



Building set back zone

Section Zone

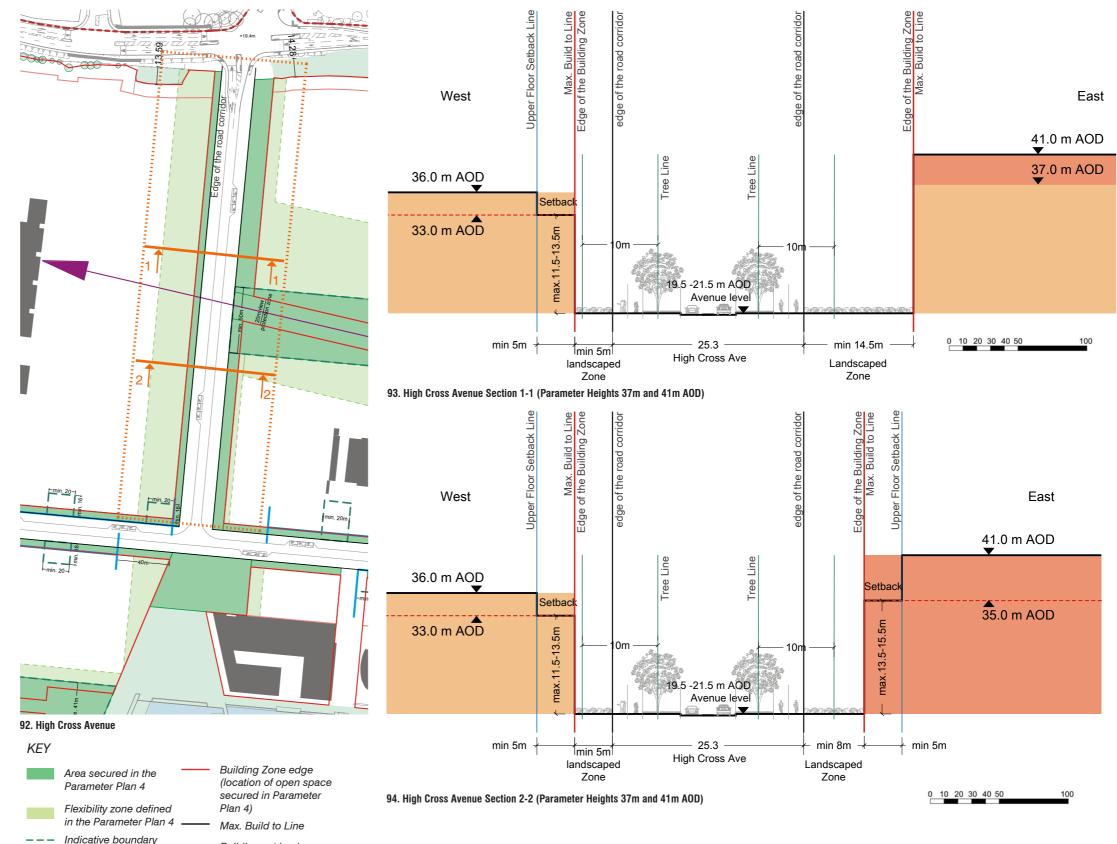
of area secured in the Parameter Plan 4

### **Heights and street frontage**

3.2.1 The following provides the requirements for heights and street frontage along High Cross. On the plan in Figure 92, the darker green colour denotes zones of open space secured through Parameter Plan 04. Other requirements for High Cross are set out in the Parameter Statement.

3.2.2 The guidelines for heights and street frontage are as follows:

- Max. build-to lines shall be setback from the road corridor by at least 8m on the eastern side and by at least 5m on the western side of the street (thus, together with the road corridor of 25.3m, the width between buildings along High Cross shall be minimum 38.3m in the south and 44.8m minimum in the north). The setbacks secure the required buffers between the stems of the existing tree and future development frontage, and exceed the recommended 10m;
- These setback zones shall incorporate soft landscape and shall be treated and landscaped as part of the street and not fenced off. Smaller areas of cycle parking may be provided within these zones;
- On the western side of the street, an additional landscaped area for larger trees shall be provided. This shall include an additional partial setback from the maximum build to line, which may vary along the length of the road, but shall provide an equivalent overall area to a 5m setback (i.e. be of average width 5m as measured from the edge of the Building Zone or 10m measured from the edge of the road corridor);
- At the southern end of the street, an additional frontage height restriction of 33m AOD (to the west) and 35m AOD (to the east) shall be applied. Any development above these heights shall be set back by a minimum of 5m from the primary frontage line;
- In the central part of the street, a zone of lower development height shall be established to maintain the views of the Schlumberger Research building roof structure. The exact positioning of this lower zone shall be such to allow views of the roof-line (tent structure) from The Green.



### 3.3. JJ Thomson Avenue

#### Street transformation

- 3.3.1 JJ Thomson Avenue 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 and enhances its role and character.
- 3.3.2 It is the second of the main entrances and approach roads into the site for public transport, motor vehicles, pedestrians and cyclists.
- 3.3.3 It forms a strong connection between West Cambridge and the North West Cambridge Development, especially to existing and proposed academic areas at Madingley Rise. It will form a connecting spine for a new greater academic cluster spanning both University sites.
- 3.3.4 With significant new development and new academic departments on both sides of the street, JJ Thomson Avenue has the potential to become more lively and animated than at present.
- 3.3.5 As a key approach road into the site it will accommodate a new Arrival space that will serve new developments on both the east and west of the street.

#### Character

3.3.6 Guidelines for the transformation of character of JJ Thomson Avenue are as follows:

- Increased activity shall be generated by locating new development frontage, building entrances, drop-off/ drop-on areas (if required) and an Arrival space along the street, as well as by promoting pedestrian and cycle movement along and across the street;
- The profile of the street shall be changed to allow for some on-street parking for disabled users, a shared foot & cycle path and additional planting;
- Variation in building lines shall be introduced, but set backs shall be limited to ensure that the street is clearly defined and enclosed. Areas created by any setbacks shall provide for additional planting and trees;
- Space for larger trees shall be provided at the interface with The Green open space.

#### Surface/paving treatment

3.3.7 Guidelines for the surface/pavement treatment of JJ Thomson Avenue are as follows:

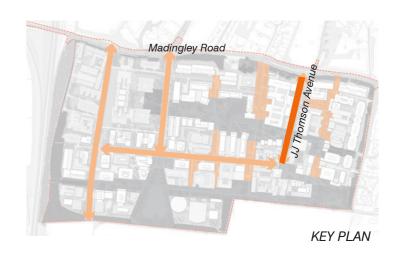
 Cycle movement shall be accommodated on or off street and a shared foot & cycle path must be formed to both sides of the road;

- Pedestrian and cycle crossing points must be incorporated at key locations, such as: in the north at the Arrival space, at The Green and at the East Forum. The road surface shall change to denote a shared surface crossing point and help to slow traffic;
- The street should incorporate drop-off/ drop-on points at appropriate locations along its length;
- There should be paved areas along the street to allow ease of access and movement and encourage activity to spill out from any active frontages and building entrances:
- Central street markings should be considered as part of the traffic calming measures along this street, serving to visually reduce the width of the street;
- Small areas of cycle parking should be located along the street, if required.

### Landscape and planting

3.3.8 Guidelines for the landscape and planting for JJ Thomson Avenue are as follows:

- New building frontage shall have building setbacks and shall vary in building line to provide pocket landscapes and foreground landscape;
- Where building setbacks occur, landscape shall be predominantly soft and planted and the design shall reflect the street design so there are no visible boundaries;
- Rain Gardens shall be provided to collect water runoff from the carriageway. These shall consider the existing street trees and underground utilities, as shown indicatively in the Appendix 5.2, and be planted with a variety of species that are appropriate for the Rain Garden and the roadside environment;
- 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 shall be given the proper environmental conditions and space to grow to maturity.



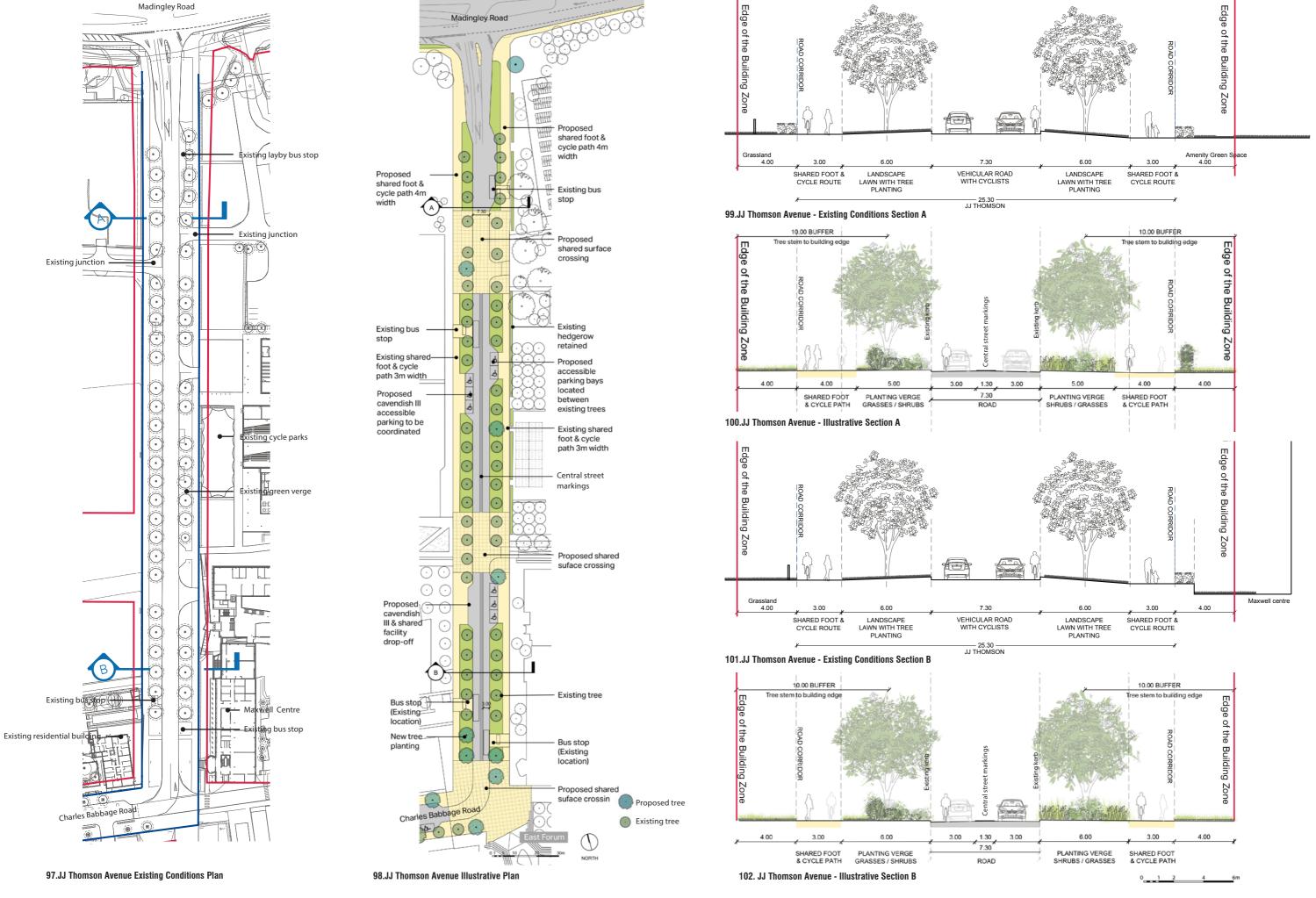


95.JJ Thomson Avenue looking north from East Forum

M



96.JJ Thomson Avenue looking south from Madingley Road



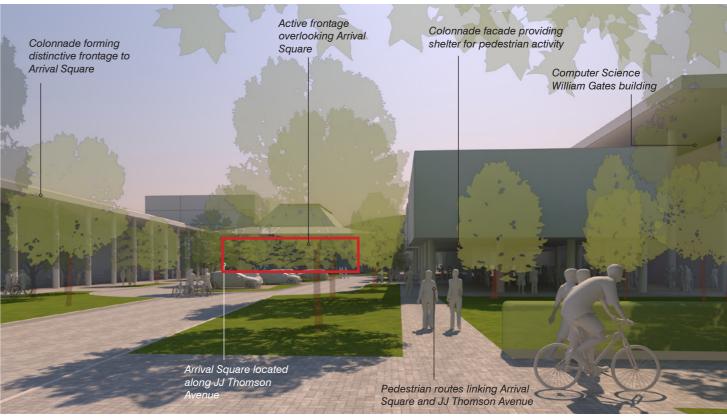
### **Arrival spaces**

3.3.9 Guidelines for the Arrival space along JJ Thomson Avenue are as follows:

- An Arrival space for the eastern academic cluster shall be located off JJ Thomson Avenue to the east of the street. Direct visual connections between JJ Thomson Avenue and the Eastern Green Link shall be provided to aid legibility for those arriving at this point;
- The Arrival space shall be designed to create a shared pedestrian/vehicle space with pedestrian priority;
- Surface treatments should avoid overwhelming use of tarmac and up-stand kerbs instead having a flush surface material similar to the surrounding footpaths. Planting should be used to soften the perimeter of the vehicle pick-up/drop-off areas.



103. JJ Thomson Avenue: view looking south



104. JJ Thomson Avenue: Arrival Space for the Eastern Cluster

### **Heights and street frontage**

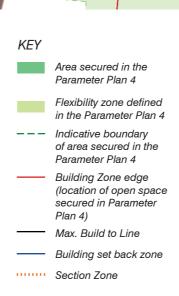
3.3.10 The following provides the requirements for heights and street frontage along JJ Thomson Avenue. On the plan in Figure 105, the darker green colour denotes zones of open space secured through Parameter Plan 04. Other requirements for JJ Thomson Avenue are set out in the Parameter Statement.

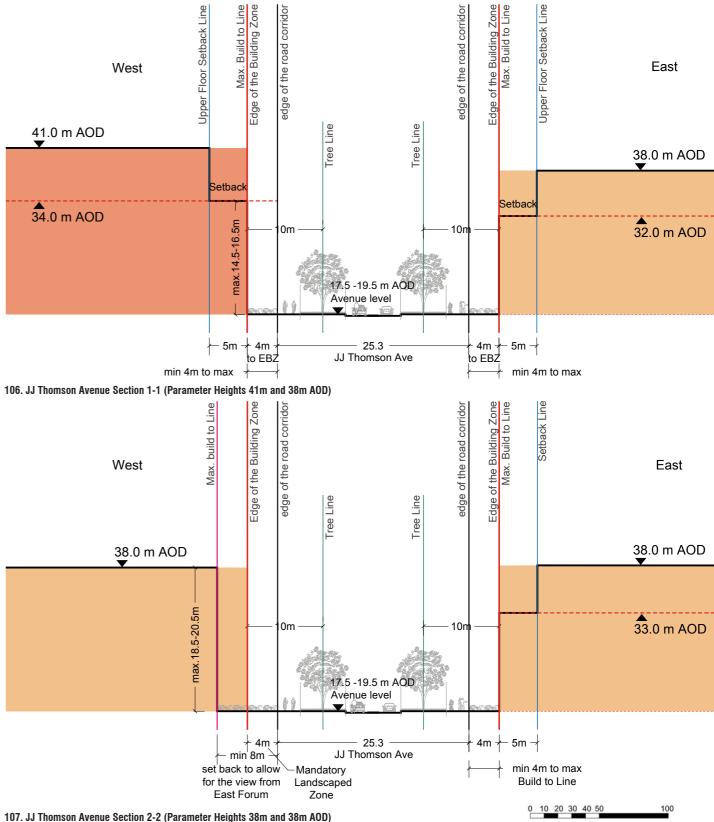
3.3.11 The guidelines for heights and street frontage are as follows:

- Building Zones are set to allow for a 10m buffer between the stems of the existing trees and the proposed building faces (maximum Build to Line). This provides an additional zone of minimum 4m between the edge of the road corridor and the building faces on each side. Thus, together with the road corridor width of 25.3m, the width between buildings along JJ Thomson Avenue shall be minimum 33.3m;
- In the southern part of JJ Thomson Avenue (see Section 2-2) an additional set back zone shall be provided to allow views from the East Forum towards the eastern part of The Green and the south-east corner of the Cavendish III building. The maximum Build to Line shall be set back from the edge of the road corridor by minimum 8m (minimum 4m from the edge of the Building Zone);
- The setback zones between the building(s) and the street shall be soft or hard landscaped and may accommodate smaller cycle parking areas. These zones shall be treated as part of the street and not fenced off:
- An additional frontage height restriction of 34m AOD (to both sides of street) should be applied for a minimum of 5m from the edge of the Building Zone.



105. JJ Thomson Avenue Avenue





### 3.4. Charles Babbage Road

#### Street transformation

- 3.4.1 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, but with setbacks and pockets of green spaces to allow the existing trees to grow to medium and large size.
- 3.4.2 In terms of cycle movement, the general principle is that cycling will predominately take place on-road within a street that is designed to result in vehicle speeds of less than 20 mph. This low speed environment will also enable more informal crossing points and greater pedestrian permeability.
- 3.4.3 The transformation of Charles Babbage Road will be the key to establish a strong link between the East and West Forums.

#### Character

- 3.4.4 Guidelines for the transformation of character of Charles Babbage Road are as follows:
- The existing Alan Reece building (IfM) and Northern Residences building are the only existing buildings which address the street directly. However, the alignments of IfM and Northern Residences provide insufficient space for growth of the plane trees planted along the street. The new development shall be set back further from these alignments but with guidelines to establish a good enclosure of the street and formation of a good, protected micro-climate;
- The profile of the street shall be changed to allow for some on-street parking, shared pedestrian and cycle routes and additional planting;
- The current corridor profile should be altered to achieve a greener character, with pocket landscapes and additional planting to provide pedestrian comfort;
- The street should be animated by building entrances. lobbies and other smaller social spaces along the street. Active frontage should be located and activity greatest in the areas adjacent to East and West Forums.

### Surface/paving treatment

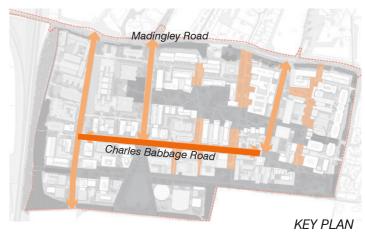
- 3.4.5 Guidelines for the surface/pavement treatment of Charles Babbage Road are as follows:
- Cycle movement shall be accommodated on or off street and a 3.2m shared foot & cycle path shall be formed to both sides of the street;

- Pedestrian and cycle crossing points shall be incorporated at key locations, such as: at the West and East Forums and at the north-south Green Links. The road surface shall change to denote the crossing point and help to slow traffic;
- Paved areas shall be provided next to active parts of buildings and building entrances, to allow ease of access and movement and encourage activity to spill out from buildings;
- The zones between building faces and the edge of pedestrian paths should vary in treatment but the treatment should be responsive to the adjacent building frontage. Possible treatments may include paving, limited cycle parking; soft landscape etc;
- Small areas of cycle parking may be located along the

#### Landscape and planting

3.4.6 Guidelines for the landscape and planting for Charles Babbage Road are as follows:

- The straight linear alignment of the street shall be softened/varied with pocket landscapes and gaps as indicated in Figure 123;
- Pocket landscapes shall have a soft treatment and
- Any street trees planted next to pocket landscapes and gaps shall be allowed to grow to maturity. Planting shall be added in these areas to provide soft landscape and to assist in orientation and wayfinding;
- Some street trees to Chares Babbage Road are young, category C trees in a poor state and replacement of trees that are not flourishing with an appropriate street tree shall be considered. All new/ replacement tree planting will include improved rooting zones, e.g. a rootcell system. Refer to the 'Tree Condition Survey Charles Babbage Road', August 2008 for guidance (see Appendix 5.3);
- Rain Gardens shall be provided to collect water runoff from the carriageway. These shall consider the existing street trees and underground utilities, as shown indicatively in the Appendix 5.2, and be planted with a variety of species that are appropriate for the Rain Garden and the roadside environment;
- Planting should be relatively ordered/regular along the street, with a limited number of species used.

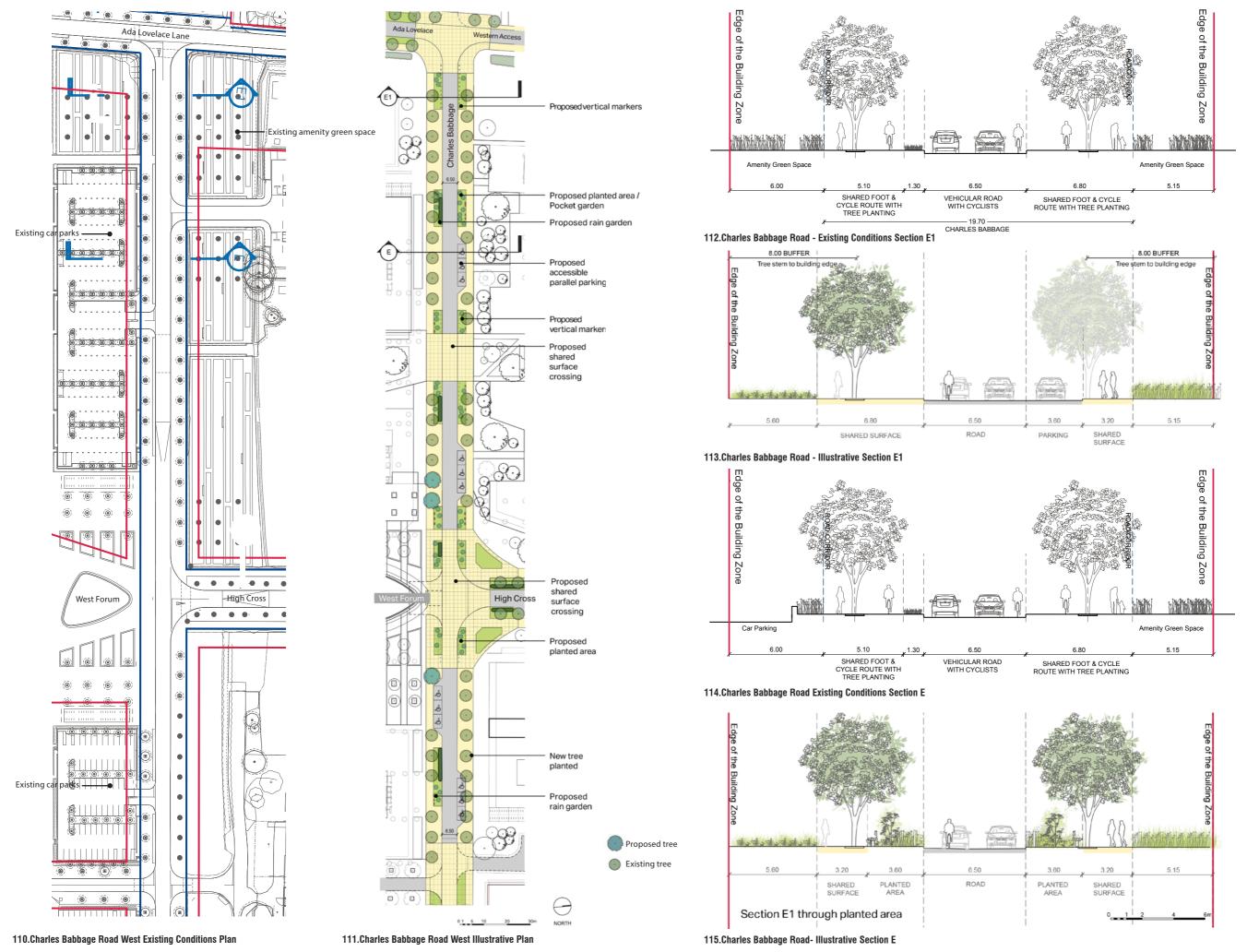


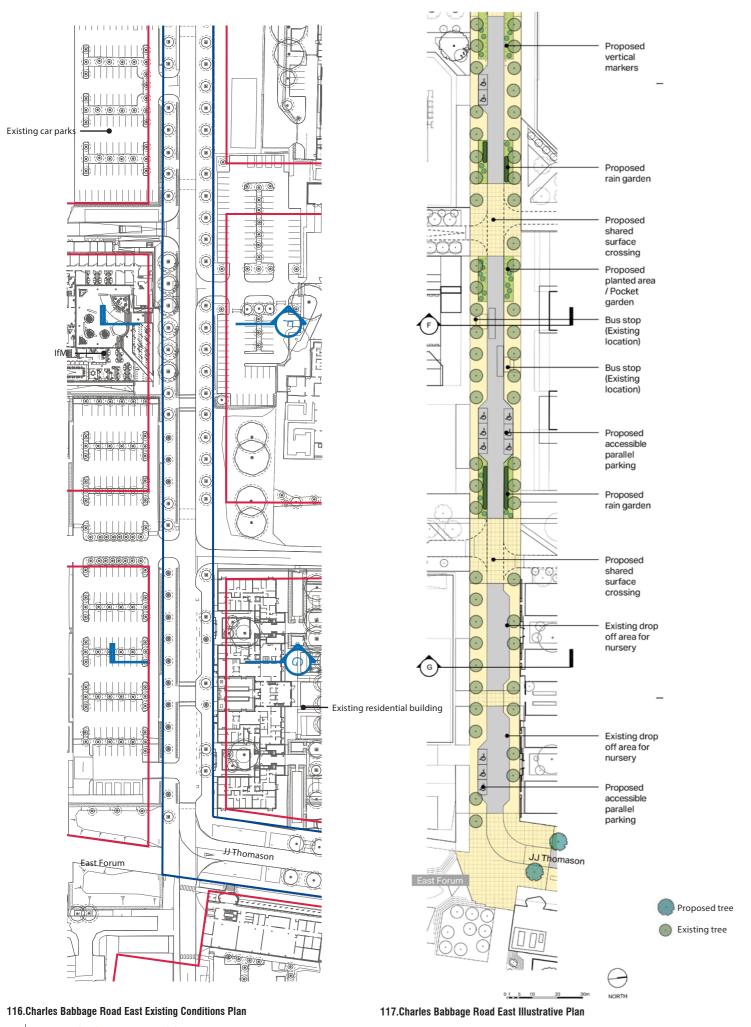


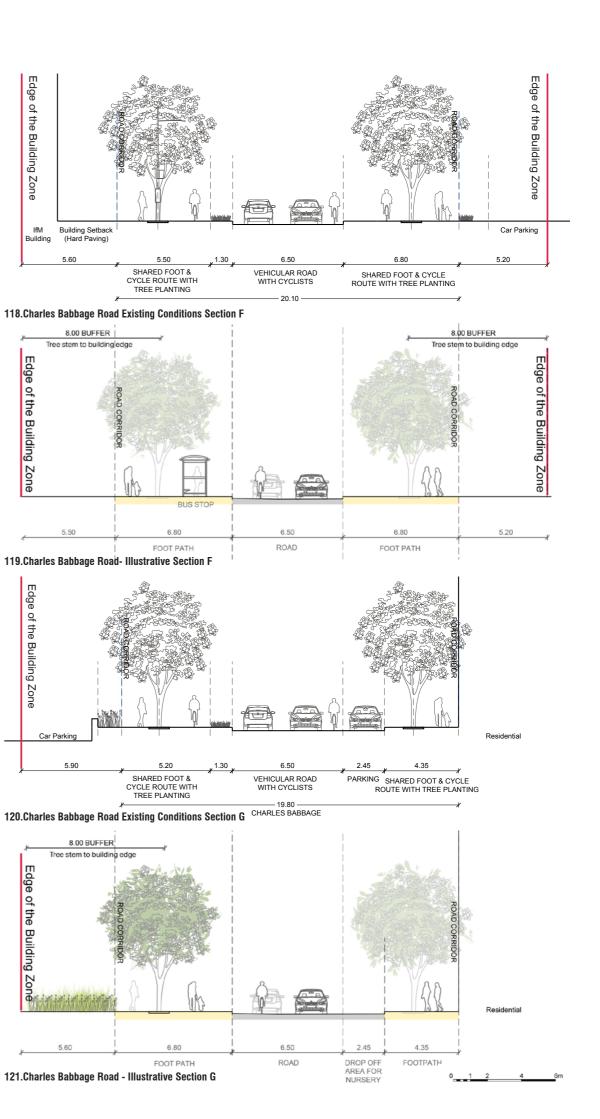
108.Charles Babbage Road looking east



109.Charles Babbage Road looking west at North Residences







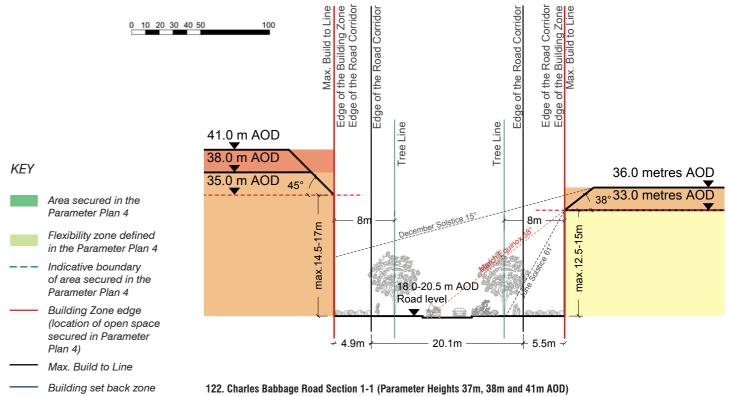
### Heights and street frontage

3.4.7 The following provides the requirements for heights and street frontage along Charles Babbage Road. On the plan in Figure 123, the darker green colour denotes zones of open space secured through Parameter Plan 04. Other requirements for Charles Bababge Road are set out in the Parameter Statement.

3.4.8 The guidelines for heights and street frontage are as follows:

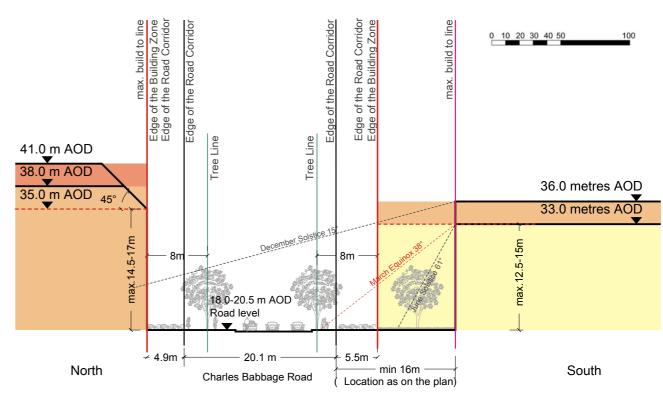
- The heights on the southern side of the street shall be lower to allow good daylight/sunlight penetration into the street, in accordance with approved height parameters;
- Building Zones are set to allow for a 8m buffer between the stems of the existing trees and the proposed building faces (maximum Build to Line). Thus, the total road corridor width and the width between buildings along Charles Babbage Road shall be a minimum of 30.5m;
- In addition to the 8m buffer, additional pocket spaces shall be provided to allow large species trees to grow to maturity. These spaces shall be a minimum 20m wide and minimum 16m deep from the edge of the Building Zones. The pocket spaces shall be distributed as shown in Figure 123: min. of 2 spaces between L1 and L1; min. of 1 space between L2 and L2; min. of 1 space between L3 and L3; and 1 space between L4 and L4. Planting shall be added to these pocket spaces;
- These spaces shall be located to provide a minimum 12m buffer from at least one of the existing street trees:
- The street frontage shall not exceed the set height of 35m (in the north) and 33m (in the south). From the frontage set height, the building heights shall stay within the envelopes which rise to the heights set in parameter plans with angles of 45° (North) or 38° (South);
- Long frontages dedicated to servicing, car parking and/or blank façades shall be avoided. External plant and storage structures (on frontage or separate structures) shall be minimised;

- The heights on the northern side of the street should have variation in roof-line;
- The setbacks within plots along the road corridor should be treated with a hard landscape (as a continuation of the street treatment) or should be planted to provide additional greenery in the street. Cycle parking areas may also be located within this zone;
- Activity along the street should be promoted by locating main entrances to buildings directly onto the street.





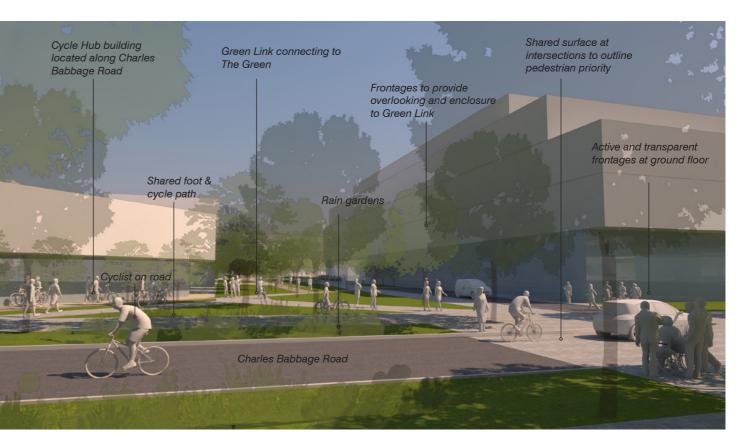
Section Zone



124. Charles Babbage Road (Section 2-2)



125.Charles Babbage Road looking East



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

### 3.5. Western Access/Ada Lovelace Road

### Street transformation

3.5.1 Western Access / Ada Lovelace Road is a street that existed on the site prior to the 1999 masterplan. The proposed development incorporates this street as an important part of the new landscape framework.

3.5.2 In the proposed development this street will, in the longer term, form a new access from Madingley Road and will also be transformed to provide a landscaped northsouth green street, contributing to the new landscape framework for the site.

#### Character

3.5.3 Guidelines for the transformation of character of Western Access/Ada Lovelace Road are as follows:

- The existing green and informal character of this street shall be maintained. New sympathetic planting shall be introduced to further green this corridor;
- The re-design of this street shall accommodate additional traffic without detrimental effect on the character of the street and pedestrian and cycle
- Buildings shall have full or partial setbacks to provide pocket and/or foreground landscapes;
- On the east side of the street he set backs shall be more generous as a consequence of the existing gas pipe 30m easement. Because of the easement, the planting types on this side shall be restricted to low level grasses, groundcovers and shrubs only;
- Gaps shall be provided between buildings on the western side of the street to allow for additional planting which can allow the western Woodland edge to extend visually towards this edge of the street;
- Rain gardens shall be provided to collect water runoff from the carriageway. These shall consider the existing street trees and underground utilities and be planted with a variety of species that are appropriate for the rain garden and the roadside environment;
- Any future development should be set back from the road to allow for pockets of foreground landscapes.

### Surface/paving treatment

3.5.4 Guidelines for the surface/pavement treatment of Western Access/Ada Lovelace Road are as follows:

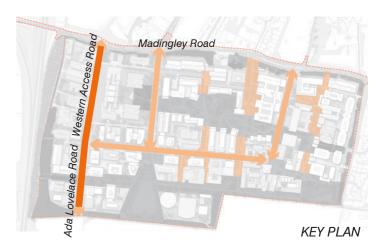


- Ada Lovelace Road shall incorporate a pedestrian pavement to both sides of the street;
- To the Western Access Road, cycle movement shall be accommodated off road on a bi-directional cycle path to the east side fo the street:
- The street should incorporate arrival spaces and drop-off/ drop-on points if required, at appropriate points along its
- There should be paved areas along the street to allow ease of access and movement and encourage any activity to spill out from building entrances.

### Landscape and planting

3.5.5 Guidelines for the landscape and planting for Western Access/Ada Lovelace Road are as follows:

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

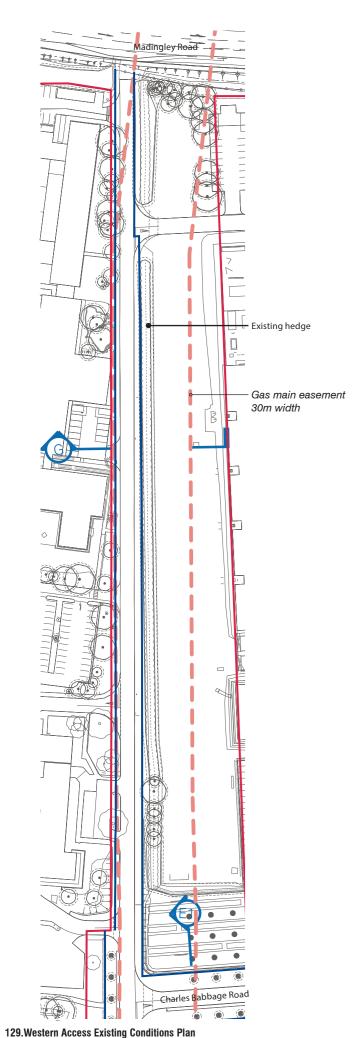




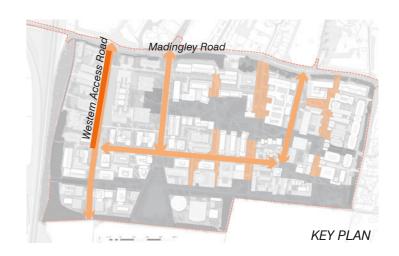
127.Western Access looking south

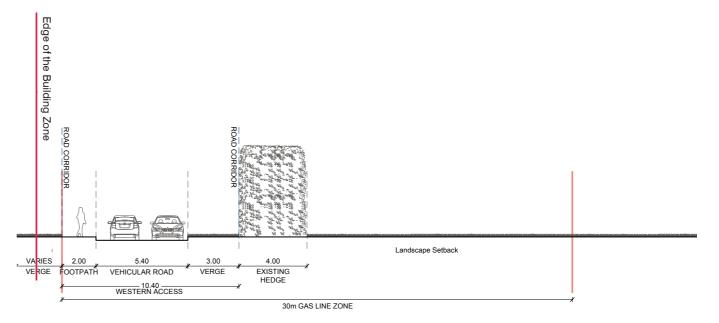


128.Ada Lovelace Road looking south





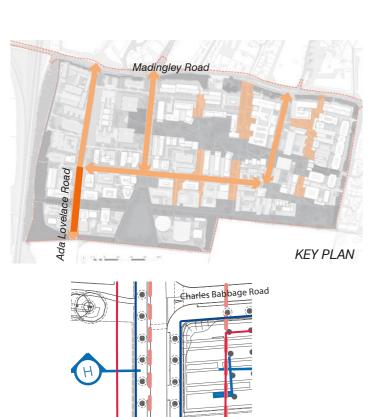


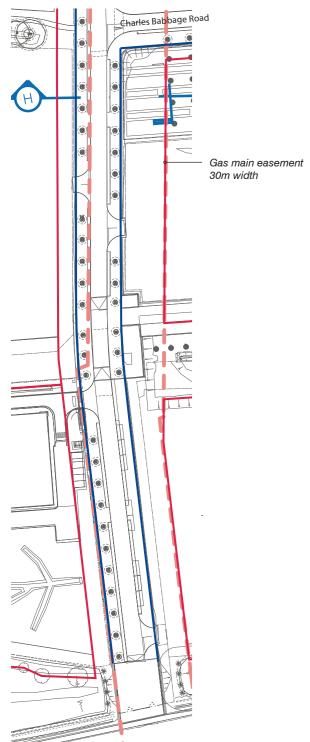


131.Western Access- Existing Conditions Section H

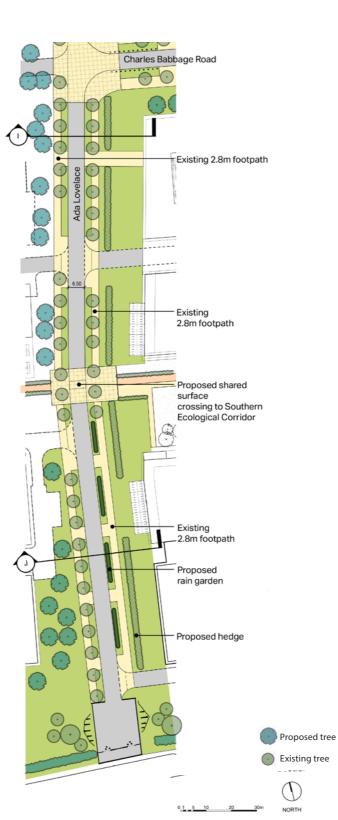


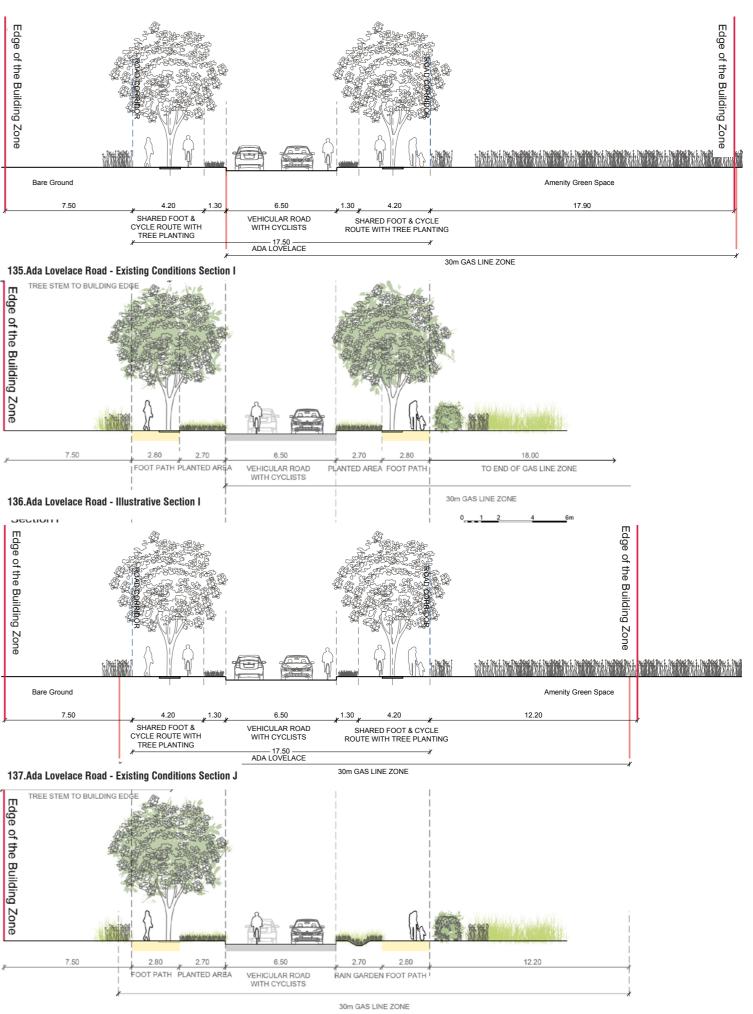
132.Western Access - Illustrative Section H





133.Ada Lovelace Road Existing Conditions Plan





138.Ada Lovelace Road - Illustrative Section J

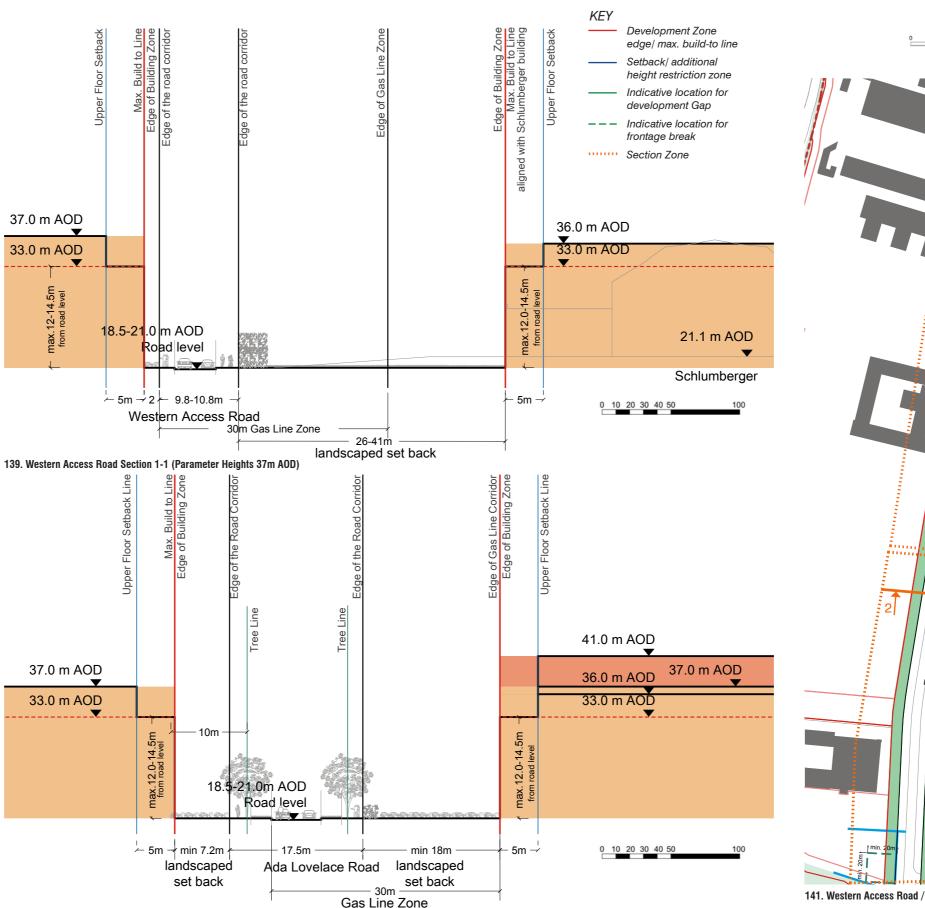
### Heights and street frontage

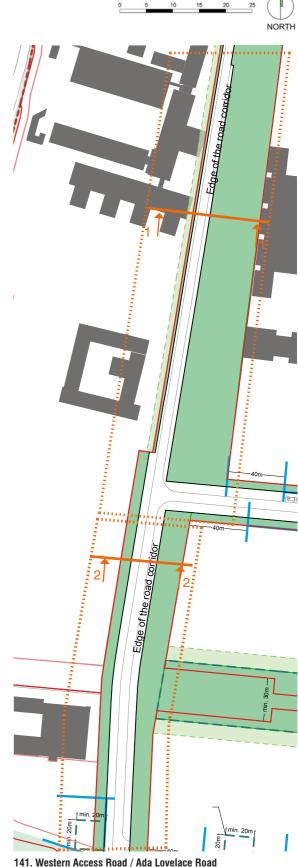
3.5.6 The following provides the requirements for heights and street frontage along Western Access/Ada Lovelace Road. On the plan in Figure 141, the darker green colour denotes zones of open space secured through Parameter Plan 04. Other requirements for Western Access/Ada Lovelace Road are set out in the Parameter Statement.

3.5.7 The guidelines for heights and street frontage are as follows:

- In accordance with the approved heights parameters, heights along Western Access Road shall respond to the existing low density character in this location. Heights shall be taller around the junction with Charles Babbage Road. Heights shall then reduce again along Ada Lovelace Road towards the Southern edge;
- Along Western Access Road (Section 1-1) the edge of the Building Zone on the eastern side shall be set to be aligned with the existing frontage of the Schlumberger Research Building. On the western side, the existing buildings limit the width of the corridor and the edge of the Building Zone shall be set back from the edge of the road corridor by 2m;
- Along Ada Lovelace Road (Section 2-2) the edge of the Building Zone shall be set to the edge of the gas line corridor. On the western side, the edge of the Building Zone shall be set back to allow a 10m buffer from the existing tree line, to protect the trees and allow them to grow;
- Maximum Build to Lines shall align with the edges of Building Zones;
- Zones between the edges of the road corridor and the edges of the Building Zones/maximum Build to Lines shall be landscaped with predominantly soft landscapes. Only areas leading to entrances and spill out uses shall be treated with hard landscaping;
- An additional frontage height restriction of 33m AOD shall apply along the street and any development above this height shall be set back by a minimum of 5m from the predominant building frontage;
- Activity should be promoted by locating main entrances to buildings along the street.

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





### 3.6. Eastern Green Link

### Street transformation

3.6.1 The Eastern Green Link will be formed from existing access roads and spaces within the east of the site. At present these access roads are car orientated and lack pedestrian activity.

3.6.2 In the proposed development, this new Green Link will form a new pedestrian orientated corridor that unifies and integrates both the retained and proposed buildings within the eastern part of the site and forms a key north-south link between the proposed eastern developments and the Forum Spaces to the south of the site.

3.6.3 Key spaces will be formed along this Green Link: the Arrival space in the north and the Garden space at the intersection of the Green Link and the existing footpath and cycle link. This garden space is seen to be an extension of The Green open space into the eastern part of the site.

#### Character

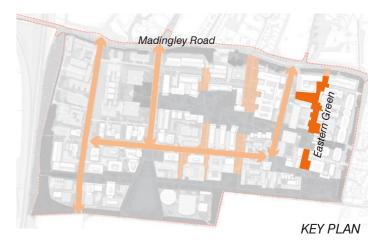
3.6.4 Guidelines for the transformation of character of the Eastern Green Link are as follows:

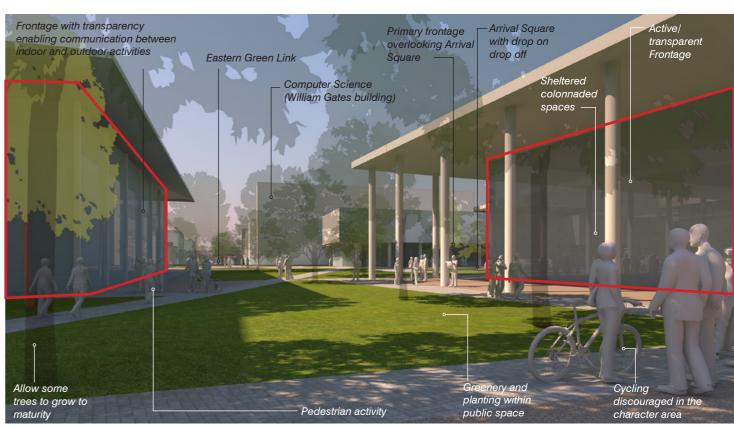
- Connecting many existing and new buildings, it is envisaged that this Link will be a very lively and intensively used by pedestrians. In order to achieve this, the Link shall be a predominantly hard space with tree planting and pockets of softscape;
- While the minimum set width shall be narrower in comparison with other links, the profile of the Link shall vary in width to achieve pockets of landscape between the buildings, as illustrated on Figure 143;
- In order to revive the frontages of the existing buildings along this Link, new lobby and social spaces should be added.

### Landscape and planting

3.6.5 Guidelines for the landscape and planting for the Eastern Green Link are as follows:

- The landscape treatment of the Eastern Green Link shall be visually coherent to ensure it acts as an integrating feature through this area;
- The public realm design of this space shall serve to prioritise pedestrians and discourage cycling through this space;
- Along the Eastern 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 shall consider aspect, environmental conditions, legibility and pedestrian desire lines;
- A specific treatment shall be formed for the intersection of the Eastern 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;
- A group of existing common Ash trees (no. G009) within the space and located to the rear of the William Gates Building shall be retained and incorporated within the design of the Green Link;
- Limited/smaller areas of visitor cycle stands should be located close to building entrances, if required.





142. Eastern Green Link: view looking south towards The East Garden

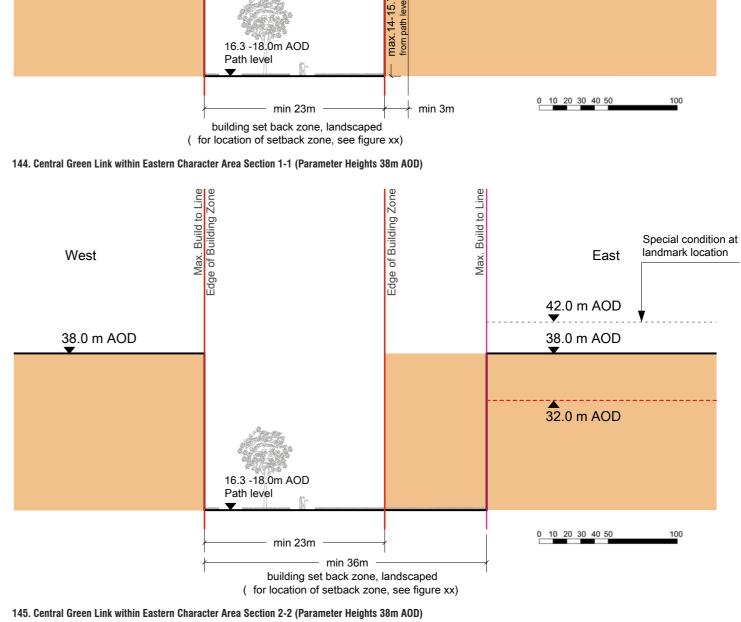
### Heights and street frontage

3.6.6 The following provides the requirements for heights and street frontage along the Eastern Green Link. On the plan in Figure 143, the darker green colour denotes zones of open space secured through Parameter Plan 04. Other requirements for the Eastern Green Link are set out in the Parameter Statement.

3.6.7 The guidelines for heights and street frontage are as follows:

- The edge of the Building Zone on the western side shall be aligned with the existing Computer Laboratory (Willam Gates Building). On the eastern side the edge of the Building Zone shall be aligned with the northern wing of Roger Needham Building. Thus, the width of the Eastern Green Link at any given cross section shall be a minimum of 23m:
- An open space shall be created south of the eastwest cycle route (south of the Computer Laboratory), and shall have a minimum total width of 36m and minimum length of 41m, as shown on the Figure 143. This space shall form a secondary focus space for the Eastern cluster of development and shall be a continuation of The Green open space;
- On the eastern side of the Green Link, four pocket landscapes shall be created, adding to the minimum width of the Link to a minimum total of 36m. Each of these spaces shall have a minimum length of 20m;
- Two of the pocket landscapes shall be north of the primary cycle route and relate to entrances of Electrical Engineering and Roger Needham buildings:
- At least two of the pocket landscapes shall be in the zone between L3 and L3;
- At the northern end, the Green Link shall connect with the proposed Arrival Space. The minimum width between buildings at the point of this connection shall be 10m:
- At its southern end, the Green Link shall connect with the East Forum spaces. The minimum width between buildings at the point of this connection shall be 10m;
- An additional frontage height restriction of 32m AOD shall apply along the eastern edge of the Building Zone. Any development above this height shall be set back from maximum build to line by a minimum of 3m.





Edge of Building Zone Max. Build to Line

Special condition at

landmark location

East

42.0 m AOD

38.0 m AOD

32.0 m AOD



West

38.0 m AOD

### KEY

Area secured in the Parameter Plan 4

> Flexibility zone defined in the Parameter Plan 4

--- Indicative boundary of area secured in the Parameter Plan 4

> Building Zone edge (location of open space secured in Parameter Plan 4)

Max. Build to Line

Building set back zone

Section Zone

### 3.7. Central Green Link

### **Street transformation**

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

#### Character

3.7.2 Guidelines for the transformation of character of the Central Green Link are as follows:

- In the north, this corridor shall incorporate high quality existing trees and re-purpose the public realm to provide pedestrian friendly amenity space, pedestrian and cycle routes and areas for cycle parking. Parts of this link shall also include vehicular access routes with limited use (servicing);
- To the south of Charles Babbage Road, the Green Link shall be widened to provide for additional planting. At its southern end, the Green Link shall include a wider width between building frontages which shall help soften the Southern edge (frontage overlooking the agricultural fields), and provide space for trees to grow to mature size.

### Landscape and planting

3.7.3 Guidelines for the landscape and planting for the Central Green Link are as follows:

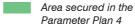
- Any vehicular access routes in the zone south of The Green shall be provided as shared surfaces with the width of maximum 6.5m - see Figures 149, 152 and 153;
- Adjacent to the existing residences, a landscaped buffer shall be provided, with the width of minimum 4m - see Figure 149;
- Landscape buffers shall be predominantly soft. Areas of hard landscapes shall be allowed for access and servicing/drop-off;
- Any new large species trees shall be planted in a zone which leaves a minimum 10m distance to the maximum build to line, to allow space for them to grow to maturity;
- Any surface in the root protection zone of the protected trees shall be permeable;

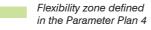


146. Central Green Link

- Cycle parking should be located along building frontages within the Green Link;
- Along the link nodes or gathering points should be formed with the use of, for example, planting and/or seating elements. The placement of these spaces should consider aspect, environmental conditions, legibility and pedestrian desire lines.

### KEY





Indicative boundary of area secured in the Parameter Plan 4

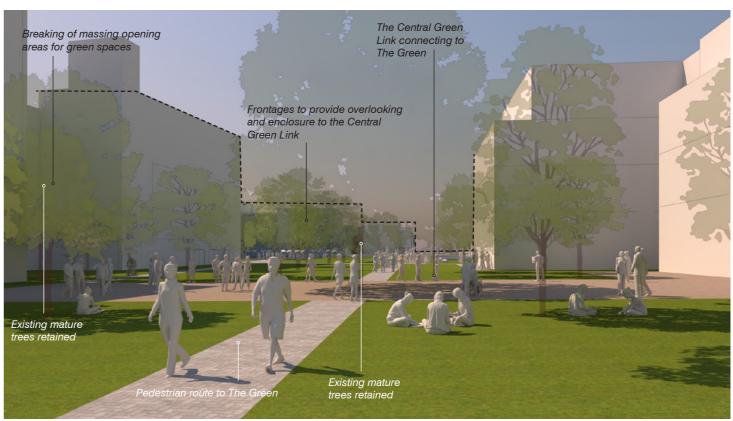
Building Zone edge (location of open space secured in Parameter Plan 4)

Max. Build to Line

Building set back zone

Section Zone





147. Central Green Link: view looking south

### Heights and street frontage

3.7.4 The following provides the requirements for heights and street frontage along the Central Green Link. On the plan in Figure 146, the darker green colour denotes zones of open space secured through Parameter Plan 04. Other requirements for the Central Green Link are set out in the Parameter Statement.

3.7.5 The guidelines for heights and street frontage are as follows:

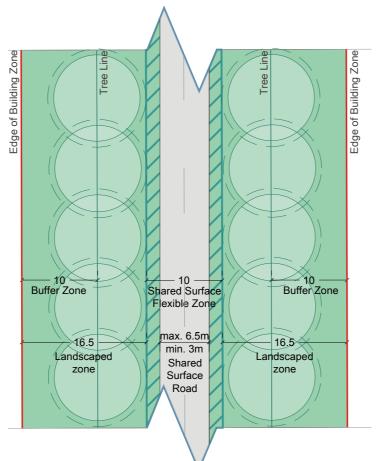
- Maximum building heights within the Green Link shall be lower to the south of Charles Babbage Road and at the north along Madingley Road;
- New frontage shall ensure that there is good enclosure and shall provide some natural surveillance and overlooking of this space;
- In accordance with the Design Guidelines for frontages (Section 1.4) small landscaped pocket spaces shall break up the length of longer frontages.

3.7.6 Further guidelines applicable to the Green Link to the north of The Green are as follows:

- Minimum width of the open space shall be 30m;
- Building frontages shall be set back a minimum 10m from the lines of the existing lime trees, resulting in building to building width of minimum 43m in this part of the Central Green Link;
- An additional frontage height restriction of 34m AOD should apply along both frontages along the Green Link and any development above this height should be set back by a minimum of 3m from the predominant building frontage.

3.7.7 Further guidelines applicable to the Green Link to the south of The Green are as follows:

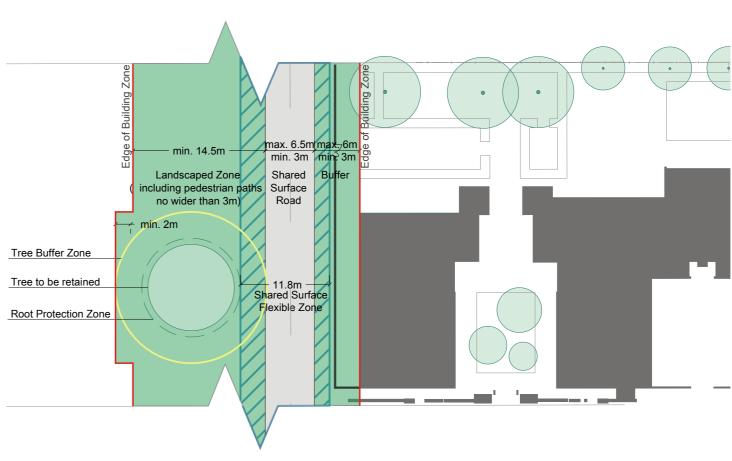
- Building to building width shall be minimum 30m;
- In the zone south of The Green and north of Charles Babbage Road, an additional frontage height restriction of 34m AOD shall apply along the frontage and any development above this height shall be set back by a minimum of 3m from the predominant building frontage;
- In the zone south of The Green and north of Charles Babbage Road, an additional setback shall be secured to ensure the tree protection zone, as indicated on Figure 149;



148. Central Green Link / Lime Avenue 1-1: Indicative schematic plan showing space for the existing trees, access routes and landscaping

149. Central Green Link 3-3: Indicative schematic plan showing space for the existing trees, access routes and landscaping

- In the zone south of Charles Babbage Road, the minimum heights set in the Parameter Statement shall be 33 and 36m AOD. No further frontage restrictions shall be required along this part of the Green Link;
- A wider space of minimum 30x30m shall be created at the southern end of the Central Green Link, and conditions shall be established to allow for one or more large trees to grow to maturity.



KEY

Building Zone edge (location of open space secured in Parameter Plan 4)

Area secured in the Parameter Plan 4

Existing trees to be retained

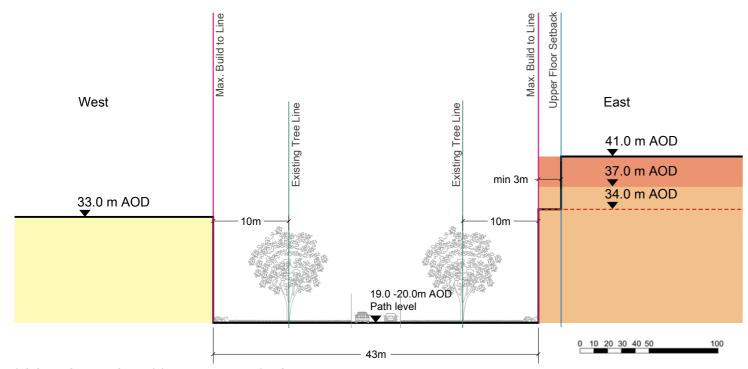
Tree Root Protection

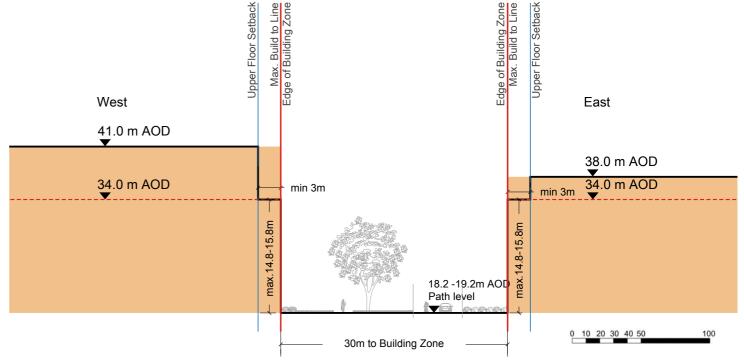
Tree Buffer Zone

Shared Surface Road

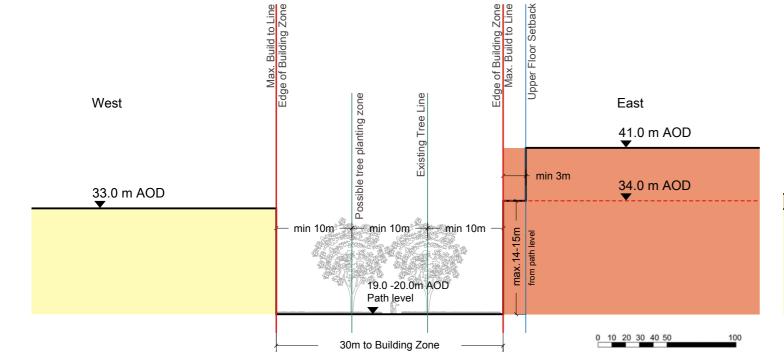
Shared Surface Flexible

Existing Building



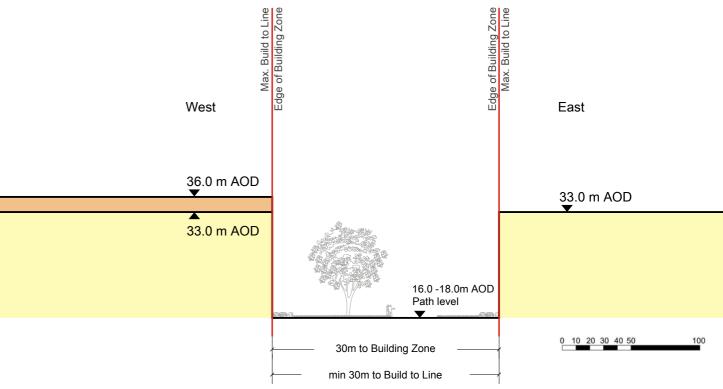


150. Central Green Link Section 1-1 (Parameter Heights 41m AOD)



min 30m to Build to Line

152. Central Green Link Section 3-3 (Parameter Heights 41m and 38m AOD)



151. Central Green Link Section 2-2 (Parameter Heights 41m AOD)

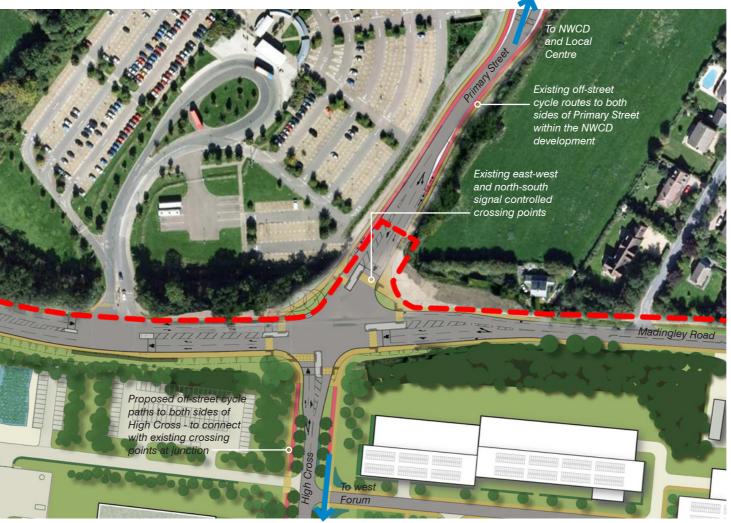
153. Central Green Link Section 4-4 (Parameter Heights 36m and 33m AOD)

### Cycle connections to the north

- 3.7.8 Junctions and crossing points to the north of the the West Cambridge site have been examined with the aim of maximising pedestrian and cyclist movement across Madingley Road, and ensuring safety and strong connections between the site and surrounding developments and infrastructure.
- 3.7.9 Madingley Road can present a barrier to accessibility, hence the need to ensure safe and efficient crossings for Pedestrians and Cyclists.
- 3.7.10 Bringing a new pedestrian and cycle network through the West Cambridge site with strong links across Madingley Road to NWCD will ensure that both sites are strongly connected to the city centre via the Coton Footpath and the proposed Ridgeway.
- 3.7.11 The key north south pedestrian and cycle routes through the site linking Madingley Road and the Coton Footpath are High Cross, JJ Thomson Avenue, Clerk Maxwell Road and the Western Access/Ada Lovelace Road. As development progresses, these links will be supported with improved crossings on Madingley Road, where found to be necessary.
- 3.7.12 Within the context of the adopted Adaptive Phased Approach for assessing mitigation for West Cambridge, the University will work with the County Council to deliver quality junctions providing a reasonable balance of capacity for all modes at the appropriate time within the development delivery.
- 3.7.13 Pedestrian and cyclist controlled crossings exist on Madingley Road:
- at Madingley Road / High Cross junction where facilities have been improved as part of the NWCD development. This junction will need to be enhanced during the duration of the West Cambridge development;
- at Madingley Rise / JJ Thomson Avenue where a new at-grade toucan crossing has recently been delivered.
- 3.7.14 As part of the West Cambridge development, pedestrian and cyclist improvements are proposed at the following crossing points on Madingley Road:
- Observatory Drive / Clerk Maxwell Road an enhanced uncontrolled, informal crossing with enhanced islands of Madingley Road is proposed;
- at a later phase, a new toucan crossing within the Madingley Road / Western Access Road traffic signal controlled junction.

### **High Cross**

- 3.7.15 The guidelines that apply to the High Cross junction are as follows:
- Existing facilities are considered sufficient during the initial phases of development and shall be retained. The junction provides signalised north-south crossing points across Madingley Road for pedestrian and cyclists which connect to the cycle paths on both sides of the Primary Street within NWCD. The proposed off-street cycle routes along both sides of High Cross shall connect with these existing crossing points;
- This junction should be enhanced in later phases of development to ensure that higher levels of pedestrian and cycle movement can be safely accommodated.



154. Pedestrian & cycle connection across Madingley Road - at High Cross

#### **JJ Thomson Avenue**

3.7.16 The guidelines that apply to the JJ Thomson Avenue junction are as follows:

- Existing facilities are appropriate and shall be retained. The junction provides a signalised northsouth crossing point across Madingley Road for pedestrian and cyclists, ensuring strong connection to Madingley Rise academic uses, NWCD and the proposed Ridgeway cycle route;
- The existing provision shall be enhanced with a new east-west crossing point across JJ Thomson Avenue at the north. This ensures that connections can be made to the proposed shared cycle/footpaths on both side of the street.

#### **Western Access Road**

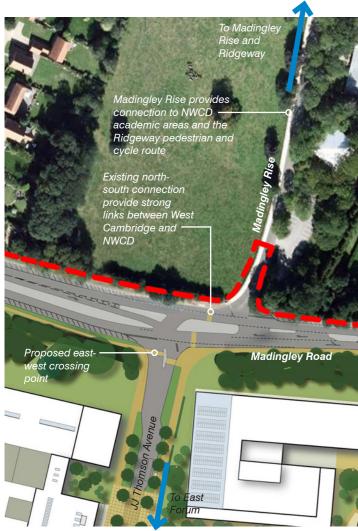
3.7.17 The guidelines that apply to the Western Access Road junction are as follows:

at a later phase of development, a new toucan crossing should be provided within a new Madingley Road / Western Access Road traffic signal controlled junction. This will connect the bi-directional cycle route along the Western Access Road with the pedestrian and cycle path along the north side of Madingley Road.

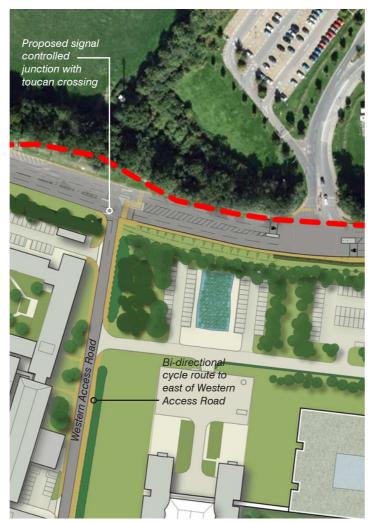
#### Clerk Maxwell Road

3.7.18 The guidelines that apply to the Clerk Maxwell Road junction are as follows:

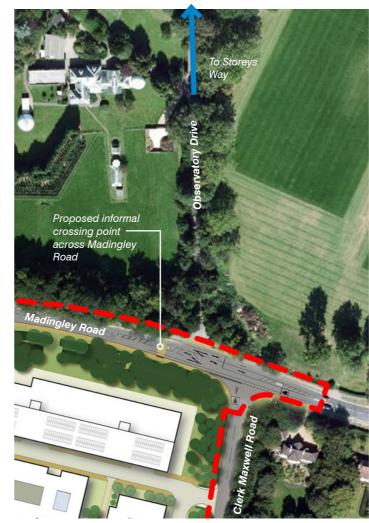
 an enhanced uncontrolled, informal crossing with enhanced islands shall be provided. This will ensure strong connections between the Coton Footpath and Observatory Drive via Clerk Maxwell Road.



156. Pedestrian & cycle connection across Madingley Road - at JJ Thomson



155. Pedestrian & cycle connection across Madingley Road - at Western Access



157. Pedestrian & cycle connection across Madingley Road - at Clerk Maxwell Road



# SITE EDGES

### 4. SITE EDGES

### 4.1. Introduction

- 4.1.1 With the exception of 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.
- 4.1.2 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.
- 4.1.3 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.
- 4.1.4 By 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 to 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.
- 4.1.5 To the north and east of the site are two Conservation Areas: The Conduit Head Conservation Area and the West Cambridge Conservation Area, each containing a number of listed buildings. The woodland buffer and tree planting at the edge of the site contributes the setting of these areas.
- 4.1.6 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 retains a green character consistent with this part of Cambridge. The guidelines also aim to provide space and good conditions for additional planting to strengthen boundaries.



159. Madingley Road site edge

- 4.1.7 The following guidelines apply to all site edges:
- The existing woodland buffers shall be maintained as per Section 1.2 'Retention of Existing Trees' and, where needed, space allowed for supplementary planting. Any additional planting shall follow the objectives set out in the 'West Cambridge Masterplan Woodland Management Plan';
- These design guidelines shall be read in conjunction with the 'West Cambridge Masterplan EIA Arboriculture Impact Assessment Report' and the 'West Cambridge Masterplan Woodland Management Plan' and recommendations shall be implemented;
- Any visible frontages facing onto Madingley Road, the eastern boundary, or the southern boundary (such as at site entrances), shall have a high quality architectural treatment. Generally, the woodland buffer shall be reinforced to limit visibility into the site;
- Where service areas, multi storey car parks and development 'backs' are located along the edges, they shall be screened by the existing woodland buffer, supplemented where necessary with additional planting and sensitively designed;
- Gaps between frontages should be used to break frontage lengths in accordance with Section 1.4 of these Guidelines. Gaps should be appropriately planted, ensuring that some individual trees can grow to maturity;
- Any visible security boundaries and gates to service areas should be of good quality and material and where possible set within planting;
- Limited views into the site should be provided at key gateway points in the north. Two key gateway points should be established on Madingley Road, which provide links across Madingley Road to the North West Cambridge Development and Madingley Rise.



160.Southern site edge



158. West Cambridge - Site edges



161. Clerk Maxwell Road site edge



162. Western Woodland edge

## 4.2. Madingley Road edge

4.2.1 Key guidelines for the Madingley Road site edge are as follows:

- Madingley Road is a key approach road into the city from the west. Development visibility shall be minimised, but any visible development here shall be of high quality to provide an appropriate visual statement which is sensitive to the character of Madingley Road;
- The buffer along the Madingley Road edge shall serve as a screening element for the proposed development. The buffer shall be supplemented where needed, as set out in the 'West Cambridge Masterplan Woodland Management Plan'

### Frontage heights and development zone

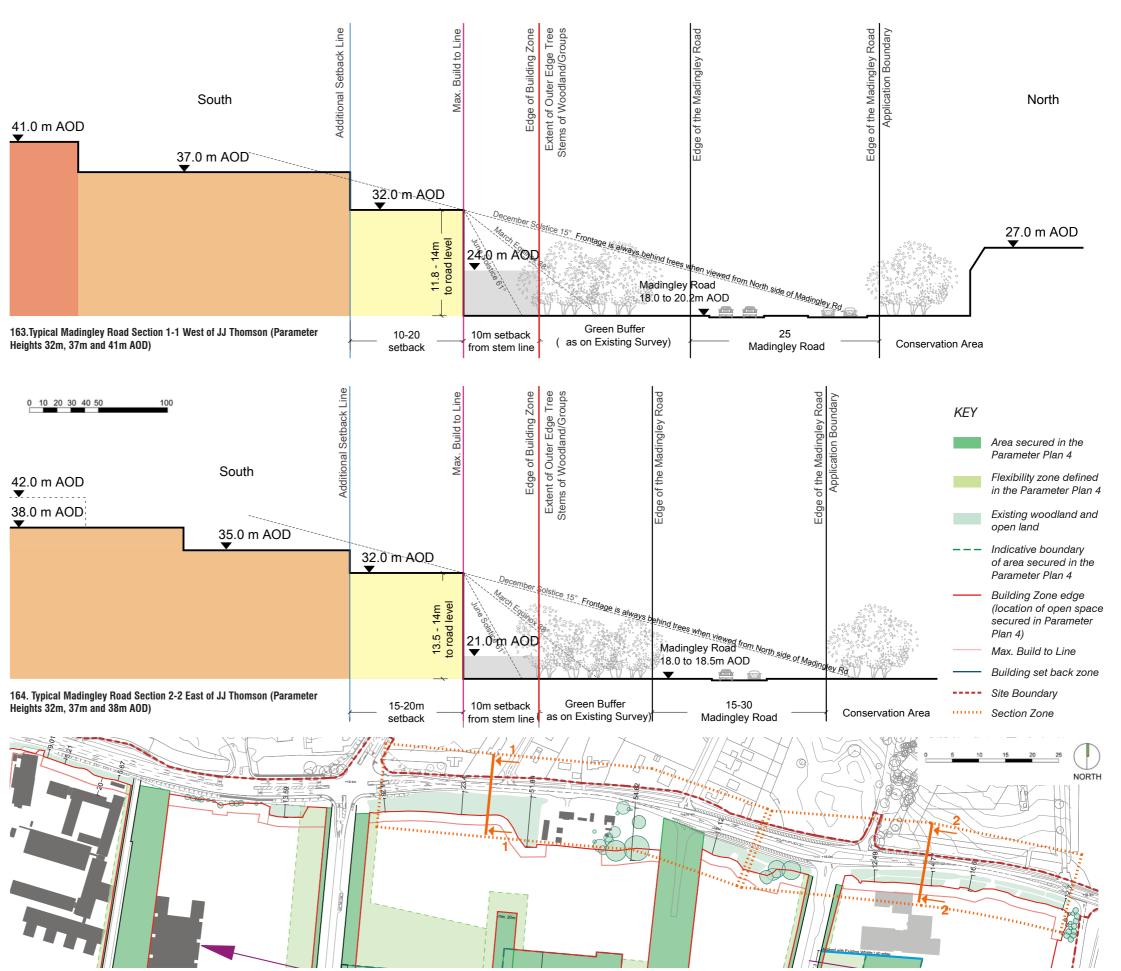
4.2.2 Max AOD heights are established in Parameter Plan 5 which include rooftop plant but exclude flues. The following guidelines apply to any development along the Madingley Road site edge:

- Rooftop plant shall not be located within the 32m AOD zone;
- Any rooftop plant within 20m of the Southern edge of the woodland buffer shall be effectively screened in views from the north, to reduce any visual impact from Madingley Road;
- Any rooftop plant within the 37m or 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) shall be minimised and shall not be visible from the West Cambridge and Conduit Head Road Conservation Areas, or associated listed buildings;
- Frontages longer than 50m shall follow the guidelines set out within Section 1.4, 'Urban Structure'.

### Landscape and planting

4.2.3 Key guidelines for landscape and planting for the Madingley Road edge are as follows:

 Any gaps or setbacks in development frontages shall contain landscape planting and greenery to soften the development edge.



### 4.3. Southern edge

4.3.1 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 the sun and exposure to wind.

### Frontage heights and development zones

4.3.2 Max AOD heights are established in Parameter Plan 05 which include rooftop plant, but exclude flues. The following guidelines apply to development along the Southern edge:

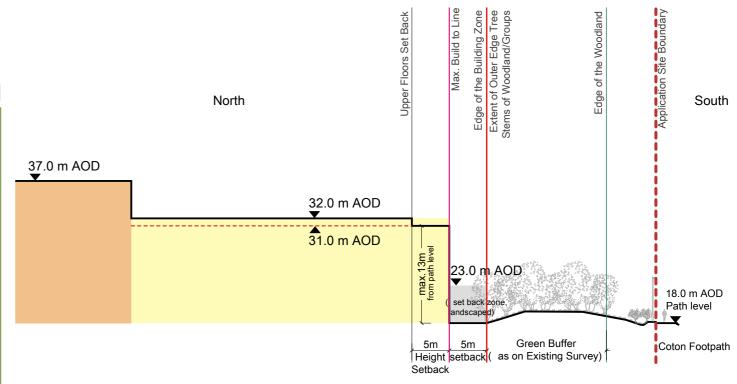
- Along the Southern edge additional height restrictions and setbacks apply, as shown in Figures 166 and 167 - frontages adjacent to the southern boundary shall not exceed 31m AOD;
- Rooftop plant shall be set back from the Southern Building Zone edge and there shall be effective screening of all rooftop plant, when viewed from the south;
- Frontages facing the southern landscape shall have a high quality architectural treatment and materials. Materials and facade design shall respond to this south facing location, and ensure that spaces within and outside of buildings are comfortable and fit for purpose;
- PV's, Green/Blue or Brown roofs should be considered on both roofs and/or south facing frontages and should be well integrated within the facade design and located to avoid visual impact;
- New development frontage should be built to the Building Zone edge but partial setbacks may be provided in order to facilitate diversity of edge conditions and a variable

width of landscaped zone adjacent to the Southern Ecological Corridor.

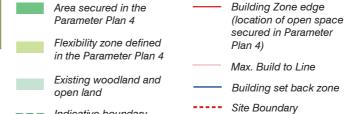
### Landscape and planting

4.3.3 Key guidelines for landscape and planting for the Southern edge are as follows:

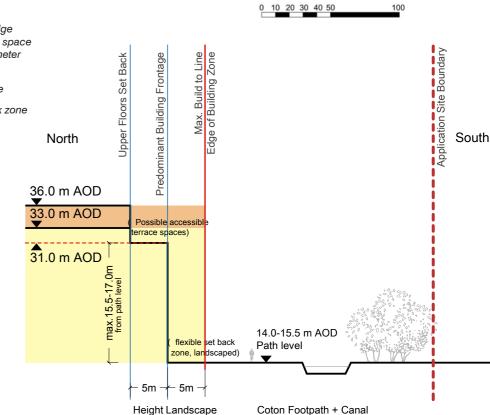
- A 5m landscaped setback zone between max. build to line and woodland buffer shall be established in accordance with the 'West Cambridge Masterplan Woodland Management Plan' and Parameter Plan 04;
- Existing planting shall be protected and enhanced to increase bio-diversity and include a range of appropriate habitats. In addition planting shall seek to establish 'Biodiversity Corridors' and improve links into the wider countryside and other areas of publicly accessible open space such as the Coton Countryside Reserve and the City Wildlife Site;
- The existing green buffer to the Southern edge in the west shall be retained and reinforced to create a visual sense of enclosure for West Forum and West Lake:
- Large feature tree planting shall be provided at a minimum of 5 key locations. Where these trees are planted they shall be given the proper environmental conditions and space to grow to maturity and shall be priovided with a 15m buffer, in accordance with the Woodland Management Plan;
- New landscape areas (including pocket landscapes and setback zones) should be planted without barriers such as fences and should visibly link to the adjoining Southern Ecological Corridor and/or woodland buffer.



166.Coton Footpath Section 2-2 West (Green Belt edge) (Parameter Heights 32m and 37m AOD) KEY



Indicative boundary of area secured in the Section Zone Parameter Plan 4



( Ecological Corridor)

168. Development Zones and additional height restrictions along the Southern edge

167. Coton Footpath Section 1-1 East (Green Belt edge) (Parameter Heights 33m and 36m AOD)

### 4.4. Clerk Maxwell Road edge

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

### Frontage heights and development zone

4.4.2 Max AOD heights are established in Parameter Plan 05 which include rooftop plant, but exclude flues. The following guidelines apply to development along the Clerk Maxwell Road edge:

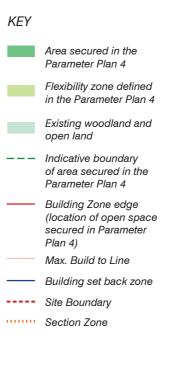
- The development frontages along the eastern edge shall not exceed the set Parameter Height of 31m AOD:
- At the eastern edge of the Building Zone the built form shall comply with an additional height restriction of 25m AOD. From this line, the development heights shall remain within envelope rising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

### Landscape and planting

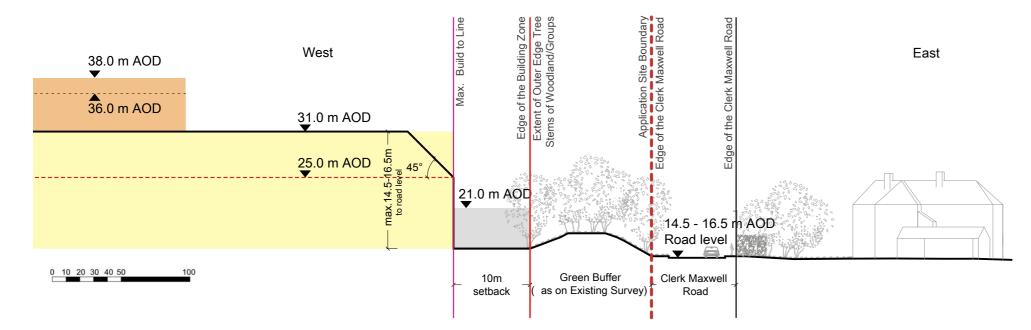
4.4.3 Key guidelines for landscape and planting for the Clerk Maxwell Road edge are as follows:

M

- The existing woodland buffer shall be maintained as per Section 1.2 'Retention of Existing Trees' and, where needed, space allowed for supplementary planting. Any additional planting shall follow the objectives set out in the 'West Cambridge Masterplan Woodland Management Plan';
- A 10m landscaped setback zone between max. build to line and woodland buffer shall be established in accordance with the 'West Cambridge Masterplan Woodland Management Plan' and Parameter Plan 04;
- Any additional access points along Clerk Maxwell Road shall be located to minimise tree loss and in accordance with Parameter Plan 03 and the Parameter Statement.







### 4.5. Western Woodland edge

4.5.1 The Western Woodland edge will remain a strong landscape buffer between the development and M11.

4.5.2 Key guidelines for the Madingley Road site edge are as follows:

Any new development on this edge will need to be set sensitively within this landscape and shall follow the recommendations set out in 'West Cambridge Woodland Management Plan'.

### Frontage heights and development zone

4.5.3 Max AOD heights are established in Parameter Plan 05 which include rooftop plant, but exclude flues. Development zones and heights for these areas are set in the Parameter Plans. No further height restrictions are proposed. The following guidelines apply to development along the Western Woodland edge:

 Rooftop plant should be screened and/or grouped to avoid visual clutter in distant views.

### Landscape and planting

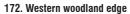
4.5.4 Key guidelines for landscape and planting for the Western Woodland edge are as follows:

- Any new landscaped gaps between buildings shall be a minimum of 20m from building face to building face;
- This woodland should contribute further to the character of this part the site, for example by allowing woodland planting to extend towards the Western Access / Ada Lovelace Road. This will allow the woodland character to be more visually apparent within the site.



171. Western woodland edge





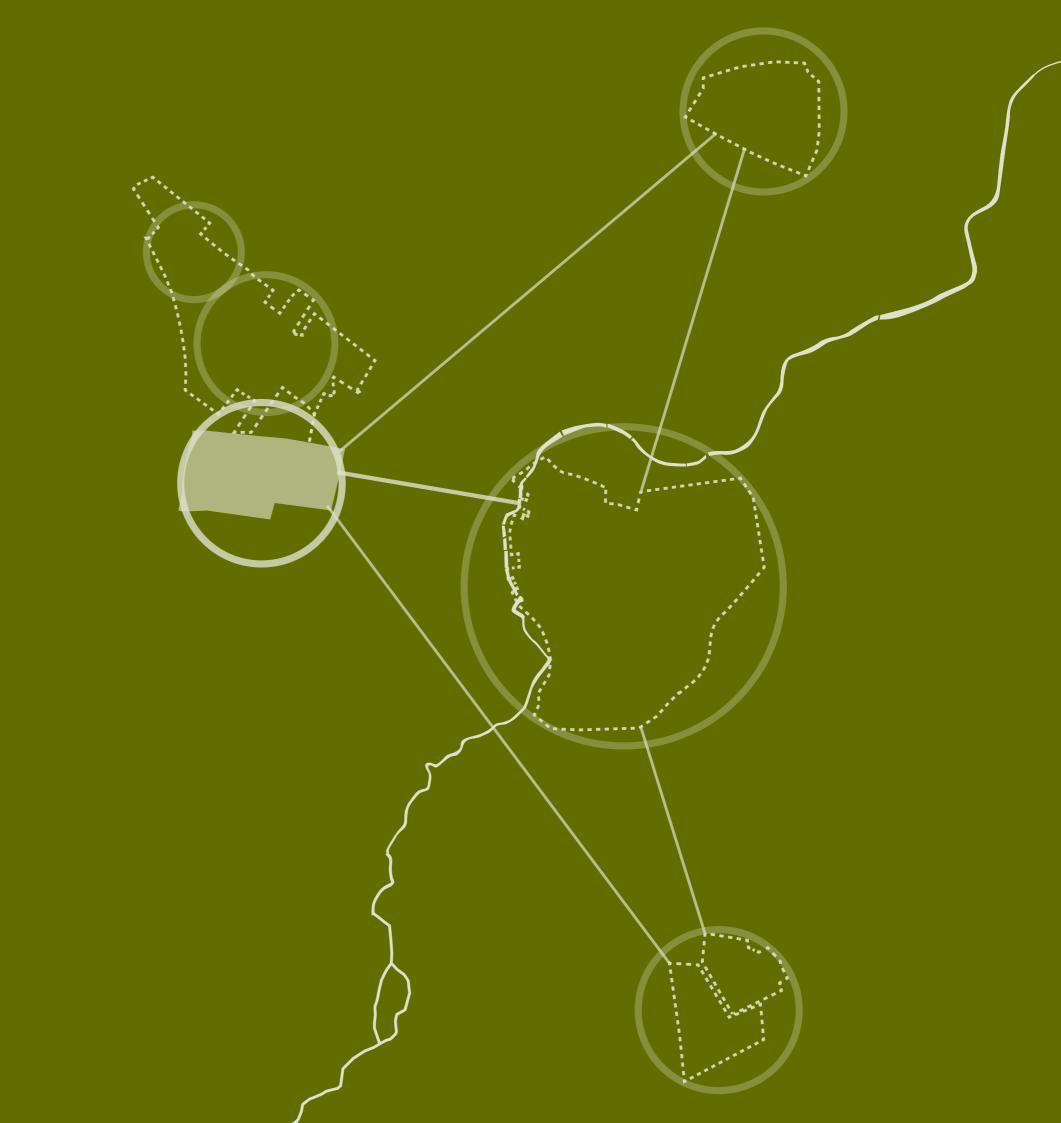


173. Western woodland edge



174. Western woodland edge - Public right of way



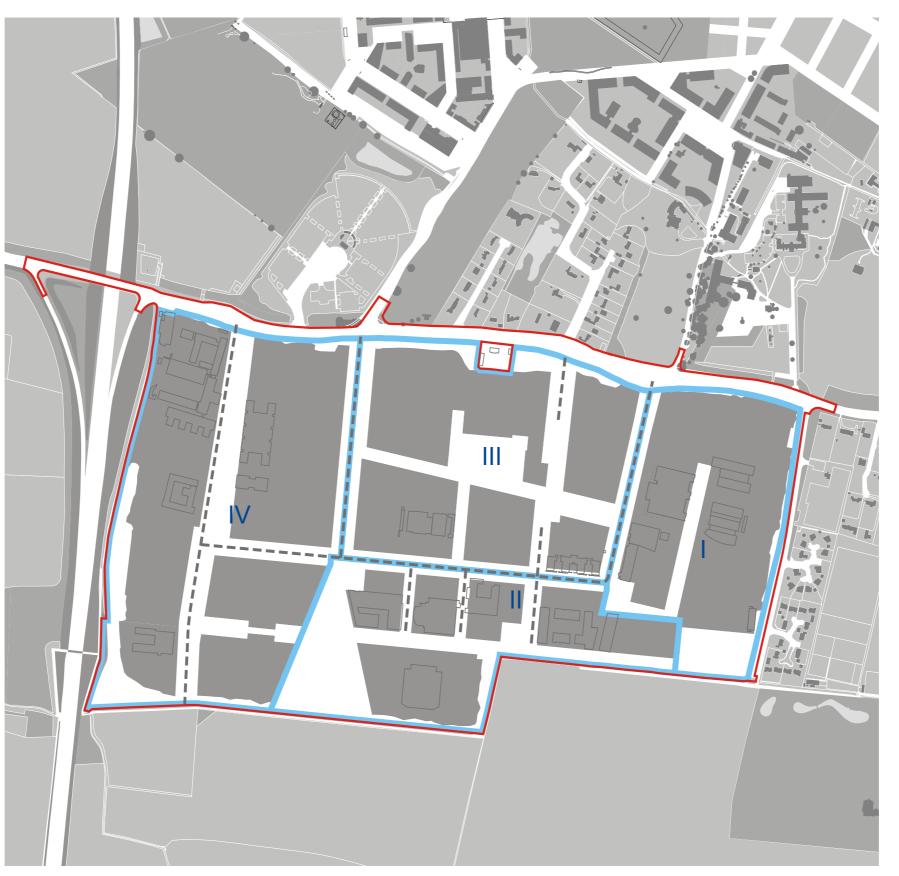


# **APPENDICES**

# 5. APPENDICES

### 5.1. Parameter Plans

Parameter Plan 1: Development **Building Zones** 



KEY

Contextual Information:

Existing street

Existing building to be retained

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/01/REV01
- Development Building Zones Parameter Plan

August 2017

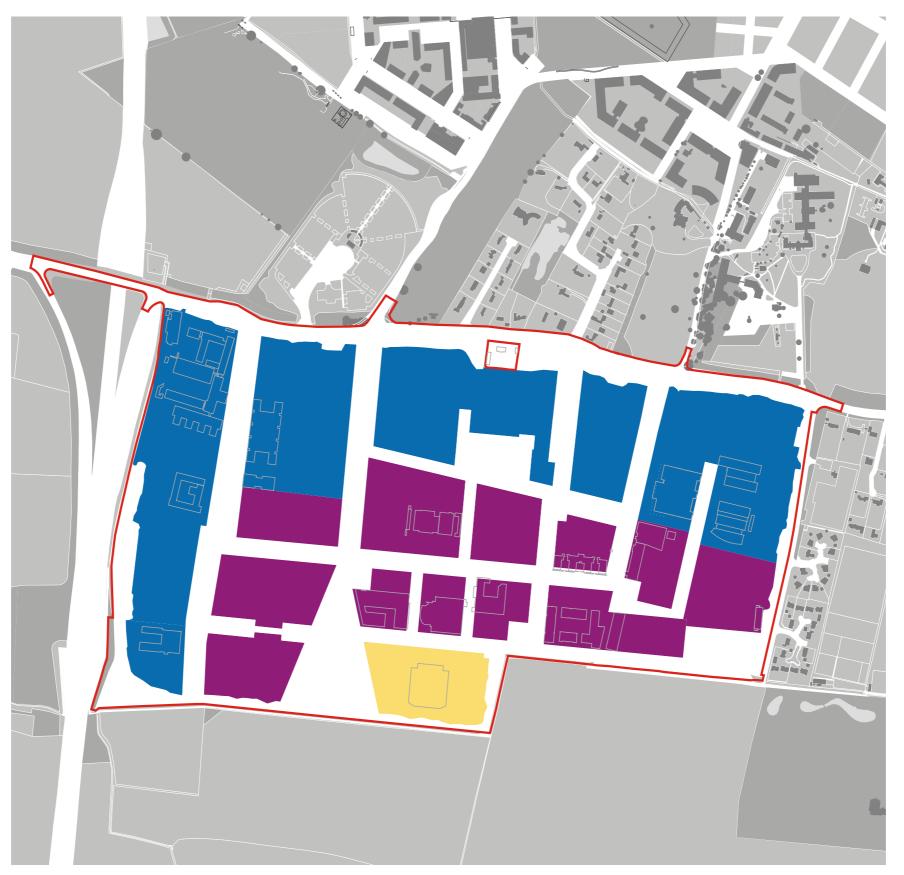






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### Parameter Plan 2: Land Use



KEY

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/02/REV01

- Land Use Parameter Plan

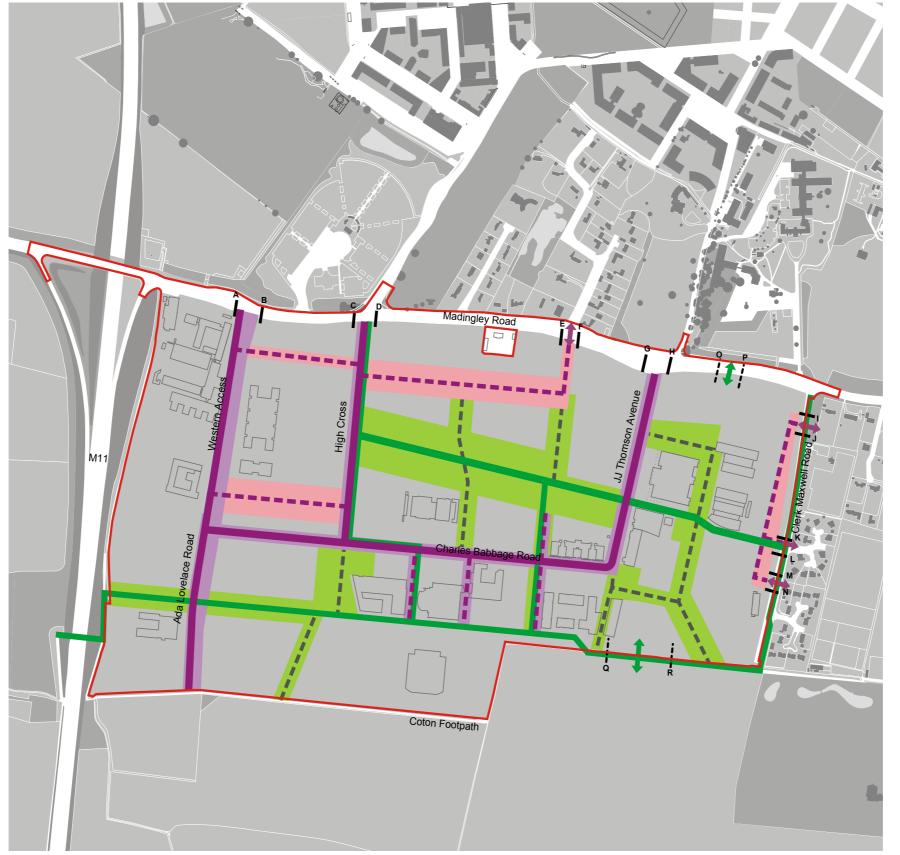
August 2017



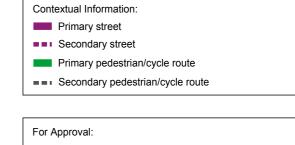


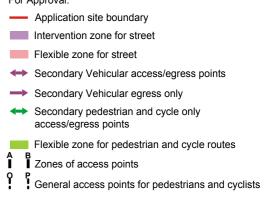


### Parameter Plan 3: Access and Movement



### KEY





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

### **West Cambridge**

WC/OPA/PAR/03/REV01
- Access and Movement Parameter Plan

August 2017







### Parameter Plan 4: Landscape and Public Realm



KEY

Contextual Information:

Existing street/ Pedestrian link

Existing retained open land

Retention & Reinforcement of existing woodland edge

Water Bodies

Canal / swale

For Approval:

Application site boundary

Primary landscape and public realm:

East Forum (Mandatory location)

West Forum (Mandatory location)

The Green (Mandatory location)

The Green minimum area - indicative location

Secondary landscape and public realm (Mandatory location)

Additional Secondary landscape and public realm

(Indicative boundary)

Street landscape areas (Mandatory location)

Flexible zone for landscape and public realm

Woodland buffer zones

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

### **West Cambridge**

WC/OPA/PAR/04/REV01
- Landscape and Public Realm Parameter Plan

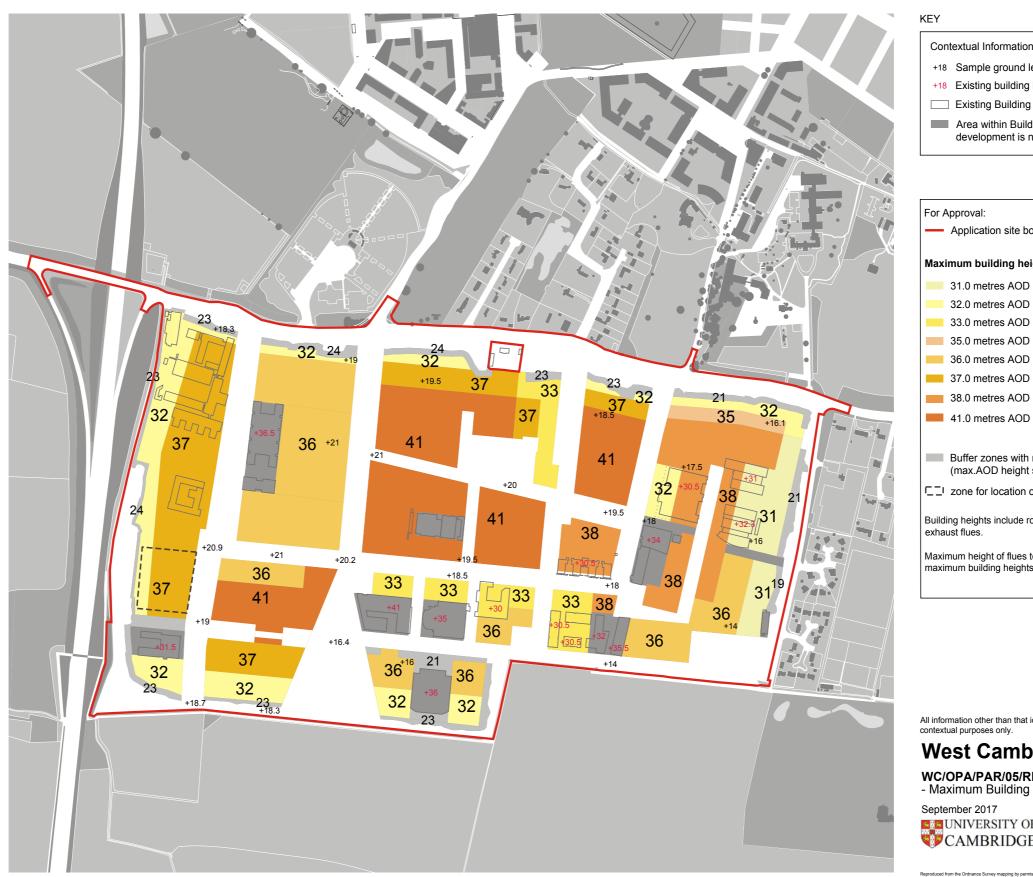
August 2017







### Parameter Plan 5: Maximum **Building Heights**



KEY

Contextual Information:

+18 Sample ground level spot height AOD

+18 Existing building height AOD

Existing Building

Area within Building Zone where built development is not proposed

For Approval:

Application site boundary

Maximum building heights

31.0 metres AOD

32.0 metres AOD

33.0 metres AOD

35.0 metres AOD

36.0 metres AOD

38.0 metres AOD

41.0 metres AOD

Buffer zones with restricted development (max.AOD height specified on plan)

zone for location of energy centre flue

Building heights include roof plant rooms but exclude

Maximum height of flues to be no more than 8m above maximum building heights.

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

### **West Cambridge**

WC/OPA/PAR/05/REV01
- Maximum Building Heights Parameter Plan

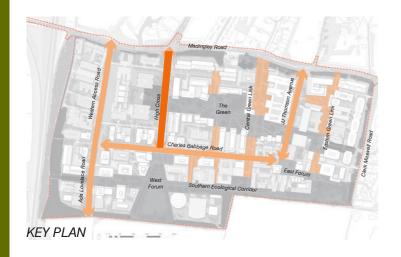






## 5.2. Existing Streets: Utilities sections

### **High Cross: Utilities**



UTILITIES KEYBT CABLES

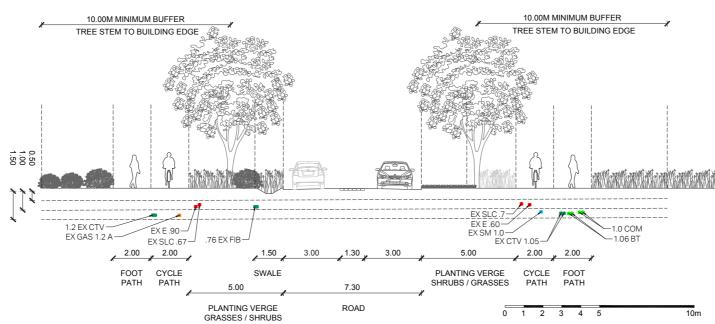
CABLE TV CABLESELECTRICAL CABLESFIBREOPTIC CABLES

HOT WATER PIPELIGHTING CIRCUIT

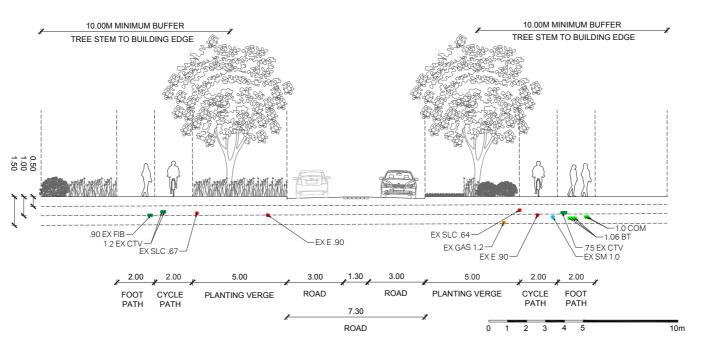
SECURITY CABLING
 UNIDENTIFIED TRACE
 WATER MAIN
 WATER SERVICE

GAS MAINGAS SERVICE

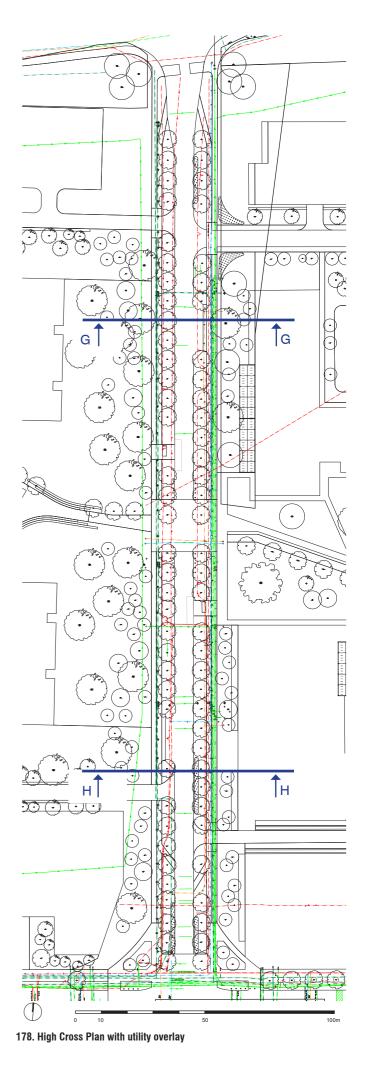
COMMUNICATIONS CABLES



177. Proposed High Cross Section G-G' (with existing utility overlay, subject to detailed design)

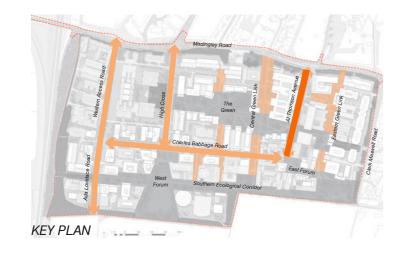


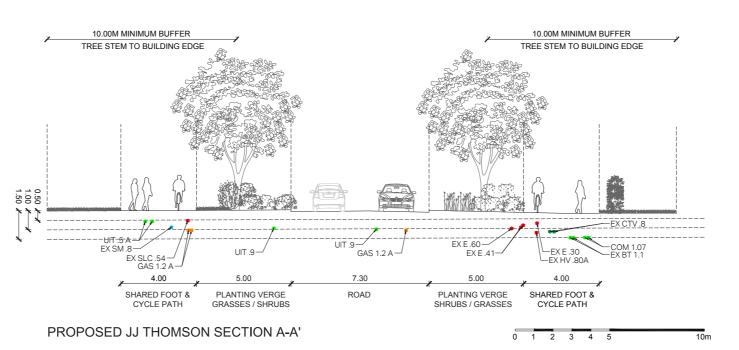
176. Proposed High Cross Section H-H' (with existing utility overlay, subject to detailed design)



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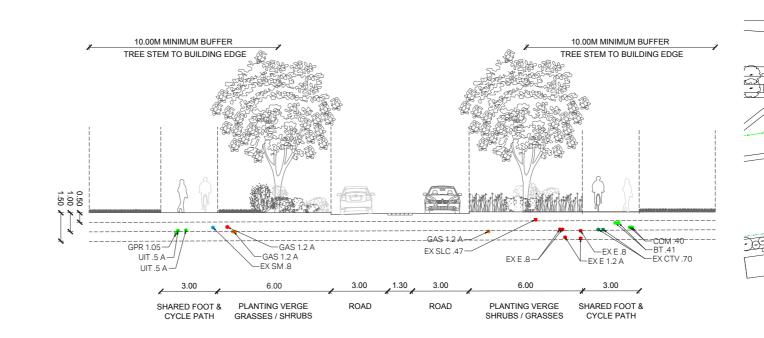
### **JJ Thomson Avenue: Utilities**





179. Proposed JJ Thomson Avenue Section A-A' (with existing utility overlay, subject to detailed design)

180. Proposed JJ Thomson Avenue Section 'B-B' (with existing utility overlay, subject to detailed design)



# WATER MAINWATER SERVICE

UTILITIES KEY

COMMUNICATIONS CABLESCABLE TV CABLES

ELECTRICAL CABLES

FIBREOPTIC CABLES

BT CABLES

GAS MAINGAS SERVICE

GPR TRACE

HOT WATER PIPE
 LIGHTING CIRCUIT
 SECURITY CABLING
 UNIDENTIFIED TRACE