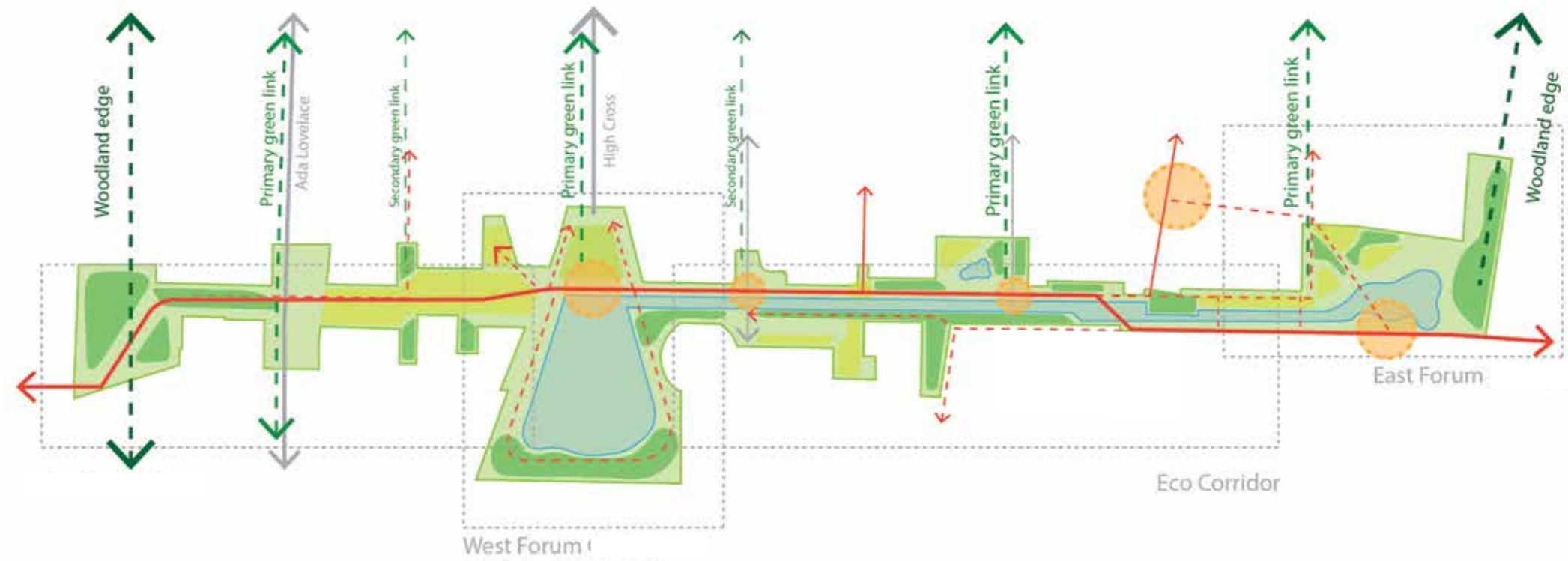
Bicycle Stands and Circulation:

- Cycle parking must be kept to a minimum within the key gathering spaces
- Cycle parking may be located within or between buildings or on the adjacent Green Links.



Planting:

- Existing trees must be maintained where possible and major feature trees shall be added at key locations.
- To the water body edges marginal planting must be provided to create a natural look, increase biodiversity and provide a range of appropriate habitats. This planting must be appropriate to the soil and environmental conditions at the water edges.
- Any area between building frontage and edge of open space, should be landscaped in a way similar to the public realm, without visible barriers such as fences. If hedges are planted, they must be located next to the building rather than marking the boundary.
- Clearing of existing hedges and understorey vegetation may be considered to open views to the development and assist in wayfinding, in particular at the East Pond.



64. Southern Ecological Corridor: Public space structure, activity, uses and character.

- KEY**
- Programmed space
 - Planting
 - Key node
 - Primary pedestrian / Cycle route
 - Secondary pedestrian route
 - Green corridor
 - Woodland edge



65. Key Views

Urban Structure

The proposed urban structure around the Southern Ecological Corridor aims to provide a clearer frontage and overlooking to this space.

This area overlaps with East Forum and West Forum areas and provides a strategic connecting route and visual element along the southern edge.


This area is highly visible both from within the site as well as from long views across the agricultural fields in the south, where new development will form new frontage.

In the western part of the corridor, development along the southern edge shall be set within the existing woodland buffer. In this area, development shall have lower heights and a more informal massing. Additional landscape and tree planting shall be used to provide a softer, greener development edge.

Along the Ecological Corridor, significant existing buildings are expected to be retained, including the Sports Centre, Materials Science and Metallurgy, Hauser Forum and Broers building and others. The new development shall provide some variation to the building lines set by these existing buildings.

The edge of the open space, particularly in the area west of the West Lake, will be defined through further design, respecting the planning parameters and preserving the existing Grade A trees.

The diagram on this page describes the urban structure framework and the arrangement of development frontage, landmarks, building accents and key gateways relating to this character area.

-  Proposed Building Zone
-  East Forum/West Forum
-  Existing Buildings
-  Active Frontage
-  Primary Frontage
-  Secondary Frontage
-  Key Views
-  Landmarks
-  Gateways

Landmarks, Building Accents and Gateways:

- At the East Pond development frontages shall combine with development within the East Forum area to form a new southern gateway from the Coton Footpath.
- Unobstructed views along the Southern Ecological Corridor must be maintained to aid legibility.
- Any new landmarks (taller elements) must be located at East and West Forum, where they will capture the views from the Ecological Corridor. The guidelines for these landmarks are provided in East and West Forum sections.
- Additional accent buildings may be located to terminate key views and relate to key spaces, such as where the Southern Ecological Corridor meets the West Forum/ West Lake space, or along intersection of Southern Ecological Corridor and Ada Lovelace Road.

Frontage types:

The diagram locates the three types of frontage: active, primary and secondary frontages.

Active Frontages: Frontage types shall be located to encourage high levels of activity within the East Forum spaces, including at the East Pond, at West Forum and key points adjacent to West Lake.

Additionally active ground floor frontages may be located along the Southern Ecological Corridor to take advantage of southern views over this space and the landscape beyond.

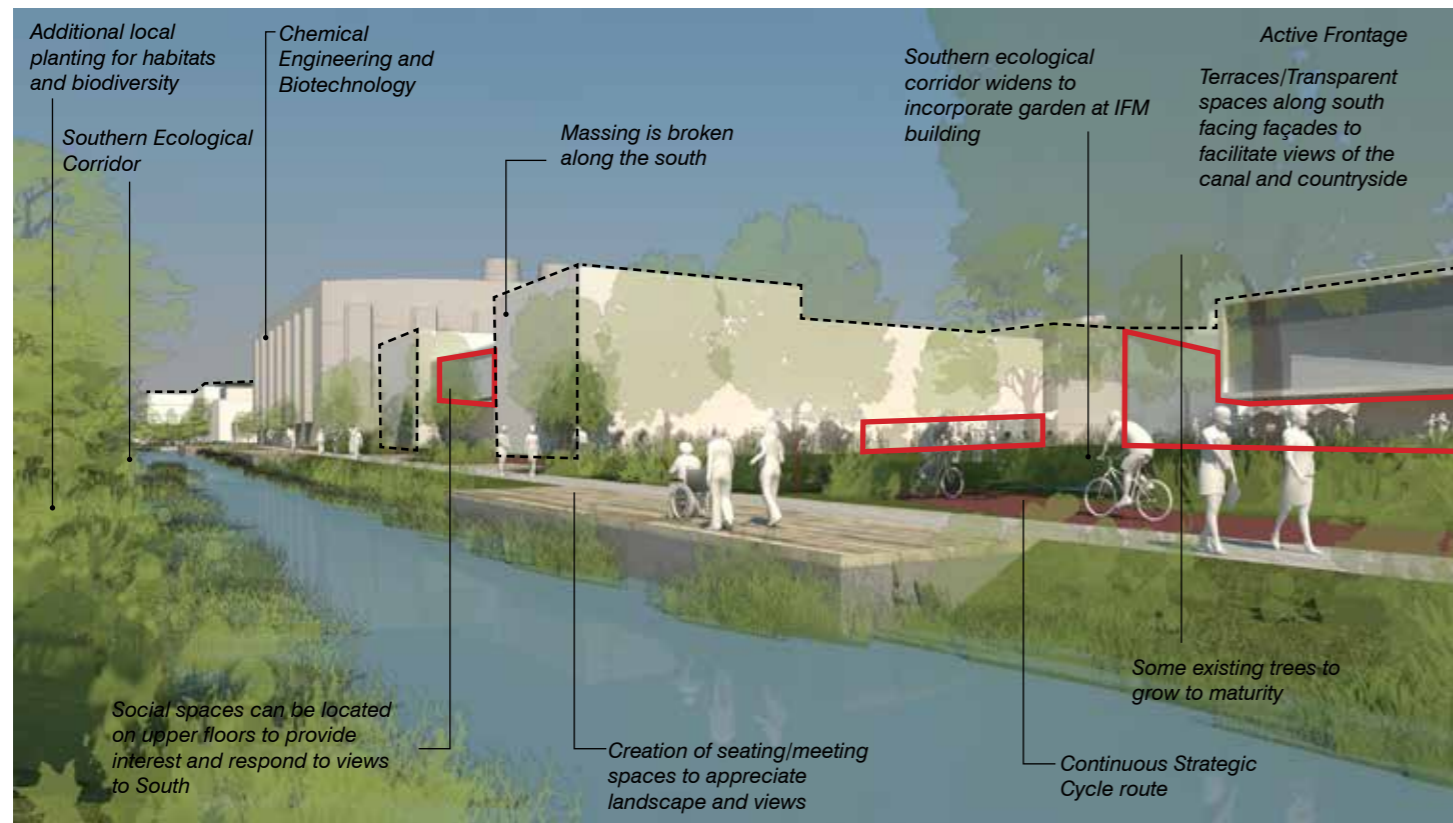
At these active frontage locations consideration may be given to introducing high level social or active spaces and roof terraces, where they could provide south facing spaces with views over open countryside.

Primary Frontages: shall be located along the main part of the Southern Ecological Corridor.

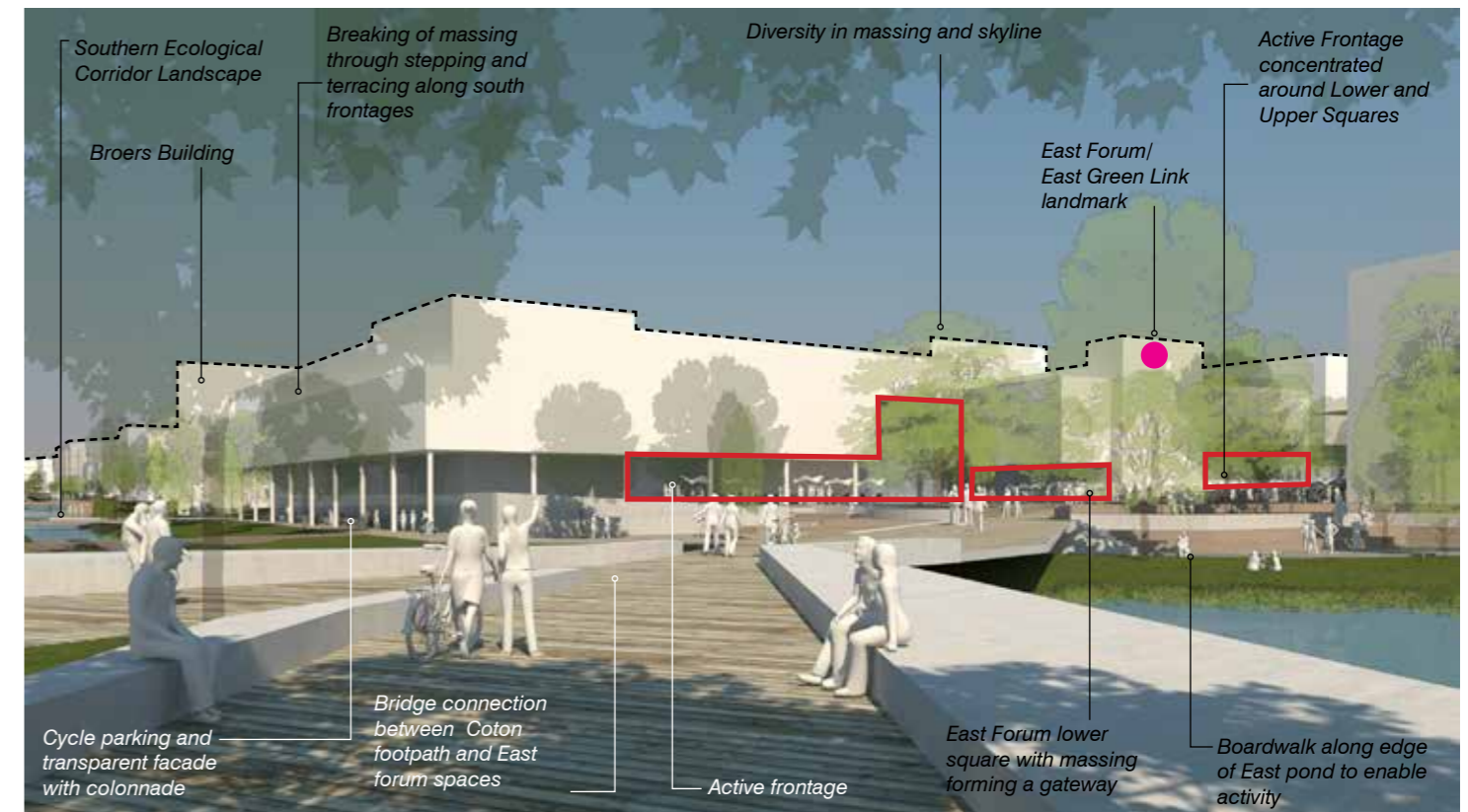
Secondary frontages: shall primarily form the Green Links and frontages screened by planting along site edges. These provide more informal frontage to these spaces.



67. Southern Ecological Corridor: Urban Structure



68. The Southern Ecological Corridor: Canal Frontage

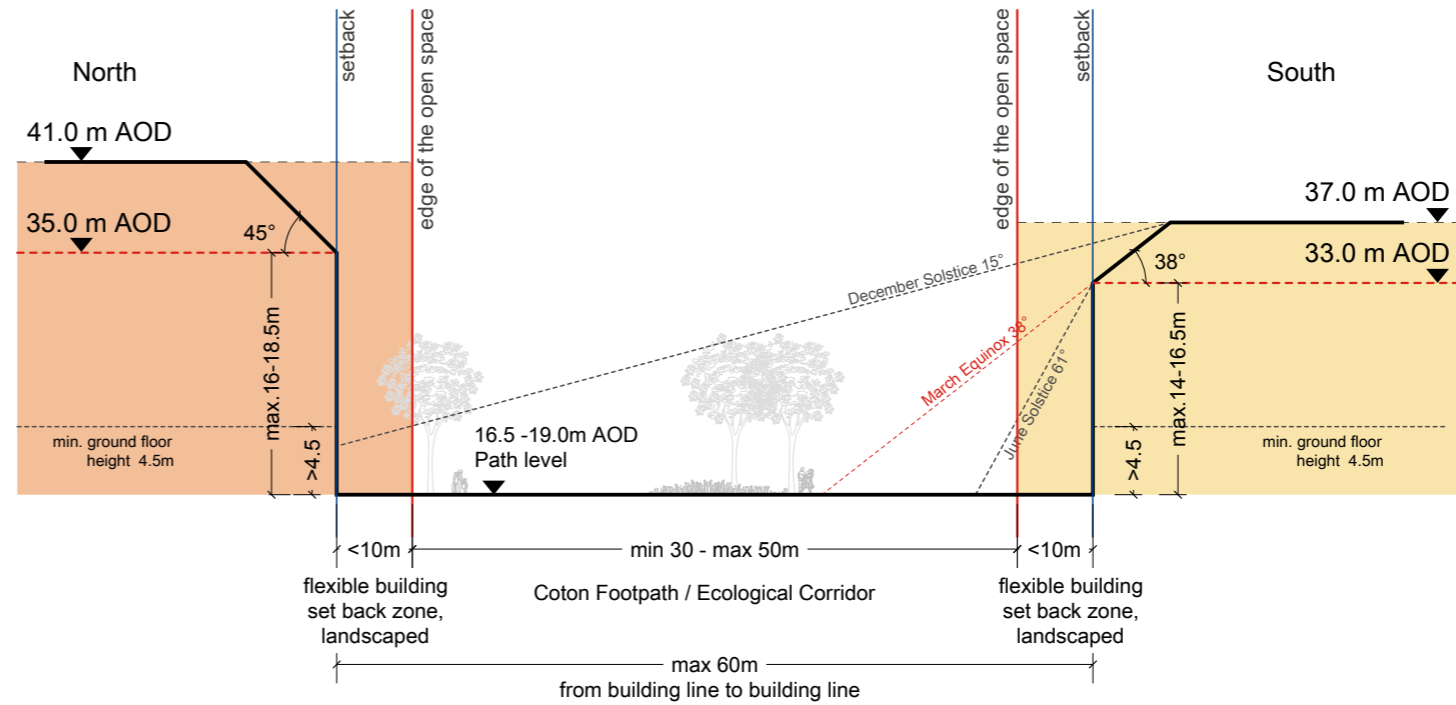


69. Southern Ecological Corridor - East Pond and Southern Gateway

Additional height considerations:

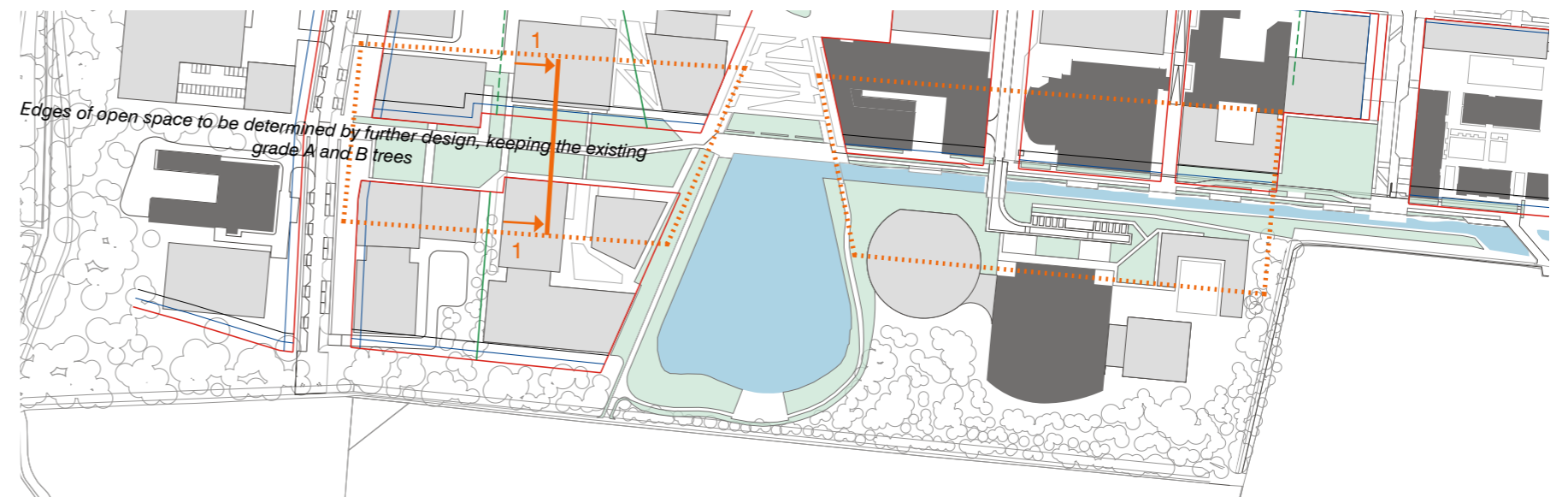
Additional height restrictions apply to the northern and southern frontages of the Southern Ecological Corridor. The aim of these restrictions is to form a coherent frontage to the space but allow for variation and interest in response to long distance views from the south. In addition it is important to ensure that development does not overshadow key spaces and routes within the space. Additional height restrictions do not apply for landmark/taller elements.

- Buildings may be built to the edge of the open space or be partially set back.
- Any area between building frontage and edge of open space, may be used for entrances or extended activities such as seating or seating with tables. These zones must not be used for service / any back of house purposes.
- The frontage should not exceed the set height of 33m AOD on the southern side and 35m AOD on the northern side of the space. Above those heights, the buildings must stay within envelopes which rise from the set maximum frontage heights to the heights set in parameter plans with angles of 45° (North) or 38° (South).
- Particular consideration should be made so rooftop plant spaces do not dominate the views from the Southern Ecological Corridor: they need to be set back, screened, treated as part of the facade or otherwise carefully treated.



70. Southern Ecological Corridor West Section 1-1 (Parameter Heights 37m and 41m AOD)

- KEY**
- Development Zone edge/ max. build-to line
 - Building set back zone
 - Indicative location for development Gap
 - - - Indicative location for frontage break
 - Section Zone



71. Edge of open space plan

Access and Movement

The Southern Ecological Corridor area is a highly permeable. The existing north-south streets will be transformed through additional landscaping into Green Links to allow greater pedestrian connection between Charles Babbage Road and the Southern Ecological Corridor.

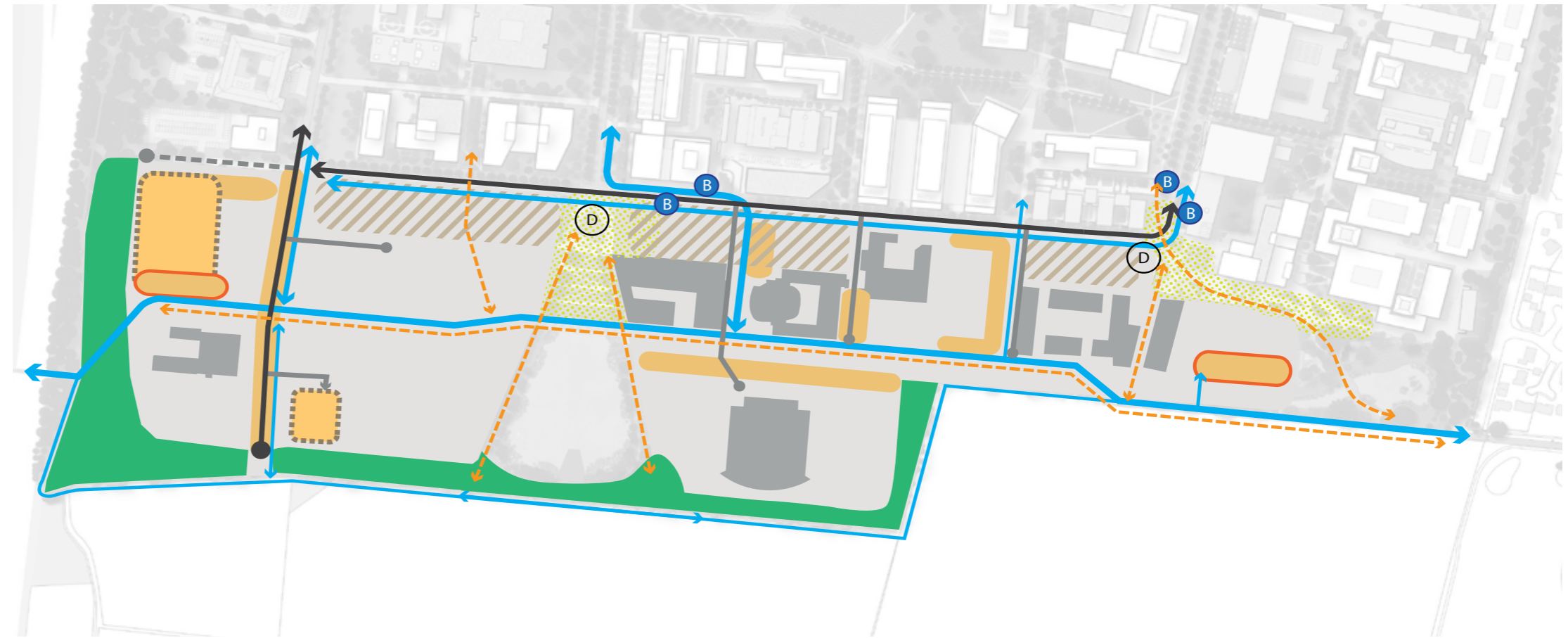
Vehicular access will be highly restricted along the Southern Ecological Corridor, however access will be required for the Sports Centre. Vehicular movement for servicing shall use some of the Green Links to access existing and new buildings.

A primary strategic pedestrian and cycle route must be located within the Southern Ecological Corridor, and must continue westwards where it must connect to the Coton Footpath and the bridge over the M11.

Car parking shall be restricted to lower ground floors along Charles Babbage Road. These areas shall be well integrated into the building frontages and not compromise the overlooking of this street.

Cycle Movement and Parking:

- A cycle hub, accommodating large numbers of cycle parks must be located to the east of the character area and accessed directly from the Coton Footpath. This facility must be located within built form to ensure limited visual impact on the key adjacent public spaces.
- A strategic pedestrian and cycle route must be located through the Southern Ecological Corridor.
- Green Links shall accommodate cycle movement as well as some cycle parking without conflict with pedestrians.
- Large areas of cycle parking shall not be located in the key open spaces and shall be provided along the key cycle routes
- Limited/smaller areas of cycle parking for visitors shall be provided within the principal open spaces. These shall be located close to shared facilities and/or building entrances.



72. Southern Ecological Corridor: Access and Movement

Vehicular movement:

- There shall be no vehicular movements along or across the Southern Ecological Corridor, with the exception that access must be provided to the Sports Centre and the proposed nursery if located adjacent to it. This crossing of the Southern Ecological corridor must be designed so that pedestrian and cycle movements retain priority.
- Primary drop-off points shall be provided in the West Forum and East Forum areas. Additional drop off shall be accommodated along Charles Babbage Road.

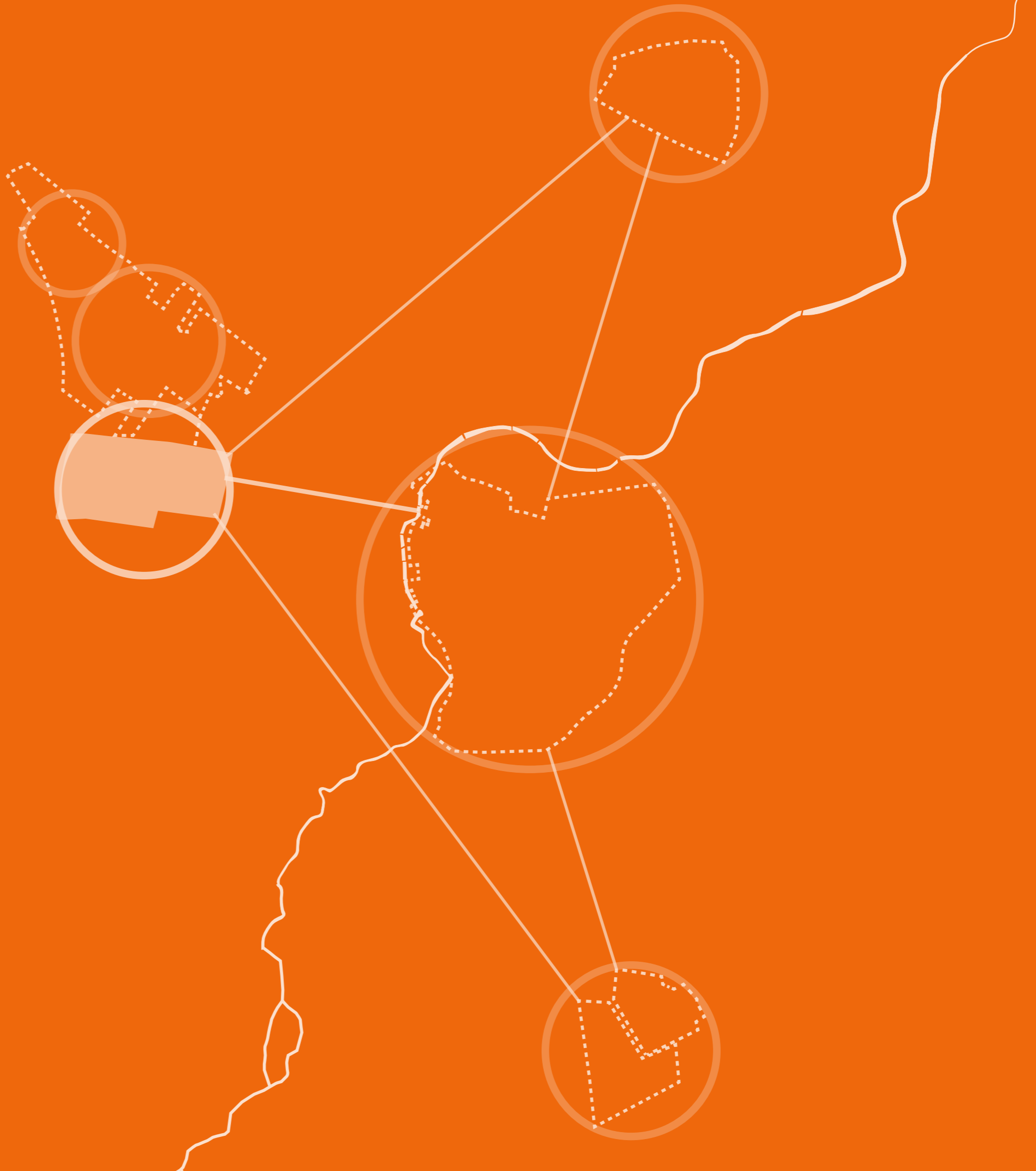
Servicing:

- Servicing access shall be from along the Green Links, accessed from Charles Babbage Road.
- Service access routes shall be designed so as to not reduce pedestrian and cycle priority through these spaces.

Car Parking:

- Lower ground or basement vehicular parking may be located along Charles Babbage Road. Any parking along Charles Babbage Road must not detract from the quality of development frontage along this street.
- Surface car parking shall be kept to a minimum (disabled parking and limited visitor parking only) and should be integrated will into the public realm design.

- ⓑ Possible Bus Stops
- ▨ East Forum/West Forum
- Existing Buildings
- Cycle Parking Zone
- ▨ Cycle+MSCP/Parking Zone
- - - Pedestrian Route
- Cycle Route
- Vehicular Route
- Secondary Vehicular Route
- Vehicular Access
- Potential Cycle&Pedestrian Access Only
- ▨ Potential Parking Zone
- ⓓ Drop Off Areas
- Cycle Hub



STREETS AND GREEN LINKS

03

3. STREETS AND GREEN LINKS

3.1. Introduction

The primary street structure within the site was established by the 1999 masterplan. There are four key streets, shown in Figure 73: High Cross, JJ Thomson Avenue, Charles Babbage Road, and Western Access / Ada Lovelace Road. The first three of the streets form the main access and circulation loop of the 1999 masterplan, and have been completed relatively recently. Their roads, kerbs and foot paths are in good condition and rows of trees have been planted along their length. Western Access / Ada Lovelace Road is an older street and is in need of improvement.

The proposed development retains all four of the existing streets, but proposes changes in character and treatment of these streets, both in relation to the adjacent built form as well as the public realm and landscape treatment.

In addition to the four key streets, guidelines for two green links are provided: East Green Link and Central Green Link.

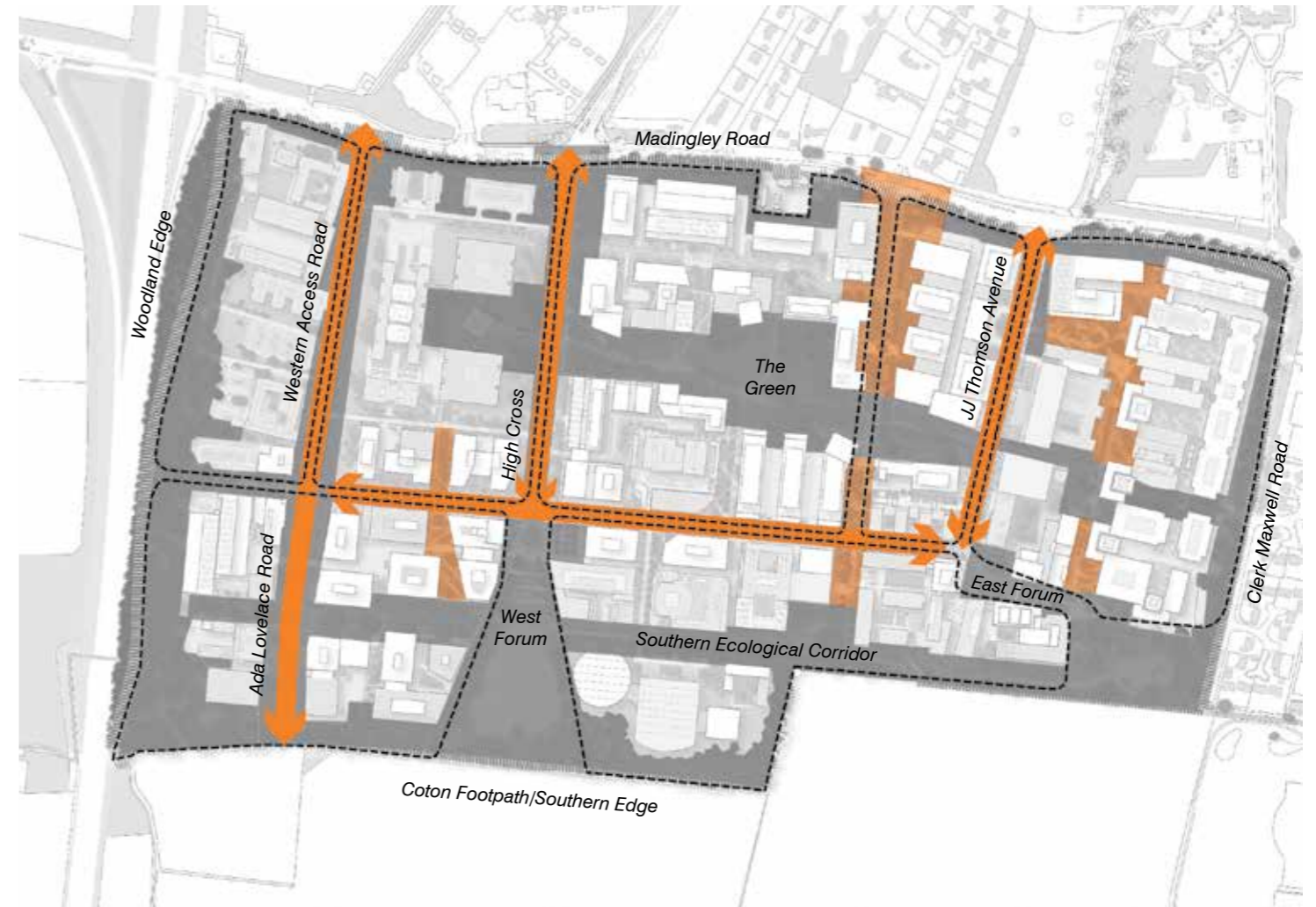
It is intended that these transformations will take place gradually with implementation over time as development comes forward.

The following guidelines apply to all four key streets:

- The key streets must accommodate vehicular movement, bus movement, cycles and pedestrians
- Special paving and landscape features to crossings shall be used to reduce the dominance of vehicles and create a shared use space with pedestrian priority.
- In select locations, such as crossing points, kerb lines shall 'bulb out' to slow traffic and create a pedestrian friendly streetscape.
- Built form along key streets must incorporate variable and interesting rooflines.

- Gaps and partial setbacks shall be used to break frontage lengths, in accordance with Section 1.2.
- Service access and service yards must not front the key streets and should be contained within buildings or enclosed by development.
- Visual impact of car parking in basement or semi basement areas must be minimised and access should be located away from the key streets.
- Rooftop plant shall be set back or effectively screened to ensure that its visual impact on the streets is minimised.
- Existing trees must be retained and incorporated within the street-scape design where possible and root zones protected.
- Proposed planting to the street verges must comprise a mix of tree species, shrubs, grasses, ground cover and lawn to create a varied and pedestrian scale streetscape.
- The underground utilities must be considered and these vary from one side to the other, therefore allowing different planting treatments to be applied in different locations along the streets as shown indicatively on the proposed sections. (See Sections 3.2 to 3.7 inclusive).
- New streetscape planting shall provide typical planting depth of subsoil & topsoil as follows:

Trees:	900mm
Scrubs:	600mm
Grasses:	400mm
Groundcovers:	400mm
Lawn:	200mm



73. West Cambridge - Streets and Links

KEY
 STREETS



74. High Cross - existing photo



75. JJ Thomson Avenue - existing photo



76. Charles Babbage Road - existing photo



77. Western Access Road - existing photo

3.2. High Cross (Primary Green Link)

Street transformation:

High Cross is one of the existing streets established in the 1999 masterplan and is the main vehicular and bus access route to the site from Madingley Road. The proposed development retains this street as an important part of the site's urban structure and enhances its role and character.

This the main entrance and approach road into the site for public transport and cars as well as for many pedestrians and cyclists. It forms a key pedestrian and cycle link to the North West Cambridge Development and its new Local Centre.

The street corridor visually continues the chain of green landscapes that run north-south through the North West Cambridge Development, into the West Cambridge site, and the West Forum and West Lake - so it is important that this street is maintained as a wide, generously landscaped Primary Green Link.

Character:

Buildings must be set back from the street to allow for a wider, generously landscaped corridor, which will visually connect this street with the landscapes within the North West Cambridge Development to the north.

The profile of the street shall be changed to allow for some on-street parking, footpath, separate cycle routes and additional, more informal planting and greenery.

Trees must be planted to soften the existing lines of parallel trees and partially obscure building frontages. Space may be provided for some larger trees to grow. On the west side, it will be important that the Schlumberger Building remains visible as key site landmark.

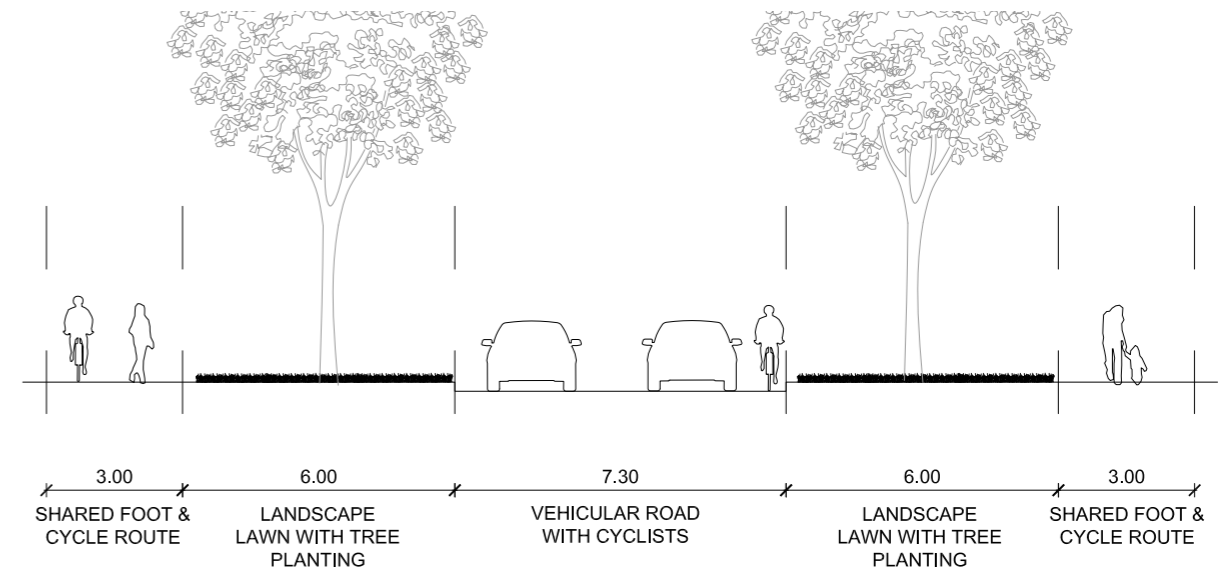
Surface/paving treatment:

- New dedicated cycle routes must be formed to both sides of the street.
- Pedestrian and cycle crossing points must be incorporated at key locations - at The Green and at the West Forum. The road material shall change to denote the crossing point and help to slow traffic.
- On street parking must be kept to an absolute minimum and be for disabled users only.
- An arrival space may be created for any expanded Schlumberger building. This arrival space must be carefully integrated in the design of the landscaped edges of the street. Use of similar materials or a careful transition of materials may be considered.

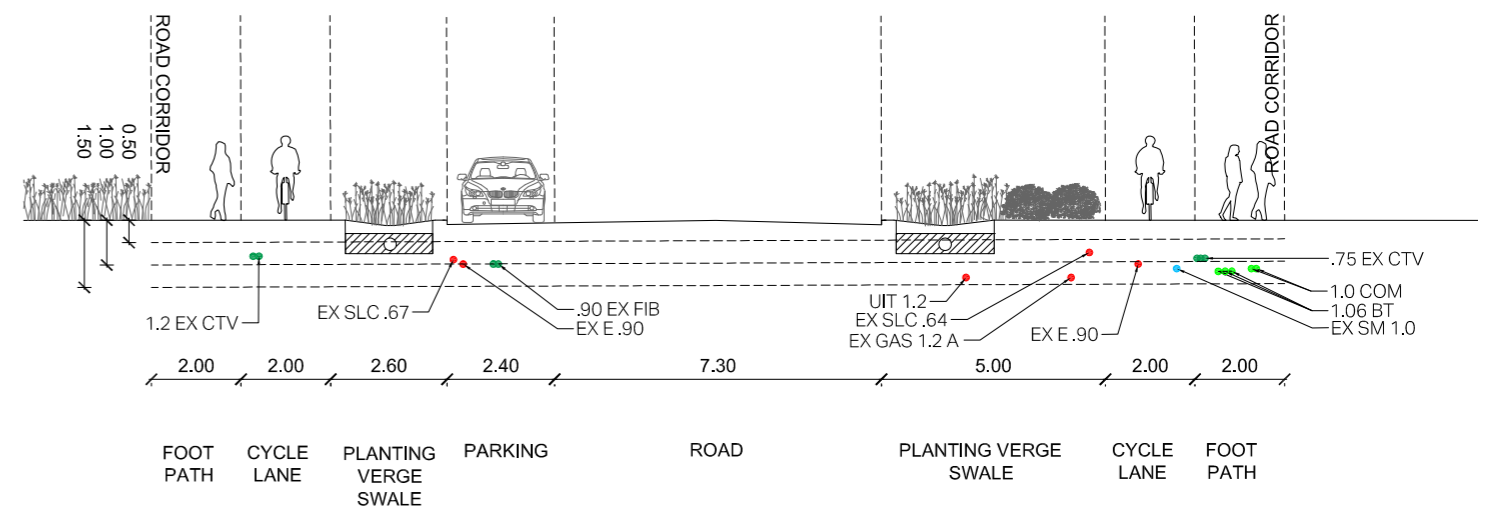
Landscape and Planting:

- Elements of the landscape character being established at the North West Cambridge Development shall be part of the landscape design along this street - elements brought into the street may include materials, planting types, tree types, street furniture.
- Additional trees shall be planted to create a sense of informality to the gateway with Madingley Road and within the gaps and setbacks along the street which will soften the linear alignment of the street.
- Where building setbacks and gaps occur the landscape design shall respond to the street design so no visible boundaries are seen.
- Large feature tree planting shall be incorporated at key spaces such as the gateway to Madingley road, the interface with The Green and the West Forum. Large tree species must be given the proper environmental conditions and space to grow to maturity.
- Wherever possible, Sustainable Urban Drainage shall be provided to collect water runoff from the carriageway. These must consider the existing street trees and underground utilities and be planted with a variety of species that are appropriate for the swale and the roadside environment.

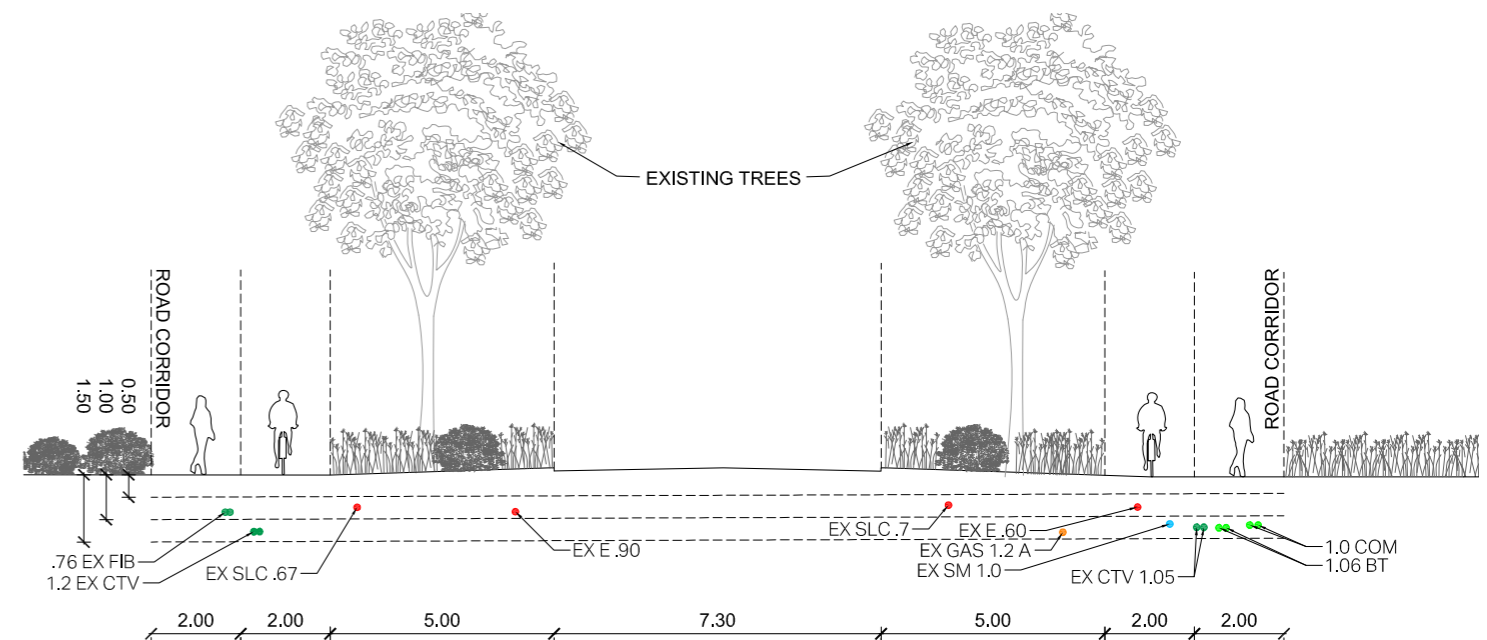
For location of sections, see Figure 81.



80. Existing Typical Section High Cross M-M'



78. Proposed High Cross Section H-H' (Subject to detailed design)



79. Proposed High Cross Section G-G' (Subject to detailed design)

- KEY**
- Communications Cable(s)
 - Cable TV Cable(s)
 - Electric Cable(s)
 - Gas Service
 - Ground Penetrating Radar (GPR) Trace
 - Security Cabling
 - Unidentified Trace
 - Water Service

Heights and Street Frontage:

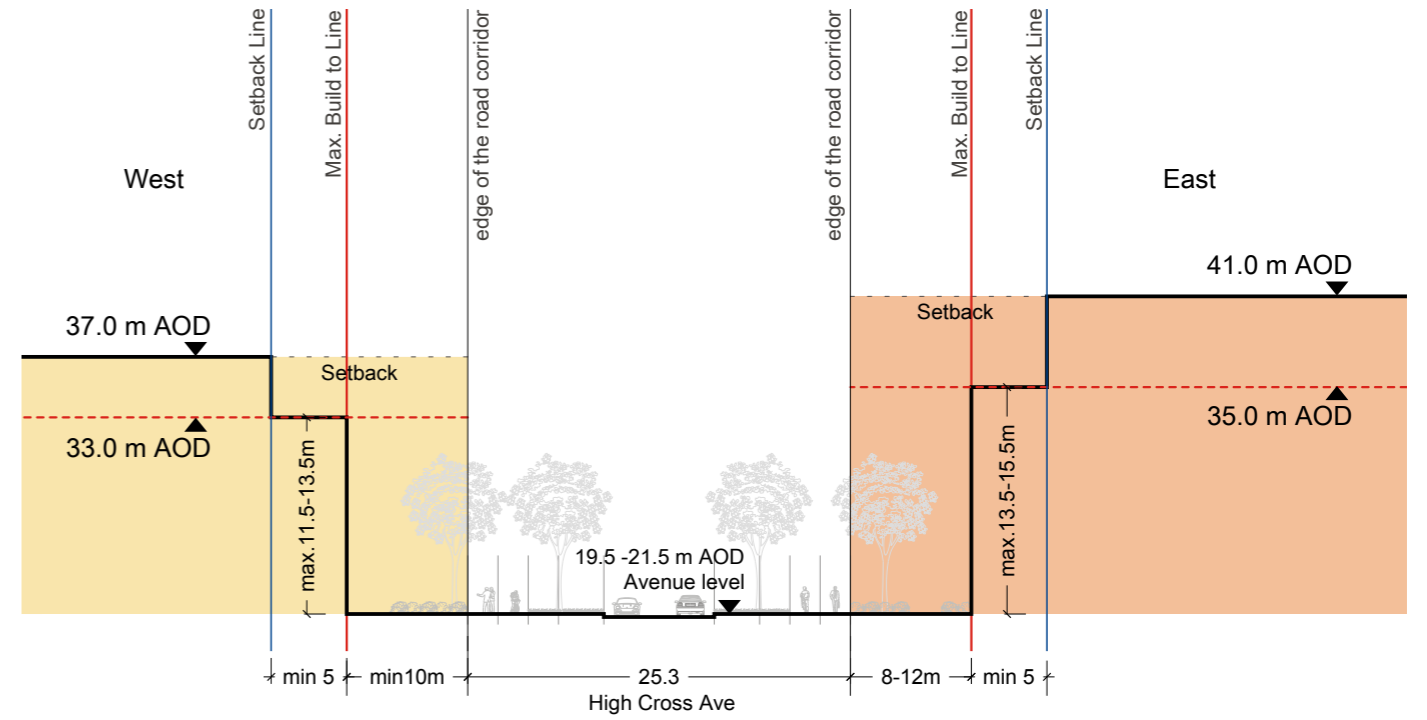
Height Parameters at the West Forum and at The Green allow for additional heights, so that landmark development can be formed, which is intended to mark these key spaces.

- Max. build-to lines must be set back from the road corridor by at least 8m on the eastern side and by at least 10m on the western side of the street.
- These zones must incorporate soft landscape and must be treated and landscaped as part of the street and not fenced off. Smaller areas of cycle parking may be provided.
- An additional frontage height restriction of 33m (west) and 35m (east) AOD must be applied. Any development above this height must be set back by a minimum of 5m from the primary frontage line.
- At the central section of the street a zone of lower height shall be established to maintain the views of the Schlumberger roof structure. The exact positioning of this lower zone should be such to allow views of Schlumberger roofline from The Green and potentially, if possible from the High Cross / Madingley Road junction.
- Any new gaps in frontage shall be a minimum of 15m from building face to building face.

Additional height restrictions do not apply for landmark/taller elements.



81. High Cross Avenue



82. High Cross Avenue Section 1-1 (Parameter Heights 37m and 41m AOD)

- KEY**
- Development Zone edge/ max. build-to line
 - Setback/ additional height restriction zone
 - Indicative location for development Gap
 - Indicative location for frontage break
 - Section Zone

3.3. JJ Thomson Avenue

Street transformation:

JJ Thomson Avenue is one of the existing streets established in the 1999 masterplan.

It is one of the key entrances and approach roads into the site for public transport, cars, pedestrians and cyclists. It must form a strong connection between West Cambridge and the North West Cambridge Development, especially to existing and proposed academic and research areas at Madingley Rise. It will form a connecting spine for a new academic cluster spanning both University sites.

Character:

With a significant new development and new academic departments on both sides of the street, JJ Thomson Avenue will become more lively, with increased activity generated by drop-off/drop-on areas, and by increased pedestrian movement along and across the street.

The profile of the street will be changed to allow for some on-street parking, footpath, separate cycle routes and additional planting.

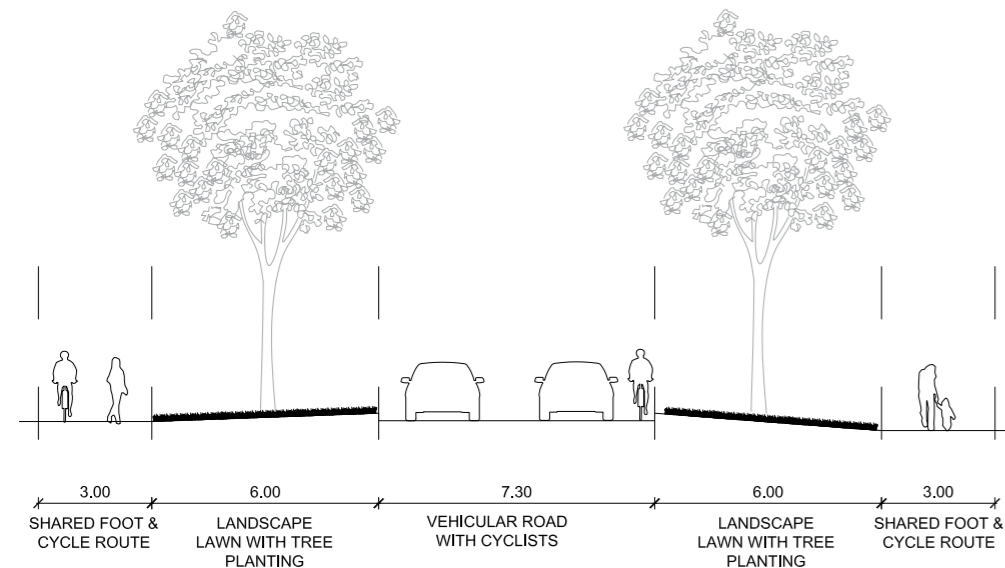
In order to make the street more pedestrian and cycle friendly, the proposed development seeks to soften the current formal appearance created by the straight alignment of the road, with rows of trees. A softer appearance should provide a gradual transition from gently landscaped and more natural Madingley Rise gateway towards the more intense and urban social focus at the East Forum spaces to the south.

Variation in building lines will be encouraged, but set backs will be limited to ensure that the street is clearly defined and enclosed. The areas created by any setbacks will provide an opportunity for additional planting, especially space for larger trees.

Parameter Plan 5 allows for landmarks to the north of the street. Development heights shall respond to this by forming a visible gateway feature to the north of the street.

Arrival Spaces:

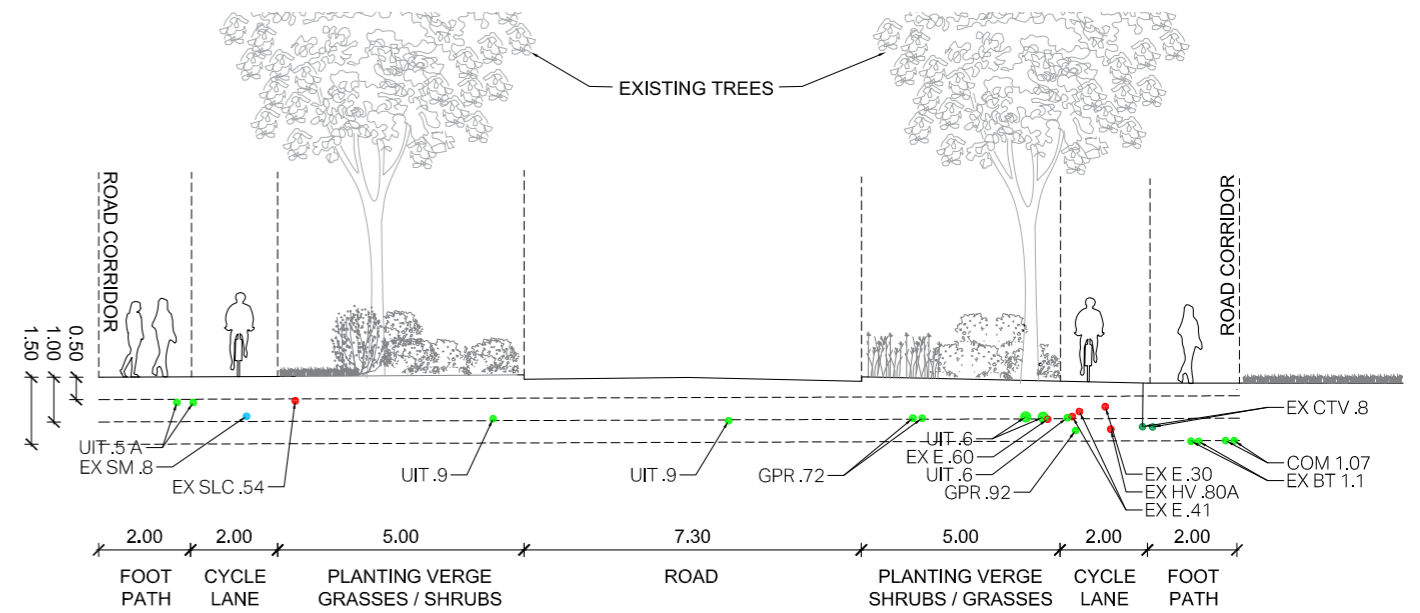
- An arrival space for the East cluster must be located off JJ Thomson Avenue. Direct visual connections between JJ Thomson Avenue and the East Green Link must be provided to aid legibility for those arriving at this point.
- This space must be designed to create a shared pedestrian / vehicle space with pedestrian priority.
- Surface treatments shall avoid overwhelming use of tarmac and upstand kerbs instead having a flush surface material similar to the surrounding footpaths. Planting may be used to soften the perimeter of the vehicle pick-up/drop-off areas.
- An additional arrival space and a drop-off point may be created on the west side of the street, to serve the Cavendish building. Alternatively, the Cavendish building may use the arrival space on the east side.



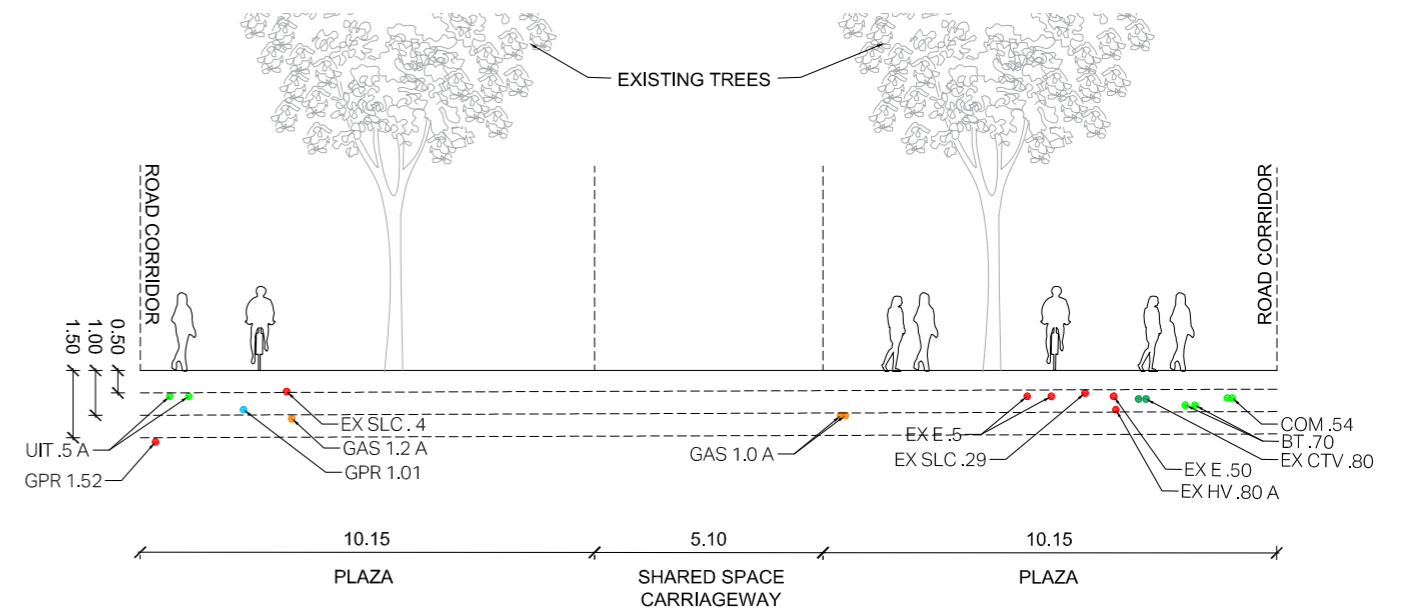
86. Existing Typical Section JJ Thomson K-K

KEY

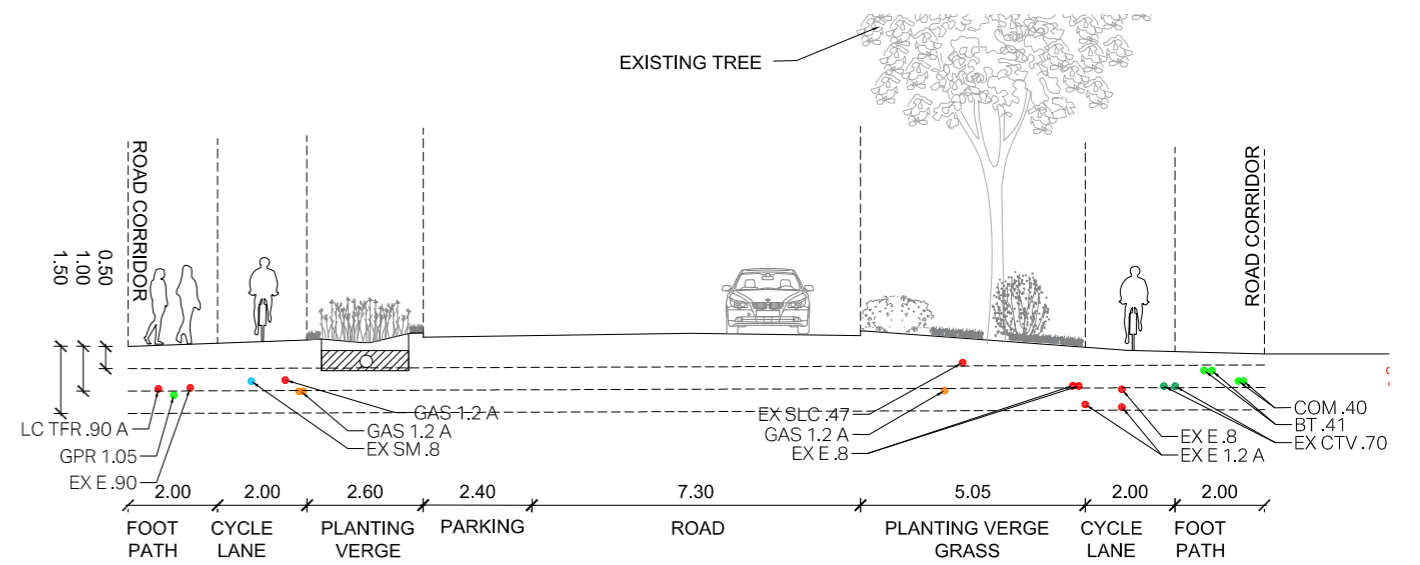
- Communications Cable(s)
- Cable TV Cable(s)
- Electric Cable(s)
- Gas Service
- Ground Penetrating Radar (GPR) Trace
- Security Cabling
- Unidentified Trace
- Water Service



83. Proposed JJ Thomson Section A-A' (Subject to detailed design)



84. Proposed JJ Thomson Section 'B-B' (Subject to detailed design)



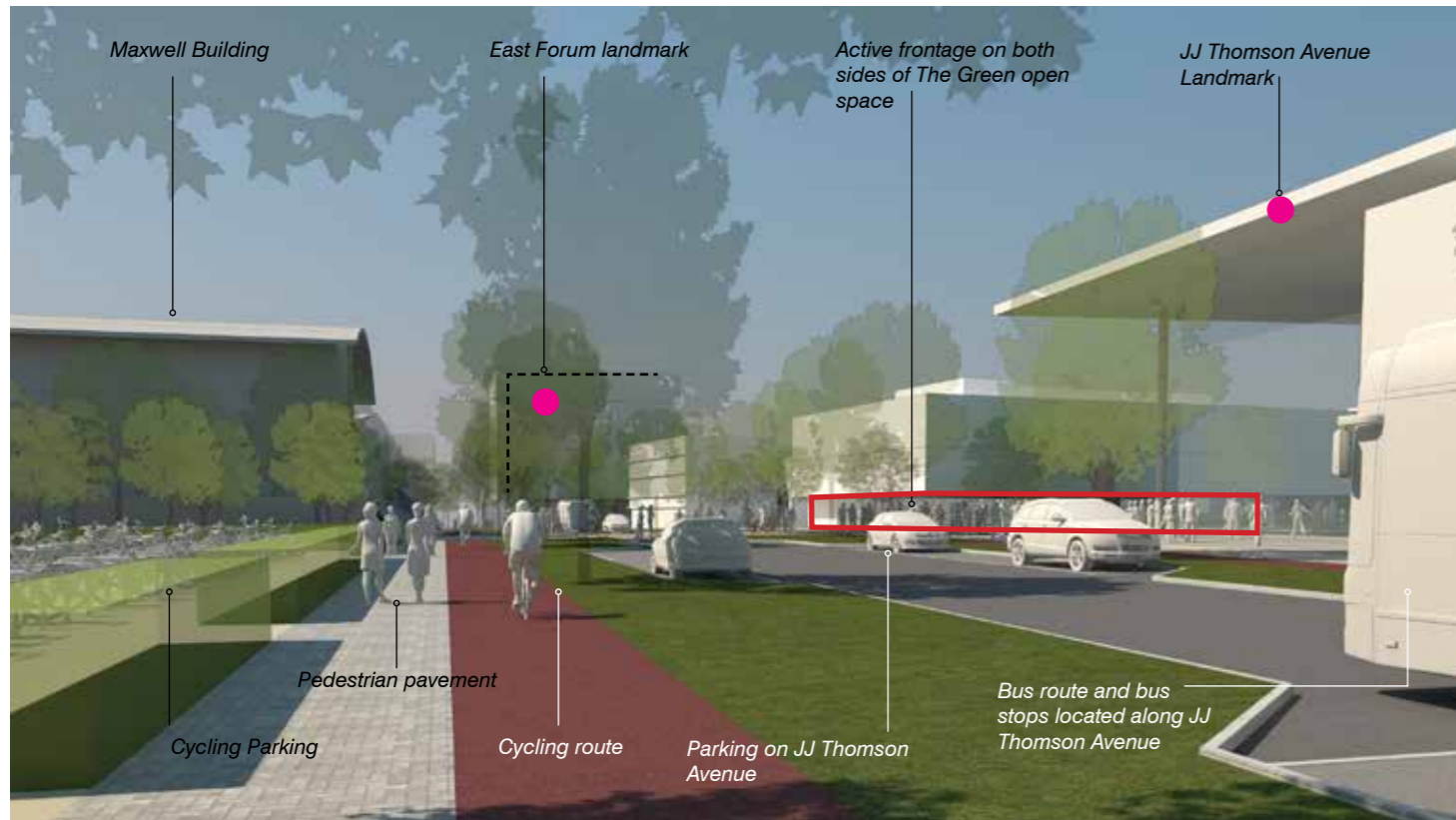
85. Proposed JJ Thomson Section C-C' (Subject to detailed design)

Surface/paving treatment:

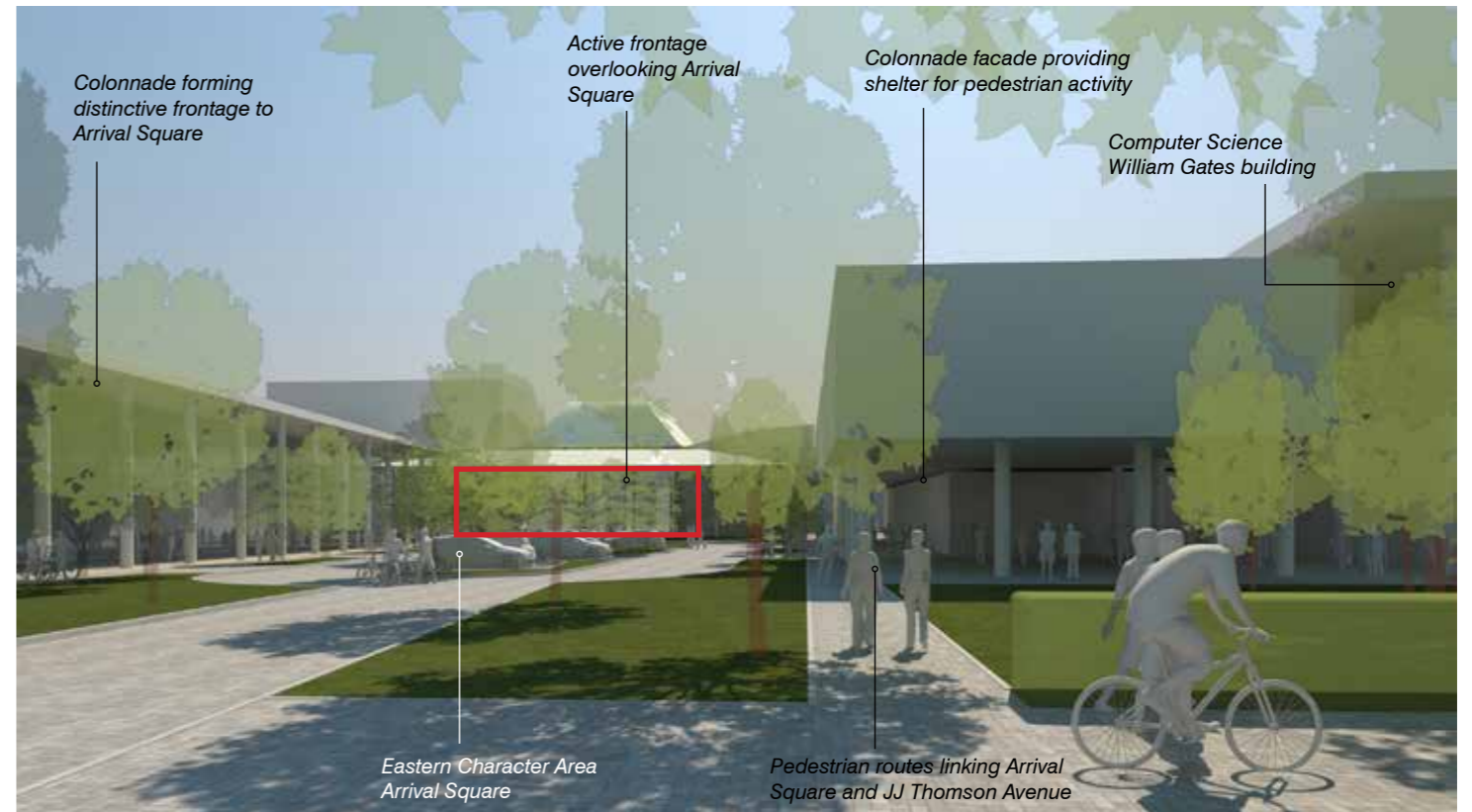
- New dedicated cycle routes must be formed to both sides of the street. Small areas of cycle parking may be located along the street if required.
- The street shall incorporate arrival spaces and drop-off points at appropriate locations along its length.
- Pedestrian and cycle crossing points must be incorporated at key locations - in the north, at The Green and at the East Forum. The road material shall change to denote the crossing point and help to slow traffic.
- On street parking shall be provided along the street
- There should be paved areas along the street to allow ease of access and movement and encourage activity to spill out from active frontages and building entrances.

Landscape and Planting:

- Large feature tree planting shall be incorporated at key spaces such as the gateway to Madingley Road and the interface with The Green. Large tree species must be given the proper environmental conditions and space to grow to maturity.
- The new building frontage shall have building setbacks and will vary in building line to provide pocket landscapes and foreground landscape.
- Where building setbacks occur, landscape must be predominantly soft and planted and the design must respond to the street design so there are no visible boundaries.
- Wherever possible, Sustainable Urban Drainage shall be provided to collect water runoff from the carriageway. These must consider the existing street trees and underground utilities and be planted with a variety of species that are appropriate for the swale and the roadside environment.



87. JJ Thomson Avenue: view looking south



88. JJ Thomson: Arrival Space for the Eastern Cluster

Heights and Street Frontage:

Height Parameters at the East Forum and to the north of the eastern frontage allow for additional heights, so that landmark development can be formed. This is intended to mark the East Forum as a key space and to form a gateway element to the north of JJ Thomson Avenue.

- Development Zones are set to the edge of road corridor.
- The build-to line (primary frontage line) must be set back from the Development Zone edge by a minimum 2m and a maximum 8m, allowing a degree of variation in frontage and building line.
- This zone between the building and the street corridor may be soft or hard landscaped and may accommodate smaller cycle parking areas. This zone should be treated as part of the street and not fenced off.
- An additional frontage height restriction of 34m AOD (both sides of street) could be applied for a minimum of 5m from the primary frontage line.
- Any new gaps in frontage shall be a minimum of 10m from building face to building face.

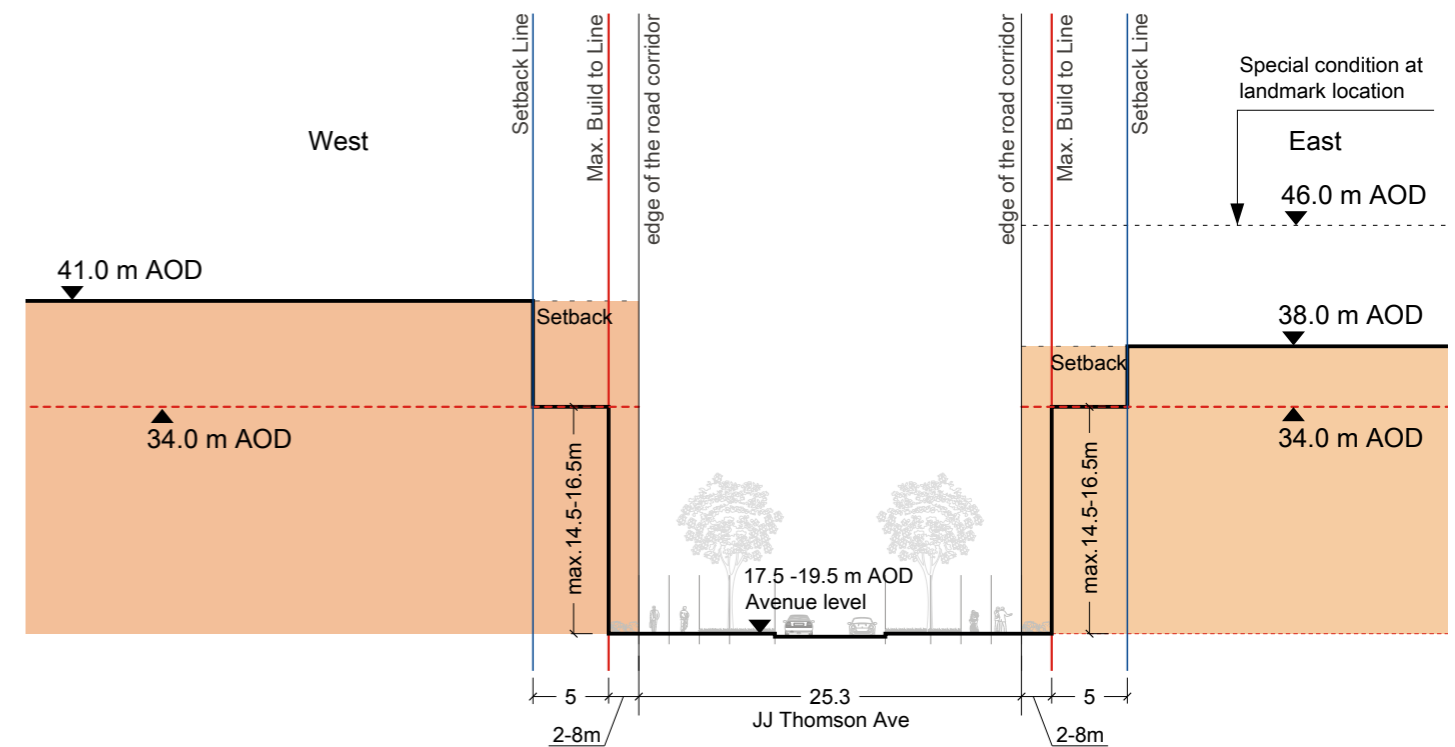
Additional height restrictions do not apply for landmark/taller elements.



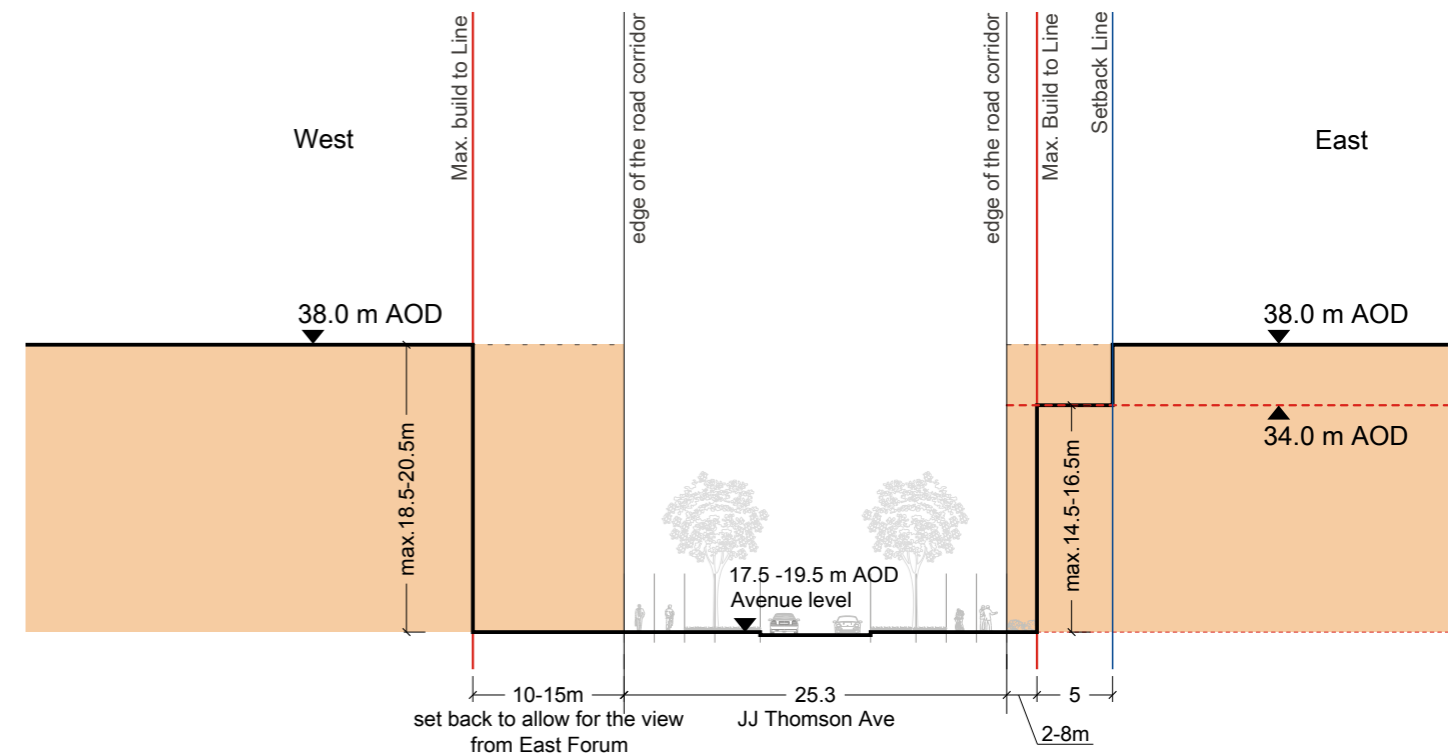
89. JJ Thomson Avenue

KEY

- Development Zone edge/ max. build-to line
- Setback line / additional height restriction zone
- Indicative location for development Gap
- Indicative location for frontage break
- Section Zone



90. JJ Thomson Avenue Section 1-1 (Parameter Heights 41m and 38m AOD)



91. JJ Thomson Avenue Section 2-2 (Parameter Heights 38m and 38m AOD)

3.4. Charles Babbage Road

Charles Babbage Road is one of the existing streets established in the 1999 masterplan. The proposed development retains this street as an important part of the site's urban structure but aims to transform its role and character: into a pedestrian and cycle friendly street, clearly defined by new development on both sides. This transformation will be the key to establish a strong link between the two Forums.

Character:

The current corridor profile shall be altered to achieve a greener character, with pocket landscapes and additional planting to provide a greener setting and additional pedestrian comfort. The street will be animated by active ground floors, building entrances, lobbies and other smaller social spaces along the street. This activity will be greatest in the areas adjacent to East and West Forums, where there will also be cafés and/or restaurants.

The existing Alan Reece building (IfM) and Northern Residences building establish good starting points for the transformation. New development will continue these building lines on both sides of the street, forming a new enclosure and a high degree of overlooking of the street.

The profile of the street will be changed to allow for some on-street parking, separate cycle routes and additional planting and greenery.

Surface/paving treatment:

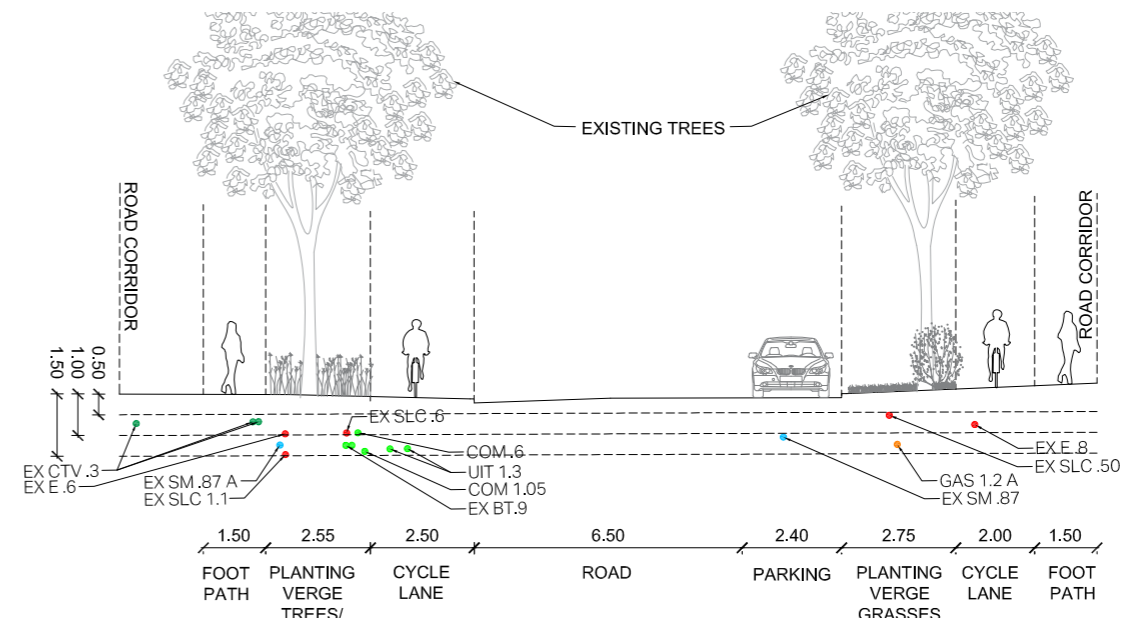
- New dedicated cycle routes must be formed to both sides of the street. Small areas of cycle parking may be located along the street if required.

- Pedestrian and cycle crossing points must be incorporated at key locations - at the West and East Forum and relevant north-south pedestrian links. The road material shall change to denote the crossing point and help to slow traffic.
- There shall be paved areas along the street to allow ease of access and movement and encourage activity to spill out from active buildings and building entrances.
- On street parking shall be provided along the street

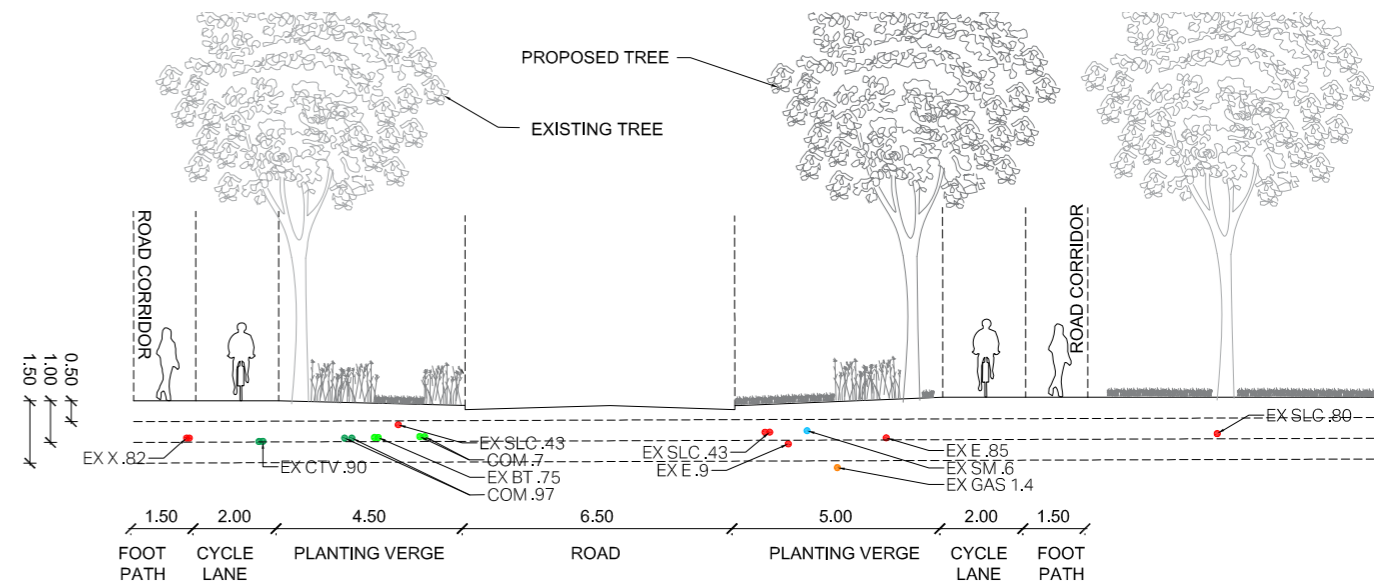
Landscape and Planting:

- Nodes or gathering points along Charles Babbage Road shall be enhanced/highlighted with gaps which will soften the linear alignment of the street and feature planting to assist in orientation and wayfinding.
- In accordance with design guidelines set out in Section 1.2, buildings frontages shall partially set back and vary in building line to provide pocket landscapes.
- Planting shall be relatively ordered/regular along the street, with a limited number of species used.
- Where building setbacks occur the landscape must provide some planting and design must complement the design of the street and also react to any building entrances and/or active uses within.

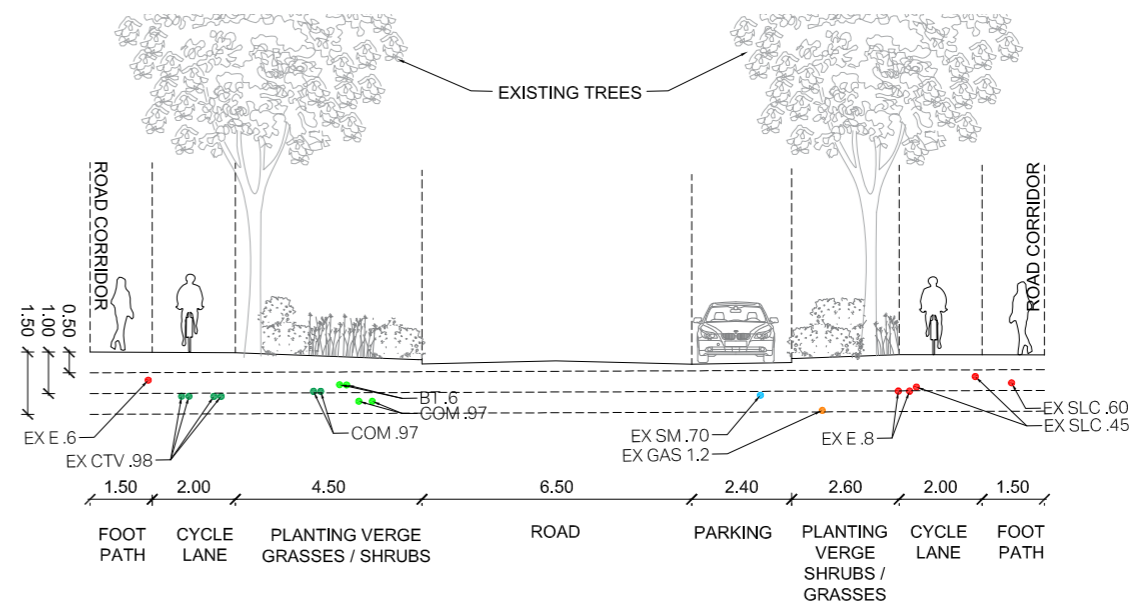
For location of sections, see Figure 98.



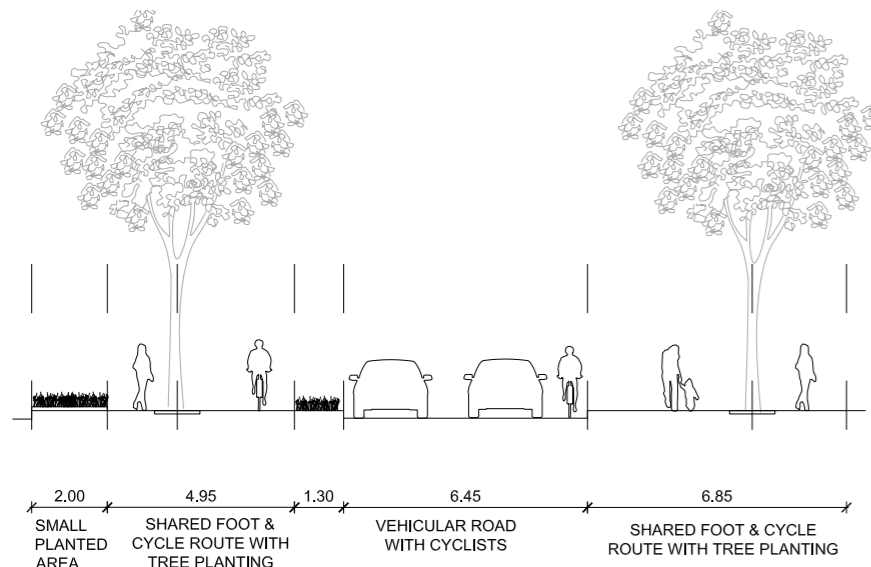
96. Proposed Charles Babbage Section D-D' (Subject to detailed design)



93. Proposed Charles Babbage Section E-E' (Subject to detailed design)



94. Proposed Charles Babbage Section F-F' (Subject to detailed design)



KEY

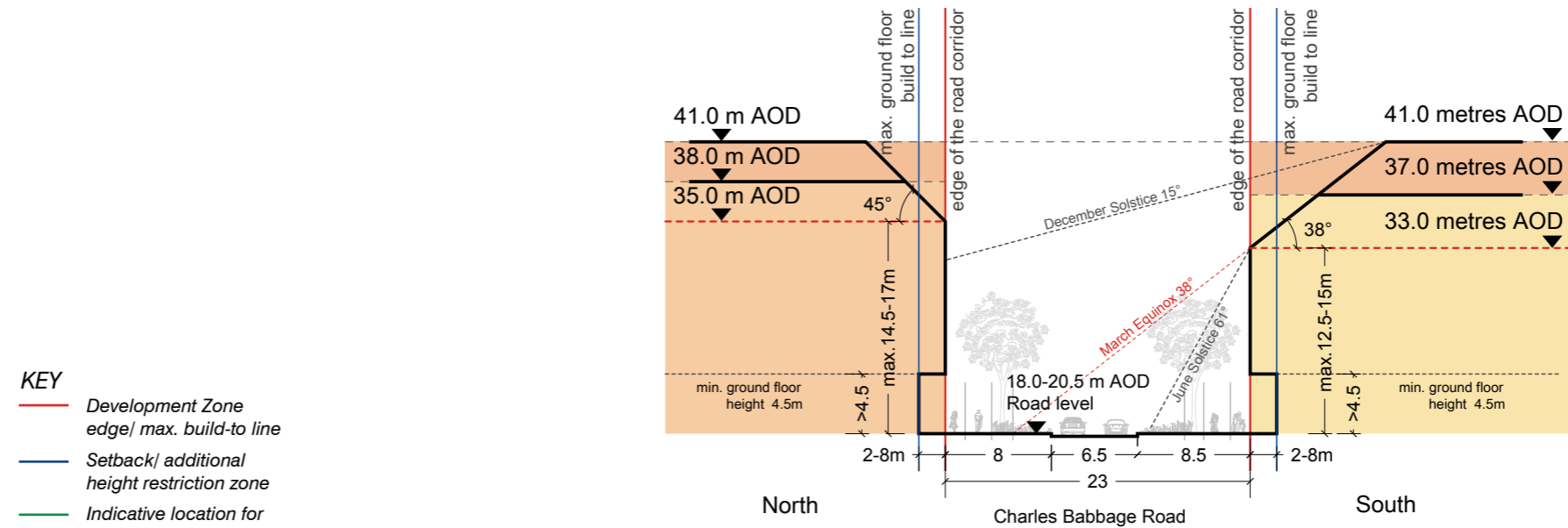
- Communications Cable(s)
- Cable TV Cable(s)
- Electric Cable(s)
- Gas Service
- Ground Penetrating Radar (GPR) Trace
- Security Cabling
- Unidentified Trace
- Water Service

99. Existing Typical Section Charles Babbage L-L

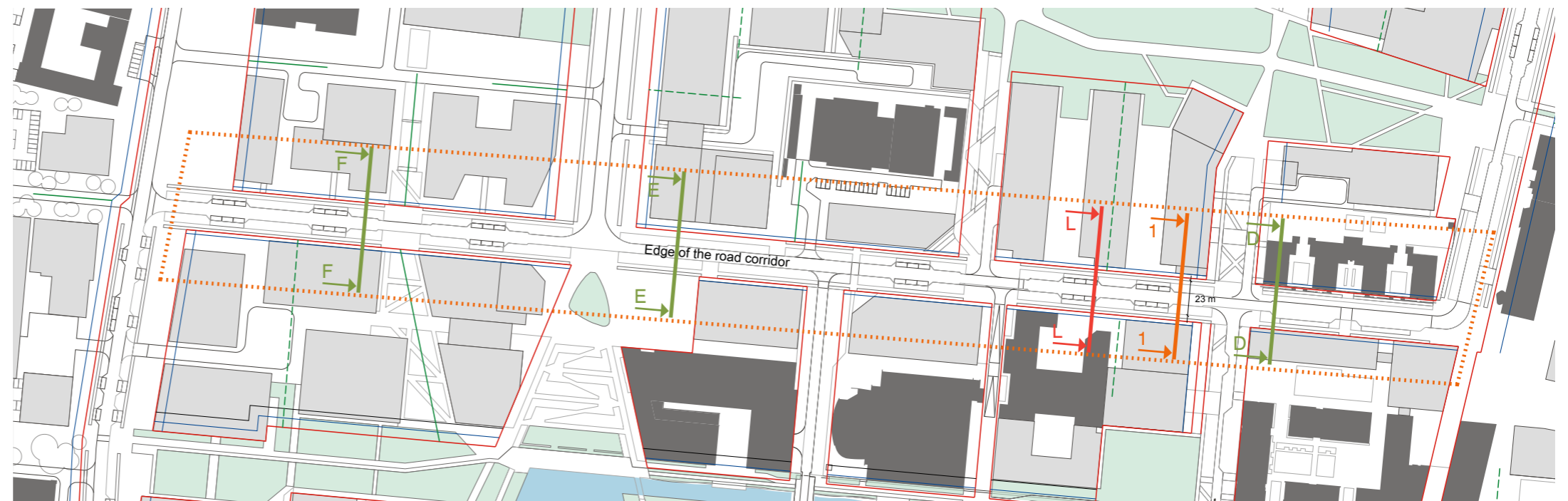
Heights and Street Frontage:

- Development Zones extend to edge of pedestrian footpath/edge of road corridor.
- The heights on the southern side of the street shall be lower to allow good daylight/sunlight penetration into the street, in accordance with approved height parameters.
- The heights on the northern side of the street shall have variation in roofline.
- Build to line on the ground floor must be set back from the Development Zone edge by minimum of 2m and maximum 8m. Upper levels can be built to the Development Zone edge but the street frontage should not exceed the set height of 35m (North) and 33m (South). If there is an overhang above the ground floor, the minimum clear height of the set back space must be 4.5m.
- From the frontage set height, the building heights must stay within the envelopes which rise to the heights set in parameter plans with angles of 45° (North) or 38° (South).
- The ground floor setback zone may be treated with a hard landscape (as a continuation of the street treatment) or may be planted to provide additional greenery in the street. Cycle parking areas may also be located within this zone.
- Long frontages dedicated to servicing, car parking and/or blank façades must be avoided. External plant and storage structures (on frontage or separate structures) must be minimised.
- Any new gaps in frontage shall be a minimum of 10m from building face to building face.
- Activity along the street shall be promoted by locating main entrances to buildings directly onto the street.

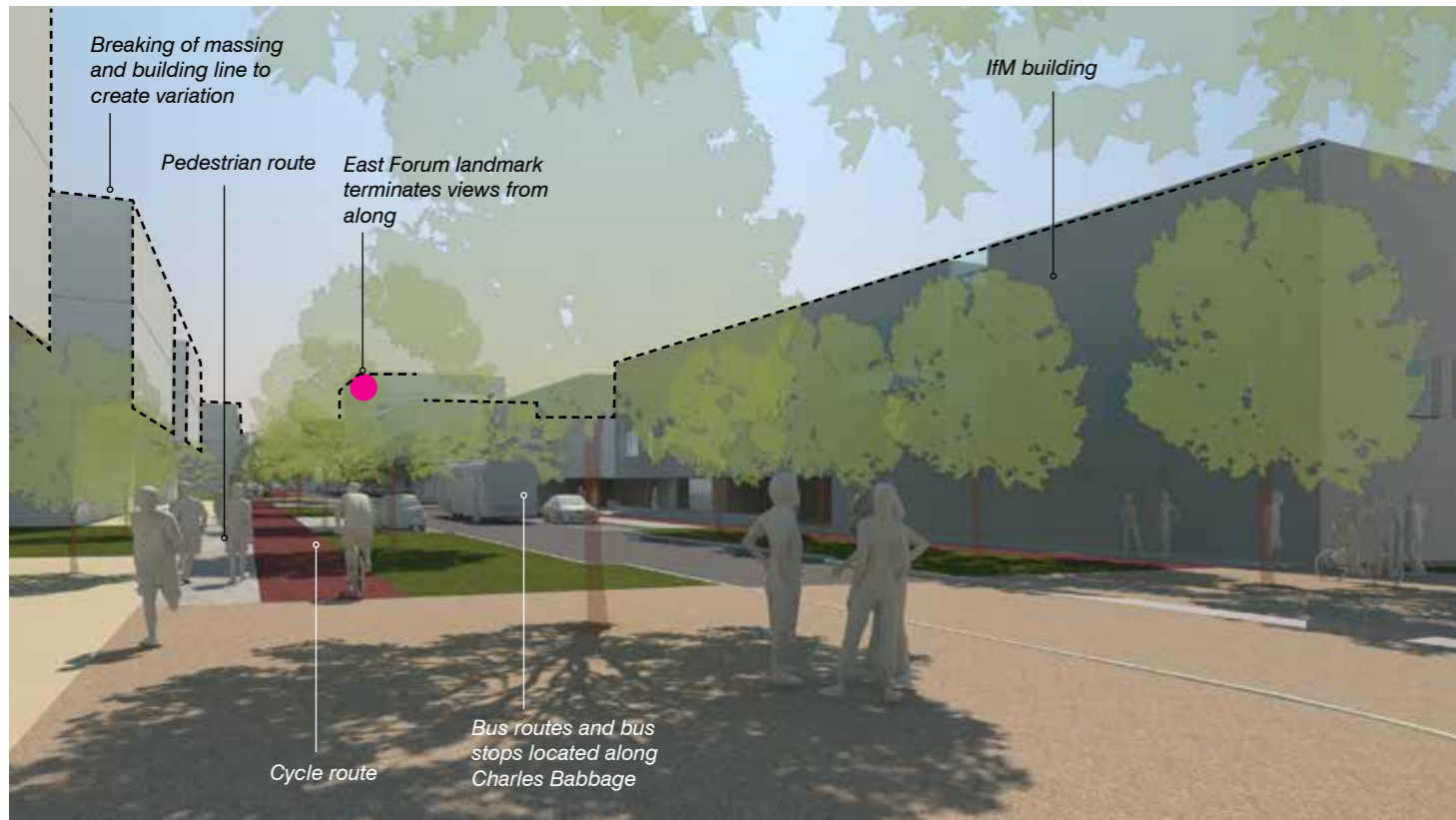
Additional height restrictions do not apply for landmark/ taller elements.



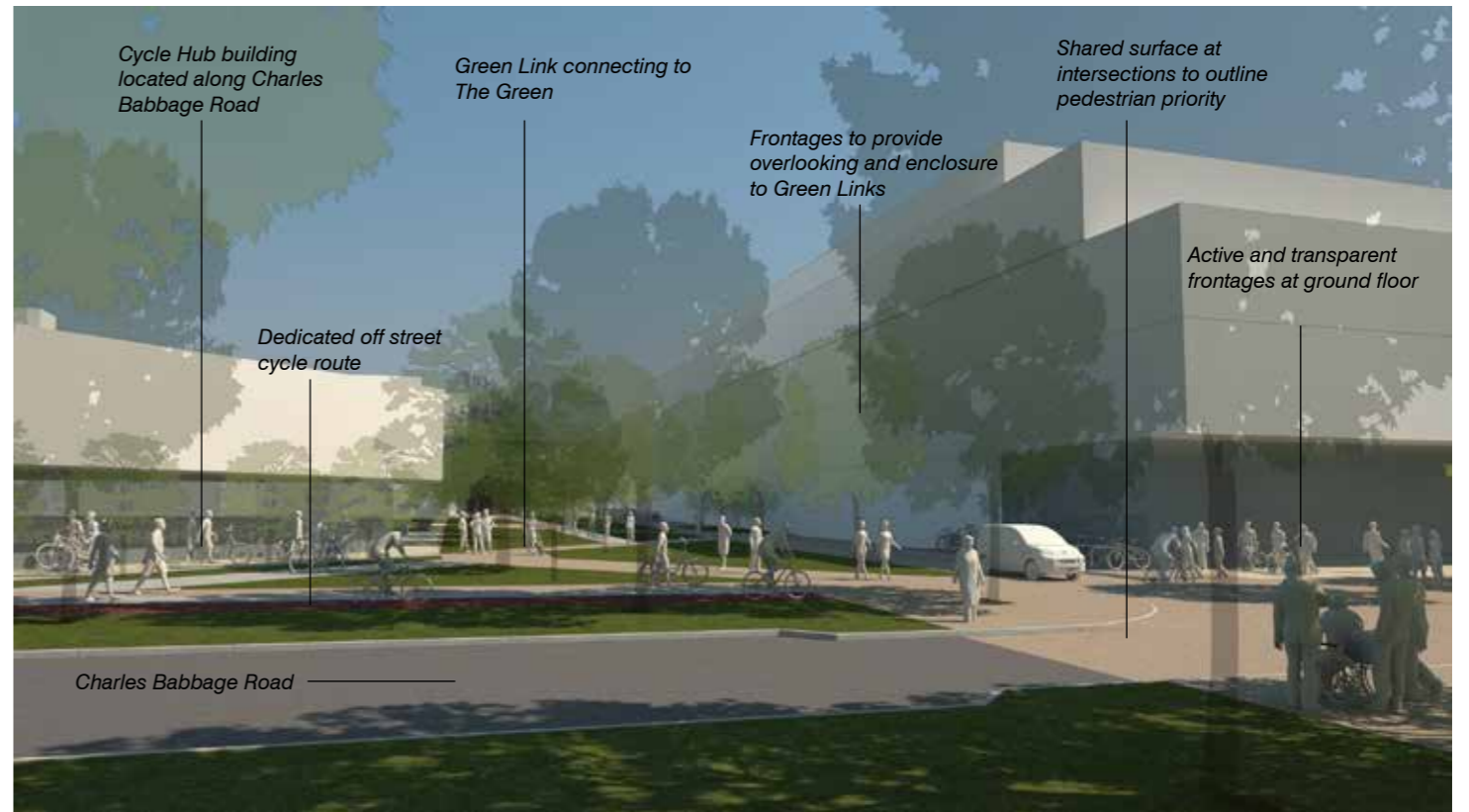
97. Charles Babbage Road Section 1-1 (Parameter Heights 37m, 38m and 41m AOD)



98. Charles Babbage Road



100. Charles Babbage Road looking East



99. View along the northern part of the Central Green Link across Charles Babbage Road

3.5. Western Access / Ada Lovelace Road (Primary Green Link)

Street transformation:

Western Access / Ada Lovelace Road is a street that existed on the site previous to the 1999 masterplan. The new masterplan incorporates this street as an important part of urban structure.

In the new masterplan, this street will form a new access from Madingley Road and will also be transformed to provide a landscaped north-south Green Link. The re-design of this street must accommodate additional traffic without detrimental effect on the character of the street and pedestrian and cycle comfort.

Character:

The existing green and informal character of this street will be maintained. Existing planting and hedgerows will be retained wherever possible. New sympathetic planting shall be introduced to further green this corridor.

The future development will be set back from the road to allow for pockets of foreground landscapes, and gaps will be provided between buildings on the western side of the street for the western Woodland edge to extend farther into the site and be made visible within the street. On the eastern side, the set backs will be more generous as a consequence of the existing gas pipe easement. Because of the easement, the planting types on this side will also have to be restricted.

- Buildings must have full or partial setbacks to provide pocket and/or foreground landscapes.

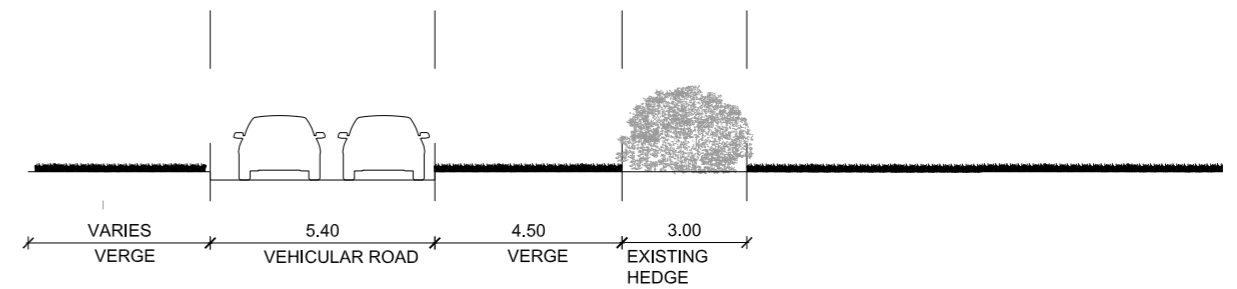
Surface/paving treatment:

- Western Access / Ada Lovelace Road must incorporate a new cycle route and pedestrian pavement to east side of street.
- The street may incorporate arrival spaces and drop-off/drop on points at appropriate points along its length.
- There shall be paved areas along the street to allow ease of access and movement and encourage any activity to spill out from building entrances.
- On street parking should be provided along Ada Lovelace Road.

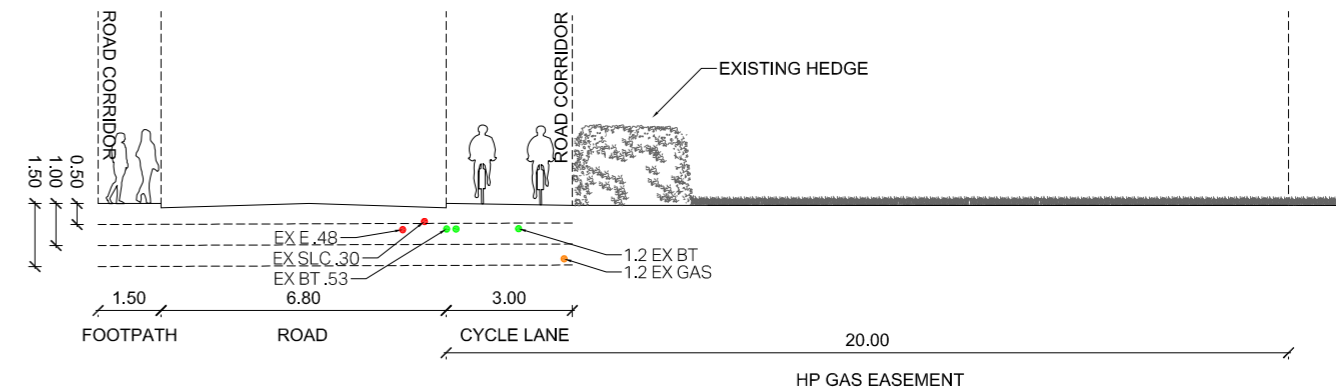
Planting:

- The hedgerow alongside the Schlumberger Building must be retained and, where needed, reinforced with a variety of species to create a continuous, bio-diverse hedge.
- No tree or large shrub planting is allowed within 10m of the underground HP gas pipeline and the planting to this corridor must incorporate low level planting only.
- Where building setbacks occur they shall be planted and landscape design should respond to the design of the street but also react to the building frontage and uses within.
- Additional woodland areas shall be planted between buildings, to reinforce the informal character and bring a woodland character to western edge of street.

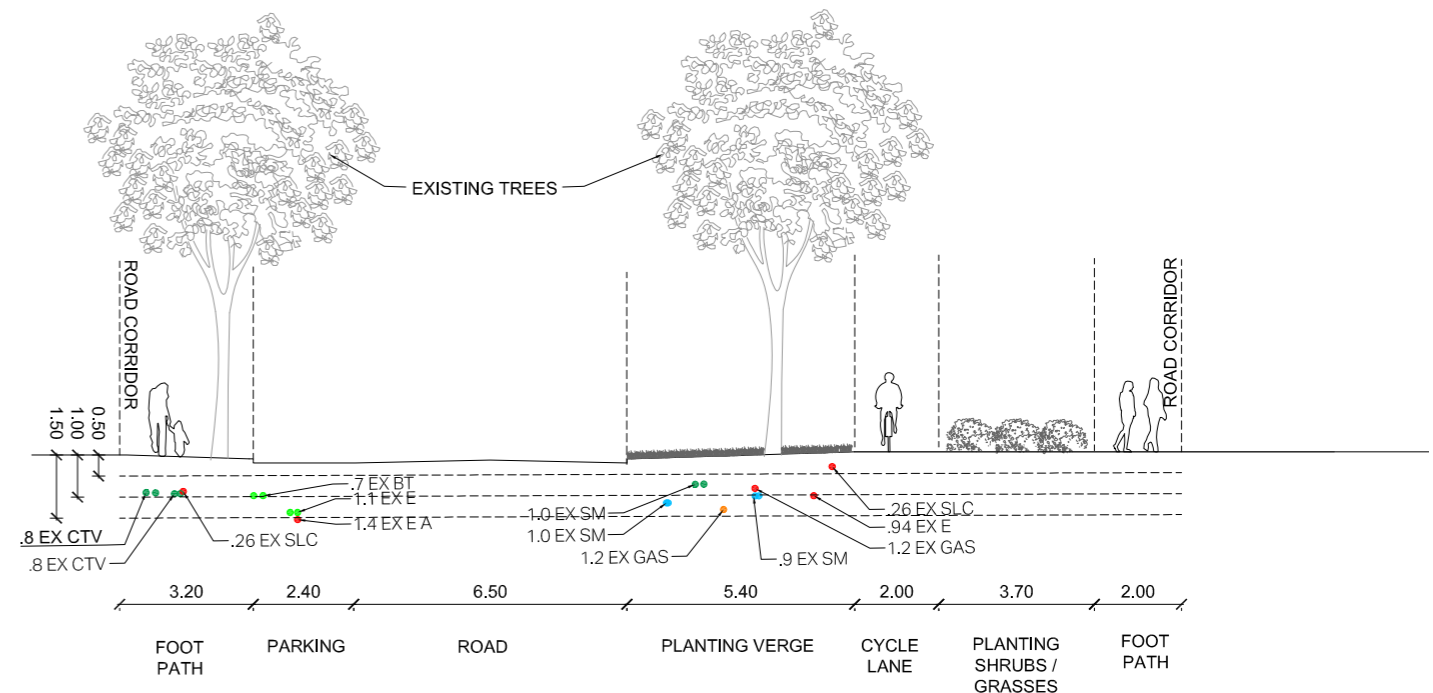
For location of sections, see Figure 106.



104. Existing Typical Section Western Access / Ada Lovelace Road N-N



102. Proposed Western Access / Ada Lovelace Road Section J-J' (Subject to detailed design)



101. Proposed Western Access / Ada Lovelace Road Section I-I' (Subject to detailed design)

- KEY**
- Communications Cable(s)
 - Cable TV Cable(s)
 - Electric Cable(s)
 - Gas Service
 - Ground Penetrating Radar (GPR) Trace
 - Security Cabling
 - Unidentified Trace
 - Water Service

Heights and Street Frontage:

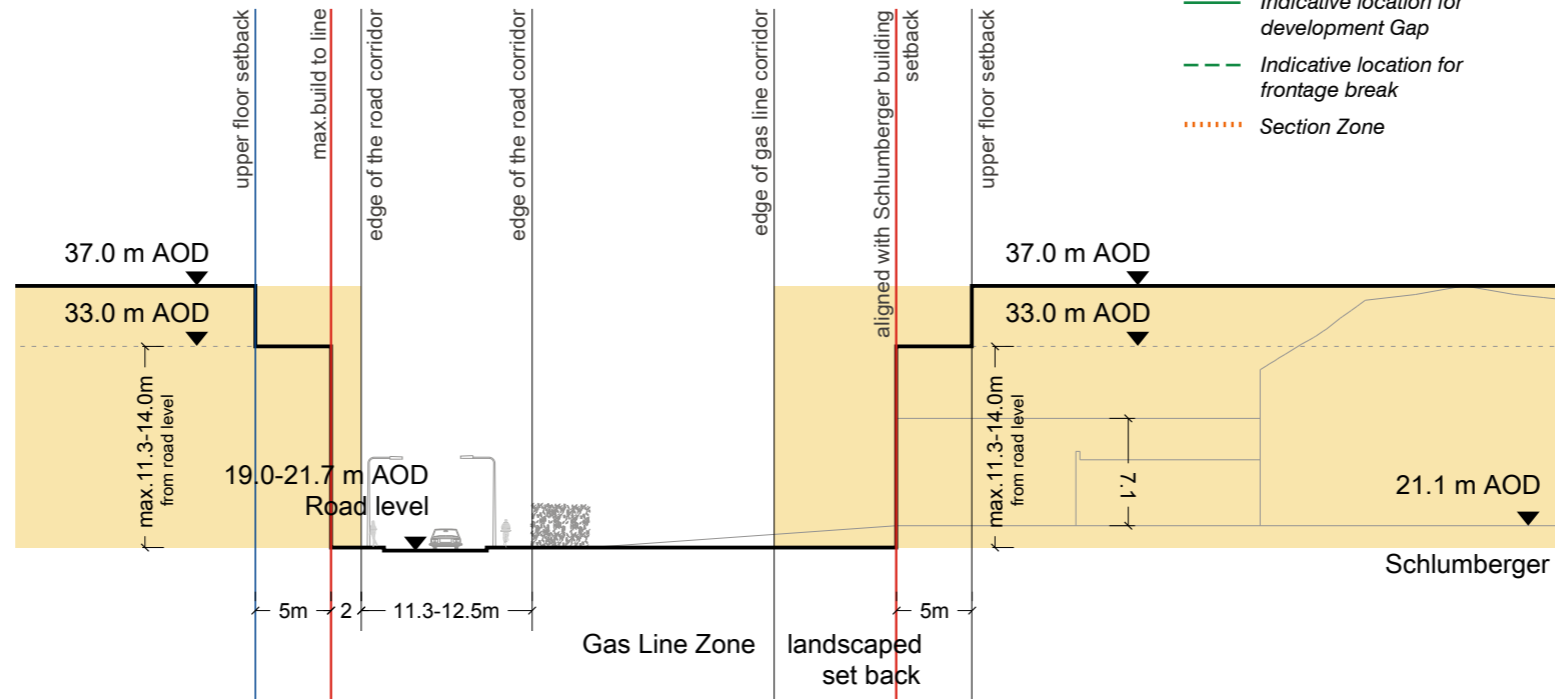
In accordance with the approved heights parameters, heights to along Western Access Road must respond to the existing low density character in this location. Heights are taller around the junction with Charles Babbage Road. Heights then fall again along Ada Lovelace Road towards the Southern edge.

- Development Zones are set to the edge of street corridor on the western side and are established by the gas main easement corridor on the eastern side of the street
- Maximum build to line will be set back from the edge of Development Zone by minimum 2m on the western side, leaving a zone for additional soft landscaping and tree planting and possible smaller cycle parking areas.
- An additional frontage height restriction of 33m AOD applies along the street and any development above this height must be set back by a minimum of 5m from the predominant building frontage.
- Activity along the street shall be promoted by locating main entrances to buildings.

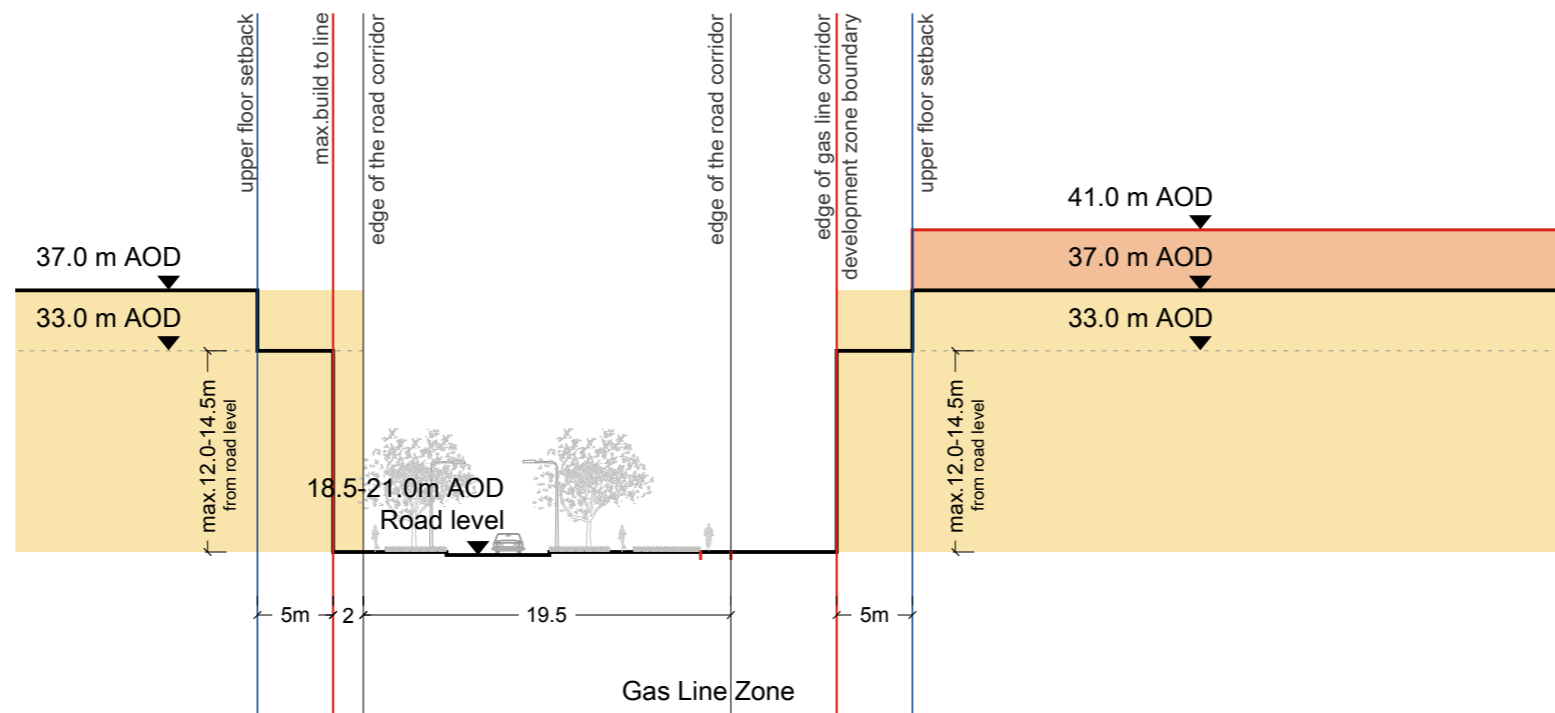
Additional height restrictions do not apply for landmark/ taller elements.

KEY

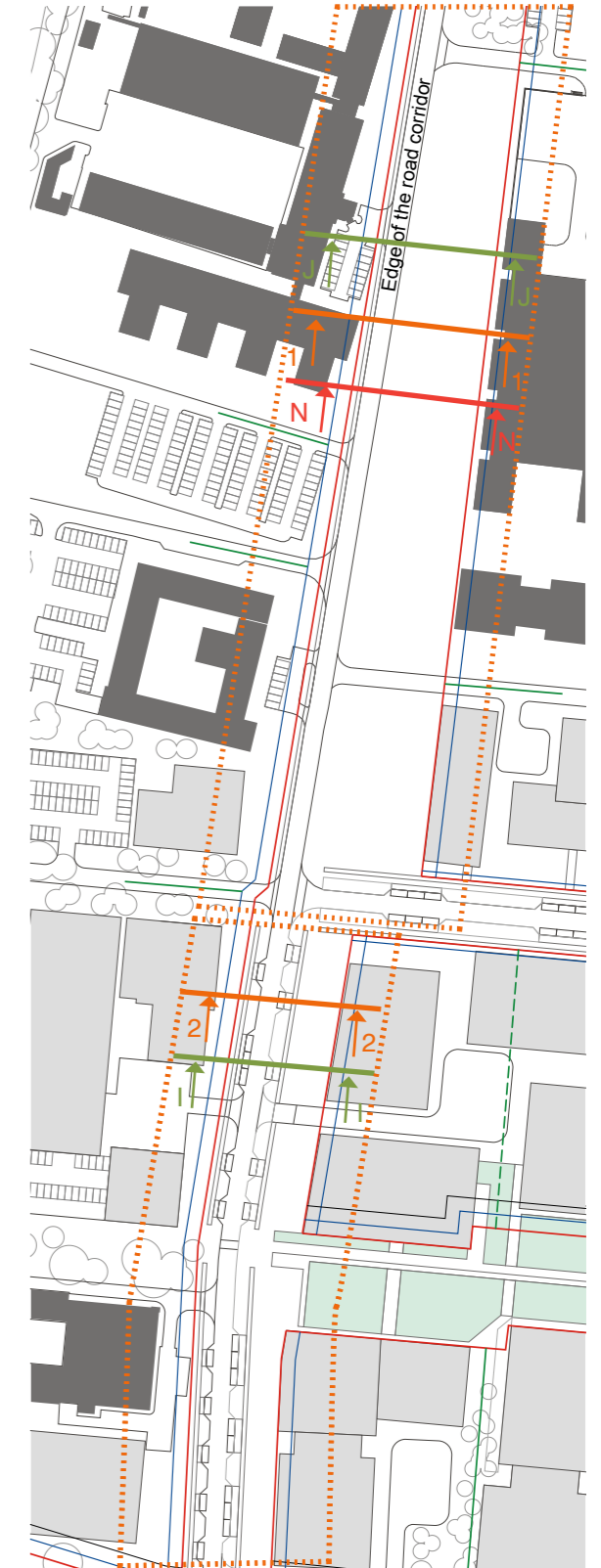
- Development Zone edge/ max. build-to line
- Setback/ additional height restriction zone
- Indicative location for development Gap
- - - Indicative location for frontage break
- ⋯ Section Zone



105. Western Access Road Section 1-1 (Parameter Heights 37m AOD)



106. Ada Lovelace Road Section 2-2 (Parameter Heights 37m and 41m AOD)



107. Ada Lovelace Lane

3.6. East Green Link

Character

The East Green Link is a pedestrian only linear space that unifies and integrates the retained and new buildings within the Eastern part of the site.

This will be a predominantly hard space with tree planting and pockets of softscape, which is expected to be intensively used and activated by buildings.

Heights and Street Frontage:

- The width of the open space must vary, with minimum width being 13m. Areas where the minimum width applies must not be longer than 20m.
- The buildings must have partial set backs up to 6m minimum width on the west side or up to 25m on the east side.
- An additional frontage height restriction of 32m AOD applies along the eastern maximum build to line. Any development above this height must be set back from maximum build to line by a minimum of 10m.

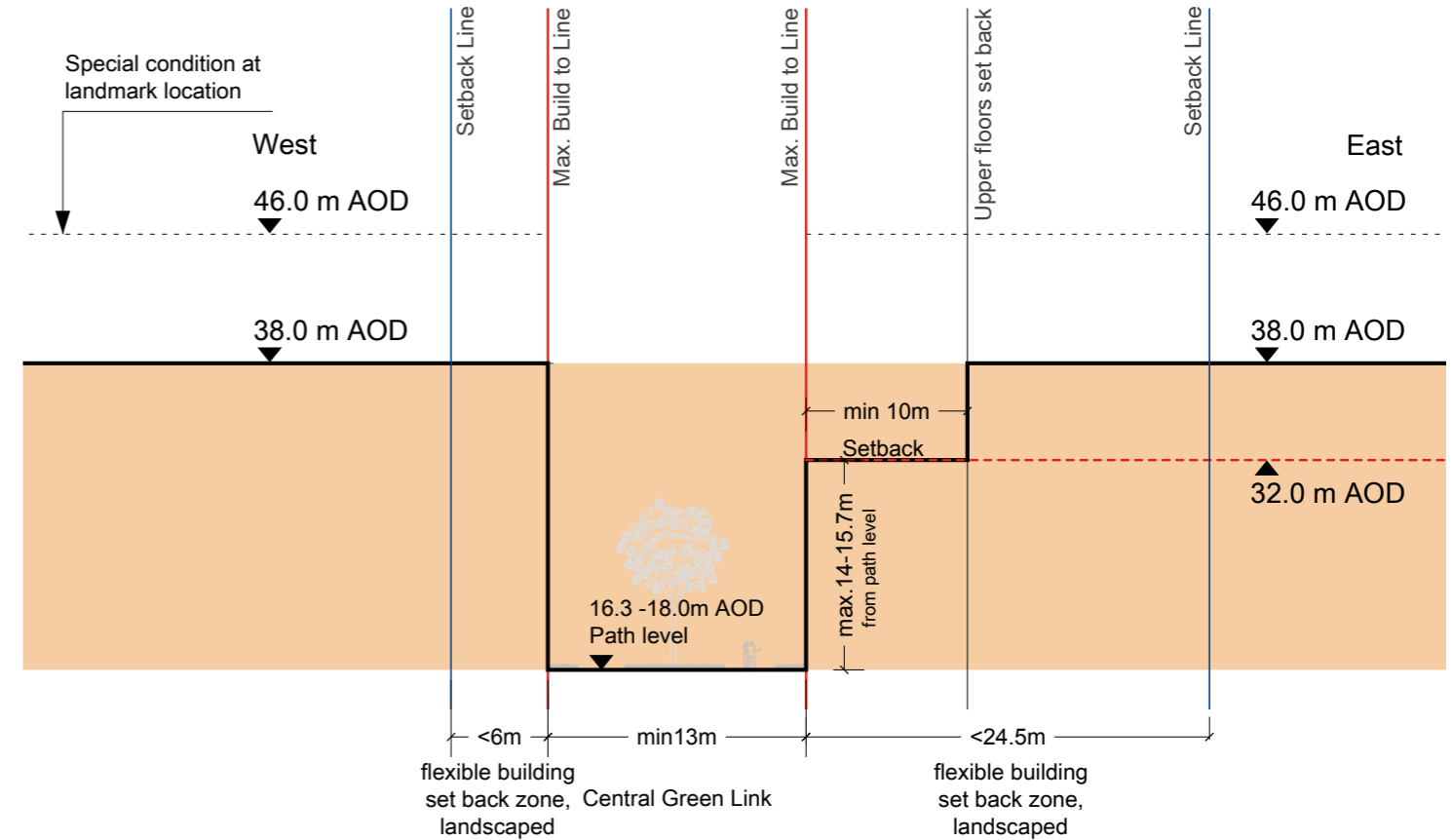
Additional height restrictions do not apply for landmark/ taller elements.

Landscape and Planting:

- The Central Green Link must be a visually coherent space to ensure it acts as an integrating feature through this area.
- The public realm design of this space must serve to prioritise pedestrians and discourage cycling through this space.
- Along the Central Green Link nodes or small scale gathering points shall be formed with the use of, for example planting and/or seating elements. The placement of these gathering spaces must consider aspect, environmental conditions, legibility and pedestrian desire lines.
- Limited/smaller areas of visitor cycle stands shall be located close to building entrances, if required.
- A specific treatment shall be formed for the intersection of the Central Green Link with the The Green/Garden Space. The surface treatment of the north-south pedestrian space shall be continued across the east-west pedestrian and cycle route to indicate the continuation of this connection and pedestrian priority across this space.



108. Central Green Link within Eastern Character Area



109. Central Green Link within Eastern Character Area Section 1-1 (Parameter Heights 38m AOD)

- KEY**
- Development Zone edge/ max. build-to line
 - Setback/ additional height restriction zone
 - Indicative location for development Gap
 - - - Indicative location for frontage break
 - Section Zone

3.7. Central Green Link

Character

This Green Link will be formed from the existing former access to Vet School (between Madingley Road and Charles Babbage Road) and from the existing service lane located west of Southern Residences.

In the north, this corridor incorporates high quality existing trees and re-purposes the public realm to provide pedestrian friendly amenity space, pedestrian and cycle routes and areas for cycle parking. Parts of this link will also include vehicular access routes with limited use.

South of Charles Babbage Road, the link will be widened to provide for planting. In this part of the site, the green link will provide a gap in built form which softens the southern edge and brings agricultural fields deeper into the site.

Heights and Street Frontage:

Maximum building heights are lower south of Charles Babbage Road and in the north along Madingley Road.

- New frontage must ensure that there is good enclosure and must provide some natural surveillance and overlooking of this space.
- In accordance with the Design Guidelines for street frontages (Section 1.2) small pocket spaces must break up the length of longer frontages.

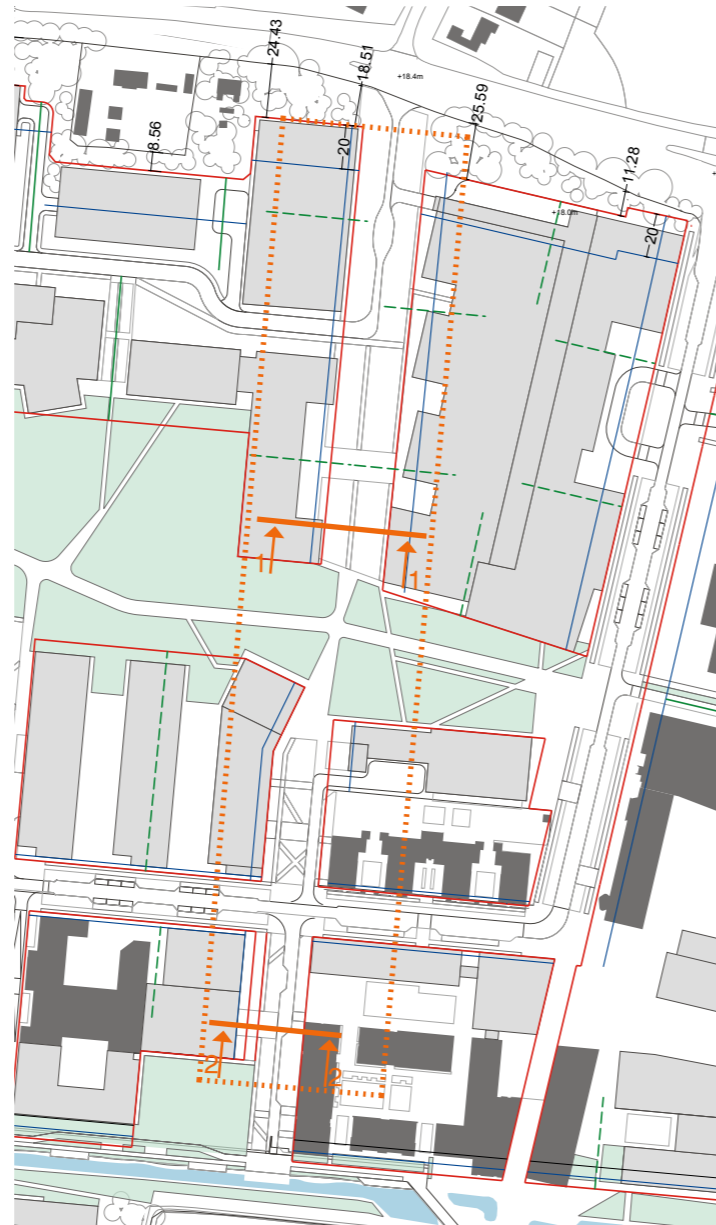
North of The Green:

- Minimum width of the open space must be 30m
- Majority of building frontages must be within flexible set back zone of 10m on the east and 5m on the west side
- An additional frontage height restriction of 34m AOD applies along the frontage and any development above this height must be set back by a minimum of 3m from the predominant building frontage

South of The Green:

- Minimum width of the open space must be 25m
- On the west side, majority of building frontage must be within flexible set back zone of minimum 5m and maximum 15m
- Wider space of minimum 30x30m must be created at the southern end of the link, to allow for one or more large trees to grow to maturity

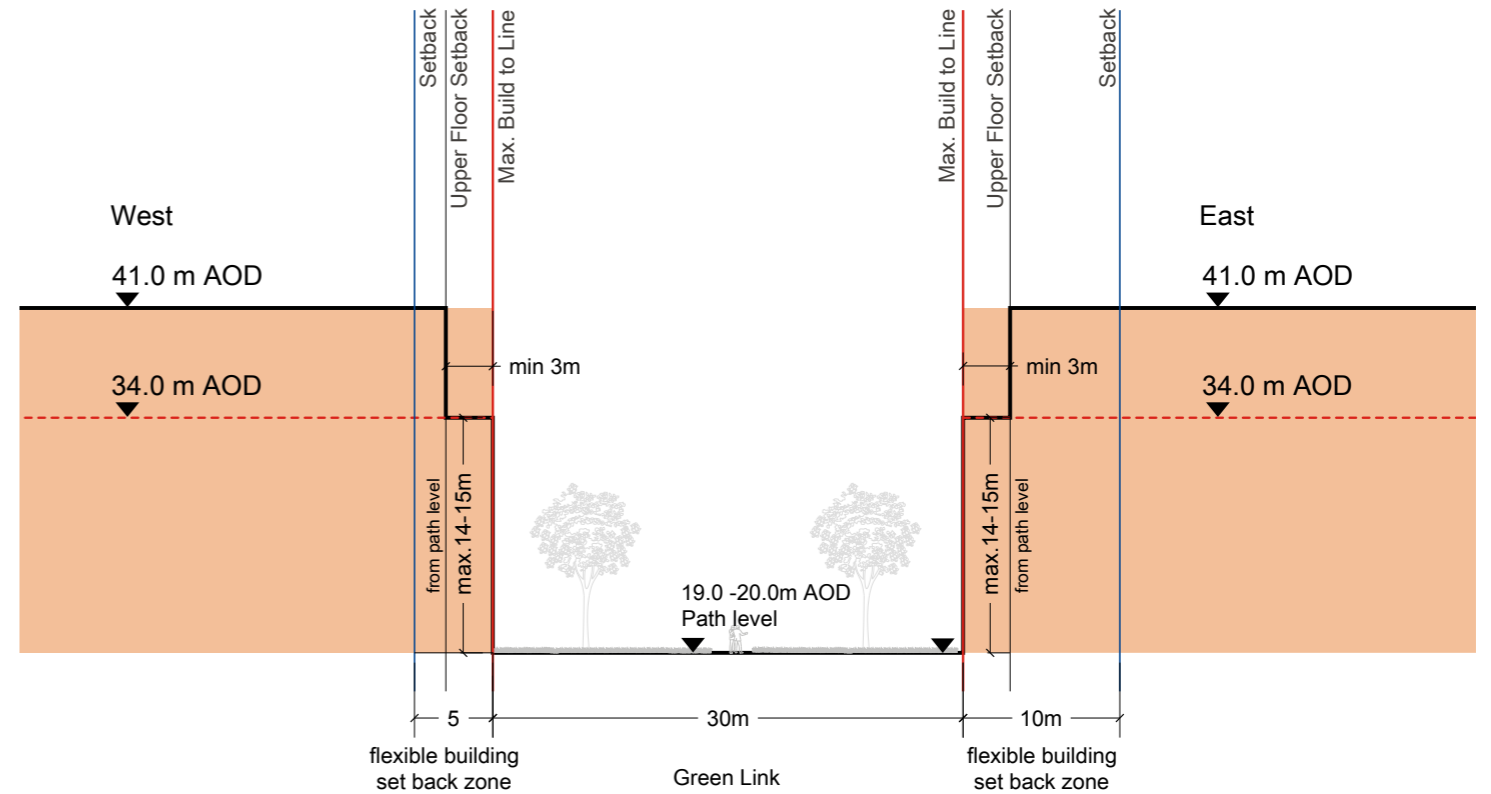
Additional height restrictions do not apply for landmark/ taller elements.



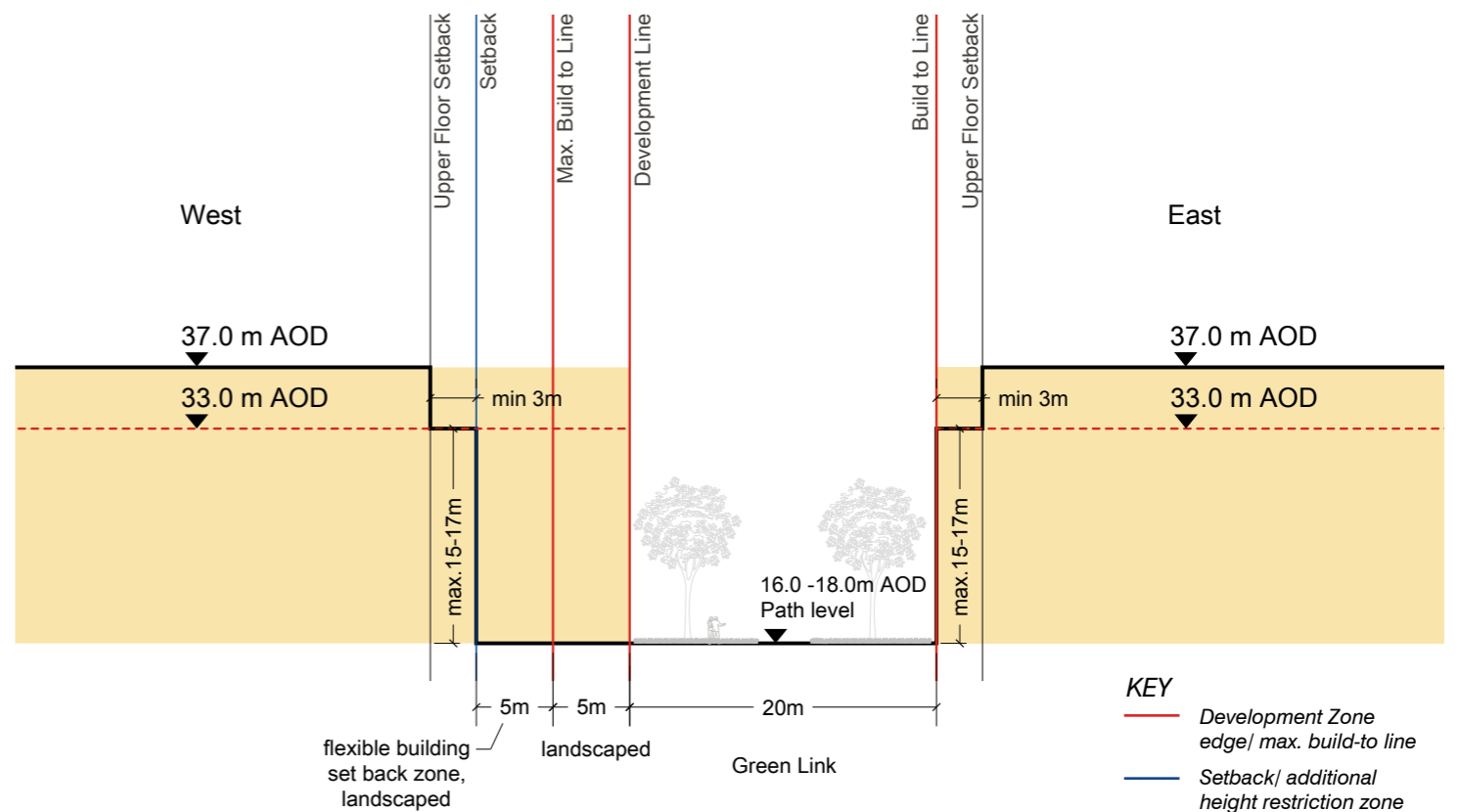
111. Central Green Link

Landscape and Planting:

- Cycle parking may be located along building frontages
- Along the link nodes or small scale gathering points shall be formed with the use of, for example planting and/ or seating elements. The placement of these gathering spaces shall consider aspect, environmental conditions, legibility and pedestrian desire lines.
- Existing trees must be retained and incorporated into this new design wherever possible.

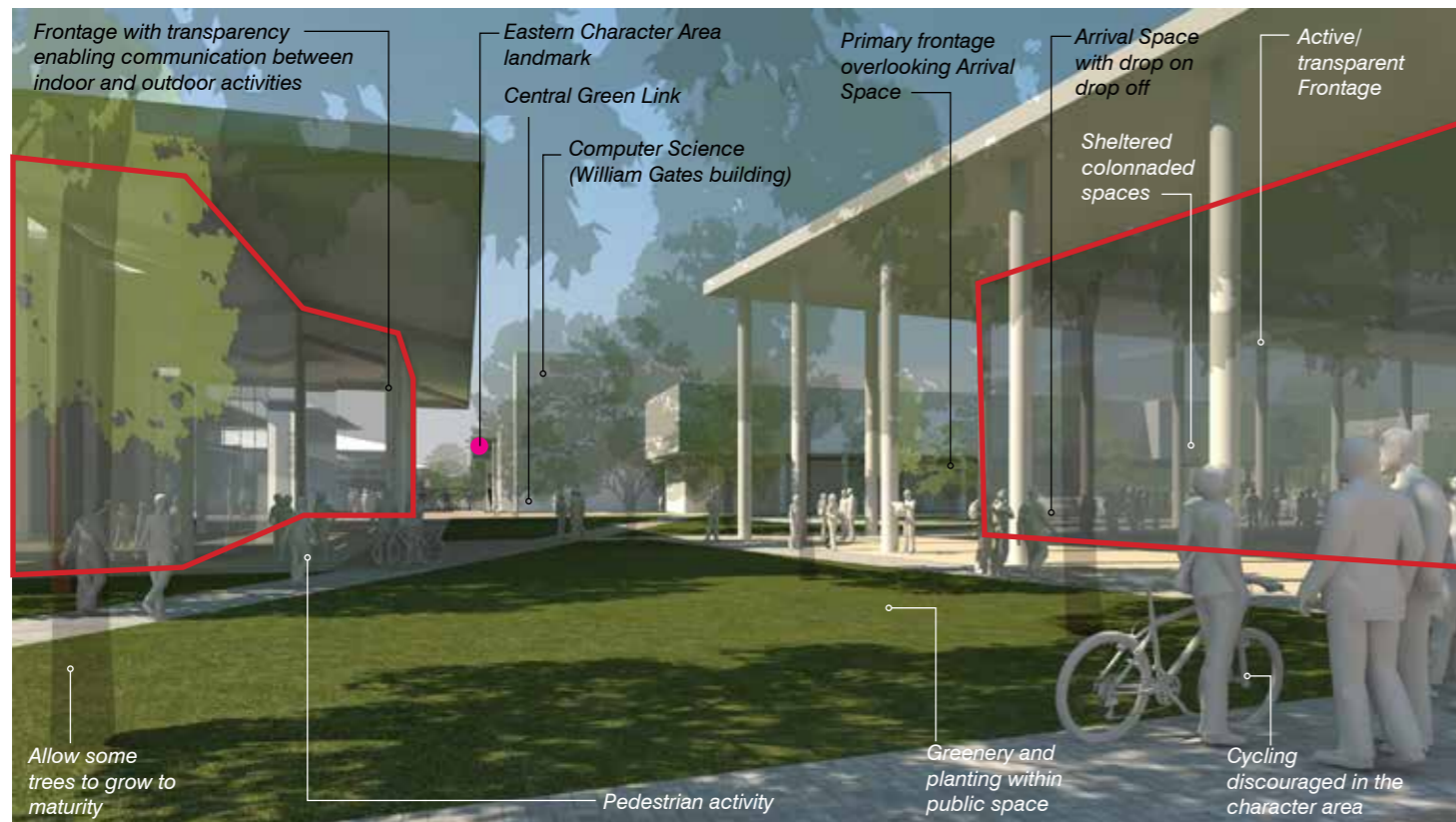


110. Central Green Link Section 1-1 (Parameter Heights 41m AOD)

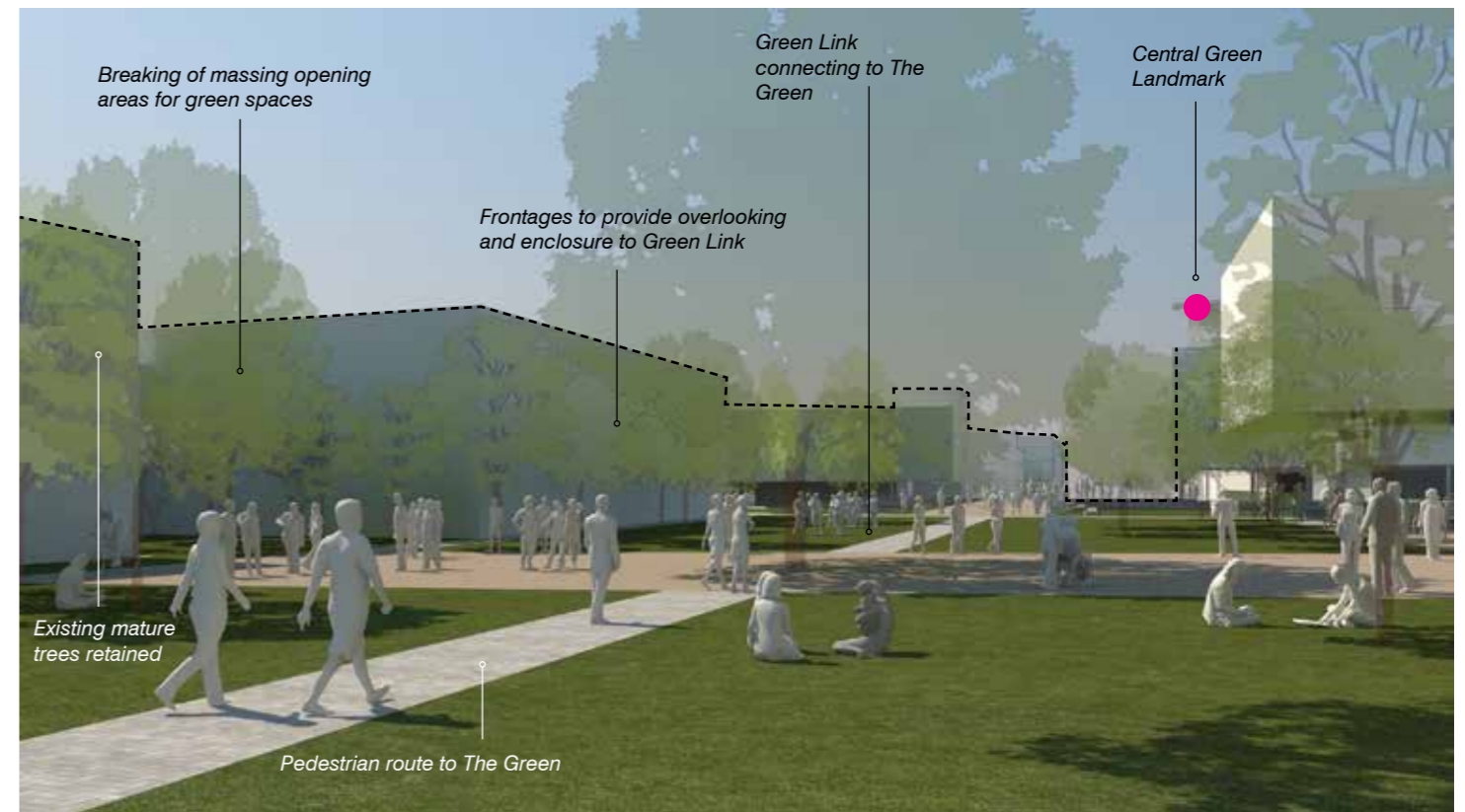


112. Central Green Link Section 2-2 (Parameter Heights 37m AOD)

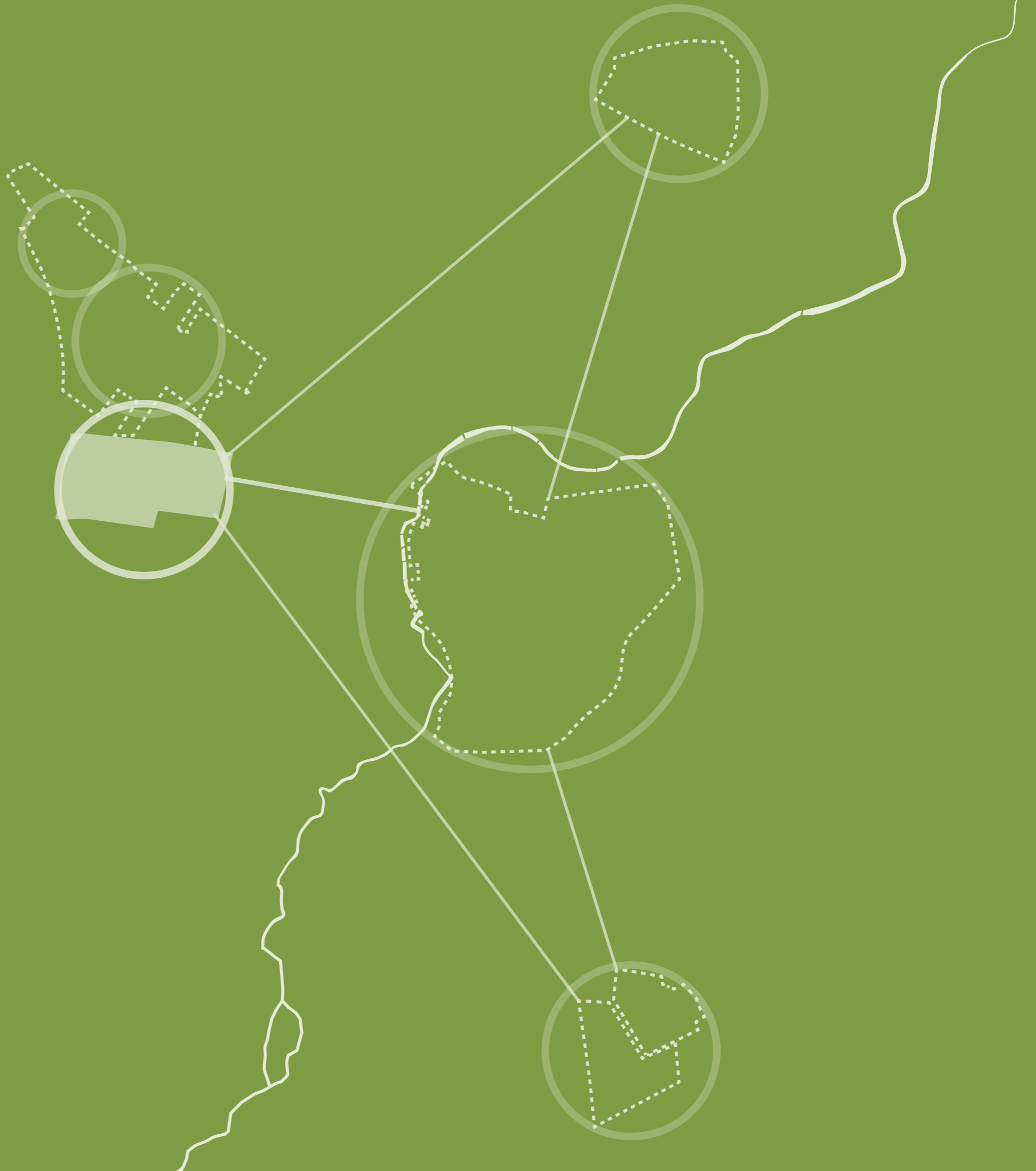
- KEY**
- Development Zone edge/ max. build-to line
 - Setback/ additional height restriction zone
 - Indicative location for development Gap
 - Indicative location for frontage break
 - Section Zone



113. East Green Link: view looking south towards The East Garden



114. Central Green Link: view looking south



SITE EDGES

04

4. SITE EDGES

4.1. Introduction

With exception of a part of the southern edge, the West Cambridge site is framed by a significant woodland buffer which contains the site and limits its visibility from the immediate surroundings.

The woodland buffer is an important element of the character of Madingley and Clerk Maxwell Roads, as well as this part of the city, to which the woodlands lend a semi-rural feel.

Along the western edge, where the site is bordered by the M11 motorway in a cutting, the woodland edge provides a green setting for the site in longer views from the west and also along the bridleway that runs north-south through the woodland.

In contrast, the southern edge of the site is much more open, only partially framed by woodlands along its western (less developed) part. Upper parts of several existing buildings are visible from distant views, across the agricultural fields in the south. This southern frontage of the development was one of the key elements of the 1999 masterplan: the planned building heights were taller along this edge and a colonnade was proposed to run along the length of the Coton Footpath, establishing a very well defined, distinctive civic frontage.

The Guidelines aim to maintain and enhance the green character of the site edges to better visually integrate the development with its surroundings, by controlling development along the edges (height, length and material appearance of buildings), and also by ensuring the site itself has a green character consistent with this part of Cambridge.

- The existing woodland buffer must be maintained and, where needed, reinforced. Any additional planting must be of the same species as existing.
- Where service areas, multi storey car parks and development 'backs' are located along the edges, they must be screened by the existing woodland buffer (reinforced where necessary), additional planting, or sensitively designed.
- Gaps between frontages shall be used to break frontage lengths in accordance with Section 1.2 of these guidelines. Gaps must be appropriately planted, ensuring that some individual trees can grow to maturity.
- Any visible security boundaries and gates to service areas shall be of appropriate quality and material and where possible set within planting.
- Limited views into the site shall be provided at key gateway points to the north. Two key gateway points shall be established on Madingley Road, which will also provide links across Madingley Road to the North West Cambridge Development and Madingley Rise.



115. West Cambridge - Site edges

KEY
 SITE EDGES

The following guidelines will apply to the site edges:



116. Madingley Road site edge



117. Southern site edge



118. Clerk Maxwell Road site edge



119. Western Woodland edge

4.2. Madingley Road

Madingley Road is a key approach road into the city from the west, so any visible development here should be of high quality to provide an appropriate visual statement which is sensitive to the character of Madingley Road.

It will be particularly important to protect the character of the Conduit Head Road and West Cambridge Conservation Areas to the north of the Madingley Road.

Frontage Heights and Development Zone:

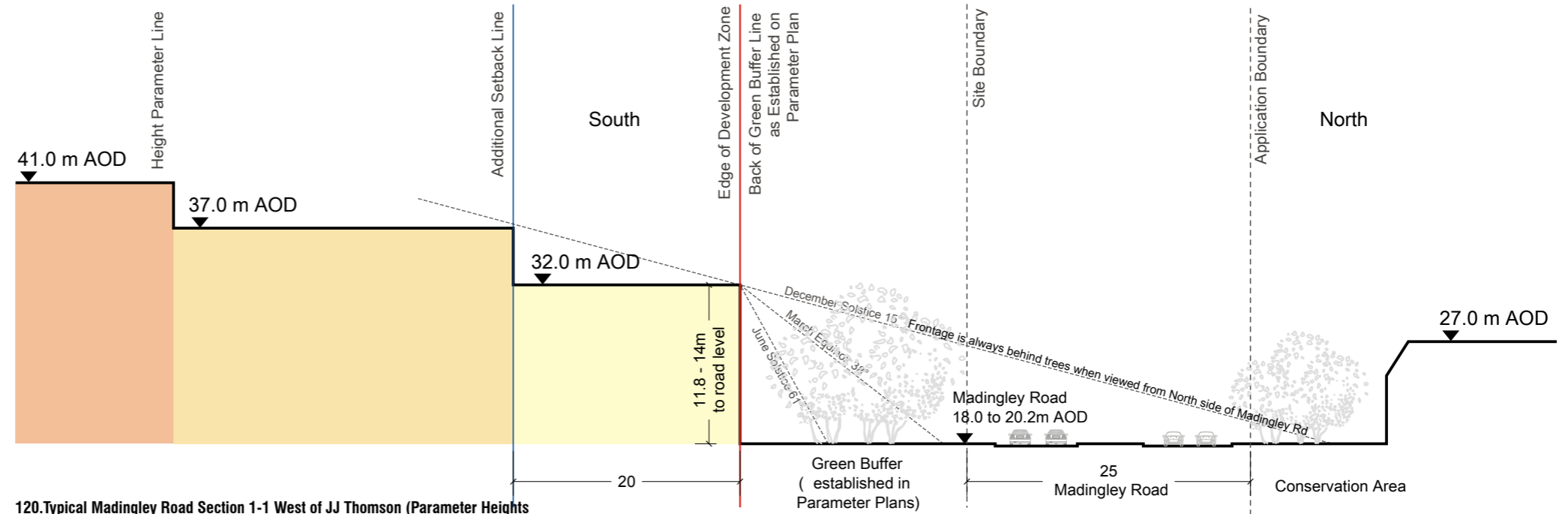
AOD heights established in Parameter Plan 5 include rooftop plant but exclude flues.

- Rooftop plant shall not be located within the 32m AOD zone (a 20m wide zone south of the retained woodland buffer).
- Any rooftop plant within the 37m or the 41m AOD zones shall be effectively screened in views from the north, to reduce any visual impact from Madingley Road.
- External plant and/or storage structures (on frontage or separate structures) must be minimised and shall not be visible from the West Cambridge and Conduit Road Conservation Areas, or associated listed buildings

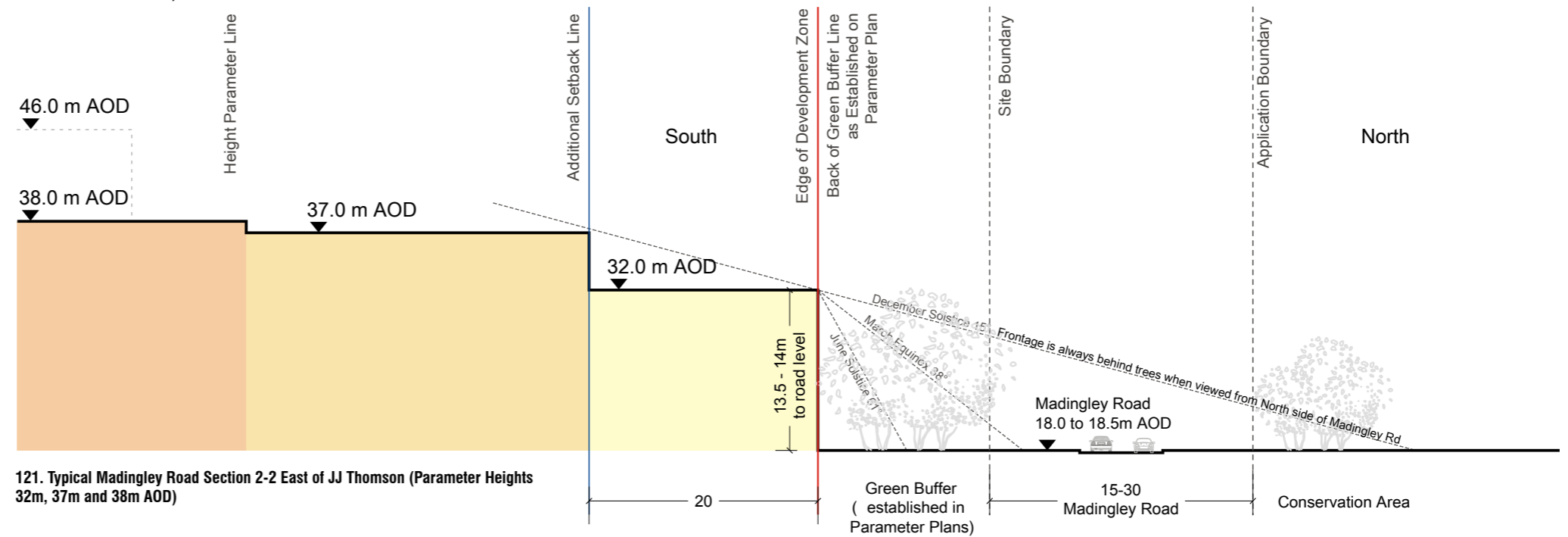
Additional height restrictions do not apply for landmark/ taller elements.

Landscape and Planting:

- Any new landscaped gaps shall be a minimum of 15m from building face to building face.
- The greenery of the woodland buffer shall be extended southwards to West Green by adding planting to this part of the site.



120. Typical Madingley Road Section 1-1 West of JJ Thomson (Parameter Heights 32m, 37m and 41m AOD)



121. Typical Madingley Road Section 2-2 East of JJ Thomson (Parameter Heights 32m, 37m and 38m AOD)

- KEY**
- Development Zone edge/ max. build-to line
 - Setback/ additional height restriction zone
 - Indicative location for development Gap
 - Indicative location for frontage break
 - Section Zone



122. Development Zones and additional height restrictions along Madingley Road

4.3. Southern Edge

Along the southern edge, the goal will be to minimise the visual impact of the proposed development from long distance views and provide a better micro-climate in the open spaces, particularly related to reducing glare from sun and exposure to wind.

Frontage Heights and Development Zones:

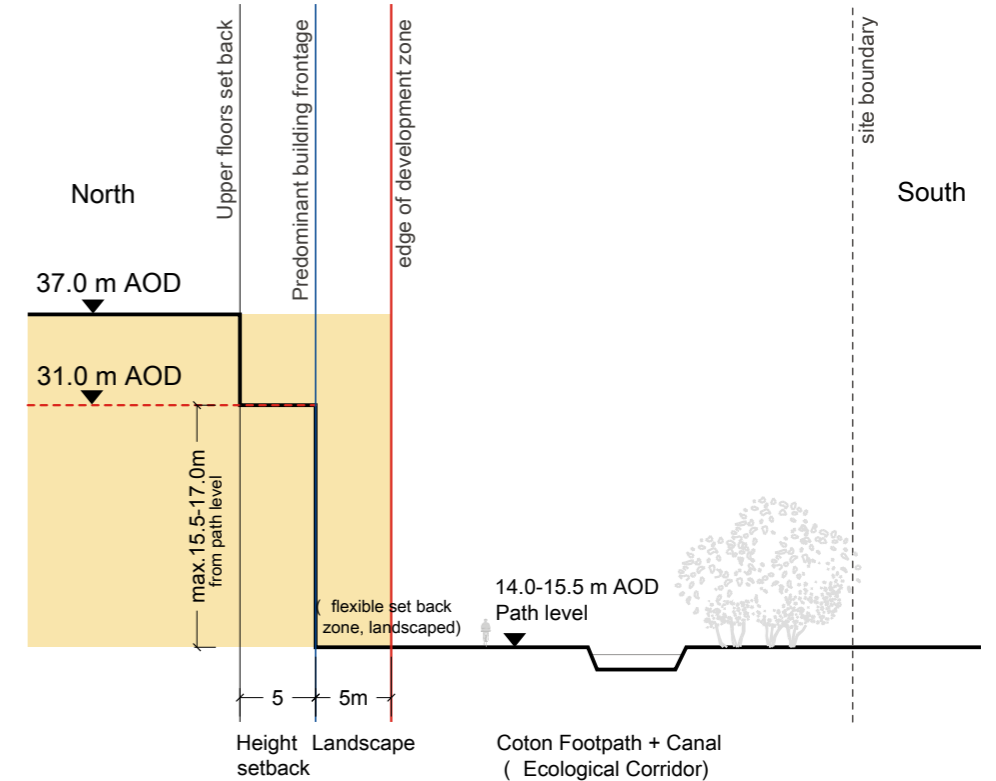
- Along the southern edge additional height restrictions and setbacks apply, as described on the two sectional diagrams shown on this page, with frontages not exceeding 31m AOD.
- New development frontage may be built to the Development Zone edge but partial setbacks shall be provided in order to facilitate diversity of edge conditions and a variable width of landscaped zone adjacent to the Southern Ecological Corridor.
- Rooftop plant must be set back from the southern development edge and there must be effective screening of all rooftop plant, when viewed from the south. This built element may contribute to the composition of a varied skyline.
- Frontages facing the southern landscape must have a high quality architectural treatment and materials. Materials and facade design shall respond to this south facing location exposed to winds from the open fields, and ensure that spaces within and outside of buildings are comfortable and fit for purpose.
- Multi-storey car parking must not be located along this edge, unless set behind a woodland buffer.

- PV's, Green/Blue or Brown roofs may be considered on south facing frontages and/or roofs and should be well integrated within the facade design.

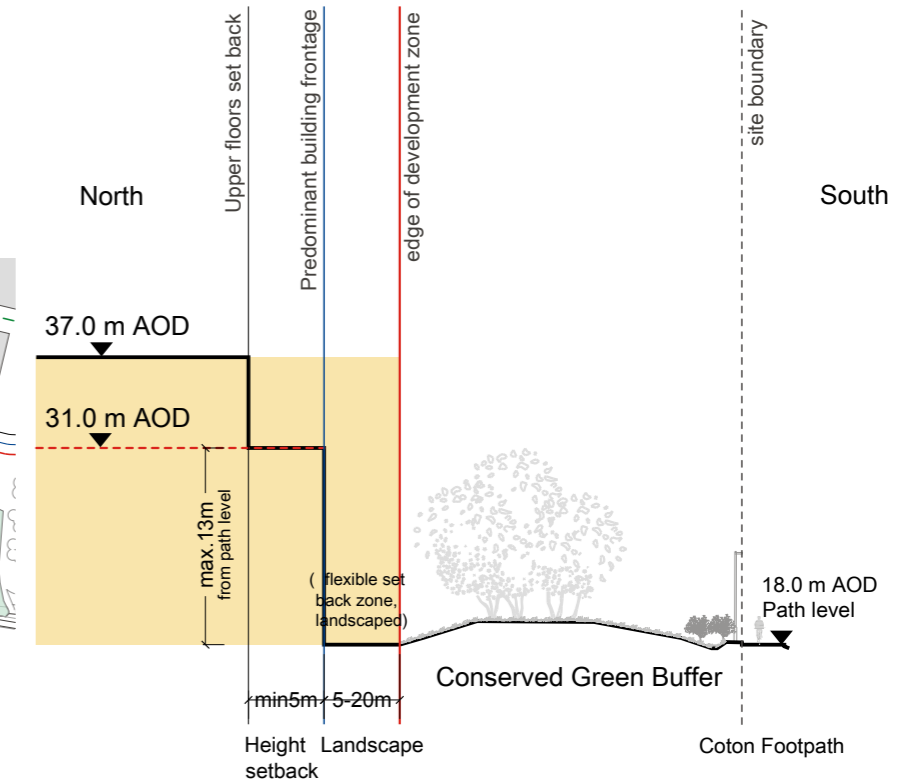
Additional height restrictions do not apply for landmark/ taller elements.

Landscape and Planting:

- Existing planting must be protected and enhanced to establish 'Biodiversity Corridors' and improve links that connect into a wider countryside and other areas of publicly accessible open space such as the Coton Countryside Reserve.
- The existing green buffer to the southern edge in the west part must be retained and reinforced to create a visual sense of enclosure for West Forum and West Lake.
- Any new landscaped gaps shall be a minimum of 25m from building face to building face.
- New landscape areas (including pocket landscapes and setback zones) shall be without visible barriers such as fences and shall link to the adjoining Southern Ecological Corridor and/or woodland buffer



- KEY**
- Development Zone edge/ max. build-to line
 - Setback/ additional height restriction zone
 - Indicative location for frontage Gap
 - Indicative location for frontage break
 - Section Zone



4.4. Clerk Maxwell Road

Frontage Heights and Development Zone

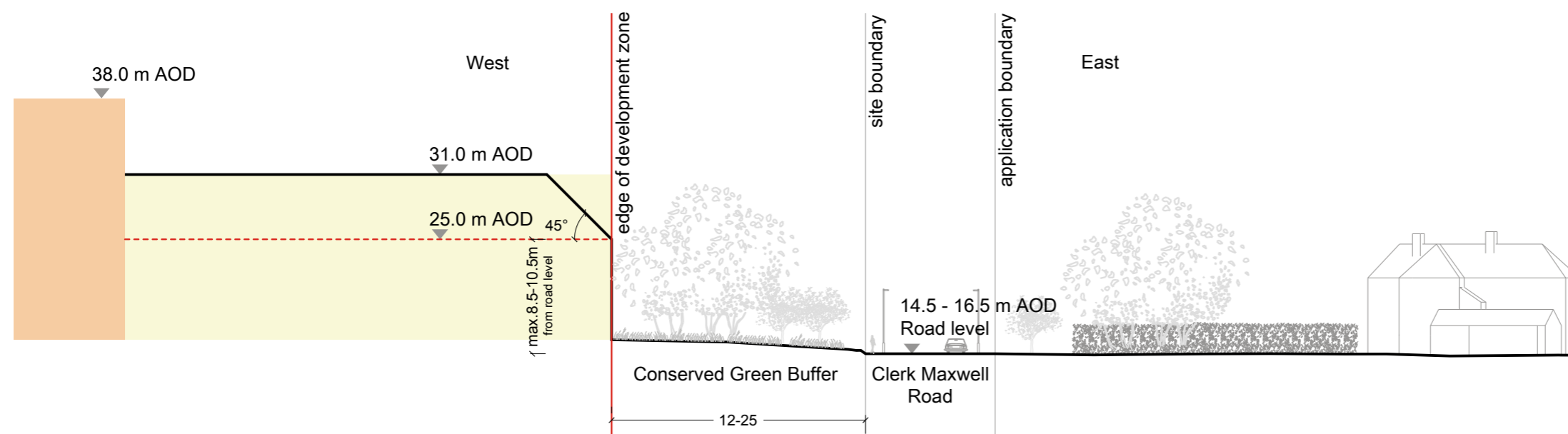
The aim of height restrictions along Clerk Maxwell Road is to ensure that development does not impact on the character of the Road and amenity of nearby properties. Maximum development heights step down along this edge to ensure that development is screened by the existing woodland buffer.

- The development frontages along the eastern edge must not exceed the set Parameter Height of 31m AOD.
- At the edge of Development zone the built form must comply with an additional height restriction of 25m AOD. From this line, the development heights must remain within envelope rising by 45° angle to the parameter height of 31m AOD.
- Rooftop plant shall be set back from the predominant building line or effectively screened.
- A variable roofline shall be formed along this development edge

Additional height restrictions do not apply for landmark/ taller elements.

Landscape and Planting:

- Any new landscaped gaps between buildings shall be a minimum of 15m from building face to building face.
- Any additional access points along Clerk Maxwell Road shall be located to minimise tree loss wherever possible.



126. Clerk Maxwell Road Section 1-1 (Parameter Heights 38m and 31m AOD)

KEY

- Development Zone edge/ max. build-to line
- Setback/ additional height restriction zone
- Indicative location for development Gap
- - - Indicative location for frontage break
- ⋯ Section Zone



127. Development Zones and additional height restrictions along Clerk Maxwell Road

4.5. Woodland Edge

The western woodland edge will remain a strong landscape buffer between the development and M11. Any new development on this edge will need to be set sensitively within this landscape.

Frontage Heights and Development Zone:

Development zones and heights for these areas are set in the Parameter Plans. No further height restrictions are proposed.

- Rooftop plant shall be screened and/or grouped to avoid visual clutter in distant views

Landscape and Planting:

Mature woodland planting exists along the western edge, where it provides a visual buffer between the site and the motorway.

This woodland can contribute further to the site by allowing woodland planting to extend in places into the site to Western Access / Ada Lovelace Road, making this feature of the site more visible. Linear blocks arranged in an east-west orientation may allow gaps for woodlands to spread into the site.

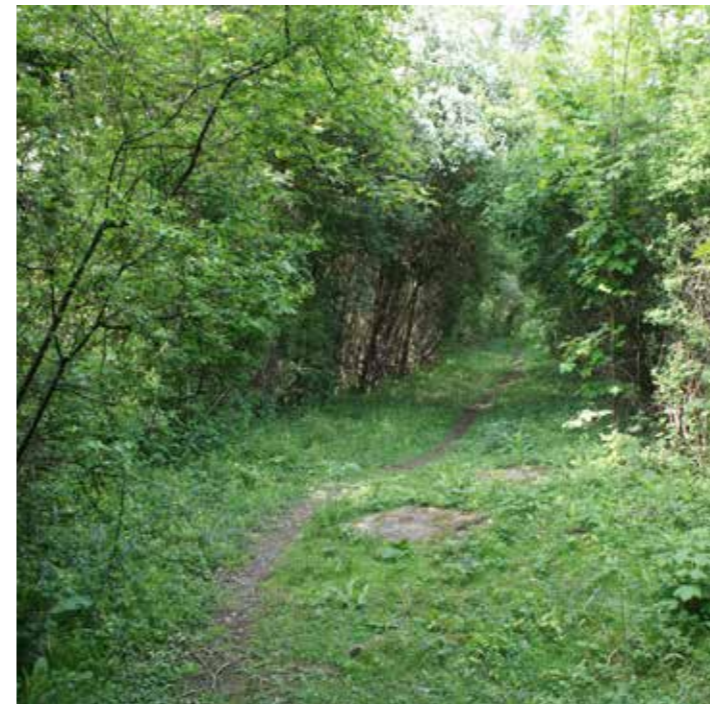
- Any surface parking along this edge must be set within woodland and planted with trees and low level planting.
- Any new landscaped gaps between buildings shall be a minimum of 20m from building face to building face.
- Additional landscape and planting shall reflect to the rural and agricultural landscape to the west.
- The greenery of the woodland buffer shall be extended eastwards to Western Access / Ada Lovelace Road by adding planting to this part of the site.



128. Western woodland edge



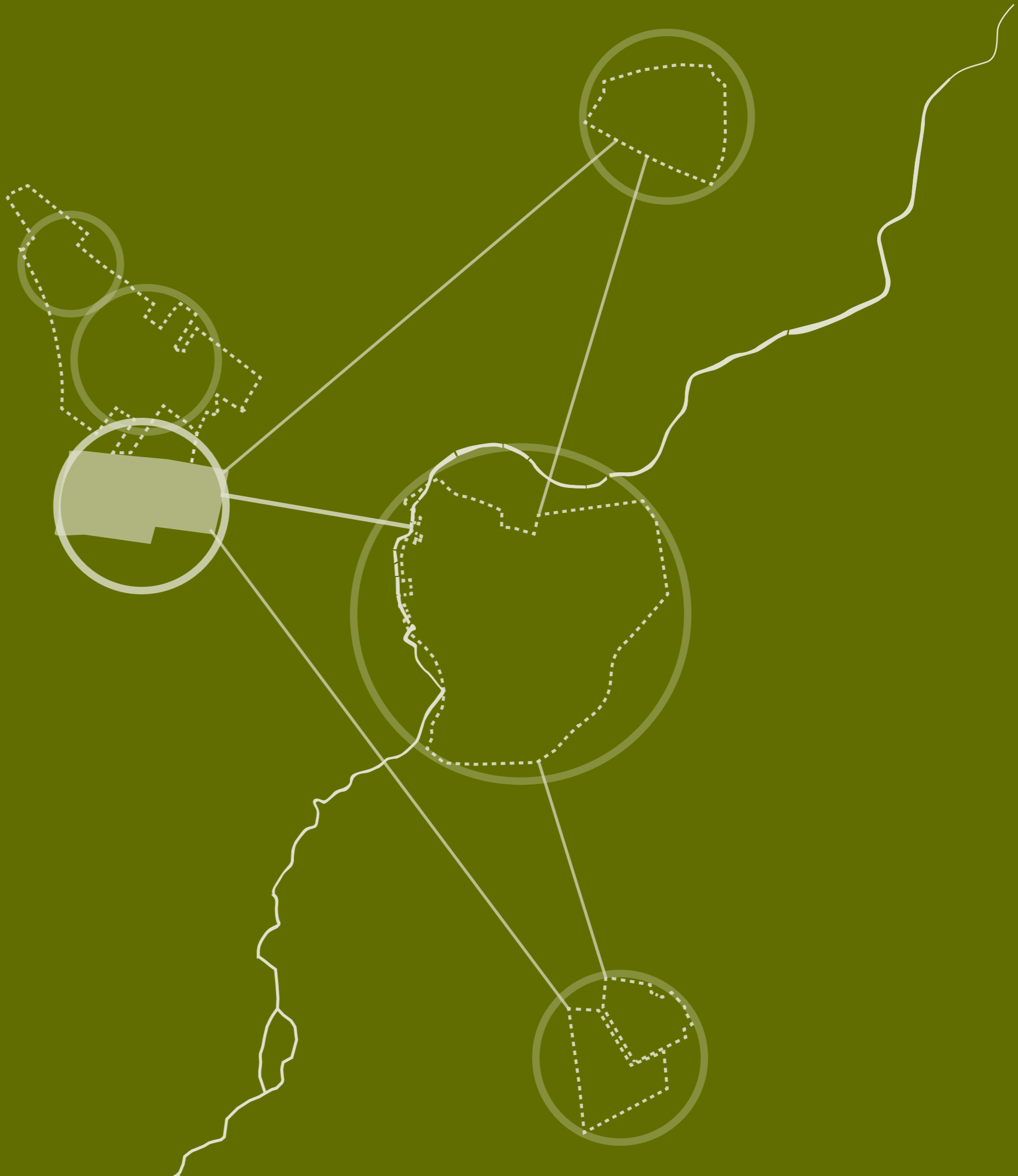
129. Western woodland edge



130. Western woodland edge



131. Western woodland edge

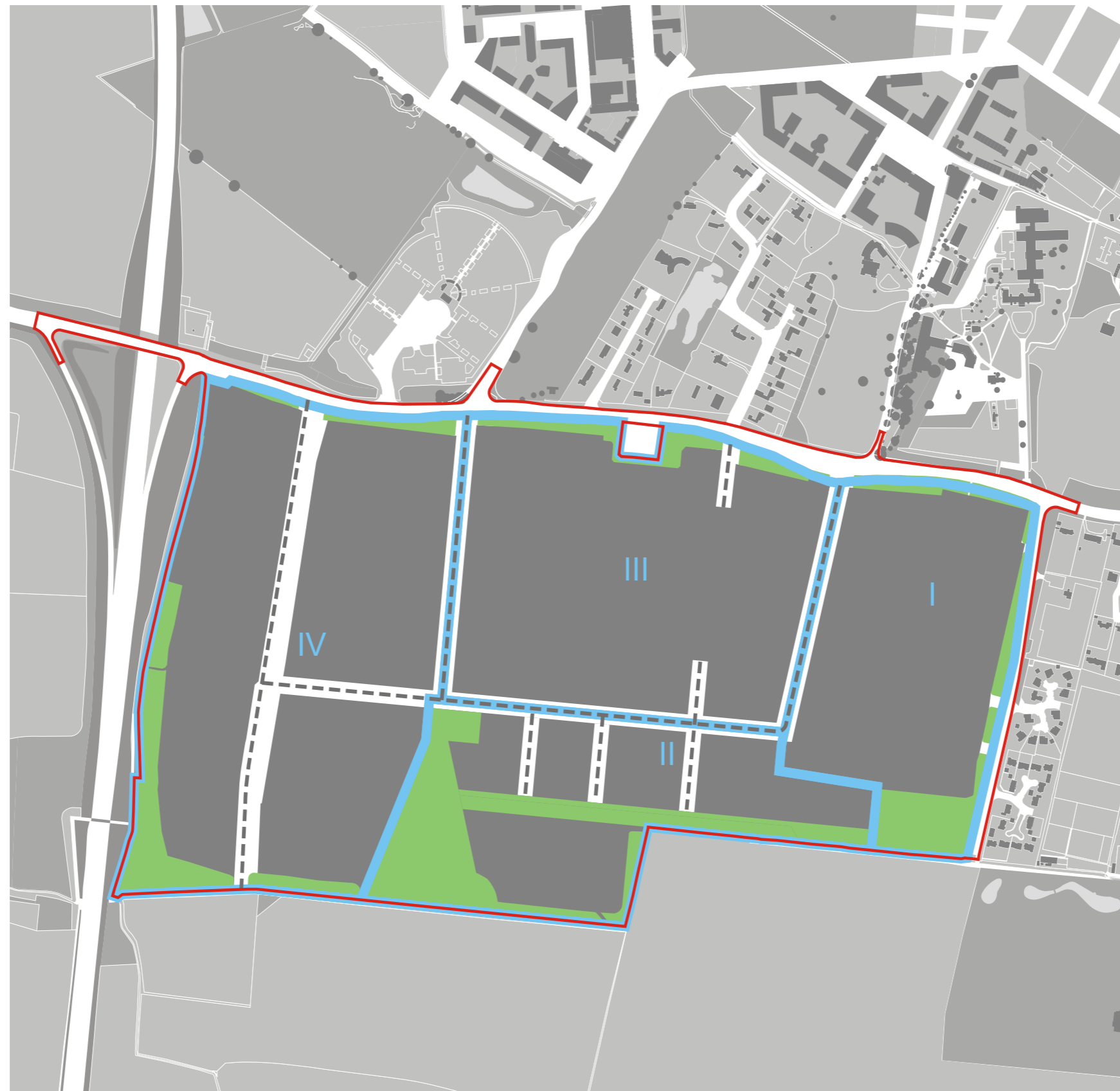


APPENDIX

05

5. APPENDIX

5.1. Parameter Plan 1: Development Building Zones



KEY

Contextual Information:
- - - Existing street
Existing open land

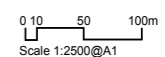
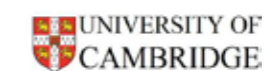
For Approval:
Application site boundary
Development zones
Building zones

All information other than that identified as being for approval is shown for contextual purposes only.

West Cambridge

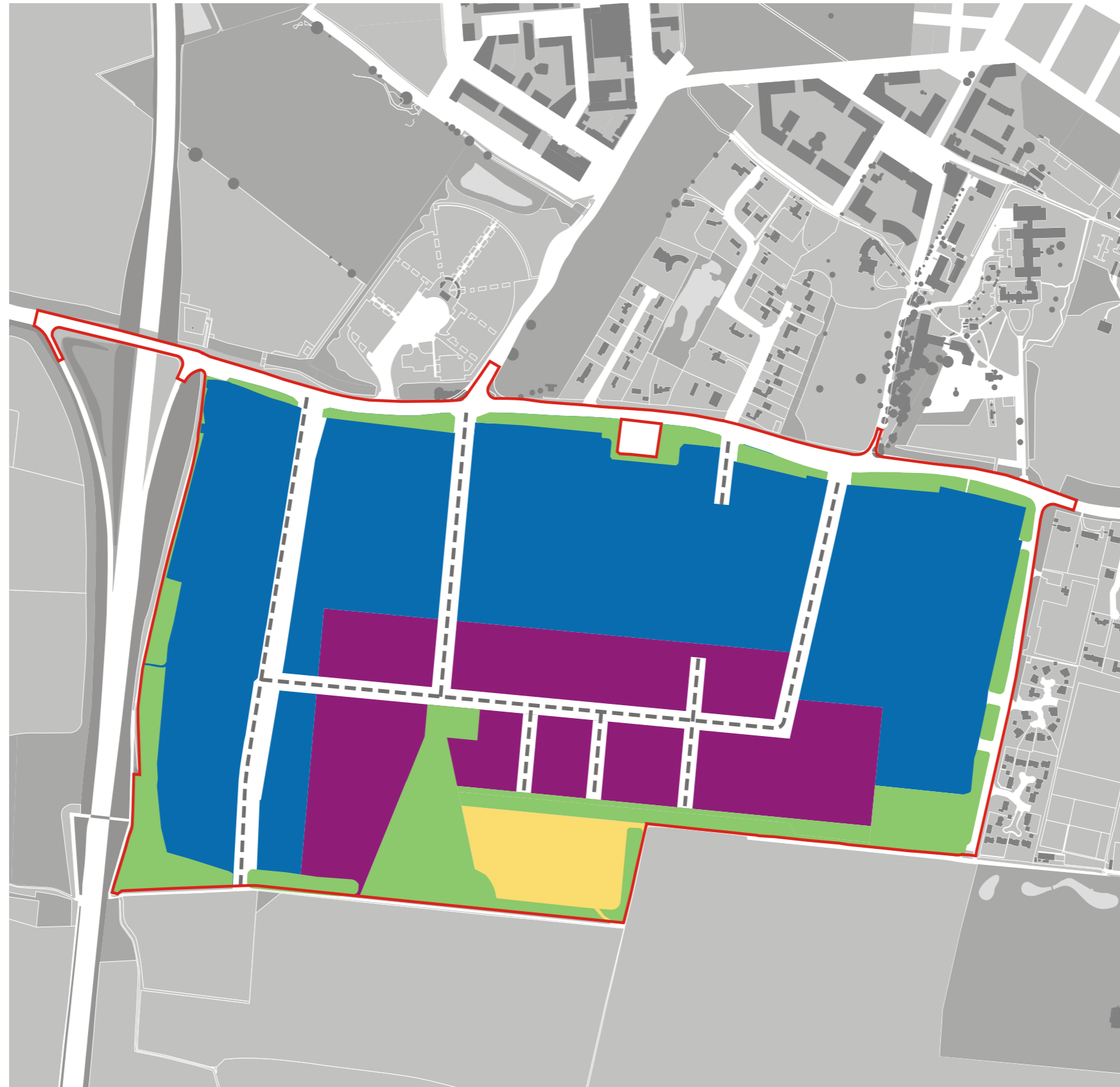
WC/OPA/PAR/02 - Development Building Zones
Parameter Plan

February 2016



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5.2. Parameter Plan 2: Land Use



KEY

Contextual Information:
 - - - Existing street
 Existing open land

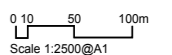
For Approval:
 Application site boundary
 Academic & Commercial Mix: D1, B1b, sui generis
 Mixed Use Zone: A1-A5, B1b, D1
 Community Uses: D1, D2

All information other than that identified as being for approval is shown for contextual purposes only.

West Cambridge

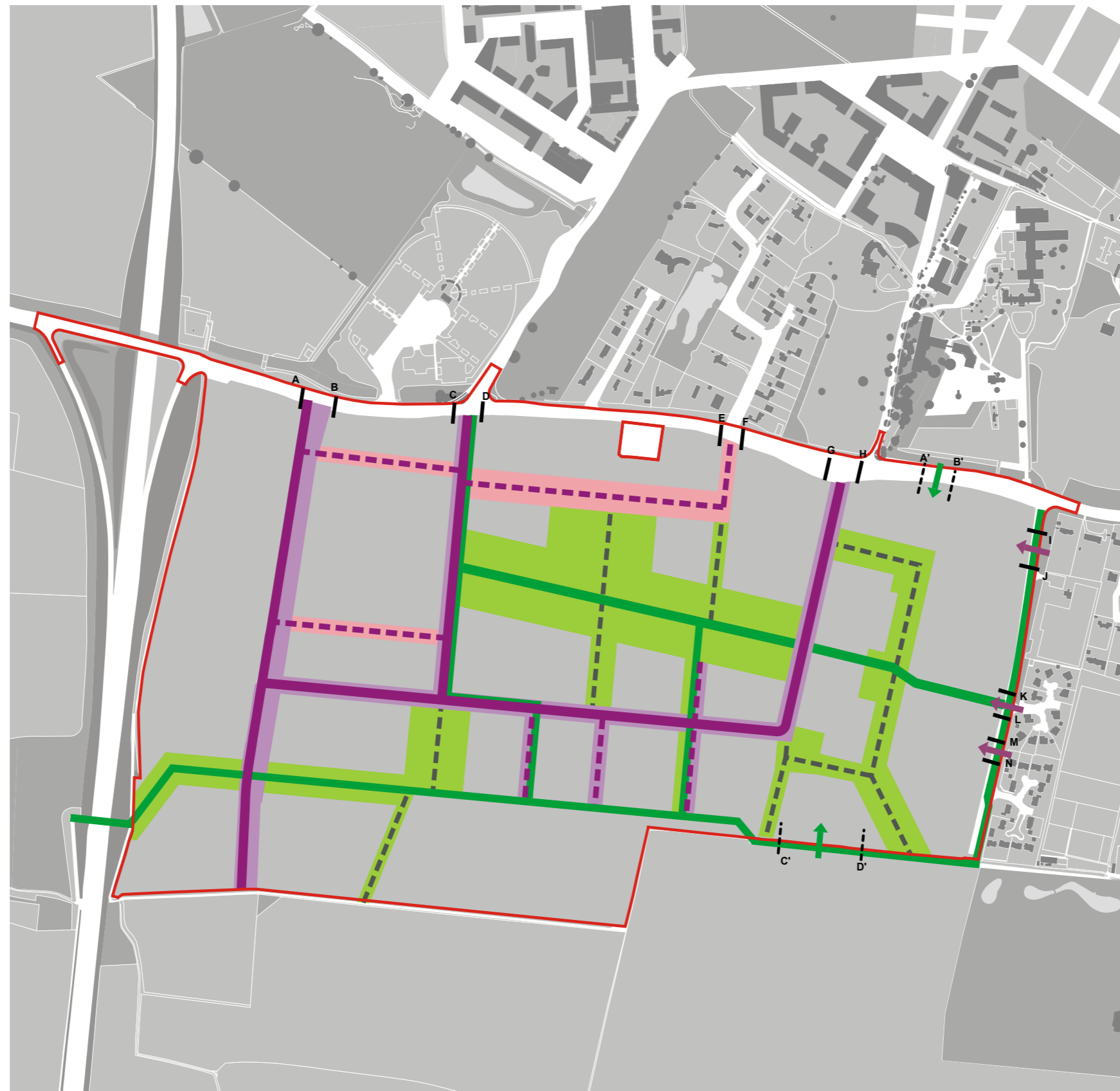
WC/OPA/PAR/03 - Land Use Parameter Plan

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5.3. Parameter Plan 3: Access and Movement



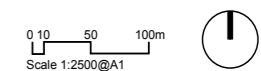
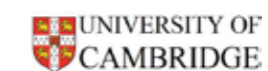
KEY

- | | |
|--------------------------------|--|
| Contextual Information: | |
| | Primary street |
| | Secondary street |
| | Primary pedestrian/cycle route |
| | Secondary pedestrian/cycle route |
| For Approval: | |
| | Application site boundary |
| | Intervention zone for street |
| | Flexible zone for street |
| | Servicing and car parking access |
| | Pedestrian and cycle access |
| | Flexible zone for pedestrian and cycle |
| | Pedestrian and cycle access point |
| | Zones of access points |

All information other than that identified as being for approval is shown for contextual purposes only.

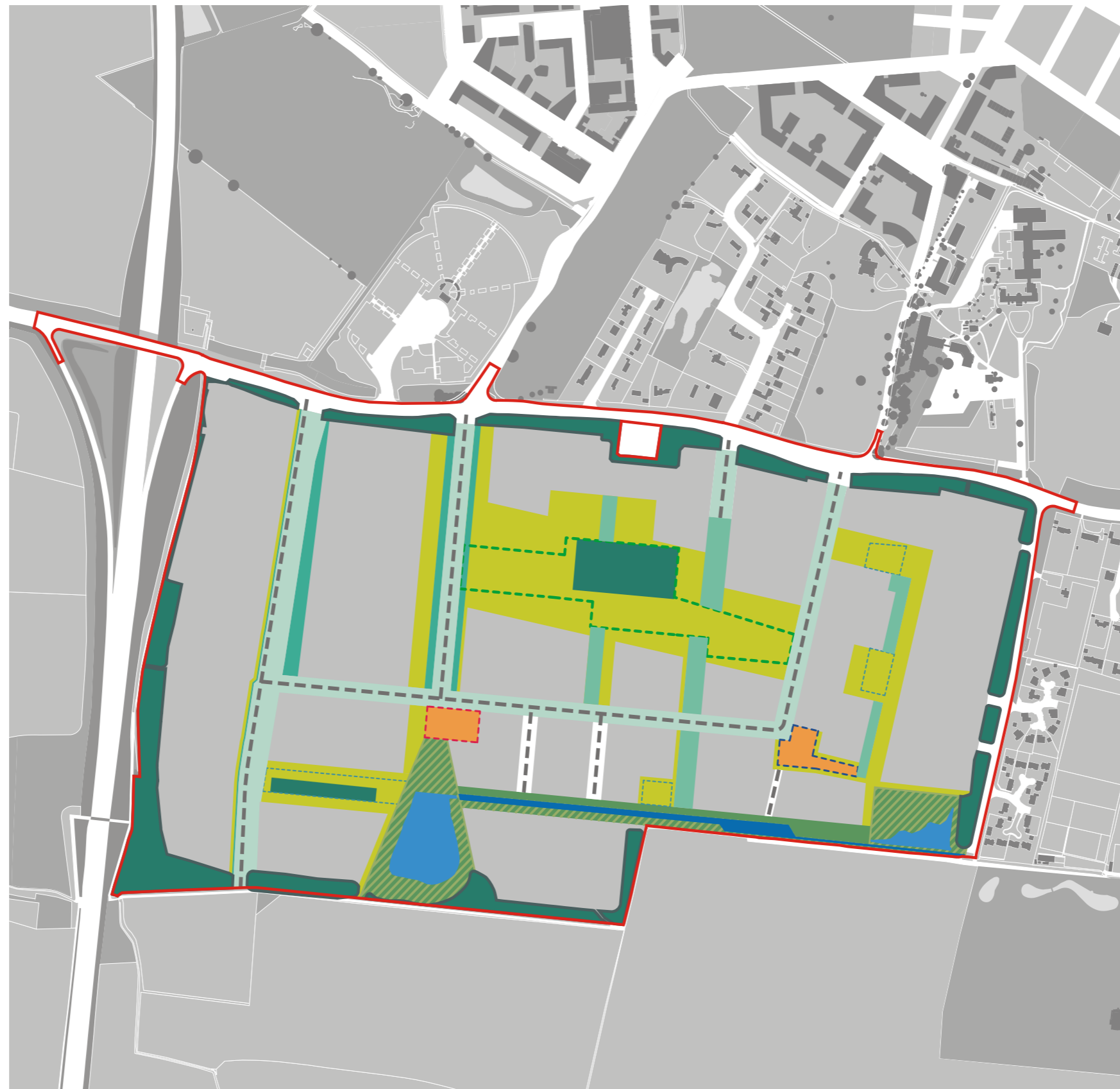
West Cambridge
WC/OPA/PAR/04 - Access and Movement
Parameter Plan

February 2016



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5.4. Parameter Plan 4: Landscape and Public Realm



KEY

Contextual Information:

- Existing street/ Pedestrian link
- Existing open land
- Retention & Reinforcement of existing woodland edge
- Water Bodies
- Canal / swale

For Approval:

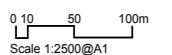
- Application site boundary
- Primary public realm:**
 - East Forum (Indicative boundary)
 - West Forum (Indicative boundary)
 - The Green (Indicative boundary)
- Secondary landscape and public realm (Indicative boundary)
- Tertiary landscape and public realm (Indicative boundary)
- The area within proposed landscape and Public realm with trees to be retained
- Existing street trees to be retained wherever possible
- Additional landscaping corridor
- Flexible zone for landscape and public realm

All information other than that identified as being for approval is shown for contextual purposes only.

West Cambridge

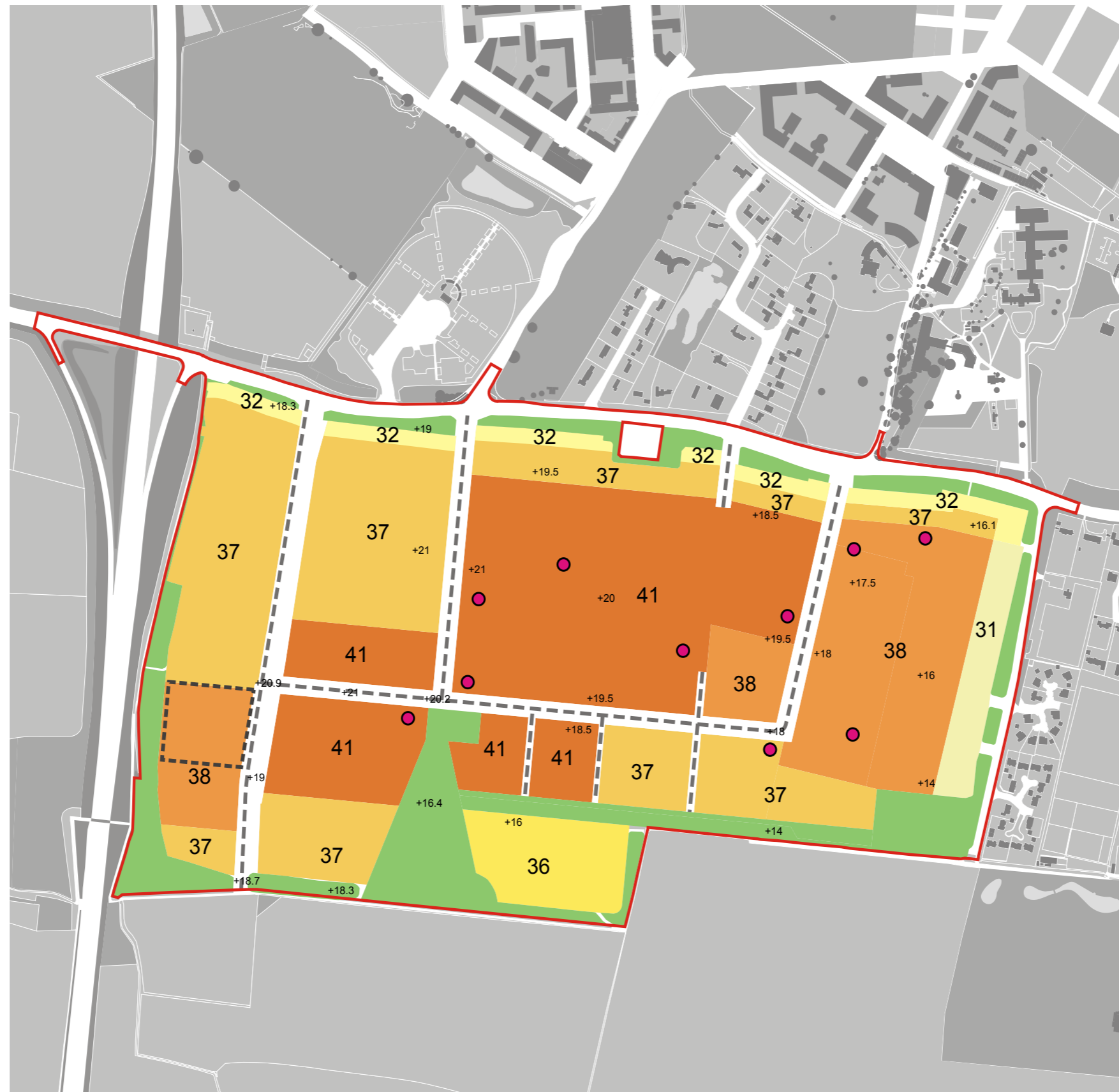
WC/OPA/PAR/05 - Landscape and Public Realm Parameter Plan

June 2016



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5.5. Parameter Plan 5: Maximum Building Heights



KEY

Contextual Information:

- Existing street
- Existing open land
- +18 Sample ground level spot height AOD

For Approval:

- Application site boundary

Maximum building heights

- 31.0 metres AOD
- 32.0 metres AOD
- 36.0 metres AOD
- 37.0 metres AOD
- 38.0 metres AOD
- 41.0 metres AOD

- Stated AOD + 8m for a footprint of up to 1,200m²

- zone for location of energy centre flue

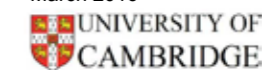
Building heights include roof plant rooms but exclude exhaust flues.
Maximum height of flues to be no more than 8m above maximum building heights.

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West Cambridge

WC/OPA/PAR/06 - Maximum Building Heights Parameter Plan

March 2016



0 10 50 100m
Scale 1:2500@A1



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