

November 2020



## 4.0 Design strategy

### 4.1 Design proposals - Phase 1

The proposals for Phase 1 bring together the overarching principles of the masterplan and the careful analysis of the context and particular settings for the new buildings which will kick off the regeneration.

Plots B, C and E, command different positions in the masterplan and respond to different context and character areas accordingly.

#### Plot B

Plot B, at the south west of the site, is on the outer extent of the development, on a peninsula of land which sits within an immediate context of suburban housing. The houses are comprised of pitched-roof Victorian terraces arranged over two and three storeys.

In response, the plot contains the lowest of all flatted blocks in the development, arranged as a single long, highly articulated building, comprising of ground plus five storeys of residential dwellings.

#### Plot E

Plot E sits to the east of Plot B in a more central position within the masterplan. It has a southern boundary to the flank walls and garden of existing homes on Piper Road.

Plot E will be the first of a podium typology repeated across the masterplan. This typology marks the departure of low-rise development and a transition to a more urban scale and setting.

The west of the plot is composed of two pavilion buildings which respond to their landscaped setting. The east is composed of a terrace of two buildings which set up the primary north:south road through the masterplan, Madingley Avenue.

Clusters of three townhouses line the north and south of the plot, creating a step down in scale, views through to open sky, and a more domestic setting for the east:west neighbourhood streets.

#### Plot C

Plot C is located at the north of the masterplan and defines the most urban edge of the scheme, creating a public-facing gateway into the masterplan from Cambridge Road and Kingston town Centre.

The location of the plot and the prominence of the open space of Madingley Gardens provides an appropriate setting for the provision of the community facility and also retail and commercial uses at ground floor.

Blocks C1 and C2 are arranged over 13 and 12 storeys respectively. They are both similar in height to the existing Madingley Tower, which is proposed to be demolished later to enable development of Phase 3.

The three interconnected buildings wrap around existing tree-planted lawns, creating an inner garden sheltered from the busy Cambridge road setting but connected via the double-height Community Centre with frontages to garden and street. Open to the south east, the re-framed Madingley Gardens is a significant open space anchor in the wider masterplan.

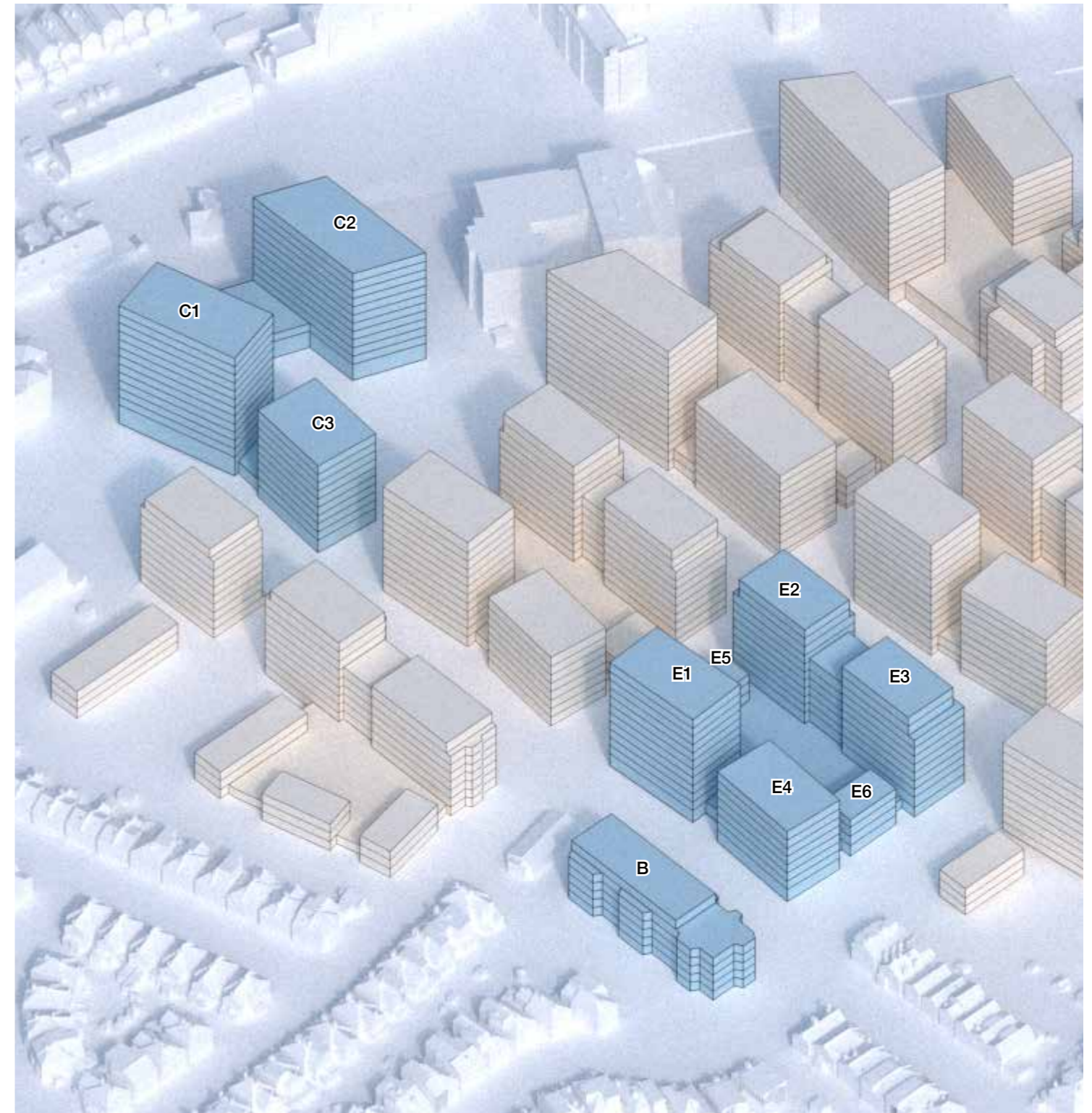


Figure 4.1: Plots B, C and E within the Masterplan massing

## 4.0 Design strategy

### 4.2 Design proposal - Plot B

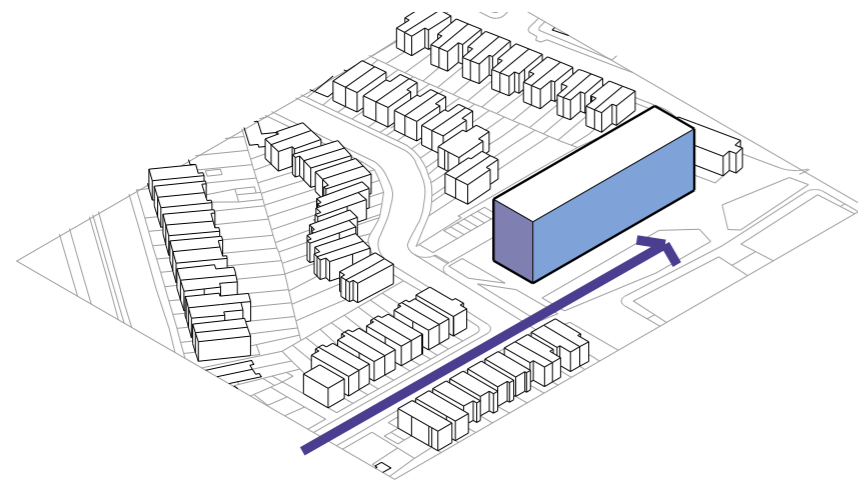
Positioned in the south-west corner of the site, Plot B's scale and linear massing responds to the surrounding neighbourhood streets of Rowlls Road and Piper Road.

The building's massing forms a continuation of the terraced house composition on Piper Road, creating a harmonious relationship between the proposed masterplan and the existing buildings.

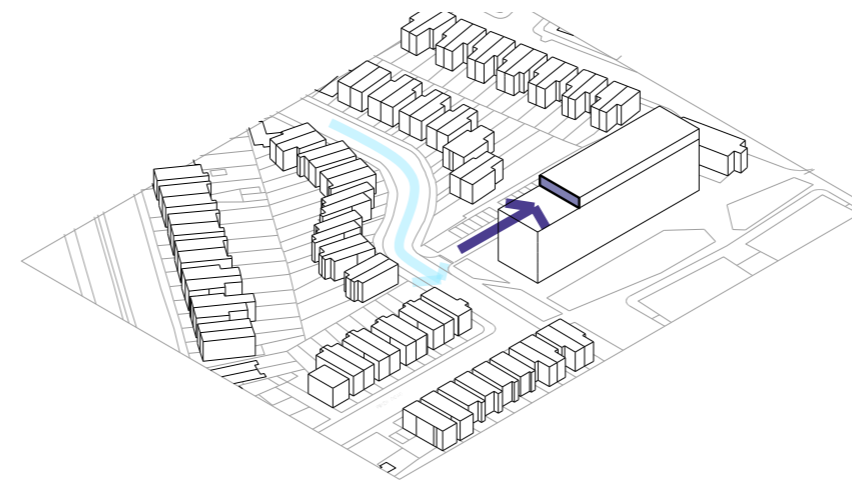
A height of five-storeys, plus set-back, provides a gentle transition in height from the surrounding neighbourhood streets (of two to three storeys) into the central areas of the proposed masterplan. The top-floor is set back from the southern edge of the building, responding to the approach into the site from Rowlls Road.

Bay windows form a key feature of the building. These reflect the terraced houses of the existing streets, which link into the proposed masterplan.

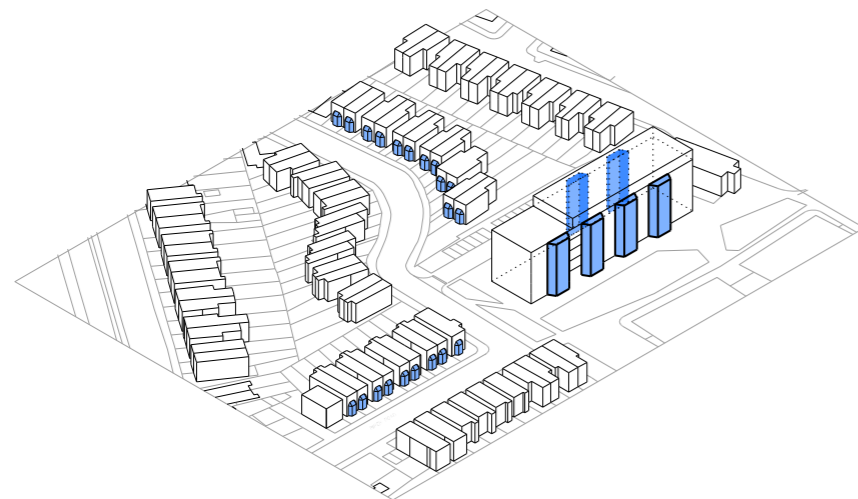
The Plot provides an edge to the new landscape setting of Piper Way and has been positioned to ensure the existing willow tree can be retained.



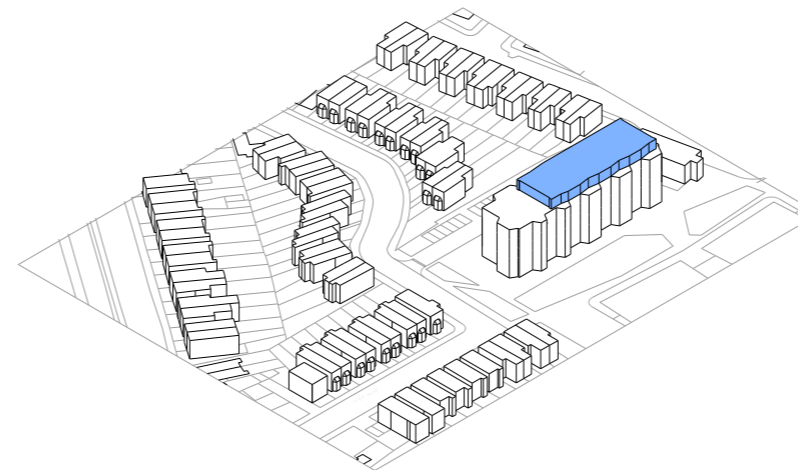
Establish the footprint and connections



Respond to the existing setting



Continue the existing bay typology



Contrasting top to reduce scale

Figure 4.2: Volumetric diagrams

## 4.0 Design strategy

### 4.3 Design proposal - Plot E

The built form of Plot E presents a podium block with a combination of linear blocks and town houses, responding to different settings. This podium typology becomes the common language for a large part of the illustrative masterplan.

The mass extends to the outer edges of the development plot, before being broken down into four distinct cores to mark the key corners of the plot.

The east linear volumes respond to the linear setting of Madingley Avenue, which is the main servicing route and only through-road crossing the scheme.

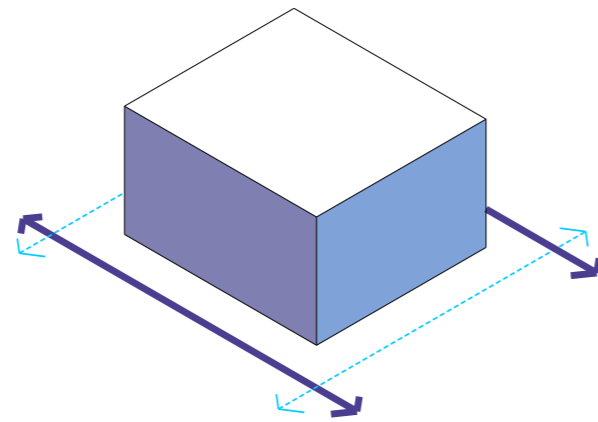
The west volumes respond to the fractal landscape and play setting, Piper Way, between Plot E and Plot B. The two building blocks (E1 and E4) rotate inward to allow for a wider landscaped setting and acknowledge pedestrian movement and pace through the space.

The massing of the four buildings is articulated in response to the surrounding context by reducing the height to the south west (E4) and increasing the height at the north east, allowing for good daylighting into the inner podium space and to give a sense of the height descending towards the existing fridges of the site and increasing towards the centre of the masterplan.

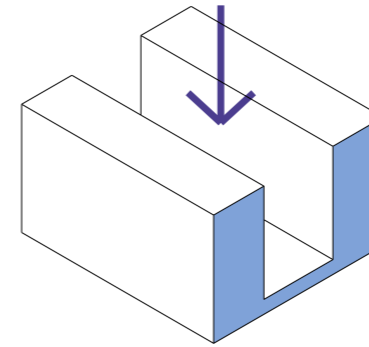
The four buildings are connected via a common podium, providing shared amenity and daylight.

The podium also offers views and verbal links to street level. These links are provided between the four primary blocks.

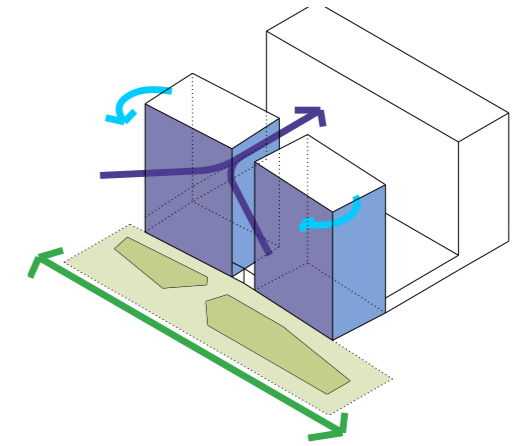
The base is then animated with townhouses located on the south and north side between the linear blocks. These fulfil the need to provide family homes as part of the decant strategy and diversify the residential offer. The houses will be dual aspect and provided with amenity spaces at ground, first and third floors as well as access to the shared courtyards.



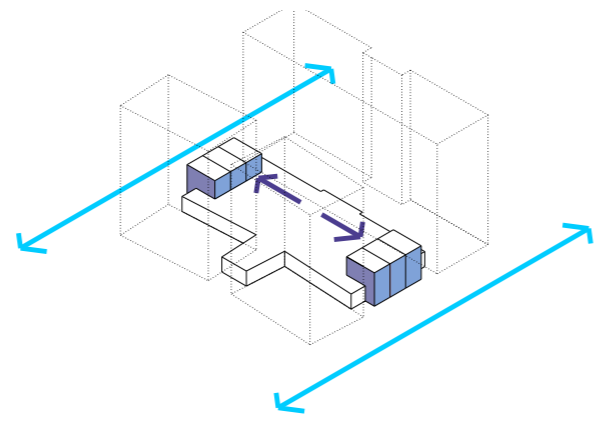
Establish the footprint and connections



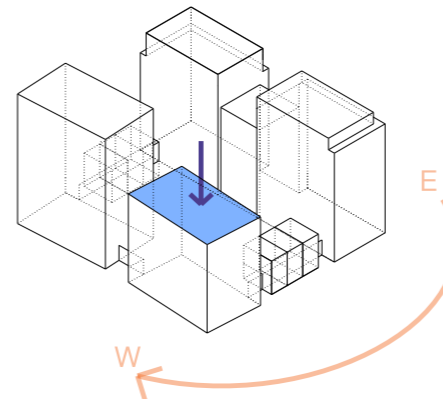
Create an inner courtyard setting



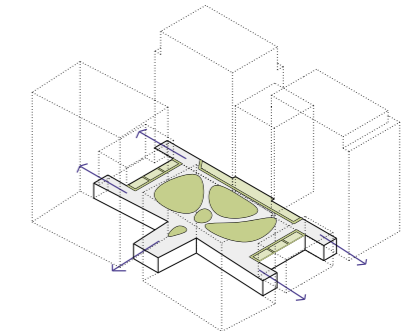
Respond to the western landscape setting



Townhouses responding to neighbourhood setting



Heights responding to typology and daylight



Landscape connection from the podium landscape

Figure 4.3: Volumetric diagrams

4.4 Design proposal - Plot C

The first response is to establish a footprint which responds to the existing pedestrian movements and trees on Cambridge Road, Madingley Gardens and the new north:south vehicle and pedestrian movements, created on the east and west sides on the plot.

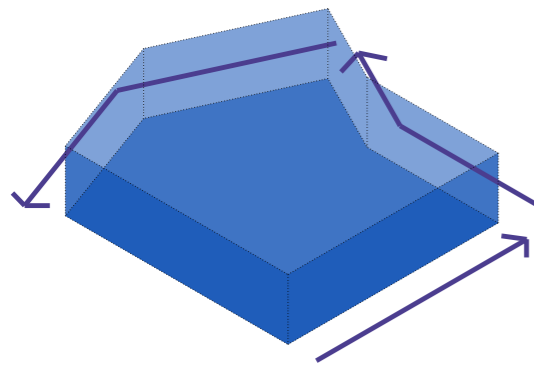
Three corners of the plot are defined by buildings, with the MUGA completing the urban block in the south: east corner. Like Plot E, the south: east building (C3) is reduced in height to maximise daylight into the inner landscaped space and building façades beyond.

The Community Centre, which acts as a gateway between Cambridge Road and Madingley Gardens, links the two tallest buildings C1 and C2. Much of the Community Centre is expressed by the two storey volume between the towers, but this also extends, along with other commercial uses, beneath both C1 and C2, creating a unified base with a residents' landscaped garden above.

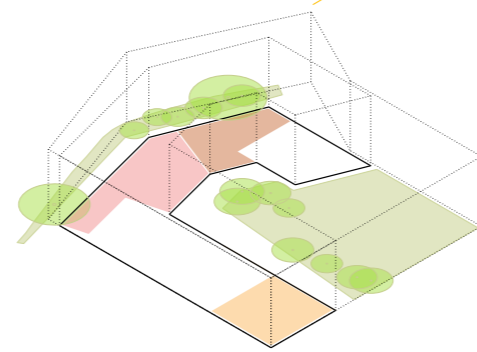
The western volumes (C1 and C3) respond to the fractal landscape and play setting of Washington Avenue. Like the west side of Plot E, the two buildings rotate inward to allow for a wider landscaped setting and acknowledge pedestrian movement and pace through the space.

At 12 storeys, Building C2 acts a marker to the main vehicle route through the site, Madingley Avenue. The block is straight on the east and west sides and angular on the north and south sides, to respond to the landscape settings, geometry of Cambridge Road and to maximise landscape in Madingley Gardens

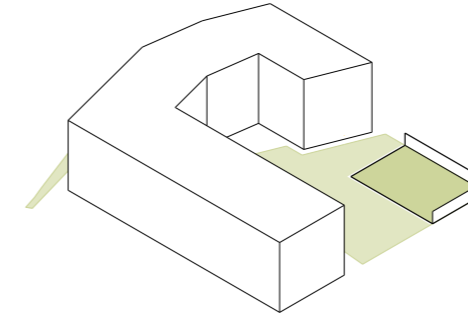
Amenity space is provided between the three blocks, to allow views through the buildings and visual and verbal connections down to the key leisure, social and play space of Madingley Gardens and the new landscape and play space provided along the car free route lining Washington Avenue and connecting to Piper Way in the south.



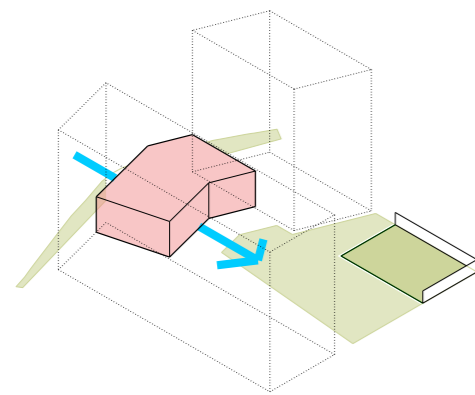
Establish the footprint and connections



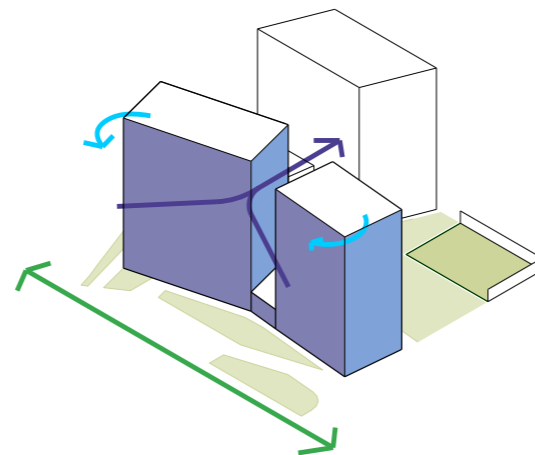
Articulate massing to respond to the landscape



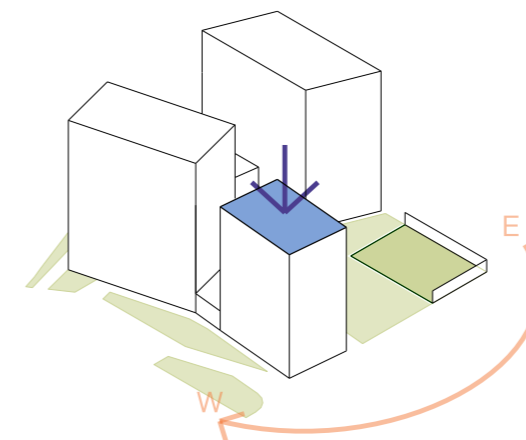
Form the four corners of the plot



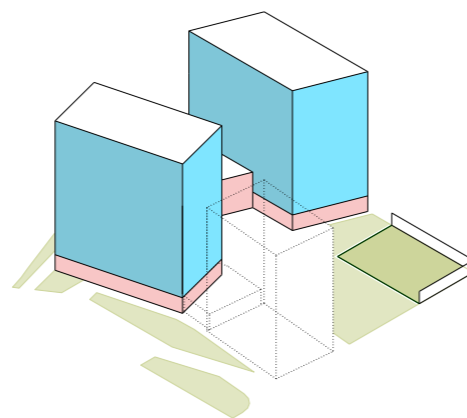
Define the Community Centre as a gateway



Respond to the western landscape setting



Heights responding to typology and daylight



C1 and C2 present themselves as a pair of buildings with a unifying base

Figure 4.4: Volumetric diagrams

## 4.0 Design strategy

### 4.5 An integrated design approach - B and E

The strategy for the first phase has been developed in conjunction with the surrounding masterplan to achieve high quality homes within inviting and successful public spaces and streets.

While Plots B, C and E are the first step towards the wider regeneration of this area and is designed to deliver immediate local improvements, the relationship between the first phase plots and the surrounding masterplan buildings is fundamental to achieving the long term design vision for the site.

Despite being different typologies, Plots B and E have been designed to create a positive relationship across the new landscape and pedestrian gateway, Piper Way.

#### Building B

Plot B is a linear pavilion typology, meaning the building is viewed 'in-the-round'.

The apartments and ground-floor maisonettes are organised around a central core, creating articulated façades of vertical expression. The top level is also articulated, creating an interesting skyline and visually reducing the overall height of the building.

Building B extends into the surrounding landscape with its articulated façades, in the form of bay windows on the east and covered terraces on the west. In both instances, multiple-aspect spaces are provided.

#### Building E

Plot E is configured as a collective of typologies, arranged around a courtyard garden and linked at the base by a podium.

The predominant forms of the building are the pavilion linear buildings on the west side, and terraced linear buildings on the east side. Both sides respond to different street and landscape settings.

The terraced linear buildings of E2 and E3 are arranged north:south, following the direction of the main servicing route through the site, Madingley Avenue. This horizontal expression provides a western edge to the road, replicated across and along the street in the outline masterplan, which creates dialogue along the street.

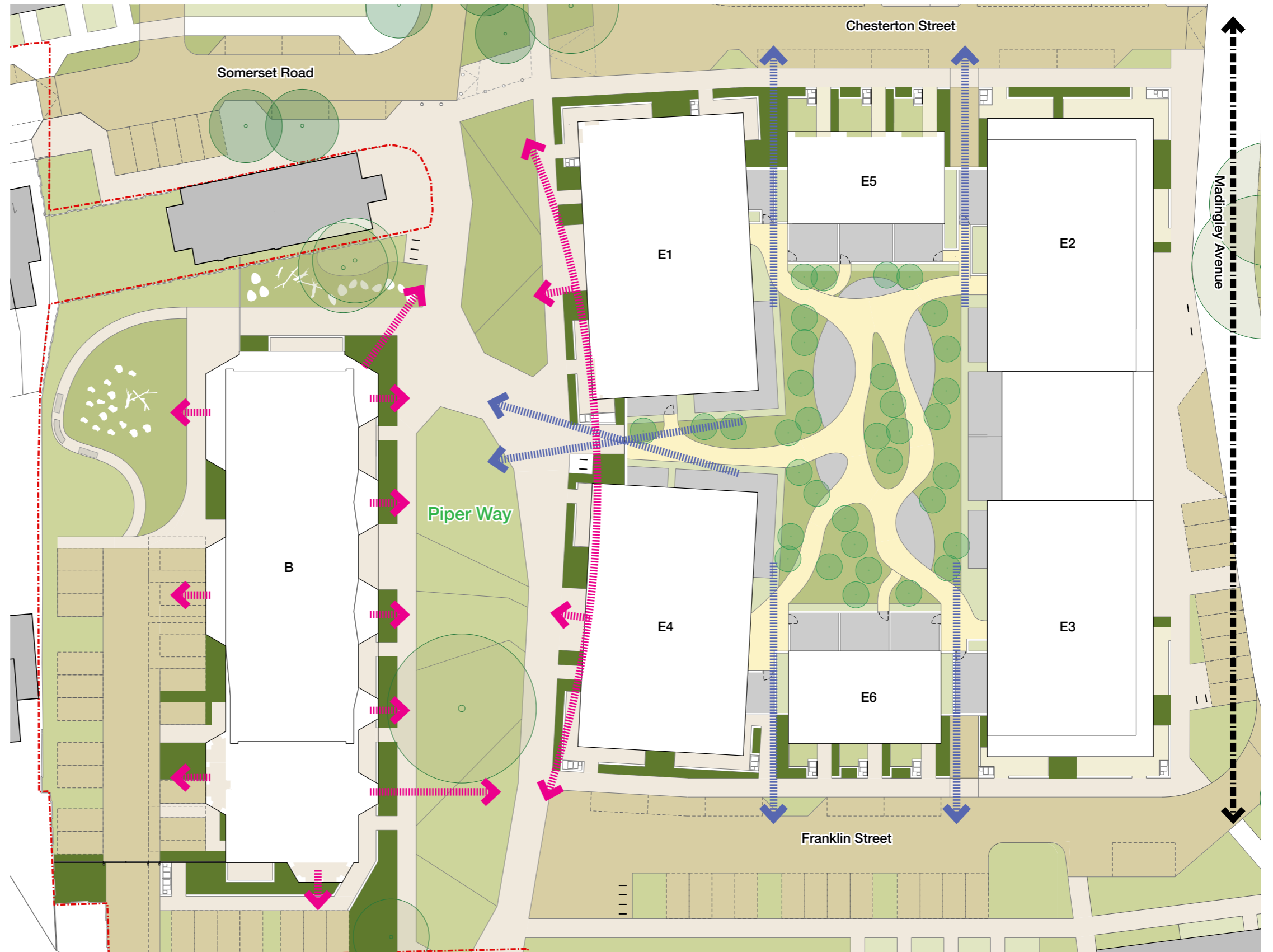


Figure 4.5: Relationship between Plot B, Plot E and the landscape setting

## 4.0 Design strategy

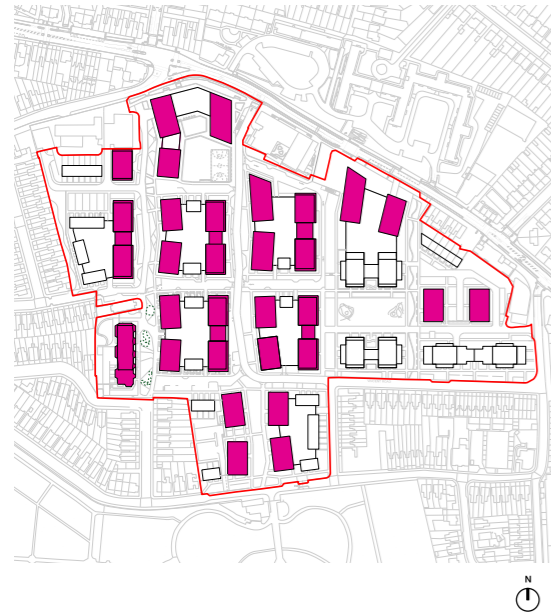


Figure 4.11: Distribution of linear buildings within the masterplan.

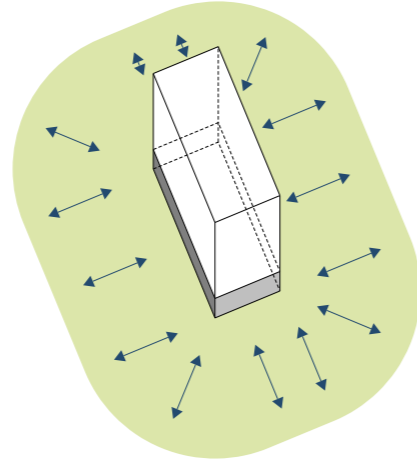


Figure 4.10: Building B - Primary aspects of Linear pavilion buildings.

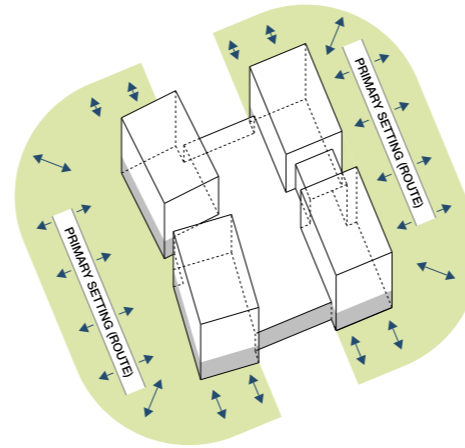


Figure 4.6: Building E - Relationship between buildings and external, public settings.

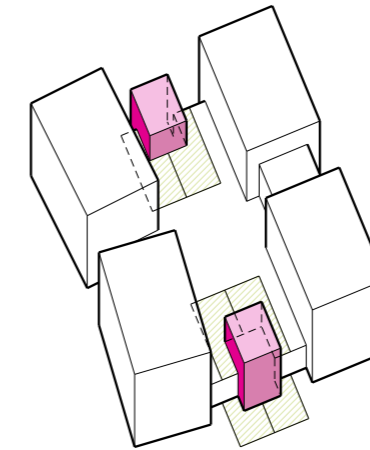


Figure 4.7: Building E - showing relationship of infill townhouses on north and south edges of the podium.

The gable ends of E2 and E3 present a smaller profile and mass on the neighbourhood streets on the north and south sides of the building. This presents a smaller profile along the neighbourhood streets on the north and south sides of the plot.

Buildings E2 and E3 are connected by a central linking element. The linking element is recessive in massing, height and articulation to the linear buildings and contributes to a varied skyline and façade expression.

The west Linear Pavilion blocks are 'seen-in-the-round' and configured so the four predominant elevations share an expression, theme and tone.

Like Plot B, the internal stair cores of the blocks are arranged so frontage onto the public-facing setting of Piper Way is maximised.

Town houses are located on the north and south façades, between the gables of the linear buildings.

The houses are located within a stitching setting which mediates the surrounding residential context and the new neighbourhood settings created by the masterplan.

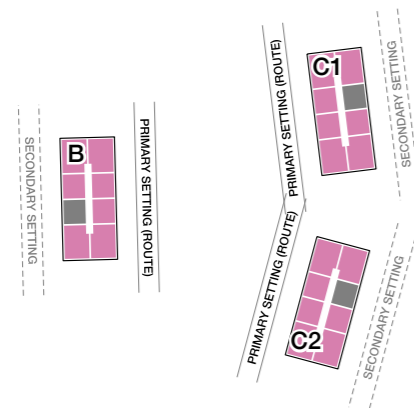


Figure 4.8: Building B and E - Configuration of cores away from primary settings

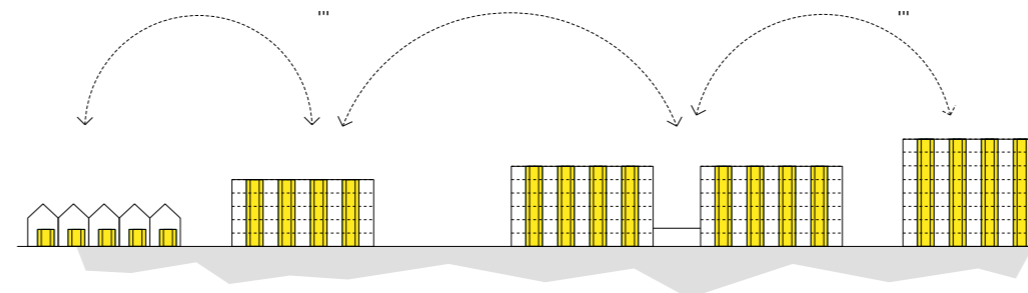


Figure 4.9: Building B - Piper Road continuing the language of bay windows and a castellated facade.

## 4.0 Design strategy

### 4.6 An integrated design approach - Plot C

Plot C comprises of three linear pavilion buildings, connected by a common base. The buildings are arranged around the perimeter of the plot, forming three of the four corners of the plot, with the MUGA on the south-east providing the fourth.

The main residential volumes are dominant in height while the volumes between (bases) are much lower and recessed in relation to the main façades. This allows the residential volumes to enjoy views into Madingley Gardens and to the sky, and opens up views from the public spaces at ground level.

The composition of forms around Madingley Gardens is similar to the podium block typology of Building E, with four large forms surrounding a landscaped space. In this instance, Madingley Gardens provides public open space and amenity for play and sport at ground level.

The north of the plot responds to the form of Cambridge Road, meaning the existing London Plain trees and pedestrian routes are preserved.

Located to the west of the Plot, Buildings C1 and C3 have been orientated to maximise greenspace in Washington Avenue; a similar approach has been adopted for Buildings E1 and E4. By angling the two buildings, the public amenity becomes larger and the façades create a boundary and sense of enclosure to the greenspace. This provides both a destination and primary thoroughfare into the site from Cambridge Road

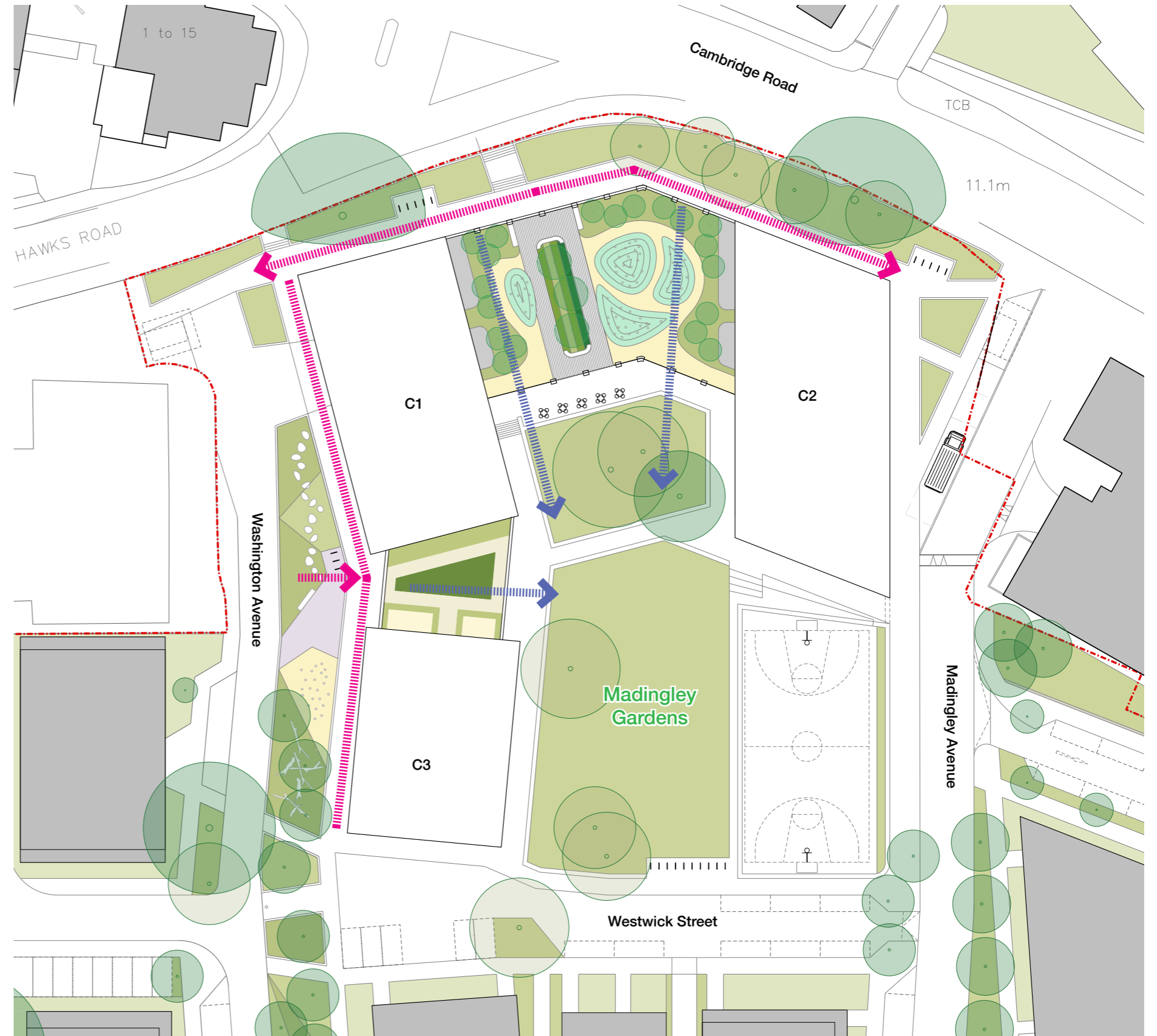


Figure 4.12: Relationship between Plot C, Madingley Gardens and Cambridge Road



# 4.0 Design strategy

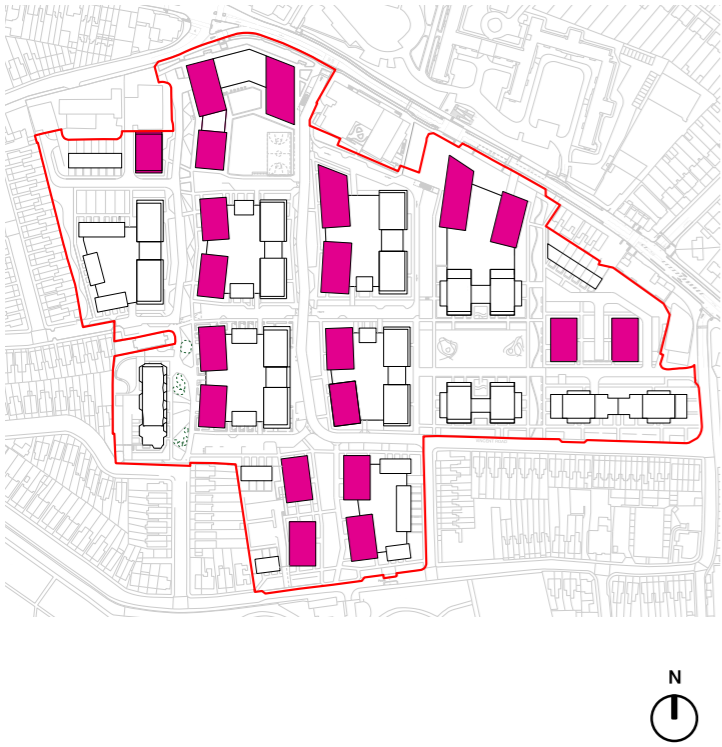


Figure 4.14: Distribution of Pavilion Linear buildings within the masterplan.

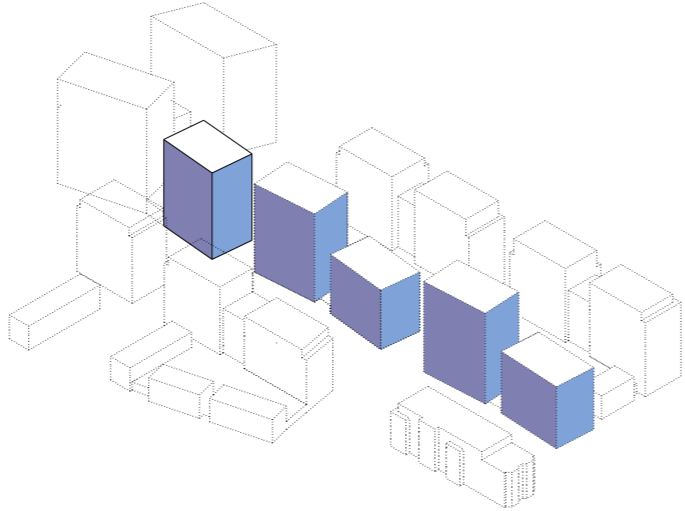


Figure 4.16: C3 as a part of a composition forming a street

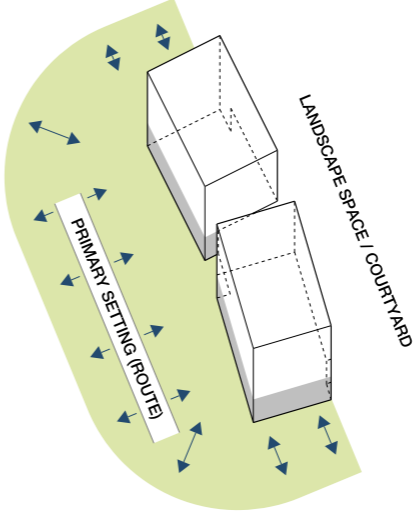


Figure 4.13: Primary aspect of pavilion linear buildings.

Building C1 is the tallest of the three blocks and marks the entrance to the scheme on approach from Kingston.

Building C2 sits on the primary north south axis of the scheme, marking the key junction between Cambridge Road and Madingley Avenue. The north and south of the block are chamfered to preserve existing tree canopies on the north and to preserve space in Madingley Gardens on the south.

C1 and C2 are connected by a two storey podium. This linking piece contains the Community Centre. Its highly glazed and open low-rise form between the two towers provides the main gateway into the scheme, connecting the wider community with the masterplan instead of presenting a solid wall to the north.

C3 is considered the first in a chain of five buildings running north:south along Washington Avenue, and terminating with Building E4 on Piper Way. It is connected to C1 by a single storey podium which also provides green residents' amenity space at first floor.

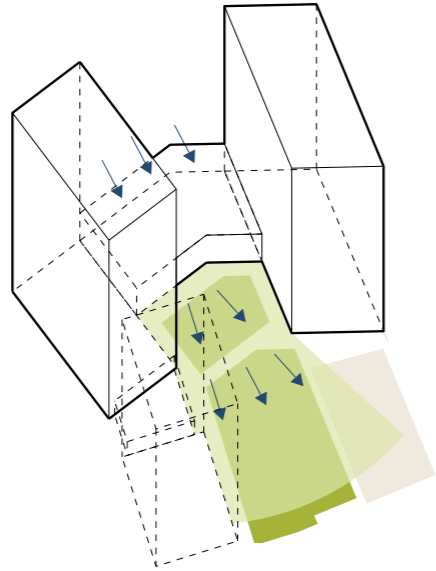


Figure 4.17: Buildings C1, C2 and the Community Centre connection with Madingley Gardens

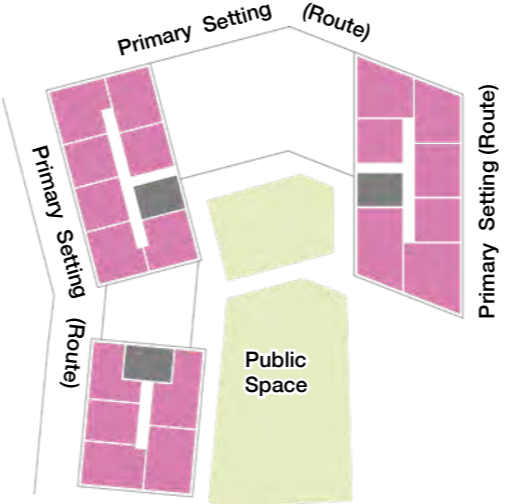


Figure 4.15: Building C - Configuration of cores away from primary settings

# 4.0 Design strategy

## 4.7 Visual and verbal connections

### Podiums to public realm

During consultation with the CRE youth forum, it was noted that visual and verbal links between the existing buildings into the public realm played an important role in social engagement for young adults and children in the Estate.

Young people populate the existing deck access for informal socialising and play, and to locate and call down to friends and organise spontaneous social activities like football, games or meeting with friends.

These decks were designed for movement, not dwelling, and young people find themselves with little to do on the narrow decks. While occupying these spaces, their presence can also be intimidating for other residents of the Estate.

The existing Estate has deck access to many of its apartments. For increased safety, security and privacy, the proposed apartments are accessed from shared communal cores. These cores are accessed via secure lobbies entered off the public realm, providing warm, dry and welcoming spaces. Ground floor maisonettes, townhouses and apartments have private front doors to provide an increased sense of ownership and privacy.

Open green spaces for residents are provided in the form of podium gardens or at-grade semi-private gardens. Planting, seating and play equipment creates spaces suitable for all.

To reprove the verbal connectivity between raised external spaces and the public realm, the scheme has been designed to allow verbal and visual links from shared outdoor amenity spaces on Plots E and C, to maintain a means of interaction from buildings into the public spaces, to promote inclusive social interaction.



Figure 4.18: An illustration of Piper Way, between Plots B and E

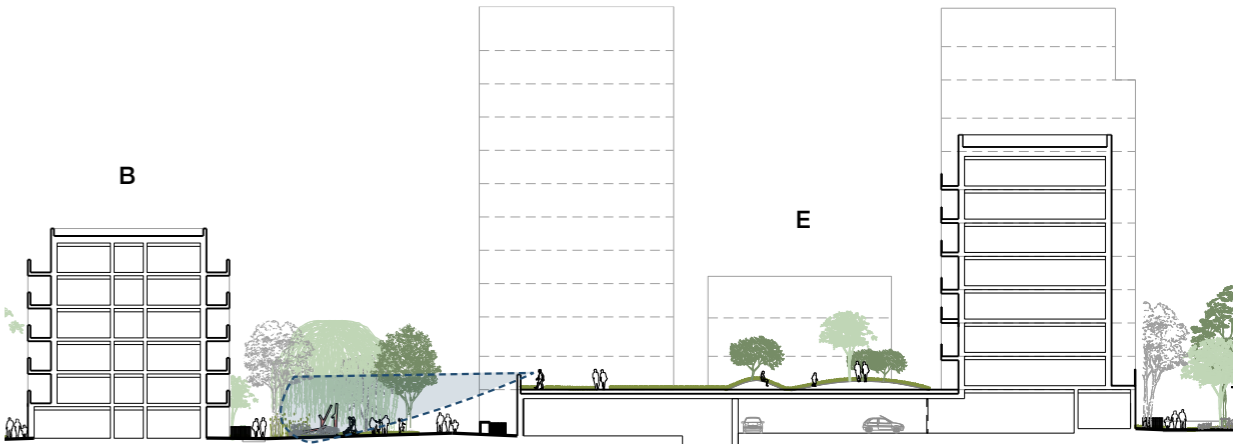


Figure 4.20: A section showing the verbal and visual link to Piper Way from Plot E

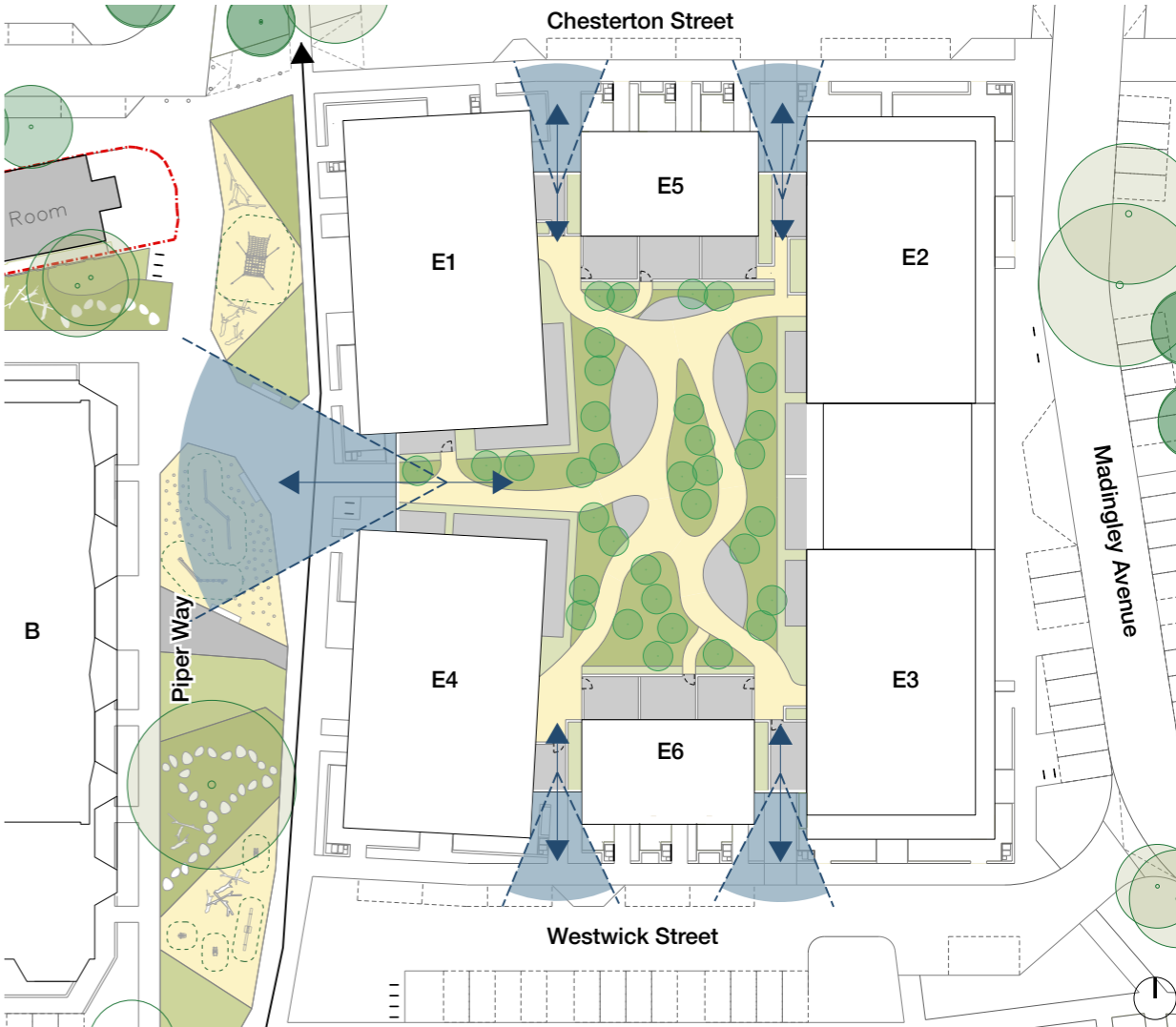


Figure 4.19: Verbal and visual links from the podium of Plot E

## 4.0 Design strategy

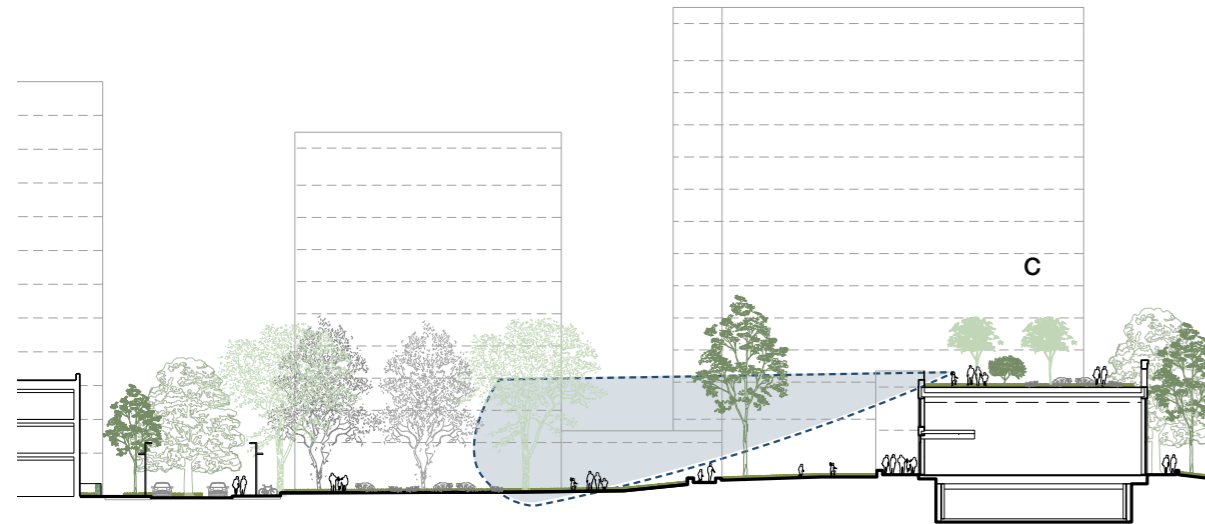


Figure 4.22: A section showing the verbal and visual link to Madingley Gardens from Building C



Figure 4.21: Verbal and visual links from the podium gardens of Plot C



Figure 4.23: An illustration of Madingley Gardens, showing the podium level of Building C

Plots C and E are located next to Washington Avenue and Piper Way, which are main pedestrian and cycle routes, running north:south through the scheme. These routes are complemented by areas for play and leisure, making them attractive spaces for younger people.

Madingley Gardens are a well-used space which will be enhanced with a new MUGA and Community Centre. It is anticipated this space will continue to be well used by all age groups, particularly young adults and teenagers, so a verbal and visual connection from Building C has been established to allow people to enjoy a sense of connection to this space from Building C.

By placing opportunities for younger people to interact in shared outdoor spaces, it removes the issue of people 'hanging-out' outside homes or along narrow or unobserved access routes. This allows the scheme to maintain the verbal links deemed as important by younger people, whilst removing the negative aspects of deck access.

## 4.0 Design strategy

### 4.8 Massing and scale - Plots B and E

The proposed massing for the plots has been shaped in response to their settings, the wider masterplan and the decant strategy requirements.

In the context of the overall masterplan scheme, the proposed massing gradually reduces in height from the tallest element in Plot C adjacent to Cambridge Road and the centre of the masterplan where the principle of height is established, down to the existing low-rise buildings around the periphery of the site.

#### Respecting neighbouring context

Having established the principal height in relation to adjacent Plots, Building E3 increases height to the centre which is located away from the surrounding context so that E4 and B can reduce in height proportionally. B is the lowest of the three blocks at 5 storeys above the base, due to the proximity neighbouring 3 storey houses.

#### Emerging context

As the buildings step away from the west boundary a more urban scale development begins to emerge. Height and mass increase on the east blocks flanking Willingham way. The central connecting forms between E3 and E2 reduce in height to create a varied skyline and the neighbourhood streets on the north and south provide visual breaks in the street.

E2 and E3 also include set back floors on the north, east and south sides. This set-back reduces its visual impact while providing special treatment to the top of this prominent building.

#### North:south axis

Plots B, C and E are all orientated north-south along key masterplan axes. This orientation creates key views through the site and beyond, improving the relationship between the proposed masterplan and surrounding neighbourhood. The orientation also allows buildings to be positioned at appropriate intervals, improving daylighting within homes and greenspaces.

Townhouses are located on the east-west masterplan routes. These three-four storey townhouses are lower than their neighbouring apartment blocks, providing articulation to the plots and streets. This strategy also ensures apartments receive appropriate daylighting levels, as well as views across the masterplan and surrounding context.

Daylighting is further improved in E by stepping down E4, located on the south-west corner of the building. Reducing the height and mass on this corner maximises daylight into the podium and allows views over E4 from E1 at the higher levels.

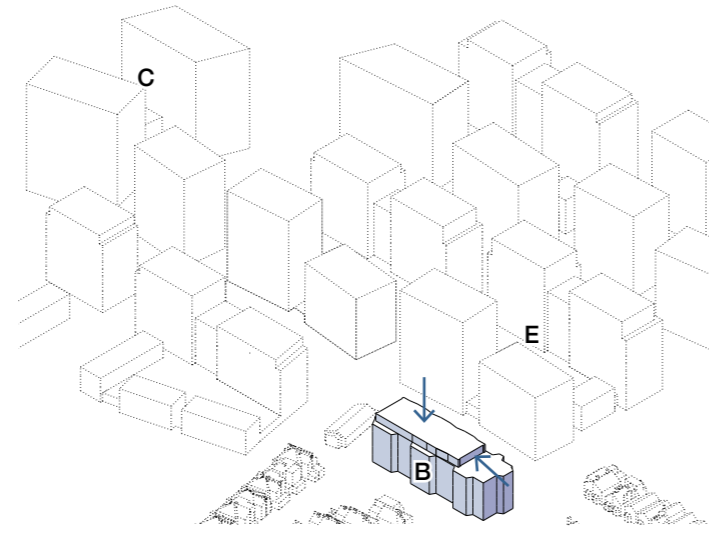


Figure 4.28: A massing diagram showing Plot B's relationship with its context

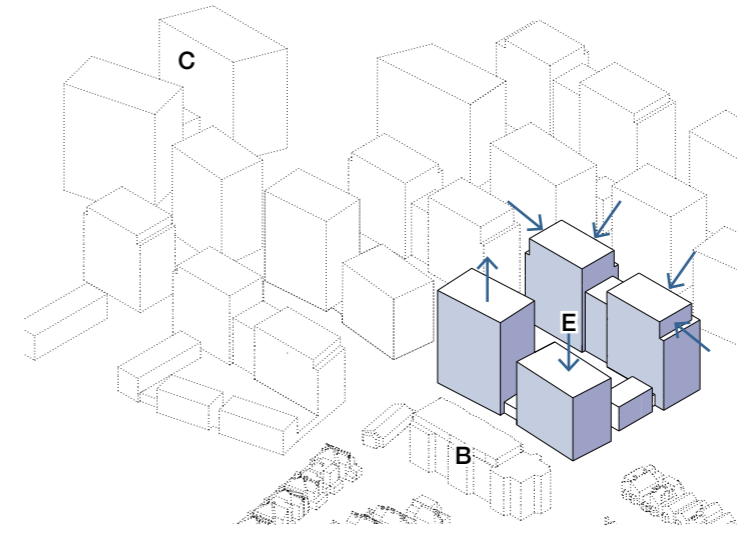


Figure 4.29: A massing diagram showing Plot E's relationship with its context

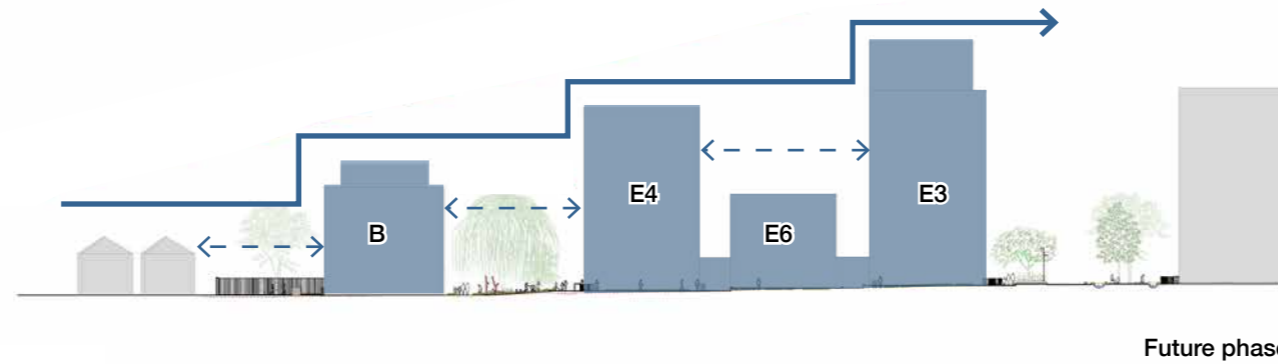


Figure 4.24: Section A showing Plot B and Plot E's relationship between the existing houses on Rowlls Road

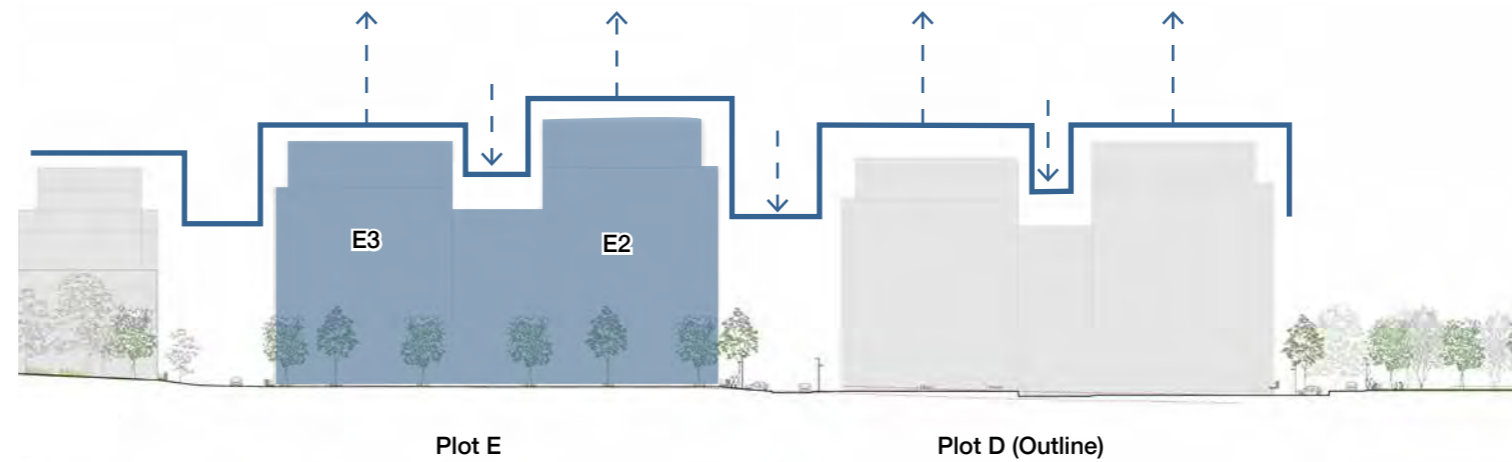


Figure 4.27: Section B showing Plot E's relationship with the outline plots

Figure 4.25: Section B showing Building B behind Archway parish rooms

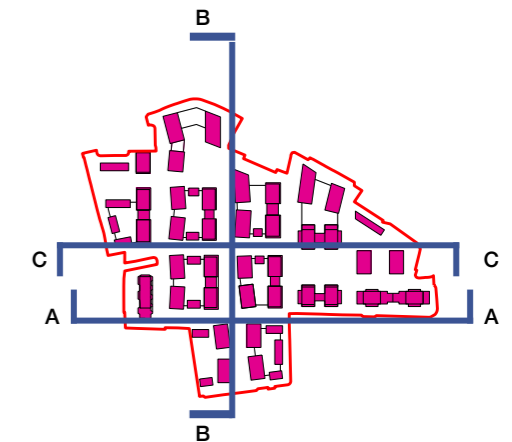


Figure 4.26: Key plan

## 4.0 Design strategy

### 4.9 Massing and scale - Plot C

The proposed massing for Plot C has been shaped in response to the settings of Cambridge Road and the wider masterplan to the south.

In the context of the overall masterplan, Plot C presents two of the tallest buildings, and most distinctive in terms of massing and articulation.

#### North:south axis

On Cambridge Road, Buildings C1 and C2 appear as two separate forms, joined by a two-storey Community Centre. The gap between the two towers allows for views of the sky and long views through the masterplan. This form repeats along the edge of the Cambridge road in the illustrative masterplan.

#### Forming Streets

C3 follows the same gesture as the typical podium blocks of stepping down on the south-west corner. This gesture allows for additional daylight into Madingley Gardens and allows views south from the upper levels of C1. This reduction in height also starts a rhythm of undulating forms along the street, creating variety and interest.

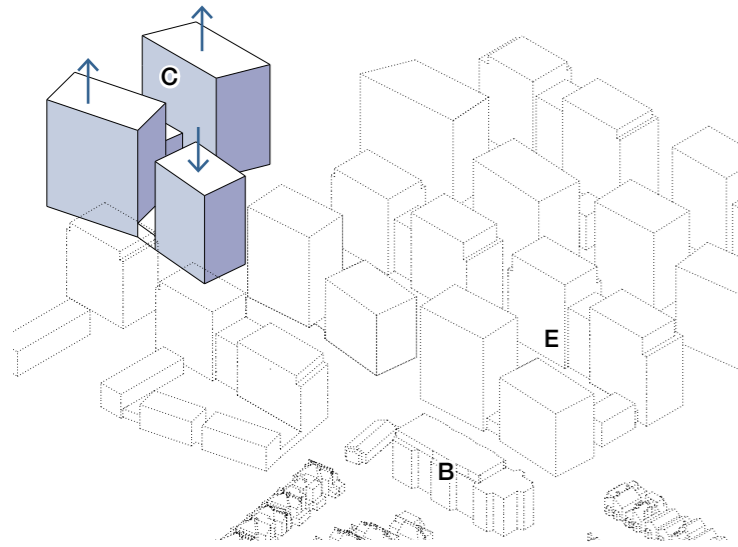


Figure 4.33: A massing diagram showing the Building C's relationship with its context

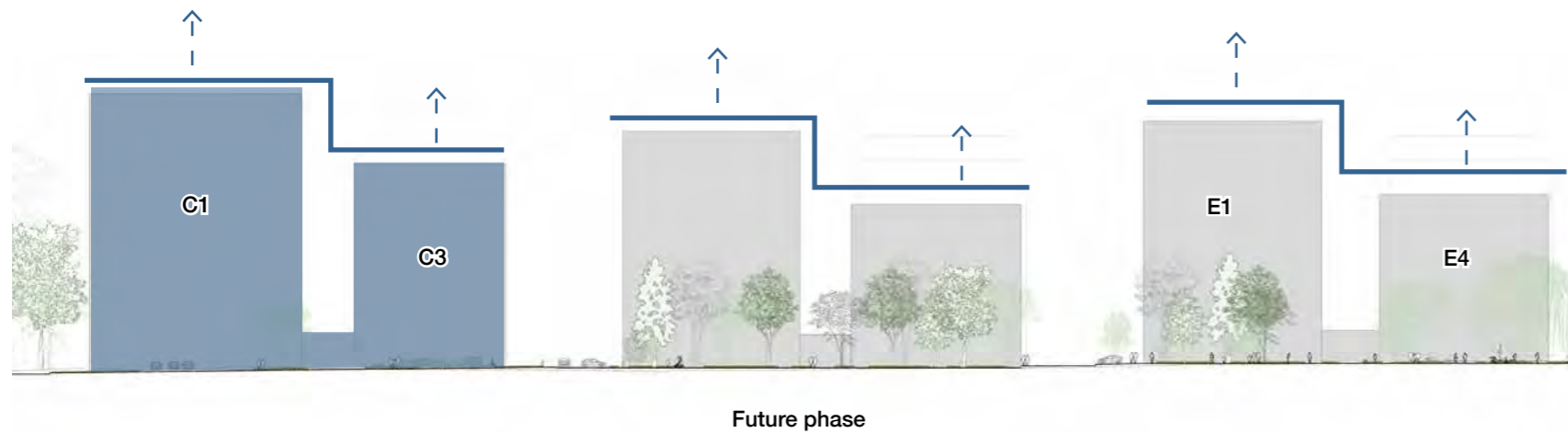


Figure 4.30: Section D showing Building C's relationship with future phase and Building E

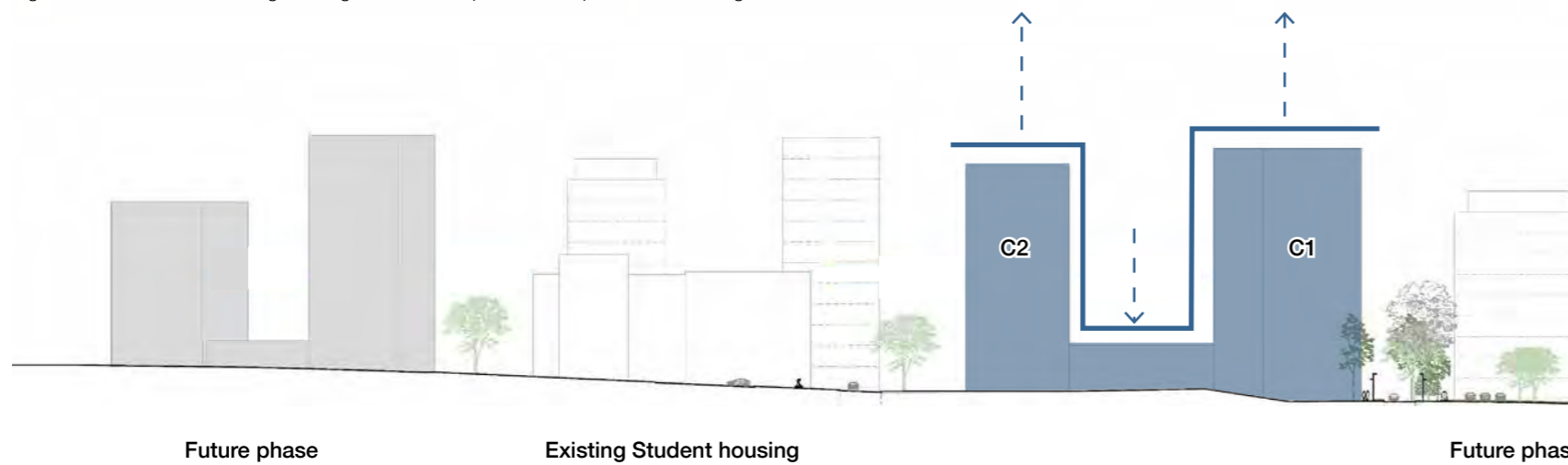


Figure 4.31: Section E showing the north:south street articulation

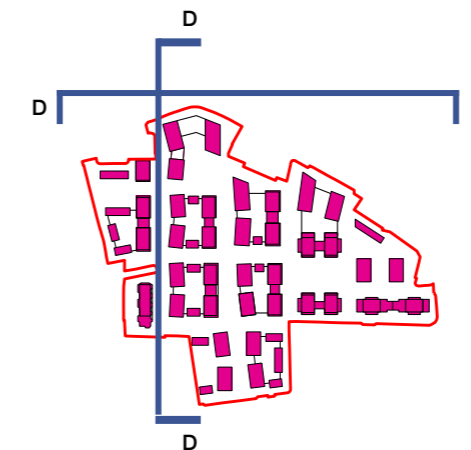


Figure 4.32: Key plan

# 4.0 Design strategy

## 4.10 Use - Plot B

### Ground floor use

The ground floor of Building B is animated by a sequence of residential entrances, provided by maisonettes, ground floor apartments and communal entrances. These bring activity to all sides of the building and articulate the façades. The ground floor homes are provided with amenity spaces to ensure good levels of privacy and a robust defensible space.

Communal entrances are located centrally on the east and west façades. The east entrance, located off the pedestrian route and public amenity space Piper Way, is considered the primary entrance. The west entrance serves as resident access to the secure resident garden and parking area.

Much of the west façade is behind a secure fence line, providing security to the parking area and resident garden. The secure line also prevents pedestrians moving behind the building, which was requested when consulting with the Design Out Crime Officer (DOCO) regarding secure by design.

Residential ancillary space is split between the east and west façades. Bike stores and plant are located on the west, behind the external secure fence line. Bin stores are provided on the east as part of the refuse servicing strategy.



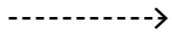











-  Main route
-  Secondary route
-  Parking route
-  Pedestrian flow
-  Secure line
-  Residential ancillary
-  Residential parking
-  Plant room
-  Residential core
-  Communal residential entrance
-  Parking entrance
-  Residential entrance
-  Refuse access
-  Service access



Figure 4.34: Ground Floor uses diagram



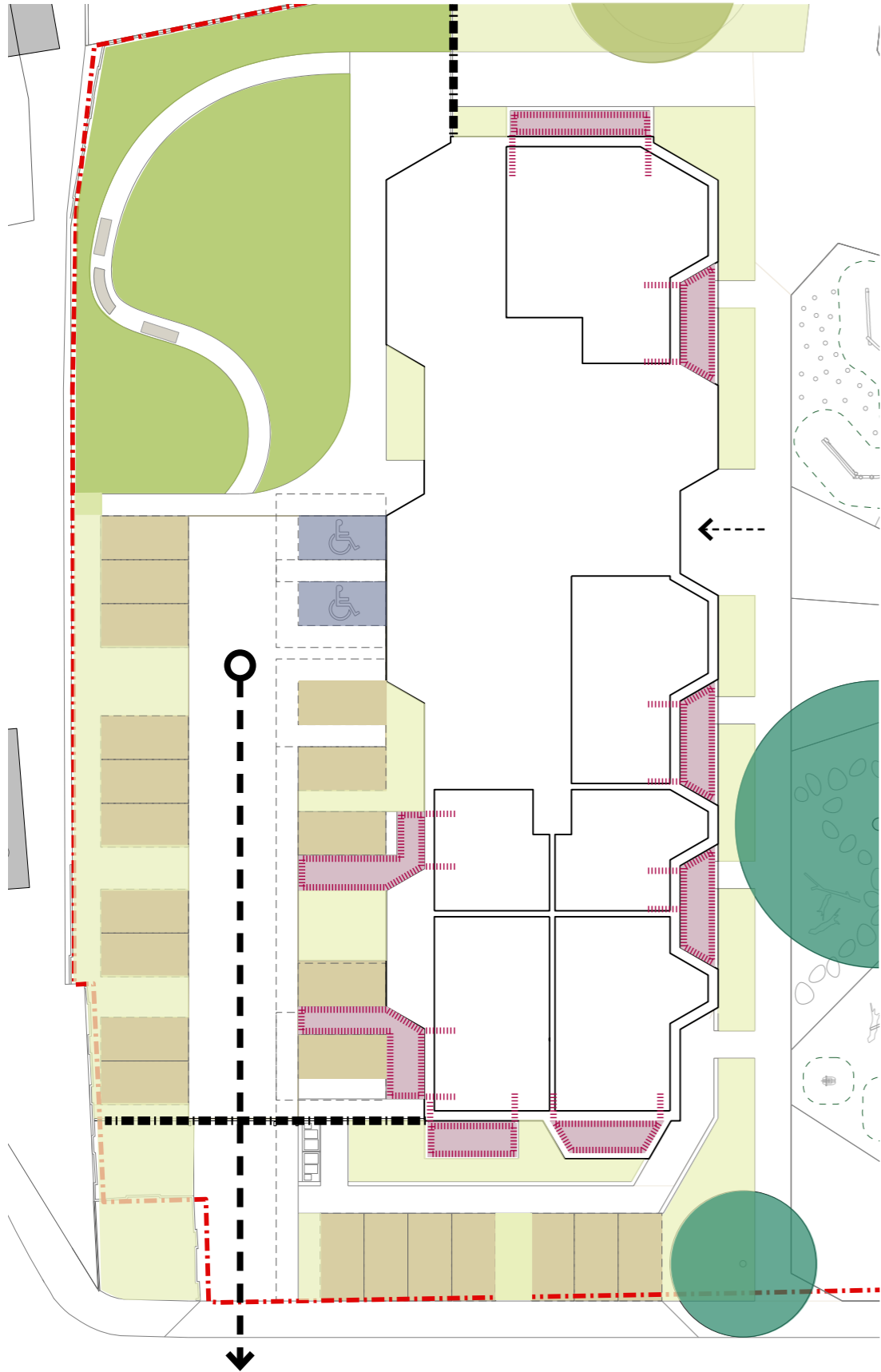


Figure 4.35: Ground Floor landscape diagram

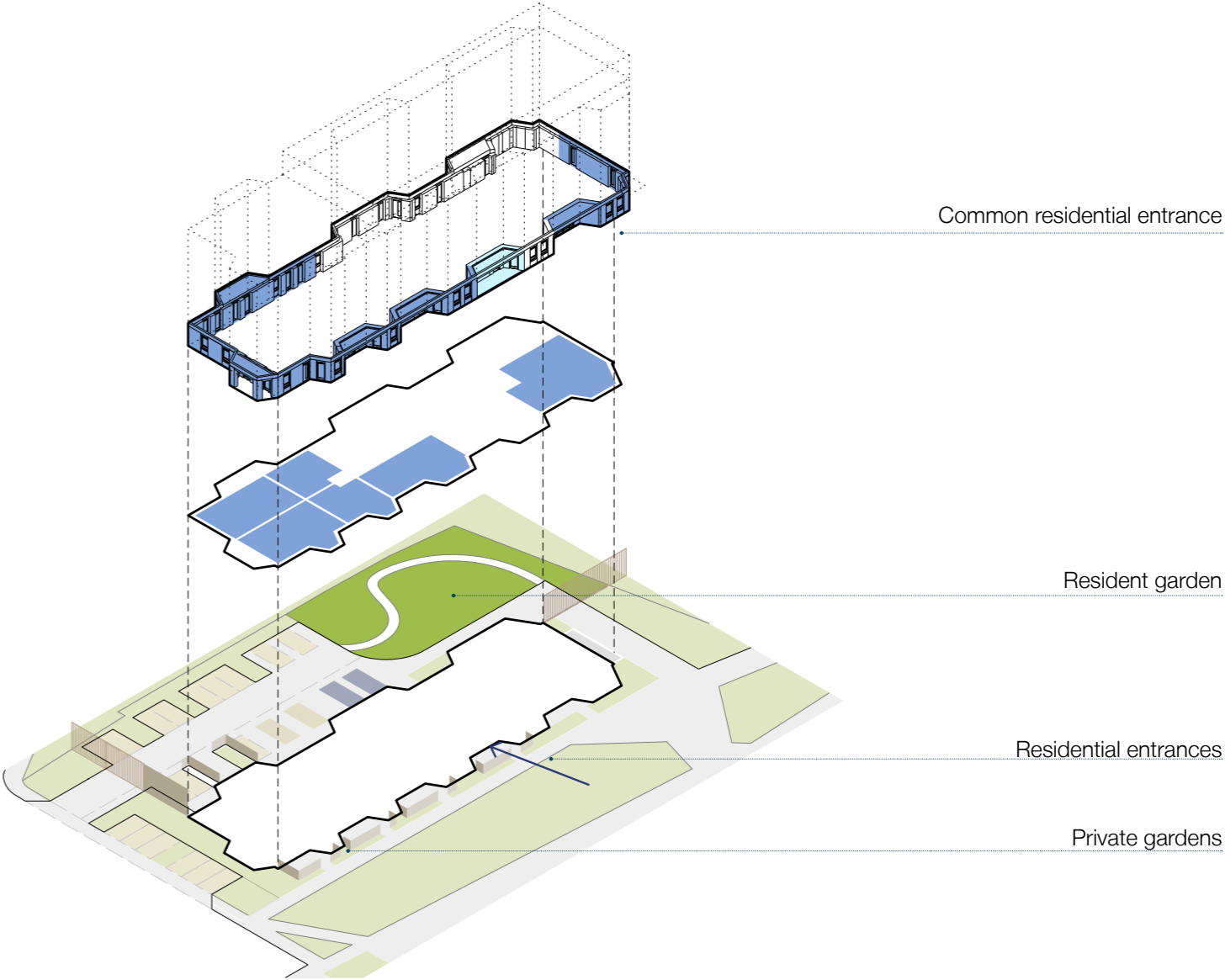




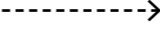







Figure 4.36: Building and landscape thresholds diagram. Building B

- |   |                               |   |                     |
|---|-------------------------------|---|---------------------|
|  | Accessible parking space      |  | Soft landscape      |
|  | Car park entrance             |  | Resident garden     |
|  | Communal residential entrance |  | Residential amenity |
|  | Secure line                   |  | Parking space       |
|  | Existing Tree                 |   |                     |
|  | Propose Tree                  |   |                     |

## 4.0 Design strategy

### 4.11 Use - Plot E

#### Ground floor use

Following the principles of the courtyard block typology, the ground floor podium will integrate all non-residential and ancillary functions.

The site wide energy centre, providing future connectivity to the Kingston District Heat network, will also house backup boilers, generators and sprinkler tanks covering both plots B and E. Servicing access to the energy centre is provided on the west elevation, so pedestrian pathways have been sized for occasional vehicle access off Piper Way, secured against general traffic by locked drop bollards.

Large cycle parking areas are contained within the podium, meaning two lines of security are provided without the need to take bikes through main building lobbies.

The ground floor is animated by residential entrances to maisonettes, apartments, communal entrances and houses. This provides active frontages on all sides of the building and creates a consistency in language.

The north and south sides of the building are part of neighbourhood street settings. Three family sized houses occupy space between the gable ends of the larger blocks. The ground floor homes are provided with amenity spaces to ensure good levels of privacy and a robust defensible space. Maisonettes sit underneath the larger residential blocks and are detached from the houses. Like the houses, private amenity and entrances contribute to the active frontages on the streets.

The podium car park is accessed between the gable ends of the larger blocks and houses. Entry is provided from the south and an exit is located on the north. By making the entrances one way, vehicle activity is reduced on both streets.

A network substation is located on the east side of the plot, with direct servicing access onto Madingley Avenue.

The communal resident entrances are each located on the east and west frontages. Entrances have been placed centrally on the elevation of each block, which provides good visibility on the street and prominence on the elevation.

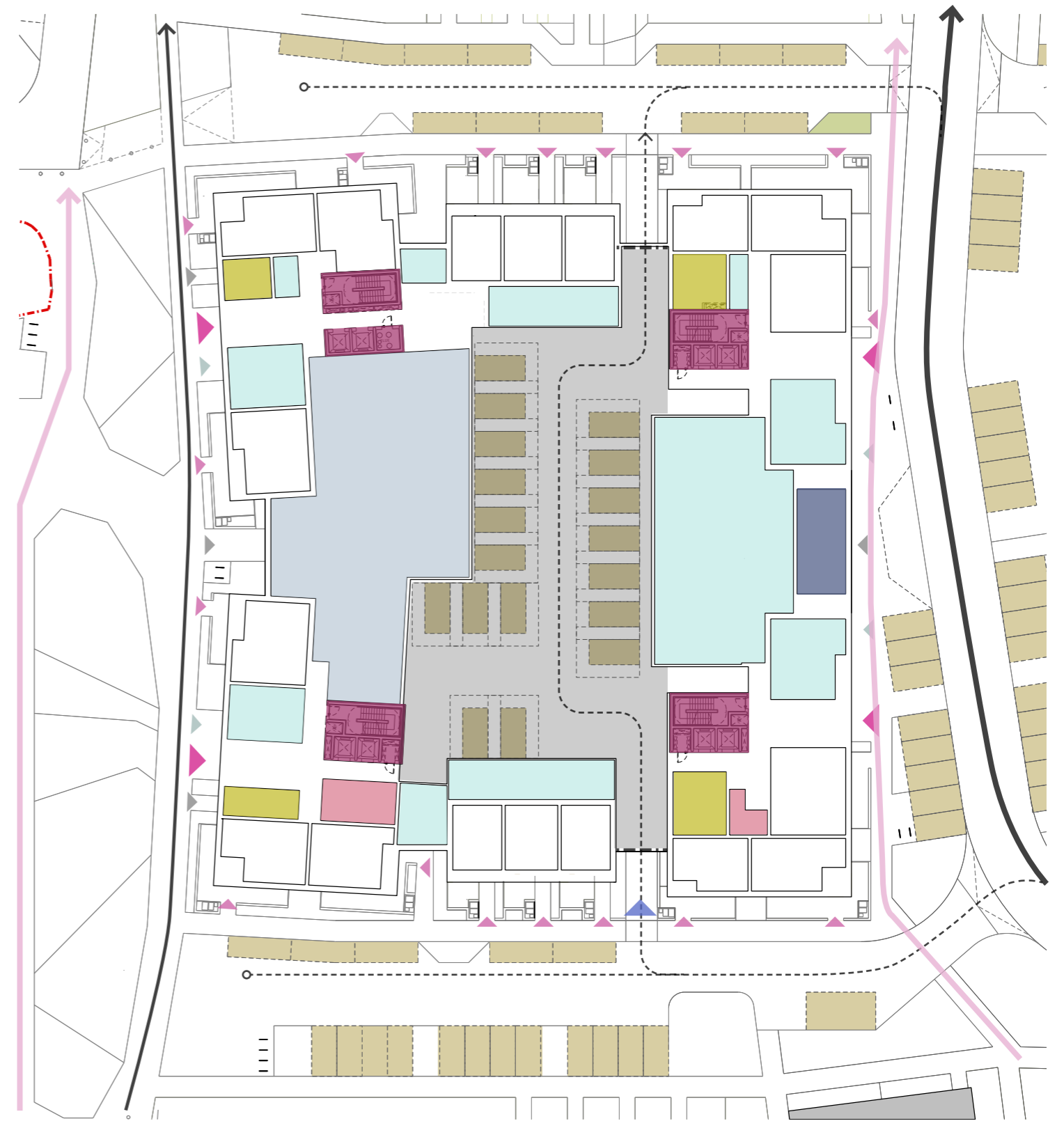
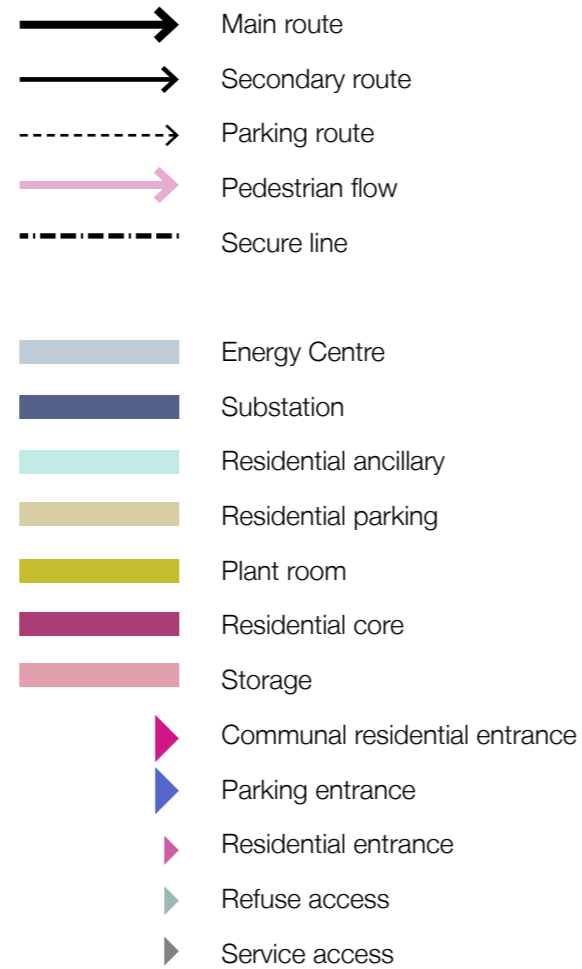


Figure 4.37: Ground Floor uses diagram



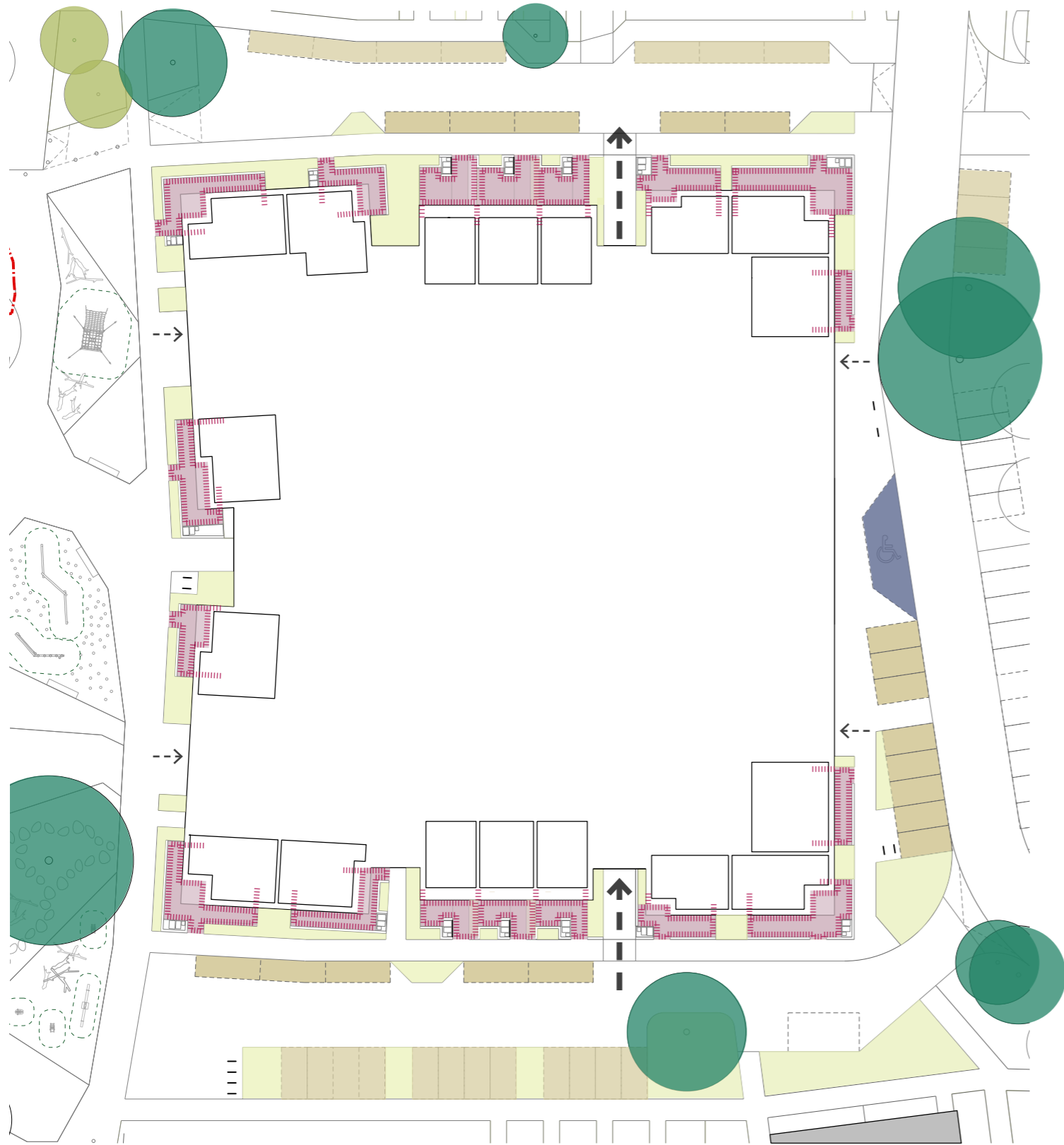


Figure 4.38: Ground Floor landscape diagram

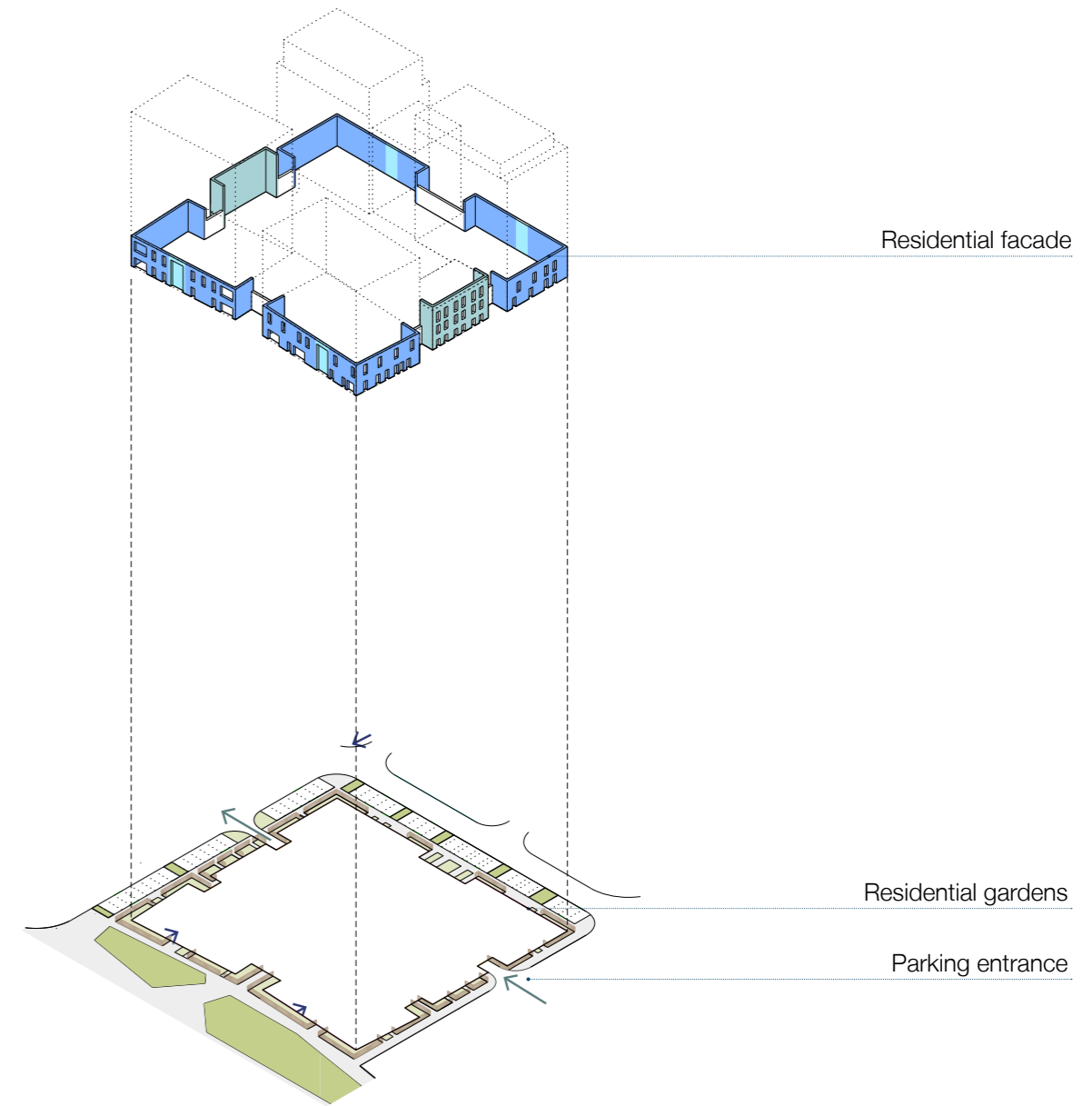


Figure 4.39: Building and landscape thresholds diagram. Building E

- |  |                               |  |                     |
|--|-------------------------------|--|---------------------|
|  | Accessible parking space      |  | Soft landscape      |
|  | Car park entrance             |  | Residential amenity |
|  | Communal residential entrance |  | Parking space       |
|  | Existing Tree                 |  |                     |
|  | Propose Tree                  |  |                     |

## 4.0 Design strategy

### 4.12 Use - Plot C

#### Ground and basement floor use

Following the principles of the podium block typology, the ground floor podium will integrate all non-residential and ancillary functions.

Commercial and community spaces are proposed in Plot C. These commercial and community offers seeks to fulfil an existing need and benefit not only the new residents but also the surrounding communities.

Retail uses are strategically located on the north-east corner of the site which has been identified as a prominent point due to its visibility from Cambridge Road and proximity to the Vibe student housing. The retail entrance is to be located on the corner of Madingley Avenue and Cambridge Road, with service access located off Madingley Avenue. A drop off bay is located on the corner and pedestrian paving is enlarged on to provide spill out space adjacent to the retail entrance.

The Community Centre provides most of the frontage onto Cambridge Road, providing activity to the street and highlighting it's importance. The Community Centre continues around the West corner onto Washington Avenue, a prominent pedestrian and cycle route into the masterplan.

The Community Centre provides through access onto Madingley Gardens, providing views into the landscape from Cambridge Road. The visual link aims to encourage people from outside the site to enter the scheme through the new community hub.

Residential entrances provide through views and access from Washington Avenue and Madingley Avenue into Madingley Gardens, providing activity to these streets.

Commercial space is provided on the ground floor of C3. The space animates the corner at ground floor and provides through views between Madingley Gardens and Piper Road.

Residential parking is provided in a basement level, which is accessed off Washington Avenue.

The basement contains commercial sprinkler tanks and associated plant for C1, C2 and C3, as well as residential parking.

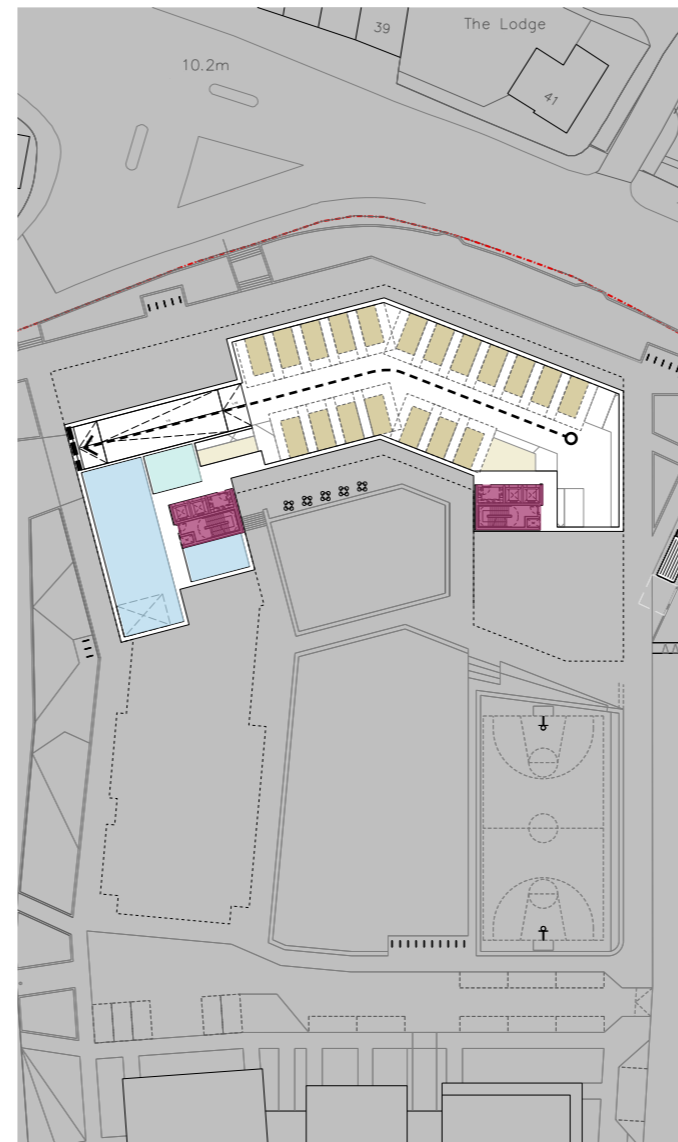
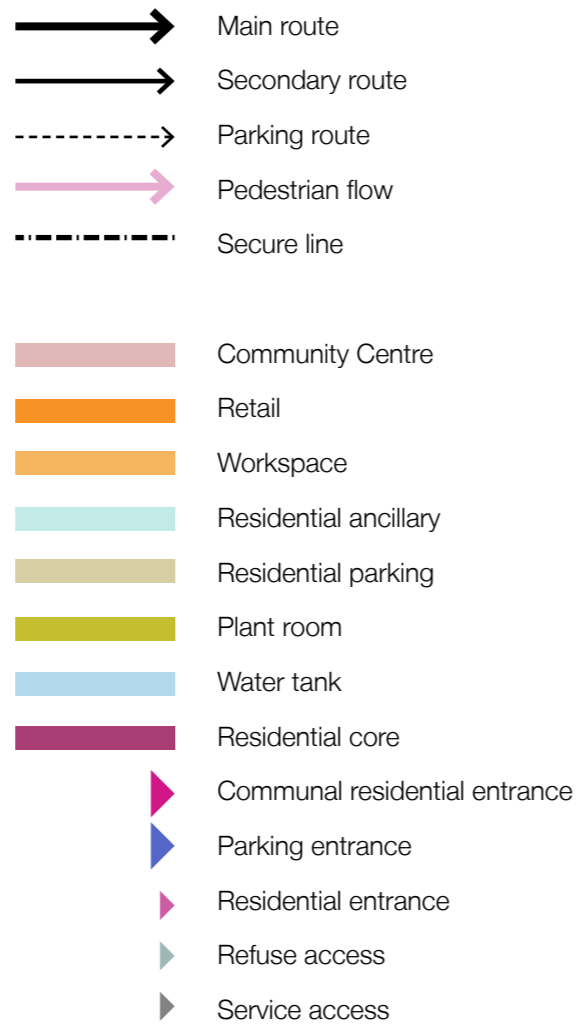


Figure 4.40: Basement uses diagram

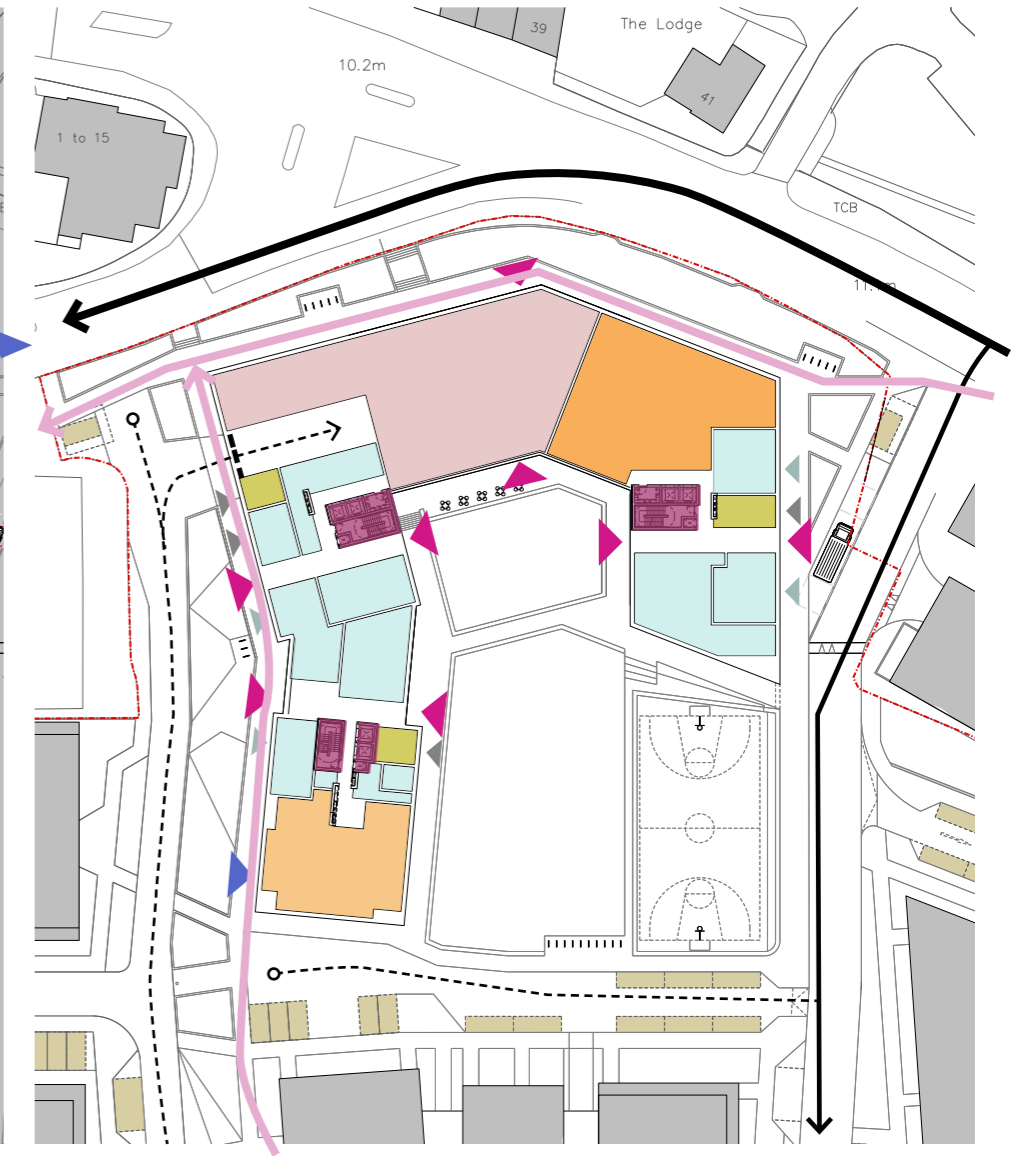


Figure 4.41: Ground Floor uses diagram

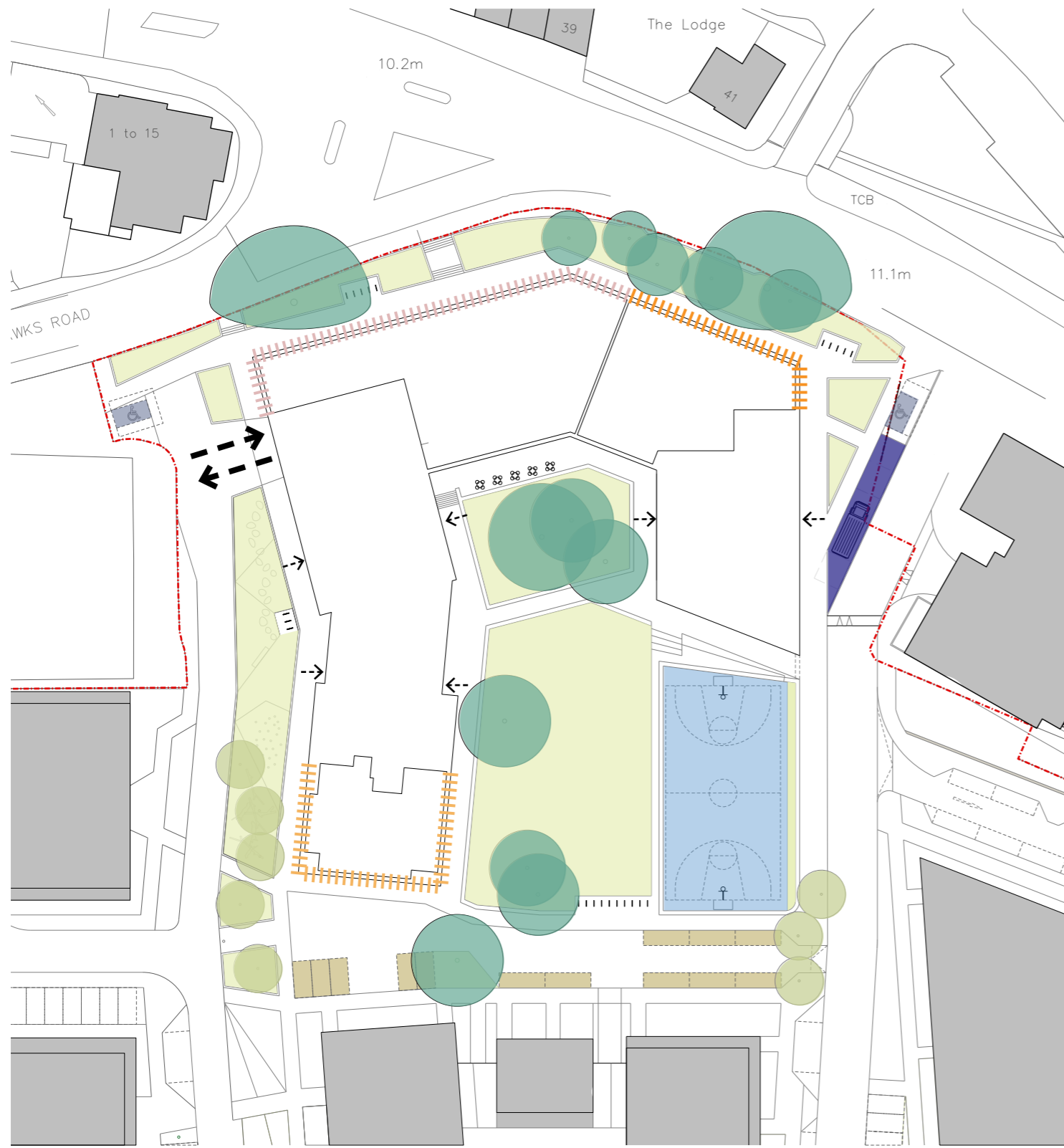


Figure 4.42: Ground floor landscape diagram

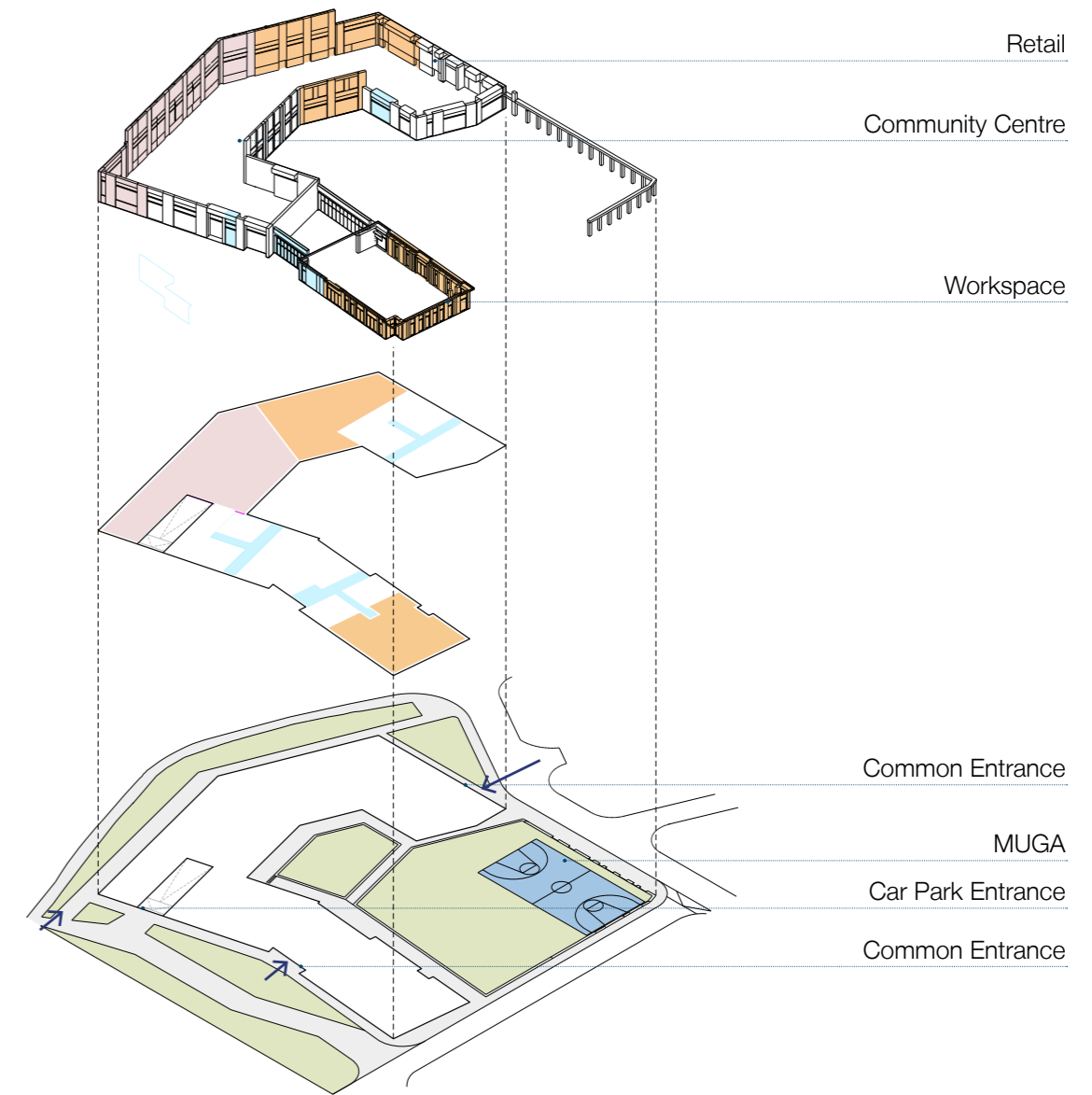


Figure 4.43: Landscape and building threshold. Building C

- |  |                               |  |                           |
|--|-------------------------------|--|---------------------------|
|  | Accessible parking space      |  | Parking space             |
|  | Loading bay                   |  | Community Centre frontage |
|  | Car park entrance             |  | Retail frontage           |
|  | Communal residential entrance |  | Workshop frontage         |
|  | Existing Tree                 |  | MUGA                      |
|  | Propose Tree                  |  | Soft landscape            |



## 4.0 Design strategy

### 4.13 Residential uses

#### Residential use - Plot E

Plot E has four main cores and two clusters of townhouses. The demand for large 3-6 bedroom family homes and ground floor accessible homes has been addressed in the form of single storey homes, maisonettes and houses, located in each of the cores.

Buildings E1 and E4 will provide a range of home sizes, including both M4(2) and M4(3) homes on the ground and upper floors. The upper level apartments are served by a common core accessed from the west, whereas the ground floor homes and maisonettes will have private entrances off Chesterton Street, Piper Way and Franklin Street.

Building E2 will predominantly provide 1-bedroom and 2-bedroom homes from level 01 upwards. A range of family-sized maisonettes wrap around the ground and first floors. The upper level apartments are served by a common core accessed from the east, whereas the ground floor homes will have private entrances off Chesterton Street and Madingley Avenue.

Building E3 will deliver 1,2,3 and 4-bedroom homes on the typical and upper floors. The upper level apartments are served by a common core accessed from the east, whereas the ground floor homes, comprising of a 1-bedroom accessible apartment and two 2-storey maisonettes will have private entrances off Madingley Avenue and Franklin Street.

Each of the buildings will have common access to the shared podium and podium car park. Apartments and maisonettes facing the podium will also have direct access onto the podium.

E5 and E6 comprise 4 and 5-bedroom townhouses, each having private entrances and gardens located on Chesterton street and Franklin Street.

For more information regarding building and apartment layouts, please refer to Volume 2 Chapter 5

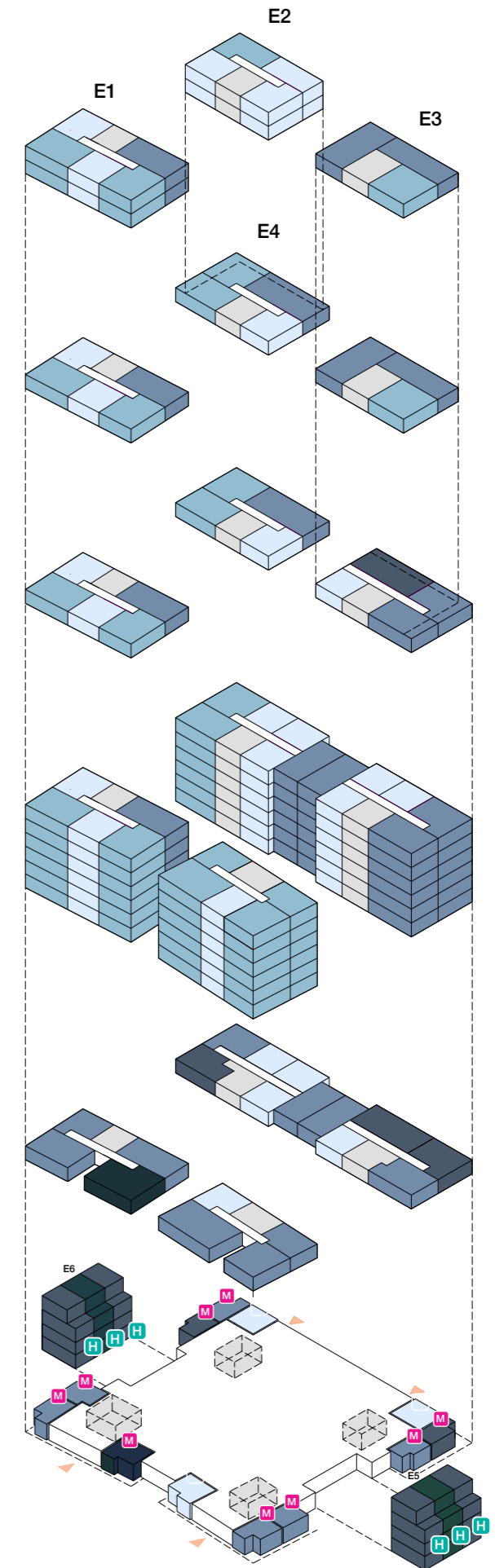


Figure 4.44: Plot E residential use diagram

- 1-bedroom home
- 2-bedroom home
- 3-bedroom home
- 4-bedroom home
- 5-bedroom home
- 6-bedroom home
- Residential cores
- M Maisonette
- H House

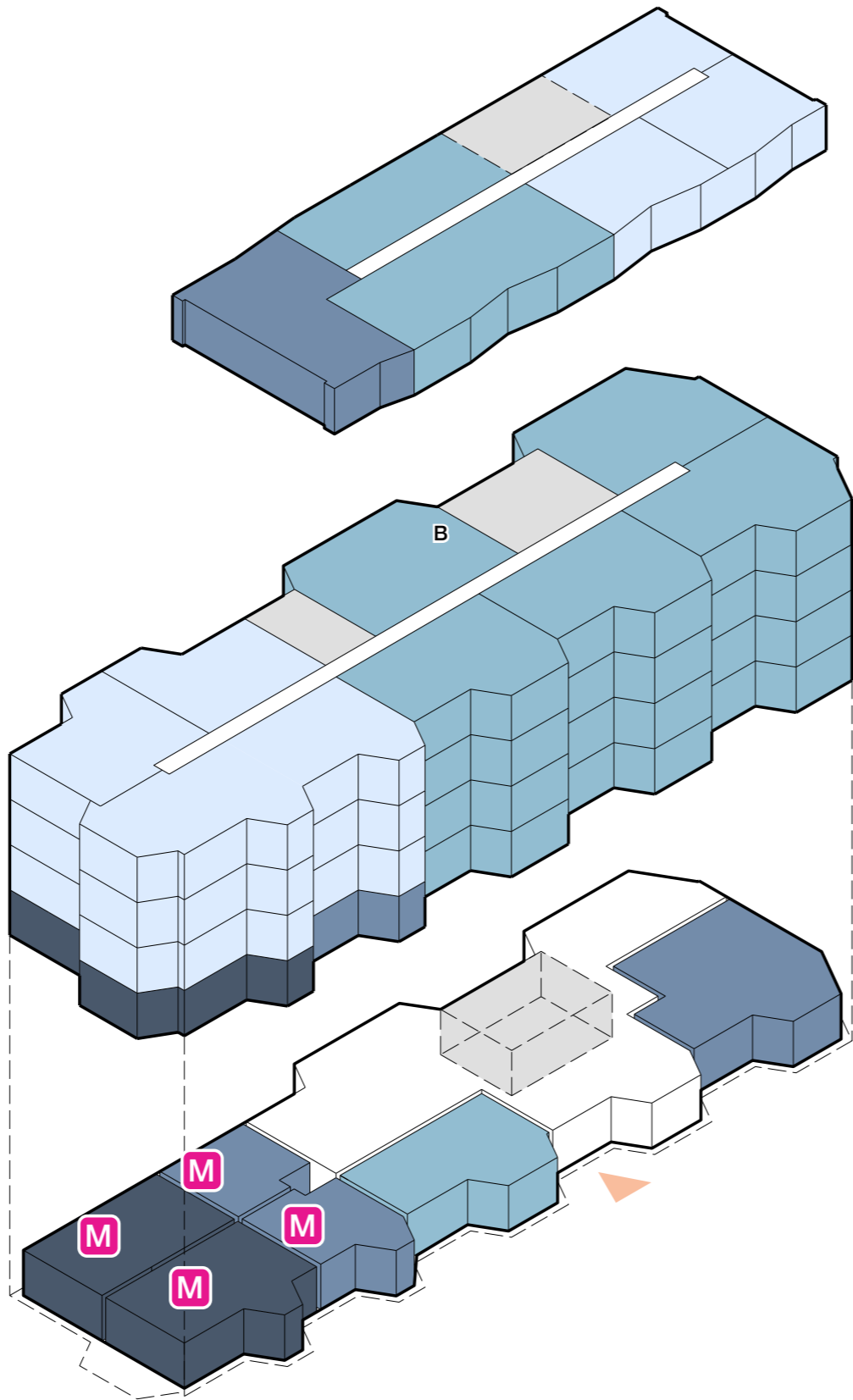


Figure 4.45: Plot B residential use diagram

**Residential use - Building B**

The homes in Building B are arranged over 6 levels and comprise a mixture of single level apartments and double storey maisonettes.

A demand has been identified in this project for large 3-6 bedrooms family homes, following the Housing Needs Assessment undertaken by RBK. Building B provides two 4-bedroom and four 3-bedroom homes. Two of the three bedroom homes are lateral apartments and the rest are maisonettes located across the ground and first floor. More information about the project Housing Needs and decant of existing homes can be found in the Rehousing Strategy submitted in support of the planning application.

The typical floor includes a mix of 1-bedroom and 2-bedroom lateral apartments. A three-bedroom home has been positioned on the top floor, with level access onto a large south facing terrace.

Two M4(3) homes are located on the ground floor of the building. Private front doors provide direct level access from the public realm.

The upper floor apartments are served by common core, entered off the east street Piper Way and a secondary stair located at the north and south of the plan respectively, whereas the ground floor homes will have private entrances.

For more information regarding building and apartment layouts, please refer to Volume 2 Chapter 5

## 4.0 Design strategy

### Residential use - Plot C

The residential component of Plot C will deliver a mixture of 1, 2 and 3 bed single storey apartments, distributed across three cores

Buildings C1 and C2 will comprise of 1, 2 and 3-bedroom apartments at levels 01 and above. The apartments are served by common cores accessed from the east and west streets respectively.

The second-floor homes facing the podium will have direct access onto a shared podium. Access to the podium for the first and upper level apartments is provided via the shared cores.

Building C3 homes will range from 1-bedroom apartments to 3-bedroom family apartments. All apartments are accessed from the west street via a common core.

The first-floor homes will have direct access to the podium located between C3 and C1. The upper level apartments will have access via the common core.

For more information regarding building and apartment layouts, please refer to Volume 2 Chapter 5

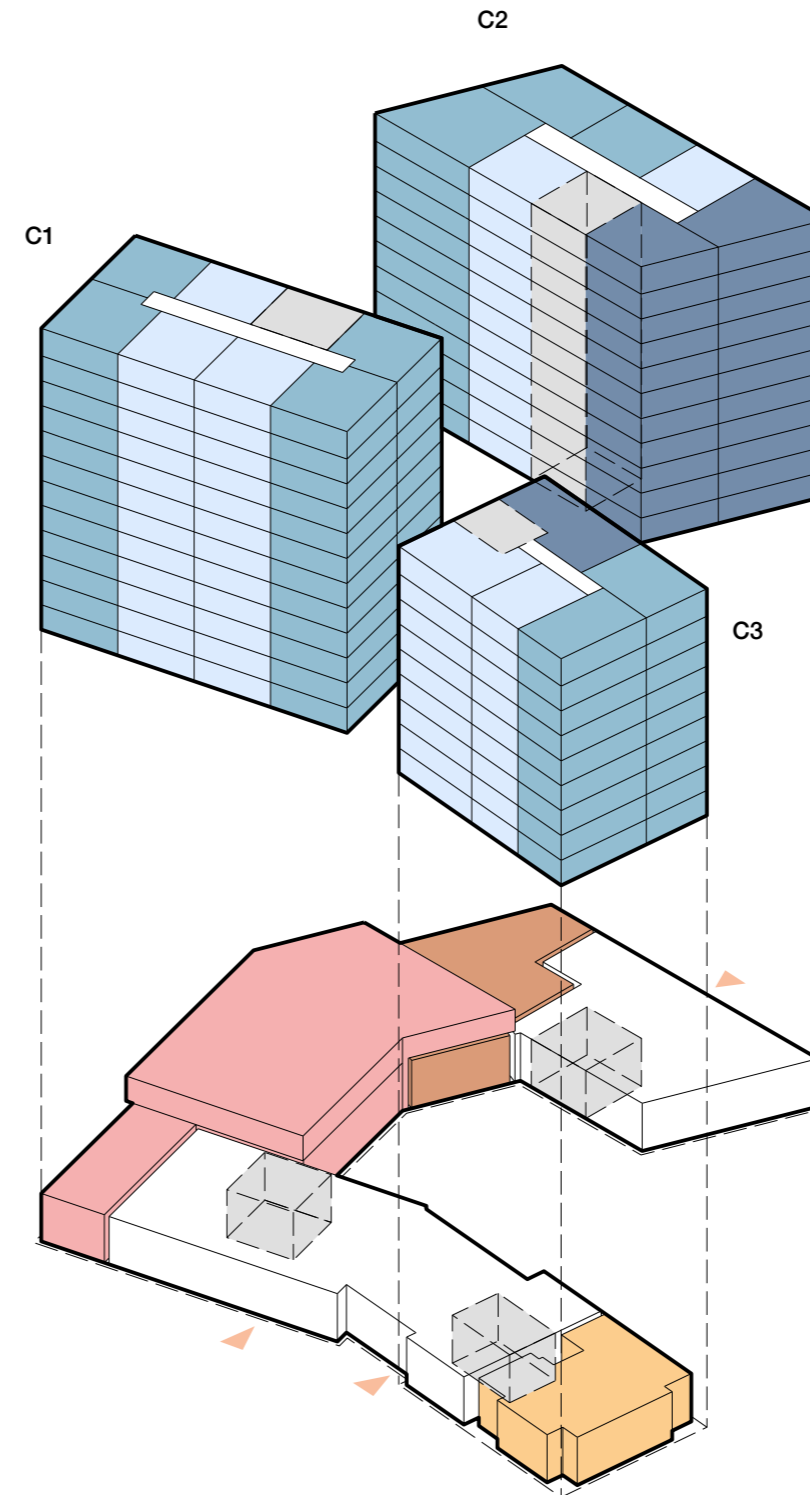


Figure 4.46: Residential use diagram



Figure 4.47: Courtyard gardens



Figure 4.48: Courtyard gardens



Figure 4.49: Planting on streets

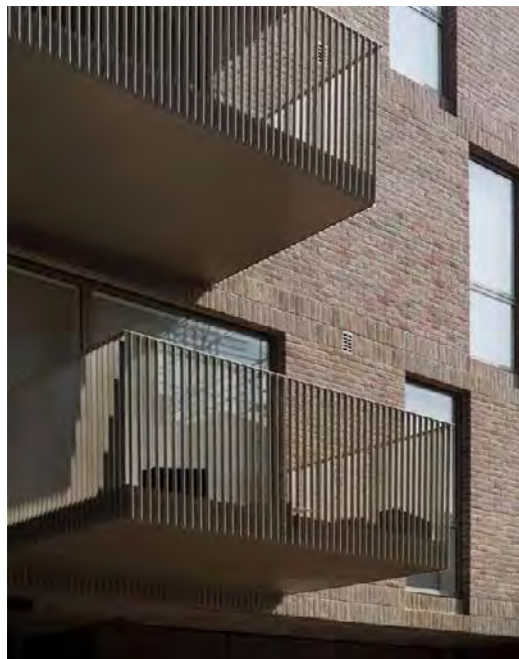


Figure 4.50: Balcony amenity



Figure 4.51: Biosolar roof

### 4.14 Sustainable buildings and systems

Plots B, C and E have been designed to satisfy the London Plan carbon reduction methodology, perform at least 10% better than current building regulation requirements (residential) and reduce carbon emissions by 35% over building regulation targets. The approach follows the “Be Lean, Be Clean, Be Green” philosophy. Refer to the **Energy Statement** and **Sustainability Statement** in support of this planning application for more information on sustainability.

#### Be Lean

- Efficient fabric: high levels of insulation, low levels of air leakage, minimising of cold bridging.
- Efficient glazing and window to wall area ratio.
- Mechanical Ventilation with Heat Recovery units.

#### Be Clean

- Provision of a new energy centre to connect to the Hogsmill district heating network. Refer to the **Energy Statement** for more information.

#### Be Green

- Photovoltaic panels on the roofs.
- Internal courtyards and building orientation considered to maximise daylight and solar gain

#### Be Seen

- The building’s energy usage will be monitored through installation of smart meters.

## 4.0 Design strategy

### 4.15 Sustainable habitats and ecology

#### Biodiversity

- Biodiverse roofs.
- Considerate planting strategy with a view to enhance biodiversity as much as possible.
- Most existing trees retained and protected during construction works.

#### Sustainable drainage systems (SUDS)

- Maximise opportunities for rainwater attenuation by providing biodiverse roofs, courtyard gardens, planted trenches and permeable paving.
- Harvesting and re-circulating of rainwater back into the courtyards for drip-irrigation of gardens.

#### Overheating

- Prevent overheating exclusively via passive ventilation systems and without the need for active cooling systems;
- Considerate fenestration design
- Maximise cross ventilation opportunities where possible by providing openable windows in both façades to all double aspect rooms.



Figure 4.52: Biodiverse roof



Figure 4.53: Biodiverse roof



Figure 4.54: Existing tree to be retained

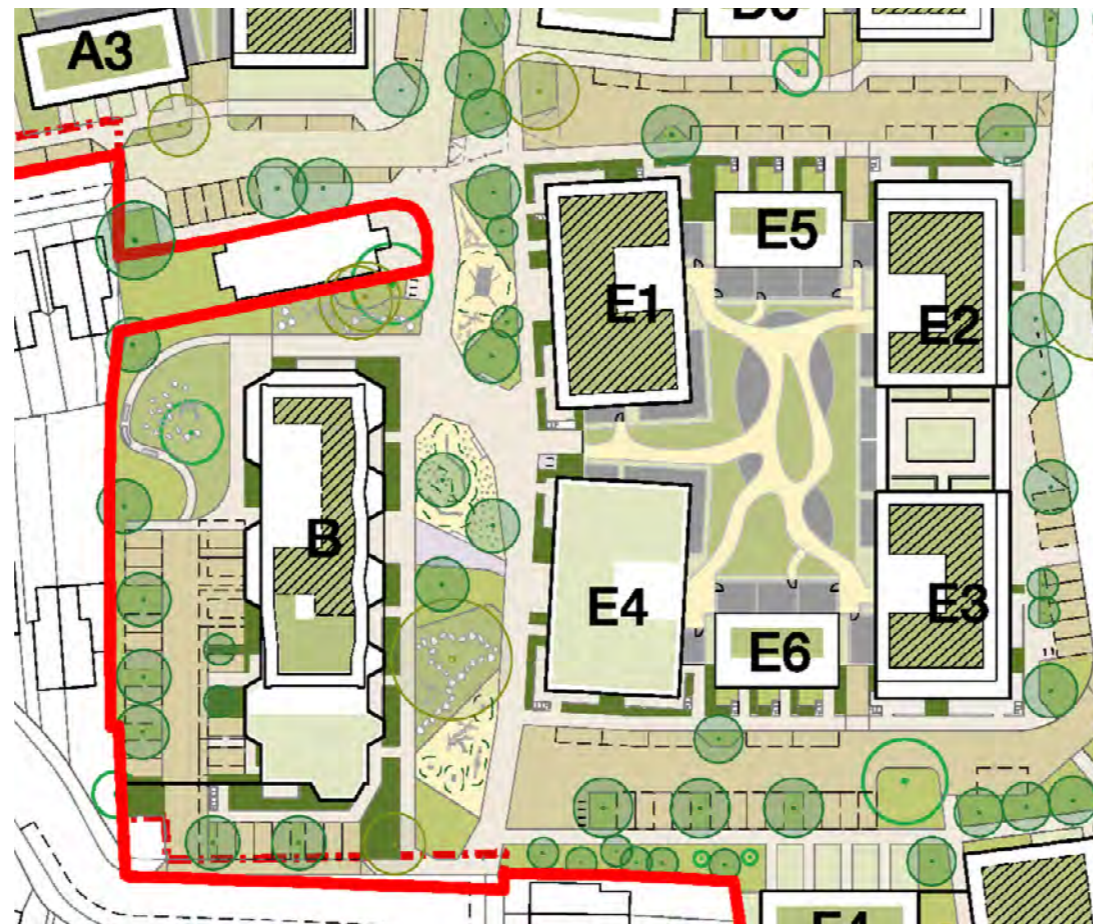


Figure 4.55: Building B and E roof plans

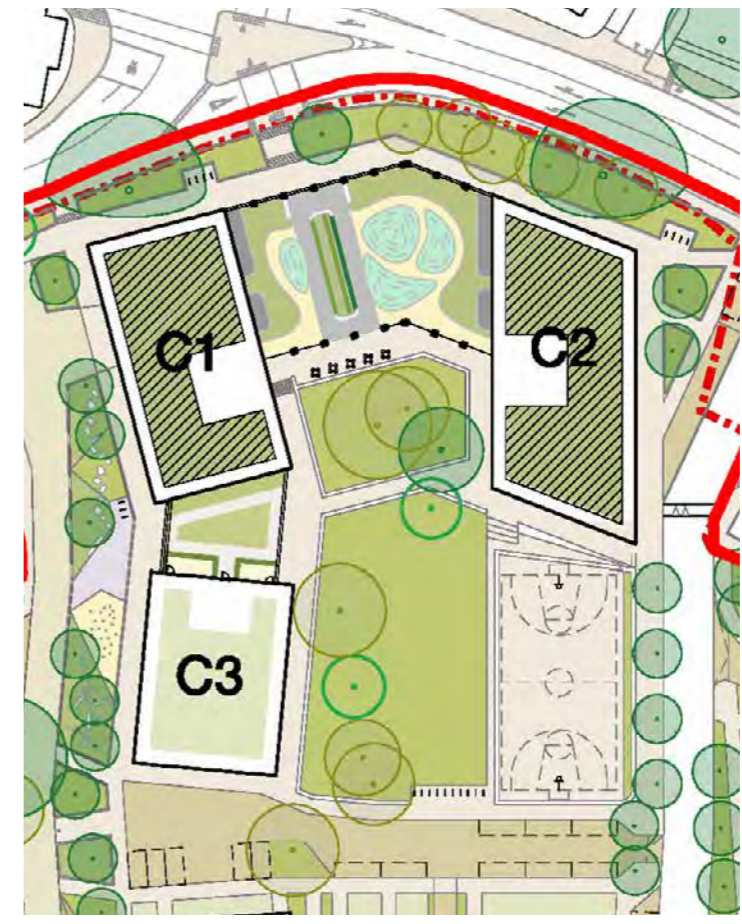


Figure 4.56: Building C roof plan







Figure 4.57: Cycle racks in the public realm



Figure 4.58: Secure cycle storage for residents



Figure 4.59: Tree planting in streets



Figure 4.65: Diverse planting in streets



Figure 4.60: Balcony amenity



Figure 4.61: Urban habitats



Figure 4.62: Urban habitats



Figure 4.63: Urban habitats



Figure 4.64: EV charging

### 4.16 Sustainable behaviours

#### Healthy Streets

- Encouraging cycling via provision of secure cycle parking for residents, cycle parking for visitors in public realm and design of streets to be cyclist and pedestrian friendly.
  - The proposed development significantly improves the PTAL rating improving accessibility to established public transport, walking and cycling networks maximising their likely use.
  - Promoting use of low carbon transport by providing electric vehicle charging points (20% active, 80% passive at completion).
  - Encourage the use of public transport via the site-wide strategy to improve bus connections.
  - The masterplan creates new public space for people to stop and dwell, Improved and more direct routes which are safer for pedestrians and cyclists, as well as improved links to the surrounding area
  - Maximise the landscape offer on site including street parking, trees and courtyard gardens
  - The provision of car club spaces on-site for those without access to their own car, to reduce the perceived need for car ownership on site.
  - The development results in a forecast reduction in vehicle-based trips, providing the ability for cleaner air and safer streets. Refer to the **Transport Assessment** for further information.
- #### Recycling
- Encourage recycling by providing recycling bins in each home and communal recycling storage in accessible locations. Dedicated recycling bins with kerbside collection are created for homes at ground floor.

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