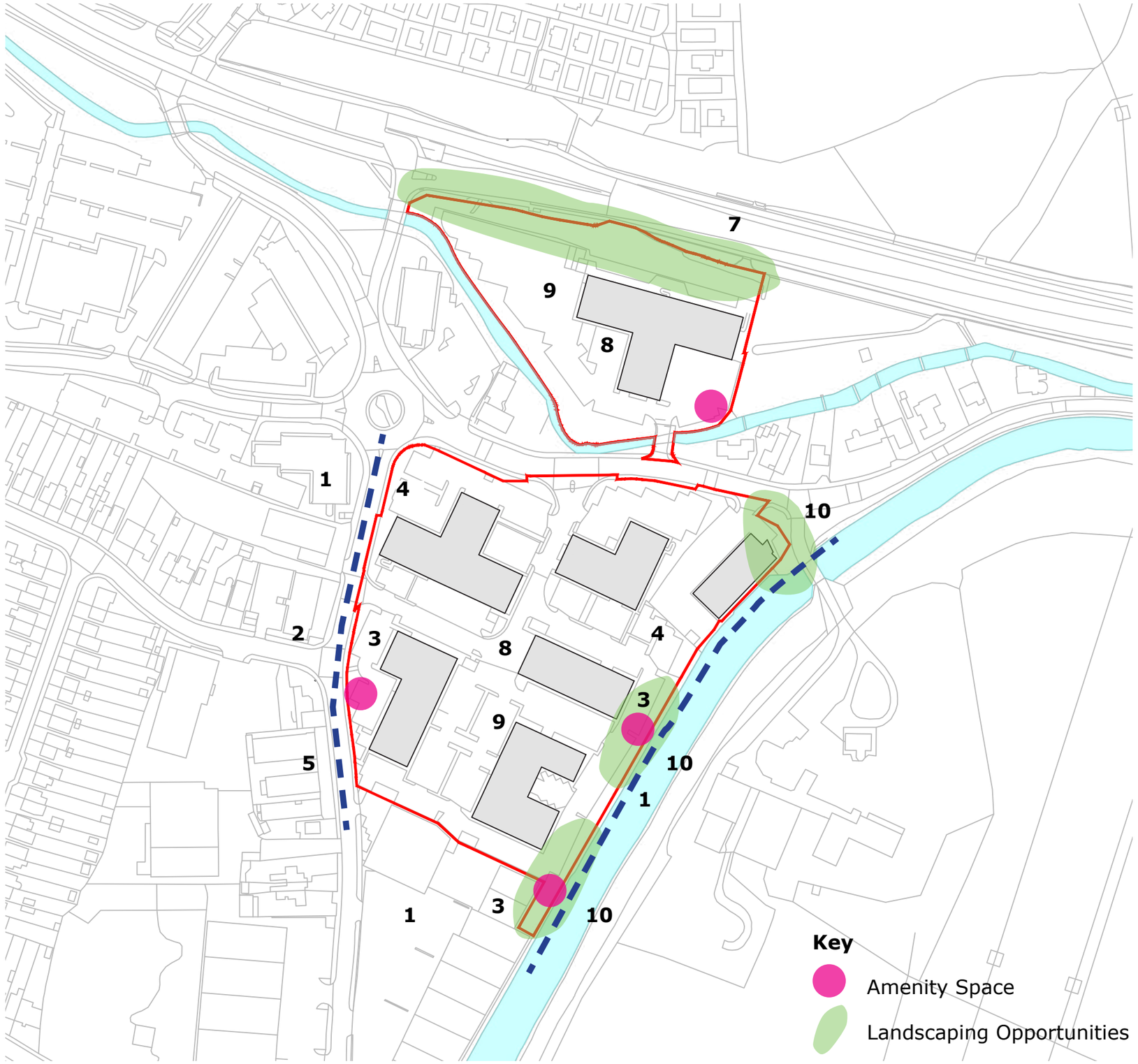
4.00

Design Development

4.01 Design Principles

The objectives of this design is to provide industrial buildings that will offer spaces for small and medium sized industrial operators. The principles of the proposed development are informed by an understanding of local stakeholder concerns and planning priorities that have been gathered by the applicant and the design team following two public consultation events, held on the site, and three pre-application meetings with Runnymede Borough Council. These principles have influenced the masterplanning and building form design and they are:

1. Respect the character and appearance of the local area regarding the development position, form, scale, and mass.
2. Avoid loss of residential amenity regarding noise from on-site operations and light by overshadowing.
3. Prioritise employee wellbeing opportunities such as indoor and outdoor amenity spaces and good levels of soft landscaping.
4. Offer sustainable transport options alongside car parking spaces that meet local requirements.
5. Improve integration of the development within the surrounding context by considering active frontages and visual connectivity.
6. Explore opportunities to promote the river as a site of leisure and wellbeing for employees and locals.
7. Design to statutory obligations such as Environmental Agency Buffers and avoiding development within the Green Belt.
8. Provide an optimum level of developable floor area to suit the needs of likely tenants.
9. Design layouts and building heights that are efficient for light industrial operations.
10. Enhance the existing landscaping, biodiversity and sustainability credentials.



4.02 Facilitating Proposed Use Classes

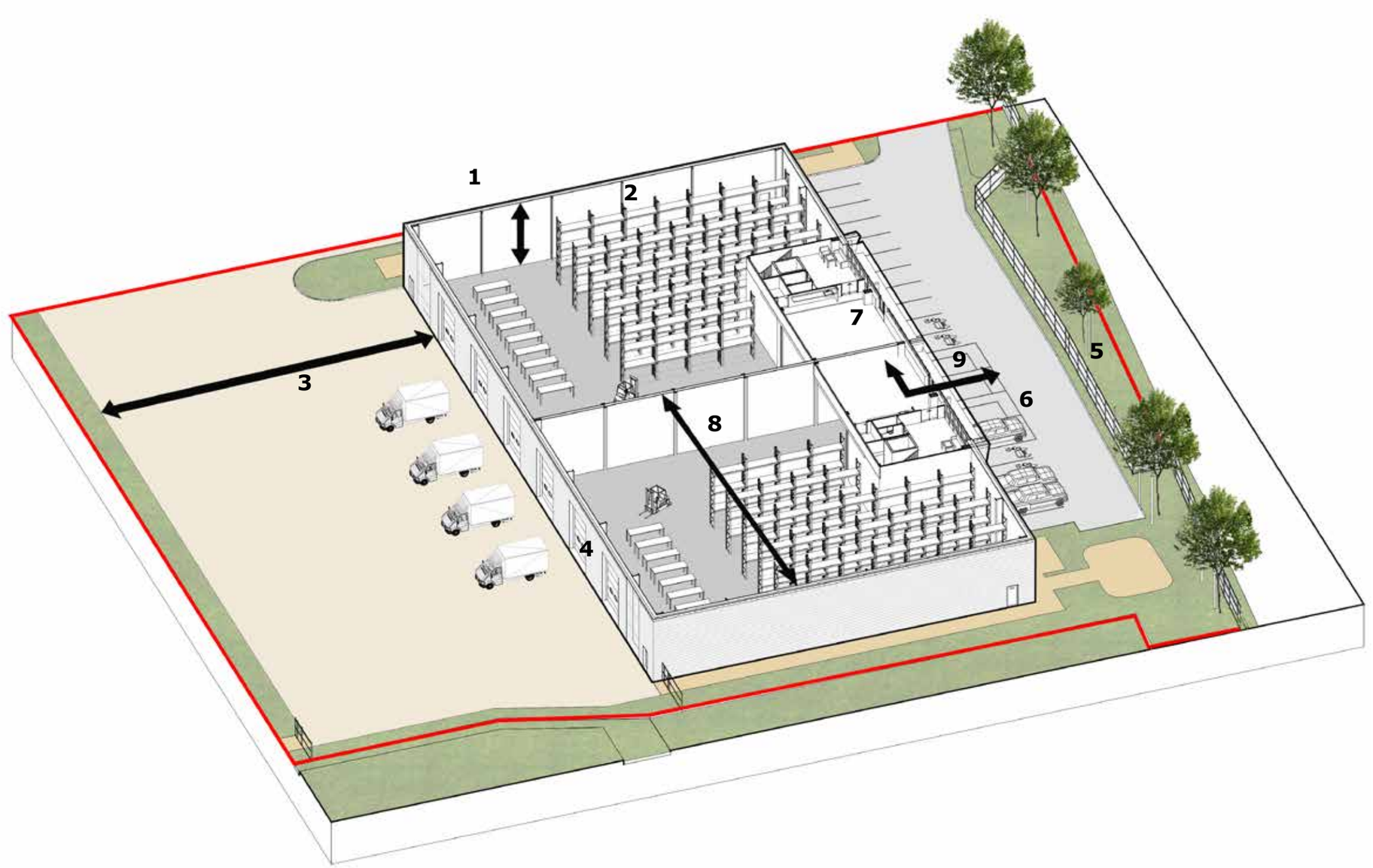
Overview

This planning application seeks to accommodate a variety of use classes, for this to be successful the design needs to accommodate a level of flexibility that will make it suitable for small to medium enterprises but discourage larger distribution operators.

Key

1. Clear heights to facilitate institutional use
2. Portal frame structural design creates column free spaces suitable for these use classes
3. Yard depths to suit operational requirements
4. Loading doors to long elevation to improve operational efficiency
5. Fencing to perimeter to comply with secure by design principles
6. Car parking adjacent to office to improve accessibility
7. Outward facing offices to improve visual engagement with the public and building users
8. Clear span offers flexibility of use
9. Good accessibility separate from operation

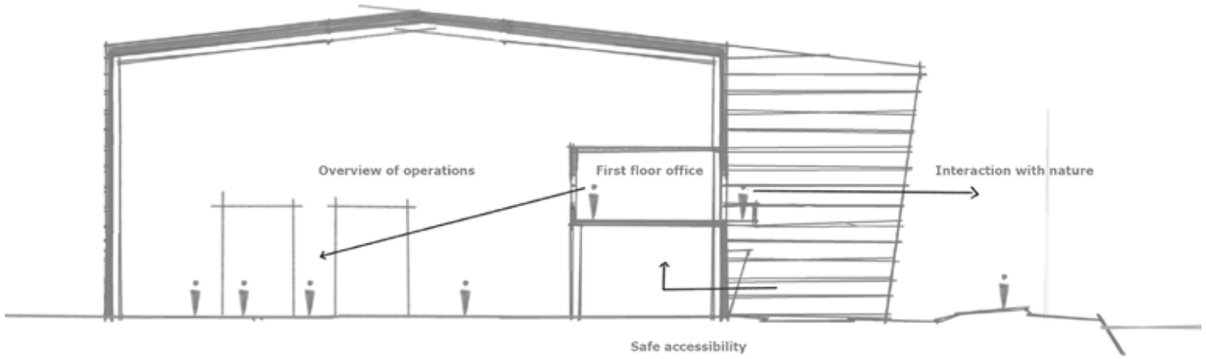
In response to the public consultation feedback, the decision was made to remove dock levellers from the development proposal, this is another feature that makes it preferable for light industrial uses and small to medium enterprises rather than large scale parcel distribution.



4.03 Additional Institutional Standards

First Floor Offices

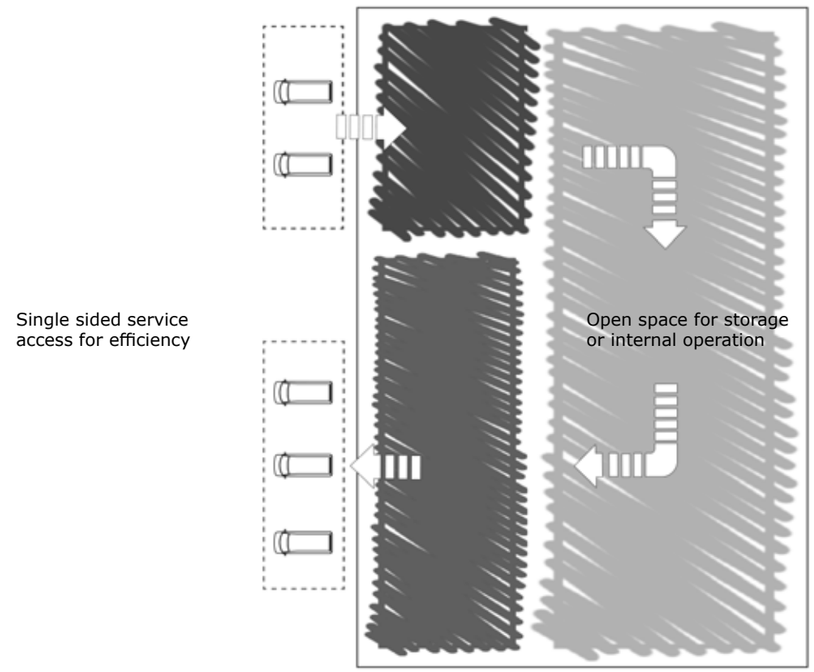
In addition to the institutional standards listed on the previous page internal offices are often installed at first floor level with B-class developments. This allows for an overview of the warehouse / industrial space from the office which helps office staff improve efficiency by being able to better manage productions and procedures.



Benefits of first floor offices

U-Flow Arrangement

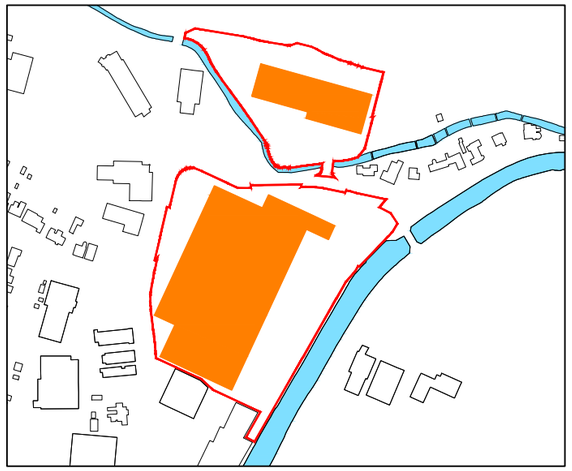
A typical logistics u-flow operation has been utilised across plot 1 to minimise yard frontages and separate operations from public space.

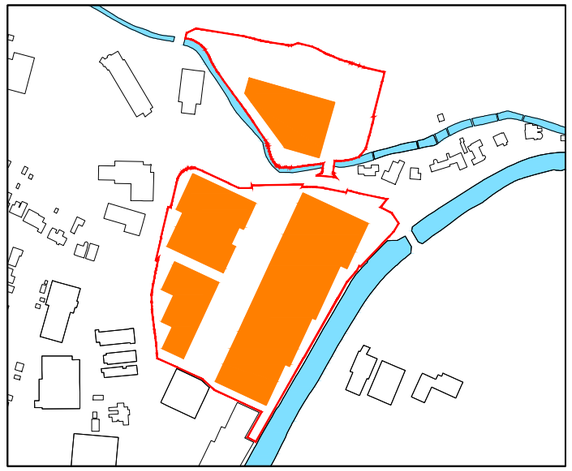


U-Shaped Arrange for Cross Docking Service Vehicles

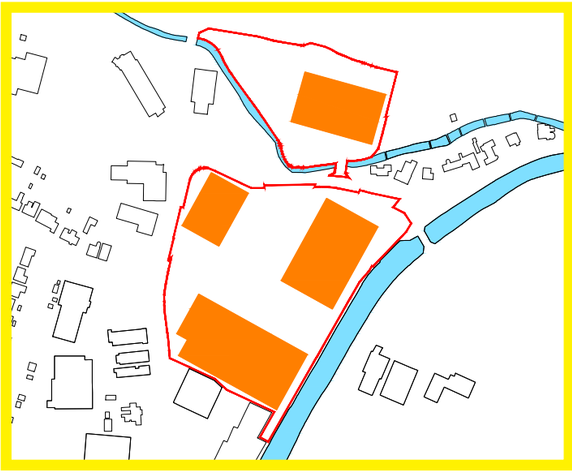
4.04 Masterplan Options

During the design development phase, several masterplan options were considered some of which are shown opposite. These options were evaluated using the principles outlined on the previous page and the most successful options were those that found a balance between building footprints that addressed the massing and position concerns and provided an optimum amount of floor area and operational efficiency. Based on these parameters three options were chosen for further review within the pre-application meetings with Runnymede Borough Council.

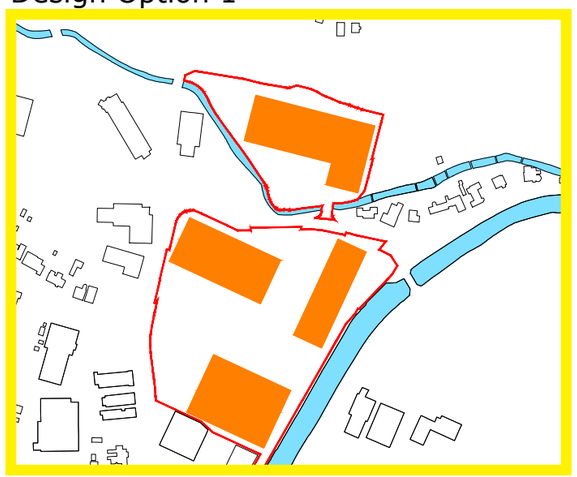


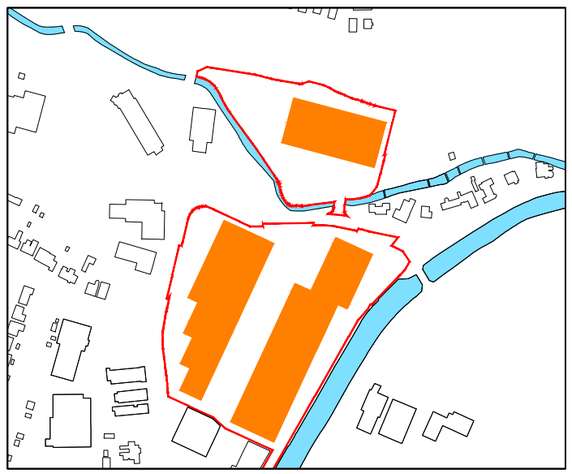


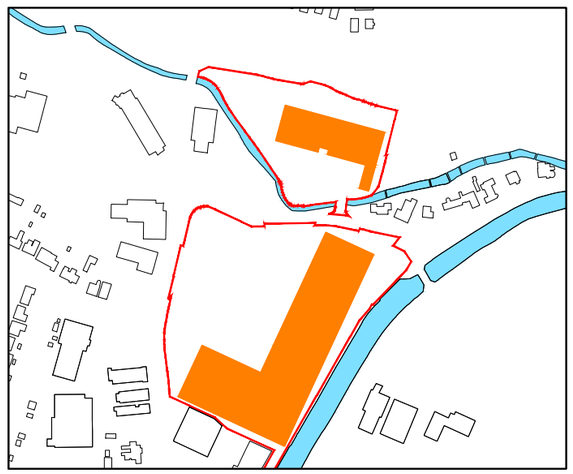
Design Option 2



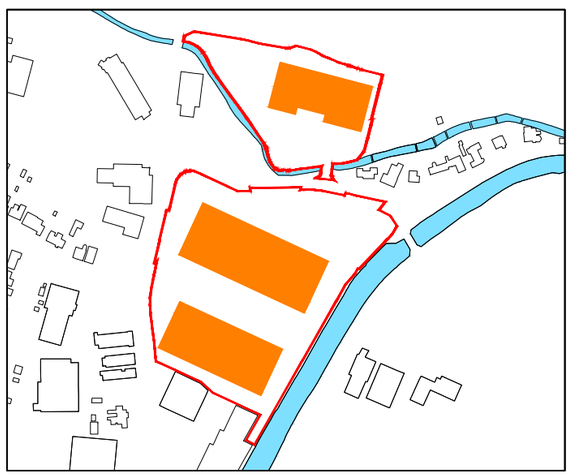
Design Option 1

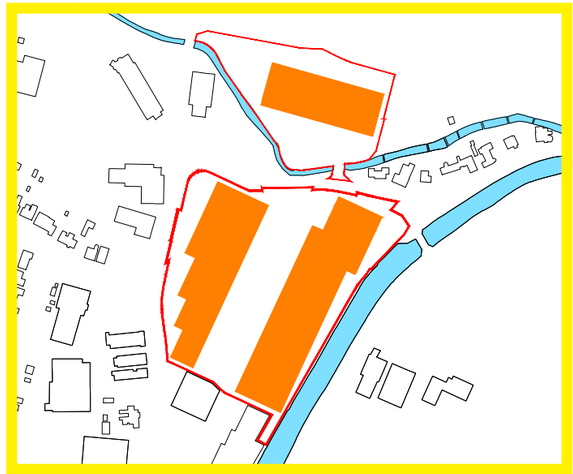


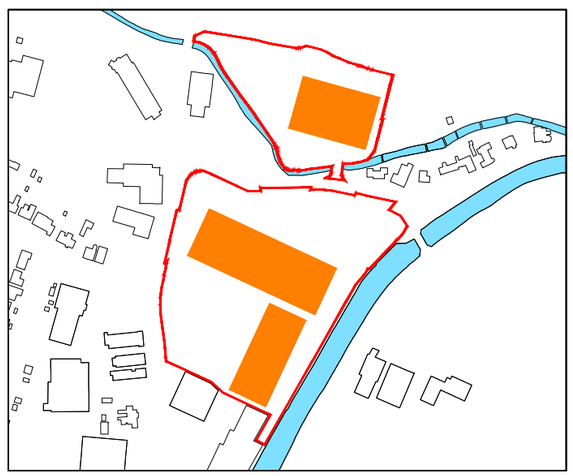




Design Option 3







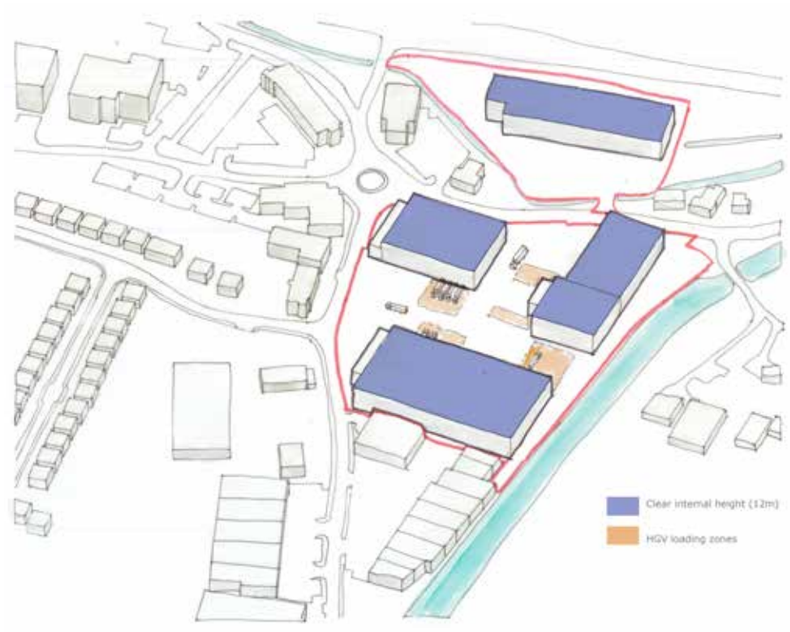
4.05 Masterplan Development Option 1 and 2

Three options were selected for greater consideration during the pre-application meetings, the first two are shown opposite. These were selected because they found a good balance between a commercially feasible floor area, functionality for operations and addressed the loss of amenity highlighted earlier in the document.

Options 1 and 2 were good in terms of breaking down the building footprints and providing a range of unit sizes and simple building forms. However, whilst these are preferable from an operational point of view, with independent units and secure yards it was decided that they were not appropriate for the following reasons:

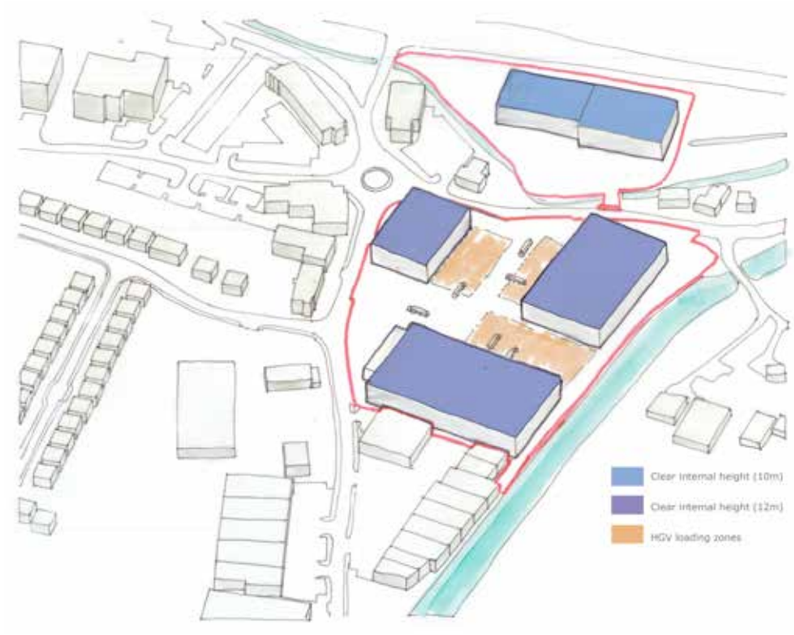
- The layouts made it difficult to screen the service operations from the surrounding buildings which would result in some additional requirements for noise attenuation.
- The yard layouts and depths would be inefficient from an operations perspective.
- They would have required service access onto Hamm Moor Lane near the Navigation House residential unit which was undesirable.
- The location of offices and employee amenity spaces would limit the active frontages facing the external streets.

Masterplan Option 1: Plan View



Masterplan Option 1: 3D View

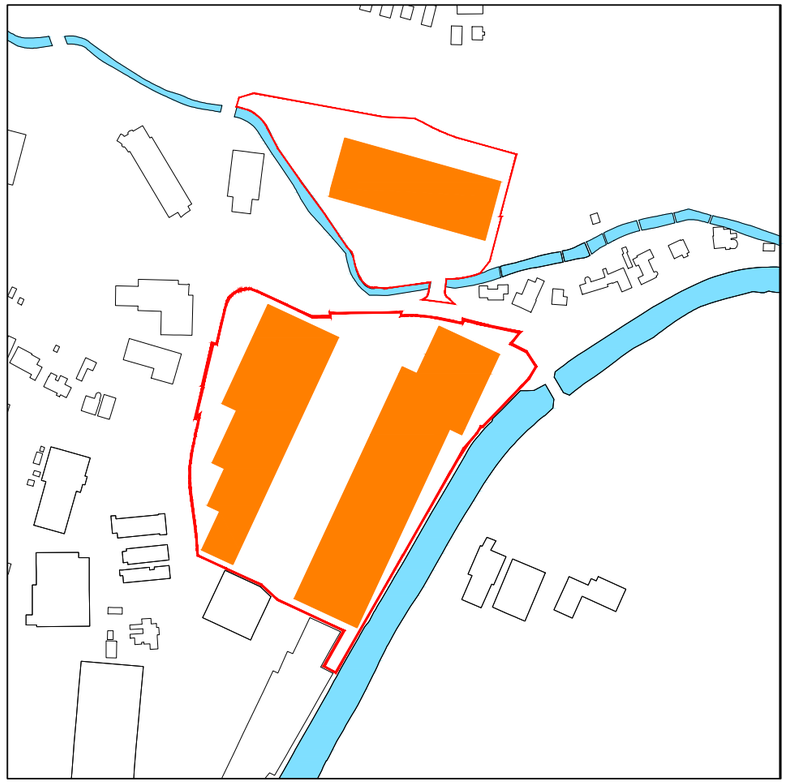
Masterplan Option 2: Plan View



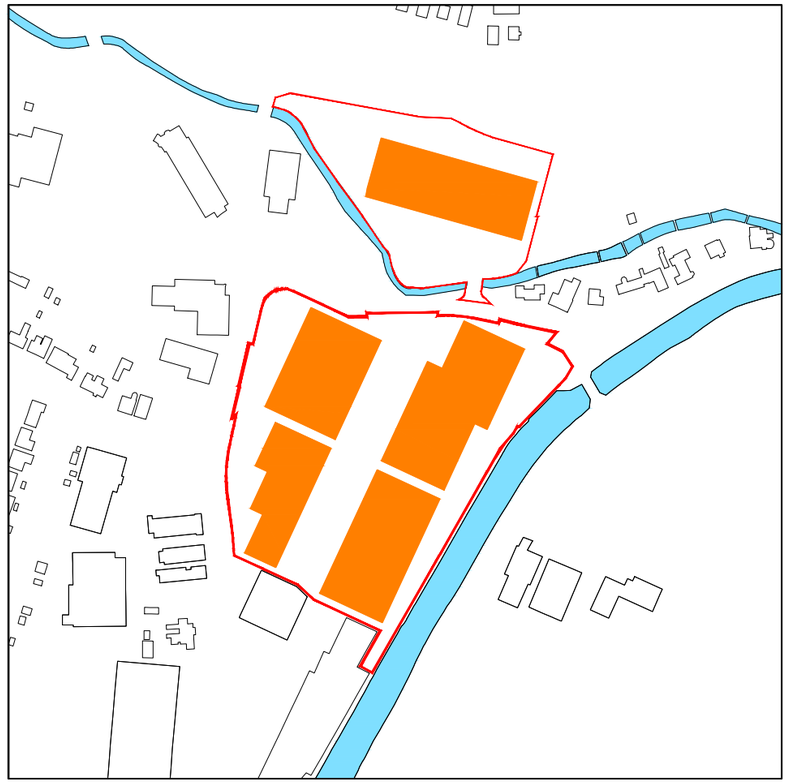
Masterplan Option 2: 3D View

4.06 Masterplan Refinement

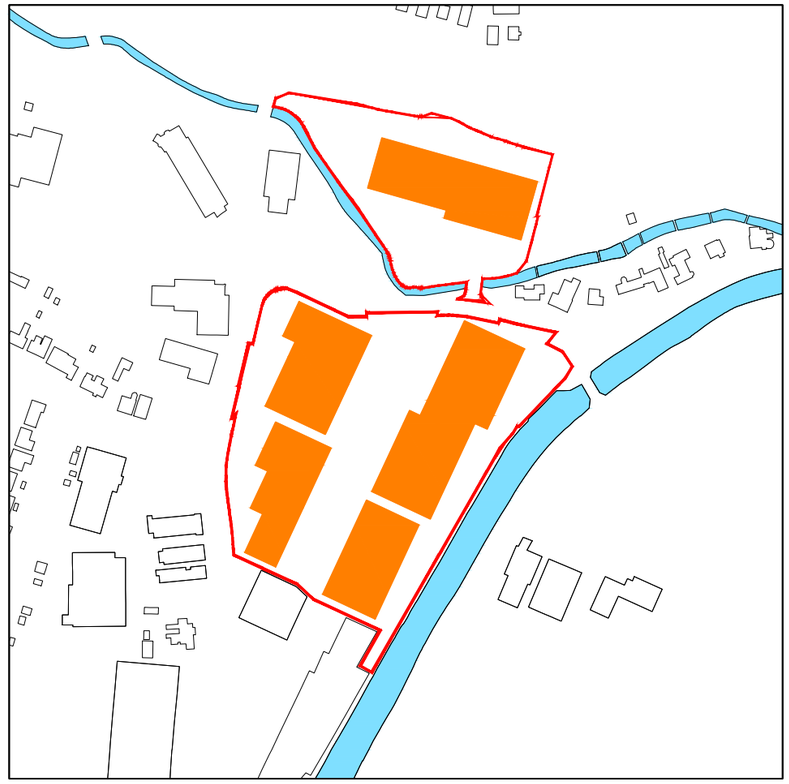
Option 3 was determined to provide the optimum balance of floor area that was feasible from a commercial perspective, functional for operations and addressed the loss of amenity highlighted during the previous planning process but this option was also subject to a series of refinements to enhance the attributes and respond to feedback received from the pre-application meetings and public consultations as described below.



1. Following the pre-application meetings and public consultations. The most effective solution of longer terraced units was then reviewed in greater detail to elaborate on the opportunities.



2. The scheme was then divided into smaller building footprints creating breaks in the massing. The stepped frontages staggered the footprint, making the buildings appear smaller overall. Minimising breaks between the multiple units, and creating terraced buildings, allows for efficiency of design with less external walls giving a more efficient and sustainable building fabric.



3. The buildings were further stepped and broken up, allowing for setbacks from the site borders. This meant that from the street each unit is perceived as an individual building. The set back from the boundary line also moves the buildings further away from sensitive receptors and creates space for soft landscaping which will help to integrate the proposal into the local context.

4.07 Masterplan Development 2

Option 3 (shown below) was amended to incorporate the pre-application meeting and consultation feedback. This included providing good setbacks from the streets to increase landscaping along the boundaries and reduce the risk of overshadowing. By positioning the offices facing the adjacent streets there is also an opportunity to increase active frontages. This orientation also screened the service yard from adjacent properties which would help with noise attenuation and contain the operations within.

Masterplan Option 3: Plan View

Masterplan Option 3: 3D View

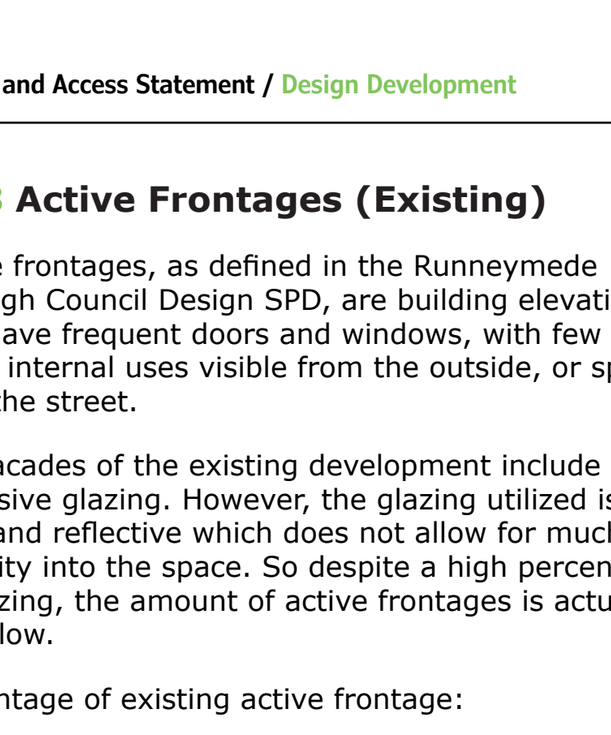
4.08 Active Frontages (Existing)

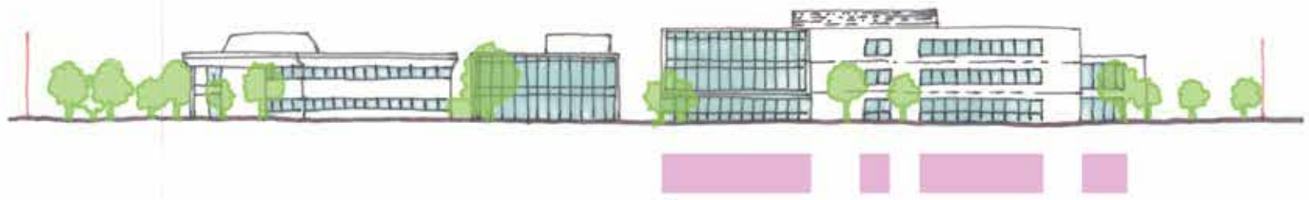
Active frontages, as defined in the Runneymede Borough Council Design SPD, are building elevations that have frequent doors and windows, with few blank walls, internal uses visible from the outside, or spilling onto the street.

The facades of the existing development include extensive glazing. However, the glazing utilized is dark and reflective which does not allow for much visibility into the space. So despite a high percentage of glazing, the amount of active frontages is actually quite low.

Percentage of existing active frontage:

27%





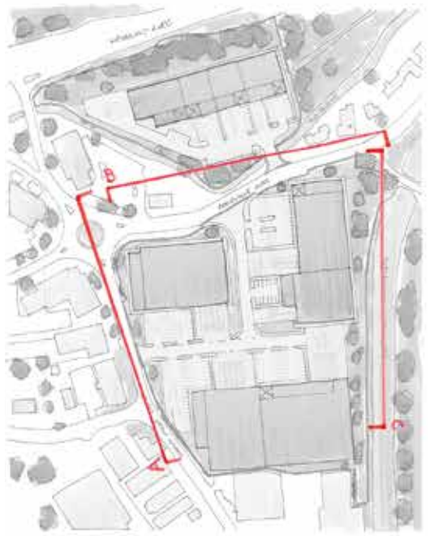
Elevation A

Elevation B

Elevation C

4.09 Active Frontages (Design Options)

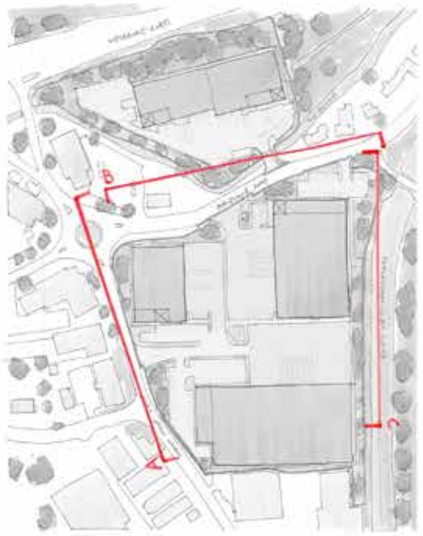
For comparison, the active frontages of design options 1 and 2 were also assessed. They provided less visual engagement with the surrounding streets compared to the existing building. Option 3 provided the most visual engagement by consistently locating the office spaces parallel to the streets and river.



Percentage of active frontages:

22%

Option 1



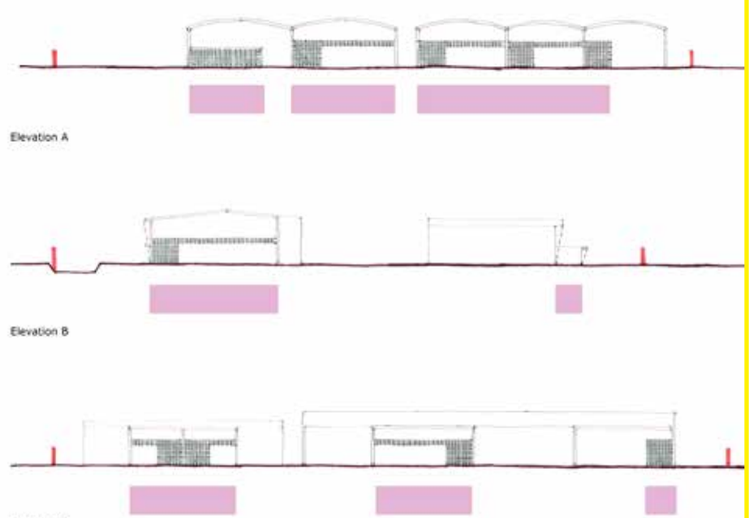
Percentage of active frontages:

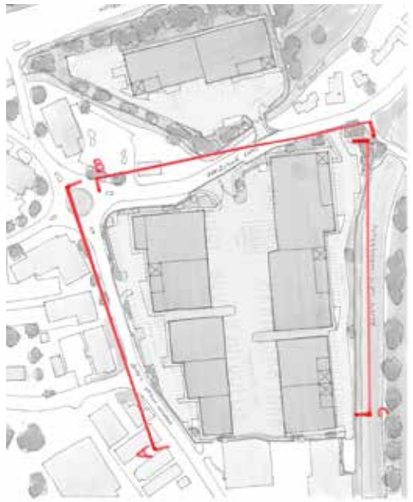
17%

Option 2

Preferred Option

This option was preferable because it offered the highest percentage of active frontages and visual engagement with the surrounding streets





Percentage of active frontages:

41%

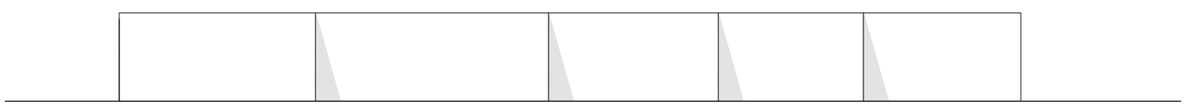
Option 3

4.10 Facade & Building Form Principles

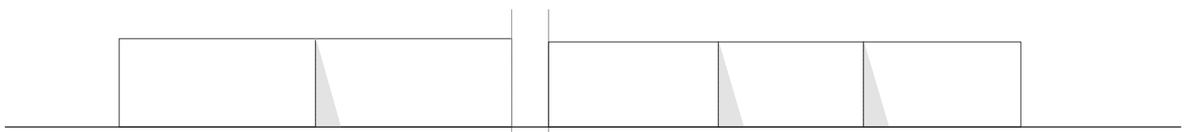
Following the masterplan development a series of design strategies were generated that could be applied to the facades (shown below). The design strategies were considered to be appropriate for this site because they had already been utilised in nearby commercial and industrial developments. Thus providing consistency with the urban grain. Strategy 1 shows the simple volume of the required floor area and this is taken as a base point. These typical design rules were applied to all resulting design options as a basis that could work with different roof types and materials depending on how the proposal needed to adapt to the surrounding context.

The diagrams below show the application of the design strategies on the elevations of the proposed volumes. These strategies included the introduction of horizontal curtain walling (shown in blue), changes in cladding materials. The diagrams show how these strategies successfully subdivide the volume into smaller components.

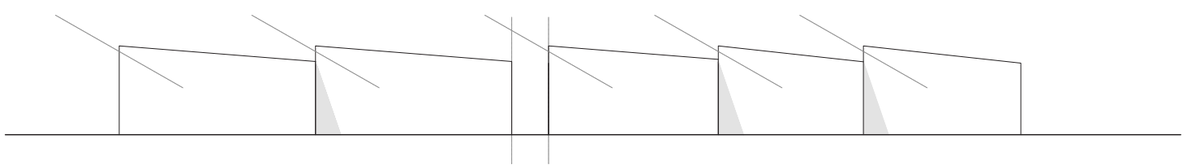
Design Strategy 1: BASE POINT - One unit facing Hamm Moor Lane



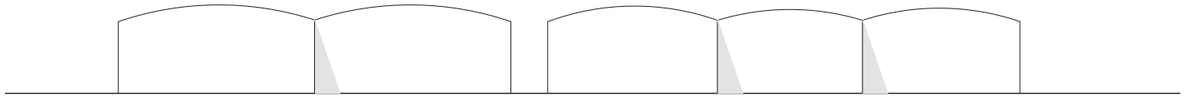
Design Strategy 2: DIVISION - Several smaller units



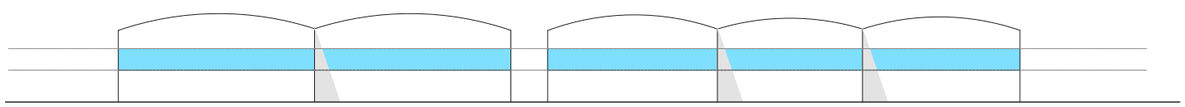
Design Strategy 3: BREAKS - Split elevation into two blocks



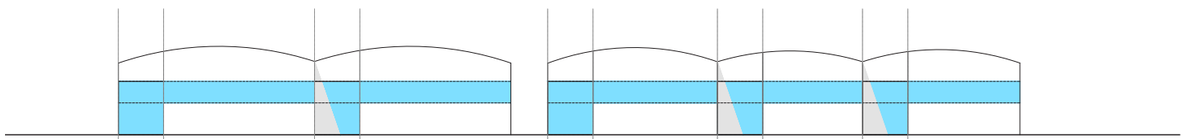
Design Strategy 4: FORM - Change roof line to create more visual interest



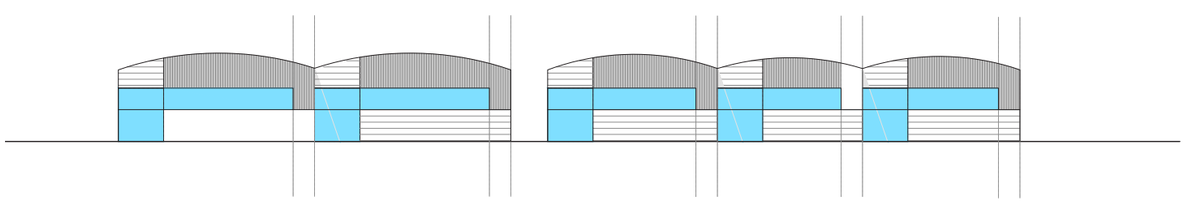
Design Strategy 5: SHAPE - Use curved roofs to reduce height of building closer to the boundary



Design Strategy 6: HORIZONTAL - Incorporate glazing to create active frontages



Design Strategy 7: VERTICAL - Subdivide facade by incorporating vertical elements



Design Strategy 8: MATERIAL - Utilise different cladding materials on elevations to create more visual interest and break facade into smaller modules

4.11 Facade & Building Form Options

Based on the facade, and building form principles, three initial options were generated for evaluation.

Unit A & B: Option 1

This option incorporated mono-pitched roofs. This is a typical industrial building form seen on traditional units across the country. Although there are no local examples of this building form it was considered beneficial because of the increased daylighting that it would enable for the warehousing space.

Unit A & B: Option 2

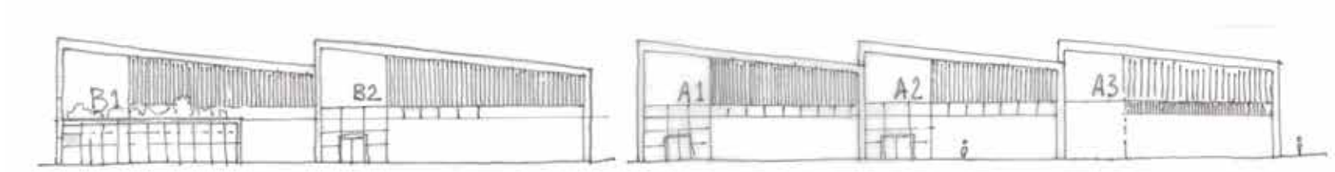
The curved roofs were more contextually focused as shown on the building form analysis page. This form was also considered to respond to the historical use of the site as a factory for aeronautical components as demonstrated on the historical building form analysis page.

Unit A & B: Option 3

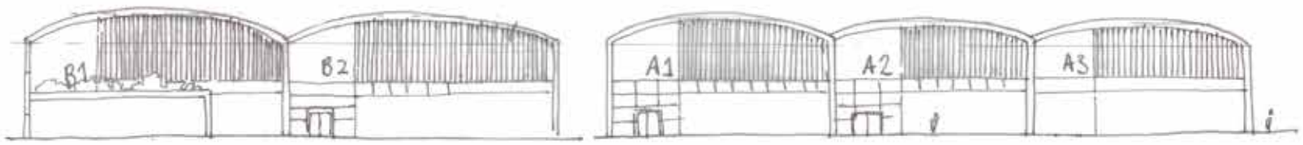
The final option responded to the neighbouring trade units along Hamm Moor Lane which also have a dual pitch roof. Option 3 was discounted along the Hamm Moor Lane frontage because it was felt that it would be better to introduce some variation of building form rather than copy the neighbouring industrial units because this will make the development more visually interesting.

Unit C & D: Option 1

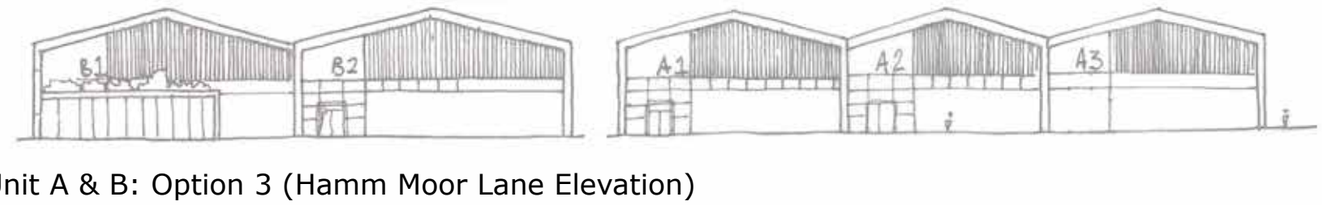
As a result of initial heritage briefings and design team meetings it was decided early in the development that removing the parapets and orientating units C and D so that the ridges and eaves of the building ran parallel with the River Wey Navigation would be the most effective way to reduce the overall heights of the building closest to the river. Consequently, only one building form option was prepared for these units.



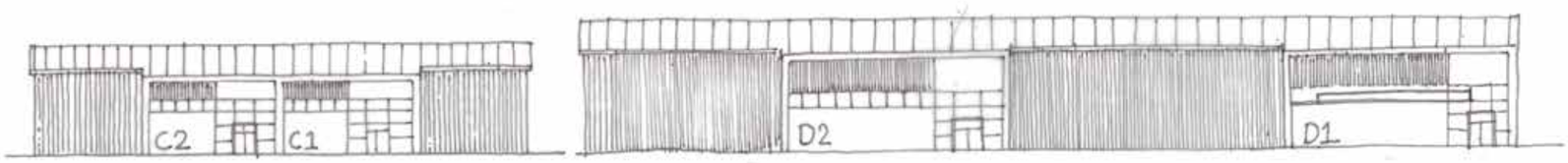
Unit A & B: Option 1 (Hamm Moor Lane Elevation)



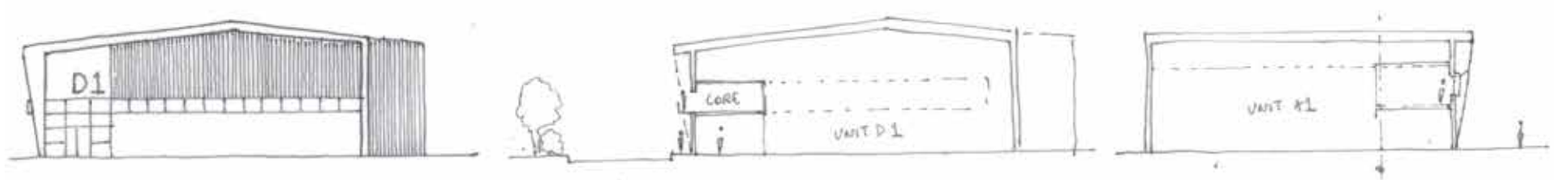
Unit A & B: Option 2 (Hamm Moor Lane Elevation)



Unit A & B: Option 3 (Hamm Moor Lane Elevation)



Unit C & D: Option 1 (River Wey Navigation Elevation)

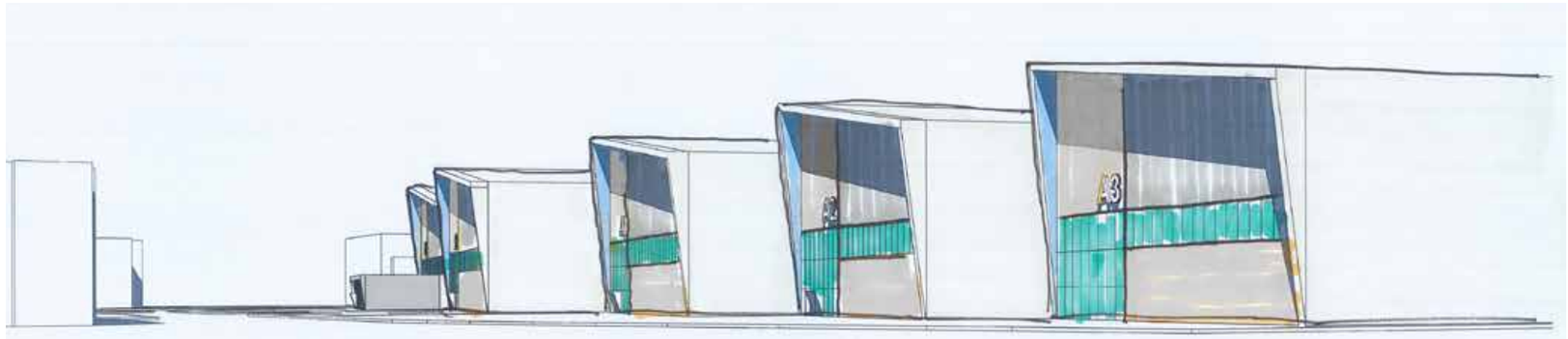


Unit C & D: Option 1 (Addlestone Road Elevation & Section)

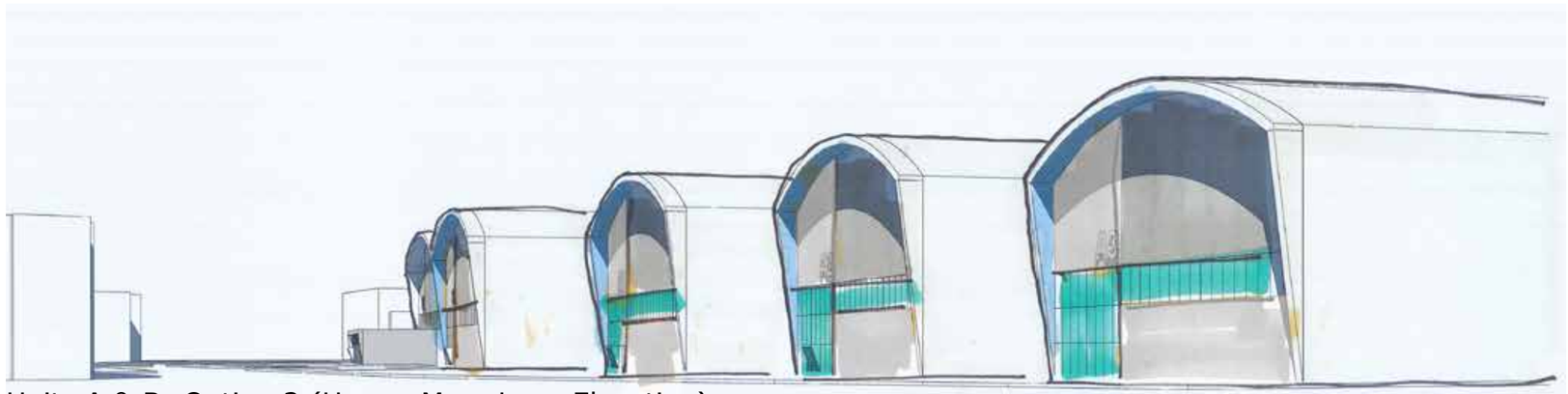
4.12 Facade & Building Form Evaluation

During the design development we considered the impact of the stepped building footprints along Hamm Moor Lane could help to break up the massing and address the design principles that were identified in the briefing stage. Orientating the gable ends of units A and B toward Hamm Moor Lane also references the positioning of the existing industrial units along this street as highlighted in the site analysis section: "Building Form and Local Precedents".

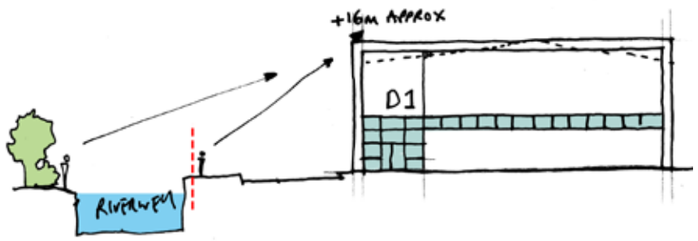
The selection of the final building form was driven by the need to reduce the overall building heights. The mono-pitch roof would create a taller elevation to unit B along Addlestone Road when compared to the curved roof. Equally, by using a dual pitch roof for unit D1 the overall height is reduced when compared to a building with a parapet or a mono-pitch roof.



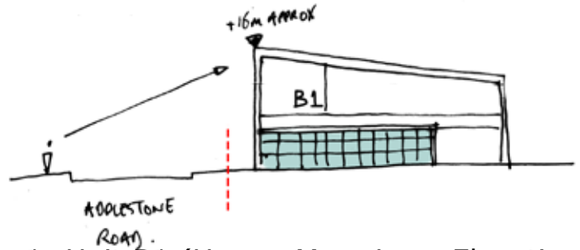
Units A & B: Option 1 (Hamm Moor Lane Elevation)



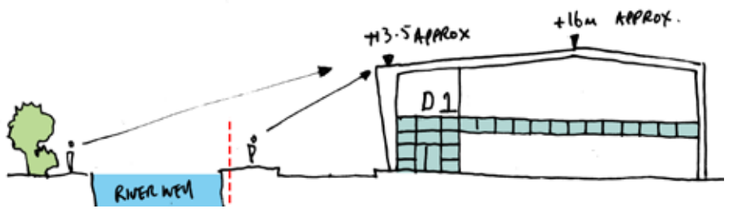
Units A & B: Option 2 (Hamm Moor Lane Elevation)



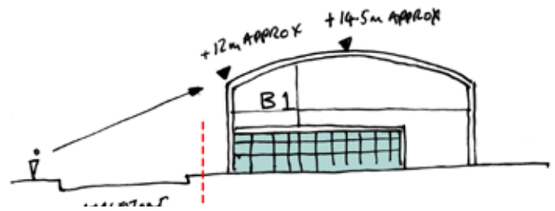
Option 1: Unit D1 (Addlestone Road Elevation)



Option 1: Unit B1 (Hamm Moor Lane Elevation)



Option 2: Unit D1 (Addlestone Road Elevation)



Option 2: Unit B1 (Hamm Moor Lane Elevation)

4.13 Material Precedents

As mentioned on the previous page an external cladding material was required that reflects the aspirations of the Runnymede Borough Council Local Plan 2030 and the applicant requirements for long lasting, high quality finish.

Metal Cladding

Metal cladding is typically used in industrial developments because it is robust and maintains its appearance long into the future with minimal maintenance. The use of metal cladding is also consistent with the facades of nearby commercial and industrial units which have utilised a mixture of brick, render and metal cladding.

Consideration of alternatives

Although brick and render may have been appropriate from a contextual perspective, they do not offer the same level of longevity and low maintenance and consistent finish that is guaranteed by metal cladding.

Warranties

Metal cladding products also offer developers and tenants long life warranties and a wide variety of premium finishes that enabled the facade design to incorporate several different finishes efficiently with minimal waste which helps to break up the facade into smaller components.

Photograph of cladding materials of industrial units along Hamm Moor Lane with vertical metal cladding

Photograph of cladding materials of industrial units along Hamm Moor Lane with flat panel cladding

Photograph of the industrial unit illustrates the type of metal cladding combinations that are available

Photograph of the variety of metal cladding canopies and colour combinations that are available

4.14 Wellbeing & Amenity Features

Inspiration for the facade design was taken from the existing site buildings, nearby commercial developments and contemporary UK industrial developments to improve occupant wellbeing and comfort. All these features improve the desirability of the development for employees and reflect the increasing appetite for facilities that prioritises employee wellbeing.

Image 1

The nearby Bourne Business Park developments incorporate brise soleil into the design which improves occupant comfort by reducing glare and overheating from excessive sunlight (image 1).

Image 2

The existing on-site buildings utilise deep canopies to reduce glare and overheating from sunlight.

Image 3

Features such as green walls are more readily incorporated into industrial developments to increase biodiversity and occupant wellbeing.

Image 4 and 5

Balconies are also beginning to be incorporated into contemporary industrial developments. They have been incorporated into the existing buildings on this site to take advantage of the nearby River Wey Conservation Area.

Image 1

Image 2

Image 3

Image 4

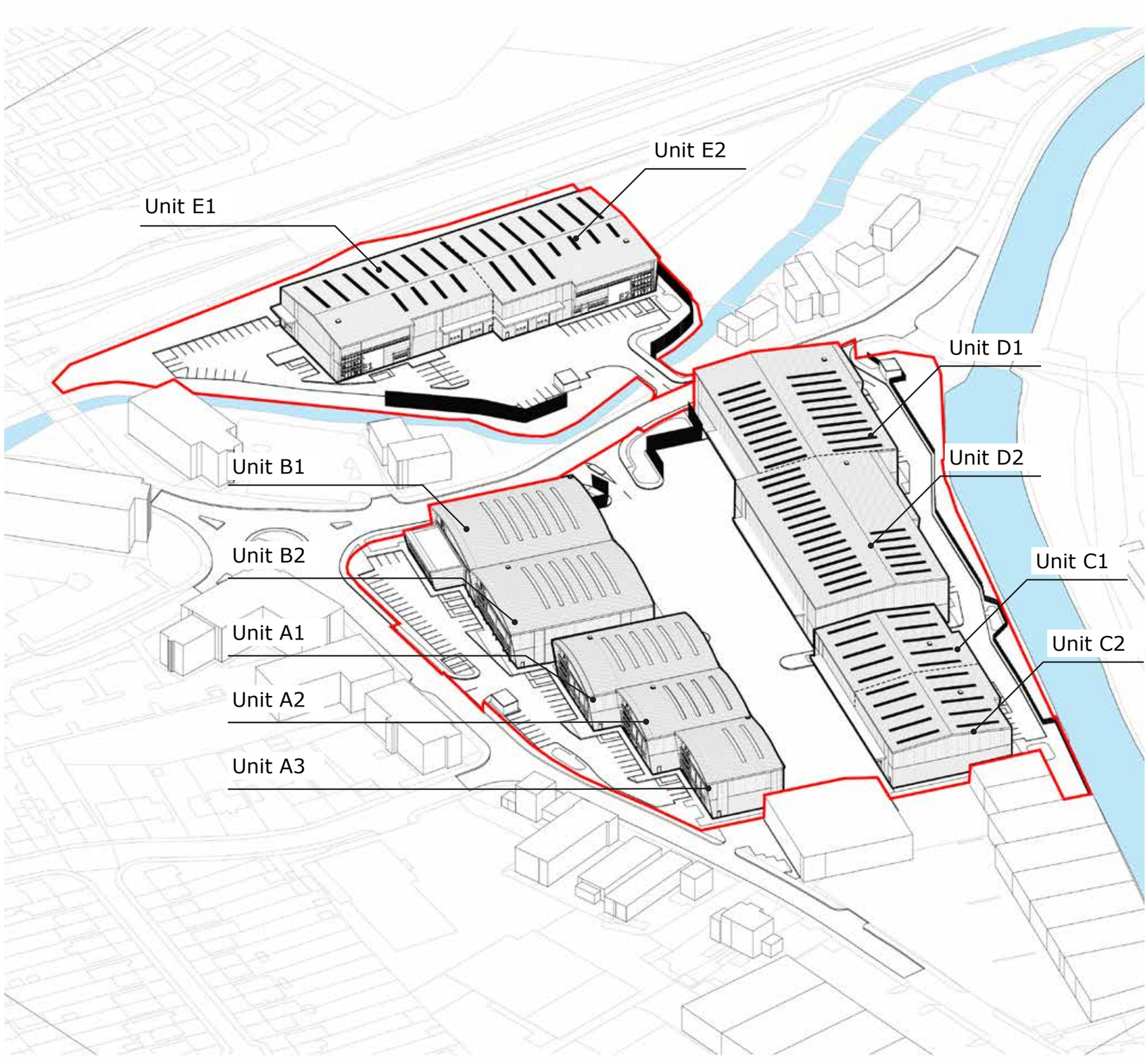
Image 5

5.00
Design Proposals

5.01 Use

The proposed development comprises of five buildings divided into eleven individual units. The total GIA for the development is 15,998 sqm (172,199 sqf). The units will be used for Classes E(g)ii, E(g)iii, B2 and B8 with ancillary office accommodation, vehicular access, associated external yard areas, service vehicle and car parking, servicing, external lighting, hard and soft landscaping, infrastructure, and all associated works.

Schedule of Accommodation		
Unit	**sq ft**	**sq m**
Unit A1	13,261	1,232
Unit A2	9,515	884
Unit A3	5,490	510
Total (Unit A GEA)	28,266	2,626
Total (Unit A GIA)	26,641	2,475
Unit B1	15,220	1,414
Unit B2	15,306	1,422
Total (Unit B GEA)	30,526	2,836
Total (Unit B GIA)	29,235	2,716
Unit C1	12,626	1,173
Unit C2	12,626	1,173
Total (Unit C GEA)	25,252	2,346
Total (Unit C GIA)	24,068	2,236
Unit D1	25,220	2,343
Unit D2	28,815	2,677
Total (Unit D GEA)	54,035	5,020
Total (Unit D GIA)	51,838	4,816
Unit E1	20,344	1,890
Unit E2	22,077	2,051
Total (Unit E GEA)	42,421	3,941
Total (Unit E GIA)	40,417	3,755
Total (Overall GEA)	180,500	16,769
Total (Overall GIA)	172,199	15,998



5.02 Amount

Overall the GEA for the development is 16,769 sqm (180,500 sqf) on a site of 3.71 Ha. This is divided between 5 buildings (unit As, Bs, Cs, Ds and Es and 11 units. The maximum unit GIA is 2,677 sqm (28,815 sqf) which as shown in the site analysis is comparable to the building footprints of the neighbouring industrial and commercial developments. The new footprint of the proposed units respond to the massing of the nearby commercial and industrial buildings by using a similar scale and footprint.

Building Footprint Area
(All areas provided are approximate)

1. 17,000ft² / 1580 m²
2. 13,500 ft² / 1255 m²
3. 11,5000 ft² / 1070 m²
4. 6,600 ft² / 615 m²
5. **40,000 ft² / 3715 m² (Unit E)**
6. 10,000 ft² / 930 m²
7. **29,300 ft² / 2720 m² (Unit B)**
8. **40,500 ft² / 3760 m² (Unit D)**
9. 10,000 ft² / 930 m²
10. **26,500ft² / 2460 m² (Unit A)**
11. **24,000ft² / 2230 m² (Unit C)**
12. 14,700ft² / 1365 m²
13. 10,000 ft² / 930 m²
14. 31,500 ft² / 2930 m²
15. 32,000 ft² / 2975 m²
16. 15,000 ft² / 1395 m²
17. 33,000 ft² / 3065 m²
18. 9,500 ft² / 880 m²
19. 9,800 ft² / 910 m²

5.03 Layout

The proposed layout responds to the design objectives prepared for this application which are listed in the introduction of this document.

1. **Scale and massing:** The units are set back from the surrounding streets with significant trees and greenery buffers to achieve a softer environment. The building scale is designed to suit operational requirements and institutional standards and has been reduced to the minimum.
2. **Position:** The proposed buildings have been orientated to maximise engagement with nearby streets and to avoid overshadowing.
3. **Noise:** The central service yard protects Hamm Moor Lane and the Wey Navigation from noise and activity caused by loading and operation. There are no dock levellers which minimizes the number of heavy good vehicles on site and the associated noise.
4. **Amenity spaces:** Service yard depths have been reduced to plot 1 since the first pre-application meeting with Runnymede Borough Council. This allows more space along the river for staff amenity space and on plot 2 amenity spaces are allocated at the southwest corner outside of the 8m Buffer zone to the Bourne ditch.
5. **Staff and pedestrian circulation:** Pedestrian movement across the service yard undermines health and safety principles. So, the design allows for pedestrian circulation around the perimeter of the site which is encouraged by good landscaping design along these pathways.
6. **Landscaping:** The landscaping has been designed to facilitate positive interaction between the proposed development and the surroundings with enhanced natural corridors facing the River Wey Navigation.

5.04 Typical Unit Internal Core Layout

The units' ancillaries have been designed with full accessibility in mind.

As demonstrated by the layouts opposite, each main access will be level and will take employees and visitors to the main Reception area on Ground Floor upon arrival.

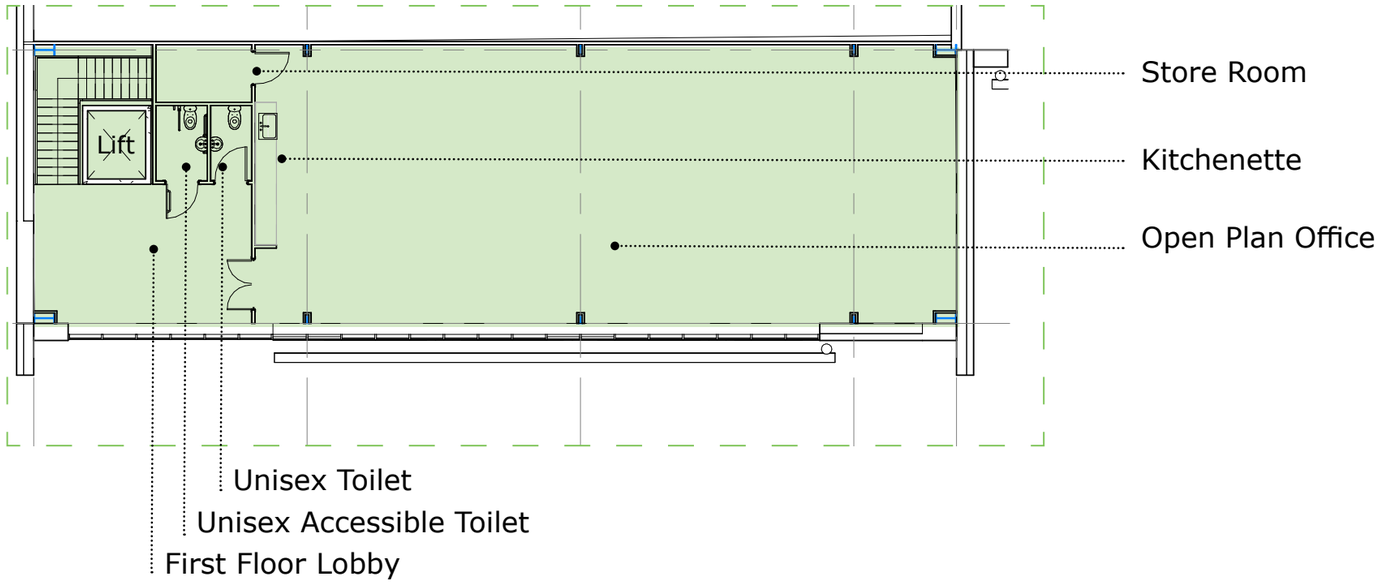
Provisions for the installation of an accessible toilet and shower (Part M compliant), are provided to the Ground Floor to comply with Part M and BREEAM requirements based on number of cycle spaces on site.

The open plan office is located on the first level and accessible either via 1200mm wide staircase or lift which is provided to ensure accessibility throughout the building.

Provision for additional unisex toilet and unisex accessible toilet to comply with BS 6465 requirements are available on the first floor with the addition of a tea station/break-out area provided within the office space.

Store Rooms are available on both floors for cleaner's equipment and office products, as required, and an open plan office space offers a flexible environment for potential tenants.

Typical First Floor Office



Typical Ground Floor Entrance

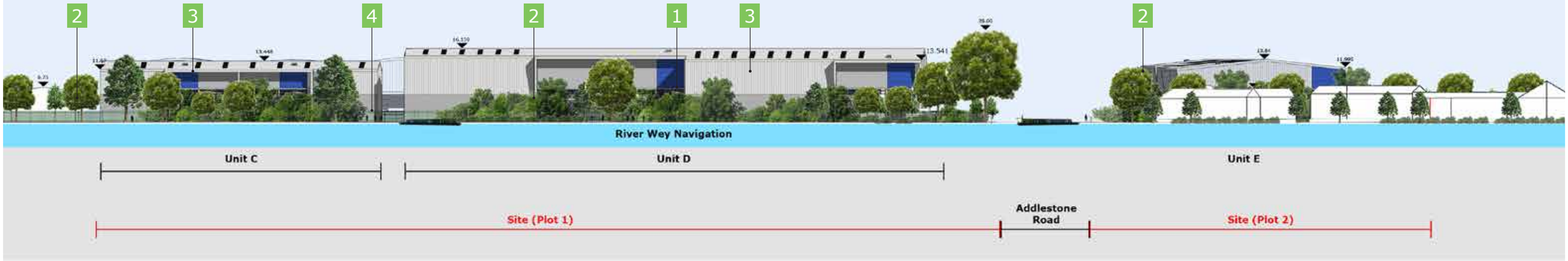
5.05 Scale (Site Sections)

The site sections show the scale of the proposal in relation to the surrounding context and the impact of landscaping, elevation treatment and nearby buildings on the overall heights. The proposal has been developed in consideration of the heights of nearby buildings such as Bourne 100 and existing soft landscaping such as the mature trees along the River Wey which are approximately 25m tall.

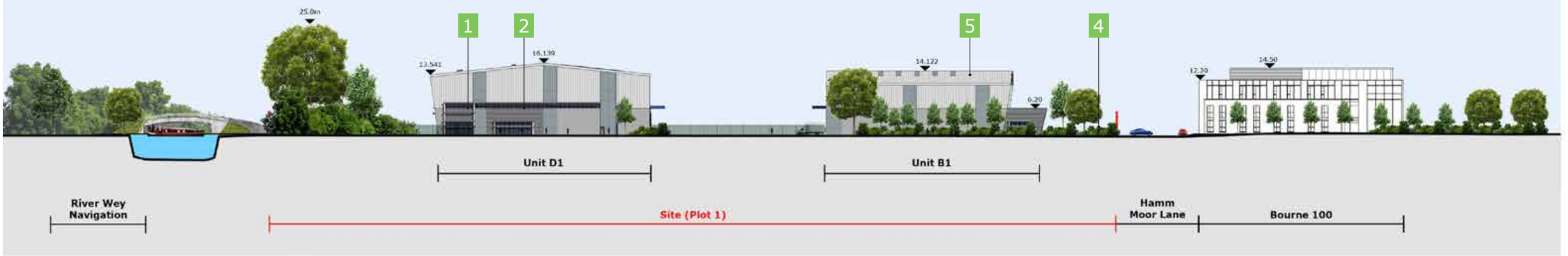
Key

1. Active frontages
2. Tree removal and planting
3. Longevity of materials
4. Amenity spaces
5. Building heights

Section A: River Wey Navigation



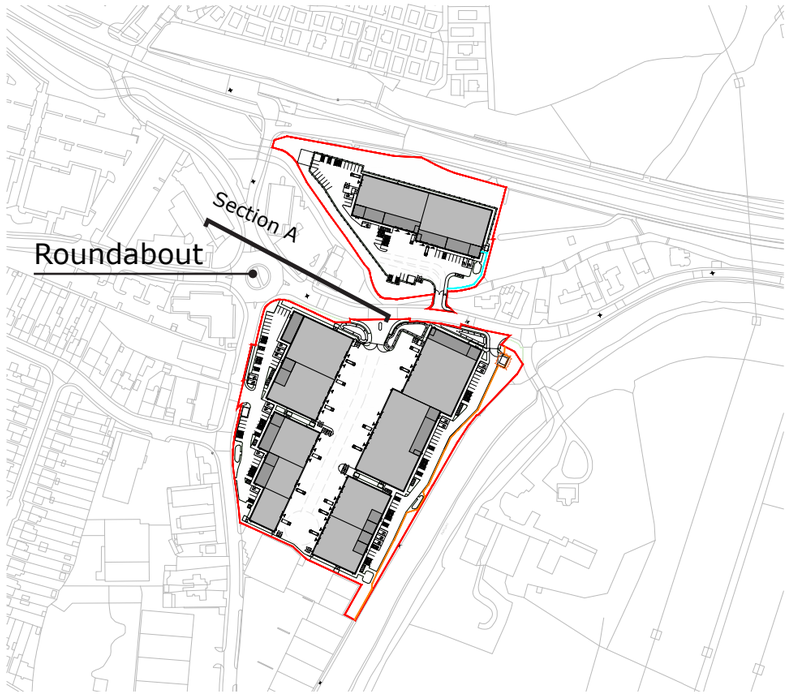
Section B: Addlestone Road



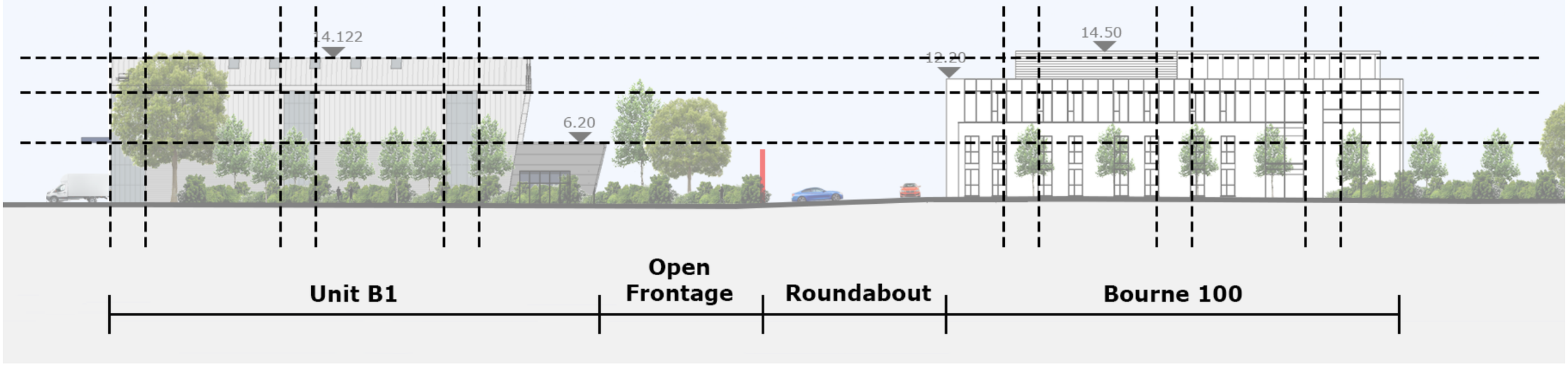
5.06 Scale (Comparison)

Our proposed scale and massing is in keeping with the adjacent plot of Bourne 100, creating mirroring at this key roundabout junction with symmetry of scale, massing and built form.

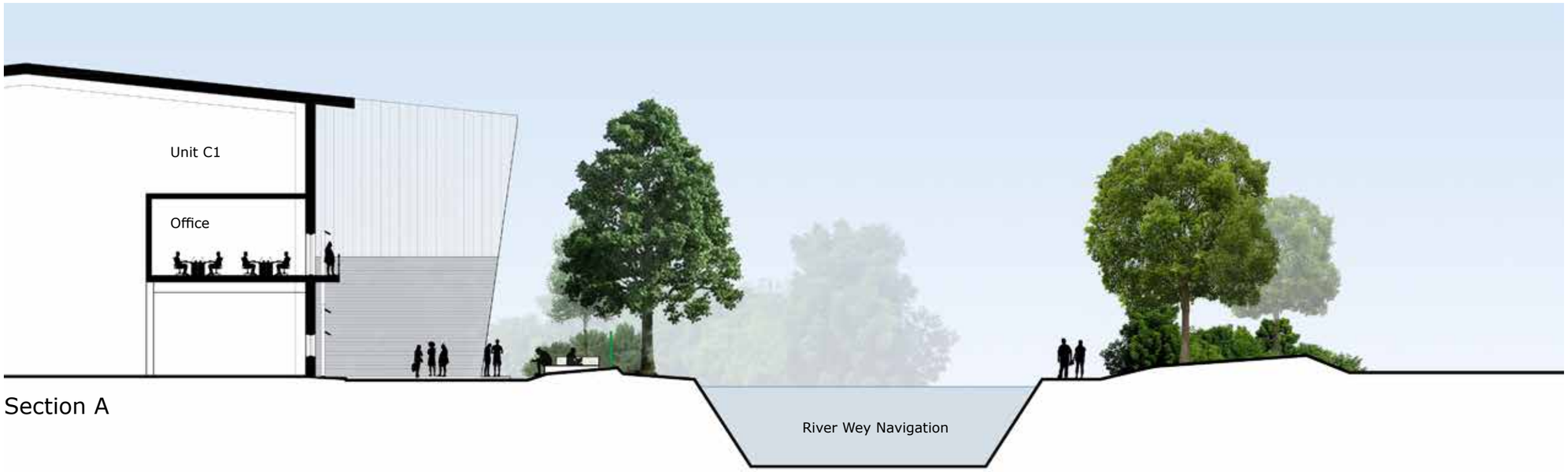
The proposed elevations have been designed to provide similarity with the horizontal levels and vertical breaks of nearby buildings and this is emphasised with changes in cladding and the inclusion of apertures at regular intervals.



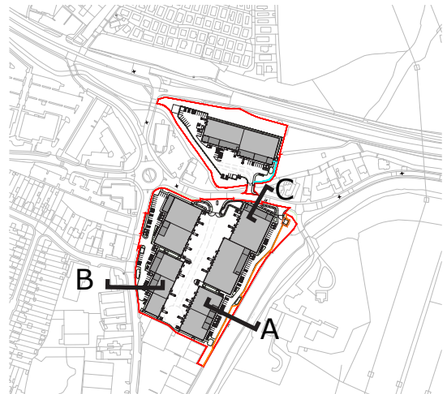
* all unit heights are in metres



5.07 Illustrative Boundary Sections



Section A



Section B

Section C

5.08 Landscape and Visual Context

The site is situated within a designated Strategic Employment Area, alongside the Waterside Trading Estate and Bourne Business Park. The site has some mature planting to its boundaries and close Addlestone and the Wey Navigation. The site consists of two parcels, lying across Addlestone Road. Weybridge Business Park is referenced as Character Area 4 in Runnymede Design Guide 2021 and is described as being 'off the main Weybridge Road between Addlestone and Weybridge' and as 'a small industrial and trading estate'. Waterside trading Estate lies adjacent to the site to the south and sits between the Wey Navigation and Hamm Moor. Bourne Business Park lying to the west of the site is also accessed from Weybridge Road.

Hamm Moor residential area lies near the west of the site. Therefore, there is a mix of built form character within the immediate context of the site including:

- Office
- Trade Counters and Small Businesses
- Local Business such as café and car wash
- Residential

The site sits adjacent westwards to Wey Navigation Conservation Area. This is a linear conservation area running along the length of Wey Navigation and connecting to other Navigations for a total of 20 miles. It is assigned this designation due to the historical nature of the Navigation, with its many locks, bridges and historical buildings associated with the waterway.

Land at the site lies adjacent to greenbelt land that lies in mostly undeveloped land between Weybridge and Addlestone.

There is a long-distance path, (European Long Distance path E2), following the tow path of the Wey Navigation, on the opposite side of the river to the

Legend

Site boundary

Designations

Conservation area
Green Belt
National Cycle Network route
River Wey Navigation (Public Right of Way)

Landscape Features

Staff seating area
Landscaped car parking areas
Existing landscaped buffer
Offices
Trade centre / SME's
Residential receptors (sensitive residential edge)
Local businesses
Industrial units
Building facing river
Open Frontage

Surrounding Built Form

There is a mix of uses in the immediate context of the site including;

- Office
- Trade Counters and Small Businesses
- Local Business such as café and car wash
- Residential

Site Characteristics

Existing mature landscape buffer to the northern site, between the main road, the adjacent residential properties and business users and the site itself. The mainly treed buffer contains development visually and separates it physically from the surrounding uses.

The vegetation on the north western edge of the Wey Navigation, on the site boundary comprises of a mixture of self seeded low grade trees and shrubs and some B category individual specimens trees which form a partial green screen to the existing site along this edge.

The buildings are set back from the edge of the Navigation, except the more northerly building which faces directly onto waterway and has a dominant glass façade with no landscape screening.

The frontage to the west and north is an open, permeable boundary. To the south the façade of the adjoining site is a blank boundary.

The configuration of the buildings results in internal landscape parking courtyards which do afford some breakout spaces for the employees, however the site has been vacant since 2017.

48hr leisure moorings are available along the River Wey, adjacent to the site with no residential moorings permitted on the River Wey.

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PROJECT
Weybridge Business Park

CLIENT

TITLE
Site Characteristics

STATUS FINAL
SCALE NTS
DRAWN AL
DATE June 2023
CHECKED -

JOB NO:	DWG NO:	REV NO:	ORIGINAL SIZE
N1048	(03)001	-	A3