

# Project Rainbow - Hawking House, City of Bristol College

Options Appraisal for Proposed SEN  
Residential Development

Bristol City Council

29 July 2019

# Notice

This document and its contents have been prepared and are intended solely as information for Bristol City Council and use in relation to Project Rainbow, Hawking house.

Faithful+Gould Limited assumes no responsibility to any other party in respect of or arising out of or in connection with this document and/or its contents.

## Document history

Revision	Purpose description	Origin-ated	Checked	Reviewed	Author-ised	Date
Rev 1.0	Options Appraisal	RA	DG	SG	DG	22/07/19
Rev 2.0	Options Appraisal	DG	DG	BP	DG	22/08/19
Rev 3.0	Options Appraisal	KF	DG	PC	DG	02/11/19
Rev 4.0	Options Appraisal	DG	DG	PC	DG	09/12/19
Rev 5.0	Options Appraisal	DG	DG	PC	DG	31/01/20
Rev 5.0	Options Appraisal	DG	DG	PC	DG	20/02/20
Rev 6.0	Options Appraisal	DG	DG	PC	DG	05/06/20

## Client signoff

Client	Bristol City Council
Project	Project Rainbow - Hawking House, City of Bristol College

# Contents

Chapter	Page
<b>1. Introduction</b>	<b>4</b>
<b>2. Existing Premises</b>	<b>6</b>
2.1. Existing College	6
2.2. The Proposed Site Area	6
2.3. Summary of Tree Survey	9
2.4. Ground Investigations	9
2.5. Utilities	11
2.6. Site Constraints/Risks	11
2.7. Summary of Building Areas	12
<b>3. Proposals</b>	<b>14</b>
<b>4. Design</b>	<b>15</b>
4.1. Option 1 – Single Storey (690m <sup>2</sup> )	15
4.2. Option 2 – Revised Part Two Storey (773m <sup>2</sup> )	15
4.3. Option 3 – Two Storey (782m <sup>2</sup> )	16
<b>5. Programming the Works</b>	<b>16</b>
<b>6. Health and Safety</b>	<b>16</b>
<b>7. Summary of Abnormal Items</b>	<b>16</b>
<b>Appendix A. Conceptual Proposals</b>	<b>19</b>

# 1. Introduction

- 1.1. Further to your instructions to undertake an options appraisal to review the available land within City of Bristol College, Ashley Down Campus with a view to creating a new build residential facility for students with SEN requirements. We have interpreted your instructions to provide information on:
  - The Site
  - Options for the scheme
  - Indicative area
  - Constraints
  - Statutory considerations
  - Project risks
  - Recommendations
- 1.2. An initial meeting with key stakeholders was held on 13<sup>th</sup> June 2019 which covered introductions and the project deliverables.
- 1.3. The site was surveyed by David Gilbey MRICS, Rebecca Armitage and Karl Fong of Faithful+Gould (F+G) on 2<sup>nd</sup> July 2019. The weather conditions during the visit were warm and dry.
- 1.4. A number of surveys have also been instructed by Bristol City Council and completed by the below:
  - Ground investigations – Ground Investigation Ltd;
  - Topographical and Underground Services – Solum Surveying Ltd;
  - Utility Search – Solum Surveying Ltd;
  - Tree survey/schedule – Bosky Trees.
- 1.5. Bristol City Council instructed Faithful+Gould to undertake a high-level options appraisal to consider options to utilise an area located at City of Bristol College, Ashley Down Centre for residential students with SEN requirements.
- 1.6. The main objective is to provide an options appraisal of a parcel of land within the curtilage at City of Bristol College, Ashley Down Centre to allow stakeholders to make an informed decision regarding the viability of the project.
- 1.7. We have reviewed the brief provided by City of Bristol College to provide an options appraisal to include consideration for the following accommodation within a new build unit to the rear of City of Bristol College, Ashley Down Campus:
  - Office large enough for 3nr. work stations;
  - Meeting/confidential room large enough to hold 6-8 people;
  - Kitchen large enough to house a group of 10 students with space for appliances;
  - Laundry area;
  - Living area;
  - Dining area;
  - 10 Double Bedrooms with sink units and 2 rooms with hoists;
  - Staff sleeping accommodation within building;
  - Wet room – 2nr;
  - Hygiene room with hoist;
  - Toilets – 2nr;



- Sensory pods – 2nr;
- Dining area;
- Storage areas;
- Outdoor storage;
- Self-contained apartments – 2nr.

## 2. Existing Premises

### 2.1. Existing College

- 2.1.1. City of Bristol College is one of the largest further and higher education colleges in the UK catering for students of all post 16 ages and background. The Ashley Down Centre is one of four main centres across Bristol providing education and training to more than 20,000 student each year, its facilities include a university centre, professional hair and beauty salon, IT computer rooms, engineering Skills Centre, Plumbing and Construction workshops, Labs, Decorating centre and a Study Centre. The site is open from Monday-Thursday 8.30am – 7pm and Friday 8.30am – 5pm.
- 2.1.2. The main building is oriented North East to South West along a long narrow strip of land, it lies adjacent to Bristol County Cricket Ground to the North and is surrounded on the remaining sides with residential housing. It is understood that land to the north of the Ashley Down Centre was previously owned by City of Bristol College and has since been sold and redeveloped.
- 2.1.3. The College is located in the Ashley Down Conservation Area and the two main buildings; Cabot and Davy House and the old swimming pool are all grade II listed and make up two of five Muller Orphanage Buildings constructed by John Foster for George Muller in the 1860's.
- 2.1.4. The listed buildings are two and three storey coursed pennant stone rubble with Bath Stone window frames. Large single glazed timber sash windows which are screwed shut dominate the rear elevations. The roofs are slate, hipped and gable-ended with bracketed verges. There are stone axial stacks with cornices. The fascia's and soffits are UPVC whilst the gutters and down pipes are cast iron. At the rear, a single-storey building of the same construction aides to enclose the car park.
- 2.1.5. Also, at the rear are two 12m long cast in situ concrete ramps with steel handrails which breach the damp proof course. Ventilation bricks located at the rear indicate a suspended timber floor.
- 2.1.6. There are a number of more recent extensions to the rear of Cabot and Davy House which are of modern construction. A 2012 single storey extension built at the rear of Davy House is constructed of reconstituted stone blockwork with powder coated aluminium glazing, aluminium box gutters, UPVC downpipes with an aluminium link roof to the existing building and a glazed lantern roof. Another nearby extension at the rear of the refectory is a single storey dressed blockwork wall with Bath stone ashlar window surrounds, the link walls are rendered with a single ply membrane flat roof.

### 2.2. The Proposed Site Area

- 2.2.1. The proposed location of the new residential development is 945m<sup>2</sup> and lies in an area enclosed on three sides to the rear of Cabot House in an area of tarmacadam currently used as a car park for 24 cars. To the north of the site lies the access route for the rear of the college which runs parallel to the college boundary.

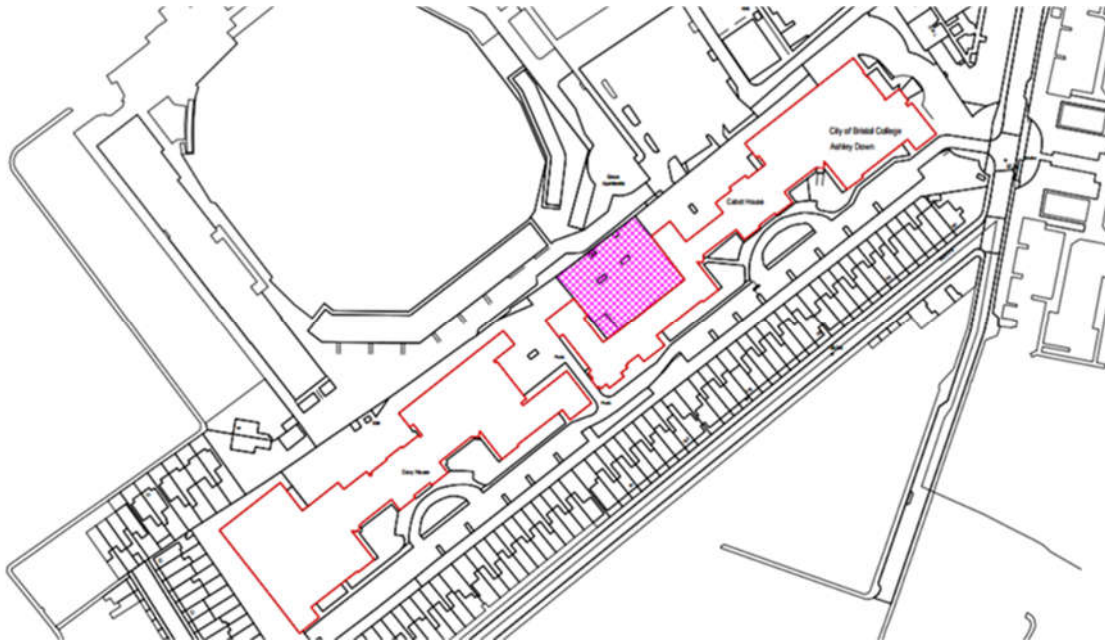


Fig. 1 Location of proposed site is hatched.

- 2.2.2. The area also contains two fire exit routes with ramps, two shipping containers and a modular unit. A pennant rubble wall runs 90° from the rear of the main building separating the refectory area from the car park and modular unit, suggesting there was previously a building in this area.
- 2.2.3. The trees running alongside the rear boundary are subject to Tree Preservation Orders (TPO). Two young Horse Chestnut trees sit within the car park which are unlikely to be subject to TPO's, these would have to be felled should this development proceed in this location. It is likely that these trees would need to be re-provided elsewhere on site.
- 2.2.4. On the Northern side the site is overlooked by a residential development and Bristol County Cricket Ground.
- 2.2.5. At the North East part of the college site, Brunel House was formerly used by City of Bristol College, it has since been acquired by Acorn Developments and work is underway to convert the listed building into a new residential development.
- 2.2.6. Vehicular access is via a barrier entrance from College Road. This road is also shared with a neighbouring residential development though conversations with onsite staff revealed access arrangements are unclear and the deeds should be checked to clarify this area.

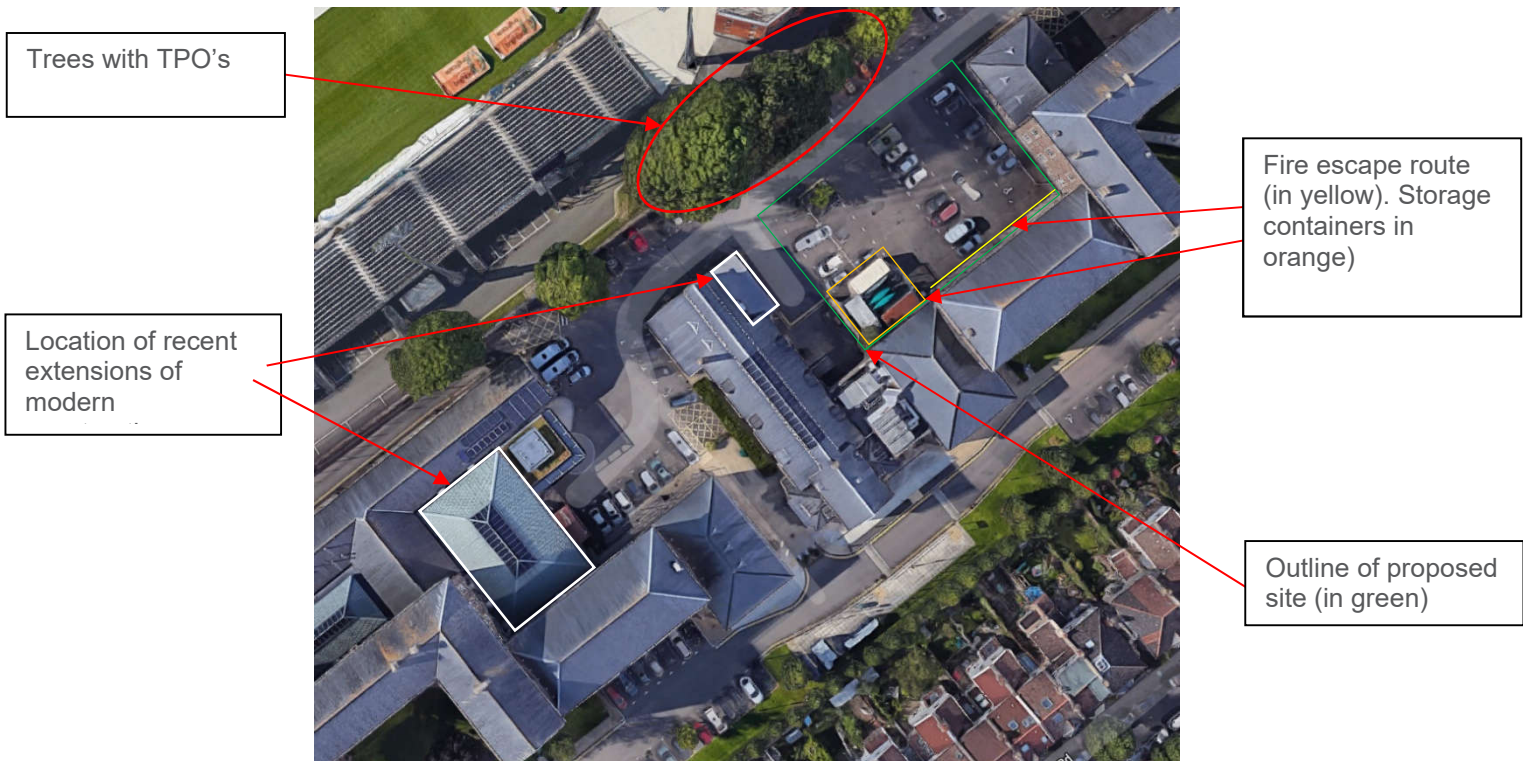


Fig 2. Google maps image with key features highlighted.

## 2.3. Summary of Tree Survey

- 2.3.1. The summary of the tree survey to findings the proposed site was that there are 16 trees overall. 6 Sycamore (T1-T5 and T8), 5 Norway maple (T6, T7, T11, T12, T13), 2 Silver maple (T9, T10), 2 Horse chestnut (T15, T16) and 1 Common lime (T16).
- 2.3.2. The majority of the trees are above 10 years old apart from one Norway maple T12. Trees T1, T3-T13 are all situated on the other side of the boundary wall however all of which root systems and canopies protrude under the boundary wall. Tree protection will need to be put in place and a condition survey undertaken at the in advance of any works.
- 2.3.3. T14-T16 are situated in an engineering planting pit with **T15** and **T16** being directly on the proposed building all of which are category C1 trees. All the trees have been graded between category B and C apart from T12 that seems to be in decline. We advise that tree numbered T12 has a more detailed condition survey undertaken in advance of any works as it is already in decline and to avoid any potential liability issues.
- 2.3.4. Category C1 trees would be directly affected by the works (located in the site area). Category C1 trees are generally very low quality with a useful remaining amenity contribution of at least 10 years. Unless it is intended to remove very large numbers of trees in this category, their loss is not normally considered to be a planning risk and individually it is incredibly rare for them to be a constraint to a development. However, it is still common for the local planning authority to seek compensatory planting in exchange for removal.
- 2.3.5. All options are possible to construct given the locations of the trees which are on interest. We recommend and designs are developed with consideration for BS 5837:2012 Trees in relation to design, demolition and construction.

## 2.4. Ground Investigations

- 2.4.1. The ground investigation included 4 holes being drilled into the ground on the proposed site WS1, WS2 WS3, WS4.
- WS1 is located north of the proposed site. The bore hole dug to a depth of 2.6m. The first 0.10m was MADCAM (bituminous surface) made ground. From 0.11m-0.30m the substrata was gravel/made ground (granular fill) which is considered to be medium density. From 0.31m-2.6m is firm gravelly clay, medium strong grey calcareous mudstone, stiff laminated brown and grey slightly sandy slightly gravelly silty clay, strong grey calcareous mudstone at 2.51m-2.60m. Ground water strike at 2.30m, recorded at 2.55m immediately prior to backfilling borehole. There was no obvious visual or olfactory evidence of mobile contaminants. Borehole terminated at 2.60m due to 'refusal' on calcareous mudstone.
  - WS2 is located on the east corner of the proposed site. The bore hole dug to a depth of 2.10m. The findings from the bore hole found that the first 0.10m is made ground (bituminous surface). From 0.11m-0.5m the ground consists of gravel (medium density) made ground (granular fill). From a depth of 0.51m-2.10 the substrate consisted of stiff laminated brown and grey slightly gravelly and silty clay and medium strong calcareous mudstone. There were no obvious visual or olfactory evidence of mobile contaminants. Ground water was not encountered. Borehole terminated at 2.10m due to 'refusal' on calcareous mudstone.
  - WS3 is located on the south corner of the proposed site. The bore hole dug to a depth of 2.40m. The findings from the bore hole found that the first 0.10m is made ground (bituminous surface). From 0.11m-0.5m the ground consists of gravel (medium density) made ground (granular fill). From a depth of 0.51m-

2.40m the substrate consisted of stiff laminated brown and grey slightly gravely and silty clay and medium strong calcareous mudstone. There are no obvious visual or olfactory evidence of mobile contaminants. Ground water strike at 2.10m, recorded at 2.15m immediately prior to backfilling borehole. Borehole terminated at 2.40m due to 'refusal' on calcareous mudstone.

- WS4 is located on the west corner of the proposed site. The bore hole dug to a depth of 1.80m. The findings from the bore hole found that the first 0.10m is made ground (bituminous surface). From 0.11m-0.5m the ground consists of gravel (medium density) made ground (granular fill). From a depth of 0.51m-1.8m the substrate consisted of stiff laminated brown and grey slightly gravely and silty clay, medium strong calcareous mudstone and strong grey calcareous mudstone. There are no obvious visual or olfactory evidence of mobile contaminants. Ground water was not encountered. Borehole terminated at 1.80m due to 'refusal' on calcareous mudstone.

2.4.2. Fortunately, the ground investigation was favourable with low levels of contamination before the natural substrate. As a precautionary measure and acknowledging the presence of earlier buildings and the use of the site as a construction compound and car park, the ground investigation report indicates a broad range of potential contaminants which should be considered. To confirm, these contaminants have not been found on site but would be expected on a site of this age/type/use.



## 2.5. Utilities

- 2.5.1. Wessex Water searches undertaken by Solum Surveying have confirmed that there is foul drainage in the area where the proposed building is to be located. Works to the drainage have been allowed for in the feasibility estimates.
- 2.5.2. The Western Power Distribution drawings confirm the presence of a HV (11kV) cable along road adjoining the site boundary within the College demise. There are also two electrical supplies in the site area.
- 2.5.3. There are two underground LV electric cables in the area which we advise are redirected as part of the works. These have been highlighted on the Solum surveying topographical and underground services layout. Allowances for the diversions have been included in the estimates.

## 2.6. Site Constraints/Risks

- 2.6.1. The proposed site contains two fire escapes, these exits will need to be preserved and consideration should be given to ensuring enough the distance between the existing and new building does not compromise these escape routes.
- 2.6.2. Conversations with onsite staff alluded to contaminated land on the proposed site. Whilst the ground investigations indicate there is a small element of made-up ground, the report refers to the fact that there could be further issues due to the age of the site. It is prudent to make allowances for unknown ground conditions in case issues are uncovered.
- 2.6.3. Access to the site is via a barriered gate. Alternative access is available via a break in the boundary line from the car park in front of the neighbouring block of flats, we have been advised by onsite staff that this part of the road is unadopted and ownership is shared with the cricket club. It is recommended that searches are undertaken to determine ownership of this section of land should this be affected by the project. Similarly searches should be undertaken to determine if there are any easements covering this section of the site.
- 2.6.4. There is an electrical substation directly opposite the site on the other side of the access road. No investigations have been undertaken to determine if there is capacity for the new building. In addition to this Faithful+Gould have been informed and ground investigations confirm that the incoming water and gas supply is via the front of the main building and drainage runs along the rear access road adjacent to the proposed development site.
- 2.6.5. The trees along the boundary line are protected by Tree Preservation Orders, the trees and roots would need to be protected. As detailed in section 2.3 and there could be a need to replace two C1 trees for all options. To summarise the trees, all options can be constructed providing adequate protection is in place for the trees and there could be a need to re-provide two trees depending on the planning conditions.

- 2.6.6. The main buildings Grade II listed status and the Conservation Area status of the area will mean that designs will be restricted, it is recommended that designs of the new building are in line with recent extensions which comprise of reconstituted stone blockwork with powder coated aluminium glazing, aluminium box gutters, UPVC downpipes, and a profiled metal roof with a glazed lantern, it should be noted that a nearby roof at the refectory is a single ply membrane flat roof.
- 2.6.7. Currently there are no secure lines onto the site. There are a number of entrances onto the site where students and the general public can freely access. External areas will need to be formed to secure the area which should be built into the proposals.
- 2.6.8. Operational noise from the development would potentially have an impact on the teaching facilities and adjoining Cricket Ground and residential accommodation. Construction impacts in terms of noise would be associated with delivery/lorry movements and the construction process.

## 2.7. Summary of Building Areas

- 2.7.1. The below are the minimum areas for the building. The layouts produced by the design team have larger floor areas, mainly due to the increased circulation spaces.

Room:	Requirements:	Total Area (m2):
Office leading from a reception area	Large enough for 3nr work stations and to house all facilities	15
Meeting/confidential room	Large enough to hold eight people	16
Kitchen	Large enough to house a group of ten students Balance between commercial and residential use 2 Fridge freezers, 2 ovens, 3 hobs (electric only) 2 dishwashers Appliances to be integrated	50
Laundry	Large enough for wheel chair access 2nr commercial washing machines 2nr Tumble dryers No need for sink and sluice unit Shelving COSSH storage	12
Living area	Multi use space for both teaching and evening activities Use of room dividers	70
Bedroom x 10	Due to size restrictions no en-suites Rooms to have sink units 2 rooms with hoists Wardrobe space Double beds Commutation system with office	113



Staff sleep room	Single bed No en-suite facilities required Meds lockable fridge	8
Wet room x2	No Baths No shower cubicles	8
Hygiene room x1	Hoists required	6
Toilets x2	Unisex toilets	5
Sensory pods x2		8
Dining area	Multi use House 8-10 residents 3 separate tables 2x4 and 1x2	19
Storage areas indoors	Cupboard for storing food	5
	Cupboard for storing equipment	9
	Cupboard for storing stationary, materials and art and crafts	2
	Cupboard for storing soft furnishings	2
Storage outside	Shed	6
Self-contained apartments	2nr self contained apartments	120
	<b>Summary</b>	<b>474</b>
	<b>Circulation Space:</b>	<b>94.8</b>
	<b>Internal walls:</b>	<b>47.4</b>
	<b>Total:</b>	<b>616.2</b>

2.7.2. The proposed building areas are:

Option:	Description:	Area:
Option 1	Single Storey	690m2
Option 2	Part Two Storey (revised)	773m2
Option 3	Two Storey	782m2

## 3. Proposals

### 3.1. Outline Proposals

### 3.2. The following legislation and codes of practice have been consulted in the preparation of this options appraisal:

- Building Regulations: Approved Documents M and B
- Residential Special Schools: National Minimum Standards 2015
- Special educational needs and disability code of practice: 0-25 years
- BB 104 Area guidelines for SEND and alternative provision: including special schools, alternative provision and units

### 3.3. There are different levels of SEN provision and therefore different area requirements in relation to this. Our proposals have been guided by the schedule of accommodation provided by the college and we have not provided advice on the suitability of our design in relation to the levels of students using the building.

### 3.4. It is expected that the proposed building will take up much of the available space on site and any remaining space will be used for parking, therefore a secure external area for the residential students will be limited, if any at all. A plan for creating a space should be included with the development proposals.

### 3.5. The proposed area is a car park which can accommodate 24 cars, this space will be lost should the development proceed no alternative provision has been allowed for. Therefore, consideration should be given to this loss of amenity in particular the impact for the users as parking already appears to be limited.

### 3.6. Provisions for providing secure lines onto the site should included with any proposals as currently the boundaries are unrestricted.

## 4. Design

### 4.1. Option 1 – Single Storey (690m<sup>2</sup>)

- 4.1.1. Option 1 is a single-storey option (layout in Appendix A). The main benefit of this option is that the building is accessible.
- 4.1.2. The single story option takes up the majority of the proposed site's footprint, however a public thoroughfare is maintained in front of the site. Private spaces are oriented away from the public thoroughfare with shared spaces facing out.
- 4.1.3. There are potential problems with lighting rooms adequately may arise with this option. Notably in order to accommodate the single storey option the wall situated behind the existing containers would have to be removed.
- 4.1.4. After looking at the practicality of this option, it seems the least successful as to accommodate the whole programme involves a very large footprint that is detrimental to the existing surroundings. It also does not allow any opportunity for quality external space which in turn becomes a privacy issue as there would be direct line of sight into several of the private bedrooms.
- 4.1.5. This space occupied also requires the removal of the dividing wall to make space for the building but as everything is on ground level it is the least visually obstructive for views out of the existing college. It also means every space in the building is easily accessible.

### 4.2. Option 2 – Revised Part Two Storey (773m<sup>2</sup>)

- 4.2.1. Option 2 is the part two-storey option which is irregular in shape and provides a unique solution to the problem (layout in Appendix A). As requested, the bedrooms are split across two levels and located towards the less overlooked part of the identified site.
- 4.2.2. The 'Half-stack' is more efficient in plan than the single storey. The private volumes can be stacked creating more external area and maximising the opportunity to have light filled space. The reduction in plan size means the existing wall no longer needs to be demolished and a small garden can be provided.
- 4.2.3. This option was discussed in detail with the key stakeholders and it was decided that it is the best one to progress.
- 4.2.4. By swapping the orientation of the kitchen suite and bedrooms as shown on the design development proposal, the existing delivery route for the refectory can be used to supply the kitchen in the new building and does not obstruct the newly provided catering stores. A good connection between the outside and the living/ activity area is created allowing the garden more exposure to diffuse light. Having a central office also overlooking the living area retains the existing benefit of accountability. The WC provision is much more centrally located on ground and first floor.
- 4.2.5. The first floor terrace can be accessed without having to go through the meeting room so can be used at any time even as a secondary garden that is removed from the hubbub of the downstairs shared facilities.
- 4.2.6. This design does not address privacy as well as the previous option and measures to mitigate overlooking may need to be taken. The bedrooms and the existing college will typically not be in use at the same times during the day so this should not be a huge problem but it should be flagged up.
- 4.2.7. The single corridor is easier to navigate from an orientation perspective.

## 4.3. Option 3 – Two Storey (782m<sup>2</sup>)

- 4.3.1. Option 3 is a full stack option (layout in Appendix A). The benefits of this are the additional external areas which could be landscaped in order to provide usable space for the students.
- 4.3.2. The 'Full-stack' is the most compact massing typology in plan. It takes up the least amount of space in plan which gives the most space to gardens / parking although a lighting strategy will need to be employed to make sure the internal spaces are well lit. With more programme provision on the first floor it requires areas of the first floor to overhang the ground floor.
- 4.3.3. This option follows a domestic typology by having a horizontal split with private space on the first floor, which would require a lift for access. There is also a danger of overlooking at first floor level.

## 5. Programming the Works

- 5.1. It is our understanding that the project is subject to Bristol City Council approval.
- 5.2. It is recommended that further investigations in advance of a full design, along with a building regulations application, planning approval and listed building application
- 5.3. A competitive tendering process should be undertaken in order to obtain best value.

## 6. Health and Safety

- 6.1. A Principal Designer (PD) will be required for these works and the works will be classed as notifiable under the Construction (Design & Management) Regulations (CDM 2015).

## 7. Summary of Abnormal Items

Item:	Mitigation:
Listed building consent not granted.	The building is listed with the main area of interest being the front (south) elevation. The extensions to the rear are of modern construction. It is recommended early advice is obtained from the conservation officer.
High voltage cable or other unknown services running across site.	We have been advised by the site team that the adjacent substation does not have any cables crossing the proposed site. This have been confirmed in the utilities scan but there are two cables in the area.
The land is contaminated.	Ground investigations suggest there is little made up ground on site and an allowance has been included for the non-hazardous and inert waste identified.
Loss of parking provision.	The parking on site is already at a premium and this is likely to be a planning consideration.

No secure lines into the area.	The site is completely open to the public and has no secure lines. The Brislington Centre is secured using mag-locks with controlled access. The extent of the secure line will need to be considered as it is likely to be a small section within the site.
Covenants or easements imposing restriction or obligations on the development.	The site and surroundings appear to have multiple lease agreements for items such as access agreements and restrictions on the operational use of the sites. This will need to be investigated further as time progressed.
Design impedes existing fire exit routes for the main building.	Initial investigations indicate that the escape routes can be maintained and redirected. Early consultation with the fire officer is advised.
Lack of an external space.	The Brislington Centre has a significant amount of external grounds in contrast to the Ashley Down Centre. An allowance has been made for a small amount of benching and external area.
There is no capacity within the existing services provision.	The existing services have not been assessed to confirm there is enough capacity. No services layouts have been supplied by the college for inclusion in our initial assessments. Capacity investigations to be undertaken.

# Appendices

## Appendix A – Conceptual Proposals

# Appendix A. Conceptual Proposals



# PROJECT RAINBOW

## City of Bristol College Ashley Down Campus



**ATKINS**

Member of the SNC-Lavalin Group



Revised Options Appraisal for Proposed  
SEN Residential Development;

Bristol City Council

BS7 9BU, Cabot House Car Park

29th November 2019

Updated for 4th February 2020





# Contents

Site observations ..... pg. 2

Accommodation & Adjacencies ..pg. 4

Indicative Plans ..... pg. 8

Summary ..... pg. 16

Moving Forward ..... pg. 24

Post-meeting redesign ..... pg. 26

Appendices ..... pg. 36



# Introduction

Faithful + Gould (F+G) have been instructed by Bristol City Council to undertake an options appraisal on City of Bristol College's Ashley Down Campus with a view to creating a new build residential facility for students with SEN requirements.

As a result of this, Atkins have been collaborating with F+G to produce early scheme options and recommendations for the available site.

We have been working on the assumption that the principle use of the accommodation is for training SEN students for independent living, which is reflected in the design decisions.

This document covers environmental and external constraints on the site and provides an overview of how we have responded to these within the brief of SEN accommodation.

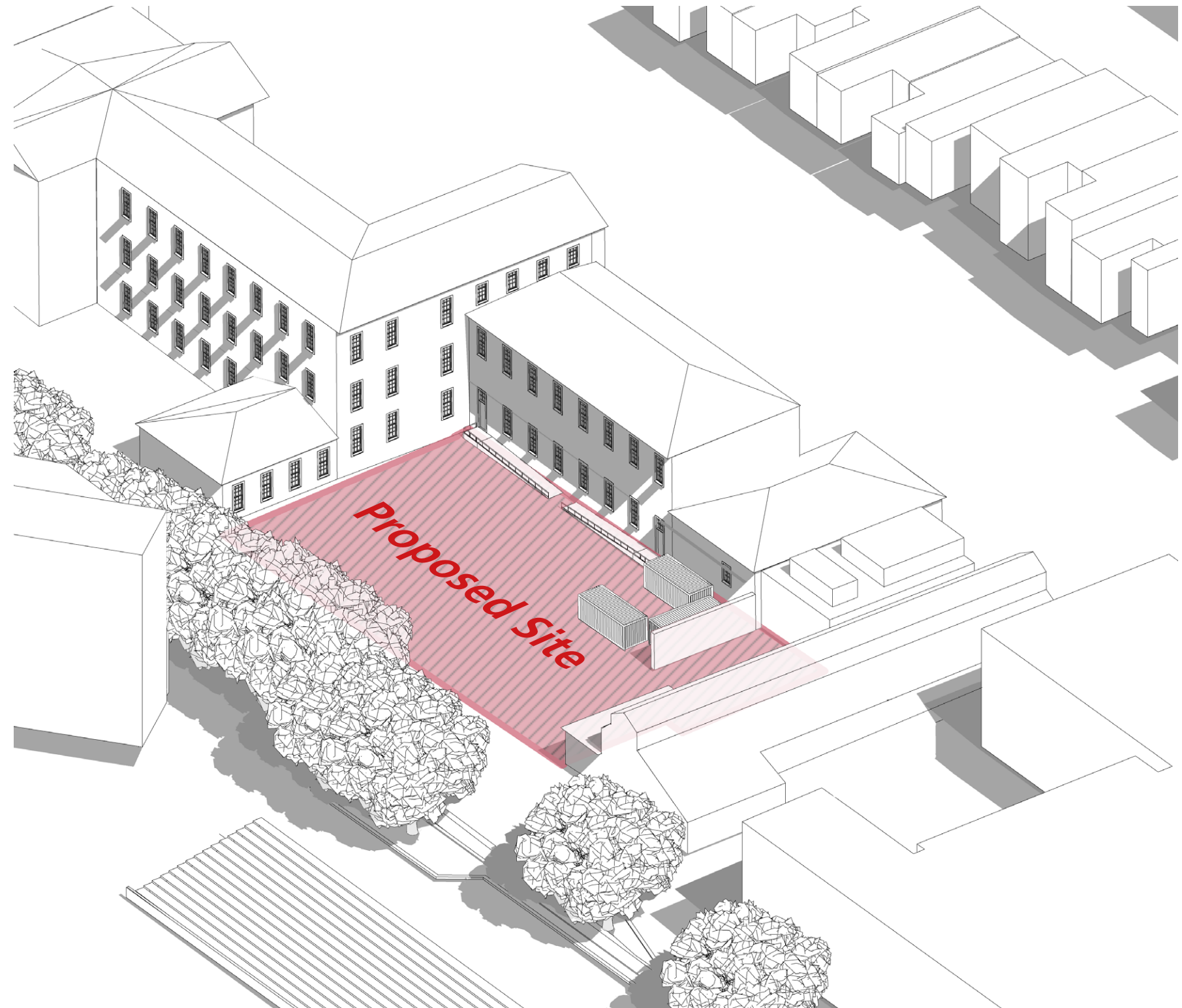
Three options have been analysed, one has been recommended and embellished with additional detail and suggestions for taking the project forward have been made.

"The main objective is to provide an options appraisal of a parcel of land within the curtilage at City of Bristol College, Ashley Down Centre to allow stakeholders to make an informed decision regarding the viability of the project.

We have reviewed the brief provided by City of Bristol College to provide an options appraisal to include consideration for the following accommodation within a new build unit to the rear of City of Bristol College, Ashley Down Campus:

- Office large enough for 3nr. work stations;
- Meeting/confidential room large enough to hold 6-8 people;
- Kitchen large enough to house a group of 10 students with space for appliances;
- Laundry area;
- Living area;
- Dining area;
- 10 Double Bedrooms with sink units and 2 rooms with hoists;
- Staff sleeping accommodation within building;
- Wet room – 2nr;
- Hygiene room with hoist;
- Toilets – 2nr;
- Sensory pods – 2nr;
- Dining area;
- 

(F+G, July 2019)



# Macro Observations

## Views

As a site flanked on 3 sides, the proposed building would only have significant views out in one direction towards the main thoroughfare. Where possible, landscaping should be considered to improve the quality of views or provide privacy between the building and the existing college.

## Sun path

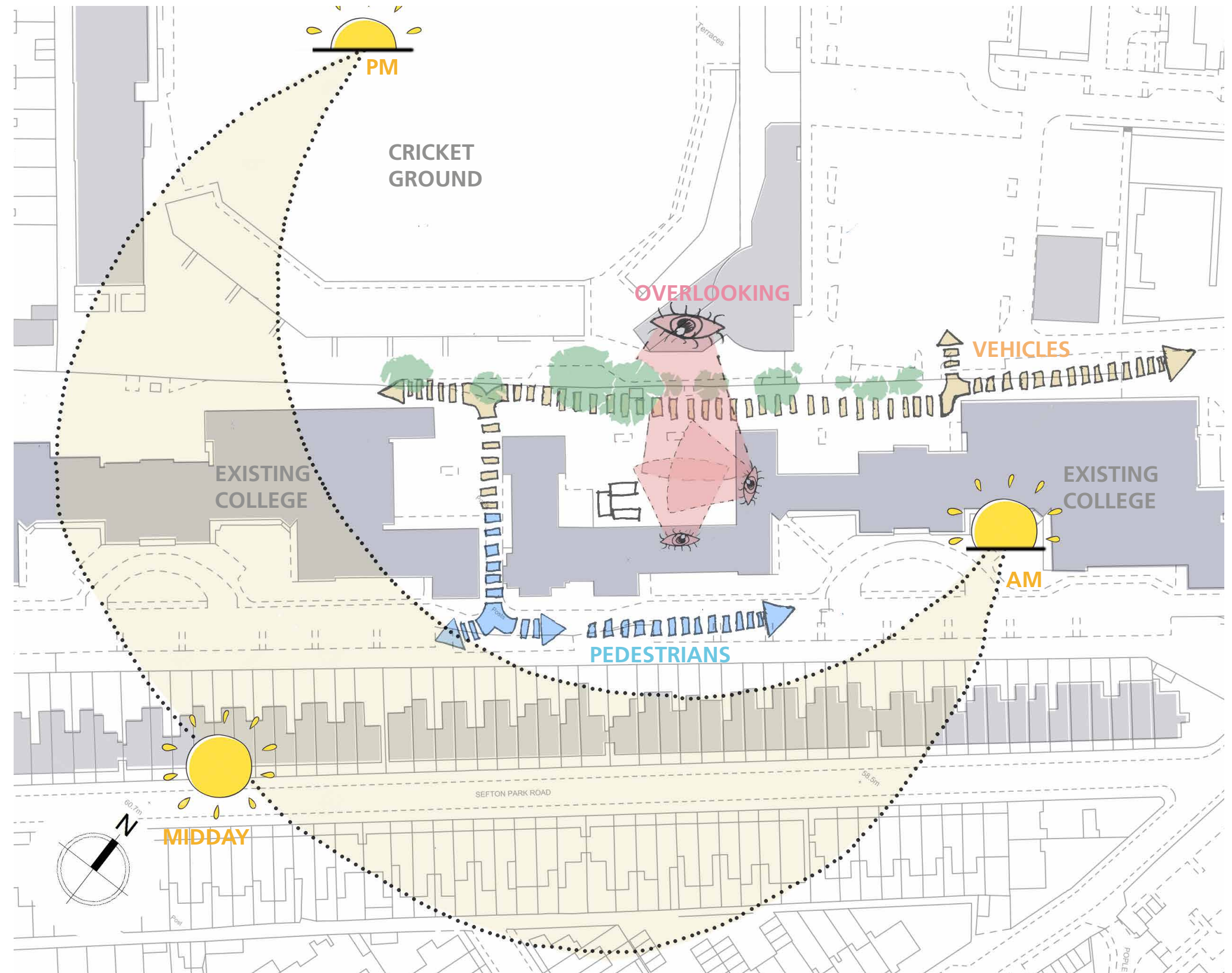
As the open side of the site is facing NW, there is very little opportunity for direct sunlight. The taller surrounding buildings restrict light intake and mean most light is diffuse Northern light. This can be used as a tool within the building to create an evenly lit environment and reduce energy costs.

## Access

Vehicle access follows the road on the Northern edge of the existing college whilst the main pedestrian route follows the Southern face of the existing college. A cut through links the pedestrian route to the vehicular route on the Northern road. The edges of the carpark site need to be accessible due to the entrances to the college located around its perimeter.

## Landscaping

There is no distinguishable material change to signify pedestrian routes around the site. A treeline of deciduous trees sit beyond the boundary wall within the cricket ground. Consideration should be given to continuing the pedestrian access onto the site through hard and soft landscaping cues.





# Immediate Observations

## Access

The main thoroughfare runs along the Northern edge of the site. This is both pedestrian and vehicle access with parking against the northern boundary wall. There site is a carpark which is bordered by 3 buildings and was on time of inspection (Tuesday 9am) sparsely used. The doorway on the western bounding building is not in use and the external dividing wall also has a blocked opening. The existing college's fire escape provision creates a bottle neck and would require a wide berth of space provision around it which restricts building positions on site.

## Parking

Based on the availability of parking spaces on site and in the surrounding area, the loss of spaces on site would not be of great detrimental impact however more information and data should be gathered before making this assumption in full. This is Based on the footprint for the building, it may be possible to retain some spaces.

## Existing wall

The pennant stone wall dividing the car park and "courtyard" in-front of the Western building looks to be built during the same construction as the main Grade II listed building and is listed as it is within the building curtalage. A Bath stone archway is blocked up although this could be considered either a constraint or opportunity .

## Overlooking

The residential building opposite the site is mostly obscured by trees when they are in full leaf. However during winter (pictured) there is very little privacy should the windows be facing each other. So steps to mitigate overlooking should be considered in plan. The East and South faces of the building would also be vulnerable to overlooking from the existing college building.



*Existing fire escape on Cabot House*



*Container storage from view at Northern point of carpark looking SW*



*Dividing wall with infilled opening behind container storage*



*Residential flats potentially overlooking the site in winter due to deciduous trees*





**Accommodation..... pg. 6**

**Adjacencies ..... pg. 7**

# **Accommodation & Adjacencies**

# Overview

This section breaks down the requested accommodation and has used Atkins' architects with SEN experience to study the relationships between provisions.

The programme has been divided into suites that share qualities so that our design can respond to the transitions between the spaces and address the differences between shared and private spaces.

# Key Points

- The 'Activity Suite' is an important feature to use as a central hub
- The 'Support Suite' plays an governing role in relation to every other suite
- The garden should have a relationship with the main inhabited spaces as outdoor connection will have a positive outcome for SEN environments
- The main thoroughfare travels through the shared provision beginning at reception.
- The relationship between reception and support is key to maintaining accountability for the residents and visitors of the accommodation

# Requested Accommodation Schedule

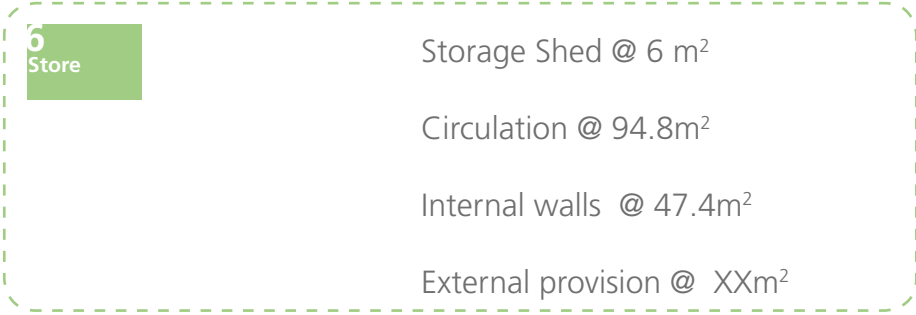
## Shared



Activity Suite  
Total m<sup>2</sup> - 91



Dining Suite  
Total m<sup>2</sup> - 76.5

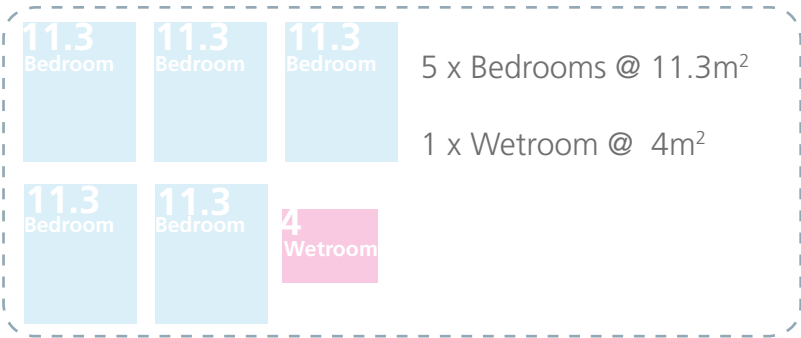


Ancillary  
Total m<sup>2</sup> - 148.2

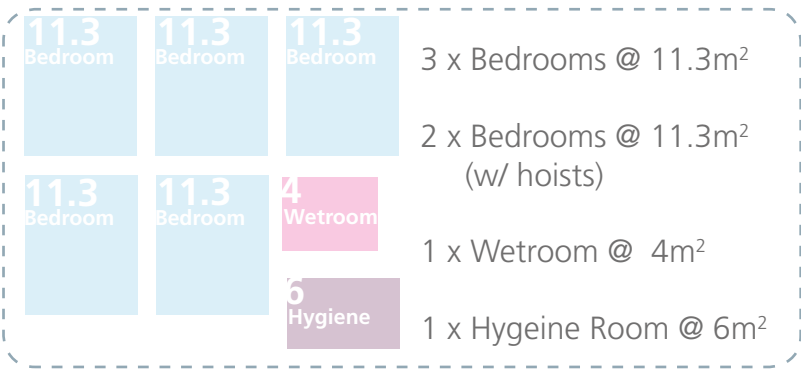


Support Suite  
Total m<sup>2</sup> - 53.5

## Private



Bedroom Suite  
Total m<sup>2</sup> - 60.5



Supported Bedroom Suite  
Total m<sup>2</sup> - 66.5



Self Contained Suite 1  
Total m<sup>2</sup> - 60

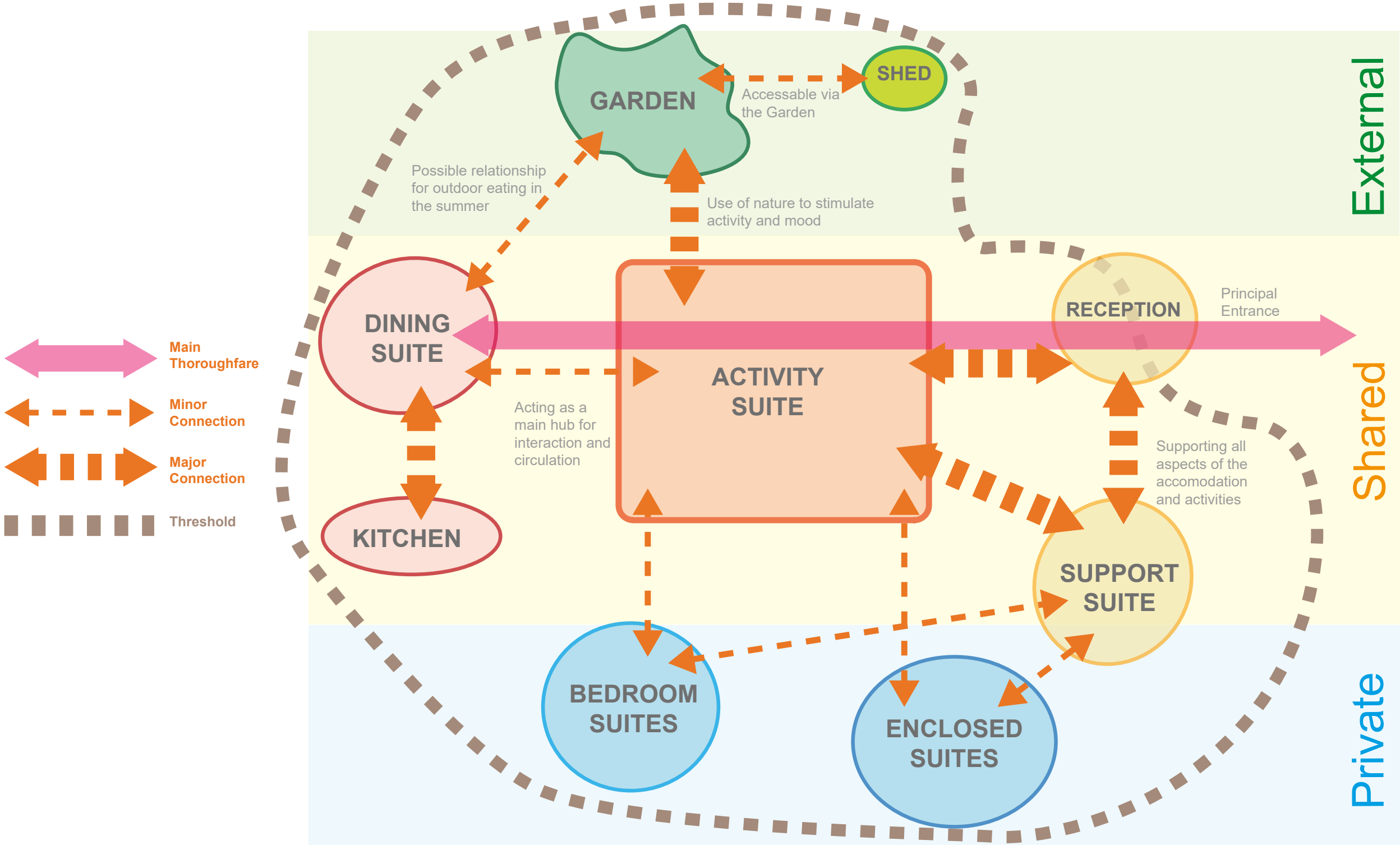


Self Contained Suite 2  
Total m<sup>2</sup> - 60

Total Area 616.2 m<sup>2</sup> + External Provision

# Adjacency Diagram

Communicating Suggested Relationship  
Rules for an Initial Plan Configuration







# Indicative Plans

Single Storey Option ..... pg. 10

Half Stack Option ..... pg. 12

Full Stack Option ..... pg. 14

Post-Meeting Design Option ..... pg. 26

## Overview

By applying the **relationship rules** between suites and looking at the most beneficial layouts with SEN residents in mind, early floor plans have been explored for each option and analysed to decide on a recommended option.

Each option will have a floor plan and a massing diagram to best illustrate the pros and cons of each.

It also allows us to get an early idea of potential building foot print and the relationship it will have to the existing college.

## Key Points

- The single storey has privacy issues and internalised activity
- There is an uneven proportion of private vs shared provision on all options.  
There is more floor area for the private provision
- The simplicity of the circulation is key for an SEN building as it resolves stressful and disorientating situations for the residents.
- Because of the size of the building, if vertical circulation is used. it would be optimal to only have one instance.
- Atkins is operating on the assumption that the SEN accommodation is a training facility for independent living and floor plans have been designed with this in mind.



# Single Storey Option

The single story option takes up the majority of the proposed site's footprint, however a public thoroughfare is maintained in front of the site. Private spaces are oriented away from the public thoroughfare with shared spaces facing out. Potential problems with lighting rooms adequately may arise with this option. Notably in order to accommodate the single storey option the wall situated behind the existing containers would have to be removed.

After looking at the practicality of this option, it seems the least successful as to accommodate the whole programme involves a very large footprint that is detrimental to the existing surroundings. It also does not allow any opportunity for quality external space which in turn becomes a privacy issue as there would be direct line of sight into several of the private bedrooms.

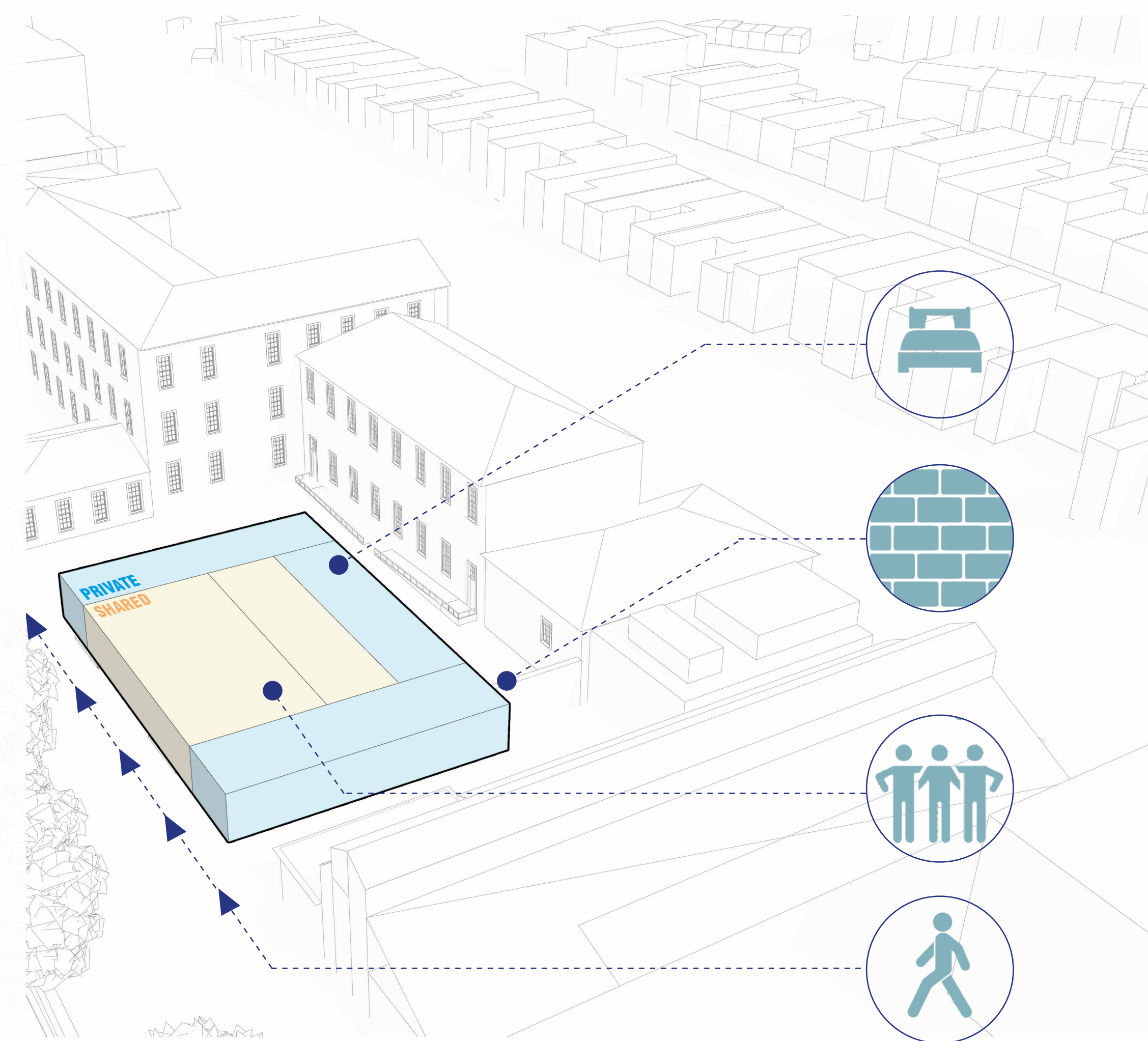
This space occupied also requires the removal of the dividing wall to make space for the building but as everything is on ground level it is the least visually obstructive for views out of the existing college. It also means every space in the building is easily accessible.

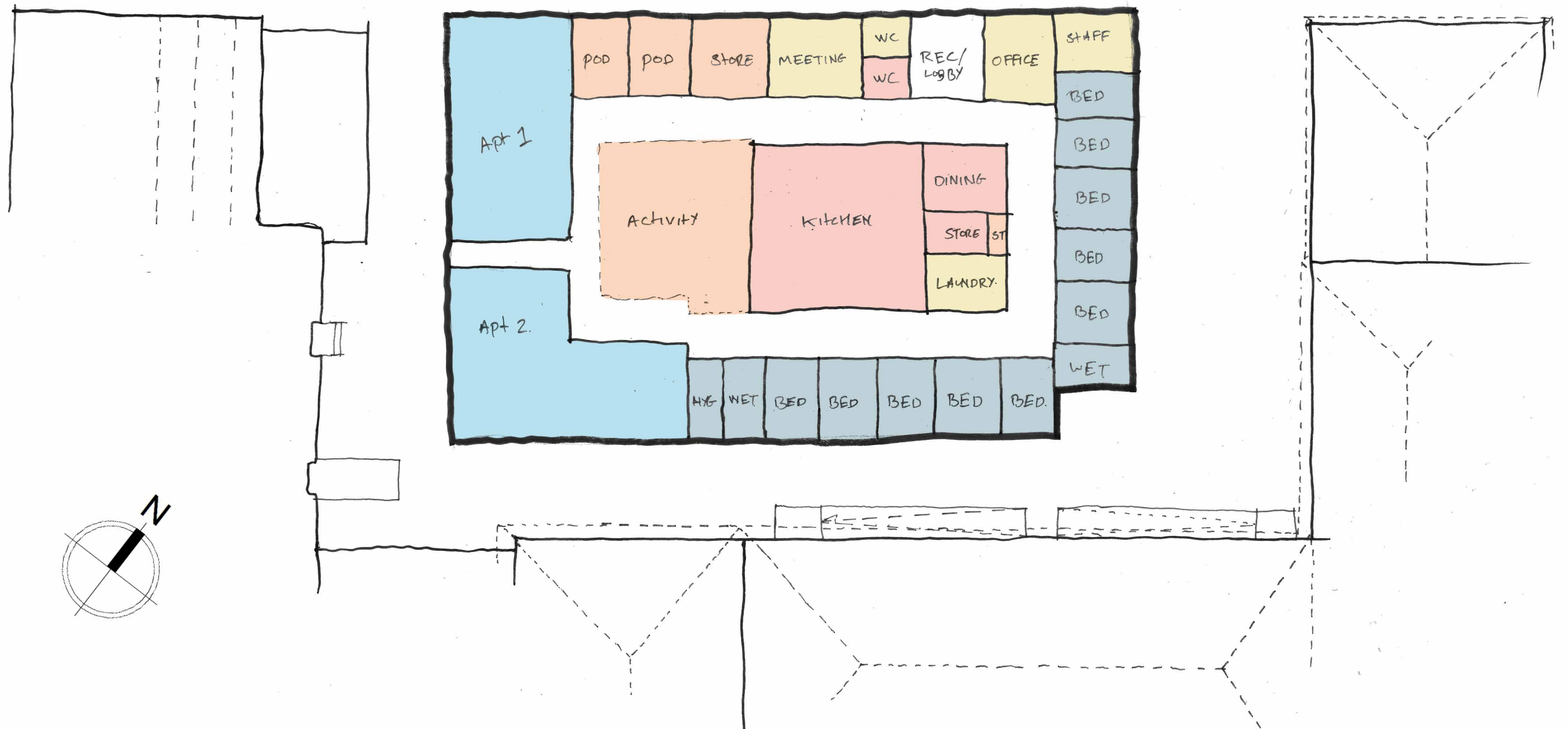
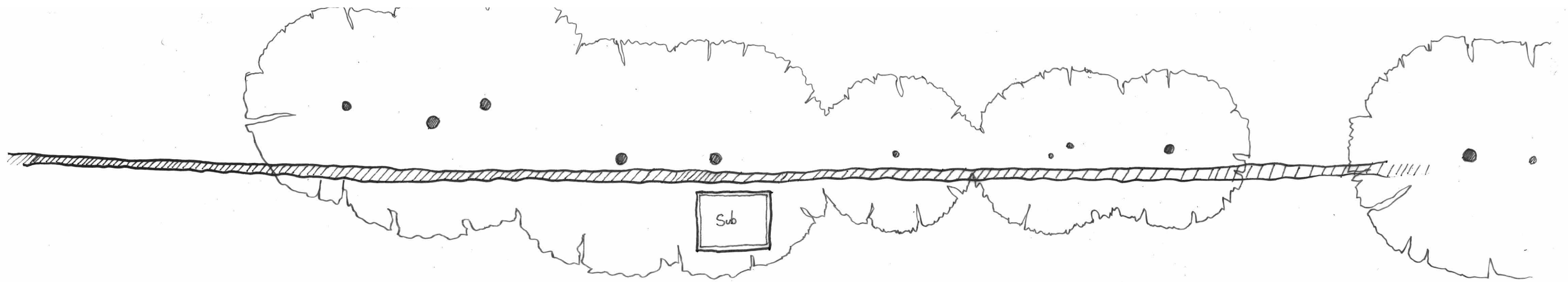
## PROS

- No need for vertical circulation
- Most accessible
- Least visually obstructive for existing building

## CONS

- Lacking external space
- Internalised activity
- Privacy issues
- Need to remove existing wall
- Potential fire risk with reduced width between new and existing building







# Half Stack Option

The 'Half-stack' is more efficient in plan than the single story. The private volumes can be stacked creating more external area and maximising the opportunity to have light filled spaces. The reduction in plan size means the existing wall no longer needs to be demolished and a small garden can be put in.

Having the private areas to the west of the plan means that there is not direct overlooking from either the residential building opposite or the two storey Cabot house building. Having bedrooms over two floors also breaks up the private space allowing better management of personalities in the accommodation. This does however require vertical circulation would could be problematic for some users.

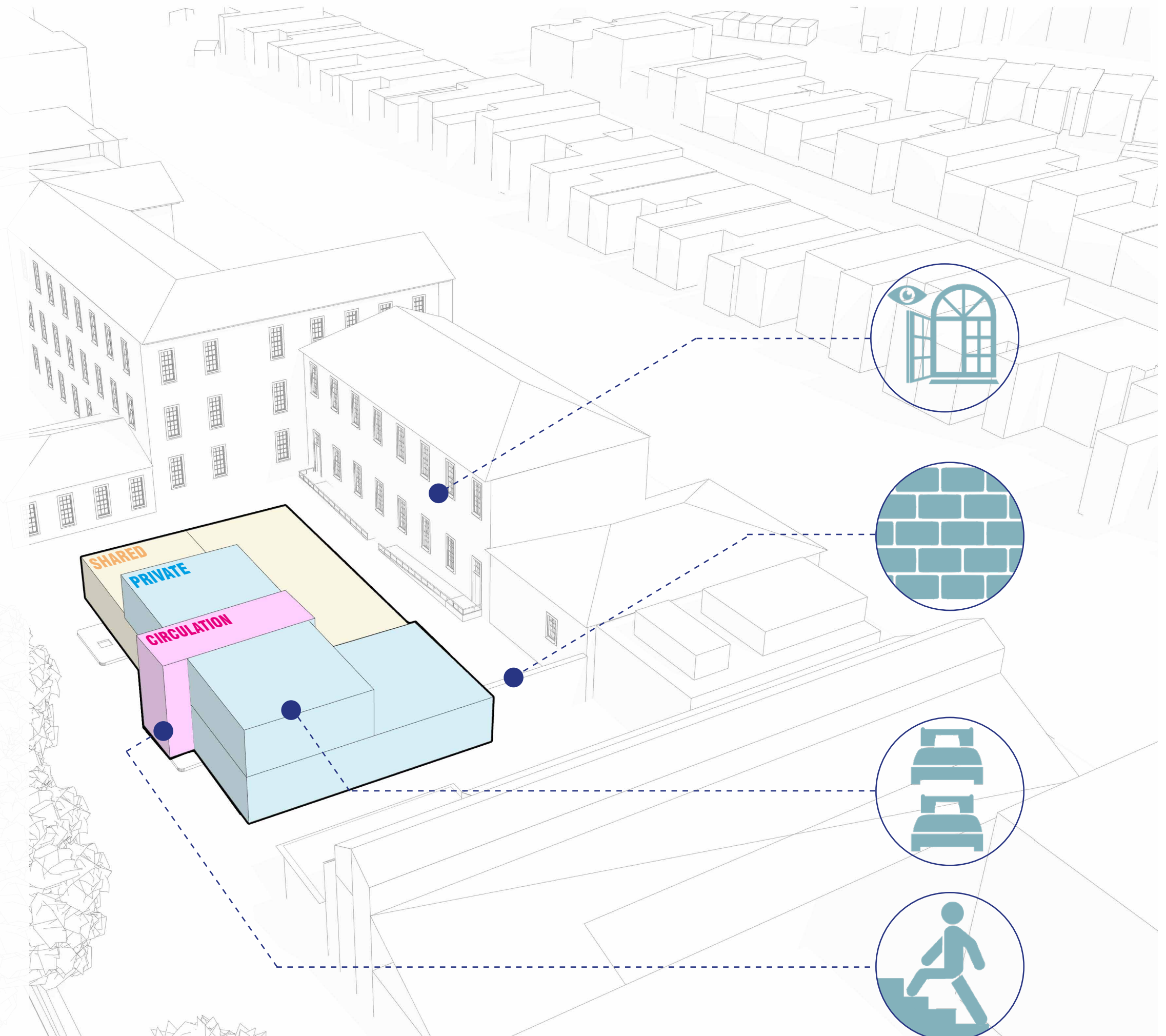
The single corridor is easier to navigate from an orientation perspective

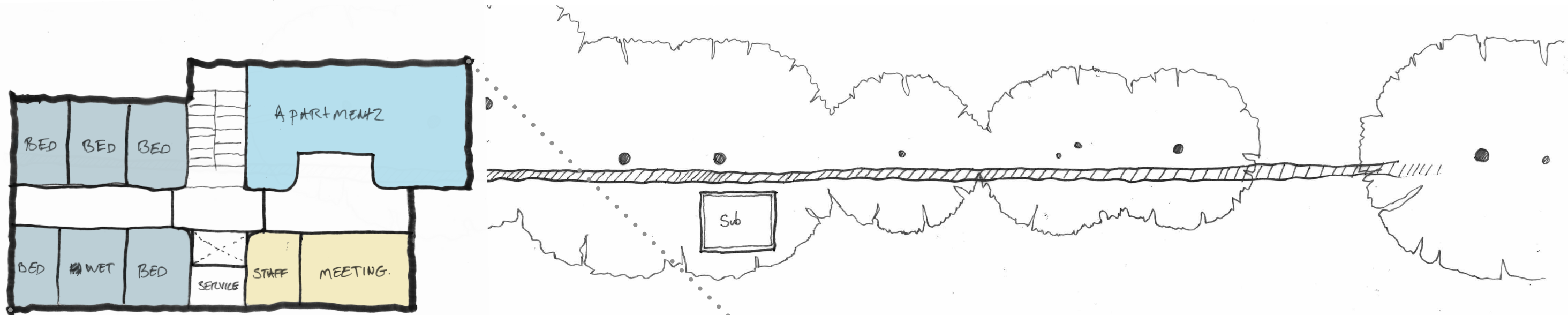
## PROS

- **Single vertical core is protected and less disorientating for SEN residents**
- **Option for sensory pods to have windows and natural connection**
- **Simple circulation facilitates easier accountability between staff and residents**
- **Provision provided for shared and private external space**

## CONS

- **Introduces vertical circulation**
- **Footprint is still slightly too large to allow a positive relationship to gardens to some spaces**
- **Minor internal privacy issues with bedrooms on ground floor looking into the garden.**
- **Support suite is displaced amongst plan (not necessarily a con)**





01 First



00 Ground



# Full Stack Option

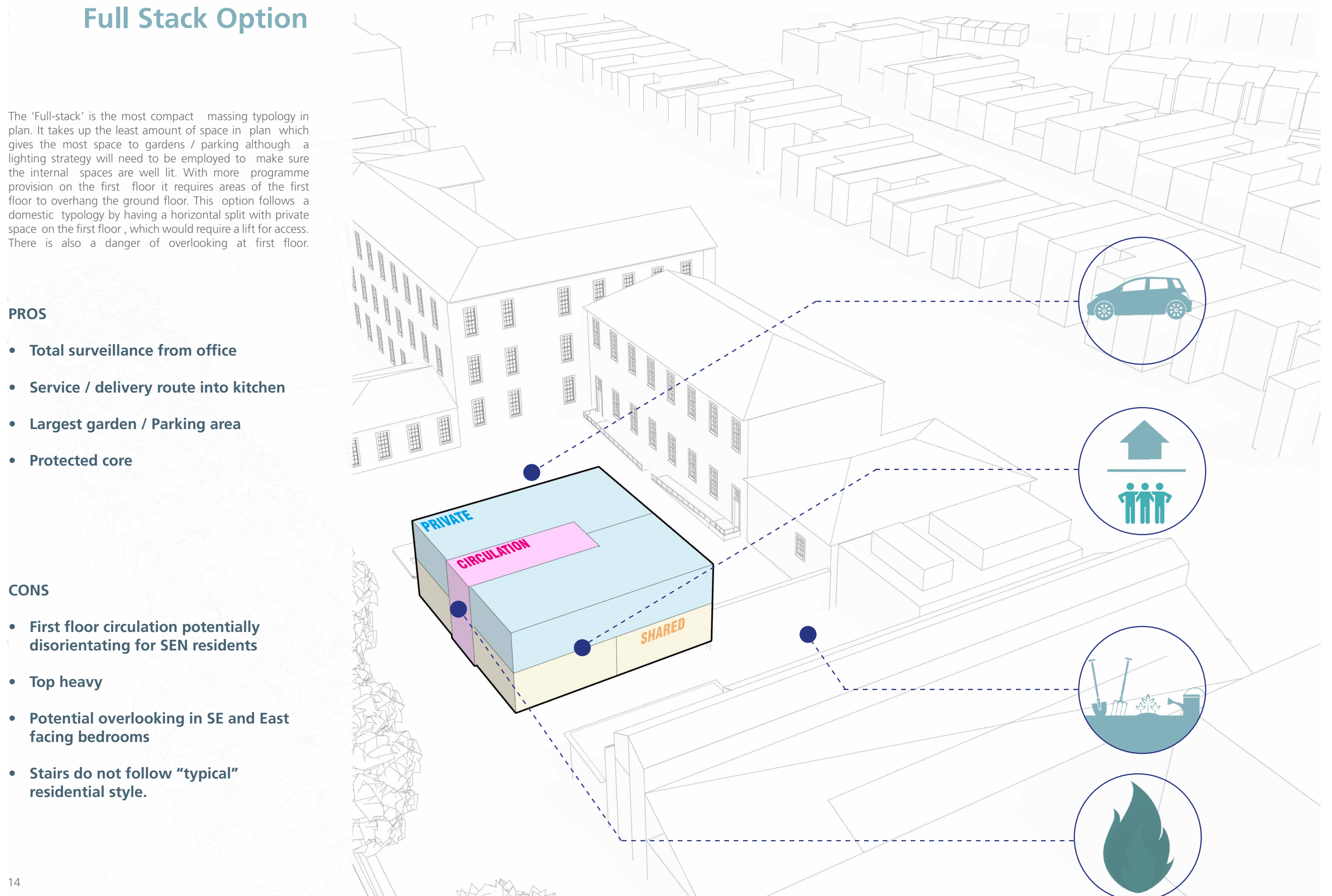
The 'Full-stack' is the most compact massing typology in plan. It takes up the least amount of space in plan which gives the most space to gardens / parking although a lighting strategy will need to be employed to make sure the internal spaces are well lit. With more programme provision on the first floor it requires areas of the first floor to overhang the ground floor. This option follows a domestic typology by having a horizontal split with private space on the first floor, which would require a lift for access. There is also a danger of overlooking at first floor.

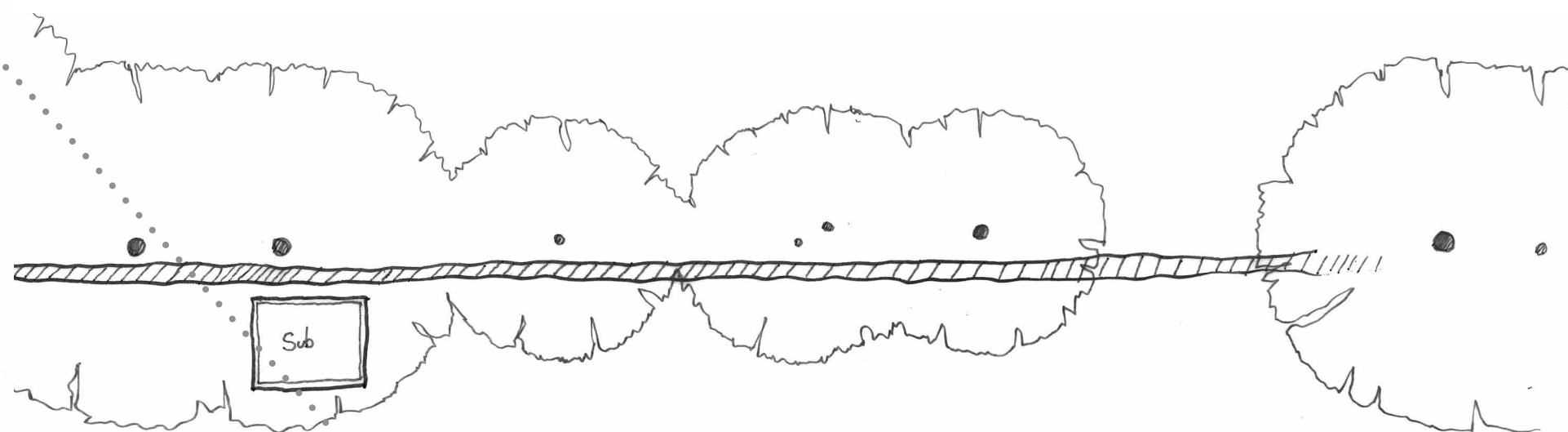
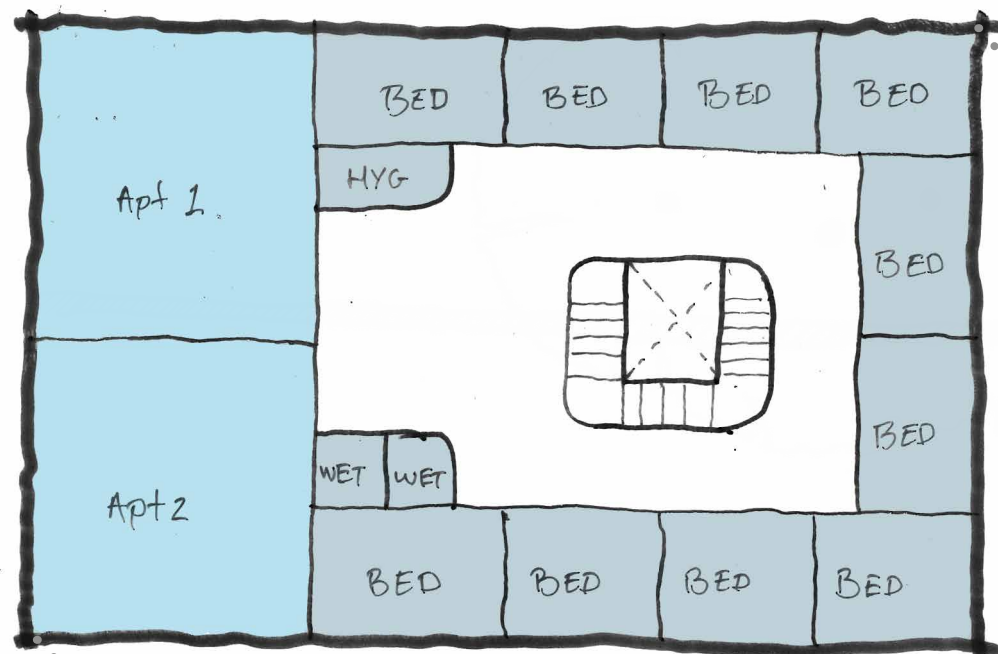
## PROS

- Total surveillance from office
- Service / delivery route into kitchen
- Largest garden / Parking area
- Protected core

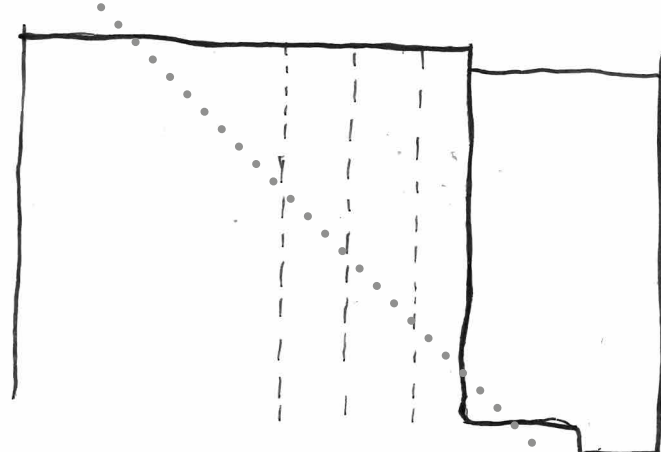
## CONS

- First floor circulation potentially disorientating for SEN residents
- Top heavy
- Potential overlooking in SE and East facing bedrooms
- Stairs do not follow "typical" residential style.

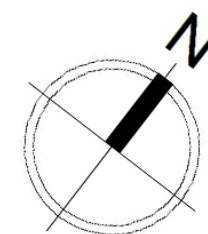
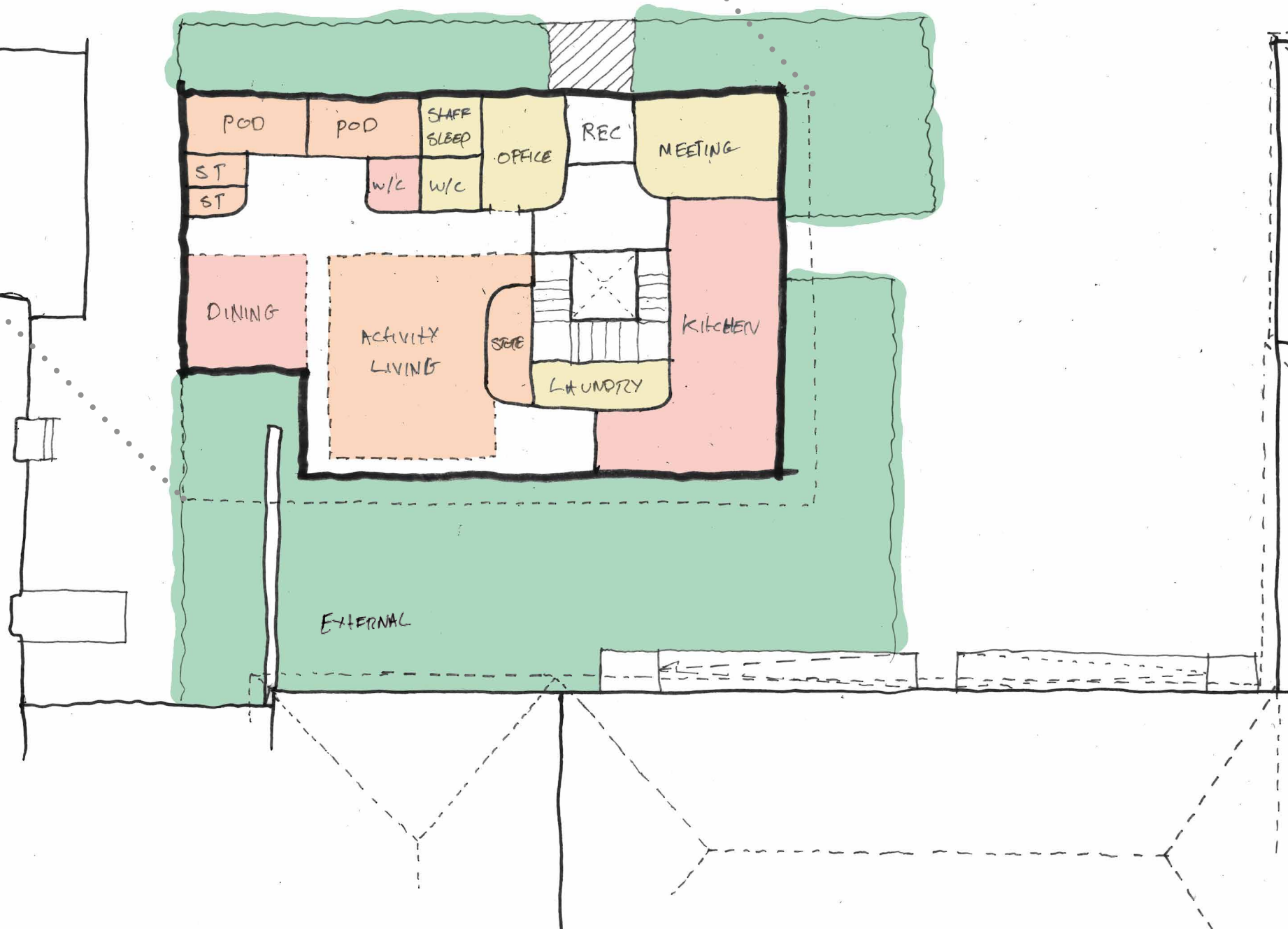




01 First



00 Ground







# Summary

**Preferred Option ..... pg. 18**

**Plans Analysis ..... pg. 19**

## Overview

Subject to review; Atkins recommends the 'Half-stack' as it has the most benefits to SEN accommodation in the opinion of our architects with SEN educational experience.

An improved plan has been drawn up with a greater degree of accuracy to check the provision requested initially against the outcome suggested in this plan configuration.

A few key points have been used to illustrate why the plan is successful on the site.

## Key Points

- Option 2 'half stack' is the preferred option
- The accommodation in the plan is 20% larger than the accommodation originally stipulated in the schedule
- The analysis drawings are some of (but not exclusively) the reasons why the plan was recommended

Preferred Option

Half Stack Option

01 First



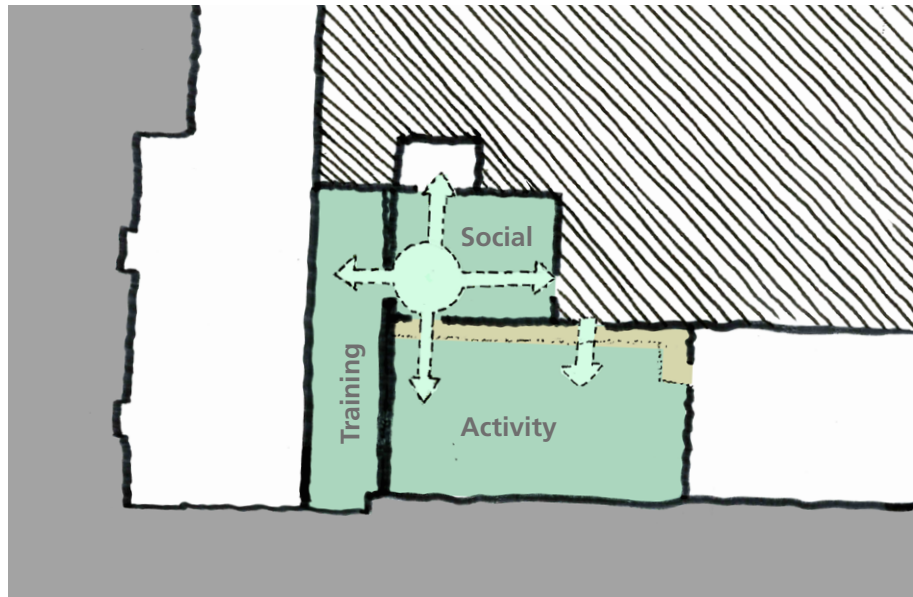
00 Ground



ACCOMMODATION			
	Requested Area (m2)	Proposed Area (m2)	Room
Contained suites	60	61	APARTMENT
	60	61	APARTMENT
	120	122	
Supported bed suite	4	6	WET ROOM
	6	6	HYGIENE
	11.3	12	BED
	11.3	12	BED
	11.3	12	BED
	11.3	12	BED
	11.3	12	BED
	66.5	72	
Bedroom suite	4	6	WET ROOM
	11.3	12	BED
	11.3	12	BED
	11.3	12	BED
	11.3	12	BED
	11.3	12	BED
	60.5	66	
Activity Suite	70	77	LIVING / ACTIVITY
	4	4	SENSORY POD
	4	4	SENSORY POD
	9	10	STORE EQUIP
	2	3	STORE FURNISHINGS
	2	3	STORE STATIONARY
	91	101	
Dining Suite	19	21	DINING
	5	5	STORE FOOD
	50	50	KITCHEN
	2.5	6	W/C
	76.5	82	
Support suite	12	12	LAUNDRY
	8	12	STAFF BED
	5	15	RECEPTION
	16	21	MEETING
	10	16	OFFICE
	2.5	5	W/C
	53.5	81	
Ancillary	6	6	LIFT
	6	6	LIFT
Circulation		6	SHED
		6	SERVICE
		16	TERRACE
		40	
	94.8	18	CIRCULATION
		24	CIRCULATION
		33	CIRCULATION
		15	CIRCULATION
		31	CIRCULATION
		18	CIRCULATION
		9	FIRE ESCAPE
	94.8	148	
TOTAL Internal area	568.8	712	
Total wall area	47.4	44	
GROSS TOTAL AREA (m2)	616.2	756	

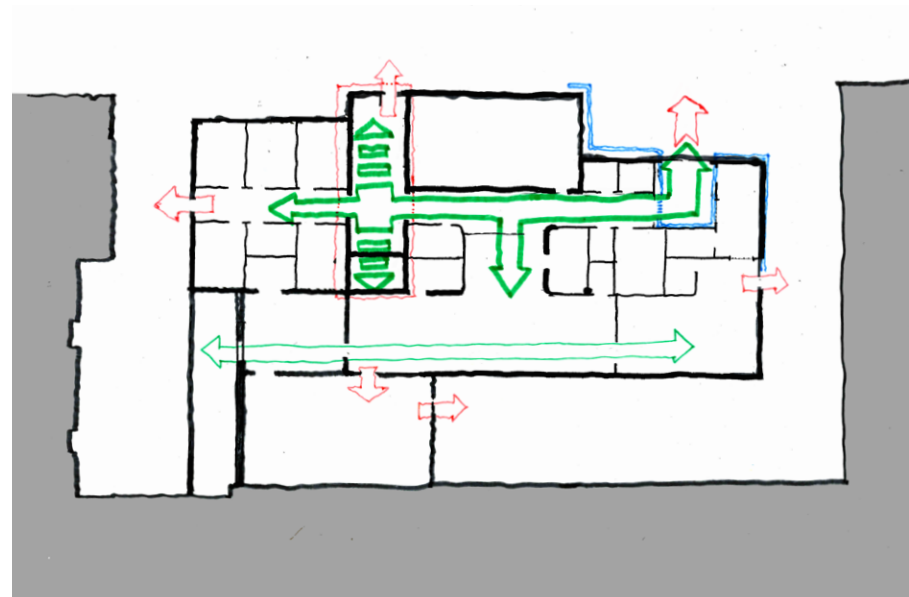


# Plan Analysis



## Functional Gardens

By using the existing wall and additional walls, the gardens can be subdivided to create different qualities of space that serve different purposes. The narrow garden can be used as a tending training garden as it shares the proportions of a typical terraced house garden. The space adjoining the shed is principle circulation and social interaction area, whilst the largest space at the bottom is the activity space which can be used for more energetic play.



## Circulation & Access

### Circulation (Green) -

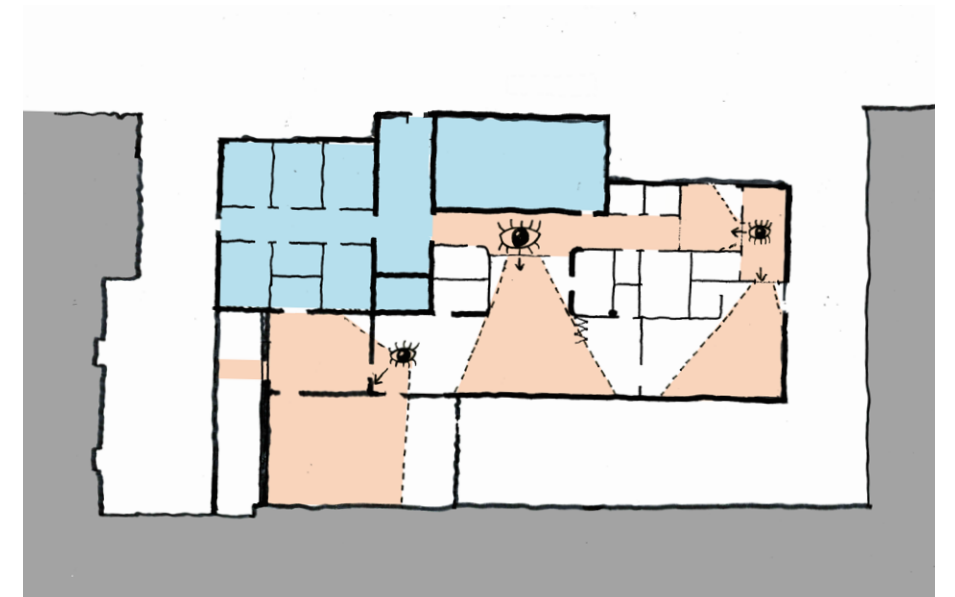
The main route through is promotes easy way-finding through direct lines and defined. The secondary axis running from the garden on the left through the living - dining - kitchen areas make the relationship between these areas stronger promoting a fluidity between each space but with clear definition between each to aid students who have difficulty with orientation.

### Fire Escape (Red) -

In each area of the plan a fire exit is easily locatable. By having the central vertical circulation as a protected fire core leading to the main fire exit. A simple fire strategy to head to the stairs in any situation can be employed to avoid confusion.

### Security (Blue) -

The secure line comes into the main reception so that upon initial entry you do not feel as though you are crossing a boundary. It allows staff to remain aware and accountable of who is in the building.



## Accountability & Privacy

From the office and central corridor, the majority of the internal shared space can be monitored which would allow for improved accountability. From the main living area the gardens also remain visible.

The private area of the building is blocked from immediate view by the vertical circulation core so that bedrooms can feel more secure and much more like personal space.



# Moving Forward

**Design Precedents ..... pg. 22**

**Architectural Summary ..... pg. 25**

# Overview

A handful of examples of successful design precedents have been selected to illustrate how Atkins could potentially move forward with a SEN-centric design. They look at design considerations in terms of layout, sensory experience and material choices. Their purpose is to promote discussion so that we can move forward the design process with the client.

The layout has been given a 3d mass to show how it would begin to affect the site. The images in this section are predominately a result of the form of the spaces and remain architecturally ambiguous at this stage.

# Key Points

- Top-lit designs favour this space
- Sensory elements should be incorporated into the fabric of the building
- Orientation and way-finding can be improved with detail design
- 3D images are architecturally ambiguous and should be used to illustrate mass on site only.



# Design Precedents

## Belgium- Ghent SEN School

A Special Educational Needs centre was built within a Ghent school in 2016 which acts as a good case study for the BCC SEN Accommodation as it shared many design challenges and potential solutions.

Namely it is an infill project into an 1870's building of similar proportions to Cabot House and is an existing educational facility for the same purpose as the brief.

It uses the 'single stack' option to fill the site and creates usable space on the roof whilst providing contrasting architecture to the original building without being visually offensive.

Generous provision for circulation has been provided and a central orientation zone allows students who have problems with orientation a higher degree of autonomy when navigating the building without the need for support.

(Top)

**In plan** - The centre occupies the entire ground floor and creates new indoor circulation for the existing building around the new centre.

(Middle)

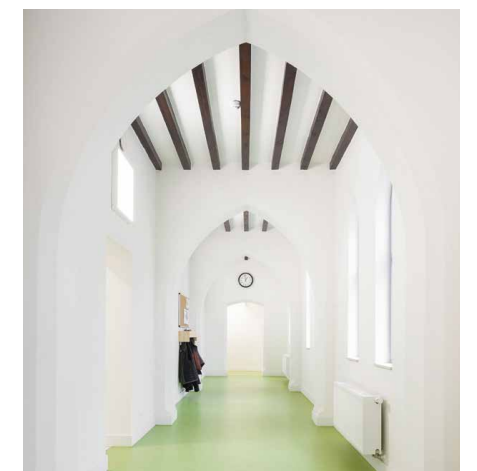
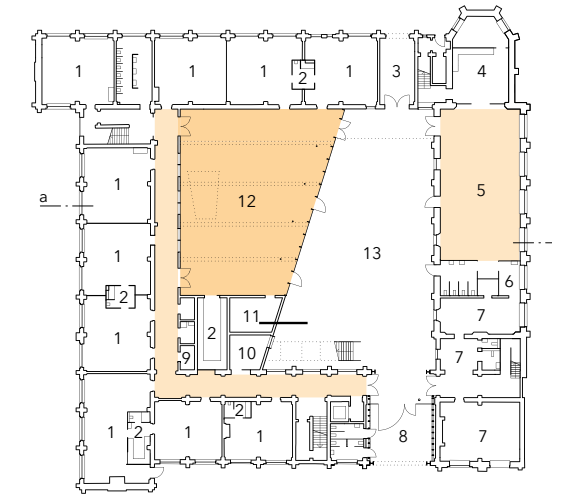
**Green Roof** - The roof becomes a feature for the centre and is usable outdoor quality space.

(Bottom-Left)

**Main Hall** - Set within the 1870's school courtyard

(Bottom- Right)

**Coloured Corridors** - Used to delineate routes through the school, providing a visual stimulus as well as reducing confusion during way-finding for students who struggle with orientation.





# Maggie's Hammersmith

Maggie Centres are support centres for cancer sufferers, they allow patients to visit, stay and receive support and consultation in a private but welcoming environment. These have been chosen as design precedents for their importance of providing a nurturing and calming environment that shares a residence / support functionalities that require a connection to but also privacy from their main facilities, (in this case hospitals).

Maggie's Hammersmith in particular, is important due to its inner-city locating with potential for overlooking for outside. The design solutions use few windows at eye level and focus on enclosure of the walls to provide a secure environment, preferring top light areas to light the area without allowing views in, much like the proposed option for CoBC. A strong connection between living, dining, and outdoor space is key to creating a 'homely' environment.

A secluded entrance approach adds to the feeling of privacy before reaching the reception which can be welcoming but also act as a secure line for staff accountability who have a duty of care over the residents.

(Top)  
**Maggie's Manchester** - Contrasting neutral colours with well lit spaces

(Middle)  
**Maggie's Hammersmith** - Natural light only at roof level to provide a protective secure environment with warm natural timber walls.

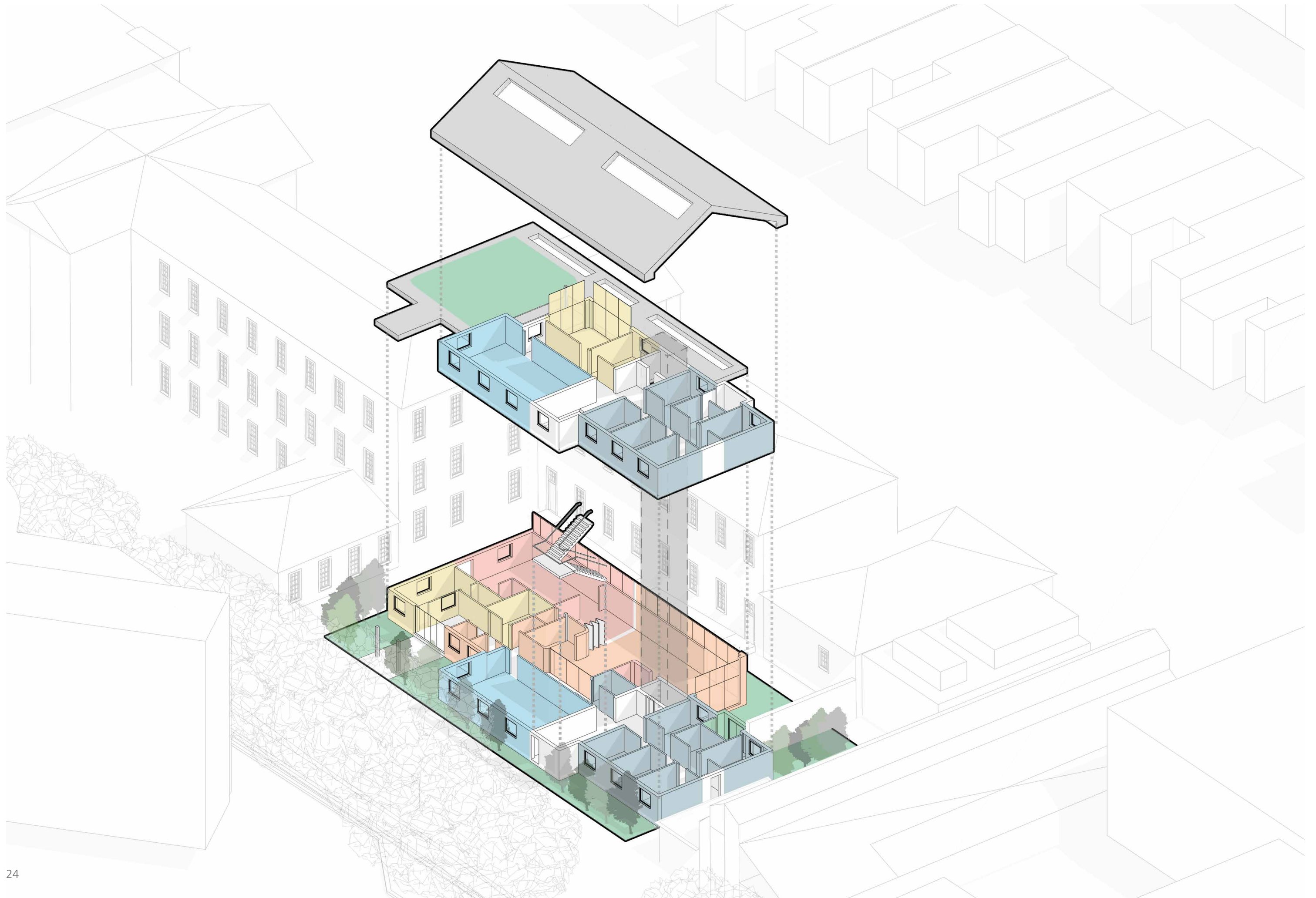
(Bottom-Left)  
**Maggie's Manchester Plan** - An external guiding wall ushers users into the secluded entrance before opening out into the main living area.

(Bottom-Middle)  
**maggie's Manchester Living** - A choice of well connected spaces around a 'kitchen heart' have visual connections with each other. Open airy and light but without privacy issues from outside.

(Bottom-Right)  
**SEN Ghent** - Visually Stimulating flooring and tactile wall textures to improve sensory experiences.







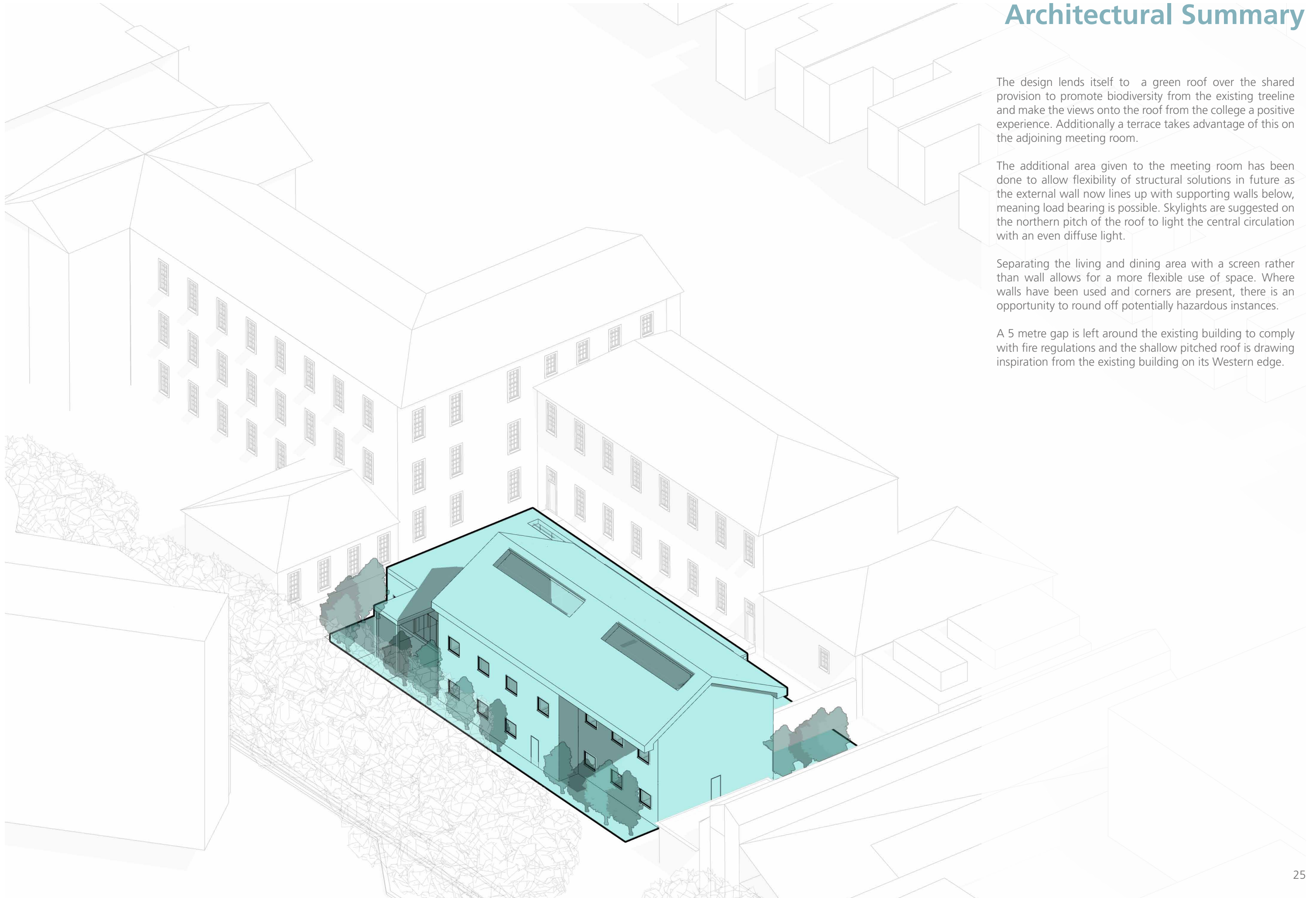
# Architectural Summary

The design lends itself to a green roof over the shared provision to promote biodiversity from the existing treeline and make the views onto the roof from the college a positive experience. Additionally a terrace takes advantage of this on the adjoining meeting room.

The additional area given to the meeting room has been done to allow flexibility of structural solutions in future as the external wall now lines up with supporting walls below, meaning load bearing is possible. Skylights are suggested on the northern pitch of the roof to light the central circulation with an even diffuse light.

Separating the living and dining area with a screen rather than wall allows for a more flexible use of space. Where walls have been used and corners are present, there is an opportunity to round off potentially hazardous instances.

A 5 metre gap is left around the existing building to comply with fire regulations and the shallow pitched roof is drawing inspiration from the existing building on its Western edge.







**Design Change Overview..... pg. 28**

**Design Iterations ..... pg. 29 - 30**

**Updated Analysis ..... pg. 31 - 33**

**Architectural Summary ..... pg. 34 - 35**

# Post-Meeting Design Changes



## Overview

This section addresses the comments made during the client meeting on 10/12/2019 and the minutes that followed. A number of changes were requested to the design that have been actioned although what was proposed as a 'simple flip' of the plan resulted in a number of complications when put into practice.

As a result an alternative layout has been produced which encompasses the design intention of the comments made without compromising the successes of the previous design. The pros and cons of the design are analysed as well as suggestions for moving forward.

## Key Points

- A new layout has been created to respond to the clients comments
- Pros, cons and concerns have been flagged up for discussion
- The design lends itself to a more contemporary architectural style
- Deliveries and storage space have been consolidated with the existing building to allow the building to respond better to its context.

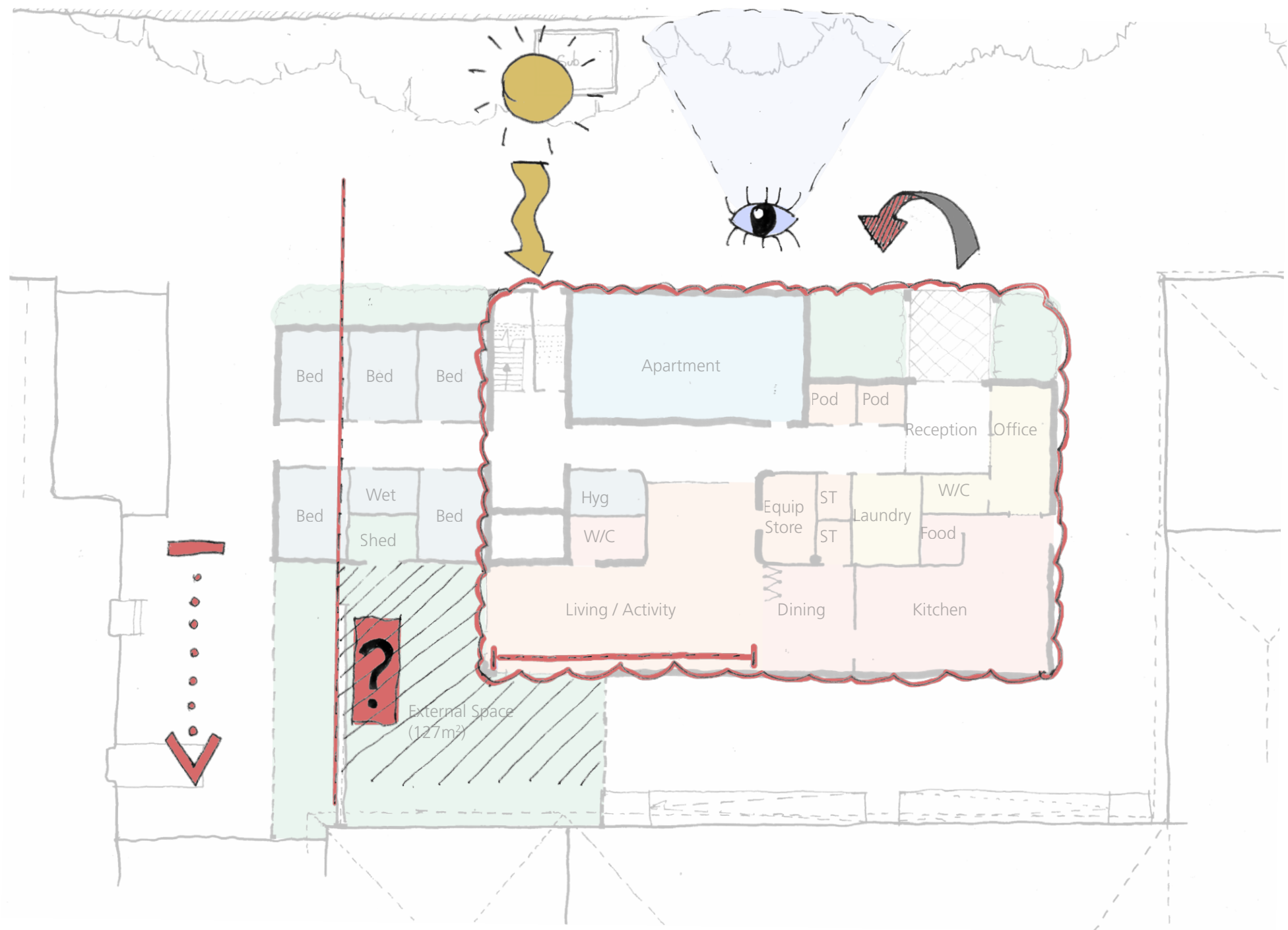
# Comments Summary

**LIGHT**  
Opportunities to provide more natural light to the main shared spaces should be made and if possible improve the amount of light received by terraces.

**ACCESS**  
An existing delivery route runs to the refectory along the Western building edge. This should be kept clear and new delivery routes should attempt to be consolidated.

**CRICKET GROUND**  
The first floor offers views to The Cricket Ground so more should be made of the opportunity. Moving the shared terrace to the North facing side of the building.

**180\* FLIP**  
Leaving the bedrooms in their current position, the 'body' of the building should be rotated 180\* to bring the living area to the roadside, better connecting it to outside



**BOUNDARY**  
The existing Grade II Listed wall should be considered the boundary that the building should not extend beyond. Providing a divide between existing and new.

**CATERERS**  
The containers on site currently are in use by caterers and if they are being removed then additional provision should be provided for them in the new build

**SHADE**  
Currently the building position does not allow direct natural light into the garden. Steps to mitigate this or improve the quality and visibility should be taken.

**GLAZING**  
To connect the building to the goings on outside, a generous provision on glazing should be considered on the living area and appropriately orientated.

## Post-Meeting Iteration

This option was produced following the advice from the meeting as closely as possible, removing bedrooms from the ground floor and relocating them upstairs whilst "flipping the plan" 180\*.

A large glazed frontage has been proposed following the advice to better connect the residents to the outside. The roof terrace has been better located to have views of the cricket ground and some of the bedrooms have been given a balcony area. In many way this is a successful plan but there are also several changes that have undesirable outcomes or fail to address the updated requirements.

Notably there is little connection to the garden from the main shared area and the apartments are removed from the rest of the private areas.

Delivery could be consolidated with existing routes but in this case is not and the first floor has a large occupancy but is only serviced by one WC. Whilst this is the requested response it can be improved on using the same guiding principles in a different way.

## PROS

- **Good level of privacy for bedrooms**
- **North facing terrace**
- **Potential for balconies on First floor bedrooms**
- **Strong linear circulation**

## CONS

- Poor relationship between living and garden
- Poorly lit garden not addressed well
- Private and shared spaces not consolidated
- Accountability & sight-lines compromised
- Uneven WC distribution





## Developed Iteration

## Mitigating negative design traits from the post-meeting iteration

By swapping the orientation of the kitchen suite and bedrooms, the existing delivery route for the refectory can be used to supply the kitchen in the new building and does not obstruct the newly provided catering stores. A good connection between the outside and the living/ activity area is created allowing the garden more exposure to diffuse light.

Having a central office also overlooking the living area retains the existing benefit of accountability. The WC provision is much more centrally located on ground and first floor.

The first floor terrace can be accessed without having to go through the meeting room so can be used at any time even as a secondary garden that is removed from the hubbub of the downstairs shared facilities.

This design does not address privacy as well as the previous option and measures to mitigate overlooking may need to be taken. The bedrooms and the existing college will typically not be in use at the same times during the day so this should not be a huge problem but it should be flagged up.

## PROS

- Consolidated shared / private spaces
- Large North facing terrace
- Good relation between living and garden
- Natural light for rear garden
- Delivery routes for existing kitchen and new kitchen matched

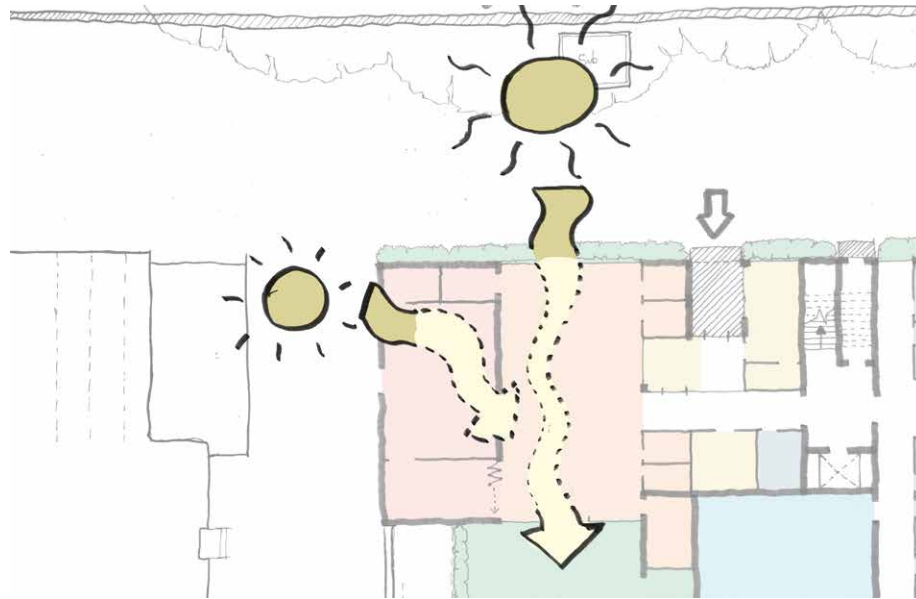
## CONS

- Potentially poor relationship between Apartment / bedrooms and existing building
- Lots of open glazing could create 'goldfish bowl' effect



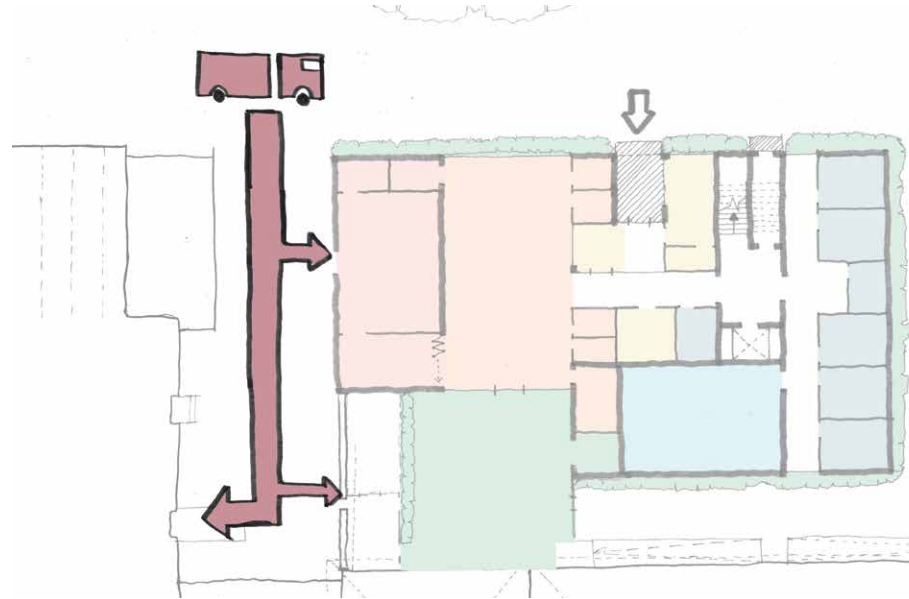
# Plan Analysis

Below are illustrated analysis showing how the plan responds to comments made during the meeting,



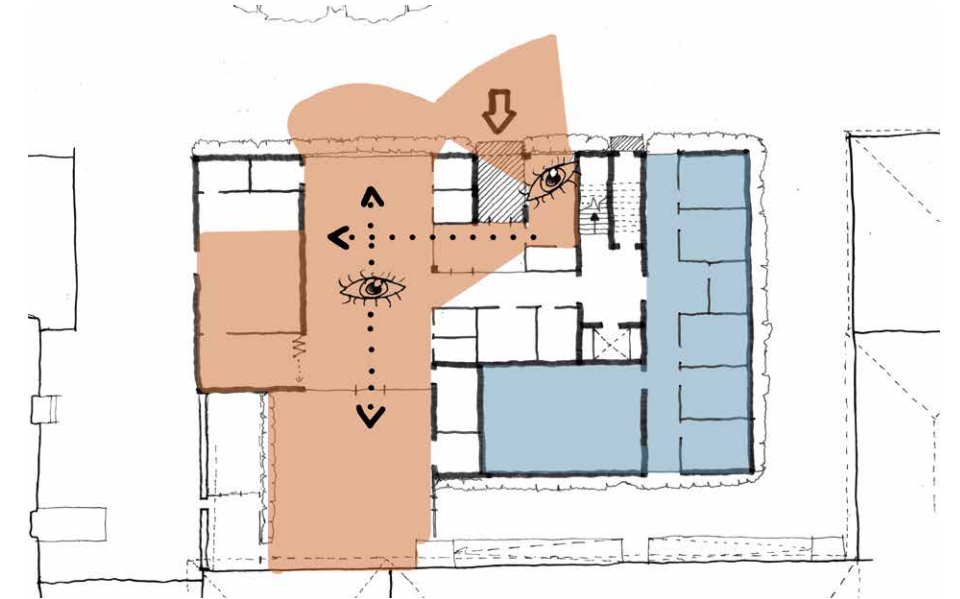
## Diffuse light - quality external spaces

As the main facade of the building is North facing, the majority of the light coming in will be diffuse. Depending on how skylights are configured, this option has the opportunity to have a very well light central space that would spill light out into the external spaces.



## Delivery route

The refectory, caterers and new kitchen will all be able to use a consolidated delivery route, minimising the use of vehicles elsewhere on the site. This also lends it self to pedestrianising other parts of the site to improve the surrounding area.

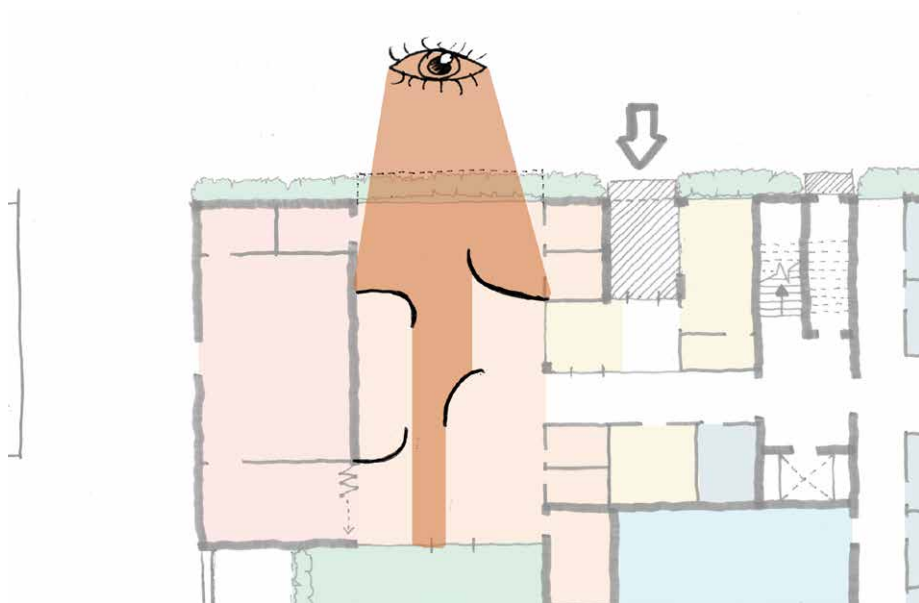


## Accountability & Privacy

This options provides a clear divide between shared and private spaces. Using the vertical core as threshold that makes crossing into private area a more homely experience. from the office a direct sight-line can be drawn into the main area and from the main area, all other shared space is visible.

# Issues That May Arise

When developing the plans, our in-house SEN specialist flagged up issues that may be of concern moving forward. Illustrated are some high-level ideas for solutions to mitigate future concerns.



## “Goldfish” effect

While there will be positive effects of having a strong connection to the outside from the inside. The residents, in some cases may not feel as comfortable being exposed so openly to the outside. The “goldfish bowl effect” could be considered a negative and internal solutions such as flexible partitions may want to be considered to mitigate this.



## Oblique bed windows

The potential overlooking between the college and the SEN residence could be problematic for residents who are vulnerable. Using oblique angled windows may be one way to manage this. Blocking views in but allowing views out.



## Landscaping

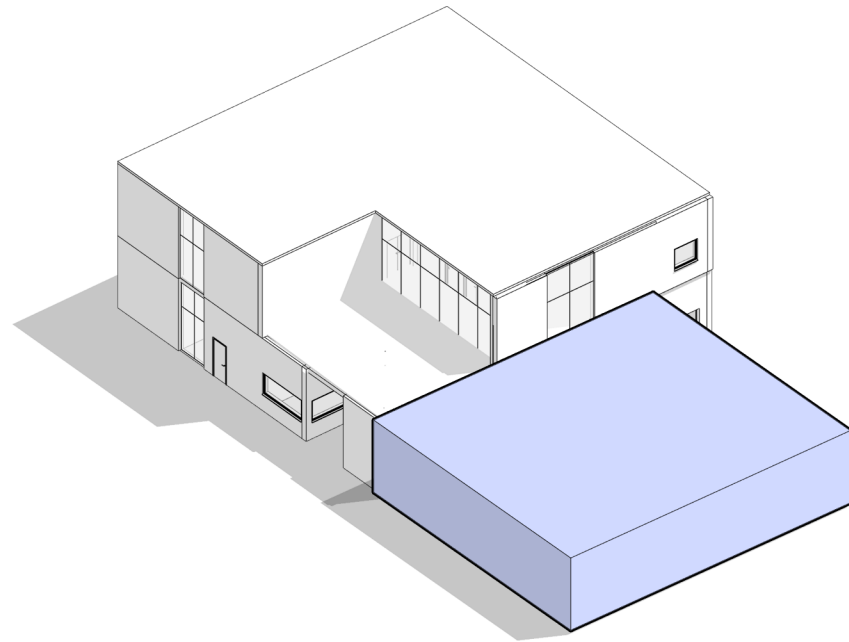
As deliveries are consolidated on the Western side, the Eastern side can be more extensively landscaped to create a nicer area to mitigate problems with privacy on the bedrooms and apartments whilst providing a secluded area for relaxing.

Connections between nature and positive learning are an important part to a successful SEN learning environment.

Wider landscaping can give visual clues as to how the surroundings should be used, creating a safer and nicer looking context.

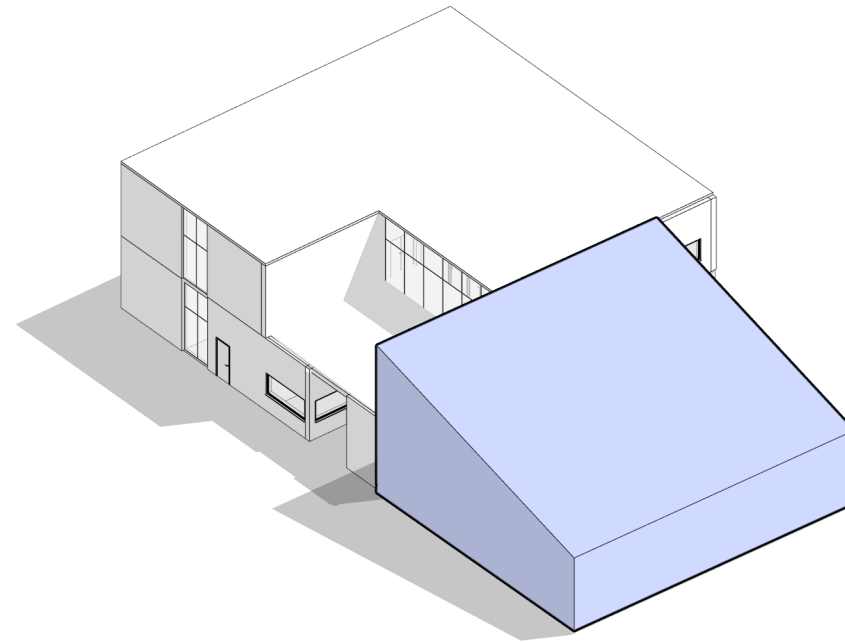


# Building Form Considerations



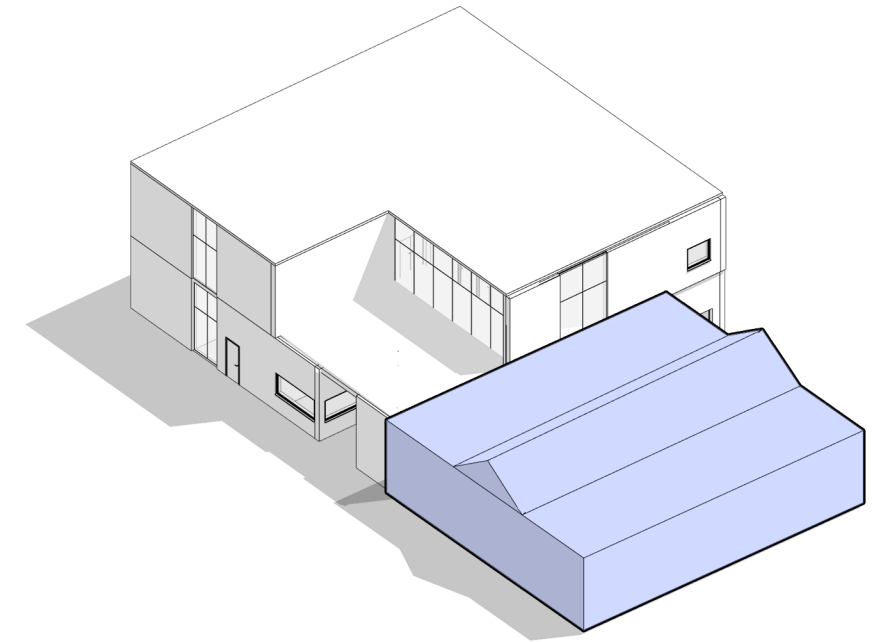
## Flat roof

This is the most simple form and the roof of the activity and kitchen area could be used as further outdoor space and would allow more light onto the first floor terrace.



## Sloped roof

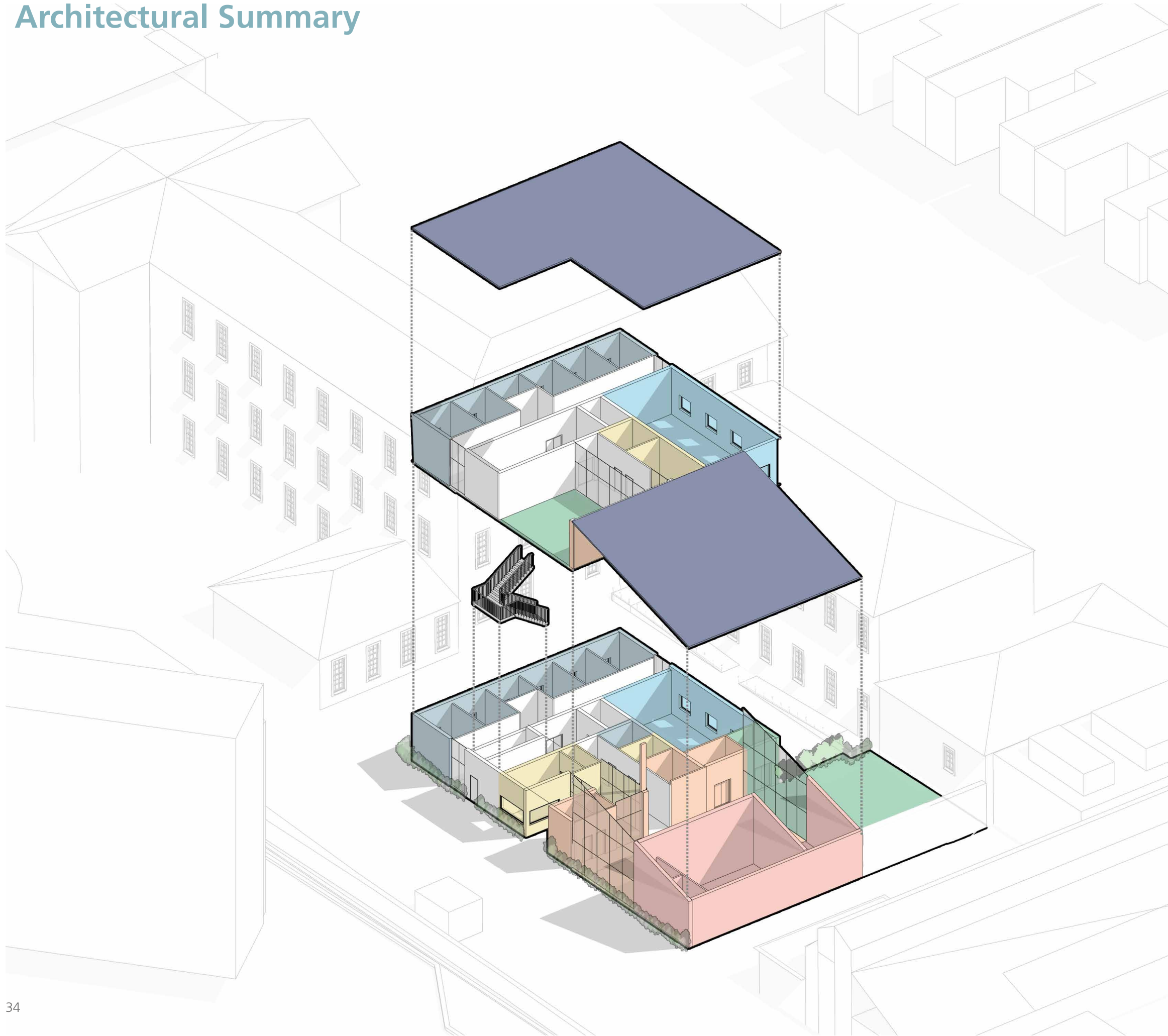
This option could be sloped in any orientation and sun studies should be explored for optimal design outcome if this form was taken forward. Benefits allow skylights for diffuse or direct light depending on direction and give a contrasting architectural form against the 18thC College. It also gives an opportunity to have a double height living area.



## Mid-gable Roofscape

Having a gable accent could take advantage of angled skylights and provide additional terraced space. The size and position of the gable tip would offer similar benefits internally to the sloped roof.

# Architectural Summary



ACCOMMODATION				
	Requested Area (m2)	Opt2 Area (m2)	New proposed Area (m2)	Room
Contained suites	60	61	60	APARTMENT
	60	61	77	APARTMENT
	120	122	137	
Supported bed suite	4	6	6	WET ROOM
	6	6	7	HYGIENE
	11.3	12	12	BED
	11.3	12	12	BED
	11.3	12	12	BED
	11.3	12	12	BED
	66.5	72	73	BED
Bedroom suite	4	6	6	WET ROOM
	11.3	12	12	BED
	11.3	12	12	BED
	11.3	12	12	BED
	11.3	12	12	BED
	60.5	66	66	BED
Activity Suite	70	77	103	LIVING / ACTIVITY
	4	4	4	SENSORY POD
	4	4	4	SENSORY POD
	9	10	10	STORE EQUIP
	2	3	4	STORE FURNISHINGS
	2	3	4	STORE STATIONARY
	91	101	129	
Dining Suite	19	21	20	DINING
	5	5	5	STORE FOOD
	50	50	50	KITCHEN
	2.5	6	5	W/C
	76.5	82	80	
Support suite	12	12	12	LAUNDRY
	8	12	10	STAFF BED
	5	15	15	RECEPTION
	16	21	17	MEETING
	10	16	15	OFFICE
	2.5	5	4	W/C
	53.5	81	73	
Ancillary		6	6	LIFT
		6	6	LIFT
	6	6	6	SHED
		6	0	SERVICE
		16	56	TERRACE
	6	40	74	
Circulation	94.8	18	17	CIRCULATION
		24	15	CIRCULATION
		33	40	CIRCULATION
		15	17	CIRCULATION
		31	40	CIRCULATION
		18	16	CIRCULATION
		9	8	FIRE ESCAPE
	94.8	148	153	
TOTAL Internal area	568.8	696	729	
Total wall area	47.4	44	44	
GROSS TOTAL AREA (Excluding terrace) (m2)	616.2	740	773	

# Architectural Summary

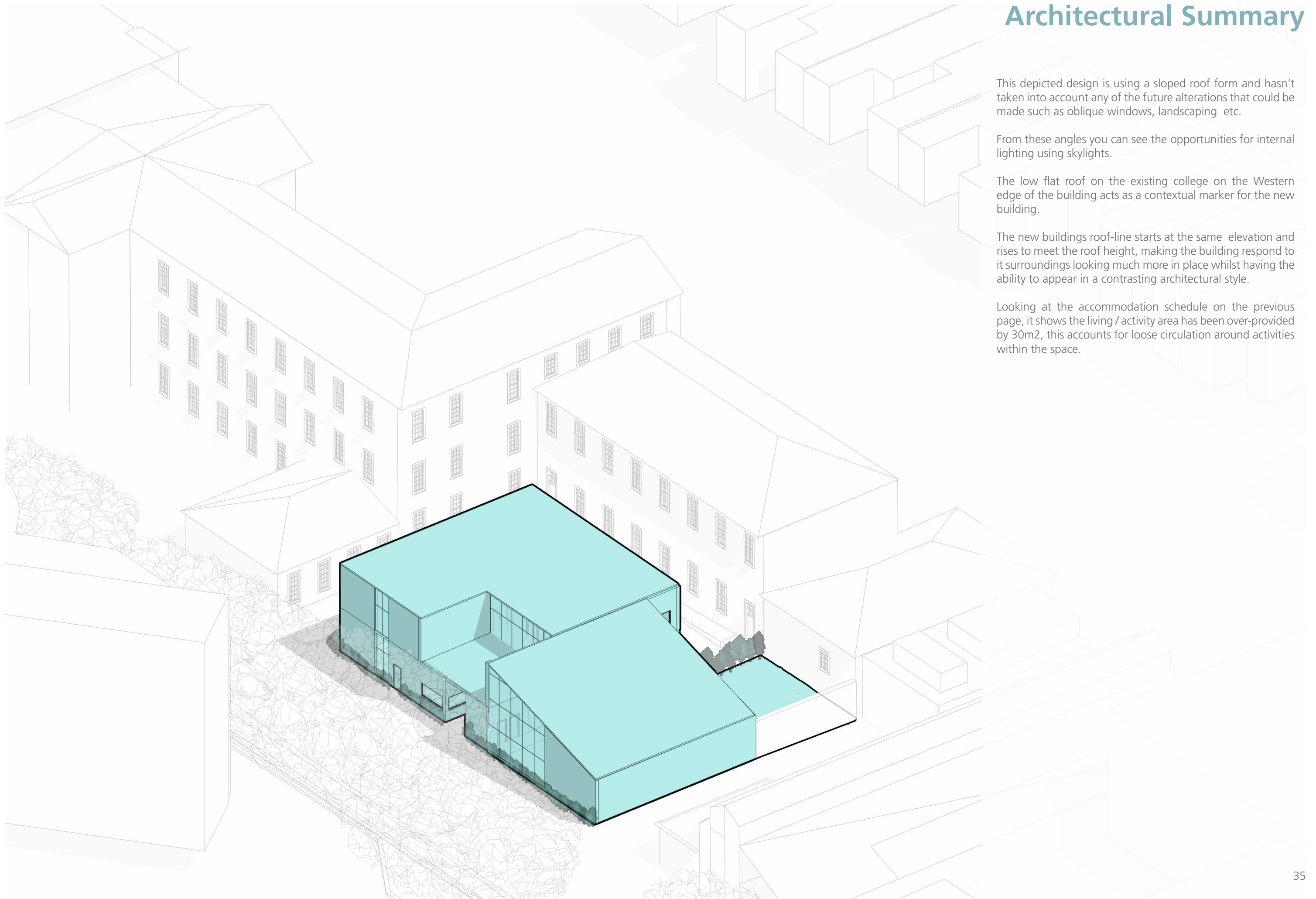
This depicted design is using a sloped roof form and hasn't taken into account any of the future alterations that could be made such as oblique windows, landscaping etc.

From these angles you can see the opportunities for internal lighting using skylights.

The low flat roof on the existing college on the Western edge of the building acts as a contextual marker for the new building.

The new buildings roof-line starts at the same elevation and rises to meet the roof height, making the building respond to its surroundings looking much more in place whilst having the ability to appear in a contrasting architectural style.

Looking at the accommodation schedule on the previous page, it shows the living / activity area has been over-provided by 30m<sup>2</sup>, this accounts for loose circulation around activities within the space.







## Assumptions & Caveats

# Appendices

- It is assumed that the accommodation is for SEN students who have difficulty with sensory and orientation difficulties in instances
- It is assumed that the accommodation is used as a training facility for independent living
- The provision for W/Cs has been increased by 50% of the initial schedule of accommodation to account for disabled use.
- Circulation has also been over-provided for SEN requirements.
- Bedroom sizes have been increased to 12m<sup>2</sup> to meet minimum standards for designing for SEN

David Gilbey  
**Faithful+Gould Limited**  
The Hub  
500 Park Avenue  
Aztec West  
Bristol  
BS32 4RZ

**Tel: +44 (0)1454 663000**  
**Fax: +44 (0)1454 663344**  
**Direct: 01454 663000**  
**david.gilbey@fgould.com**

© Faithful+Gould Limited except where stated otherwise