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3.0 Proposal

3.1 Design Evolution

This section of the report describes the layout of the new development by illustrating the design evolution that has taken place during the design and pre-application consultation process, then describing the current application design.

As noted in the consultation phase, the design proposals were shared with the Local Planning Authority for comment and discussion. This was followed by further meetings and submissions showing amendments related to the suggestions of the Local Authority. This process included a presentation to the Local Authority’s Design Review Panel for further feedback and comment. This has enabled us to arrive at a proposal for the site that was agreed in principle with the Local Authority

On the following pages we illustrate how the scheme has evolved so that the progression to the current design can be understood.

Opportunity / Strength	Constraint / Weakness
Preserve high amenity value trees.	Tree root protection zones
Site entrance to north - as existing. But made safer with in and out.	750 diameter surface water sewer along northern edge and foul water to southern edge
Create a safer place.	Lack of frontage to West and South. No overlooking to Bede Walk.
Allow light into the site by arranging around a courtyard.	Ensure that the development respects its neighbours.
Size and location of site has quieter and noisier areas allowing for logical positions of uses.	Eastern boundary to acknowledge private garden spaces. Western boundary has traffic.

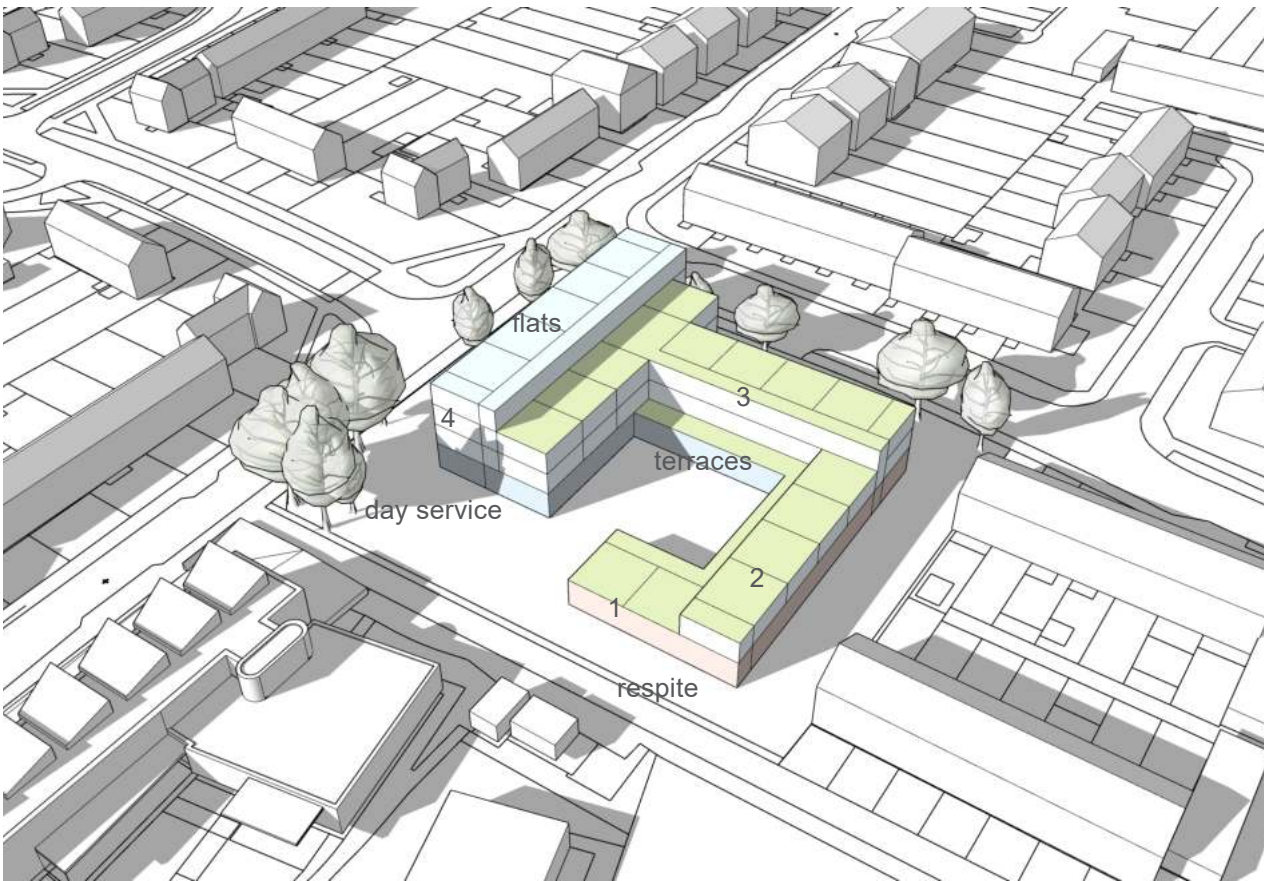


Figure 15. Initial design response to the site

Viability - Version 1

A viability study was carried out in August 2020 to test the site. The initial brief for the site was based on a number of factors determined by Reading Borough Council’s housing and Adult Services Department, analysing a number of different sites, as noted in Section 1. The requirement was as follows:

- 36 1 bed, 2 person Sheltered Flats
- A Profound and Multiple Learning Disabilities Day Service
- 9 bed respite service for adults with physical and mental learning disabilities

The building was arranged on the site based on a Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis of the site. The key points have been tabulated in Table 1, to the left.

It was clear from the outset that the existing building could not be re-modelled or extended to provide the requirements of the brief to make the project affordable.

Figure 15, above illustrates the initial massing model that reflects the points made in the table.

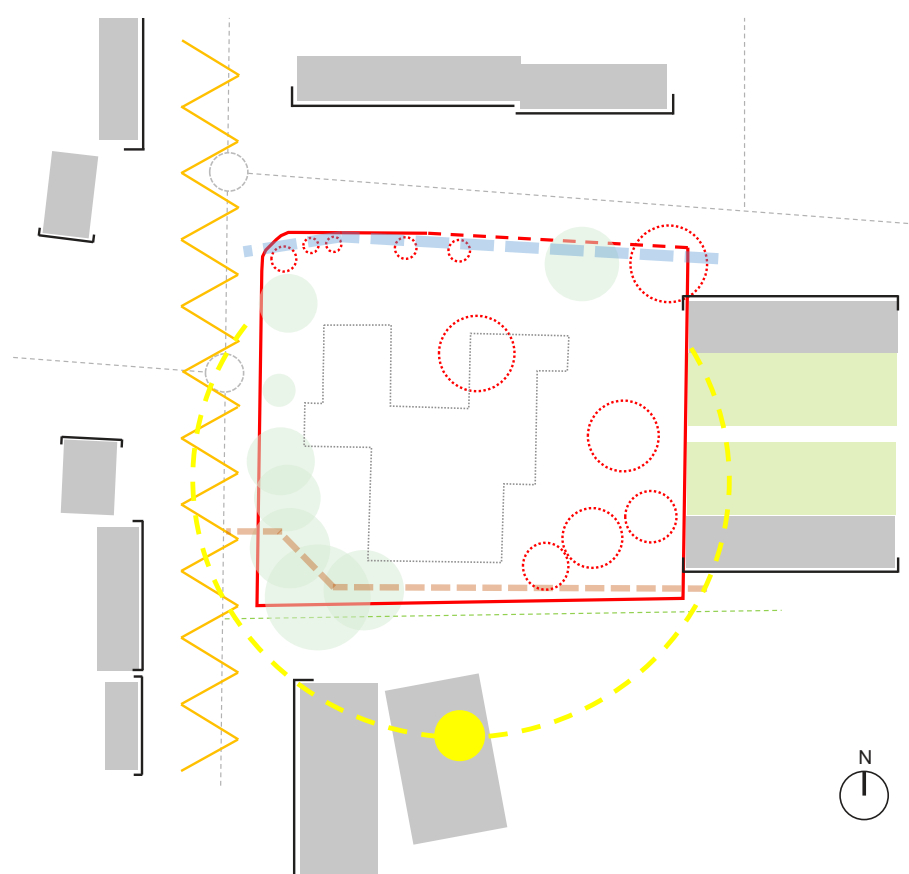


Figure 16. SWOT diagram

Figure 16 illustrates in diagrammatic plan form the SWOT analysis against the site analysis plan shown in section 2.7, figure 10 earlier in this statement.

- North - South axis to site
- Square and level site
- High amenity value group of trees to South West
- High amenity value single trees to North East and North West
- Lower value trees elsewhere
- Sewers along Northern and Southern boundaries
- Access along Hexham Road (as existing)
- Lack of frontage to Bede Walk or Northumberland Avenue
- Noise along Northumberland Avenue

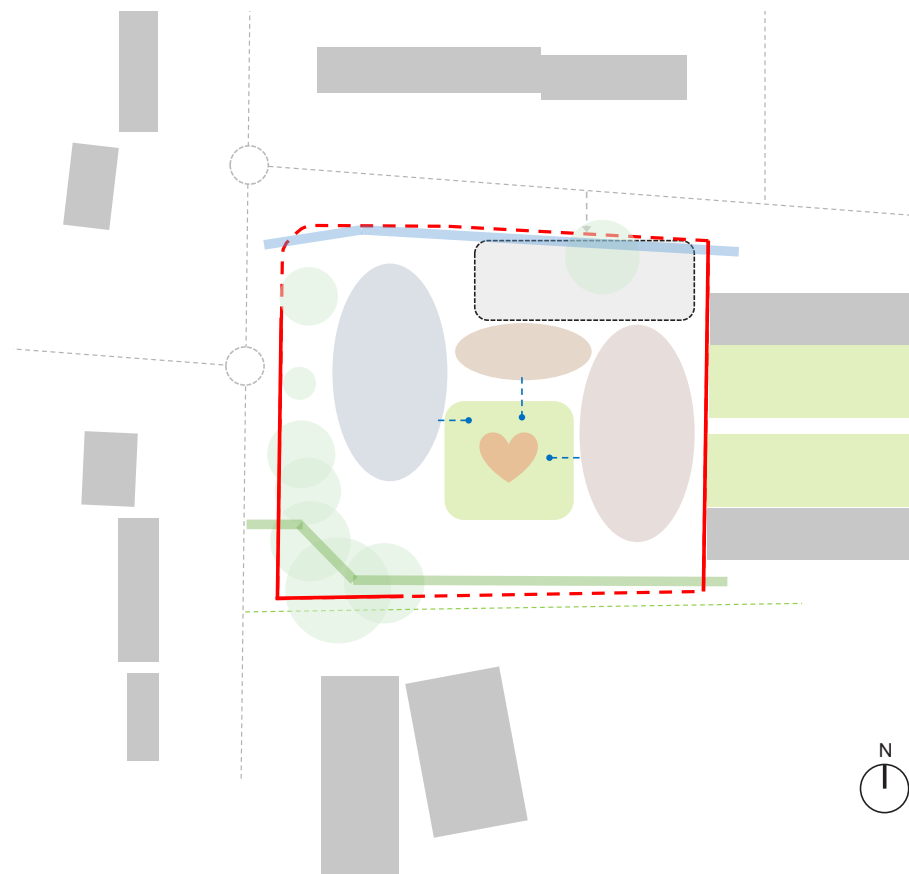


Figure 18. Ground Level principles diagram

Figure 17 illustrates in diagrammatic plan form the initial response to the SWOT analysis, at ground floor level:

- Maintain Access to the north, away from the junction between Hexham Road and Northumberland Avenue
- Create a central courtyard which enables an arrangement of accommodation with light, views and legible circulation.
- Place the services provided by RBC's adult care onto the ground floor for greater accessibility.
- Position the day service element of the brief on the Western side of site.
- Place the respite service element of the brief to the quieter eastern side of the site with secure sleeping accommodation against the eastern boundary.
- Place the respite service self contained flats to the south of the site to align with the properties along Bede Walk.
- Open up the boundary to Bede Walk to make it a more pleasant walking route.
- Open up the North Western corner to engage with Northumberland avenue and the retail facilities further North.

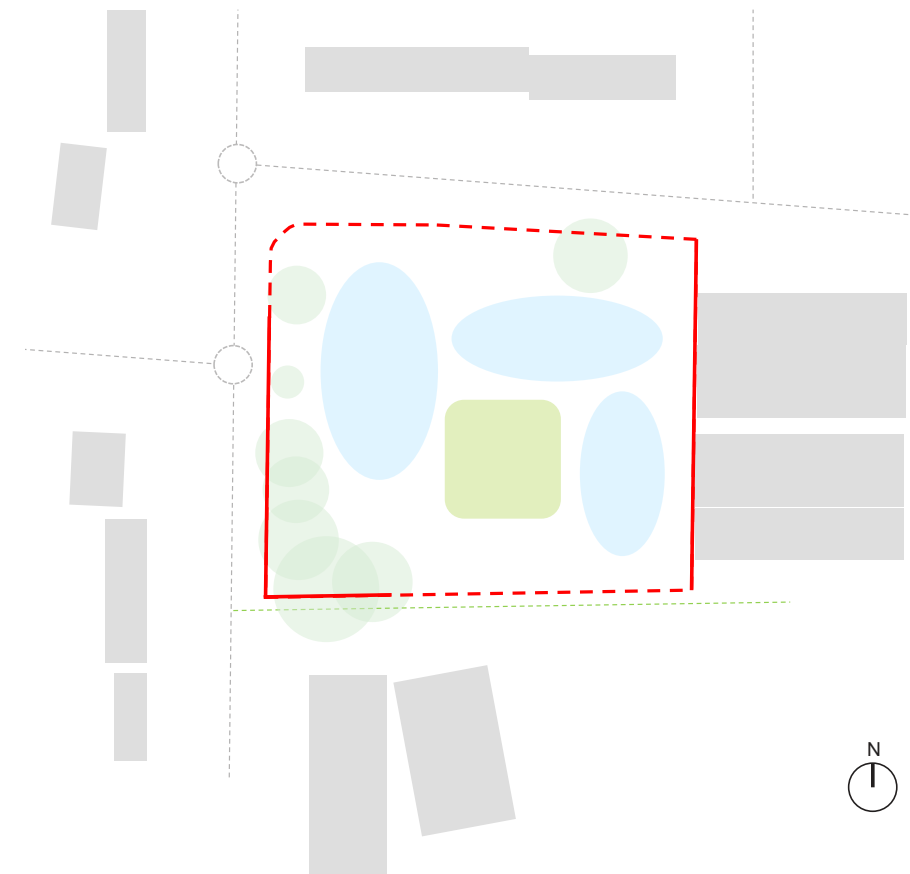
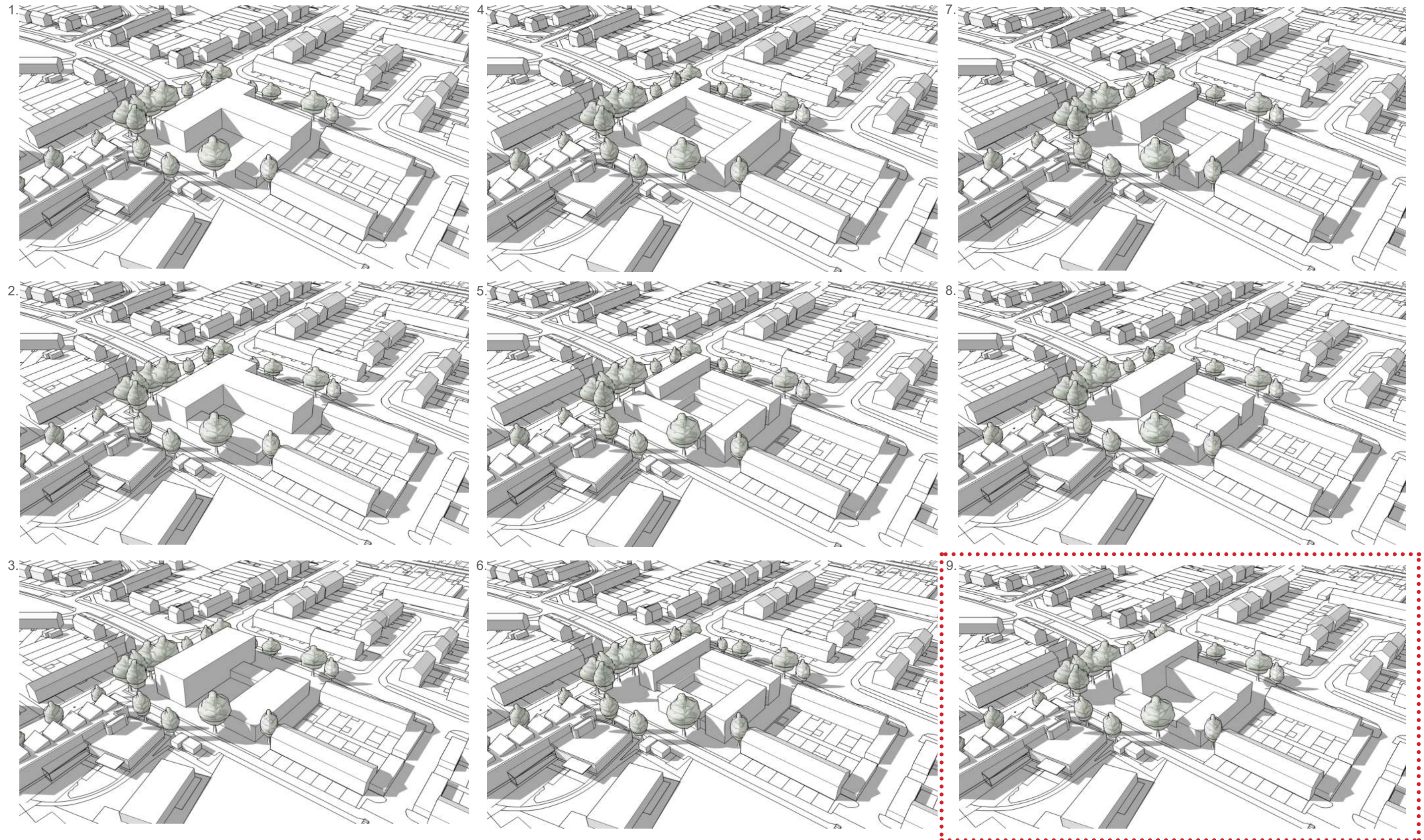


Figure 17. Upper Levels principles diagram

Figure 18 illustrates in diagrammatic plan form the initial response to the SWOT analysis at the upper levels:

- Place sheltered flats above the adult care provision
- Position fewer flats and lower building mass towards the east of the site (in closest proximity to existing housing)
- Position deeper and greater building mass to the West, shielded by the existing trees and furthest away from the smaller housing along Hexham Road and Bede Walk.



Once the initial site analysis work was complete, a series of massing and scaling studies were carried out to test a number of options against the analysis work. Figure 19, above shows the various massing arrangements considered for the scheme.

From top left, column by column: **1.** Original feasibility study with 3 storey double bank blocks to north and west with single storey to east. **2.** As per feasibility study with single storey to south following existing urban grain. **3.** Side by side double bank blocks, 2 two and four storey. **4.** Donut scheme, 2 storey to all aspects except south. **5.** Full donut. **6.** As scheme 4 with articulation and open court to South West.

7 & 8. Stepped and terraced options with variations in articulation. **9.** Stepped and terraced option reducing from 4 storeys down to 1 storey around a central courtyard - this was the option that was progressed further as it harmonized most comfortably with the site.

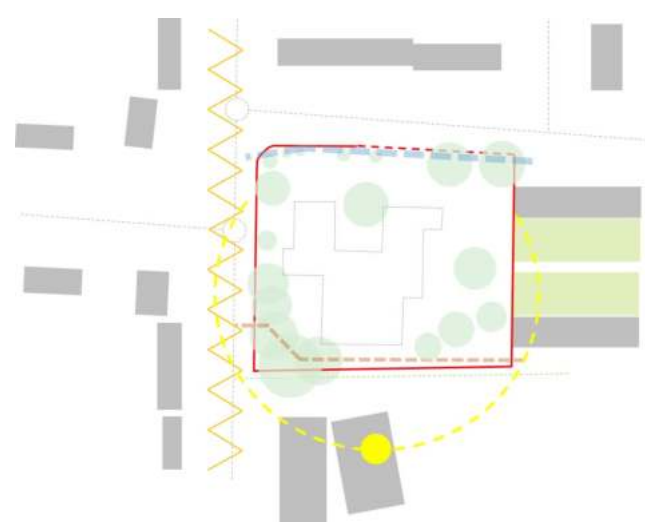


Figure 20. SWOT analysis diagram and existing 3D of site



Figure 21. Organisation diagram at ground level

Following the site analysis and massing option studies, an organisational diagram emerged, placing the uses and building mass logically around the site related to the opportunities and constraints noted in figures 10 and 11 earlier in the report.

The figures on this page illustrate the sequence of organisation of the site building up through the levels of the building in response to the analysis work.

During this time, the brief from Reading Borough Council's Adult Services team altered to remove the respite element. This was following extensive discussions with the Care Quality Commission (CQC) who had concerns with registering the respite element with adjacent similar uses on the site, which was conflicting with their design guidance. See Planning Statement for full details.

The removal of the respite service offered opportunities to provide general needs housing on the ground floor, potentially serving wheelchair users with direct access from street level.

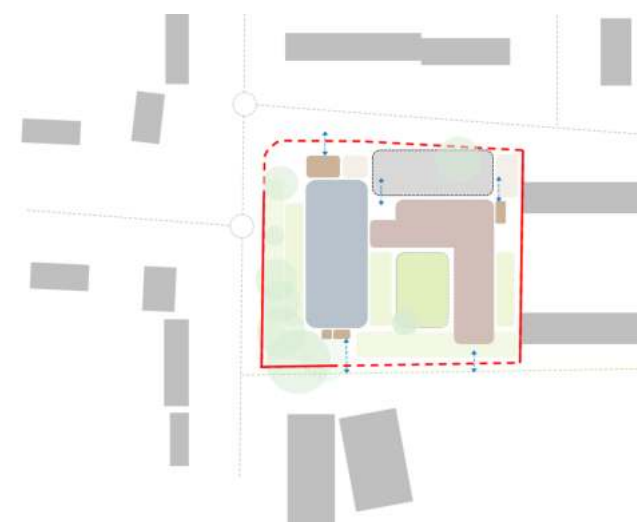


Figure 22. Organisation diagrams at ground level showing access and gardens



Figure 23. Proposal

Figure 20 re-illustrates the SWOT analysis with corresponding 3D diagram of the existing site.

Figure 22 illustrates the ground floor arrangements of the building - with the general needs flats to the West, behind the tree line and the day service locating to the east. The entrance and parking arrangements locate to the north, all arranging around an open courtyard to the south.

Figure 22 illustrates the access points to the upper levels from each 'corner' of the site and how the landscape is arranged opening up to the south.

Figure 23 illustrates the upper levels of flats which build up to the South West behind the existing trees. Open deck terrace access is made to some of the flats in the upper levels, giving terrace access to the flat users on each level.

3.2 Design Proposal

The final arrangement of the site was agreed with both RBC’s Adults and Housing teams as well as through pre-application discussions with RBC’s planning team. Figure 24 shows the arrangement presented as part of this application. Initial concerns around massing and overlooking raised by RBC’s planning team and the consequent adjustments to the arrangement are illustrated in the following pages.

The accommodation comprises of:

Ground Floor

- Day service for adults with profound and multiple learning difficulties (Class E(f))
- 4Nr. 1 bed general needs 1 bed flats (Class C3, Cat 2)
- 2Nr. 1 bed flats general needs flats (Class C3, Cat 2)

Upper Floors

- 36Nr. 1 bed sheltered flats (Class C3, Cat 2)

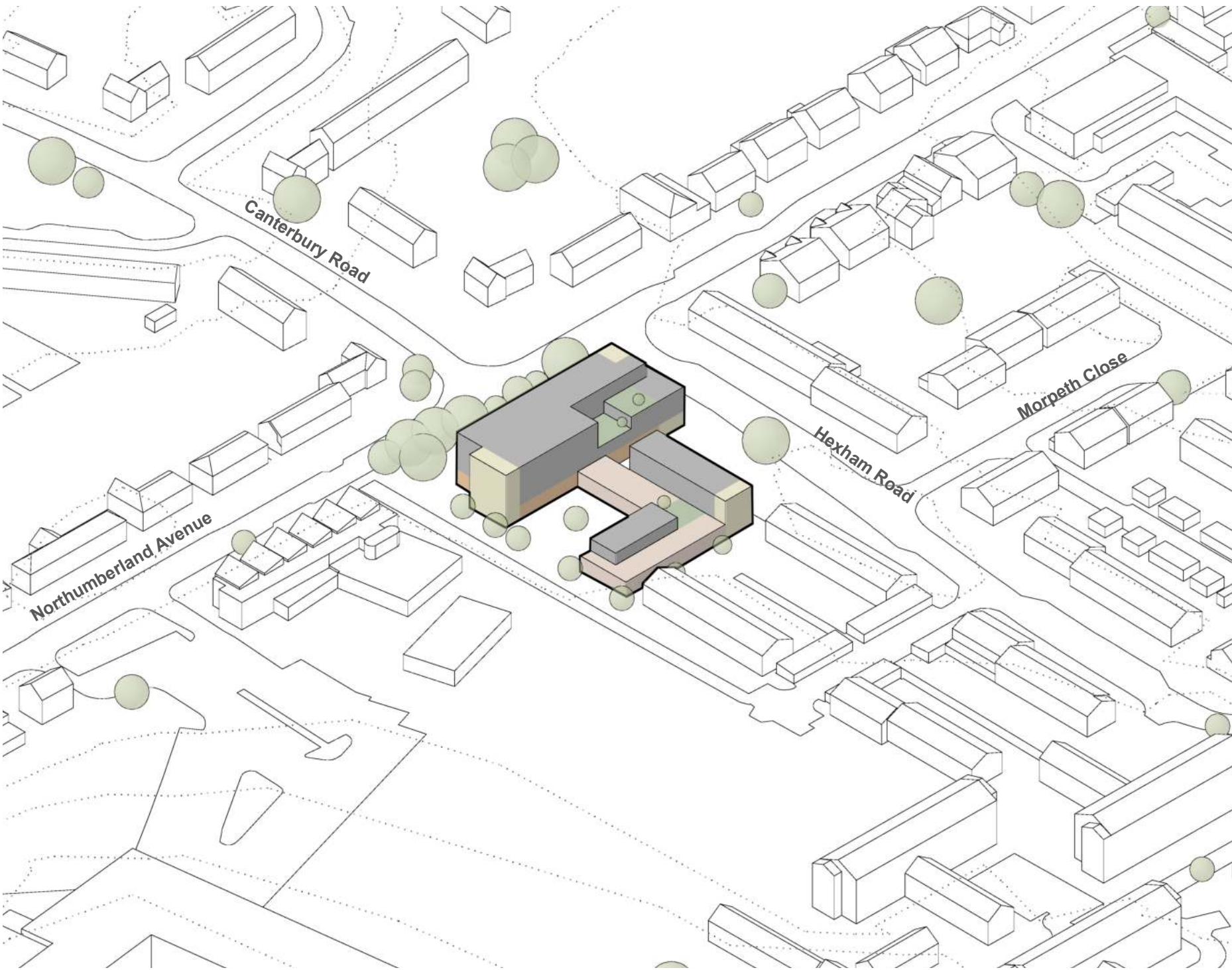
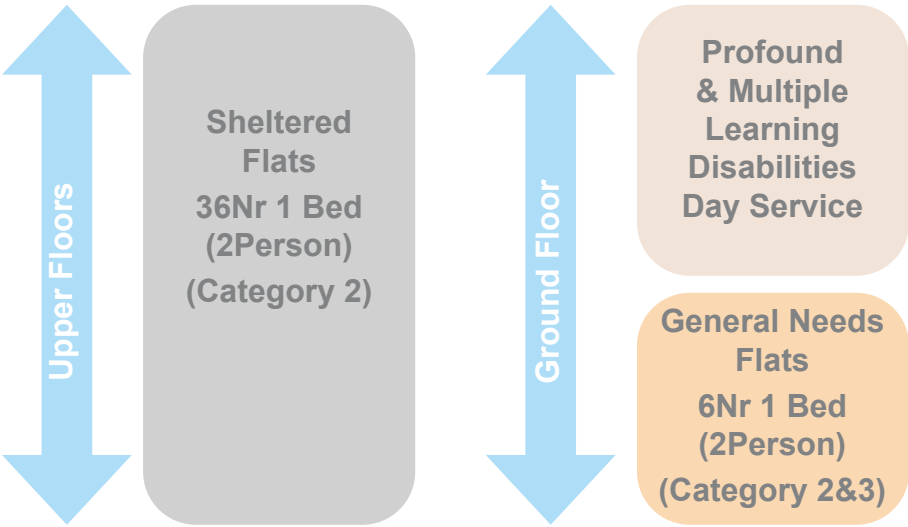


Figure 24. Proposal in 3D Diagramatic Form

The proposal is described and illustrated by figure 25.

Numbers on buildings represent storey heights.

The form of the building responds to its immediate context in terms of scale, suburban grain and orientation.

The building is split into three distinct elements that represent different uses; day care for adults with profound and multiple learning disabilities, general needs accessible flats on the ground floor with affordable sheltered flats above.

The plan steps down with each wing in a clockwise direction providing direct connections to outdoor spaces for all levels of accommodation. The heights of the different wings respect the neighbouring houses in terms of rights of light and overlooking and maximise light into the central courtyard space.

The building is carefully placed on the site and respects the existing trees which provide a screen to the busier road to the West. A series of courtyards and garden spaces on the ground floor provide different types of landscaped spaces for the different user groups.

The eastern wing opens out to the southern boundary with active spaces facing the existing footpath to the south to provide passive surveillance and help activate the public route.

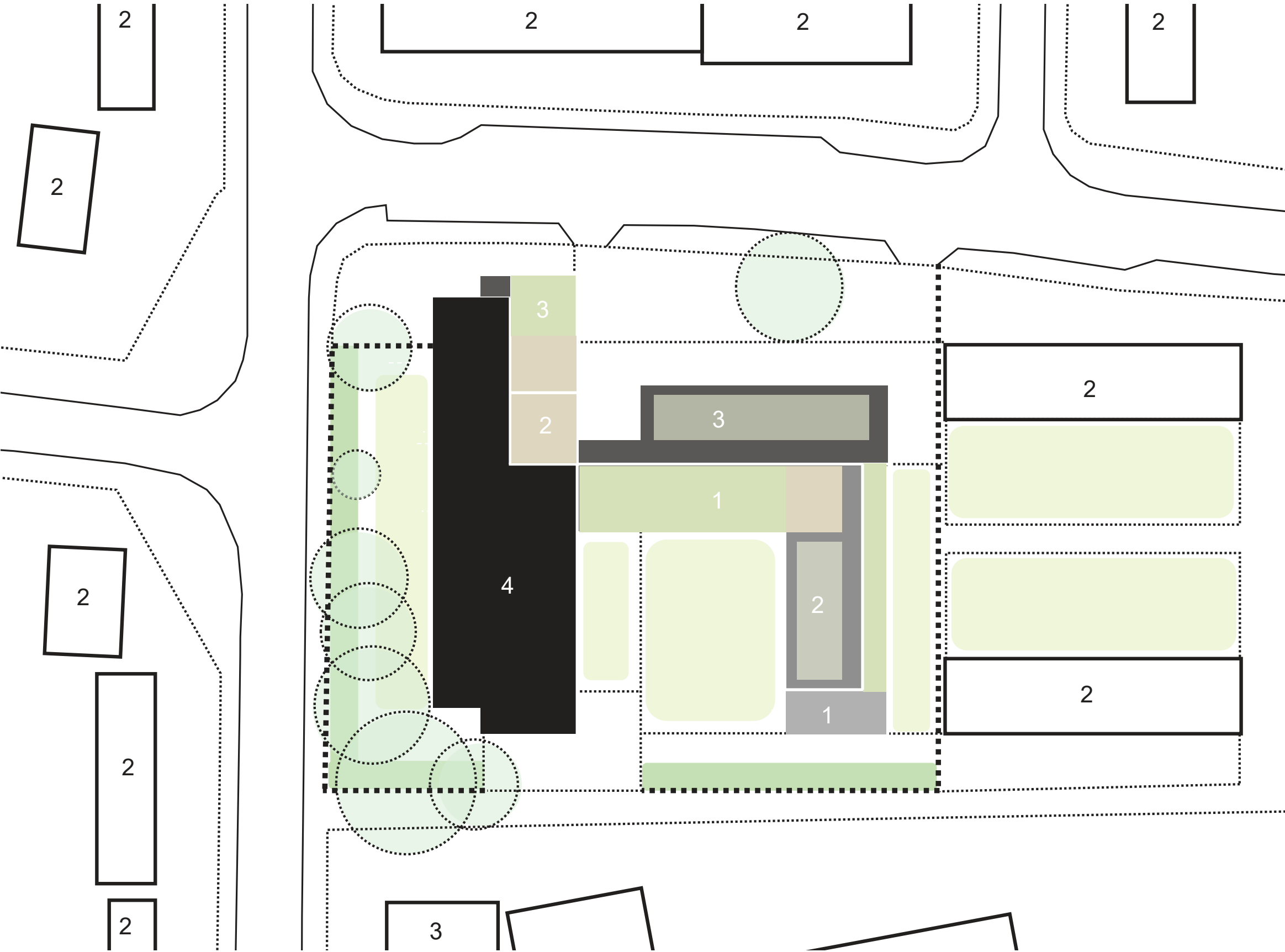


Figure 25. Diagram explaining the proposal

3.3 Scale and Massing

Massing

The approach to massing was developed through the site analysis work as well as through feedback from the pre-planning application discussions.

The largest building mass is located to the South West of the site, behind a line of semi-mature existing trees.

The building element facing towards Hexham Road steps down to 3 storeys to relate to the 2+roof housing along the Northern side of the site.

The building element on the east of the site is two storey to reduce over-shadowing and over-looking towards the adjacent gardens to this side of the site.

The final arrangement can be seen in figure 26.

On a wider urban scale, there are existing 4 storey blocks at the Eastern end of Hexham Road, effectively bookend-ing the East-West section of hexham Road from Northumberland Avenue to the flats surrounding the community centre. This can clearly be seen in the long sections illustrated in figures 27 and 28 and the location plan below.

To maximise the area of Photovoltaics and provide external terrace areas we are providing flat roofs.

Scale

The scale of the building aims to act as a transition between the taller trees and large scale school along Northumberland Avenue towards the smaller scale housing along Hexham Road and Bede Walk. The scheme wraps around a south facing courtyard which opens on to Bede Walk, providing natural light to the scheme and improving the environment along the Western end of Bede Walk.

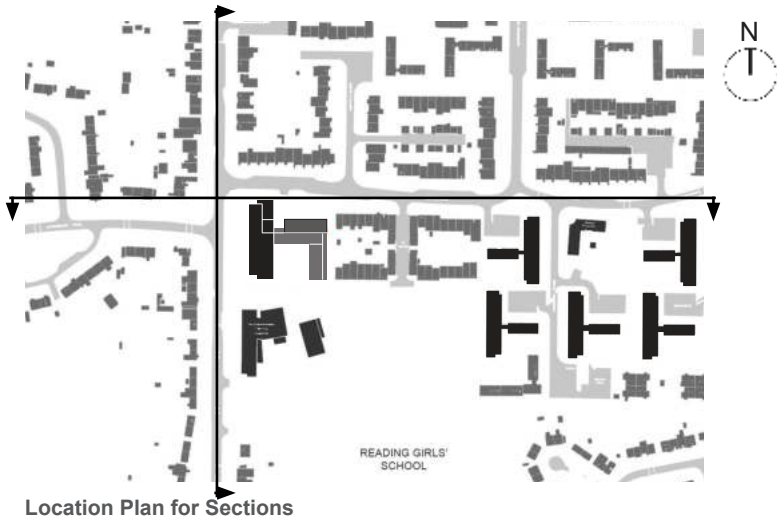


Figure 26. Birds eye view of the scheme from South East

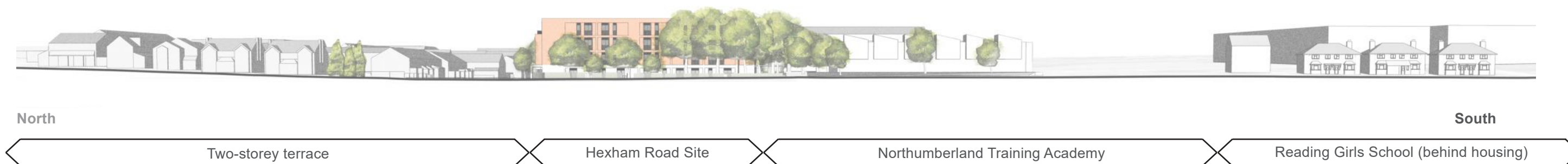


Figure 27. Long Section North to South along Northumberland Avenue



Figure 28. Long Section East to West along Hexham Road

3.4 Design Modification

As noted in the consultations section of this statement, meetings were held with RBC’s planning team to adress issues at an early stage of the design. The figures illustrated on this page show the before and after arrangements following the comments made.

Figures 29 and 30 show birds-eye views of the scheme, highlighting the items raised at the second pre-planning application meeting.

Figures 31 and 32 show the same view with the comments addressed.

In summary:

- Overshadowing to east minimised by the stepped building mass and the shadow analysis demonstrating minimal impact to adjacent properties (figure 33). Refer also to separate daylight report.
- Screening added to end of walkways to minimise overlooking
- Building mass at Hexham Road stepped back.
- Balconies removed to allow more light into courtyard and minimise building mass.
- Amenity space calculated to meet planning guidance (refer also to section 4.0)

RBC’s planners queried whether the scheme was potentially over-developing the site. In the final iteration, shown in figure 25, the southern single storey wing to the scheme was removed to allow for a larger, more open, courtyard facing south.

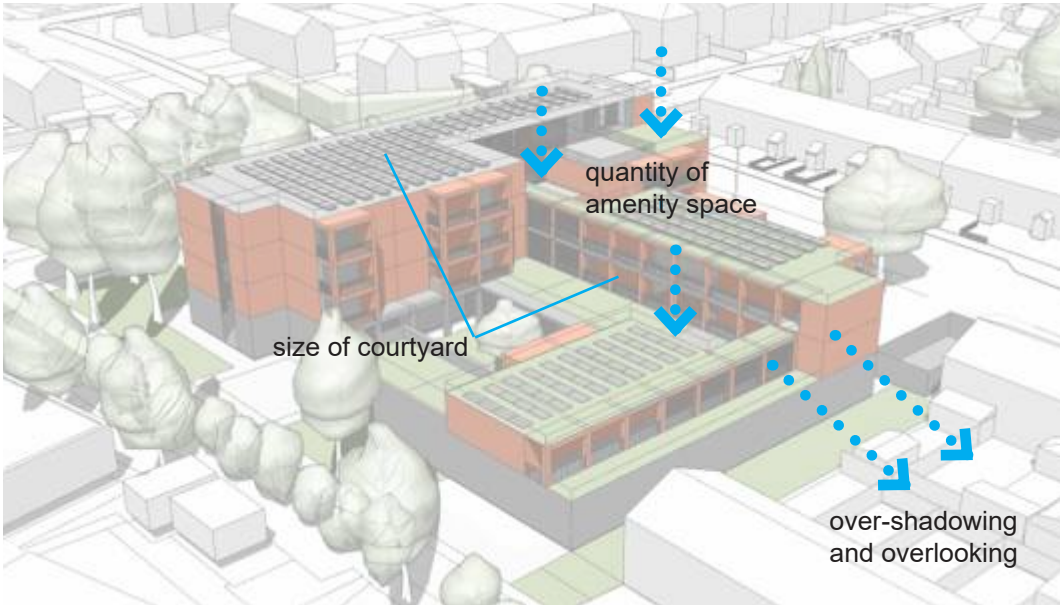


Figure 29. Bird's eye view from South East as initially presented to RBC planners



Figure 30. Bird's eye view from North West as initially presented to RBC planners



Figure 31. Bird's eye view from South East with mitigation strategies



Figure 32. Bird's eye view from North West with mitigation strategies

Figure 33 - Overshadowing analysis of the the development carried out after the pre-planning application meeting, demonstrating that the building size and position has no detrimental impact to the adjacent properties on Hexham Road and Bede Walk. This iteration of the scheme included the southern wing along Bede Walk, which has now been removed. However the size, height and position of the building elements remain as this iteration.

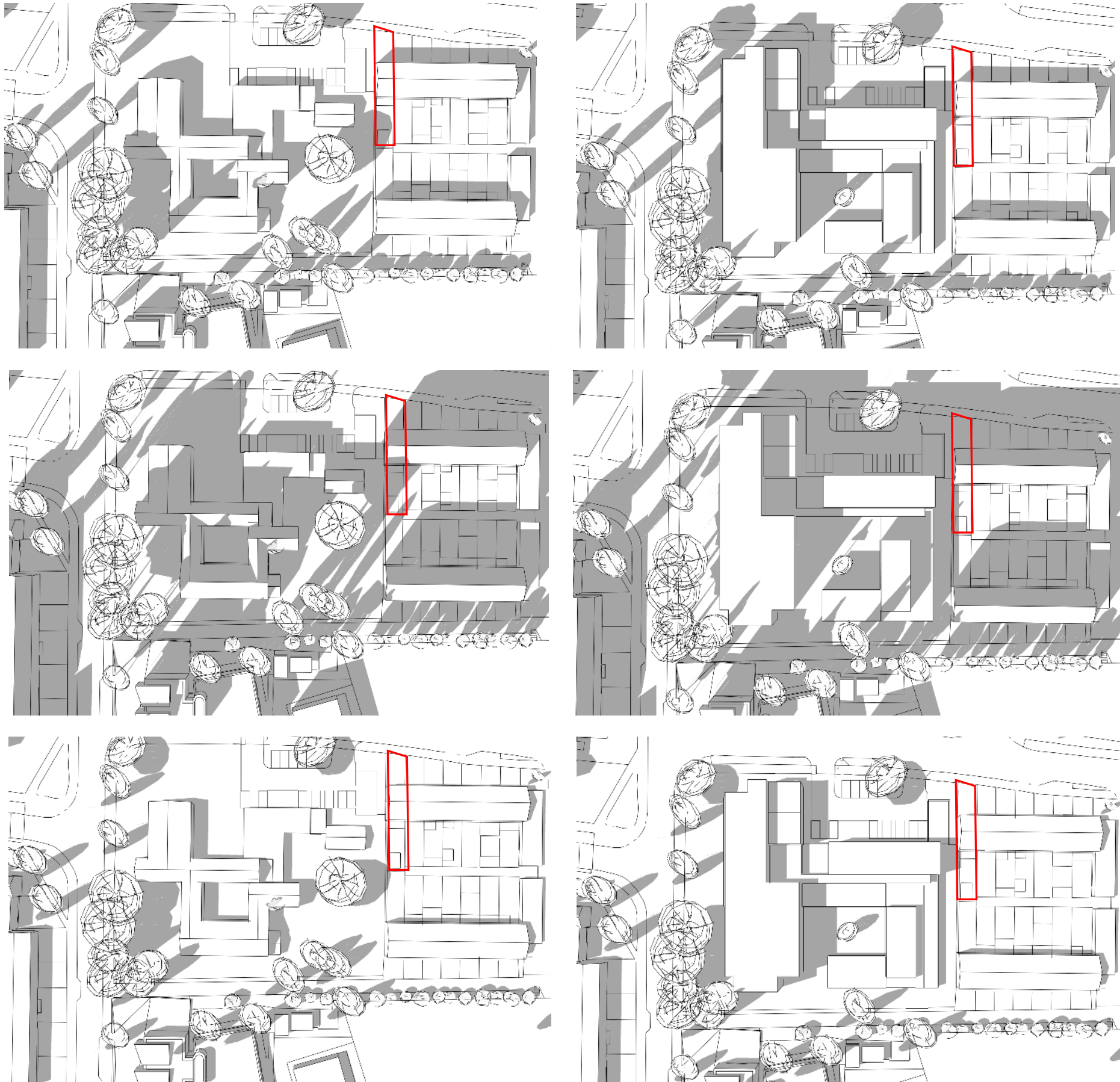


Figure 33. Top to Bottom - Equinox, Winter solstice, Summer solstice at 14:30. Existing left column, proposed right column.

3.5 Overlooking Mitigation

The layout has been developed and refined to ensure that it does not negatively impact on the existing residents living within the surrounding area. The distance between the new and existing buildings as well as the locations of windows has been carefully considered to prevent overlooking into any property. In addition, windows have also been positioned to ensure that the areas that are overlooked provide passive surveillance to the street.

Hexham Road

Flats facing Hexham Road are 40 m away from the housing opposite, representing a comfortable distance between windows. Flats within the northern end of the building face East over the car parking area. Corner windows have been introduced into the northernmost flats to ensure that there is adequate surveillance of the entrance to Hexham Road, but still within acceptable distances from existing windows (28 m)

Northumberland Av

The majority of the Western elevation facing Northumberland Avenue looks down Canterbury Road. The closest house is to the South West, 31m away, which is largely obscured by the large existing trees between the existing houses and new flats.

Bede Walk

None of the flats face South, however to ensure that there is sufficient passive surveillance of Bede Walk, corner windows from the living rooms have been introduced to the Southern-most flats of both the Western and Eastern side.

Key

- Existing and proposed window locations
- Existing brick boundary wall
- Overlooking Distance
- Existing trees outside of boundary
- New 1.5m fence boundary
- New 0.45m retaining wall
- New 1.8m brick wall
- New 1.8m railing
- New 1.1m railing

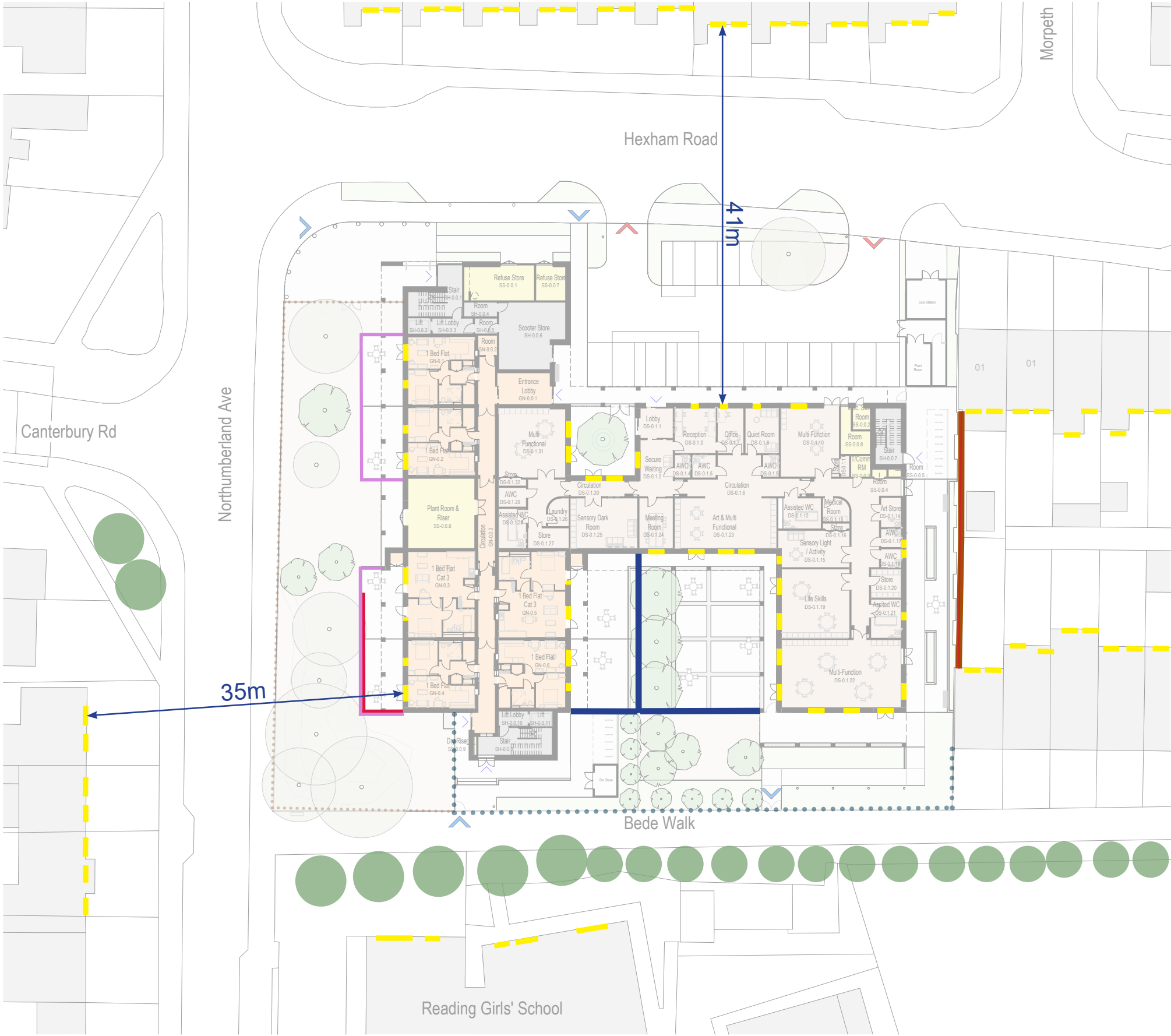


Figure 34. Ground Floor Plan

Key

- Existing and proposed window locations
- Hit and Miss Brickwork
- Non habitable rooms
- Overlooking Distance
- Proposed trees

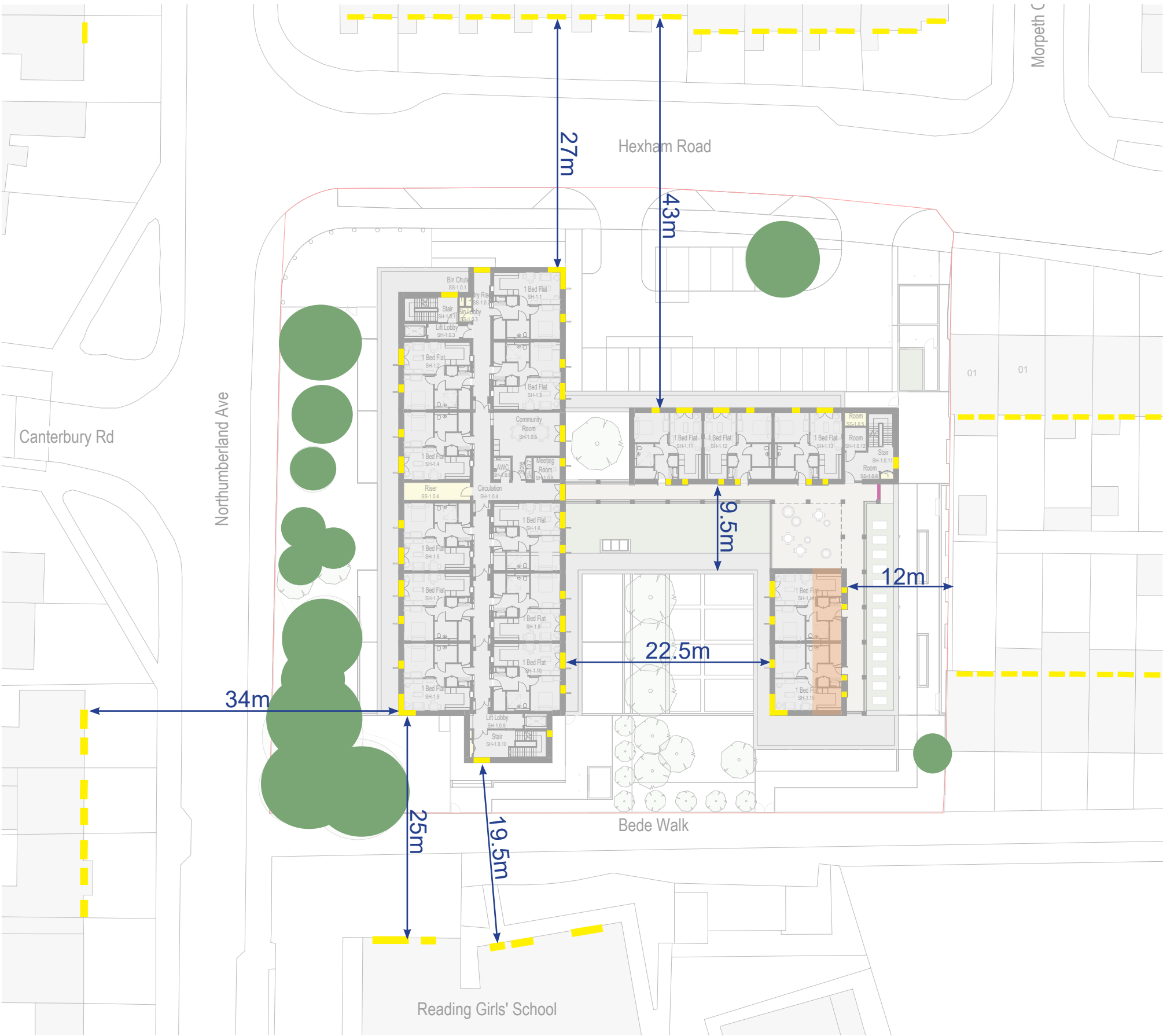
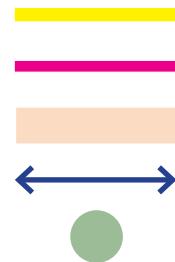


Figure 35. First Floor Plan

3.6 Frontages

The key to the successful urban design of the site is to create active street frontages with main entrance points at logical and legible positions in the street.

Hexham Road

At ground floor, the PMLD day service is located in the Eastern portion of the site, behind the parking area. Above, flats overlook the parking area and street providing surveillance of both. The new building line matches the previous development on the site. The general needs flat accommodation, including the category 3 wheelchair accessible flats are also accessed from the car park.

At the Western end of Hexham Road at the junction with Northumberland Avenue, the main entrance to the sheltered flats is located, activating this key corner of the site, being easily legible from all directions and the local shops further north.

Northumberland Avenue

The frontage to Northumberland Avenue is entirely made up of flats with living spaces and bedrooms overlooking the street behind the existing mature tree line. At ground level, a mid height fence encloses a patio garden area for the flats, but low enough that activation of Northumberland Avenue is achieved.

Bede Walk

The Southern entrance to both the ground floor general needs housing and the sheltered flats locates along Bede Walk, activating this end of the walk. An emergency access to day service is provided further along Bede Walk with a principle activity space fronting the walk at the Eastern end. Railings and light planting along this boundary also provide visual connection between the public walk and the semi-private garadens behind.

Figures 38 and 39 show sketch views along Bede Walk illustrating the more open boundary and improved street setting

Key

- Private Entrances
- Communal Entrances
- Emergency Exit
- Courtyard Entrances
- Existing Private Entrances

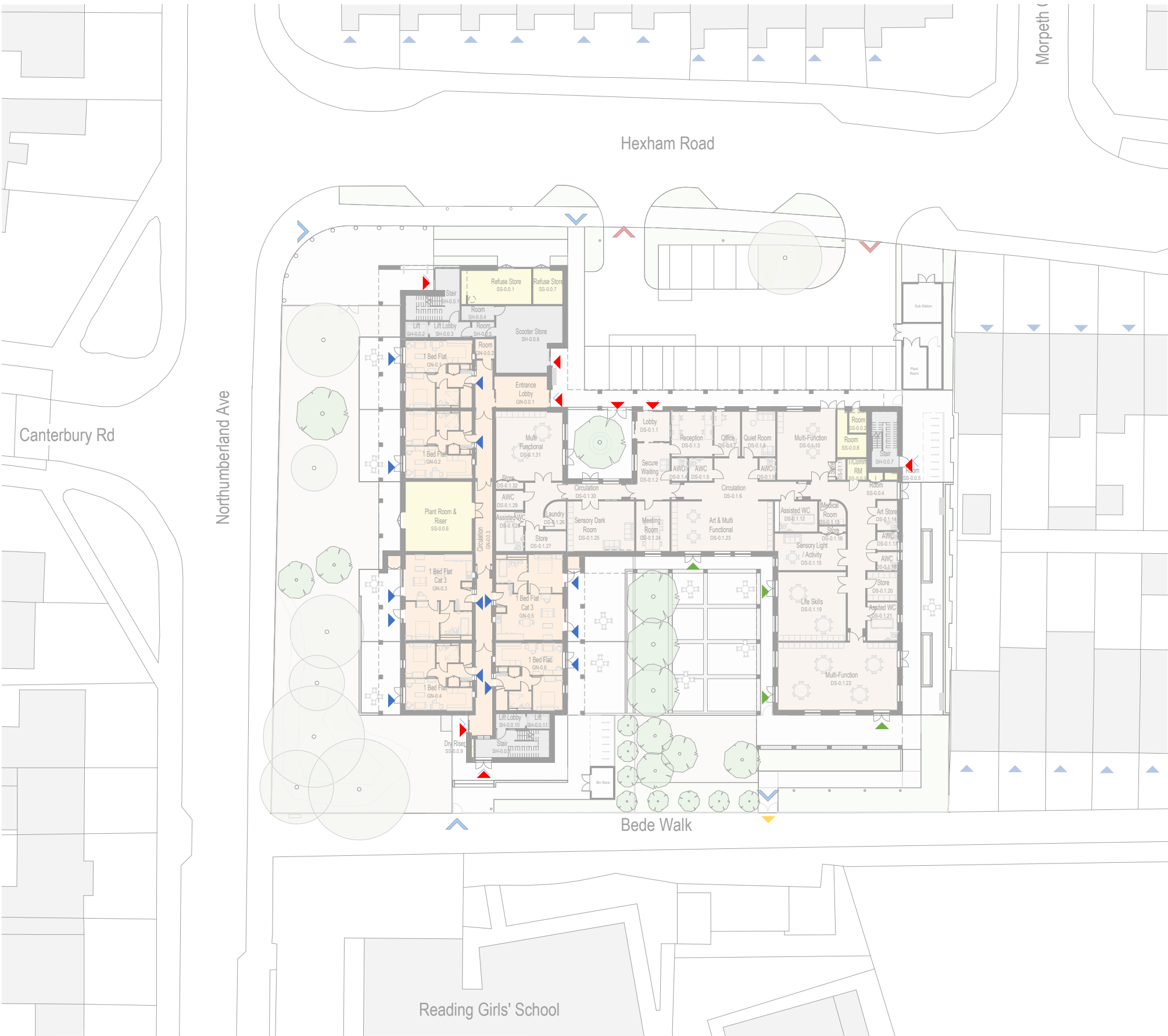


Figure 36. Ground Floor Plan



Figure 38. View along Bede Walk towards Northumberland Avenue



Figure 39. View towards Bede Walk from Northumberland Avenue

Key

- Private Entrances ▲
- Communal Entrances ▲
- Rear Entrances ▲
- Courtyard Entrances ▲
- Existing Private Entrances ▲

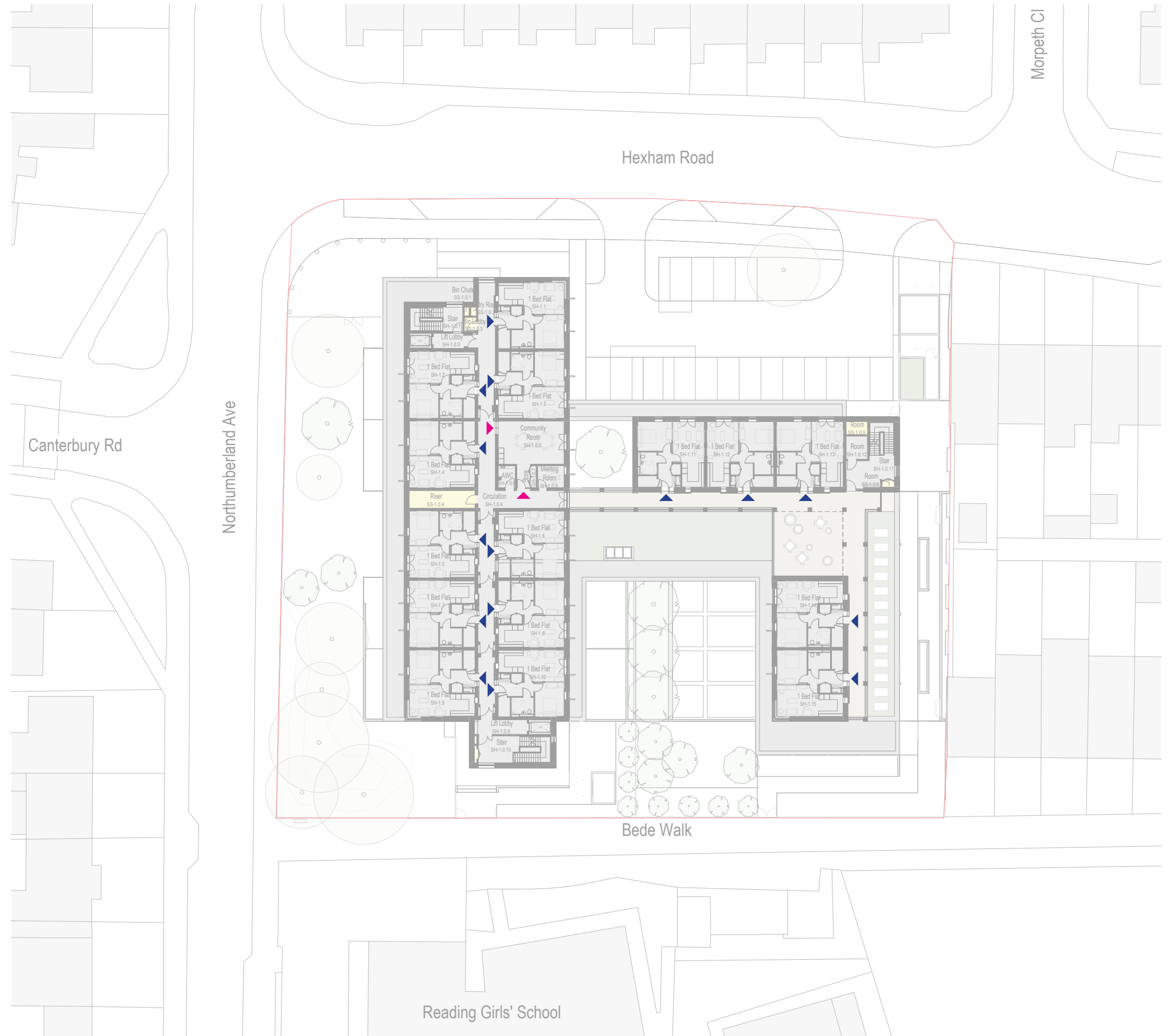


Figure 37. First Floor Plan

3.7 Movement & Access

The site layout has been designed to improve both the vehicular access to the site as well to engage with existing pedestrian and cycle routes around the site, making them more pleasant and hence likely to be used.

Vehicular Access

The existing vehicular access to the site is via a single connection to Hexham Road. The scheme design introduces another connection which provides an in and out circuit to the car park, improving safety by minimising reversing manoeuvres. An apron of level grade footpath is extended from the main entrance of the day service to facilitate transfer of service users from their modes of transport.

Deliveries, emergency vehicles, taxis and minibuses are all able to use this route to access the site.

Pedestrian Access

We have designed the main entrance points at logical connection points to the North, South and Eastern-most points to the existing footpath, cycle and public transport networks. Bede Walk will be improved by removing the existing dark vegetation and replacing it with permeable railings and light, low maintenance planting.

Cycle Access

RBC's cycle routes pass to the north of the site, but also permit cycles along Bede Walk. We are providing cycle parking at all primary entrance points to the flats, encouraging sustainable modes of transport.

Bus Stop

The nearest bus stop to the site is at the junction between Bede Walk and Northumberland Avenue, providing access to the public transport network within 40m of the southern entrance to the development.

Key

One Way

Vehicular Access

Pedestrian Access

Bus Stop

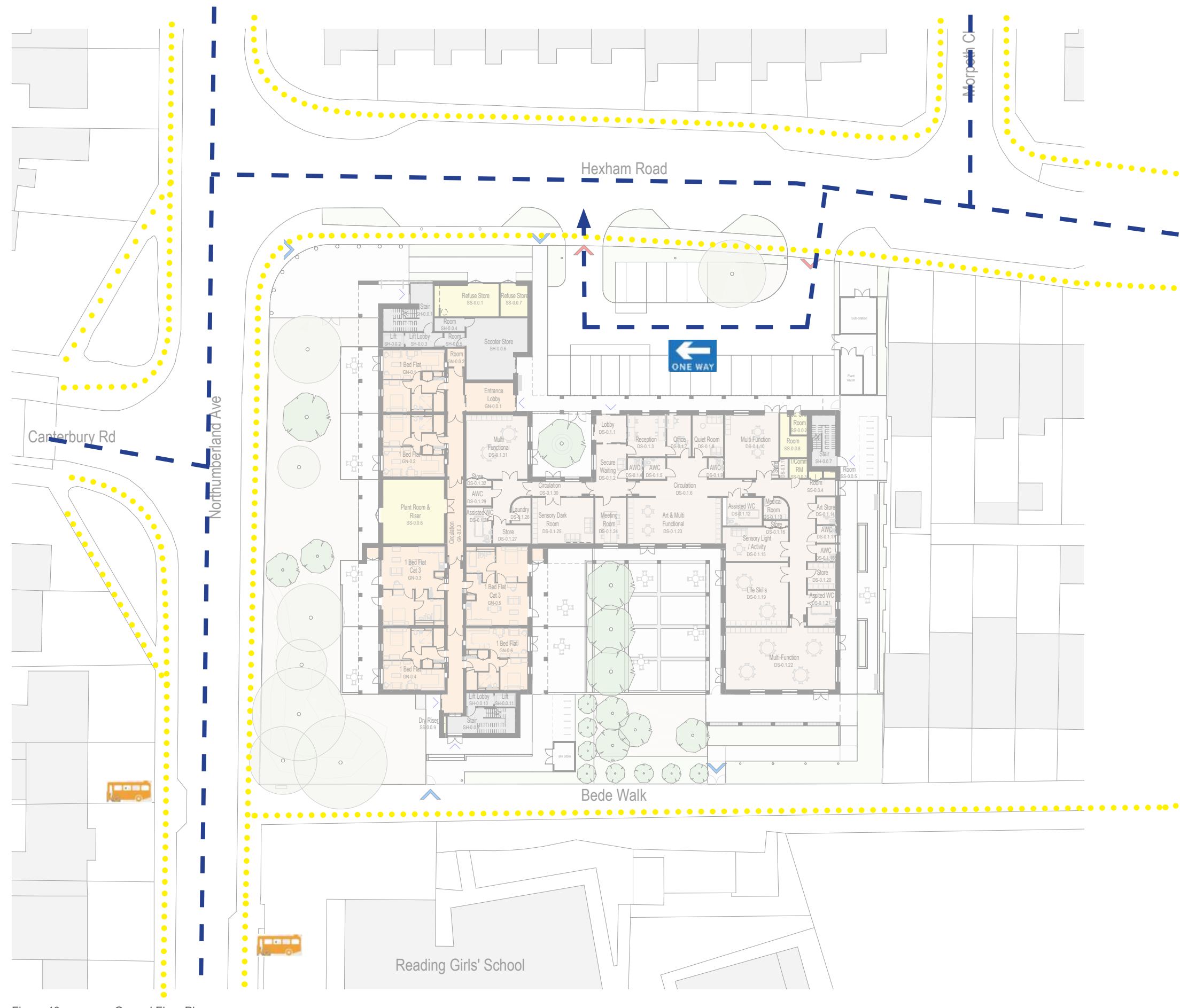
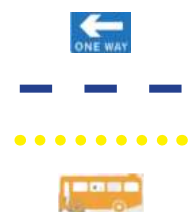


Figure 40. Ground Floor Plan

3.8 Parking & Cycle Storage

Figure 41 shows the parking areas associated with the development.

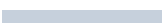
Parking Provision:

- 16 Nr parking spaces (inc 3 accessible)
- 3 Nr spaces provided within the existing verges along Hexham Road.
- 28 Bicycle parking spaces
- 1 Motorscycle parking space
- 10 mobility scooter parking spaces
- EV charging for 11 spaces on site and 3 along Hexham Road.

Bicycle Parking

Three locations for cycle storage are being provided as part of the development, all conveniently located in close proximity to the main access points to the flats, as well as for the day service staff. The storage area to the north is part of the mobility scooter store area, potentially utilising the charging points for e-bikes.

Key

Existing Parking	
Offstreet Parking	
Dropped kerb	
New Electric Car Pool Spaces	
New Car Parking Spaces	
New Disabled Car Parking Spaces	
Scooter Store	
Bicycle Storage	
Parking Restriction	
Removed Parking Space	

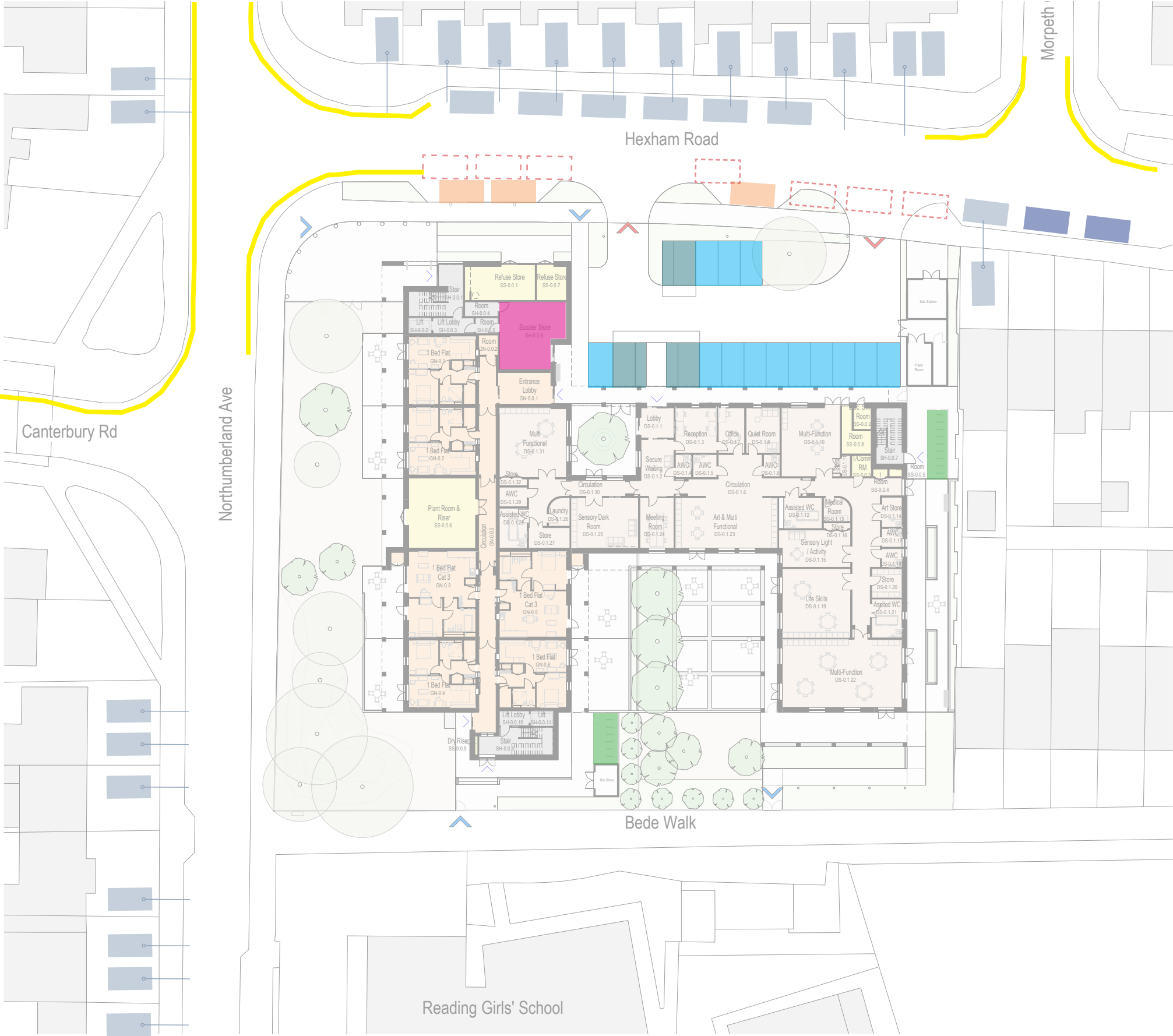


Figure 41. Proposed Parking Plan

Existing Parking Provision:

- 19 Nr parking spaces (inc 1 accessible)
- 4 Nr spaces on the carriageway adjacent to the site.

Figure 42 Shows the existing parking condition on site when the, now demolished, Willows Care home was in operation.

The accompanying Transport statement demonstrates that we are providing spaces in line with the anticipated demand, however the development aspires to encourage sustainable modes of transport as follows:

- The site is located close to the centre of Reading, with accessible and rapid public transport links adjacent to the site, which will help discourage private car travel;
- The site is within accessible walking distances of local shops, schools, and other amenities
- Due to the nature of the new residents (older and disabled persons) trips via private motor cars will be limited.
- Mobility scooter parking and charging facilities have been increased to accommodate a greater need from the residents.
- EV ‘car club’ spaces are provided on Hexham Road for all the community.

Key

- Existing Disabled Parking
- Existing Parking
- Offstreet Parking
- Dropped kerb
- Parking Restriction

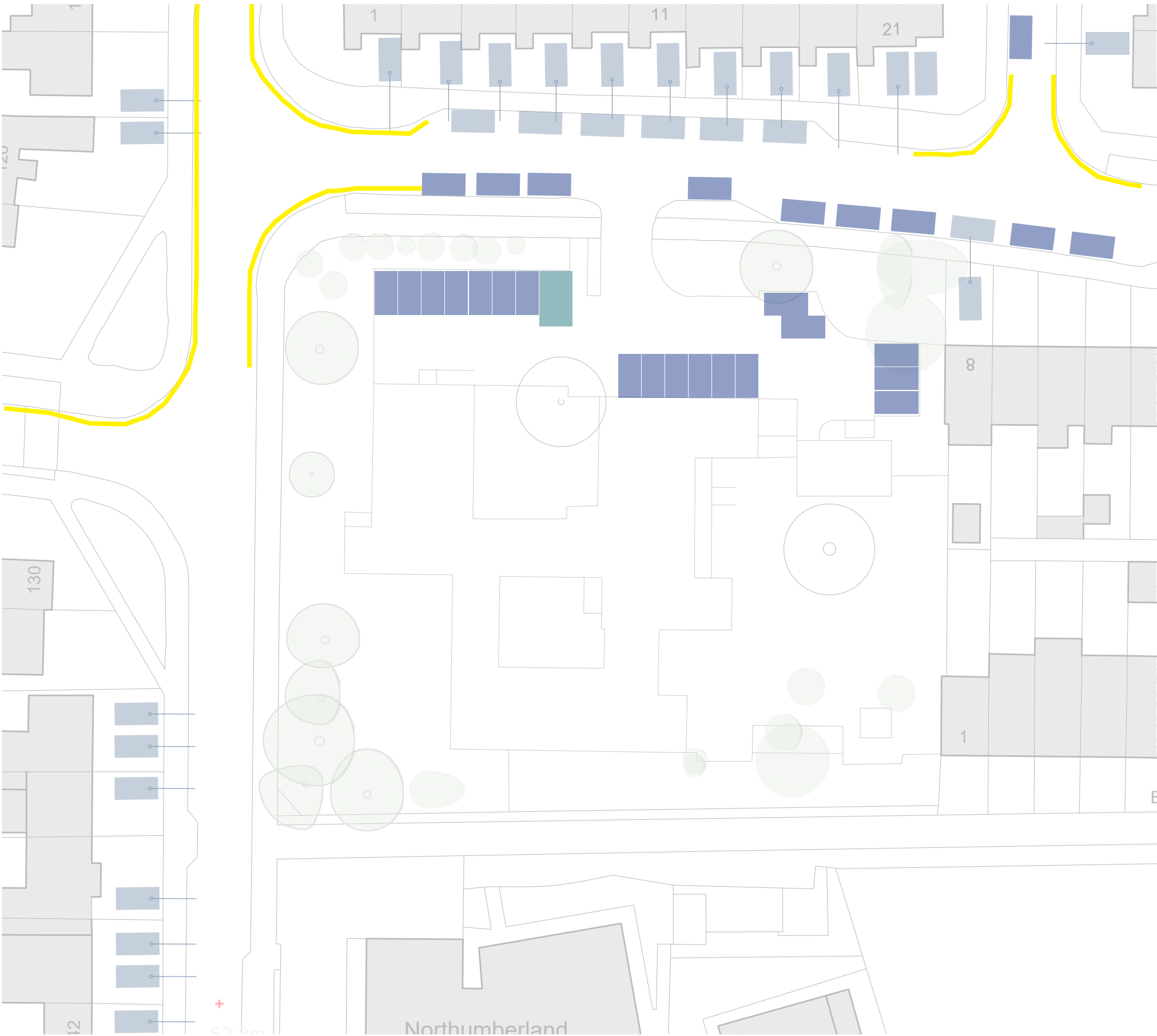


Figure 42. Existing Parking Plan

Figure 43 illustrates the bin store locations and refuse collection points / routes.

There are four bin store locations as part of the development, located to facilitate access for the residents and day service staff.

All the sheltered flats share a single bin chute system located at the North Western corner of the development. Each floor has access to the bin chute system, minimising travel distances.

Within the bin chute lobby, residents select the waste type and dispose of their waste through the chute. At the base of the chute, a hopper diverts the waste according to the selected type into the appropriate 1100 litre waste bin within the refuse store (figure 25). The store has been sized to accommodate 9 Nr bins - allowing for an 'in use' set of 3, a set awaiting collection and an empty set.

The general needs flats have two refuse areas - with lockable sub-compartments, within an area to the north adjacent to the bin chute refuse store and an external area to the south, adjacent to the southern entrance.

The PMLD day service has a dedicated area as part of the services compound to the North East of the development.

A refuse vehicle is able to enter via the car park for collection of all the northernmost refuse areas. The southern refuse area would be collected from Northumberland Avenue via Bede Walk.

Key

Resident Route to Bin Store

Refuse Collector Route to Bin Store

Bin Lorry Access

General Needs Bin Store

Sheltered Flats Bin Store

PMLD Bin Store

Refuse collection stopping points

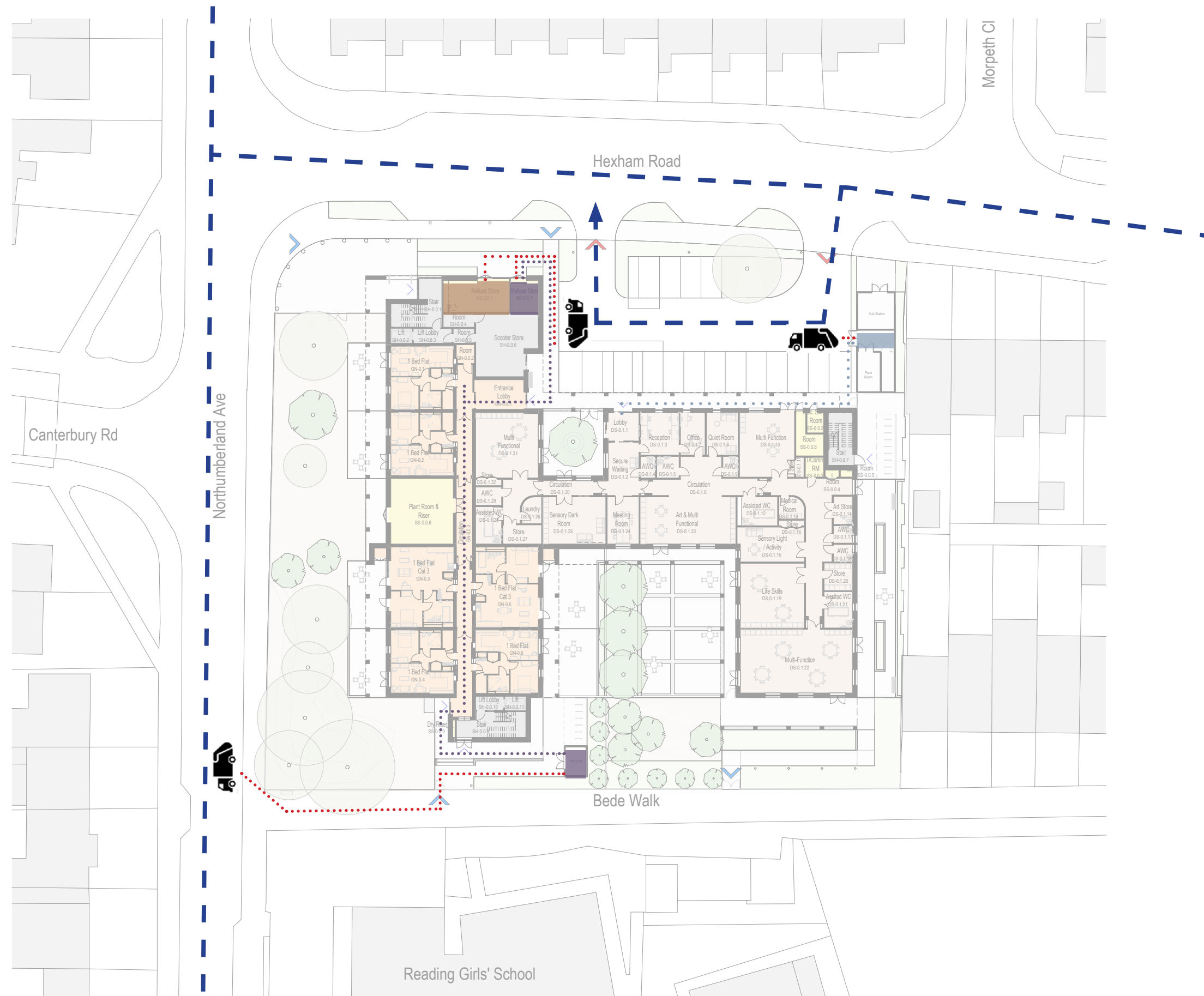


Figure 43. Ground Floor Plan showing bin store locations and collections

3.11 Area Schedule

Flat areas comparison to Nationally Described space standards (NDSS)
Minimum gross internal floor area (GIFA)

Refer to included schedules for more detail. Below is a summary table.

Bedroom	Person Nrs	Proposed GIFA	User Group / Type	Number of Units	Bed Spaces	Total GIFA- m²
1 Bed	2	53	Sheltered Flats (Class C3, Cat 1)	36	72	1908
1 Bed	2	53	General Needs Flats (Class C3, Cat 2)	4	8	212
1 Bed	2	67	General Needs Flats (Class C3, Cat 3)	2	4	134
			Total Units	42	84	2254
			PMLD Day Service			780
			Shared Plant			166
			Circulation			1031
			Total GIFA			4231

The development provides:

- Day service for adults with profound and multiple learning difficulties (Class E(f))
- 4Nr. 1 bed general needs 1 bed flats (Class C3, Cat 2)
- 2Nr. 1 bed flats general needs flats (Class C3, Cat 2)
- 36Nr. 1 bed sheltered flats (Class C3, Cat 2)

42 Nr Dwellings in Total (91 dph)

3.12 Brick Types

Historically, dwellings in Reading have been built predominately with Reading red bricks, with more civic or higher-status buildings having silver grey on their front elevations. The development reflects this materiality by using red brick for the upper areas of the building, primarily the Sheltered Flats. Grey bricks are used for the ground floor areas as well as the upper level walkways. This also reflects the geology of the area with iron oxide found in red bricks sitting above the chalk found in grey bricks.

Reading red and silver brick used in much of the borough's Victorian housing stock has also influenced the decision to use the two coloured bricks in the proposed development. What is also apparent in the Georgian and Victorian buildings of Reading is the use of flemish bond. This has been incorporated into the development in the recesses of the facades.

Key:

Red Brick (Michelmersh Freshfield Lane First Quality Multi)

Grey Brick (Michelmersh FLOREN.Be Caster)



Figure 45. Axonometric - Aerial view from north-east - red and grey brick distribution

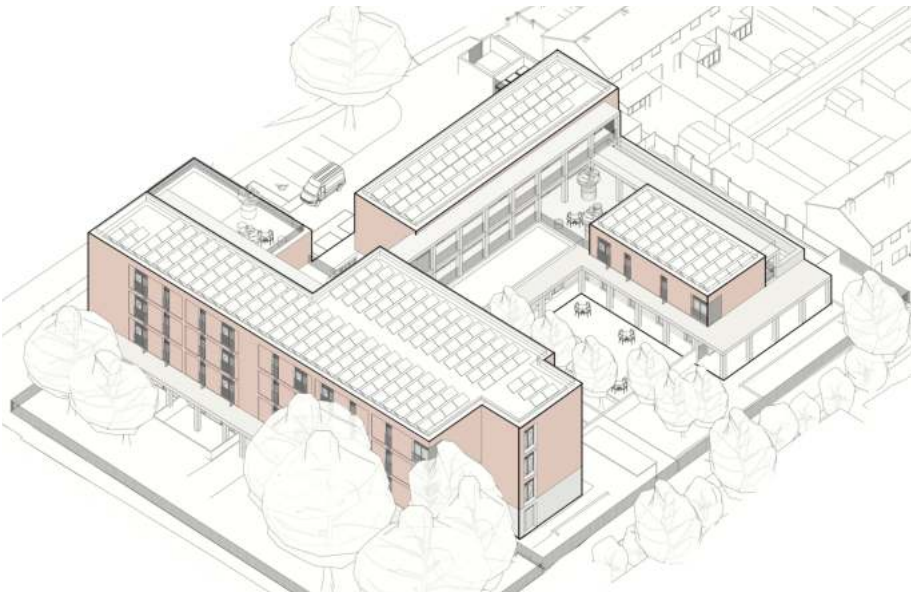


Figure 46. Axonometric - Aerial view from south-west - red and grey brick distribution

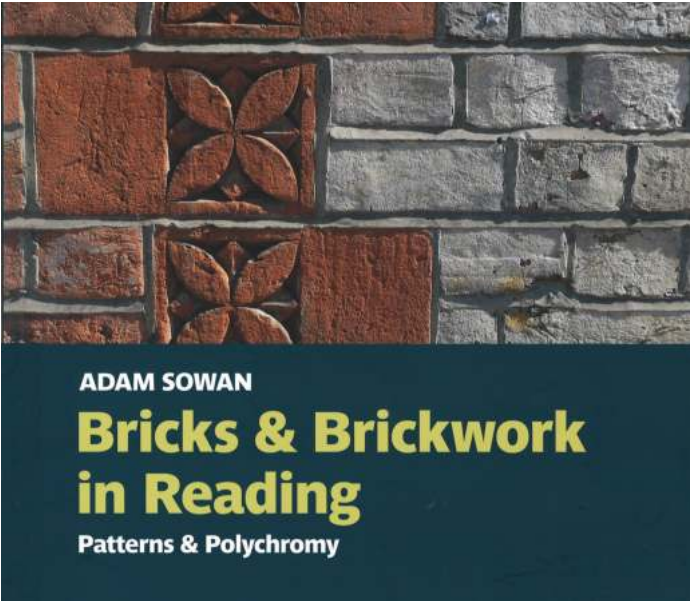


Figure 47. Red Brick - Michelmersh Freshfield Lane First Quality Multi



Figure 48. Grey Brick - Michelmersh FLOREN.Be Caster

Image 1, Bricks & Brickwork in Reading - Adam Sowan
Images 2-3, Apartment Building, Agnes-Hundoegger-Weg, SMAQ - example of projecting headers.
Image 4, Moor's Nook - Coffey Architects - example of red multi-brick projecting Flemish bond at high level, silver grey brick Flemish bond at low level.



1.



2.



3.



4.

3.13 Brick Patterning and Motifs

Looking at the contextual elevations of neighbouring houses to the proposed development, there is a consistency of motifs and patterns in the facades. These range from decorative brickwork patterns in the Victorian terraces of Newcastle Road (fig 49), to the hung tiles of much of the housing on and around Hexham Road (fig 50).

Therefore, the Hexham Road development has taken these recurring patterns and endeavoured to translate them into the external elevation of each flat facing onto Hexham Road and Northumberland Avenue. 3 patterns have been overlayed to create the resulting patterning; scalloped (fig 51), diamond and zig-zag (fig. 52). These will be introduced by protruding a selection of header bricks within a flemish bond to sit within the same plane as the stretcher bond, whilst the rest of the bay is recessed by 30mm (fig. 53).

The recessed bays seek to identify the individual flats within the facade, as well as expressing the structure and floor-to-ceiling heights of the flats.

Key

Scalloped pattern

Diamond pattern

Zig-Zag pattern



Figure 49. Newcastle Road - Reading red, grey and buff brick in Victorian terraces



Figure 50. Hexham Road - Hung tiles on front elevations



Figure 51. Scalloped patterning within hung tiles

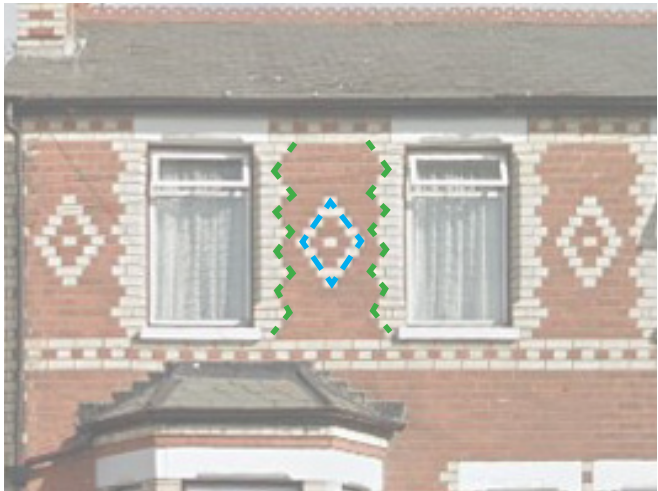


Figure 52. Diamond and Zig-Zag pattern on Newcastle Road

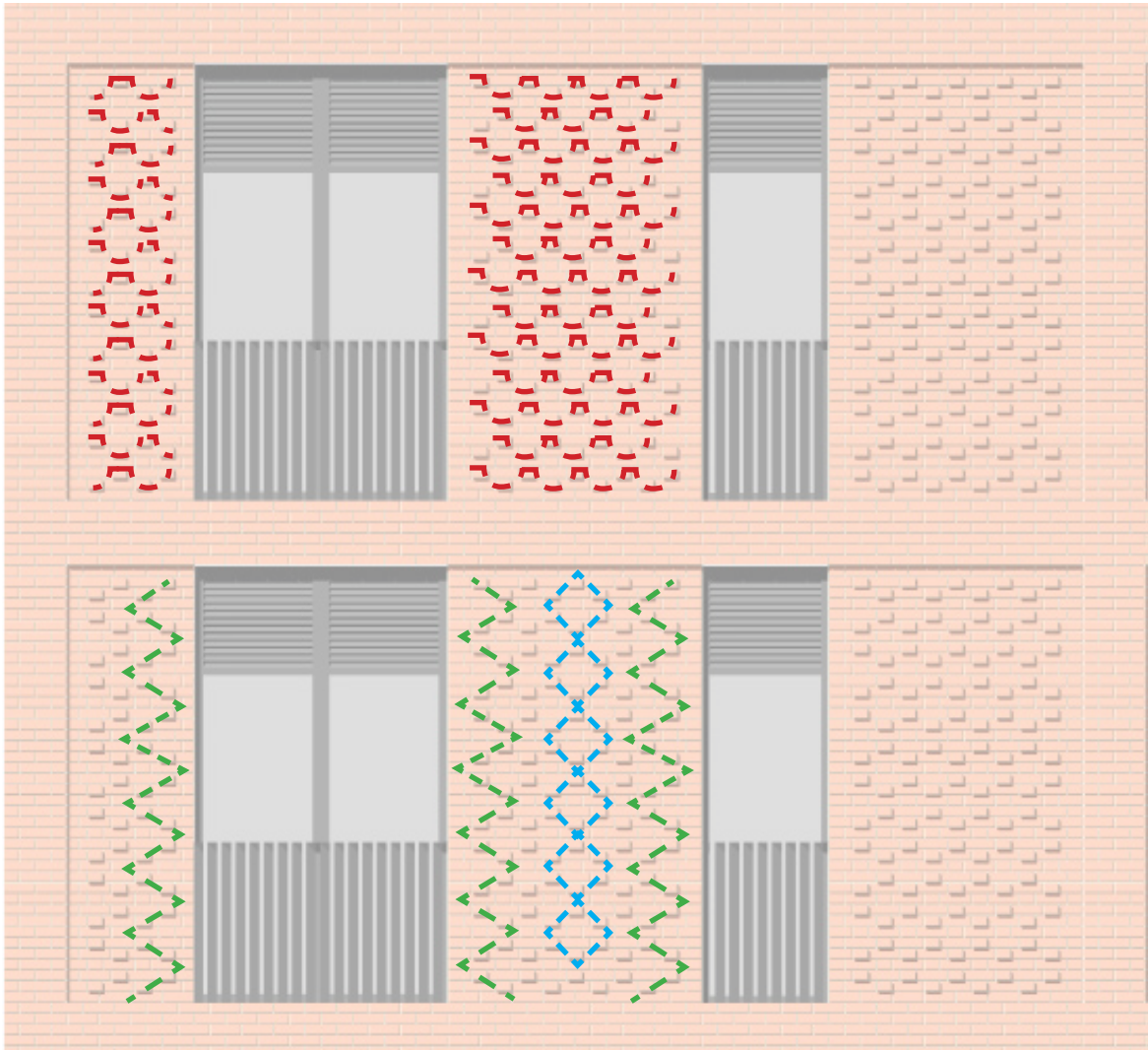


Figure 53. Hexham Road bay elevation - brickwork patterns in flemish bond to reflect contextual facades

3.14 Appearance

Brick Pattern Distribution

The majority of the brick used on Hexham Road will be standard stretcher bond, however two variations of Flemish bond will be used within the recesses of the facades of the flats; flush Flemish bond and Flemish bond with protruding headers that reflect the varying contextual motifs. As can be seen in fig.54 and fig. 55, the more decorative flemish bond will be on facades facing out to Hexham Road and Northumberland Avenue, whilst the simpler flush Flemish bond will be used on flat elevations within the open courtyard.

Windows

We are using triple glazed composite windows with timber core and grey polyester powder coated aluminium external frames. A limited palette of sizes are proposed depending on the different rooms and orientation. Solar shading will be provided, and the amount of glazing and shading is dependent on the orientation to optimise daylight and heat gain and to minimise heat loss. All windows will be able to open inwards to be able to be cleaned from the inside.

Roof

We are predominantly using shallow pitch single ply membrane roofs to maximise the area of Photovoltaic panels. We are also providing accessible roof terraces and green roofs on 1st, 2nd and 3rd floors for use by Sheltered flat residents.

Key:

- Flemish Bond (Flush)
- Flemish Bond (Protruding Headers to reflect scalloped tiles and brick patterning of contextual buildings)

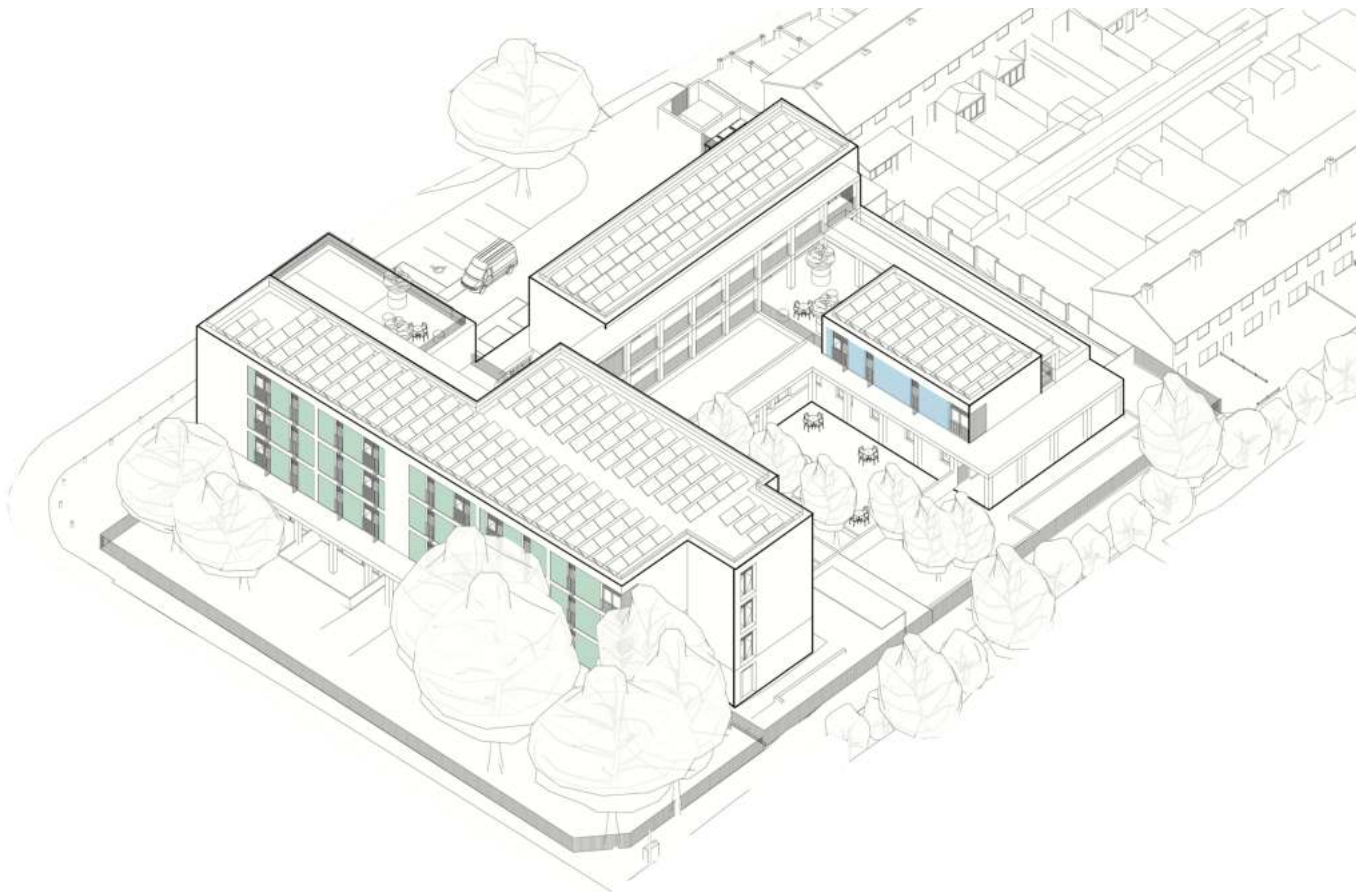


Figure 54. Axonometric - View of development from North-East

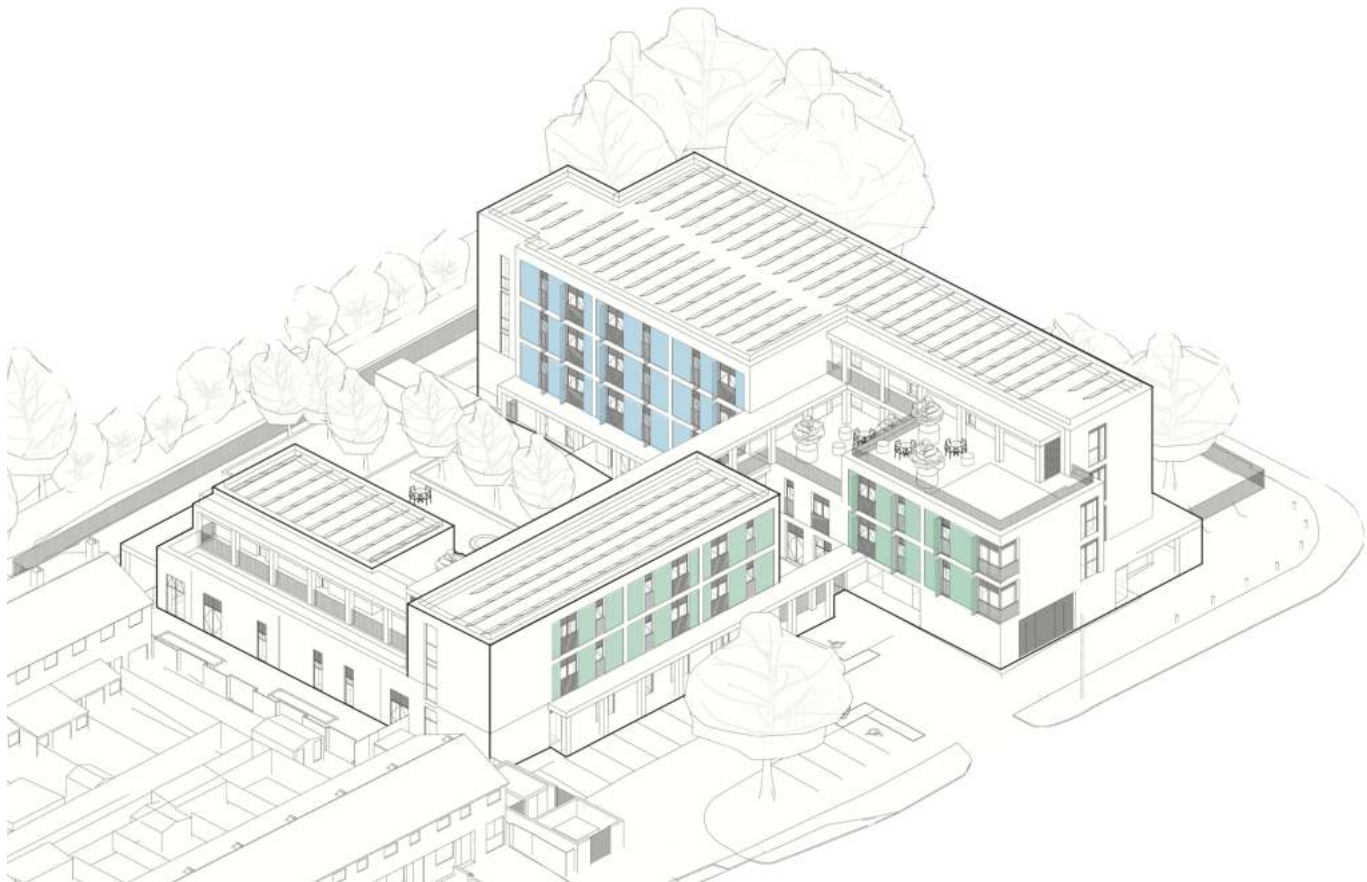


Figure 55. Axonometric - View of development from South-West