3.1 Design Principles

The design team have started at first principles to best understand what architectural responses would best meet the unique and inspiring brief for Owlstone Croft Postgraduate Homes. The project brief describes the design of a distinct environment for a community of students, placing wellbeing at its heart.

This student-led approach has defined how the architectural team have tackled the design process since Stage 1. In order to ensure design solutions create the optimum living and working environment for the individual student, the Design Team started at the scale of the study-bedroom. From this point, the team looked at the scale of the home, hosting a community of 5 students which are understood to be the core support network for postgraduate students living in the college.

Following initial studies of the postgraduate home, the team then looked to the scale of the site, including new community spaces. The team tested a range of strategies which fostered groups of larger communities within the Owlstone Croft site. The proposal represents a new site for Queens' with a unique community and intellectual life of its own.







1. The study-bedroom

2. The house

3. The site

3.1 Design Principles



Killowen House, Hall McKnight

1. Non-institutional feeling - creating homeliness

These houses are to be the permanent residence of a community of students. Critical to the feeling of belonging in a community is the sense that the place you reside in is your home. In order to create a feeling of homeliness, design has developed to avoided the adoption of institutional qualities, which can be typical of student accommodation.

Accommodation is organised into 4 and 5 bed houses, each with its own private front door. Each house shares a generous living, kitchen and dining space on the ground floor, with direct access to a communal shared garden.



Level thresholds, East London House, Mikhail Riches

2.Inclusivity

Inclusivity is key to the ethos of the college. This will has been a central driver of the design of the student house. The ground floor is fully accessible to a range of users' with a variety of needs and aspirations. The design placing emphasis on places where students can come together and socialise.

Each home has a lift, ensuring that all student bedrooms are visitable by a range of users. 8 homes have wheelchair-accessible bedroom on the ground floor.

This notion that inclusivity is a key design driver will assist the formation of these crucial peer support groups, perhaps the most important network a student will develop during the course of their time in the college.



A range of spaces for students to gather

3. Encouraging interaction

To foster the sense of community within the house, care has be given to the design of communal spaces including the lounge and kitchen, which will be key spaces for students to come together.

The organisation and size of these spaces have been developed to allow for residents to be together with their guests, allowing for individuals from the wider community to engage with the house.



Bauder bio-solar roof system

4. Sustainability

The building technology should be intuitive and user-friendly. The ambitions for sustainable design will provide dwellings which are very comfortable, avoiding overheating in summer and creating welcoming environments in which to live and study. To achieve the sustainability targets, the team have considered a range of servicing options.

Designs have be driven by a fabricfirst approach, creating well-insulated buildings with low heating demands.

To create common goals among students and foster the sense they are living in a sustainable community, methods to encourage students to use less energy will be explored.



3.1 Design Principles



Threshold at David Leach House

5. Excellent connection to the outdoors

To enhance the wellbeing of students residing in these dwellings, the houses have fantastic connections to the surrounding landscape. The ground floors have good connections to the outdoors, with thresholds that allow students to step out into green space for recreation, outdoor dining.

Views to the outdoors have be considered throughout the house, including the organisation of common stairs, and ground floor common spaces.

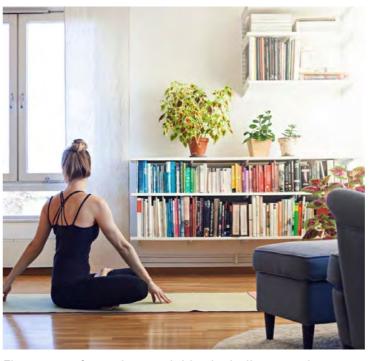
In creating a good connection to green spaces, student's will have more sense of ownership over the outside spaces, making them more likely to make use of and enjoy the landscape.



Locke Living

6. Plentiful natural daylight

The study-bedroom will be a working environment and has been carefully considered to provide a high level of natural daylight whilst mitigating against overheating.

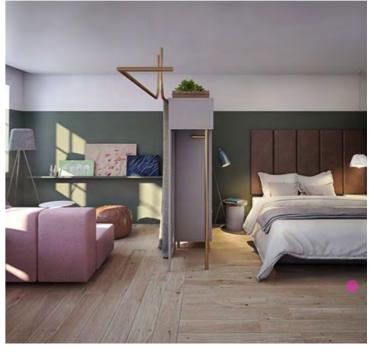


Floor space for various activities including exercise

7. Flexibility & accommodating of different activities

It is important that the rooms are inclusive to a range of occupants, who may wish to carry out a range of different activities. The rooms provide activity zones and floor space for non-work and study activities such as prayer and indoor exercise. This will ensure students may feel more at home.

The balance between fixed and moveable furniture has been carefully considered. Students will be able to move their desks wherever they choose in their room, providing a high degree of personalisation.



Locke Living

8. Separation between sleeping & study area

To protect the welfare of the students inhabiting these rooms, separation between sleep and work is of utmost importance. In creating a separate study space, there is increased likelihood of aiding intrinsic motivation to work. This separation is equally important for achieving high quality sleep, essential for maintaining good physical and mental health.

3.1 Design Principles



A common scene in student living

9. Communal Space for small studygroups

Students may wish to meet in their rooms for collaborative study. A separate study space in the room ensures that students will not need to rely on the bed as a form of seating, creating a better group working environment.



Locke Living

10. Privacy

It is vital that students feel safe in their bedroom. To create a feeling of security there are a number of measures which have been introduced to the bedroom. The bedroom is separated from the study by the ensuite so there is no visual connection. This will produce a more comfortable environment when students host guests in their room.



Window with shading & opening vent

11. Ventilation & Thermal Comfort

To meet sustainability targets and to provide good levels of thermal comfort, the houses are organised to allow cross-ventilation to the study bedroom.

Openable windows will allow students to vary the temperature of their rooms and create a working environment that suits them. Shading will has been considered were appropriate to prevent overheating through the use of pergolas and elements in the landscape.



Robust materials, Church Walk, Mikhail Riches

12. Longevity

The design life of the homes will be greater than industry standard. As such, the structure, MEP and room layouts have been designed in such a way that elements can be replaced without the risk of damage to structure or acoustic and thermal envelope.

Materials specification will ensure the longevity of the building's fabric and fittings and fixtures will be robust to withstand multiple users over time.

3.2 Community Engagement

Public Consultation Events

A virtual public consultation workshop was held on 8th July 2021. A second larger public consultation event took place on 13th July 2021. This exercise was to understand what residents perceive to be the problems with the current site and likely areas of concern.

The traffic movements generated by access to the nursery on site was raised as a major issue of the existing site. Several residents commented on the poor quality of Block B. Potential concerns were raised relating to disturbance to surrounding residents through construction traffic and traffic movements when the site is operational. Potential concerns were also raised on the impact on the nature reserve from the new buildings.

A further digital public consultation event took place on Monday 8th November. The key concerns raised focused on the construction process and the impact of the proposals on the surrounding area.

Site walks

On 10th November 2021 two site walks were held to show participants around the site. The majority of questions and feedback related to: construction management and access; impact of the proposals on the nature reserve; access and parking; existing buildings;

building design and layout; landscaping measures; impact on wildlife and potential flooding.

Feedback from key local groups

Newnham Croft Residents' Association

The group expressed concerns about the proposals' impact on the neighbourhood, particularly the size and scale of the buildings and the proximity to the nature reserve. Other issues included light pollution, noise from the cafe, flood risk, construction access and management, and construction related noise disturbances.

South Newnham Neighbourhood Forum

The forum emphasised the importance of environmental conservation and protection in the context of climate change. They expressed concern about the potential effects of flooding, particularly in relation to the Paradise Nature Reserve.

Friends of Paradise

The group is concerned about the proposals' impact on wildlife, particularly noise and light pollution during construction and when the site is operational. Concerns were also raised on the biodiversity of the nature reserve.

For further information, refer to the Planning Statement contained as part of this application.

3.3 Pre-application Process

Summary

The first meeting between the Applicant and Officers took place on 19th October 2021. A second meeting was held on 11th November 2021 and a third on 18th January 2022. A final meeting was conducted on 17th of March 2022. A series of design workshops were also held to discuss elements of the evolving design in greater detail with relevant officers. Below is a summary of the key themes raised in these meeting by the planning officers.

Demolition of Block D

A whole life carbon study was undertaken to understand the difference between refurbishment or demolition of the Block D. On review of this study, the Council's Sustainability Officer considered that demolition and replacement with a new efficiently design residential building was appropriate in terms of the proposed low embodied carbon, passivhaus standards and energy strategy.

Terraces 1-3

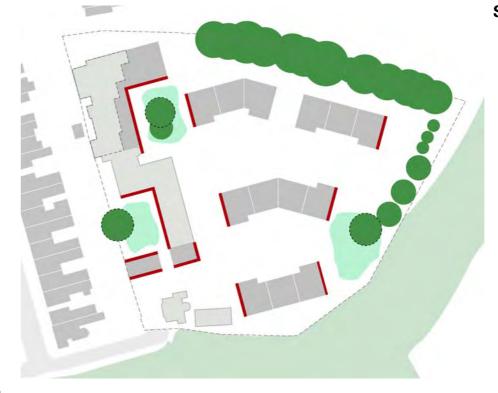
The massing of these terraces, with their pitched gable forms, wide dormers, mansard roofs and 2.5 storey heights were supported. To understand the visual impact of the buildings on Paradise Nature Reserve, the officers recommend verified views were prepared. These were subsequently presented at the fourth pre-application meeting.

The officers recommended that the landscaping proposals should be developed to dissuade people from taking short-cuts to the Nature Reserve from the site maintaining the single point of entrance to the south. Boundary proposals have developed through workshop collaboration with officers to include new estate fencing and planting where appropriate.

Terrace 4

Officers raised concerns about the scale of Terrace 4. There was concern that this building would detract from the Porters' Lodge and visually impact the Paradise Nature Reserve. Following this feedback, the design team explored alternative roof forms, to reduce the scale of the building. On review of the revised roof form, the officers commented that the proposed gable ends and eaves levels now read as a less assertive form and more domestic scale.

The officers recommended further verified views of Terrace 4 to be reviewed in order to understand the visual impact on Paradise Nature Reserve. These were subsequently presented at the fourth pre-application meeting and discussed alongside the boundary and landscape strategies. These demonstrated the scale of terrace 04 in relation to its context from various view points reassuring the officers.



Site Plan PreApp 01

Site Plan PreApp 02

Key updates:

- Placement of building footprints reviewed to respond more closely to site context.
- Development of building articulation / ground floor projections
- Exploration of views into and out of the site



3.3 Pre-application Process

Existing Stores

Initial proposals to demolish and replace the existing store outbuildings were not supported by planning officers. Upon this feedback, the design team explored a revised approach to integrate a new substation and refuse storage within a portion of these existing buildings, whilst considering the nature of the entrance courtyard formed by this, the Porter's Lodge, the new cafe and the western end of Terrace 04 to form a coherent arrival space on site.

Block A & B

The massing and elevation treatment of the new additions to Block A and B were supported. The officers liked the approach to Block A, which reveals the gable of the original Owlstone House.

Officers were supportive of the proposed de-carbonisation works, noting that the improved appearance of Block B was a positive addition to the proposed masterplan strategy for the site. The team discussed the proposed parapet on Block B which will enable safe access to the roof and aid the shielding of rooftop plant from view. The proposed energy strategy was discusses with the Sustainability officer who was supportive of the proposals.

Biodiversity impacts

The Council's Nature Conservation
Officer supported the proposed blurring

of the boundary with the Local Nature Reserve. It was noted that increased areas of open water ditch, emergent wetland vegetation and woodland glades could benefit existing species.

The Officer noted that integrated provision for swifts should be provided as there is a local colony in Newnham that are likely to find new sites.

Lighting impacts on bat species was raised. The design should take account of possible impacts of light spill to bat species with a lighting assessment undertaken.

Landscape & Trees

Tree proposals have been discussed in detail at a series of planning meetings. Whilst initially proposing to remove T10, the project team have taken onboard feedback from the planning officers, with the landscape proposals being evolved to accommodate this and the coordination with the drainage scheme.

Landscape proposals have been developed in collaboration with the planning officers to explore the potential for composed views both in and out of the site. It was discussed that the buildings and landscape proposals would work together to enhance the 'edge of village' location of the site, respecting both the character of the LNR and of Newnham Village.

Hydrology and Drainage

There have been several discussions regarding flood risk on the site. Building levels have been set at 1:1000 +600mm freeboard for climate change. A SUDs strategy was presented and includes a proposal to extend the current ditch by slackening off the contours on site to create a damp meadow condition where water levels may fluctuate but will normally remain damp.

Officers requested further information and draft flood risk report information was shared by the design team.



• Square gable with greater visual impact on Paradise Nature Reserve

| Pre-App 11th November 2021 | Square gable removed,

 Square gable removed, reduced visual impact on Paradise Nature Reserve
 Demolition of the store

building is proposed.

Terrace 03

Black B

Pre-App 18th January 2021

 Design team have explored options to retain the store buildings.



MIKHAIL

RICHES

4.1 Summary of Proposal

The new build postgraduate homes are arranged across 4 terraces with a range of 4 and 5 bedroom houses. Each house will have a generous living, kitchen and dining space on the ground floor with direct access to a communal garden. Between each of the terraces, a rich landscape will lead down to the nature reserve which adjoins the site.

New community space is clustered around the existing buildings. To the south of Block B, a new 1 storey building creates a new and rationalised sense of arrival. This building holds a cycle store and cafe, providing a new student hub at the site entrance. A new study centre is provided in the ground floor of Block A. The existing 1940s extensions are removed to reveal the gable of the original Owlstone house. New single storey extensions create generous study spaces and seminar rooms.

Retained existing buildings are retrofitted for improved thermal efficiency, also improving the external appearance of Block B.

Key Information:

- 60 accessible postgraduate rooms;
- Generous communal gardens;
- Community study space (55 users);
- Seminar room (60 users);
- Cafe;
- Gym;
- Cycle stores;
- · Refuse and Substation;
- Gardener's Store





4.2 Proposed Demolition

Following a detailed examination of strategic options with longevity and the sustainable future of the site at the fore, some existing buildings and structures on site are proposed to be demolished.

Analysis has been undertaken to explore the impact of these decisions, and the effect on the embodied carbon of proposals, as well as opportunities for re-use of materials. Please refer to the Whole Life Carbon study which accompanies this application for further detail.

- 1. Existing external site storage not required in the future.
- 2. Existing bicycle storage with 120 spaces capacity. These are re-provided in new integrated stores.
- 3. Ad-hoc existing additions to Block A are removed to reveal and enhance the original Owlstone House. The study centre proposals are sympathetic to the house, integrating existing structure into proposals to create efficient and flexible spaces.
- 4. Block D / Nursery building is removed to enable the development of postgraduate student homes and a coherent site strategy for the long-term future use of the site. A portion of the existing outbuildings are demolished, whilst most is retained to accommodate ancillary site uses.



4.3 Key Moves - Urban Form

Layout

The proposed layout has been developed to respond to the experience of the site as a series of connected spaces with complementary characters and uses.

Key views linking these spaces have been considered in order to construct a coherent site strategy with clear wayfinding.

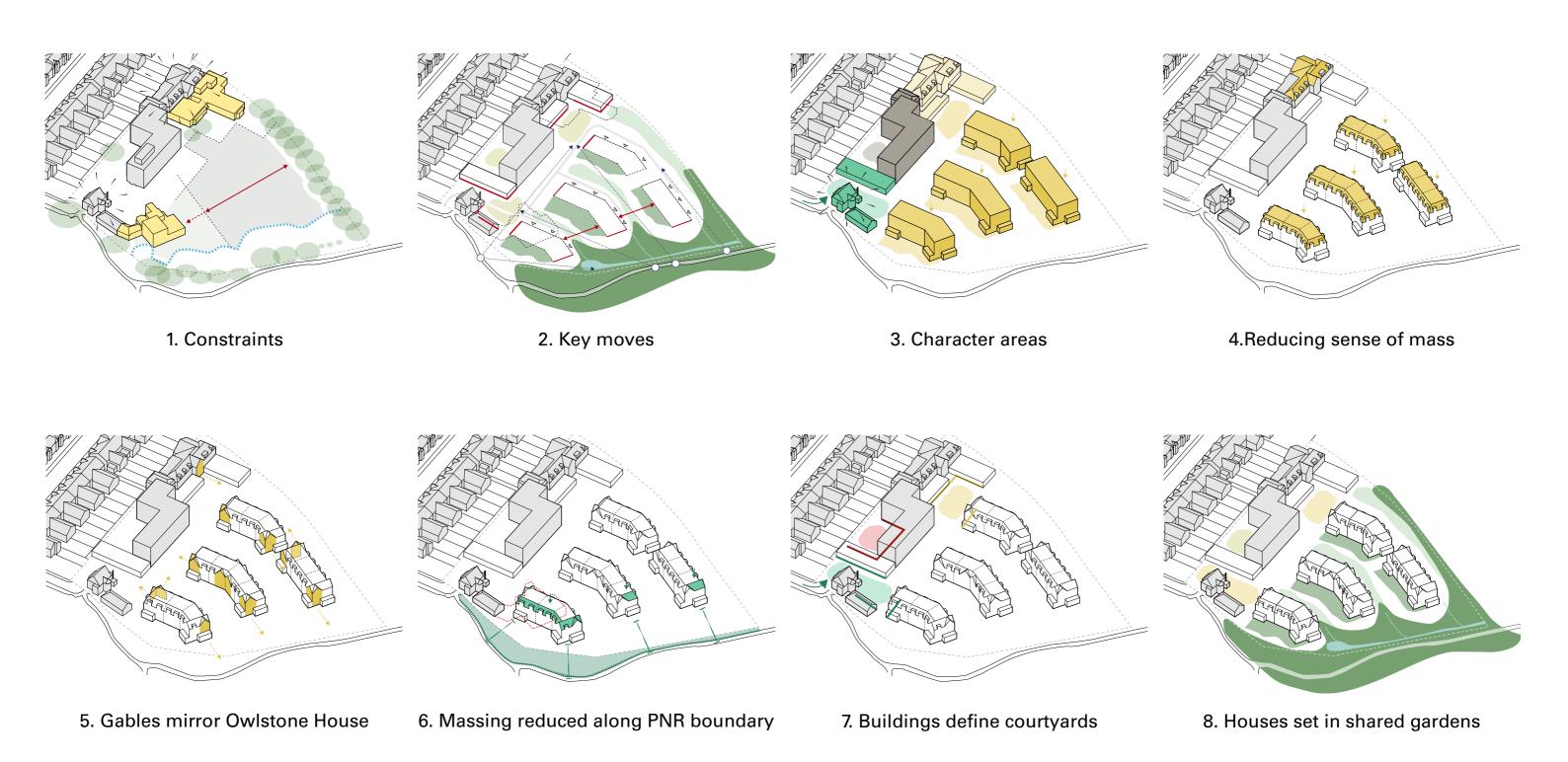
The positions of proposed buildings helps to frame these, with their orientation defining both communal courtyard-like spaces and more linear landscapes and routes.

The relationship to the neighbouring Local Nature Reserve has been carefully examined with proposed buildings set back from the site boundary and views between the site and boardwalk framed where appropriate.





4.3 Key Moves - Developing Massing



4.4 Aerial Sketch View



4.5 Illustrative Views

Arrival

A new single storey extension flanking the south elevation of Block B creates a strong arrival point to the site. Housing generous cycle stores and a cafe, this presents a new student hub at the centre of the site, with views out to the landscape and Paradise Nature Reserve.



Existing south elevation of Block B



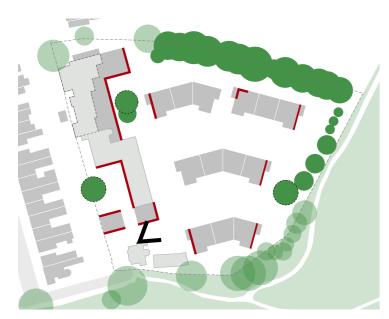
Key plan



Proposed single storey building creating a new arrival point



4.5 Illustrative Views



Key plan



4.5 Illustrative Views

Long Views

The organisation of the site allows for long views to be maintained across the site. The new additions to block A and B create focal points, where students will gather to socialise and study.



Existing view

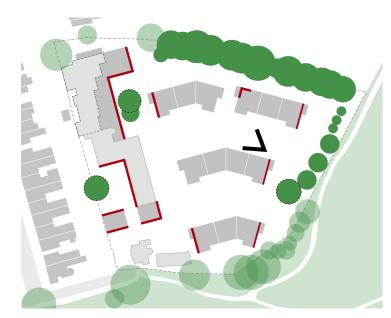


Key plan

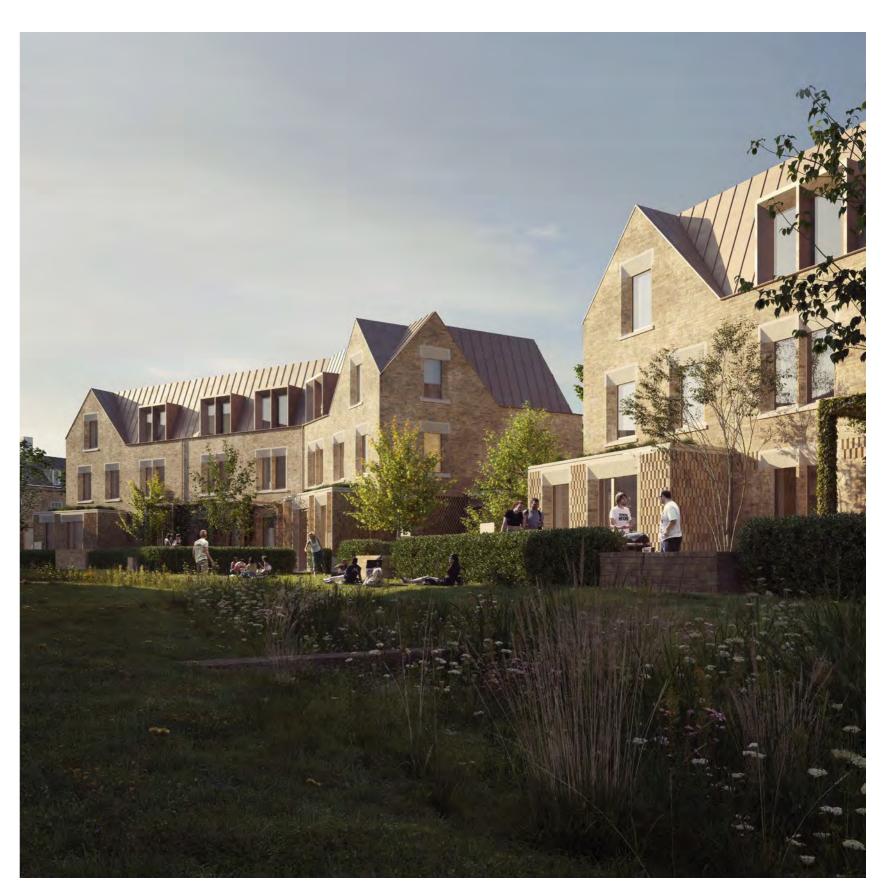


Proposed view looking north

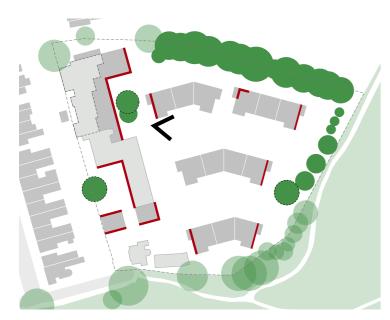
4.5 Illustrative Views



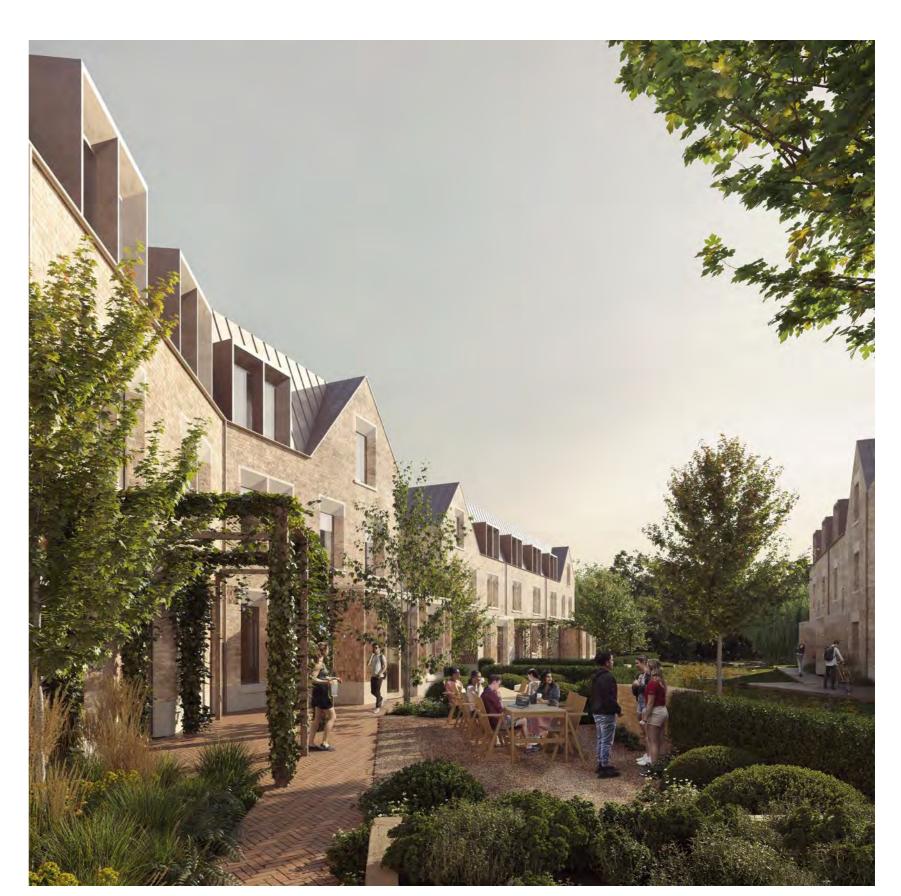
Key plan



4.5 Illustrative Views



Key plan



4.5 Illustrative Views

Study centre and Owlstone House

The removal of the 1940s ground floor extension and the 1938 1st floor extension reveals the original gable of Owlstone space. This gable is flanked with new single storey buildings housing group working spaces.



Existing condition of Owlstone House

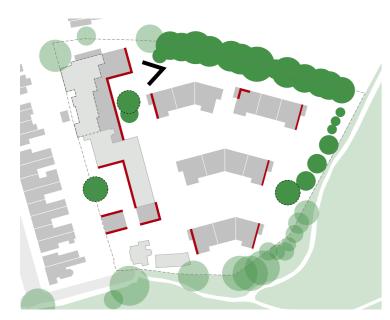


Key plan



Proposed view of Owlstone House and community space

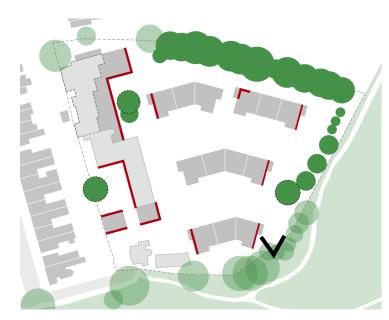
4.5 Illustrative Views



Key plan



4.5 Illustrative Views



Key plan



5.1 Design Principles

Unlike typical student accommodation, the postgraduate housing is based on the idea of a terraced house.

The Design Team developed a bespoke set of design principles which would foster a community of 4-5 postgraduate students sharing amenities. The configuration of the house is focused on creating a welcoming and inclusive environment that students can call home during their time at Queens' College.



Non-institutional feeling



Inclusivity



Excellent connection to the outdoors



Encouraging interaction



Privacy



Ownership



Sustainability



Longevity



Maintainability

5.2The Study Bedroom

Circulation, Sleep, Study

The study bedrooms have been organised to create an optimal live/work environment to enhance the wellbeing of students living here. The room is generous, providing flexibility and accommodating different activities. This will ensure the rooms are inclusive to a range of occupants. The rooms provide activity zones and floor space for nonwork and study activities such as prayer and indoor exercise.

There are 3 distinct zones for circulation, study and sleep. To protect the welfare of the students inhabiting these rooms, the study zone is separated from the sleep zone by the ensuite. In creating a separate study space, there is increased likelihood of aiding intrinsic motivation to work. This separation is equally important for achieving high quality sleep, essential for maintaining good physical and mental health.

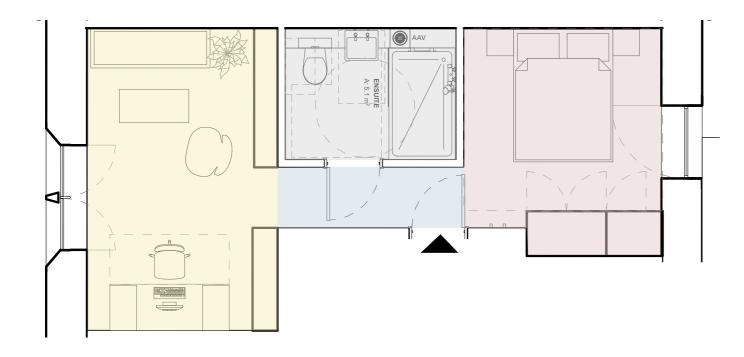
The study area of the rooms is generous, allowing for small study groups to meet. The generosity of the study space ensures that students will not need to rely on the bed as a form of seating, creating a better group working environment.



5.2The Study Bedroom

The study bedroom has been developed with the well-being of the occupant at the fore. Sleeping and studying spaces are separated, and each have windows looking opposite ways creating dual aspect rooms with good passive cross ventilation.

Each room is generous, with space for activities such as group study. Integrated storage enables the room to be kept tidy, with space to put belongings.



Typical Study Bedroom

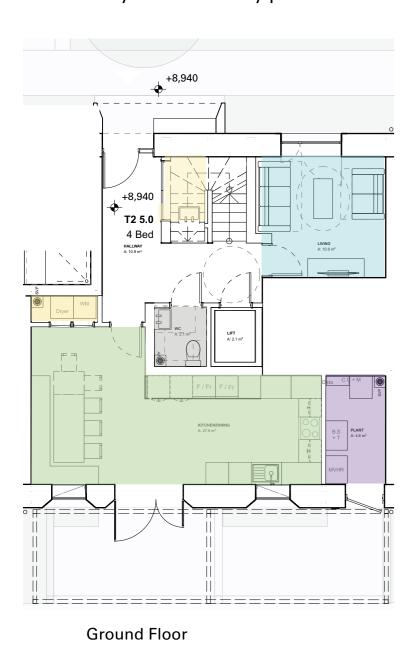


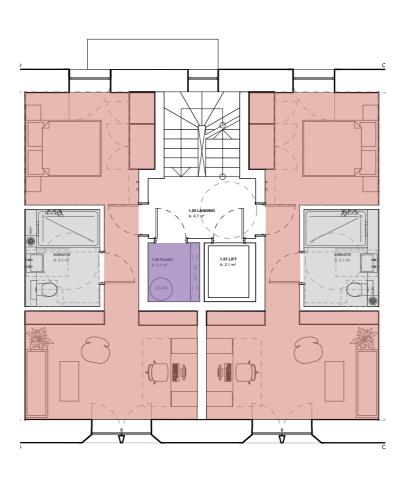
Typical Accessible Study Bedroom

5.3 Typical 4 Bedroom House

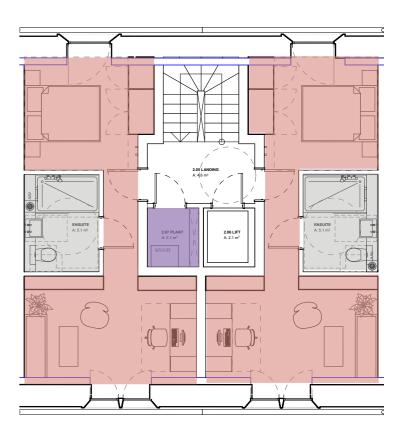
The 4 bedroom house is generally located mid-terrace and accommodates communal spaces on the ground floor with two floors of two bedrooms each above.

All communal spaces are accessible to all and have been designed to accommodate social activities comfortably. The upper floors can be accessed by staircase or by platform lift.





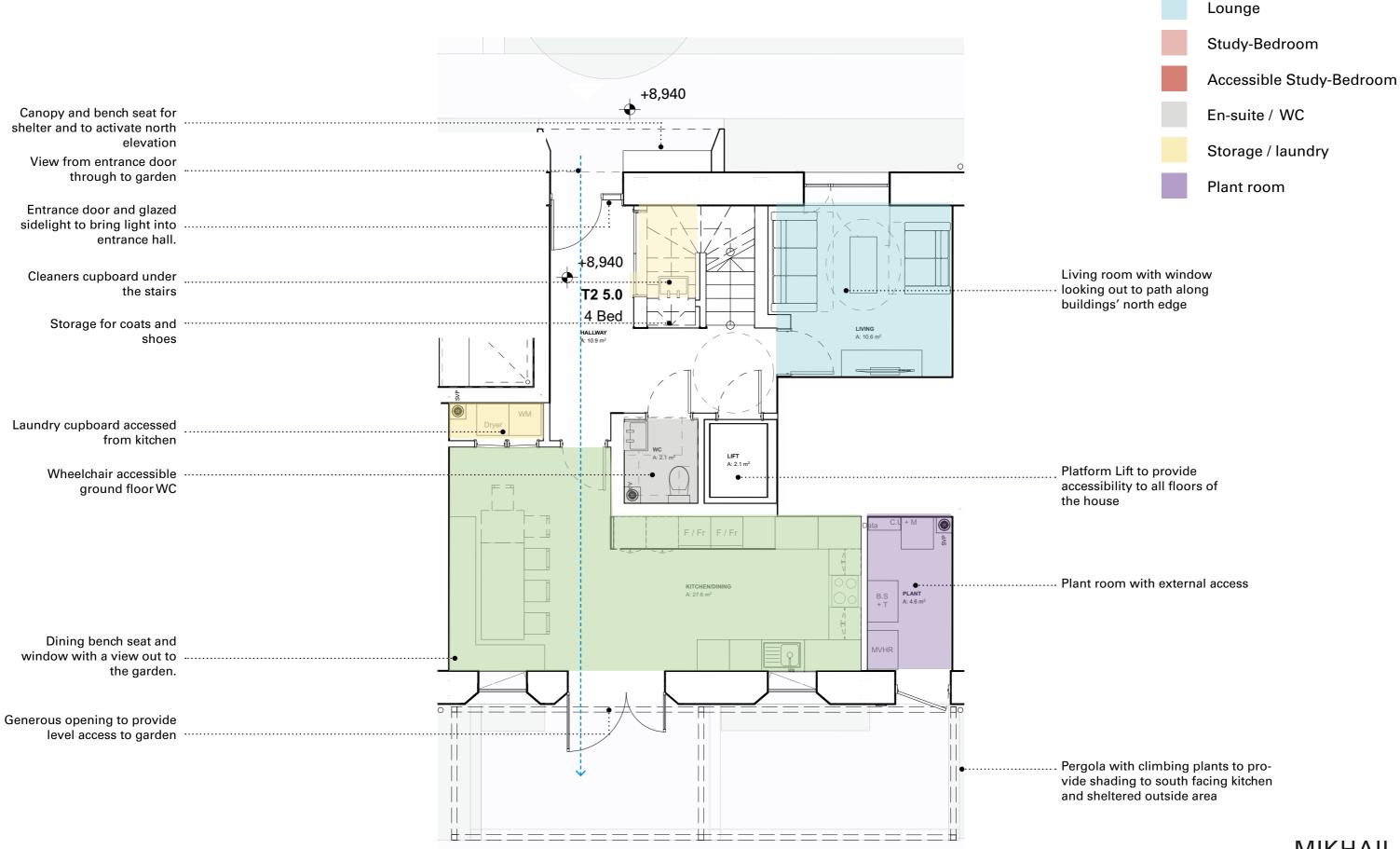




First Floor Second Floor



5.3 Typical 4 Bedroom House



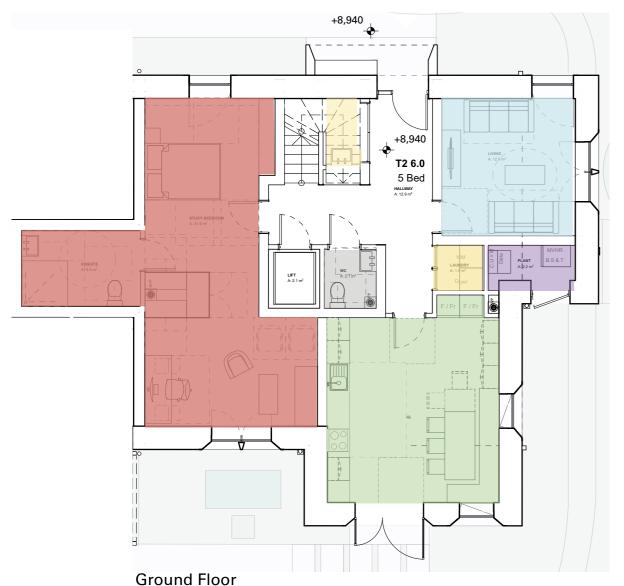
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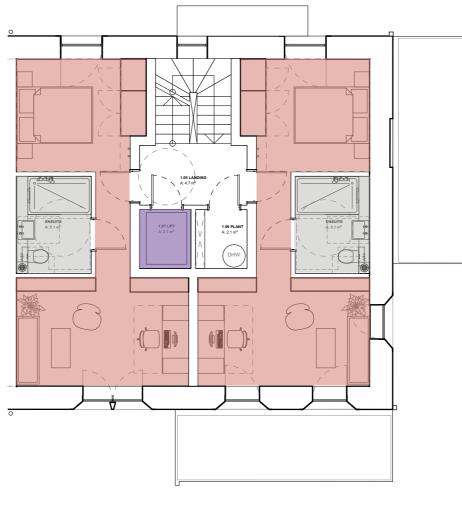
Kitchen

5.4 Typical 5 Bedroom House

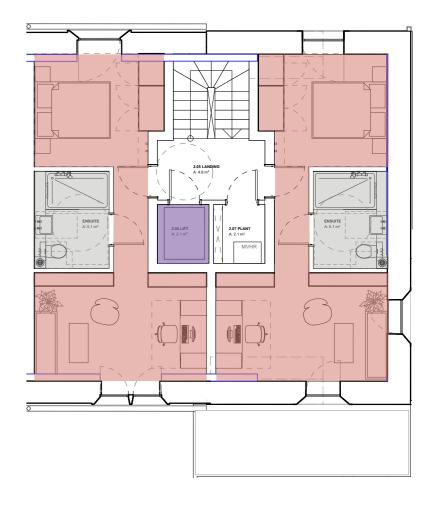
The 5 bedroom house is generally located at the ends of terraces and accommodates communal spaces on the ground floor alongside an accessible bedroom.

All communal spaces are accessible to all and have been designed to accommodate social activities comfortably. 4 additional study bedrooms are located on the upper floors, accessible by stair or platform lift.





First Floor



KEY:

Kitchen

Lounge

Study-Bedroom

En-suite / WC

Plant room

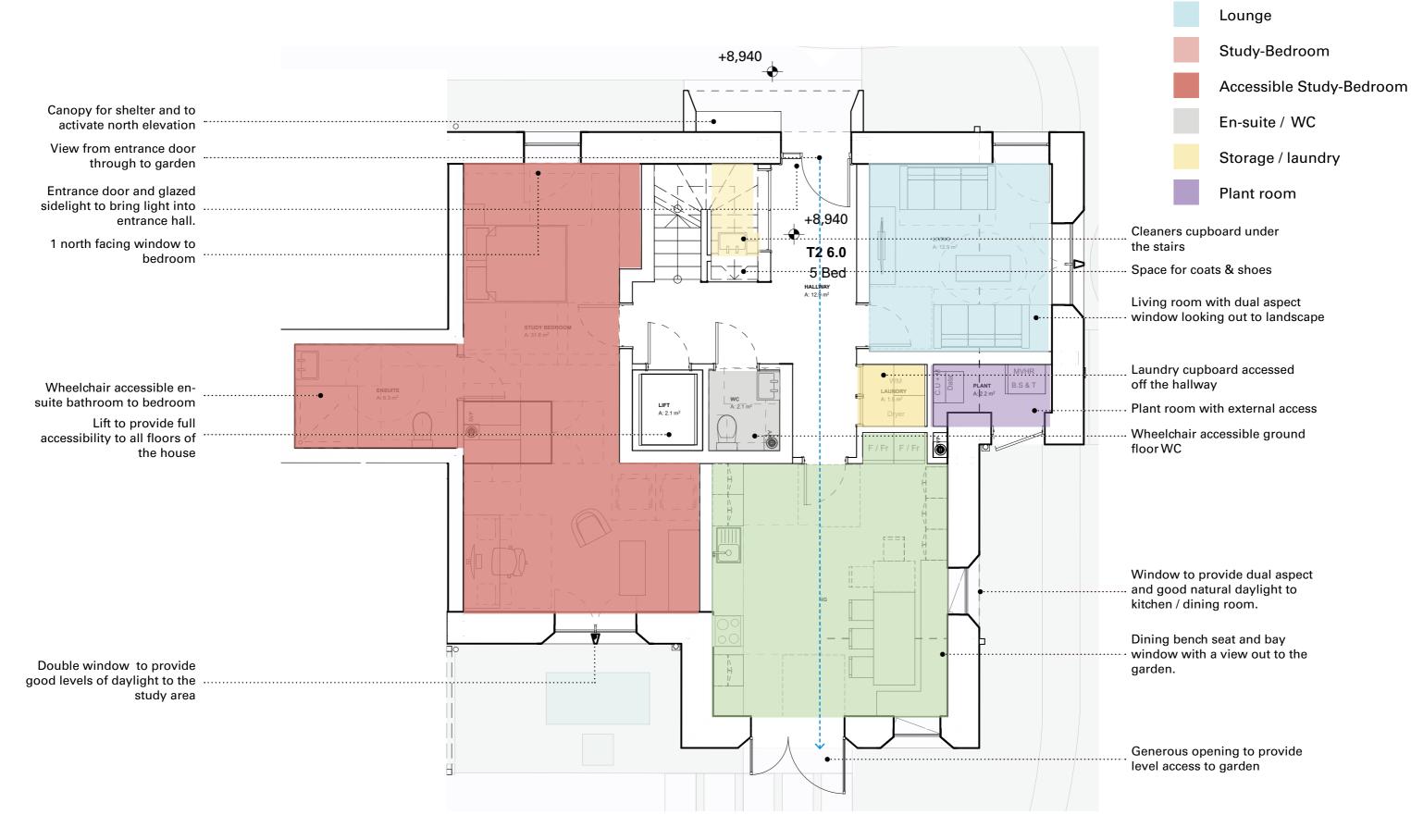
Storage / laundry

Accessible Study-Bedroom

Second Floor

MIKHAIL RICHES

5.4 Typical 5 Bedroom House



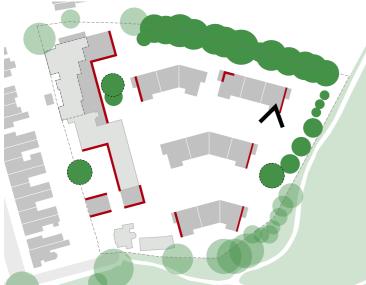


KEY:

Kitchen

5.5 Typical Communal Kitchen





Key plan

View from kitchen, looking out to the landscape.



5.6 Terraces

Scales of Community

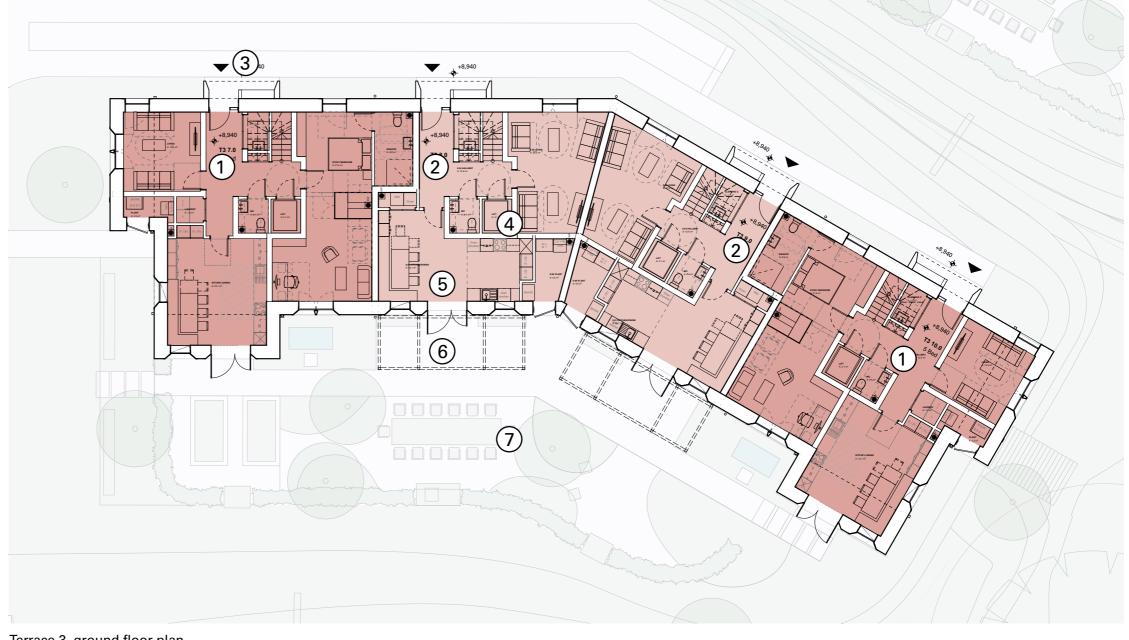
Each terrace contains 2no. 5 bed homes and 1 or 2no. 4 bed houses. A group of students occupying a single house can be considered as a core household community.

Each terrace, connecting between 3 or 4 houses shares a secret garden to the rear. Houses have direct access to the garden, with communal kitchens overlooking these spaces. The garden is a space where students from across the terrace can come together to enjoy the landscape and outdoor dining in the warmer months.

In this way, the organisation of the site encourages the formation of different scales of community, adding to the convivial life of the College.

KEY

- 5 bedroom house
- 4 bedroom house
- Private front door to each house
- (4)Lift to every house
- Kitchens overlook secret gardens
- Pergola encourages congregation outdoors
- Secret garden shared by all students in a terrace



Terrace 3, ground floor plan



5.7 Material Principles

Material Principles

Learning from the precedents both in Queens' College and from the local context of Newnham Croft, the material palette has been organised to give definition to the terraces.

The mansard roof helps to reduce the overall sense of scale of the terraces. Intricate brick detailing at the ground floor projections combined with the wetcast stone plinth help to tie the terrace together as a whole, reflecting the scale of the original Owlstone House.

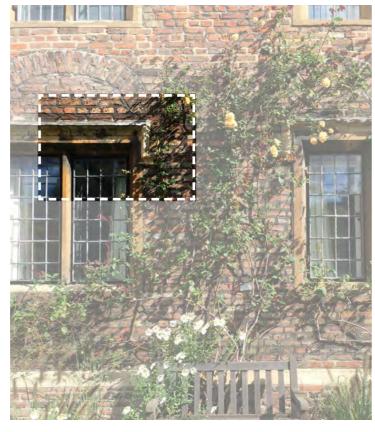
Within a terrace, each house has its own sense of identity, with its own front door and back door out into the garden. Downpipes separate each house within the terrace, giving them a further sense of definition.



5.8 Appearance & Character - Local Precedents

Queens' College

Queens' is comprised of a series of courts, each offering a unique scale and character. Façades offer a range of intricately crafted details at the window surrounds, contributing to the special character found in each courtyard.







Newnham Croft

The surrounding area is characterised by 2-3 storey long terraces of well preserved early 20th century houses retaining much of their original detailing.

Most houses are faced with brick and have stone detailing around entrances and bay windows.

Small front gardens create a green ambience to the street and are bounded by low brick front walls.

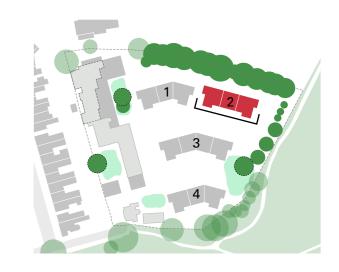




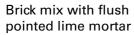


5.9 Material Elevations

South Elevation









Through coloured pre-cast concrete window surrounds



Triple glazed terrace door to kitchens



Triple glazed tilt turn window



Standing seam roof

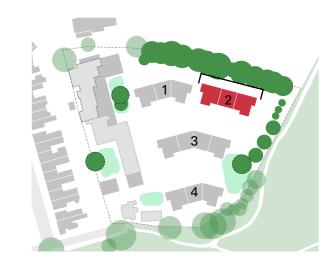


Through coloured pre-cast concrete ground floor projections, window surrounds & plinth

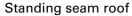


5.9 Material Elevations

North Elevation









Through coloured pre-cast concrete window surrounds



Triple glazed tilt turn window



IdealCombi entrance door and sidelight



Half round guttering and circular metal downpipes



Brick mix with flush pointed lime mortar



Through coloured pre-cast concrete ground floor projections, window surrounds & plinth



5.9 Material Elevations

Ground Floor Treatment

Each terrace represents a community of students. To give a distinct character to each terrace, the brick detailing on the ground floor projections and the brick band will vary between terraces.

In addition to giving each terrace a unique identity, this will also create a variety across the site. The brick details on this page represent the variety it is proposed to achieve across the terraces.



Indicative Brick Bond - Alternate brick stacked stretcher



Indicative Brick Bond - Alternate brick fluting



Indicative Brick Bond - Alternate brick diamond headers



Indicative Brick Bond - Alternate brick headers



6.0 Proposals - Student Study Centre

6.0 Proposals - Student Study Centre

6.1 Design Principles

Similarly to the postgraduate housing, the proposals for student study centre facilities on the site have been developed from a series of design principles which have guided the evolution and articulation of spaces.

Block A

A new study centre is proposed in the ground floor of Block A. The existing 1940s extensions are removed to reveal the gable of the original Owlstone house. New single storey extensions create generous study spaces and seminar rooms sensitively incorporating existing structure. These spaces will be available to students across the wider Queens' community, and will give the site an intellectual life of its own.

Block B

New community space is clustered around the existing buildings. To the south of Block B, a new 1 storey building creates a new and rationalised sense of arrival. This building holds a cycle store and cafe, providing a new student hub at the site entrance.



Welcoming & inclusive



Accommodating of a variety of activities



Encouraging collaboration



A special place



Sustainability



Ventilation & thermal comfort



Longevity & maintainability



Excellent connection to the outdoors



Flexibility

6.0 Proposals - Student Study Centre

6.2 Works to Existing Buildings

The existing fabric and facilities of Block A & B have been studied in order to understand how the new community spaces can strategically thread into them. The evolution of proposals has focussed on developing a coherent structural strategy which reveals the original Owlstone house and retains key structure where possible.

Block A - Ground Floor

The existing footprint of Block A has 8 bedrooms and other facilities including a laundrette, computer room and archive room. It is proposed that the ground floor bedrooms, dining room / kitchen, archive room and computer room are removed to allow a reorganisation of new communal facilities in the building.

Block B - Ground Floor

There are 16 rooms on the ground floor of Block B, including a private flat. Other facilities include a server room, access to the basement, toilets, kitchen, and a porters office. These rooms will remain with works to the south of Block B proposed to complement interventions on the site and contribute to a renewed site entrance.

Block A + B De-Carbonisation Works

In addition to the study centre works, it is proposed to retrofit both Blocks A and B to thermally upgrade the fabrics of both buildings. Windows are replaced and Block B is proposed to be externally re-clad.

