Osborne Grove Care Home

London Borough of Haringey
Ingleton Wood LLP

Stage 02 Report



architecture
building surveying
building services
planning
interior design
sustainability
civil and structural
quantity surveying
project management
CDM and H&S services

Osborne Grove Care Home

Job no. [812866]
Stage 02 Report - REV C

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1.0 Executive Summary

Ingleton wood were appointed by LB Haringey on a full multi-disciplinary basis, including core design teams, catering, transport, FF&E consultancy, planning, environmental / sustainability consultancy and full National BIM Framework compliancy management, to undertake the design of a new Care Home.

Osborne Grove Nursing Home is a 32-bed registered nursing home; owned by the London Borough of Haringey. The location is in the south of the borough in Stroud Green. The road access to the home is from Upper Tollington Park Road, close to the crossroads with Stroud Green Road. The home includes off-street parking accessed from Upper Tollington Park Road at the right-hand side and foreground of the site and is directly behind a health clinic.

The home was originally designed as a residential nursing home and there are a number of design issues with the building that effects the provision of nursing care on site, including the size and configuration of the home, the width of doors and corridors, the absence of wet-rooms in each bedroom and concerns pertaining to fire safety.

LB Haringey initially chose to demolish the existing nursing home in order to create a new 70 bed nursing provision with café and day centre. However it was decided that further residential units could be added to the site to increase the space utilisation. Ingleton Wood were therefore instructed to complete designs to demolish the existing nursing home in order to create a new 70 bed nursing provision, café, day centre, 20 flats (mix of 1 and 2 beds) as well as 10 studio extra care apartments.

The aims of the project are to:

- Develop a high-quality outstanding provision to improve outcomes for residents through a model of nursing care which is responsive to current and future local need.
- A financially viable and sustainable future for the continuation of nursing care provision on the site.
- To realise the benefits of outstanding design to flexible care delivery now and into the future.
- ‘An open home’, which is not only ‘outward facing’, but an ‘open home’ that’s design encourages active community use – i.e. people coming in too, as well as health & care partners
- Partner and community engagement in supporting OGNH to operate to the full benefit of residents and other older people
- Focus on working in ways which build relationships and start from people’s strengths
- Increased access to the most enabling help even for those with high and complex needs

The initial brief for the 70 bed care home was to create a home divided into 5 ‘households’ to meet the separate and differing needs of residents with:

- Learning disabilities / autism - 10 beds
- Complex care nursing needs - 10 beds
- Dementia and/or challenging behaviour - 25 beds
- Physical frailty - 15 beds
- Inpatient nursing rehabilitation - 10 beds

The ten studio apartments are for service users who are facing end of life and homelessness complex care needs.

The twenty sheltered housing 1 & 2 bedroom apartments are to follow a co-housing development model for community living available for general needs tenancy clients from an older LGBTQ+ user group.

A feasibility study had been carried out which identified a number of options for the siting and massing of the potential new care home. From this feasibility study the proposed Option 8 was chosen as the optimum solution. This sited the care home to the south west side of the plot with an access road in the middle of the site and the sheltered housing accommodation as a separate building to the north east. In our opinion the care home option, although achieving the requirements of the brief, had not been accurately dimensioned and did not provide the best solution for the needs of the residents of the care home. It was found that the proposed road access and parking provision shown in the middle of the site could not be achieved and the width when calculated and drawn correctly would not allow the desired access within the site.

Ingleton Wood therefore developed a number of further options to accurately reflect the size and shape of the building required. Through intense consultation and utilising analysis of the optimum accommodation schedule we designed every individual room and element of the care home to find the ultimate solution of size, shape and form, including relationships between areas, and would provide the outstanding provision required. Each of these elements were presented to the full stakeholder co-design steering group to elicit their feedback and to allow for all of their comments to be incorporated into the designs. Through this exercise an optimum layout evolved for both the care home building as a separate identity and for the sheltered housing units as an individual, self-contained building. During this exercise we also explored the best positioning and massing solutions on the site to provide the best quality provision but also the least impact on the surrounding buildings, environment and community.

The brief for the significant amount of accommodation required on this site provided a big challenge and to lessen the impact of this we looked to try and incorporate the care home and sheltered housing accommodation together into a single massing element. This was welcomed and exploring the form that this could take whilst retaining each individual identity enabled us to maximise the footprint throughout the site to give the best possible external spaces and courtyard area for the benefit of the residents. Through further consultation and development of this the client group reconsidered the brief and revised it to allow the incorporation of the sheltered housing flats into the care home as a whole as it would felt this would bring the benefit of care and support to the resident group of the sheltered housing.

One of the main criteria and requirements for this project was to find a good balance of internal accommodation to external garden space. This would provide residents of each household with the benefit of their own specific garden design to enjoy. To achieve this the form of the new building evolved to terrace upward and back from the rear of the site providing rooftop garden areas and expanding upwards towards the elevation facing onto Upper Tollington Park. However in order to be able to include all of the accommodation required the building increased to five storeys on this road frontage. This was always going to be a challenge in planning terms and was confirmed through our initial meeting with the local authority’s town planning department. Although it was thought that the design could be supported it was agreed amongst the team that we should look to mitigate the five storey solution to the front and to try and redistribute the accommodation further to the rear of the building reducing the overall impact to only four storeys on the street frontage. This would provide the least impact to the surrounding conservation area.

Also at this time it was thought that the capacity for optimum care and in particular management of surveillance and travel distance for residents was best achieved within a 10 bedroom household unit. It was therefore agree to alter the brief to optimise the capability of nursing provision by moving from five households of varying size to seven households of 10 beds each. This has had the effect of reducing the external terraced areas available for each household but this has been mitigated and improved by the generous provision of external balconies to both household lounge areas and to the activity rooms available to each of these. The courtyard garden and the external areas surrounding the buildings, especially the two corner areas, have been enhanced in their landscaping provision to provide a lot of interest and potential activity for the residents.

We have fully involved our in-house interior design team in the development of the overall layout and the individual spaces within the care home and they have brought their expertise and understanding of what constitutes good design for elderly people and people with dementia for the benefit of the scheme throughout this stage. They have considered the appropriate functions of entrances, corridors, lounge and dining areas, occupation and activity spaces, and in particular familiarity and wayfinding so that these have no adverse effects on the physical and mental wellbeing of the residents of this care home. They understand that spaces and activities with a destination and a purpose are powerfully meaningful to elderly people but that these can be easily misinterpreted. Their input has enabled the design of an environment that offers the potential to enhance a

resident's self-esteem and confidence and to make family and the local community feel welcome. Their further consideration of sound, light and colour contrast will be invaluable during the detailed design stage. The whole team are continually researching and taking advice on current exemplar care guidance and utilise many forms of publication, case studies, reports and standards to inform the design process. We have also consulted with both Stirling and Liverpool Universities to gain the benefit of their knowledge and expertise and we have incorporated the feedback from these workshops and sessions in the design process.

The concept designed solution prepared at the end of this Stage meets every aspiration of the project and is able to reflect and showcase the high quality outstanding provision required for flexible care delivery now and into the future and is a clear outward facing home encouraging community use as well as engaging and supporting the residents and other older people.

There was a clear aspiration at the outset of this project to create a building that impacts as little as possible on the environment, possibly even to be a zero carbon solution. The design of a care home is very challenging to achieve this. Residents' comfort is paramount and elderly people find it very difficult to tolerate a significant change in temperature caused by either overheating or overcooling. Enormous consideration has been given to creating a constant temperature throughout the building, whilst a balance of embodied carbon in the building materials of the construction against the amount of operational energy used for the lifetime of the building has resulted in the solution and building form shown. All building materials available were considered including concrete, steel and timber and the embodied carbon and energy use required for their creation taken into account. Timber, especially through CLT panel systems, has the least carbon use content. However it has very limited thermal mass and a great deal of cooling would need to be added to the building to compensate for this. Therefore a concrete solution provides the optimal construction efficiency. To mitigate the use of this we have proposed a prefabricated off site panelled system that guarantees specification of materials such as recycled aggregates and low carbon cement, enhances the quality of the product and reduces substantial waste that accompanies on site solutions. This has been used where thermal mass is most needed in the walls whilst a hybrid, composite floor system of concrete topped CLT flooring incorporates less carbon and is lighter thus enabling a reduction in the size of the foundations.

The overall sustainability solution for the project takes an holistic approach to a zero carbon solution and informs the design process from the first principles of sustainable design. The building is an efficient shape with regards the ratio of its floor area to its external wall area. All walls, floors, roof areas and windows will be designed to achieve exemplary U values to ensure that there is as little heat loss from the building as possible. For residents wellbeing it is desirable to achieve as much daylight and ventilation into the building as possible It is therefore beneficial for windows to be ideally as large as possible. However we need to ensure that the internal environment is protected in terms of solar gain, and thereby overheating, within the building and again to reduce heat loss as much as possible through this element. The windows will therefore also have a superior specification of triple glazing, low U value and solar control.

Although a Passivhaus solution has been considered it is very difficult and expensive to achieve a full accreditation. However all the principles towards this, including air tightness and minimal air permeability from the building, a thermal bridge free design and a natural, passive ventilation strategy will be utilised. There will be no gas on site and therefore no burning of fossil fuels. All services will be electric, including the commercial kitchen area, with power provided by photovoltaic cells on the roof areas, 100% low energy lighting with Wi-Fi control to reduce cabling within the building. There will be heat recovery via MVHR units, especially from the kitchen and laundry areas, and heating will be enhanced through the use of both air source and ground source heat pumps.

The initial brief for the building what's to achieve a BREEAM 'very good' rating. We are already achieving above this with a current 'excellent' score with an aspiration to potentially get to an 'outstanding' accreditation. Biodiversity will be encouraged through a green and/or brown roof solution underneath the PV panels and through the courtyard and external landscaped areas. The green roof areas well also provide reduction in stormwater run-off and create a number of other environmental advantages.

In addition to the core disciplines working on the design we have carried out a number of supporting consultations and surveys for the benefit of the project. These include flood risk assessment, unexploded ordnance desktop study, acoustic, fire and transport assessments, environmental considerations including ecological and arboricultural, we have utilised a catering consultant for the design of the kitchens and laundries and we have also consulted with the Metropolitan Police for Secure by Design accreditation. As stated previously we have also had informal pre application discussions with the local planning authority. All of this consultation and collaboration has resulted in a very well supported scheme.

The next stage of the design aspects of this project will further develop the concept design into a more detailed solution incorporating all the lessons learned from stage 2, the feedback received from the enormous amount of consultation undertaken, the benefit of the experience of the end user group and lead towards a full planning application later in the stage. During this time we will also consider as a team the most advantageous procurement method to provide the best outcomes for the construction off this fantastic project.

Osborne Grove Nursing Home located at 16-18 Upper Tollington Park is a 32-bed former local authority run nursing home which closed in March 2020. The council cabinet decision to close the home was taken in light of safeguarding and quality of care concerns over a number of years and following extensive public consultation. A separate Cabinet decision to redevelop the site to achieve enhanced nursing care capacity was made following findings from a comprehensive feasibility study, which included a strong focus on co-design and stakeholder engagement.

Background

The future of Osborne Grove is of critical importance to the Local Authority. There is currently only one privately run nursing home within Haringey located in the East of the borough with 117 nursing home beds and this means that the demands for nursing home placements have not been able to be met locally for some time. Currently, for example, 70% of all nursing home placements made by Haringey Council are made outside of the borough. However, prior to Covid-19 the proportion residents being placed outside of the borough remained static at 80%.

There are currently 146 over 65-year-old Haringey service users in receipt of nursing care and this figure is projected to grow to around 195 by 2024/25. Traditionally, Haringey's demand for nursing care would have been met by nursing homes in North Central London but increasingly, Haringey is having to look beyond the sub-region to meet this demand with 22% of nursing beds purchased out of North Central London at present. The reason that Haringey now purchases beds across a wider geographical area is that – despite the widely reported and increasing demand – the capacity in the marketplace for nursing and residential care is shrinking. For example, there were 56 nursing homes across North Central London (Barnet, Camden, Enfield, Haringey and Islington) in 2015 and now there are 49. A number of other providers are restricting access only to self-funders or reducing the proportion of local authority placements they are willing to accept. This means that the absolute capacity of nursing care beds available for Haringey to commission is decreasing. This is a national picture reflecting the fragility of this sector of the social care market, the uncertainty over future funding mechanisms and the challenge of delivering nursing care to frail, older people with complex needs.

In addition, the Council is keen to develop nursing care which offers the greatest opportunity for innovation and community facing support, co-designed with local residents and ensuring nursing care is at the heart of wider community initiatives.

Feasibility process

Initial exploratory work on the range of options for delivering enhanced nursing capacity on the site found that the current building is not fit for its identified use as a nursing home. The home was originally built in 2008 for residential care rather than nursing care (for which it was most recently designated) and various issues including the size and composition of bedrooms, lack of en-suite facilities, fire risk concerns, the lack of wide access lifts and the layout of the home make it unsuitable for providing care to individuals who require nursing care. The Feasibility study further identified that the existing structure is load bearing masonry supporting concrete planks or timber trussed rafters which would prevent the internal changes required to provide Nursing care. Additionally, the structure was not designed to withstand progressive collapse in the event of a fire, therefore this would limit the use of any bedrooms within the existing structure as bed bound patients would not be able to reside in this part of the building if extended.

In light of the issues with the current building and the inflexibility of its structure to the necessary level of adaptations, a proposal to demolish the current building and to build a new structure was put forward and agreed.

The feasibility study also identified the potential range of uses and scale of scheme it would be possible to accommodate on the site. These have all been selected as complementary to the core function of delivering nursing care on the site – with a strong focus on supporting local residents and communities, as well as the immediate residents of the Home.

At the same time, the feasibility highlighted the possibility of achieving an Outstanding rating of BREEAM in the final design – the Council is well aware of the challenges to sustaining this in the light of designing a nursing care provision which really works for local residents but remains committed to excellence in this area.

Design process

A Co-design group was established in 2018 and includes the lead member for health and social care, local residents representing different identified needs groups, local councillors, health partners and council officers. The co-design team process has included continual engagement throughout the design process. The Council has used a set of design principles, developed with stakeholders through a co-design process and approved at Cabinet in June 2018, as a consistent framework in which any developments affecting the Home will be brought forward:

- The design of the home is geared towards meeting the current and future needs of Haringey residents.
- A financially viable and sustainable future for the continuation of nursing care provision on the site.
- Recognition of the benefits of outstanding design to flexible care delivery now and into the future.
- Aspiration for outstanding provision.
- 'An open home', which is outward facing and supports engagement with the wider community, and health & care partners.
- Partner and community engagement in supporting OGNH to operate to the full benefit of residents and other older people.
- Focus on working in ways which build relationships and start from people's strengths.
- Increased access to the most enabling help even for those with high and complex needs.

The brief for the design team was in summary to develop a high-quality provision to improve outcomes for residents through a model of nursing care which is responsive to current and future local need. The proposed provision was described as follows:

A) Nursing Beds, Learning Disabilities/Autism:10 Beds
B) Complex Care Nursing Needs:10 Beds
C) Nursing Beds 1, Dementia and/or Challenging Behaviour: 25 Beds
D) Nursing Beds 2, Physical Frailty:15 Beds
E) Inpatient Nursing Rehabilitation Beds:10 Beds
F) Nursing Studios for end-of-life complex homelessness: 10 Studios
G) Short Term sheltered housing for step up, step down care 15-17 flats

The cabinet approval included direction for the home to be run as a public sector partnership with local health partners as it is recognised that all the proposed client groups will all benefit from a coordinated approach to care including Nursing, Physical Therapies, Mental Health and Social Care.

In addition, the brief was to support provision for bed-based intermediate care and therapies with space for non-resident community uses including day opportunities and use by local residents.

The opportunity to co-design a new nursing care provision in the heart of the local community is an exciting one which has been energised by the involvement of local residents and other stakeholders The Council is committed to provision which responds holistically to resident need, including for environmental sustainability, ideally in-borough and delivered in partnership to achieve the most sustainable outcomes for the borough.

3.0 - Brief

architecture
building services
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interior design
sustainability
civil and structural
project management
CDM and H&S services

The brief and tendering description is for the demolition of an existing care home and new build of a 70 bed care home, café, day centre, 10 studio apartments and 20 flats. The project is an Architect led multi-disciplinary consultancy services project.

A feasibility study has been carried out setting an initial brief of requirements to work from. Ingleton Wood have continued developing from the feasibility report to address the desires and requirements of the London Borough of Haringey, associated stakeholders, end user representatives and the needs of those of whom will use the care home.

Aims of the project of which were tendered against are;

- To develop a high-quality outstanding provision to improve outcomes for residents through a model of nursing care which is responsive to current and future local need.
- A financially viable and sustainable future for the continuation of nursing care provision on the site.
- To realise the benefits of outstanding design to flexible care delivery now and into the future.
- 'An open home', which is not only 'outward facing', but an 'open home' that's design encourages active community use – i.e. people coming in too, as well as health & care partners.
- Partner and community engagement in supporting OGNH to operate to the full benefit of residents and other older people.
- Focus on working in ways which build relationships and start from people's strengths.
- Increased access to the most enabling help even for those with high and complex needs.

Objectives

- To provide 'Outstanding' care and support as recognised by CQC
- To provide person-centred, outcomes-based delivery
- To deliver a Zero Carbon Development, with high levels of sustainability and a building that is adaptable for a future climate
- To deliver a fair cost of care and ensure that front line care workers work in environments that offer good terms and conditions, enable career progression and secure retention levels, whilst ensuring that services continue to offer value for money and can meet increasing demand.

Housing Brief and Objectives

The initial scope for the sheltered housing were identified to provide residential Flats (Sheltered Housing 1- and 2-bedroom apartments).

These flats would be a Co-Housing Development Model developed, a model for community living, sustainability and to alleviate the UK's housing shortage. Available for general need tenancy clients with safe and sound alarm, daily telephone calls and support workers coming into the provision at times throughout the week. It is likely that a particular needs group would be targeted, such as the Older LGBTQ + user group (to be confirmed).

Change of brief to Sheltered Accommodation

Through RIBA stage 02 the requirements for the sheltered housing changed. The flats would no longer be used for general tenancy clients to address the UK's housing shortage. The accommodation would instead be used by elderly residents of semi-independence who would benefit from occasional care. The flats would act as 'step-down' living whereby if a residents health deteriorated they are able to smoothly transition to part of the main care home.

Studio Apartments (End of life Complex/homelessness nursing studios)

The Service Users who would be placed in this provision have complex nursing and care needs. In order to meet the needs of this group the service will have a multi-disciplinary approach with the nursing and care team working alongside specialist housing workers, with experience of working with individuals who have experienced homelessness and/or rough sleeping. Residents may have some level of additional needs that are unlikely to be met by the staff within the home, therefore staff space will need to accommodate higher staffing levels to facilitate additional housing support workers who specialise in homelessness.

Cafe / Day Space

A cafe accessible to residents and the public is to be included within the overall design. The cafe should be inviting creating an open relationship with the public realm to support the homes integration with the community.

The cafe should have a direct connection with a large day space also for resident and public use. The day space should accommodate a range of activities including relevant storage. The space should be flexible and adaptive to a multitude of users however should not feel like a 'sports gym.' A connection to external landscaping is desired. Detail and spatial requirements shall be further developed at RIBA stage 3.

Supporting Facilities

The home should also allow for supporting facilities for resident and public use including interview/multi-functional rooms, self-care and wellbeing rooms eg hair salon, multi-faith room, activity spaces and staff support rooms. These requirements shall be established and developed in agreement with Haringey.

Design Considerations

The design should also consider (but not limited too):

- Reflect appropriate design guidance (for example but not limited to dementia care, Alzheimer's, autism, etc.), including attention to the potential for conflict between needs of/guidance for different user groups.
- Local and National Planning (including GLA) Policies.
- Be pioneering in both its physical design and ability to integrate a holistic approach to care and to stimulate, comfort and provide a homely atmosphere.
- Engage stakeholders, OGNH Co-Design Reference Group; OGNH Model of Care Sub-Group; OGNH Public Provider Partnership Group (e.g. Whittington Health, Camden etc.), Representatives from existing staff, etc.
- Materials will be expected to be prepared and presented for regular consultation events throughout the project. Presentation boards will be required as a minimum at each RIBA Stage, 2, 3 and 4.
- The design must be fit for purpose and age appropriate in terms of product selection and robustness/safety.
- The design must ensure that wet rooms are available to residents to ensure that residents can look after themselves and allows for personal care to be attended to by nursing and care staff if required.
- Consideration as to the intended environment in terms of safety must be given in the design with recommendations to exceed building regulations recommendations where required such as handrail heights, non-slip surfaces
- Lessons learned from the 2020 Covid-19 pandemic must be applied; the design must facilitate infection control with particular consideration given to the control of the spread of aerosol transmitted diseases and the personal protection of residents, staff and visitors.
- When specifying products, the design team must consider the maintainer who will be required to maintain such equipment and simplify where possible and practical
- Ensuring all designs comply with regulations.
- Deliver a Zero Carbon Development, which will also include addressing overheating risk under current and future weather patterns.
- Deliver high levels of sustainability throughout the design, construction, and operation, that can be assessed through an independent assessment methodology.
- An environmental design that promotes well-being and a calm environment for the users.
- .The scope of the design, cost plan and construction contract should include all fixed items. A separate budget held by the Project Manager will be available for loose FF&E.
- Products used within the build should be of low maintenance in nature.
- The current site, configured in wings of 8-bedrooms with a number of 'blind spots' created by the layout of the home necessitates a higher than average staffing establishment which increases running costs within the home relative to the majority of nursing homes within the market. For a financially viable and sustainable service to be provided, the nursing home needs to be reconfigured to increase the number of bedrooms per wing and to increase visibility from nursing stations across each given wing. (reflected in Option 4 and 8).
- Apply secured by design principles.
- Wet-rooms are essential but must also be of a size which allows for personal care to be attended to by nursing and care staff if required. Sprinkler protection is to be included.
- Shade and covered areas for external landscaping should be considered.
- Consideration to reinforce newly proposed grassed areas.
- The choice of plants and shrubs should reflect the local habitat and not present any hazards to residents.
- Programming and design consideration for ecology such as planting periods, nesting etc. Any existing habitat and relocation of such needs to be considered.
- External landscape should have provision for garden maintenance in terms of water and power.
- Zoning of essential mechanical services should be considered, with easy access and space for maintenance.

- Although a new build solution is intended, consider adaptations to existing fire alarms and access control systems as required to any retained buildings.
- Specification for housing to follow GLA and Haringey planning policy.
- Provide site wide information and investigations (including intrusive), missing from the initial feasibility information.
- Consult with planning (inc Design Review Panel), building control, secured by design, fire officer and conservation (and any other statutory bodies) as required.
- Consult with planning on the potential for an environmental impact assessment and traffic impact assessment.
- Conduct risk assessments on the design, health and safety hazards with the Principal Designer.
- Required collateral warranties to be identified.
- Ensure full co-ordination across all services including IT, fixed and FF&E.
- Identify and take into consideration any required services isolations, disconnections, temporary requirements to suit decanting/phasing and or diversions.
- Deliver concise and robust employers' requirements (if progressed under D&B). Deliver a robust and comprehensive traditional design sufficient to support a full bill of quantities for a traditional procurement route. Permission for any Contractor Design Proportion's will be required from the Project Manager and made clear at each RIBA Stage.
- Completion of an equalities impact assessment (which will be required to facilitate a construction award).
- Utility metering/monitoring during construction work.
- The construction activity must maintain a safe fire exit route from the building at all times.
- On completion, production of an energy management certificate.
- Consider aftercare/soft landings arrangement for up to 3 years from practical completion for main construction works.

The design requirements are to be further developed during the design stages and further engagement and presentations with key stakeholders via the co-design groups is essential.

This means that the nursing home needs to be designed in such a way as to accommodate feedback (lessons learnt) from previous residents/family members, and potential future recipients of nursing care. At least one wing of the home needs to be appropriate for adults with autism and/or a learning disability.

The design is to respond to current weather patterns for 2020, future weather patterns in 2050 and risks of weather patterns in 2080. Thought also needs to be given to the impact of climate change and the potential for increasingly long and hot summers on the health of vulnerable older residents so that undue spending is not made on managing extremes of heat or cold.

The current building was designed and built in the 2000s and yet increasingly appears unfit for supporting the higher level of needs of the older residents Haringey seeks to place within the home. The Council must ensure that any future developments to Osborne Grove are designed in such a way to enable flexible use of the site to adapt to the changing needs profile of Haringey residents and meet all future proofing scenarios currently available. This should integrate the latest building design best practice around health, wellbeing, and environmental performance.

Whilst design is not a panacea for 'good care', it can be an enabler of 'good' or 'outstanding' care and support as recognised by CQC. The Council wants any developments to Osborne Grove to best enable the delivery of high quality care and support, from offering opportunities for meaningful activities within the home, enable safe care regardless of residents' needs and promote a therapeutically informed environment for different residents (be they adults with dementia, mental health conditions or autism/learning disabilities).

The nursing home site is based in a part of the borough where the Council projects there will be a concentrated growth in the local older people's population. Given the prominent location of the home, the Council's would like to consider the scope to include some form of flexible space that could be of benefit to the wider community e.g. for One-to-one or group in-reach activities from health and care practitioners and community groups / communal spaces which are accessible to and can offer wider benefits to older people and the wider local community (e.g. café space and/or multi-purpose/day centre space etc.). Importantly, the Council wishes that such space is located within the building in such a way as to protect the privacy of residents, ensuring the ability of residents to have their own communal spaces, and the efficient configuration of the nursing home.

It is necessary that the future design of, and offer from, Osborne Grove is informed and advised by a range of stakeholders. It is expected that the further design process will actively seek to take into account views from stakeholders, notably those channelled through the Osborne Grove Co-Design Reference Group and its Model of Care Sub-Group convened to enable this approach. Views should also be sought from the existing staff group at Osborne Grove. Work is underway to develop provider perspectives on any future design and we would anticipate that the design process will therefore need to work with potential providers too in shaping the possibilities on the site taking into account their views on the impacts on deliverability and efficiency. This includes consideration of the future operating model for Osborne house and clarity about the care and health needs it can cater for.

In design terms, we anticipate this principle relating to the delivery of the most flexible spaces to respond to individual strengths. We want to be able to enable residents to support themselves wherever possible and to draw on the support of their family, friends and wider support networks. It is not yet clear what such a design impact would constitute but we are keen to take it into account in designing flows through the building, inter-connectivity of differently designated spaces, flexibility and interoperability of spaces and overall look and feel of any new Home.

In design terms, we would need to be considering whether there are any preventative approaches – for example, use of health and fitness equipment, built in opportunities to deliver healthier lifestyles and mental wellbeing, the designing out of restrictions to external access for example – which would need to be taken into account. It would be important to ensure that access to the outdoor space available, and visual stimulation (such as views of flowering plants, trees, and living walls) was equitable but also safeguarded residents through full consideration of security issues for the most vulnerable residents.

Schedule of Accommodation

A schedule of Accommodation (SOA) has been produced to support the design process. The SOA lists the rooms required and their associated areas. Various iterations of the SOA have been shared throughout RIBA stage 2 to reflect minor changes in the spatial requirements. The SOA has formed part of the briefing document for design.

Osborne Grove Care Home - Project Accommodation Schedule — Rev E - 25/04/21

Revision E 25/04/2021

	Room reference and description	Notes	Proposed Design Scheme Room Area m²
BASEMENT			
0.00	**UTILITIES**		
0.01	Mechanical Plant Room 1		65.0
0.02	Mechanical Plant Room 2		20.0
0.03	Electrical Plant Room 1		10.0
			95.0
	Circulation		**30.0**
	BASEMENT TOTAL AREA		**125.0**
GROUND FLOOR			
1.00	**ENTRANCE, PUBLIC & SUPPORT SPACES**		
1.01	Main Entrance lobby		10.0
1.02	Reception		12.0
1.03	Entrance waiting area		44.0
1.04	Mobility Scooter park/charging		14.0
1.05	Café / Lounge Space		97.0
1.06	Shop		12.0
1.07	Back Office/Manager/General Admin		43.0
1.08	Visitors WC 1 (DDA)		12.0
1.09	Visitors WC 2 (DDA)		12.0
1.10	Visitors WC 3 (DDA)		7.0
1.11	Day Space Communal / Activity / Recreational space for family / carers		235.0
1.12	Day Space storage		15.0
1.13	Day space WC/Changing 1		10.0
1.14	Day space WC/Changing 2		10.0
1.15	Day space kitchen/servery		12.0
1.16	Staff Changing Room 1		16.0
1.17	Staff Changing Room 2		16.0
1.18	Interview / Counselling / Multi purpose / Family Room 1		12.0
1.19	Interview / Counselling / Multi purpose / Family Room 2		16.0
1.20	Interview / Counselling / Multi purpose / Family Room 3		25.0
1.21	Hairdressing / Chiropody		16.0
1.22	Multi Faith Room		22.0
1.23	Guest Bedroom Ensuite		22.0
1.24	Refuse / Recycling store		12.0
			702.0
2.00	**HOUSEHOLD A - Nursing Beds - Learning Disabilities / Autism**		
2.01	Single Room with wet-room ensuite 1		22.0
2.02	Single Room with wet-room ensuite 2		22.0
2.03	Single Room with wet-room ensuite 3		22.0
2.04	Single Room with wet-room ensuite 4		22.0
2.05	Single Room with wet-room ensuite 5		22.0
2.06	Single Room with wet-room ensuite 6		22.0
2.07	Single Room with wet-room ensuite 7		22.0
2.08	Single Room with wet-room ensuite 8		22.0
2.09	Single Room with wet-room ensuite 9		22.0
2.10	Single Room with wet-room ensuite 10		22.0
2.11	Lounge		32.0
2.12	Dining Room		32.0
2.13	Nurses Sation/Staff base		5.0
2.14	Prep Room (Controlled drugs)		6.0
2.15	Store		5.0
2.16	Wheelchair / Hoists store		11.0
2.17	Staff / Visitors WC		4.5
2.18	Residents WC		4.5
2.19	Assisted Bath / Shower Room / WC		17.0
2.20	Sluice		9.0
2.21	Multi Purpose /Activity Room 1		35.0
			381.0
3.00	**HOUSEHOLD B - Complex Care Nursing Beds**		
3.01	Single Room with wet-room ensuite 1		22.0
3.02	Single Room with wet-room ensuite 2		22.0
3.03	Single Room with wet-room ensuite 3		22.0
3.04	Single Room with wet-room ensuite 4		22.0
3.05	Single Room with wet-room ensuite 5		22.0
3.06	Single Room with wet-room ensuite 6		22.0
3.07	Single Room with wet-room ensuite 7		22.0
3.08	Single Room with wet-room ensuite 8		22.0
3.09	Single Room with wet-room ensuite 9		22.0
3.10	Single Room with wet-room ensuite 10		22.0
3.11	Lounge		32.0
3.12	Dining Room		32.0
3.13	Nurses Sation/Staff base		5.0
3.14	Prep Room (Controlled drugs)		6.0
3.15	Store		5.0
3.16	Wheelchair / Hoists store		11.0
3.17	Staff / Visitors WC		4.5
3.18	Residents WC		4.5
3.19	Assisted Bath / Shower Room / WC		17.0
3.20	Sluice		9.0
3.21	Multi Purpose /Activity Room 2		35.0
			381.0
	Circulation		**687.0**
	GROUND FLOOR TOTAL AREA		**2,151.0**

FIRST FLOOR

4.00	**STAFF & SUPPORT SPACES**		
4.01	Occupational Therapies/Palliative Care team/Rapid Response Team office		32.0
4.02	Staff Rest Room		30.0
4.03	Staff store		15.0
4.04	IT Room		5.0
4.05	Laundry		98.0
4.06	Linen		9.0
4.07	Main Kitchen		87.0
4.08	Kitchen staff		16.0
4.09	Dry Store		17.0
4.10	Cold Store		15.0
			324.0
5.00	**HOUSEHOLD C - Nursing Beds 1 - Dementia and/or Challenging Behaviour**		
5.01	Single Room with wet-room ensuite 1		22.0
5.02	Single Room with wet-room ensuite 2		22.0
5.03	Single Room with wet-room ensuite 3		22.0
5.04	Single Room with wet-room ensuite 4		22.0
5.05	Single Room with wet-room ensuite 5		22.0
5.06	Single Room with wet-room ensuite 6		22.0
5.07	Single Room with wet-room ensuite 7		22.0
5.08	Single Room with wet-room ensuite 8		22.0
5.09	Single Room with wet-room ensuite 9		22.0
5.10	Single Room with wet-room ensuite 10		22.0
5.11	Single Room with wet-room ensuite 11		22.0
5.12	Single Room with wet-room ensuite 12		22.0
5.13	Single Room with wet-room ensuite 13		22.0
5.14	Single Room with wet-room ensuite 14		22.0
5.15	Single Room with wet-room ensuite 15		22.0
5.16	Single Room with wet-room ensuite 16		22.0
5.17	Single Room with wet-room ensuite 17		22.0
5.18	Single Room with wet-room ensuite 18		22.0
5.19	Single Room with wet-room ensuite 19		22.0
5.20	Single Room with wet-room ensuite 20		22.0
5.21	Single Room with wet-room ensuite 21		22.0
5.22	Single Room with wet-room ensuite 22		22.0
5.23	Single Room with wet-room ensuite 23		22.0
5.24	Single Room with wet-room ensuite 24		22.0
5.25	Single Room with wet-room ensuite 25		22.0
5.26	Lounge 1		32.0
5.27	Lounge 2		34.0
5.28	Lounge 3		32.0
5.29	Dining Room 1		32.0
5.30	Dining Room 2		76.0
5.31	Nurses station/Staff base 1		5.0
5.32	Nurses station/Staff base 2		5.0
5.33	Prep Room (Controlled drugs)		6.0
5.34	Store		5.0
5.35	Wheelchair / Hoists store		11.0
5.36	Staff / Visitors WC		4.5
5.37	Residents WC		4.5
5.38	Assisted Bath / Shower Room / WC 1		17.0
5.39	Assisted Bath / Shower Room / WC 2		17.0
5.40	Sluice 1		9.0
5.41	Sluice / Dirty Utility 2		9.0
5.42	Linen Store		3.0
5.43	Cleaners store		4.0
5.44	Multi Purpose /Activity Room 3		35.0
			891.0
6.00	**HOUSEHOLD E - Inpatient Nursing Rehabilitation Beds / Complex Needs Patients**		
6.01	Single Room with wet-room ensuite 1		22.0
6.02	Single Room with wet-room ensuite 2		22.0
6.03	Single Room with wet-room ensuite 3		22.0
6.04	Single Room with wet-room ensuite 4		22.0
6.05	Single Room with wet-room ensuite 5		22.0
6.06	Single Room with wet-room ensuite 6		22.0
6.07	Single Room with wet-room ensuite 7		22.0
6.08	Single Room with wet-room ensuite 8		22.0
6.09	Single Room with wet-room ensuite 9		22.0
6.10	Single Room with wet-room ensuite 10		22.0
6.11	Lounge		32.0
6.12	Dining Room		32.0
6.13	Nurses Sation/Staff base		5.0
6.14	Prep Room (Controlled drugs)		6.0
6.15	Store		5.0
6.16	Wheelchair / Hoists store		11.0
6.17	Staff / Visitors WC		4.5
6.18	Residents WC		4.5
6.19	Assisted Bath / Shower Room / WC		17.0
6.20	Therapy Room		35.0
			372.0
	Circulation		**606.0**
	FIRST FLOOR TOTAL AREA		**2,193.0**

SECOND FLOOR

7.00	**HOUSEHOLD D - Nursing Beds 2 / Physical Frailty**		
7.01	Single Room with wet-room ensuite 1		22.0
7.02	Single Room with wet-room ensuite 2		22.0
7.03	Single Room with wet-room ensuite 3		22.0
7.04	Single Room with wet-room ensuite 4		22.0
7.05	Single Room with wet-room ensuite 5		22.0
7.06	Single Room with wet-room ensuite 6		22.0
7.07	Single Room with wet-room ensuite 7		22.0
7.08	Single Room with wet-room ensuite 8		22.0
7.09	Single Room with wet-room ensuite 9		22.0
7.10	Single Room with wet-room ensuite 10		22.0
7.11	Single Room with wet-room ensuite 11		22.0
7.12	Single Room with wet-room ensuite 12		22.0
7.13	Single Room with wet-room ensuite 13		22.0
7.14	Single Room with wet-room ensuite 14		22.0
7.15	Single Room with wet-room ensuite 15		22.0
7.16	Lounge 1		32.0
7.17	Lounge 2		32.0
7.18	Dining Room 1		32.0
7.19	Dining Room 2 / Multi purpose Activity Room 4		30.0
7.20	Nurses station/Staff base 1		5.0
7.21	Nurses station/Staff base 2		5.0
7.22	Prep Room (Controlled drugs)		6.0
7.23	Store		5.0
7.24	Wheelchair / Hoists store		11.0
7.25	Residents WC		4.5
7.26	Staff / Visitors WC		4.5
7.27	Assisted Bath / Shower Room / WC		23.0
7.28	Sluice		7.0
7.29	CLR		7.0
7.30	Linen Store		3.0
7.31	Cleaners store		5.0
7.32	IT room		9.0
			551.0
8.00	**STUDIO UNITS (Annexed to Care Home) - Homeless complex care / Palliative care units**		
8.01	Studio Room 1 - Ensuite		25.0
8.02	Studio Room 2 - Ensuite		25.0
8.03	Studio Room 3 - Ensuite		25.0
8.04	Studio Room 4 - Ensuite		25.0
8.05	Studio Room 5 - Ensuite		25.0
8.06	Studio Room 6 - Ensuite		25.0
8.07	Studio Room 7 - Ensuite		25.0
8.08	Studio Room 8 - Ensuite		25.0
8.09	Studio Room 9 - Ensuite		25.0
8.10	Studio Room 10 - Ensuite		25.0
8.11	Common Room		41.0
8.12	WC 1		6.0
8.13	WC 2		6.0
8.14	Office 1		12.0
8.15	Office 2		12.0
8.16	Refuse store(s) / Meters		13.0
8.17	Bathroom		6.0
8.18	Hoist Store		10.0
8.19	Furniture store		10.0
8.20	Reception		7.0
			373.0
	Circulation		**419.0**
	SECOND FLOOR TOTAL AREA		**1,343.0**

THIRD FLOOR

9.00	**RESIDENTIAL SHELTERED HOUSING UNITS**		
9.01	Flat 1		46.0
9.02	Flat 2		46.0
9.03	Flat 3		46.0
9.04	Flat 4		46.0
9.05	Flat 5		46.0
9.06	Flat 6 - 2 Bed		72.0
9.07	Flat 7 - 2 Bed		72.0
9.08	Flat 8		46.0
9.09	Communal Space (Meetings / Activities / Events)		75.0
9.10	Refuse Store(s) / Meters		33.0
9.11	Archive store		31.0
9.12	Store		14.0
9.13	Store		12.0
9.14	Linen Store		3.0
9.15	Cleaners Store		12.0
			600.0
	Circulation		**234.0**
	THIRD FLOOR TOTAL AREA		**834.0**

FOURTH FLOOR

9.00	**RESIDENTIAL SHELTERED HOUSING UNITS**		
9.16	Flat 9		46.0
9.17	Flat 10		46.0
9.03	Flat 11		46.0
9.04	Flat 12		46.0
9.05	Flat 13		46.0
9.06	Flat 14 - 2 Bed		72.0
9.07	Flat 15 - 2 Bed		72.0
9.08	Flat 16		46.0
9.10	Furniture / Archive store		33.0
9.11	Store		14.0
9.12	Store		12.0
9.13	Store		12.0
9.14	Linen Store		3.0
9.15	Plant Room		26.0
			520.0
	Circulation		**234.0**
	FOURTH FLOOR TOTAL AREA		**754.0**
	70.1%	TOTAL GROSS AREA	5,190.0
	29.9%	TOTAL CIRCULATION	2,210.0
		TOTAL NETT AREA	**7,400.0**

Introduction

Ingleton Wood and Man and Machine (M&M) have worked alongside the London Borough of Haringey to understand their requirements with regards to building information management. Ingleton Wood and M&M have supported Haringey at the beginning of stage 2 as it was understood that Haringey would like their project to be delivered in line with the UK BIM framework of deliverables. However, this is a new process for Haringey and their understanding of this process, and the extent of the deliverables is limited.

It has been raised throughout stage 2 that in order for the project to progress in line with the UK BIM framework, consultants require further information from the client. It has been raised that an Exchange Information Requirements (EIR) document should be provided by Haringey to set out the expected deliverables. This will allow the consultant teams to produce an execution plan and response to these deliverables.

A confirmed EIR document has not been provided, only a DRAFT copy for comment has been provided and is therefore not included within this report. A DRAFT response BEP has been put forward by Ingleton Wood and M&M.

Ingleton Wood and M&M have taken the initiative to put together a DRAFT project execution plan (PEP) of which will be included as an appendix. The project execution plan should be produced in response to an EIR. As this has not been provided, best practice has been applied. The project execution plan is an assumption of what should be typically expected as deliverables for a project of this nature.

If an EIR is provided after stage 02 and the expected requirements and deliverables exceed that of the shared project execution plan, further agreement between the client and consultants will be required.

Project Execution Plan Overview

The purpose of this Execution Plan is to define the common approach for the whole team on the method and objectives to produce models for the associated project deliverables utilising Digital Construction and Information Management principles for design and delivery.

This document should be read and followed in conjunction with the requirements of the UK BIM Framework and associated Information Management Standards alongside any other referencing such as NBS Level of Definition guidance as shown in the links below:

- https://www.ukbimframework.org/
- https://toolkit.thenbs.com/definitions

This document will be prepared in a series of stages and will develop over the lifecycle of the design and construction phases and will address the requirements of each stage in advance. The Project execution plan is to serve as a series of defined project level instructions and guidelines on the method of provision of integrated processes which are to be followed throughout the design and delivery of the project. The objective should be to provide a practical guide as to the method used in production of the model and design information including its associated documentation, which will be passed on to the client at completion of the delivery team appointment.

It is important to establish and maintain a method of work to ensure that the objective standards are agreed and maintained. This document and its associated parts will be used to define these objective standards which will cover the information inputs, outputs, deliverables and standards. In this way it will be possible to support the whole team in a collaborative approach to the production of the design and construction information.

The independent delivery models may be assembled by the team to provide a federated model. This will be used for design team visualisation, coordination and clash detection. The model has the potential to be used for construction planning and sequencing and programme validation by others however this is outside of the delivery scope of the current engagement.

The Federated Model is composed of several linked but independent discipline specific and specialist sub-contractor models. These are authored and quality checked by the individual owners and coordinated by the design team to ensure compliance with the requirements of the appointing party.

For FM purposes standard procedure is that only major maintainable assets including major plant, equipment and systems subject to agreement with the Appointing Party FM provider or Operations Team have agreed upon information attributed to them within the model to be used by the facilities management team post completion.

The intent is to use the model as appropriate to assist the client with design and communication to relevant stakeholders to facilitate with the design development process during the RIBA Plan of Work stages.

The execution plan addresses the required inputs and outputs at each stage. As the design progresses in line with the RIBA Plan of Work, an increased level of granularity and accuracy based on the NBS Level of Development definitions and any requirements highlighted in line with BS EN 17412-1:2020 (Level of Information Need) which will be gradually added.

Within the following sections and associated secondary documents, the level of model ownership, functionality and level of information needed is defined for the project.

The contents of this report and BIM section do not supersede or replace any liability for the delivery of information on the project, as defined in separate appointments and contracts.

Common Terms Used.

BIM

BIM stands for Building Information Modelling, which is a “model based” process of generating and managing building data during the life cycle of a project.

CDE

Common Data Environment where the project information is to be stored. (System to be confirmed by Main contractor for data exchange purposes.)

Component

A component is a model element that can be reused in a number of situations. Examples include doors, stair cores, furniture, façade panels, columns, walls etc. Components are typically inserted and moved/rotated into required position.

Family

A Revit component as described above.

Native Model

A native model is a model containing discipline specific building elements or components, e.g. Architectural, Structural, MEP, and Civil.

Federated Model

A Federated Model is a composite model consisting of linked but independent components or native models.

Level of Information Need

Associated requirements needed to meet client desired outputs and specification in line with BS EN 17412-1:2020 and EIR deliverables.

LOD

Level of detail required at a certain stage for graphical objects or components within a BIM model.

LOI

Level of Information required at a certain stage for non-graphical information within a BIM model.

All parties working on this project are required to understand the contents of this report with regards to BIM and must ensure their existing working methods are aligned with these requirements. Any queries or comments on the enclosed should be directed to the Project Design Team.

This plan is structured with reference to content within the UK BIM Framework and BS EN ISO 19650 suite.

Standards and References for Project Delivery and Execution Plans.

A full list of standards and references for the project delivery can be found in the Project Execution Plan (PEP).

Information planning

BS EN ISO 19650-2 Clauses 5.1.2 and 5.2.1 defines the requirement for both the Project Information Requirements and Exchanges Information Requirements for a scheme. The subsections of the BEP, supplementary information and appendices respond to the parts of the EIR specifically requesting bidders' proposals.

Planning of work and data segregation

The project will be divided into discipline working models. These would be managed in line with the Common Data Environment protocols and internal file management structure. Model division and planning has been explained in more detail within the Model Extent Matrix and Level of Information Need Matrix as part of the Supplementary Information. For further information regarding data segrgation and the management of models, refer to the attached Appendix.

Co-ordination and clash detection

Each task team will be responsible for checking and delivering a co-ordinated design proposal using the full design team information exchange. Project level design co-ordination is normally managed by the Lead Designer with the assistance of all engaged design teams. Task team reviews will be managed initially in the native modelling software and then reviewed by the team interface managers and coordination manager within their nominated clash rendition software.

Collaboration process

All design models will be exchanged through the identified common data environment (CDE) with associated protocols. Ingleton Woods chosen CDE is BIM360. Any work carried out by specialist designers will be managed by design and contractor leads and file exchange will be managed through the CDE.

Health and safety/CDM management

Principle designer and CDM role will be carried out by Ingleton Wood.They will be present at DTM's as required and will manage their information exchanged through the allocated CDE.

Quantity Surveyor

QS services are to be carried out by an external consultancy, 'WT partnership' and it is expected that their information be shared via the CDE to relevant parties.

Compliance Plan

Ingleton Wood LLP have ISO 9001 and 14001 QMS policies and the company Project Delivery Guidance is written in line with BS EN ISO 19650 series and we carry out periodic project audits across the business to ensure compliance. The Task Information Managers assigned to the project will ensure that the project standards are followed and our Digital Delivery Group will aid with this process throughout the assigned project stages.

Project Federated Model Environment

A Federated Model is a composite model consisting of linked but independent components or "native" models.

The native independent models or OpenBIM format deliverables will be assembled by the assigned leading team to provide a Federated Model. The Federated Model will mainly be used for design team coordination and clash detection and resolution purposes during design team meetings and individual design team authoring.

The Project Lead Designer will own and be responsible for the Federated Model. Native models will be produced by the consultant teams as appropriate. Each native model originator will be responsible for their own information for submission to the design team for coordination purposes.

Assembly of all model content (native models) into the Federated Model for review, and the management of the review process will be the responsibility of the Project Design and delivery team.

Design and engineering responsibility, coordination leadership and technical coordination will remain with the consultant team / specialist subcontractor (as appropriate). The model content author retains responsibility for the accuracy of the native model content.

For clarity the assigned Project Lead and Information Manager will not take any design liability for the design works which will continue to rest with the native model authors. The role of these individuals are specifically for the highlighting of coordination issues and implementation of the project protocols across this project.

It will be the responsibility of each native model originator to ensure that their models are checked for compliance with this protocol and relevant standards (including coordination) prior to being issued to the design coordinator/main contractor for inclusion into the Federated Modelling process.

At the completion of the project it is understood that only 2D outputs will be a requirement of the handover deliverables, however it is expected that a native model would also be requested. This expectation includes native model authors to issue their native models (last model produced and issued for federation) for issue to the client as part of the handover documentation and as record of installation and for further use by the FM team for asset management should this be required.

BIM Goals and Model Uses

Project Model Goal Description	Priority (High/ Med/ Low)	Potential Model Uses
Enhance quality of design outputs. Reduction of uncontrolled design changes. Provision of coordinated design deliverables.	High	3D Design co-ordination, Design authoring, Design reviews, As-built model
Eliminate on-site conflicts through continual coordination.	High	3D Coordination
Improve visibility of design intent to construction / delivery team & client	Medium	3D Design co-ordination, Design authoring, Design reviews
Design Simulation for Structural Analysis, Energy Analysis and Review	Medium	Simulation and Design Review, As built model
Interconnected Design and Engineering Processes	Medium	3D Design co-ordination, Design reviews, Software interchange
Assess costs associated with design development and changes.	Medium	Cost estimation
Record of the existing building services and facilities for asset capture of assets.	Low	Existing conditions modelling.

Typical Stage Based Model Uses

Stage 2 Concept and Options Design		Stage 3 Development & validate		Stage 4 Technical design	
✓	Concept design authoring	✓	Design review & validation	✓	Technical design authoring
✓	Design reviews	✓	Design reviews	✓	Design reviews
✓	3d coordination	✓	3d coordination	✓	3d coordination
		✓	Design simulation *	✓	Design simulation *

The model will be used as a basis for providing data to analytical simulation software to assist in developing and confirm certain building performances requirements. The model may be used in creating:

- Building Thermal Performance
- Structural Element and System Analysis
- Lighting and Daylight Analysis
- Energy Consumption and Performance

The project models will be unlikely to be utilised for direct analysis however we will be creating reference models or isolated models within the analysis packages. This information will be added to the Execution Plan (Software Used Section).

To make use of the analytical software tools; information may be extracted from the native model environment, 2D drawings and specification documents. This information may not be directly linked to the modelling process due to the tools being used however these tools have been selected due to their suitability.

Information Exchange

Ingleton Wood shall ensure that it's information meets these requirements:

- File Naming meets agreed protocols
- Data saved to adopted project co-ordinate systems
- Purged, audited and compressed for model issues (Final Issue)

The regular exchange of information is an essential part of a successful project. All Project Stakeholders should establish agreed Project Data Exchange Protocols within the Project Execution Plan. This should include the following from Ingleton Wood exchange protocol:

External Data exchange - All Teams

All documents and drawings are to be uploaded to the identified CDE in accordance with approved naming procedures and CDE guidance systems. Any variance to the standards BS EN ISO 19650-2 (N. Annex A) or the IWD protocols should be noted clearly in the Project Execution Plan.

Frequency and Format of data exchange

The frequency and format of the data exchange should be managed in accordance with the table shown in the Project Execution Plan.

The following section deals with the type and method of information exchange to produce any discipline model, utilising other discipline models.

All information issued for use in the formation of the documentation shall meet the requirements of the Model Extent Matrix, Level of Information Need Matrix and TIDP/ MIDP for the project deliverables.

All model files submitted for coordination review must be transmitted via the appointed CDE, if applicable, or other means as noted in the Execution Plan, and follow these points:

- Models must be transmitted with an updated document register.
- IFC 2x3 (Industry Foundation Class) – Coordination View 2.0 will be made available if requested by the client.
- Models will be uploaded to the CDE as per agreed protocol
- All models are to be uploaded for information only unless specified otherwise.

Sharing Models - use for internal coordination.

It is understood that information will be generated as part of the design development process, this information which is currently in production and has not yet been approved and verified for use outside of the individual organisation may be shared to the internal design team to support collaboration at the earliest possible stage. This information is to be treated as "uncontrolled" and should not be utilised for formal information production to be shared outside the organisation until approved for issue.

Sharing Data

To ensure co-ordinated and efficient working, the design team shall make their design data available for project-wide formal access through the Common Data Environment or nominated file exchange system.

These files shall be accessible by all from the CDE system, however prior to sharing, the data shall be checked, approved and validated as 'suitable for co-ordination' in line with the BS EN ISO 19650-2 (N. Annex A) by the native file originator.
These models shall be transmitted in accordance with the agreed upon programme. These models will be the only model data that the Design team will use to create a Federated Model, this is to ensure that other disciplines are

working to latest validated information.

All Model files shall be issued in conjunction with verified 2D documents/drawings if appropriate for clarity.

All changes to the shared data shall be effectively communicated to the team through drawing issue and change register.
Publication of documents issued from verified models.

All 2D DWG or PDF drawings produced from model data shall be published to the agreed CDE system folder structure once formally checked, approved and authorised in accordance with quality control procedures.

- Revision/Issue control shall follow the Document Control systems established for the project.
- A record of all issued deliverables shall be maintained in the Task Team internal archive.
- Information within a model environment is inter-dependent of other areas of the model, therefore changes in one area may affect other areas. As such the Models and associated views shall be treated as Work In Progress or shared as un-controlled documents until such time as they leave the model environment in a non-editable format e.g. PDF issued drawings.
- Frequency of information issues/data drops should be in accordance with frequency schedule in the BIM Execution Plan.

Collaborative Working Strategy

Common Data Environments (CDE)

The exchange of information between all stakeholders is a key factor in execution of a successful BIM project. As such it is important to establish a Common Data Environment. Data Environment locations are listed in the Execution Plan.

It has been agreed with the client that Ingleton Wood will use BIM360 as their CDE with sharing facilities open to the client and external consultants.

Please refer to separate documentation for further details surrounding CDE workflows and standards where hosted and managed by others.

Data exchange processes and frequency are noted in the main Execution Plan information.

The federated model will be reviewed periodically for technical evaluation and coordination purposes and should include all design team members.

The Lead Designer/PIM will collate and issue clash review report review at the workshop reviews to discuss with the design team.

Quality Control Strategy

Information Authors are responsible for modelling quality checks before release to a shared environment prior to Task Team Managers review and approval of this information.

Further details are to be agreed prior to stage 3 regarding the planned use for BIM 360 Docs – Internal and External Access for the project including CDE exchange containers and any design discipline/team access arrangements for typical project delivery.

Typical Level of Information Need definitions – LOD & LOI

Refer to the attached Appendix for further details regarding project Levels of detail and information, standards, typical format for naming procedures, methods and procedures.

Measurement and Coordinate Systems

The project coordinate system should be based upon a known global coordinate from accepted survey information.
Coordinate Systems

Units & Measurement:

Models shall use consistent units and measurement across the project.

COBIE

There has been no request from the client to produce COBie data outputs. No requirement for COBie data outputs were stated in the contract for deliverables and an EIR has not been shared with consultants.

Project Deliverables

Concept Design - Stages 1 to 2

Early stage design information will be used for concept design, options appraisals and early planning of the building design. Models shall be shared at the end of stages and schematic layout designs may be created as 2D design outputs to supplement early design models at this stage.

Developed Design – Stage 3

During Developed Design process, the model updates will be produced more regularly in line with the frequency requirements. They may be required to be produced in native format or IFC for design coordination purposes or in NWD format for federation design coordination purposes.

2D design outputs should be generated form the model environment and models should contain a higher level of geometric and information deliverables in line with the model element matrix and client's specific requirements.

All physical design deliverables are referenced in the works stage deliverables documents which are issued outside this document. 2D formatted drawings will be prepared and issued via the CDE system in accordance with the agreed drawing and document management protocols.

Project deliverables shall be in line with the agreed contract of requirements

Task Information Delivery Plan (TIDP)

Project Number	812866
Originator Code	IWD
Project Title	OSBORNE GROVE CARE HOME
Document Author	JG
Date Created	19/02/21
Date Last Updated	18/06/21
Document Status	S2 - SUITABLE FOR INFORMATION
Revision	P02
Document Name	TIDP

REVISION LOG		**Comments**
Revision Number:	**Revision Date:**	
P01	25/05/2021	Stage 3+ Programme to be confirmed.

			Refer to file naming convention documentation for clarification:							2_Concept Design		3_Developed Design			4_Technical Design			5_Construction	
			File Name as per ISO 19650-2							RIBA Stage:	2	RIBA Stage:	3		RIBA Stage:	4		RIBA Stage:	5
										Programme Reference:		Programme Reference:			Programme Reference:			Programme Reference:	
DELIVERABLE (TITLE)	DESCRIPTION	EXCHANGE FORMAT	Project Code	Originator Code	Volume/ System	Level/ Location	Type	Role	Number	Owner	Date Required to Issue:	Owner	Date Required to Issue:	Information Required to Complete	Owner	Date Required to Issue:	Information Required to Complete	Owner	Date Required to Issue:
DOCUMENTS																			
812866-IWD-XX-XX-SH-A-0020	Accommodation Schedule	PDF/Excel	812866	IWD	XX	XX	SH	A	0020	IW - ARCH	18.06.21								
812866-IWD-XX-XX-RP-A-0010	Project Risk Register	PDF	812866	IWD	XX	XX	RP	A	0010	IW - ARCH	18.06.21								
812866-IWD-XX-XX-RP-A-0100	Stage 02 Report	PDF	812866	IWD	XX	XX	RP	A	0100	IW - ARCH	18.06.21								
812866-IWD-XX-XX-RP-A-0101	Stage 03 Report	PDF	812866	IWD	XX	XX	RP	A	0101										
SURVEYS																			
1099-TRS-XX-XX-M3-G-0001	Point Cloud Survey	RVT	1099	TRS	XX	XX	M3	G	0001	IW - ARCH	18.06.21								
TS21-099-1-3D	Topographical Survey	DWG									18.06.21								
DRAWINGS - Architecture																			
0100 - Planning Drawings																			
812866-IWD-XX-XX-DR-A-0130	Site Plan		812866	IWD	XX	XX	DR	A	0130	IW - ARCH									
812866-IWD-XX-00-DR-A-0140	Floor Plan - Level 00		812866	IWD	XX	00	DR	A	0140	IW - ARCH									
812866-IWD-XX-01-DR-A-0141	Floor Plan - Level 01		812866	IWD	XX	01	DR	A	0141	IW - ARCH									
812866-IWD-XX-02-DR-A-0142	Floor Plan - Level 02		812866	IWD	XX	02	DR	A	0142	IW - ARCH									
812866-IWD-XX-03-DR-A-0143	Floor Plan - Level 03		812866	IWD	XX	03	DR	A	0143	IW - ARCH									
812866-IWD-XX-04-DR-A-0144	Floor Plan - Roof		812866	IWD	XX	04	DR	A	0144	IW - ARCH									
812866-IWD-XX-BG-01-DR-A-0145	Floor Plan - Below Ground 01		812866	IWD	XX	BG-01	DR	A	0145	IW - ARCH									
812866-IWD-XX-XX-DR-A-0160	Elevations		812866	IWD	XX	XX	DR	A	0160	IW - ARCH									
812866-IWD-XX-XX-DR-A-0161	Elevations		812866	IWD	XX	XX	DR	A	0161	IW - ARCH									
812866-IWD-XX-XX-DR-A-0170	Sections		812866	IWD	XX	XX	DR	A	0170	IW - ARCH									
812866-IWD-XX-XX-DR-A-0171	Sections		812866	IWD	XX	XX	DR	A	0171	IW - ARCH									
1000 - Model Files																			
812866-IWD-ZZ-ZZ-M3-A-1000	Architect Revit Model	RVT	812866	IWD	ZZ	ZZ	M3	A	1000	IW - ARCH	18.06.21								
	IFC Export	IFC 2x3 Extended																	
	Navisworks Model For Collaboration	NWC																	
1100 - Model Analysis Files																			
1200 - Visualisation Files																			
1300 - Clash Rendition Files																			
1400 - Animation Files																			
2000 - Existing Layouts																			
812866-IWD-XX-XX-DR-A-2000	Site Location Plan	PDF	812866	IWD	XX	XX	DR	A	2000	IW - ARCH	18.06.21								
812866-IWD-XX-XX-DR-A-2001	Existing Site Plan	PDF	812866	IWD	XX	XX	DR	A	2001	IW - ARCH	18.06.21								
812866-IWD-XX-XX-DR-A-2005	Existing Site Elevation	PDF	812866	IWD	XX	XX	DR	A	2005	IW - ARCH	18.06.21								
812866-IWD-XX-XX-DR-A-2006	Existing Site Elevation	PDF	812866	IWD	XX	XX	DR	A	2006	IW - ARCH	18.06.21								
812866-IWD-XX-XX-DR-A-2010	Existing Site Context Elevations	PDF	812866	IWD	XX	XX	DR	A	2010	IW - ARCH	18.06.21								
812866-IWD-XX-XX-DR-A-2020	Existing Site Section	PDF	812866	IWD	XX	XX	DR	A	2020	IW - ARCH	18.06.21								
812866-IWD-XX-XX-DR-A-2021	Existing Site Section	PDF	812866	IWD	XX	XX	DR	A	2021	IW - ARCH	18.06.21								
2200 - Demolition and Enabling Works																			
812866-IWD-XX-XX-DR-A-2200	Demolition Site Plan	PDF	812866	IWD	XX	XX	DR	A	2200	IW - ARCH	18.06.21								
2300 - Site General Arrangements																			
812866-IWD-XX-XX-DR-A-2300	GA Site Plan	PDF	812866	IWD	XX	XX	DR	A	2300	IW - ARCH	18.06.21								
2400 - Floor Plan General Arrangements																			
812866-IWD-XX-00-DR-A-2400	GA Floor Plan - Level 00	PDF	812866	IWD	XX	00	DR	A	2400	IW - ARCH	18.06.21								
812866-IWD-XX-01-DR-A-2401	GA Floor Plan - Level 01	PDF	812866	IWD	XX	01	DR	A	2401	IW - ARCH	18.06.21								
812866-IWD-XX-02-DR-A-2402	GA Floor Plan - Level 02	PDF	812866	IWD	XX	02	DR	A	2402	IW - ARCH	18.06.21								
812866-IWD-XX-03-DR-A-2403	GA Floor Plan - Level 03	PDF	812866	IWD	XX	03	DR	A	2403	IW - ARCH	18.06.21								
812866-IWD-XX-04-DR-A-2404	GA Floor Plan - Level 04	PDF	812866	IWD	XX	04	DR	A	2404	IW - ARCH	18.06.21								
2500 - Ceiling Plan General Arrangements																			
812866-IWD-XX-00-DR-A-2500	GA Ceiling Plan - Level 00	PDF	812866	IWD	XX	00	DR	A	2500	IW - ARCH									
812866-IWD-XX-01-DR-A-2501	GA Ceiling Plan - Level 01	PDF	812866	IWD	XX	01	DR	A	2501	IW - ARCH									
812866-IWD-XX-02-DR-A-2502	GA Ceiling Plan - Level 02	PDF	812866	IWD	XX	02	DR	A	2502	IW - ARCH									
812866-IWD-XX-03-DR-A-2503	GA Ceiling Plan - Level 03	PDF	812866	IWD	XX	03	DR	A	2503	IW - ARCH									
812866-IWD-XX-04-DR-A-2504	GA Ceiling Plan - Level 04	PDF	812866	IWD	XX	04	DR	A	2504	IW - ARCH									
2600 - Elevation General Arrangements																			
812866-IWD-XX-XX-DR-A-2600	GA Elevation North	PDF	812866	IWD	XX	XX	DR	A	2600	IW - ARCH	18.06.21								
812866-IWD-XX-XX-DR-A-2601	GA Elevation East	PDF	812866	IWD	XX	XX	DR	A	2601	IW - ARCH	18.06.21								
812866-IWD-XX-XX-DR-A-2602	GA Elevation South	PDF	812866	IWD	XX	XX	DR	A	2602	IW - ARCH	18.06.21								
812866-IWD-XX-XX-DR-A-2603	GA Elevation West	PDF	812866	IWD	XX	XX	DR	A	2603	IW - ARCH	18.06.21								
2700 - Section General Arrangements																			
812866-IWD-XX-XX-DR-A-2700	GA Site Section A.A	PDF	812866	IWD	XX	XX	DR	A	2700	IW - ARCH	18.06.21								
812866-IWD-XX-XX-DR-A-2701	GA Site Section B.B	PDF	812866	IWD	XX	XX	DR	A	2701	IW - ARCH	18.06.21								
812866-IWD-XX-XX-DR-A-2710	GA Section A.A	PDF	812866	IWD	XX	XX	DR	A	2710	IW - ARCH	18.06.21								
812866-IWD-XX-XX-DR-A-2711	GA Section B.B	PDF	812866	IWD	XX	XX	DR	A	2711	IW - ARCH	18.06.21								
812866-IWD-XX-XX-DR-A-2712	GA Section C.C	PDF	812866	IWD	XX	XX	DR	A	2712	IW - ARCH	18.06.21								
812866-IWD-XX-XX-DR-A-2713	GA Section D.D	PDF	812866	IWD	XX	XX	DR	A	2713	IW - ARCH	18.06.21								
2800 - Strategy Layouts																			
2900 - Schedules and Schematics																			
812866-IWD-XX-XX-DR-A-2900	Door Schedule	PDF	812866	IWD	XX	XX	DR	A	2900	IW - ARCH									
812866-IWD-XX-XX-DR-A-2910	Window Schedule	PDF	812866	IWD	XX	XX	DR	A	2910	IW - ARCH									
DRAWINGS - Architecture Detail																			
3000 - Setting-Out Site																			
812866-IWD-XX-XX-DR-A-3000	Site Setting Out	PDF	812866	IWD	XX	XX	DR	A	3000	IW - ARCH	18.06.21								
3100 - Setting-Out Floor Plans	Setting Out Plan - Ground Floor	PDF	OSBRNE	IWD	XX	00	DR	A	3100	IW - ARCH	18.06.21								
OSBRNE-IWD-XX-01-DR-A-3101	Setting Out Plan - 1st Floor	PDF	OSBRNE	IWD	XX	01	DR	A	3101	IW - ARCH	18.06.21								
OSBRNE-IWD-XX-02-DR-A-3102	Setting Out Plan - 2nd Floor	PDF	OSBRNE	IWD	XX	02	DR	A	3102	IW - ARCH	18.06.21								
OSBRNE-IWD-XX-03-DR-A-3103	Setting Out Plan - 3rd Floor	PDF	OSBRNE	IWD	XX	03	DR	A	3103	IW - ARCH	18.06.21								
OSBRNE-IWD-XX-05-DR-A-3105	Setting Out Plan - Roof	PDF	OSBRNE	IWD	XX	05	DR	A	3105	IW - ARCH	18.06.21								
OSBRNE-IWD-XX--01-DR-A-3110	Setting Out Plan - Below Ground -01	PDF	OSBRNE	IWD	XX	-01	DR	A	3110	IW - ARCH	18.06.21								
OSBRNE-IWD-XX-ZZ-DR-A-3120	Setting Out - Typical Bedroom Layouts	PDF	OSBRNE	IWD	XX	ZZ	DR	A	3120	IW - ARCH									
3200 - Setting-Out Ceiling Plans																			
OSBRNE-IWD-XX-00-DR-A-3200	Setting Out Ceiling Plan - Ground Floor	PDF	OSBRNE	IWD	XX	00	DR	A	3200	IW - ARCH									
OSBRNE-IWD-XX-01-DR-A-3201	Setting Out Ceiling Plan - 1st Floor	PDF	OSBRNE	IWD	XX	01	DR	A	3201	IW - ARCH									
OSBRNE-IWD-XX-02-DR-A-3202	Setting Out Ceiling Plan - 2nd Floor	PDF	OSBRNE	IWD	XX	02	DR	A	3202	IW - ARCH									
OSBRNE-IWD-XX-03-DR-A-3203	Setting Out Ceiling Plan - 3rd Floor	PDF	OSBRNE	IWD	XX	03	DR	A	3203	IW - ARCH									
OSBRNE-IWD-XX-04-DR-A-3204	Setting Out Ceiling Plan - 4rd Floor	PDF	OSBRNE	IWD	XX	04	DR	A	3204	IW - ARCH									
OSBRNE-IWD-XX-ZZ-DR-A-3210	Setting Out Ceiling Plan - Typical Bedroom Units	PDF	OSBRNE	IWD	XX	ZZ	DR	A	3210	IW - ARCH									

3300 - Setting-Out Elevations																			
OSBRNE-IWD-XX-XX-DR-A-3300	Setting Out - Elevation North	PDF	OSBRNE	IWD	XX	XX	DR	A	3300	IW - ARCH	18.06.21								
OSBRNE-IWD-XX-XX-DR-A-3301	Setting Out - Elevation East	PDF	OSBRNE	IWD	XX	XX	DR	A	3301	IW - ARCH	18.06.21								
OSBRNE-IWD-XX-XX-DR-A-3302	Setting Out - Elevation South	PDF	OSBRNE	IWD	XX	XX	DR	A	3302	IW - ARCH	18.06.21								
OSBRNE-IWD-XX-XX-DR-A-3303	Setting Out - Elevation West	PDF	OSBRNE	IWD	XX	XX	DR	A	3303	IW - ARCH	18.06.21								
OSBRNE-IWD-XX-XX-DR-A-3320	Setting Out - Elevation Courtyard North	PDF	OSBRNE	IWD	XX	XX	DR	A	3320	IW - ARCH									
OSBRNE-IWD-XX-XX-DR-A-3321	Setting Out - Elevation Courtyard East	PDF	OSBRNE	IWD	XX	XX	DR	A	3321	IW - ARCH									
OSBRNE-IWD-XX-XX-DR-A-3322	Setting Out - Elevation Courtyard South	PDF	OSBRNE	IWD	XX	XX	DR	A	3322	IW - ARCH									
OSBRNE-IWD-XX-XX-DR-A-3323	Setting Out - Elevation Courtyard West	PDF	OSBRNE	IWD	XX	XX	DR	A	3323	IW - ARCH									
3400 - Setting-Out Sections																			
OSBRNE-IWD-XX-XX-DR-A-3400	Setting Out - Section A.A	PDF	OSBRNE	IWD	XX	XX	DR	A	3400	IW - ARCH									
OSBRNE-IWD-XX-XX-DR-A-3401	Setting Out - Section B.B	PDF	OSBRNE	IWD	XX	XX	DR	A	3401	IW - ARCH									
OSBRNE-IWD-XX-XX-DR-A-3402	Setting Out - Section C.C	PDF	OSBRNE	IWD	XX	XX	DR	A	3402	IW - ARCH									
OSBRNE-IWD-XX-XX-DR-A-3403	Setting Out - Section D.D	PDF	OSBRNE	IWD	XX	XX	DR	A	3403	IW - ARCH									
3500 - Plan Details																			
OSBRNE-IWD-XX-XX-DR-A-3500	Plan Details - Ground Floor 01	PDF	OSBRNE	IWD	XX	XX	DR	A	3500	IW - ARCH									
3600 - Elevation Details																			
OSBRNE-IWD-XX-XX-DR-A-3600	Elevation Details 01	PDF	OSBRNE	IWD	XX	XX	DR	A	3600	IW - ARCH									
3600 - Section Details																			
OSBRNE-IWD-XX-XX-DR-A-3700	Section Details 01	PDF	OSBRNE	IWD	XX	XX	DR	A	3700	IW - ARCH									
7000 Interior Design																			
7200 - Furniture Plans																			
812866-IWD-XX-00-DR-ID-7200	GA Floor Plan - Level 00	PDF	812866	IWD	XX	00	DR	ID	7200	IW - INT									
812866-IWD-XX-01-DR-ID-7201	GA Floor Plan - Level 01	PDF	812866	IWD	XX	01	DR	ID	7201	IW - INT									
812866-IWD-XX-02-DR-ID-7202	GA Floor Plan - Level 02	PDF	812866	IWD	XX	02	DR	ID	7202	IW - INT									
812866-IWD-XX-03-DR-ID-7203	GA Floor Plan - Level 03	PDF	812866	IWD	XX	03	DR	ID	7203	IW - INT									
812866-IWD-XX-04-DR-ID-7204	GA Floor Plan - Level 04	PDF	812866	IWD	XX	04	DR	ID	7204	IW - INT									

National design standards, Health Building Notes and general design guidance, all of which relate to and support the design of Osborne Grove Care Home and its future residents have contributed to the development of the project. Some of this resource has been listed in this section. However, Ingleton Wood's own experience within this sector and the knowledge of team members and past projects all naturally influence the success of the project.

The following resources listed are as follows;

- DCLG - Nationally described space standards
- London Plan - Housing guidance
- Ministry of Housing Communities & Local Government - National Design Guide
- HBN 00-01 - General Design Guidance for Healthcare Buildings
- HBN 00-02 - Sanitary Spaces
- HBN 00-03 - Clinical and Clinical Support Spaces
- HBN 00-04 - Circulation and Communication Spaces
- HBN 00-057 - Resilient Healthcare Estate
- HBN 08-02 - Dementia-Friendly Health and Social Care Environments
- HBN 00-09 - Infection Control in the Built Environment
- HBN 00-10 Part A - Flooring
- HBN 00-10 Part B - Walls and Ceilings
- HBN 00-10 Part C - Sanitary Assemblies
- HBN 00-10 Part D - Windows and Associated Hardware's

Further Design guidance relevant to the homes intended user groups has also been referenced on the following page.





























- Good practice in the design of homes and living spaces for people with dementia and sight loss - The University of Stirling.
- Zero Carbon Compendium - The future of low energy cities and communities
- Older People's Housing Design Guidance - The Royal Borough of Kensington and Chelsea.
- Design for Dementia - Liverpool John Moores University
- 10 Characteristics of places where people want to live - RIBA
- Designing Homes for Older People - Pozzoni LLP Architects
- Design Principles for Extra Care Housing - PRP
- Integrated by Design - PRP
- A Home for the Ages - RIBA
- Older and Wiser. A practical guide for developing, commissioning and operating age-friendly homes - The Housing Forum.
- Age Friendly Housing - Future Design for Older People - RIBA.
- Care Homes for Older People - Department of Health
- HAPPI - Housing our Ageing Population: Panel for Innovation.
- HAPPI2 - Housing our Ageing Population: Plan for Implementation
- HAPPI3 - Making Retirement Living a Positive Choice
- Small Dementia Design Considerations for Big Impact - Ryder
- Homes for our Old Age - CABE
- Safe, Happy & Together in Later Living Communities - PRP
- Designing for Autism Spectrum Disorders











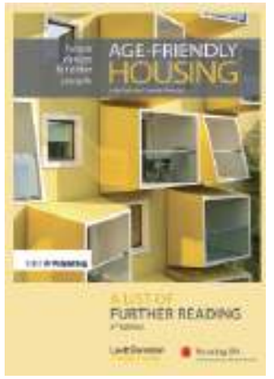




























Numerous design theories can be found when researching individual user groups of which can generally be applied to the care home as a whole. Below are various theories which may be applied to the home to create an intelligent piece of responsive architecture.

Therapeutic Environment Theory

The Therapeutic Environment theory stems from the fields of environmental psychology (the psycho-social effects of environment), psychoneuroimmunology (the effects of environment on the immune system), and neuroscience (how the brain perceives architecture). The design of therapeutic environments has been well researched in the study of designing for an aging population. Cohen and Weiseman developed a conceptual framework for therapeutic environments that assumes that the nature and needs of residents define therapeutic goals, which in turn helps shape the physical setting indirectly through their cultural relationships with the social organizational context. Their concept, Therapeutic Goals: Focus on Continuing of the Self, includes:

1. Maximizing safety and security
2. Maximizing awareness and orientation
3. Supports of functional abilities
4. Facilitation of social context
5. Provision of privacy
6. Provision of opportunities for personal control
7. Regulation of stimulation 8. Provision of continuity of self

Many of the philosophies of therapeutic environments are based on whether or not architectural features make a home more adaptable. Due to advancements in design for diversity and the implementation of building codes, most homes are designed to prevent placing individuals at physical risk. Unfortunately, little has been done to address the psychological consequences of architectural elements for populations with sensory sensitivities and low cognitive abilities. This theory of a therapeutic environment can be applied to the home as an overall strategy but shall be developed during stage 3 & 4 of the design. A therapeutic application to the Osborne Grove design may be through fiinishes, colour and texture and covered in the design of finer details. A therapeutic environment has been applied in the layout of the home, creating a passive circular flow, social hubs and integration of biophilic design.

Gestalt Theory

A theory used to understand how individuals organise the stimuli they are presented with. The theory understands how one organises their perceptions into a coherent whole as the ability to look at an object as a whole, not just individual pieces posses a cognitive processing issue for people with ASD.

- A weak central coherence involves the inability to integrate details into a meaningful whole.
- Focus on parts rather than the whole.
- Memory is often stored as an unprocessed, un-interpreted image.

The Theory can be applied with regards to arrangement of finishes and details, including signs and wall fixings. Walls will be kept simple and reduce the need for lots of small parts when trying to convey information or design.

Sensory Integration Theory

Sensory Integration Theory is the process that refers to the detection, integration, organisation, and use of the sensory information that helps a person interact with his or her environment. People whose sensory input is not organized or integrated in the brain have sensory integrative dysfunction (SID). As a result, the environment often causes the individual to feel confusion, irritation, or an inability to participate and act in manners similar to non-ASD individuals.

Treatment of symptoms is provided through a variety of activities and equipment to teach directionality, coordination, balance control, vestibular and sensory stimulation, and fine motor control. Activities and equipment supporting the senses of those in the home shall form a large part of the residents daily lives in design and the homes use. Activity rooms, the day spaces and outdoor areas all support running activities to support this with SID. Along with treatment, management of residents with these difficulties can come from simplifying the sensory input around the home. Households are to be a minimalist and clear to reduce sensory overload. This will be further developed during stage 3 & 4 to build on the theory.

Elements of Legibility

The Theory of Legibility helps provide direction for accommodating wayfinding deficits. Wayfinding refers to the process of organizing spatial and environmental information to help users find their way. Designers are often put to task to enhance the wayfinding of individuals in order to keep them safe and diminish their frustration. Kevin Lynch, an urban planner, identified and described five predominate elements that lead to the legibility and image of a city: paths, edges, districts, nodes, and landmarks. These elements have been described and refer directly to individual areas within the care home. Because the home is made up of these elements, residents can naturally understand different spaces and therefore supports wayfinding.

1. Paths are channels people use as they travel from one area to another; examples include walkways, roads, and in the care homes instance corridors. Paths will be clearly identified and continuous. The strongest form of a path clearly indicates the start point and the end point. Paths may be internal via corridors and movement routes or routes through external landscaping to connect spaces. Corridors in the home have been emphasised further by widening at ends where social activity takes place re-inforcing the correct movement.
2. Edges, such as fences or hedge lines, preclude travel and may appear to be boundaries. The strongest form of an edge is one that is constant and continuous. These may be used to control movement through the external landscaping or act as barriers for security. Soft and hard landscaping is included within the design to passively control movement, ie hedges separating zones.
3. Districts, the largest elements, are regions having a particular character that people can readily identify: commercial, residential, artistic, and so on would be seen if designing at a city scale however within the home these may be regarded as individual floors.
4. Nodes are well-known points within the environment to and from which people travel; they are often places where paths converge. Nodes within the care home are areas such as separate households of which shall have their own identity for resident benefit but also remain consistant for nursing familiarity.
5. Landmarks, easily seen and singular components within an environment, are used for location orientation, and are often found within districts and nodes. These landmarks may simply be social spaces, dining or lounge rooms or a destination point clearly visible to provide a resident with an orientation within the home.

Substances and surfaces can also help provide cognitive clarity for one to be able to build their connections and their cognitive comprehension.

Prospect and Refuge Theory

The prospect-refuge theory built on an idea originally conceptualized by Lorenz, which said “to see without being seen” is an intrinsically human trait.

Prospect, by definition, is the ability to survey the environment, have unimpeded view of the space before entering or “previewing.”

Refuge is the ability to hide if necessary escape routes should be provided.

Humans subconsciously desire the ability to be able to see into a room before entering and also desire areas in which to hide inside that room. Theorists claim that the opportunity for prospect and refuge offer one of the most satisfying experiences in residential privacy by providing feelings of safety and of being inside and looking out. The challenge in interacting with other people is the desire to maximize control of contact. This includes the desire to be with others as well as the desire to avoid others. Being able to see into a room before making a commitment to enter can satisfy this need for control. The concept of previewing can be accomplished by sidelights, windows in doors, and subdividing spaces so one has a view from a distance. The care home allows for glazed doors and sidelights/windows between corridors and social spaces to let residents preview the area before entering. This will be a regular inclusion throughout the home where residents may feel uncomfortable before entering a space. Previewing methods also help to make entrances and exits more visible once inside a space. This can be helpful for individuals, particularly those with social anxiety, dementia or learning disabilities, who feel the need to escape from a stressful social situation. Exits that are made more visible by a sidelight or window will help inhabitants to clearly see an escape route. Spaces that provide for prospect and refuge also encourage social interaction.

Large areas divided into smaller areas, or areas with lower ceilings that permit looking out to more open spaces, are positive, as they provide refuge and the opportunity to look for prospect. This theory has been applied as part of the natural openness of the home giving users the independence to decide how and if they wish to enter a space and comfort in how they are going to use this space. This is particularly prevalent in the open plan design of social spaces. Larger areas for example dining and lounges will have zones and smaller spaces to re-inforce this comfort.

Individuals with Autism Spectrum Disorders (ASD) are often ignored in design. ASD is not included as part of building codes or design guidelines. This is a concern at a wider level but also a concern when creating architecture that will be used by those with ASD, specifically the Osborne Grove Care Home.

A challenge in designing for those with ASD is that no two cases are alike. Each individual will have different symptoms, sensitivities, and levels of functioning across the spectrum. Ideally, spaces would be designed for each individual case, with spaces accommodating each unique symptom, whilst helping individuals build a tolerance to environmental stimuli. However, 'cocooning' ASD individuals from all external factors does not necessarily help them experience their full potential. With this understanding, design guidance states that designers should not overly cater to users with ASD to create unrealistic environments.

Those with ASD are more sensitive to their physical surroundings and environment, more than that of the average person. When individuals find their environment difficult, this often leads to challenging, negative behaviour. ASD individuals are particularly sensitive to their environments primarily because of sensory processing deficits. Sensory processing deficits such as sensitive eyesight or hearing can make their environment distracting and even frightening.

Temple Grandin described in her autobiography autism as *"Seeing the world through a kaleidoscope and trying to listen to a radio station that is jammed with static at the same time. Add to that a broken volume control, which causes the volume to jump erratically from a loud boom to inaudible."*

Many individuals form coping mechanisms in the form of rigid and repetitive behaviours to deal with stimuli. These may appear like a tantrum but are actually a result of an imbalance between the environment and the individuals ability to adapt to it. ASD is not yet fully understood or even why the disorder occurs, however we understand and are able to include design principals to respond to these challenges.

Symptoms that individuals with ADS may experience are;

- Sensory Processing
- Hypo- and Hyper-sensitivity
- Repetitive and Restricted Behaviours
- Difficulties in Communication and Social Interaction

Design For the Senses

- Sight
- Auditory
- Touch/Tactile
- Proprioceptive and Vestibular Senses

Are all senses that directly affect those with ASD and should be considered as part of the homes concept for design. The design considerations towards these senses can be applied to other households as general principals for design.

Detailed design guidance can be found in the Designing for Autism Spectrum Disorders resource of which will be used to inform the OGCH stage 3 design.

Sense	Hypo-sensitive	Hyper-sensitive
Auditory (Sound)	Does not respond when name is called; Enjoys strange noises; Enjoys making loud, excessive noises	Overly sensitive to loud noises; Appears to hear noises before others; Cannot function well with background noise
Tactile (Touch)	Touches people and objects unnecessarily; Has abnormally high pain threshold (does not appear to be hurt after a hard fall); Does not appear to feel extreme temperatures	Avoids wearing certain fabrics; Becomes distressed during grooming; Does not like being wet or going barefoot; Reacts negatively to being touched
Visual (Sight)	Disregards people or objects in environment; Can see only outlines of certain objects; Likes bright colors and bright sunlight	Bothered by bright lights (covers eyes or squints); Easily distracted by movement; Stares at certain people or objects
Vestibular (Motion)	Moves around unnecessarily; Enjoys spinning in circles; Becomes excited about any task involving movement	Seems unbalanced; Becomes distressed when upside-down or when feet leave the ground
Smell/Taste (Olfactory)	Some reports of Pica or eating non-food substances; "Feels" objects with mouth; Seeks out strong smells; Oblivious to some scents	Picky eater; Will only eat foods with certain textures, with particular smells, or at a certain temperature
Proprioception (Sense of body's location)	Unaware of body position in space and body sensations like hunger; Often lean against people or objects	Odd bodily posture; Uncomfortable in most positions; Difficulty manipulating small objects

Sight

Sight is the sensory system that one uses to see their surroundings, such as nature, objects, and people. Visual sensitivities are not as commonly exhibited as auditory or tactile sensitivities by individuals with ASD. However, symptoms can be incredibly disruptive and challenging to cope with for individuals that exhibit them. Like most sensory symptoms, visual sensitivities can mostly be categorized as hyper-sensitive or hypo-sensitive. Individuals on the spectrum may exhibit visual hyper-sensitivities by appearing to notice everything in the environment and intensely focusing on the most minute of visual details. Visual hyper-sensitivities may also be exhibited by a difficulty making eye contact because of the intolerance for the movement of another person's eyes. Early features of ASD sight include avoiding eye contact, using peripheral vision to examine objects or people, and "inefficient eye gaze."

Contrary to the often overwhelming effects of visual hypersensitivity, visual hypo-sensitivity is almost like possessing a visual impairment. Those with visual hypo-sensitivity may disregard people and objects in the environment, as if they are not there at all, or only see the outlines of objects. Some individuals may also enjoy bright colours and bright lights, things that would be overwhelming, even terrifying for an individual with visual hyper-sensitivity. As with all sensory symptoms, both hyper- and hypo-sensitivities, occurrence and severity of visual sensitivities vary widely.

Many individuals with ASD show heightened visual spatial functioning associated with right hemispheric dominance or right brain/global learning. A number of studies examining environmental preferences in right brain/global learners and left brain/analytic processors find that relationships exist between cognitive style and environmental preferences.

People with spatial strengths are able to visually manipulate images in their minds and understand complex patterns. They have a high level of creativity, which is a prerequisite for unique problem solving and their ability to contribute to new knowledge. The fields of engineering, architecture, chemistry, physics, and medical surgery all rely on spatial skills.

Residents in the home may suffer from ASD with over or undersensitive sensitivity in their sight therefore the environment should remain simple.The home will be designed to reduce intense colours, patterns and any moving objects. We can then specifically design activity rooms or dedicated areas within the home with extra stimuli for less sensitive users. Visual sensitivity also links to the lighting of which will again remain simple and ambient in communal areas rather than direct.

Lighting

All forms of light in an environment can be categorized as either natural or artificial light. Arguably, the most important aspect of lighting in design is control. For example, most people prefer ample amounts of natural light in a space. But a space with multiple windows that do not have any window treatments, or any means to control the light, would be useless and undesirable.

Natural Light

Lighting is a very important part of the built environment, especially for individuals with ASD, as research has shown that they could be more sensitive to light output changes, and repetitive behaviours sometimes increase under fluorescent light sources. Environments that only have artificial illumination and lack natural light increase stress and discomfort. Natural light is much more beneficial than artificial light for reducing stress and discomfort and improving attitude and performance. Overall, natural light has a positive influence on people.

The home shall maximise natural light with consideration given to the views and windows in a space as some views may pose a distraction. Clerestory windows can be installed in some cases or draperies added to provide natural light but minimize distracting views from the window. Research has found that several windows and doors on all of the walls in an environment can be stressful, but several windows side by side on the same wall are positive and a good source of daylight. Having too many windows in a space is also likely to result in an overabundance of natural light that is sometimes difficult to control. All bedrooms allow for full height windows to maximise natural light. Full height windows are proposed throughout the home to maximise natural light especially in deeper plan rooms.

Artificial Light

In terms of artificial light, most fluorescent light sources cause flicker. Visual hyper-sensitivity and repetitive behaviours are often seen in areas with fluorescent lighting. Even though some of this flicker is not consciously perceived by most people, it can still cause headaches and eye strain. Eye strain can eventually negatively affect sleep patterns.

The use of LED lighting can prevent those with autism from being bothered by the flicker associated with fluorescent fixtures whilst saving energy. It has been identified that lamps with a colour temperature of 3500 K are preferred. Teachers reportedly favour soft lighting because they observe more relaxed behaviour and better academic focus under dim lighting. Rooms should be equipped with blinds or drapes that can be adjusted to allow the desired amount of natural light to enter the space. Dimmer switches should also be provided to control levels of light.

Visual triggers influence the behaviour of those with ASD. The source of light (flickering light, direct sunlight), intensity of light, and luminance (reflection, shine, fluorescent glare) have the greatest effect on behaviour. A variety of light sources, such as overhead (general) lighting, natural light, task lighting, and softer lamp light, allows easier control of light.

Glare and Reflection

Glare occurs when one area of the visual environment is brighter than the general brightness of the rest of the environment. Glare can come from artificial or natural sources, and the reflection off of surfaces is also considered glare. Individuals with neurodiversity's may be distracted by sunlight coming in through the windows. As individuals on the spectrum pass down hallways, glare from the light reflecting off of surfaces may blur the lines of definition in the architecture and furnishings. Using a glazed or frosted glass will allow natural light to enter the space without creating sharp shadows or glare and will also diminish visually distracting views. The home will not use glossy or shiny surfaces typical of plastic which create glare. Matte colours will be a primary choice for surfaces.

Some window coverings, like blinds, create what is described as "pattern glare." Using matte surfaces, such as matte paint, carpet, or wall coverings made of fabric, will also reduce glare.

Colour

Colour is one of the most influential aspects of an environment with both psychological and physiological reactions. An individual will experience emotional and psychological responses to colour. Half of the colour wheel is classified as warm and the other half as cool. Colours associated with red and yellow are considered warm. Warm colours advance in a space. Cool colours are associated with blue and green and tend to recede. Visual temperature may also be affected by intensity. Lighting also influences colour perception and temperature.

Research shows that a space painted cool colours under cool fluorescent lighting resulted in spaces that seemed larger, quieter, and cooler. Cooler colours are intended to be used in the home to support other design theories for example creating a tranquille and relaxed atmosphere for sensitive residents. Colour themes can individualise a household ie, greens for one household and blues for another are both cool colours that can be introduced.

COMMON DIFFICULTIES WITH SENSORY SYSTEMS: OBSERVABLE BEHAVIORS

HYPER-REACTIVE BEHAVIOR INDICATORS	HYPO-REACTIVE BEHAVIOR INDICATORS
VISUAL SYSTEM	VISUAL SYSTEM
▪ disturbed by bright lighting	▪ unaware of the presence of other people
▪ avoids sunlight	▪ unable to locate desired objects, people
▪ follows any movement in the room with eyes	▪ loses sight of people or objects when they move
▪ blocks field of vision with eyes	▪ cannot distinguish figure–ground relationships
▪ covers part of visual field—puts hands over part of the page in a book	
▪ responds physically to appearance of certain objects or colors	

Common difficulties through the visual system.

A space with warm colours under warm incandescent lighting resulted in a more active space that seemed smaller, warmer, and louder. Purity and contrast can also be argued as more important than colour temperature. For example, an intense green may stimulate people as much as an intense red. Warmer colours may be used less for social spaces but could form part of the public spaces at ground level used by less sensitive residents.

Quantity of colour is another consideration in the design of the physical environment. Large amounts of colour can overstimulate individuals no matter the colour temperature or preference. Pallettes shall be kept simple and complimentary of which will be developed at stage 3 and 4 of the design.

Space Organisation

Legible Environment

Legible environments are simple and straightforward for navigation so that the user is not left wondering which activities and behaviours are most appropriate for that space. Designing truly legible spaces involves understanding that people with ASD think differently and react differently to stimuli. Colour and light are valuable wayfinding tools. “Colour coded” buildings in which different floors have different colour schemes would be an example. Osborne Grove shall introduce colour themes for households and floors. A method called spatial sequencing reorganizes a space to promote routine. When people begin to know what to expect in each space, transitions/routines become more predictable and less stressful. This is particularly true for individuals with ASD but applies to other households and nursing staff. Spatial sequencing here involves dividing an area of the care home e.g., a household into different zones, with each zone having only one function or activity. The individuals will begin to associate an activity with a specific area or zone, which will then ease transitions between activities, protect routine patterns, and promote predictability.

Sensory Integration and “Escape” Spaces

Sensory Integration spaces are based on sensory integration therapy, an idea that emphasizes the connection between sensory experiences and motor and behavioural performance. Sensory integration therapy helps to calm those that are usually under-reactive to sensory stimulation and help build tolerance. Sensory integration spaces are also called multisensory rooms. These rooms are the opposite of escape spaces. They are gently stimulating environments that are designed for interaction and to engage the senses. Multisensory rooms are beneficial to individuals not just with ASD, but also with Alzheimer’s, cerebral palsy, dementia, and patients with chronic pain or severe brain damage. The home has numerous activity spaces on each floor of which can be used as multisensory spaces. Their details shall be developed at stage 3 to support sensory stimulation in appropriate households. By providing spaces for those who are hypo-sensitive or sensory-seeking to play and engage their senses, they are less likely to try to generate unsafe sensory experiences elsewhere. These areas especially should be designed around an individual’s unique symptoms and preferences. Specific interests and hobbies should be taken into consideration as well. If the activities within the sensory integration space feel like play and not like therapy or work, residents will more willingly engage in them. Further guidance can be given in designing a sensory space. The design team will seek further guidance from Sterling University in the design of sensory spaces.

An “escape” space is different from a sensory integration space. Incorporating escape or break-out spaces into the interior environment may help reduce the impact of overwhelming environmental stimuli. This space may be a small room or a portion of a room. Bookcases and dividers are two ways to integrate an escape space into a larger area. This space should have minimal soft furnishings. Individuals with ASD may benefit from having a quiet space to retreat to when feeling overwhelmed with sensory overload from the environment. Dining and lounge areas will be split with dividers or storage to subtly create ‘escape spaces.’

Elements and Principles of Design

Applying the elements and principles of design into the environment may aid in environmental perception and provide visual appeal. The principles of design are abstract concepts that form the theory of design. These principles (scale, proportion, balance, rhythm, emphasis, and harmony) are universally accepted as the means by which we evaluate the elements of design (space, shape, form, mass, line, texture, pattern, light, and colour). Both elements and principles are primarily visual aspects of design. However, their use may be perceived through other senses (texture may be perceived through touch or sight, for example). Possible applications of the elements and principles of design for individuals with ASD are shown in the table. Although this list provides practical recommendations, it is not all inclusive. Additionally, when designing for individuals with ASD, all of the seven senses (hearing, sight, smell, taste, touch, vestibular, and proprioception) should be addressed, not just visual aspects

Principle	Application
Scale	Furniture selections are the appropriate size for the user.
Proportion	The use of the golden mean/section (e.g. dado molding placed between 1/2 and 1/3 the height of the wall.
Balance	Symmetrical balance could be achieved by the placement of student desks as a mirror image on both sides of the room. Radial balance may be achieved using round tables with chairs for students. Asymmetrical balance may be achieved with objects of similar visual weight balanced form a central dividing line.
Rhythm	Repetition—Repetition of color, flooring, patterns, rows of seats, windows, doors. Progression—Shapes on floors, walls, and ceilings progressing from small to large or vice versa; shades of color; hallway with many doors. Transition—Crown or dado molding placed without interruption, floor borders. Opposition/contrast—Cabinetry, window frames, angular shapes placed next to rounded shapes. Radiation—Floor coverings, ceilings.
Emphasis	Chalk board or white board in the front of the classroom, workstations. Fireplace or bed in a residential space.
Harmony	Unity and variety are needed to achieve harmony. Unity is achieved through color scheme, consistent furniture styles, background materials have similar feeling. Use of pattern, value, textures are consistent with the master plan. Variety may bring diversity through differing colors, textures, and the contrast of materials. Variety must have order to prevent confusion.

Element	Application
Space	Positive space is filled with color, texture, form, or mass through walls, furnishings, and graphics. Negative space is empty space surrounding positive space — the windows between walls, space between furniture pieces. Spaces should be closed off or divide up rooms with partition furnishings. Minimize visual distractions by avoiding open spaces. Use spatial sequencing or zoning. Provide opportunities to clean up clutter, remove from sight.
Shape and Form	Shape and form may be seen throughout the environment in furnishings, lighting, etc.
Mass	Massing is grouping components to give a more solid appearance.
Line	Lines form the walls, floors and ceiling of a room. Examples include a ceiling or floor pattern, or bookshelves.
Texture	Walls, floors, and furniture have rough or smooth texture. Finishes that reflect light and create glare should also be avoided such as matte paints, wall coverings and surfaces. For example: Carpet instead of highly polished tile.
Pattern	Pattern may be seen in fabric, carpet, wall, and floor coverings.
Light	Two sources: Natural and artificial light. Correctly placed windows and skylights are necessary to prevent undesirable solar heat gain and visual discomfort. Appropriate window coverings will also help to control harsh natural light and resulting glare/ reflections. Lighting should be flexible (dimmers, multiple switches).
Color	Walls, floors, and decorative elements where color may be applied. Personal preference is important. For the visually hyper-sensitive bright colors and bold patterns can be distracting and painful. Softer hues, neutral colors, subtler patterns/ textures. Most research indicates that light, warm, neutral colors are best (Vogel, 2008). Colors found in nature are most soothing. Visually hypersensitive individuals can focus on extraneous detail and become distressed by high amounts of color. For visually hypo-sensitive students, color can be used for wayfinding or as a tool to locate objects in the classroom. For example, colored tape can be used to delineate pathways around the room.

Auditory sensitivity is experienced by a high percentage of those with ASD. Multiple studies have identified auditory processing difficulties as the most prevalent sensory trigger for individuals on the spectrum. Individuals with ASD will vary in severity and presence of individual symptoms. The table reviews common difficulties with the auditory system exhibited by individuals with ASD.

One symptom of auditory sensitivity not listed in the table is the inability to regulate volume. ASD individuals have difficulty using an appropriate speaking volume or volume when listening to music or watching television. They may be either too loud or too quiet regardless of the presence of background noise. Another symptom that is not listed on the table is Echolalia. Echolalia is another term for the repetitive speech and excessive noises made by some auditory hypo-sensitive individuals.

Environmental Noise

Pitch, loudness, reverberation, and signal to noise ratio (SNR) must be addressed during design. Pitch is “the subjective impression of how high or low a sound is” and is measured in Hertz (Hz).

Loudness may be defined as “the subjective impression of the intensity of a sound” and is measured in decibels (dB). Reports of hearing loss with high noise levels are well-documented.

Reverberation is important to understanding speech. Reverberation is defined as the “amount of time a sound lingers in a space before it diminishes to an imperceptible level.” Reverberation within a space can be caused by too many sound-reflecting surfaces. Surfaces in the home shall be designed to reduce reverberation by means of soft wall furnishes, acoustic ceiling panels or the position of items in a space to soften the reverberation.

Additionally, an understanding of signal to noise ratio (SNR) is necessary for proper acoustical design. SNR is “the difference between the decibel level of a speaker’s voice minus the level of the background noise.” Those with learning disabilities are more adversely affected by background noise than those without. The control of acoustics will be designed in detail as part of the detailed design proposal alongside the acoustician and interior design consultation.

Designing for Auditory Hyper-Sensitivity

An individual may have a hyper-sensitive auditory system if they are distracted easily by background sounds, overreact or demonstrate unpredictable reactions to sounds, try to physically block noise from entering their ears by covering them, respond physically to sound, or show no response to any kind of sound. These individuals are typically light sleepers, dislike loud noises, and do not enjoy tasks such as having their hair cut. Most individuals on the spectrum who are hyper-sensitive to sound are easily distracted by even the softest noise, have difficulty functioning with background noise, and find some noises painful. Those with hyper-sensitivity can be easily overwhelmed by incoming sensory information. The environment can be terrifying at times because loud or sudden noises feel physically painful to hyper-sensitive individuals.

When sensory integration spaces are incorporated, a stereo should be provided for individuals on the spectrum to listen to music and other sounds. Individuals with ASD who are hyper sensitive to sound will be distracted by soft noises and may experience pain with some noises. Instead of striving to eliminate all noise, the goal should be to help build tolerance to noise to enable individuals on the spectrum to gain independence. Designing for Auditory Hypo-sensitivity An individual may have a hypo-sensitive auditory system if they do not respond to their name, seem oblivious to sounds in their environment, create constant sounds, or show no reaction to sounds that indicate danger. These individuals may seek sound or create it to stimulate their hearing and may be prone to bang doors, tap items, and tear or crumple paper. An individual with with auditory hypo-sensitivity may enjoy hearing and making loud, excessive noises. If a soft environment is in place, soft materials will absorb sound instead of reflecting it, as hard surfaces do. Ensuring that the individual has a quiet space for sleeping, engaging activities such as drawing, etc. will help the individual stay focused.

Controlling Noise

Noise impact will be a consideration during stage 3 and applied through the technical design. Understanding the available strategies outlined here can be put into practice through materials, furniture arrangement, joint detailing and services. Noise from mechanical systems and silencers can then be implemented in construction. Materials are an aspect of the overall design that can realise vast improvements in sound absorption. Hard surfaces should be avoided on walls, floors, and ceilings to reduce noise and reverberation. These hard surfaces are significant contributors to the reverberation time (RT) within a space. Sound-absorbing panels can be installed over drywall or suspended from the ceiling in order to reduce the number of hard surfaces within a space. Additionally, fluorescent lighting may create noise levels of 50 dB. Trying to avoid areas with fluorescent lighting and utilizing natural light are ways to address this issue. Using carpet instead of vinyl composite tile or other hard flooring materials can also aid in decreasing reverberation. Wood products also tend to have more absorptive properties than many laminates.

Soft background music is as a way to reduce the impact of excessive auditory stimulus. Classical, instrumental, familiar music, and nature sounds are identified as recommendations for those with ASD. Optimally, designing for noise reduction will benefit all users of a space, including those with ASD. Even simple modifications, such as the use of headphones, may help individuals with ASD adapt to interior and exterior spaces.

HYPER-REACTIVE BEHAVIOR INDICATORS	HYPO-REACTIVE BEHAVIOR INDICATORS
AUDITORY SYSTEM	
• easily distracted by background sounds • overreacts to sounds • unpredictable reactions to sounds • holds hands over ears to block noise • screams or cries at sounds in the environment • responds physically as if sound is a threat	• does not respond to name being spoken • seems oblivious to sounds of surrounding activities • creates constant sounds as if to stimulate self • unsafe because does not react to sounds indicating potential danger • does not respond to any kind of sound

Common difficulties through the auditory system.

After accentuated hearing, hyper-sensitive touch is the most prevalent sensory characteristic. Nerves under the skin's surface send tactile information to the brain. Light touch, pain, temperature, and pressure are all perceived through the sense of touch. The tactile sense tells a person what an object feels like. For people with ASD, engagement of the tactile sense is especially important, as they learn by engaging physically with materials.

Tactile experiences are evaluated simultaneously with other sensory encounters. The way something feels is influenced by how it looks, and vice versa. Every significant experience of architecture is multi-sensory. The senses are specialisations of the skin, and all sensory experiences are related to tactility.

When people with ASD interact "hands on" with materials in an art class, for example, they connect with what they are creating and develop communication skills through their works of art. The intimate connection with materials such as clay, paint, paper, and textiles enables them to engage their sense of touch and develop deeper meaning of what's happening in the environment around them. Engaging in physical work such as farming, planting and tending to gardens, caring for animals, and cleaning also provides tactile connections that provide people with ASD positive sensory feedback.

Tactile Defensiveness

Tactile defensiveness is a condition in which the tactile system is immature or working improperly. Individuals may resist being touched or hugged, wearing certain types of clothing, and complain about having their hair or face washed. This may cause the brain to be overly stimulated and lead to excessive brain activity, making it difficult to concentrate or organise behaviour, leading to developmental delays, learning problems, and other sensory problems. Exercise and deep pressure stimulation may help reduce behaviour problems. Large indoor and outdoor spaces are available in the home to support exercise. Deep pressure is defined as "the type of surface pressure that is exerted in most type of firm touching, holding, stroking, petting of animals or swaddling. Firm massages, weighted vests, and weighted blankets are other ways to apply deep pressure. Sensitivity to scratchy clothing or textiles may create additional tactile issues for individuals on the spectrum. Studies have shown that organic bamboo and organic cotton are the two most preferred textiles by individuals with autism. The soft touch and moisture wicking properties were found to be the most positive features. Although these studies looked at textiles for apparel, the same principles are relevant for designing interior spaces.

Designing for Tactile Sensitivities

Individuals with ASD often prefer their personal space such as their bedroom to be heavily adorned with soft toys, pillows, and blankets or, in contrast, minimally decorated with tailored bedding. Whatever their preference, evidence suggests that preferences are important to these individuals and that they covet their belongings in unique ways that bring meaning through the tactile sense. Soft textures/surfaces are generally seen as more pleasant and preferred to hard ones. This becomes implemented when designing or choosing appropriate furniture.

"Smooth metallic surfaces evoke positive emotional responses such as lively/cheerful, modern, elegant, and comfortable. In contrast, rough metallic surfaces evoke negative emotional responses such as dull/depressing, traditional, ugly, and uncomfortable." In a study and interview with adults with ASD, several of the men commented on liking images of residential interiors that had smooth, shiny surfaces. Comments were made about how they liked the shiny floors, counter tops, and lighting in the images they were shown. These individuals further explained that the shiny features looked "rich" and clean.

People almost always know how something will feel just by seeing it, and this is followed by the feelings that accompany that sensory experience. For example, when one sees a large duvet covering on a bed, they know from past experience that the material the item is made from is soft, and this knowledge evokes a feeling of comfort, warmth, and safety. Therefore, a variety of textures and patterns that reflect a hand-crafted quality and are seamlessly integrated in the interior and exterior spaces allow the person with ASD to touch and feel and gain knowledge from their surroundings and become more self-reliant. The concept of personal space is associated with the sense of touch.

People diagnosed with ASD may resist being close to other people or having other people close to them. Quite frequently they choose to stand or sit in locations where they can hug the wall and/or are translucent as an act to attain privacy. Doing this sets them apart from conversations, and their acquisition of information is restricted. Standing back in the comfort of a wall to lean on also means the person with ASD is not positioned where a lot of conversation takes place.

To help a person with ASD feel more comfortable in public spaces, a variety of design interventions need to be implemented. Providing opportunities for a person with ASD to ease into a space and acclimatize to their surroundings is one way. A variety of small group seating arranged at right angles, which include high backs and upholstered seats, provide a cocooning affect. Cocooning makes the vulnerable person feel more protected, hence more likely to feel less stress in crowded situations.

Some individuals with ASD prefer to keep the thermostat low and wrap themselves in layers of blankets. As previously mentioned, this provides deep touch pressure that calms the nervous system. Finding a balance in temperature may be challenging for individuals with ASD, and quick temperature changes can be alarming. Heated floor systems help to regulate flooring temperature to eliminate this issue. Heat and humidity might also direct the tactile defensive person to feel the need to cool off by separating themselves from others. Heat may also increase unpleasant bodily odours that create an unpleasant environment for those who have sensory sensitivities. As with the other senses, a wide range of preferences may be displayed in designing spaces for tactile sensitivity.

Design interventions may be implemented to support the principles of sensory integration therapy. Several environmental features can be manipulated to support the comfort of individuals with ASD. Some of these elements include allowing for private spaces and providing adequate room to transition through the environment without touching other people. The regulation of temperature should be addressed for maximum comfort through materials such as heated floors and individual temperature controls when appropriate. Soft textiles and other soft textures should also be considered. Implementing therapy rooms, craft rooms, and places for 'play' (indoor and outdoor) into the design will also address these needs. The design solution is not "one size fits all." Personal needs and preferences are important considerations when designing for tactile and other sensory features of the built environment.

HYPER-REACTIVE BEHAVIOR INDICATORS	HYPO-REACTIVE BEHAVIOR INDICATORS
TACTILE SYSTEM	
• touch defensive—does not like to be touched • avoids tasks with strong tactile element (clay, water play, paint, food preparation) • complains about discomfort of clothing • refuses to wear certain items—tugs at clothes • responds negatively to textures in foods, toys, furniture	• does not seem to grasp concept of personal space • does not seem to notice touch of others • frequently puts things into mouth • does not adjust clothing that would seem to be an irritant • high pain threshold, unaware of danger because of low response to pain

Common difficulties through the tactile system.

3.6.4 - Proprioceptive and Vestibular

The vestibular and proprioceptive senses are often referred to as the hidden or inner senses. The vestibular sense “helps with movement, posture, vision, balance, and coordination of both sides of the body”. Balance and the sense of spatial orientation rely on the vestibular apparatus. Proprioception informs a person as to where his or her body parts are in space and the appropriate amount of force needed to perform an activity such as picking up a glass of milk. The vestibular system and the proprioceptive system affect visual and spatial perception.

As with the other senses, hyper- and hypo-sensitive responses to these inner senses cause challenges for people with ASD. Spatial cognition/perception is developed through the proprioceptive system. The proprioceptive sense is regulated by one’s muscles, joints, ligaments, tendons, and connective tissues. It is often referred to as one of the “deep senses” and as the “position sense.” Without a well-developed proprioceptive system, the ability to touch, see, and hear can be distorted. One may not know where he or she is in space or have a sense of time. The distortion may be so distracting that an individual with ASD cannot perceive their world. Common signs of dysfunction are clumsiness, a tendency to fall, difficulty manipulating small objects such as buttons, and resistance to new motor movement activities.

Proprioception is necessary to organize all the senses. Characteristics that contribute to an ASD person’s ability to manoeuvre through space include “distorted body postures such as toe walking, arching of the back, and hyperextension of the neck”. Proprioceptive, vestibular, and the visual systems contribute to balance. These disturbances in motion and gait influence their visual perception and consequently their balance and spatial orientation. This visual dysfunction prevents a person with ASD from experiencing an integrated visual perception of events and objects in their environment. Some people with ASD lose track of their own position in space, compromising their posture, self-esteem, and comfort level with participating in social settings. Others may perceive these individuals as clumsy and awkward. Research has speculated that the cause for this distortion is partially due to a deficit in their ambient vision. From a design standpoint, Osborne Grove will ensure the forms and shapes are well delineated, using contrasting materials and finishes, and creating dominance by varying the portion and scale of a space can help them manage this deficit. This is especially important for the person who, for example, kicks the wall as he or she walks down a corridor or from room to room.

Observers may think the individual who is kicking the wall is angry and acting out physically. However, people who have proprioception challenges may strike the wall to register where they are in space. Weak vestibular and proprioceptive systems also hinder the ability of a person with ASD to remember landmarks and make connections to where they have been and what they have seen. As a result, this may negatively affect their ability to navigate a space with confidence. A field of environmental behaviour known as wayfinding is devoted to accommodating this deficit. Individuals with ASD are affected most when they transition from space to space and when the number of people in a space changed.

Older, frailer individuals have difficulty maintaining their balance and coordinating their body and those within the home will have health problems. Elderly residents will likely wear glasses; have hearing aids and wear orthotics shoes. Compromised vestibular and proprioceptive systems need to be addressed in the design of the physical space. Accommodating proprioception deficits can be achieved by the careful planning of spaces and the application of materials, patterns, and textures that permit differentiated engagement of the senses. Permitting one to touch and feel textures and forms in a space helps them register where they connect their thoughts and feelings to where they are in time and space. As a result, this tempers their anxiety levels and allows them to perceive their environment with less frustration and reduced confusion. A weak sense of proprioception has been associated with the clumsiness, and therefore requires special attention to durability and maintenance of spaces. Interiors that are made up of defined forms and shapes that profile the perimeter of a space can help a person overcome these challenges. Archway transoms located at entrances to hallways and at the entrance to rooms, and mouldings outlining the perimeter of the space at the floor level and ceiling provide clarity.

Contrasting floor materials such as carpet or wood, finishes, and colours also aid in wayfinding, however, care will be given to contrasting elements in the dementia household. Additionally, spaces that accommodate opportunities for kinaesthetic enrichment such as performing jobs and activities can help alleviate these challenges People with ASD, especially the sensory seekers (those with vestibular hypo-sensitivity who are under-responsive to movement) need constant motion. They frequently wiggle their legs, tap their feet, flap their hands, and need to keep moving so their brain knows where their body is. They love to jump, run, bounce, spin around in circles, and to wrap themselves tightly in blankets. Therefore, providing supports in the built and surrounding environments that accommodate their vestibular and spatial needs are important.

Spacious walkways allow for release of physical energy manifested in spinning, arm flapping, and overall body movements that require more space. Placing the bedrooms in pods of two also aids in privacy, as the residents only have two bedroom doors to remember and choose from (cognitive privacy) rather than several doors along a corridor. The care home reduces the number of bedrooms clustered together and avoids long runs of corridor. These corridors are also wide (1.8m+) for a variety of reasons, one being to give space to residents that feel the need to demonstrate greater movement. Short corridors also provide spatial privacy for residents who may have proprioception deficits, as they do not have to manoeuvre long distance to get to their bedroom. Short hallways reinforce a more home-like atmosphere. Additionally, wider staircases with handrails on both sides provide safer passage for individuals with ASD.

Accentuated stair risers with edge strips will aid in secure footings and will be designed at stage 4.

The vestibular and proprioception senses must be considered when designing spaces for individuals on the spectrum. Although limited in scope, interventions that react to the understanding of those with ASD can provide a significant impact for individuals within the care home.

HYPER-REACTIVE BEHAVIOR INDICATORS	HYPO-REACTIVE BEHAVIOR INDICATORS
VESTIBULAR SYSTEM	
• overreacts to movement activities • has difficulties navigating on different surfaces (carpets, grass, etc.) • walks close to wall, clings to supports such as banisters • seems to be fearful when movement is expected, muscles seem tense • rigid about positioning of body, keeps head in same rigid angle • seems to become physically disoriented easily	• seems to need constant movement • rocks, travels in circles • seems to tire easily when engaged in movement activities • generally slow to move, lethargic in movement • takes long time to respond to directions to move

Common difficulties through the Proprioceptive and Vestibular Senses system.

Household B, consists of 10 complex care nursing need bedrooms. Complex care is person-cantered specialist support for someone with a chronic or long-term health condition, who requires extra assistance to manage their symptoms and day-to-day activities to enable a high quality of life.

This type of care differs from general domiciliary care because it usually involves medical intervention of some sort and involvement with clinicians and nurses that specialise in that individual's particular condition. Complex care can include any condition that requires clinical support, such as Parkinson's, acquired brain injuries or a neurological condition. It can also be provided if someone requires nursing care as a result of their primary condition, for example, a PEG feeding tube after someone has had a stroke.

The aim of complex care is to provide support around an individual's needs and enable them to retain their independence as much as possible.

Design requirements for those with complex nursing care needs do not greatly differ from the design of the other households. All rooms and households have been designed to accommodate residents that may have complex nursing needs. Allowances have been made in the households general layout, movement zones, corridor widths, storage, accessibility, and available facilities.

The primary different for those with complex nursing care needs is the type of care they require and how this is managed by staff.

End of Life Homeless Studios

This end user group has been identified as a requirement to be included within the home, to act as an independent household with their own private entrance and limited integration with the other households. This is due to the potential nature of these residents. The household is still a part of the home and shall not feel isolated, however access and movement is controlled. These residents are given their own private access as they may often wish to come and go from the home as not all residents will be bed bound or limited in their movement.

It is important to understand these residents may come from troubled backgrounds and may wish to operate differently to the rest of the households. The environment should promote relaxation, independence, and a sense of freedom. The environment should give quality to the remaining lives of these residents.

Sufficient external terrace area and balcony space is to be provided. The external areas should be of high-quality landscaping and finish as with the rest of the home but with flexibility for separate zones. Although smoking is not prohibited on the site and shall not be promoted through design, the design team is aware that this may be a regular occurrence due to the nature of the residents and the reluctance to leave the building especially if bed bound. Additional considerations are to be given towards the potential occurrence of smoking with regards to ventilation and extraction, sprinkler systems, movement of smells and landscaped zones to control this situation. Smoking is not promoted through design however the design team are aware of the realistic eventualities.

The household is to be designed in a similar fashion to the other bedrooms however additional space is included for a small kitchenette backing onto the en-suites. This is to promote the user's independence and reduce the need to travel for necessities such as a cup of tea.

The design of these bedrooms should also follow the same standards as the other households with regards to large door openings, sufficient turning circles and ease of movement.

Osborne Grove care home will include residents with varied levels of dementia. The care home and particularly those spaces available to residents with dementia must be designed to accommodate their specific requirements.

The design considerations for residents with dementia cover a wide variety of principals. The following section of this report aims to cover specific areas of considerations. This section is not exhaustive and further considerations will naturally be picked uo through the design. Guidance documents within this stage 02 report have been listed and are used alongside Ingleton Wood's own experience and the experience of stake holder engagement; all of which contribute to the development of Osborne Grove Care Home.

Workshops and engagement have been made with both the University of Stirling and the University of Liverpool to discuss the care home proposals and gather feedback with regards to designing for dementia. Both representatives gave positive feedback surrounding the proposal and were impressed at the level of consideration that had been given, not typically seen in UK care homes. We will be expanding on this guidance and through the UoS Dementia Design Audit Tool seek to achieve DSDC accreditation.

Design Principals - DSDC Design Principals

Design should support individuals needs as they age, or dementia progresses. Rooms should be designed for resident to stay in that room with end-of-life consideration in mind. With this, an individuals negative progression should be a consideration, rooms for dementia residents and as a general rule for all Osborne Grove residents, these spaces must be adaptable.

The home should aim to maximise independence for those with dementia. This can be achieved in numerous ways for example way finding is a key attribute. If way finding signs and a clear layout is consistent, this becomes supportive, helping those with dementia them find their way between spaces.

Reinforce Individual Identity

The home will give residents the option to bring in their own belongings and furniture. This creates familiarity and comfort and personal identity. E.g. if a person has always been involved in gardening, the home should provide spaces for gardening. E.g. if a person has always sewn their own clothes, provide a space for crafts and sewing in the activity rooms.

Enhance self-esteem and Confidence

Self-esteem can be linked to independence and carry out daily physical tasks. Hanging clothes, gardening, making a cup of tea. Tasks like this contribute positively to the persons mental, emotional and physical health and well-being. Completing tasks or having something to show for your efforts give people a sense of purpose and satisfaction.

Be orientating and Understandable

An accessible building should be designed in a way that the person can navigate easily. Long corridors are not recommended and have purposely been avoided in the design due to their monotonous repetition which could become confusing. The home will break up corridors with seating and points of interest along walls such as art work or reminiscence items. This creates distinguishable spaces and those with dementia should find it easier to navigate the home. The home should include breaks in it's spaces to provide opportunity for rest and social interaction.

Dead ends should be avoidable as they can cause much frustration for people with dementia. This is a primary reason behind the circular layout that is shown. An area of interest such as an activity room or a seating area has been created as a sense of destination. Buildings can be made orientating through large expanses of glazing which will provide cues and give people with dementia an understanding of the function of a room. A clear signage strategy should further enhance wayfinding. Facilities need to be recognisable and familiar. Plant of staff only spaces will be hidden or blend into the environment and not direct residents to them. This will be demonstrated in the door design, elevation and schedules.

Control Balance and Stimuli

It is important to encourage movement and activity for those with dementia by providing multifunctional spaces designed to accommodate daily living. The home should create a balance of large and more intimate spaces offering people a choice of activities and a level of stimulation. Often a TV becomes a focal point in a lounge, often bringing all conversation to a halt. Creating different groupings of seating in a lounge can help break a larger room up into different zones giving people more choice of where to sit. The lounge areas where a TV may reside will be split into zones and not have the TV arranged to be the primary focus of the room.

Demonstrate Care for Staff

Design considerations take into account staff as well as those being cared for. Work environments that are accessible and familiar for those with dementia will allow staff to better care. Residents that are more independent will relieve the need for attention from the carers freeing them up for those residents that do require additional care.

Residents can often be confused about the time of day and agitated by missing meal times. A simple solution can be to install clearly legible wall clocks to enable residents to check on their own and act independently.

Design Principals and Aims

Familiarity

Research demonstrates that more familiar design means those with dementia are less likely to need help, they make less mistakes and are more satisfied if environment is familiar. Eg kitchen layouts and how they anticipate one to look.

Users should feel familiar with the rooms and spaces they have access to within the home or their zone. This will make them more likely to go into the space and get involved in activities and spend time socialising.

The interior design should enable independence throughout the home creating a balance of consistent themes for example across individual households and contrasting where areas need to be easily recognised as different, an example being ones front door. Facilities should allow them to navigate the space supported by clear signage and lines of sight. The use of glazed panels is encouraged as to promote independence and user comfort.

Reduction in Stress and Anxiety

Good practice should increase the independence of those with dementia. Promoting independence aligns with reducing confusion and agitation. These emotions can be reduced when residents understand the home they're living in and the fittings they're using. Being able to use facilities independently with limited or no help will increase confidence and thus sociability. Encouraging them to venture out of their bedroom more often, and in turn improve physical fitness.

Being able to get outside is also highly beneficial. The integration of gardens offer positive support for those with dementia promoting natural therapy and relaxation. Greenspace and an integration with the natural environment should be considered as a high priority in the design. Landscaping and greenery is to be explored later in this report under its own heading.

Intimate Domestic Scale

Often when those with dementia can't live independently, they're removed from their own home, sharing facilities with other strangers in a household setting. Providing a variety of communal spaces of various scales and activities is good practice as it gives residents a choice of what they want to do. The creation of intimate spaces that reflect the comfort of their own home is important for those with dementia as they often struggle to eat and will choose to eat alone.

Research also says that no more than 10 people with dementia should dine together at the same time. Dining rooms should be intimate in scale and mechanisms should be in place to allow residents to dine alone within the dining room in another area or in their own room if required. Dining areas and their requirements are reflected to create zoning and larger households will allow for multiple dining rooms.

Legible Intelligent design

The design of the care home should be as simple as possible. It is important to create spaces and objects free from unnecessary features or distraction that may be difficult for resident usability or may create an intense experience. The designers should ensure objects and features are easily used and understandable and recognisable to allow for intuitive use. Ease of use will also promote independence.

Building layouts should be logical in order to slow down and reduce the number of wayfinding decisions needed to navigate through the building. This may be achieved through the overall movement around the home or simply through individual rooms. A logical layout and reduction of direction decisions shall also aid to those with visual impairments. It is therefore important to create a logical sequence of rooms shown in the building layout.

Clear Visibility and Multiple Cues

Good architectural communication in the building form, language and orientation are vital for creating interiors for those with dementia and difficulties. The function of the room

must be apparent to those with dementia before they even open the door. Glazed screens and vision panels will allow the person the view into the room giving them vital info on the room before they decide to make a decision to enter or not. This also gives them confidence that this is the right room, particularly in rooms where there might be an increased number of other residents.

Cues begin with the building layout and the location and hierarchy between public and private spaces. It makes sense to position a room that it belongs to the public realm such as café or hair salon near the entrances. It also makes sense that private spaces such as bathrooms are positioned near to bedrooms and away from lounges and dining rooms.

Avoid Confusion

Those with dementia find it harder to process and make sense of the visual environment. Avoiding confusion and minimise distraction is essential for the delicate well-being of residents.

Sensory overstimulation can lead to stress due to visually cluttered spaces. It is important to de-clutter and allow for sufficient storage, designed in a simplistic manner. The space, its function and potentially stimulating elements should be analysed before determining which fixtures and fittings are helpful. Consideration must be given towards what can be removed to make the environment simpler and more rational.

Entrances and receptions can be particularly cluttered. The design should be simple and allow storage to put away items. Notice boards and wall information should also be limited. To simplify entrances the design should remove signage that is not necessary to residents. Removing staffing awards, protocol and notices from of house and relocating them where they belong in staff only areas can help to de-clutter public spaces.

People with dementia often find it difficult to find their way due to impaired memory leading to frustration. This can happen when they try to pass through doors locked. It is advisable that doors that are locked or not to be used by residents should match the adjacent wall as not to draw attention to the doors. Doors for residents use only should have clear signage on them including legible text and symbols. Door colour should contrast adjacent wall in order to draw the person towards it.

Care should be taken when selecting finishes. Design should not create clutter or confusion in the type of finish, for example contrasting patterns and shapes. This is not to say that patterns cannot be used. Patterns can be placed on cushions or small pieces of furniture but should not be designed across large walls or corridors. Avoid overcrowding ornaments, furniture tops, complex graphic patterns or even message board bombarding the viewer with too much information. Visual clutter can be managed by limiting info to one area.

Easy to use Physically and Cognitively

This design aim can be applied to buildings and objects. For buildings visually linking spaces, giving multiple cues and clear wayfinding is important. The same applies to objects. They should be easy to use and their function clear. Studies done on taps for example show that older residents with dementia are more familiar with designs such as a crosshead tap more independently. Designs that are unfamiliar tend to cause frustration resulting in the person requiring more help from staff.

Intelligent consideration towards the tonal contrast helps residents navigate the home. Tonal helps users understand the boundaries between space. For example, a contrasting wall tone to the flooring creates a clear distinction between the two and will reduce the likelihood of tripping and clashes.

Tonal contrast can also be a negative and create uncertainty for residents where one should naturally move between rooms/spaces. Clear changes in the floor surface can be seen as a void or barrier to those with dementia and can stop residents comfortably moving between spaces. This includes floor threshold strips, tonal patterning and a change in material. The LRV system helps specify the appropriate tones.

Depth perception is a common cause in older people and those with dementia making them more likely to fall. Neurological pathways can be damaged by dementia and visual pathways can be affected. These visual aspects perform the function of receiving and relaying and finally processing visual information. When the pathways are damaged there can be a number of adverse outcomes affecting safety of those with dementia. Firstly, people with dementia can have difficulty adjusting spatial orientation. Making it hard for them to retain their posture in relation to environment. Misjudgement can lead to trips and falls. This affects persons ability to perceive and adjust their position within the physical space. An example would be reaching out for balance and mis-judging, resulting in a fall. Difficulty positioning on one's seat can also be an example. To overcome this issue for instance, seat pads that contrast with the floor should be introduced.

Lighting should be uniform throughout, avoiding light and dark patches within the home. Lighting should consider the function of the room. Layers of task lighting can be designed to add to the general lighting scheme. Lighting should ensure that aging eyes can carry out their task where some residents will be weaker than others. Glares should be avoided using diffusers etc to omit direct light to the eye.

Encourage Social Interaction and Physical Activities

Activities of daily living, cognition, behaviour, and communication are all affected by dementia. However, design interventions can be treatment for those with dementia. Good design can reduce the need for pharmacological interventions. The quality of the relationships with those around is therefore important and will aid a healthy lifestyle.

The built environment has an important part to play in encouraging those to interact socially. Design should incorporate open kitchen serveries in a communal dining space. This encourages residents to get involved in tasks e.g. making a cup of tea, food preparation or helping with the washing up. Open shelving or glazed cupboards will help those with dementia find things more easily. The design should include conventional facilities like a kettle rather than a complicated modern piece of kit. Residents should not be a passive recipient of services but should be afforded the opportunity of making a contribution however small.

Colour

Appropriate colour is significant in determining if an environment is dementia friendly. British Standard 8300:2009 Accessible design – "the main feature of a surface, which appears to be strongly correlated with the ability of blind and partially sighted people to identify differences in colour is the amount of light the surface reflects, or its light reflectance value" LRV. LRV's refer to the amount of light a surface omits and clearly see one object against another it is recommended that there is 30 points of percentage difference between objects. Key areas are surfaces, walls, floors, doors, critical planes, skirtings, toilet seats. A Minimum of 30% contrast is required between each other. Where contrast is not required a maximum of 8-10% contrast accepted.

Colour vision changes with age. Mainly the gradual loss of the blue to violet spectrum. This changes how the older eyes see the colours. More saturated colours should be specified for blues and violets. Blurring vision is another consideration and the safety for those with blurred vision must be considered in the home.

Changes in stairs and levels must be shown e.g. contrasting of stair nosing's to highlight the change between the person with visual impairment. Change in floor level is the only scenario where tonal contrast is accepted. Otherwise tonal changes should be consistent throughout, including threshold strips. Decreased contrast sensitivity can affect older people and those with dementia.

Adaptive Environment

Good practice is to design adaptive spaces to allow resident flexibility as they get older and require more care. It is expected that many residents will be in the home for the rest of their lives. A person centred approach needs to be applied for individuals and groups of people as a whole. Age related changes in vision need to be accounted for e.g. reduction in visual acuity/clarity in vision. Tonal contrast again is very important to be able to differentiate between objects and plains when visual clarity becomes reduced. Reduction in peripheral vision field affects how a person finds an object or positions ones self on a chair for example.

The home must therefore be designed to cater for those with severe stages of dementia that have gradually deteriorated. The principals outlined in this section all contribute to creating an adaptive environment and should be reflected across the home as they set a high standard for design, not just for those with dementia but all the typologies at Osborne Grove.

Dementia Services Development Centre

"DSDC is the world leader on the design of services and environments for people with dementia."

Stirling Universities DSDC draw on research and practice, from across the world, to provide a comprehensive, up-to-date resource on all aspects of dementia DSDC have worked with individuals and organisations for over 25 to:

- Improve the lives for people living with dementia through care and design.
- Make communities dementia-friendly.
- Influence policy and to improve services for people with dementia.

For over 25 years DSDC's multidisciplinary team of clinical specialists, architects and designers have been promoting the importance of design for people with dementia. They have developed a unique insight into what can be done to support people with dementia, based on research and evidence of what makes a difference. DSDC offer the following core services covering design training, scheme reviews, product development, audit & accreditation and bespoke client briefing development.

Ingleton Wood have engaged with Stirling Universities DCDC to discuss the care home proposal with an informal initial review. Comments were well supportive and that the current proposal is responsive to designing for dementia.

The DSDC have provided a quote for their services and shared with the client of which covers:

- Plan Review ideally undertaken in advance of a planning application being made.
- Detailed Design Review. (Highly Recommended) of which includes a review of all available FFE/Landscape/Lighting/Signage/etc.
- Construction Site Visit and Review. This is an optional services typically requested by the building contractor at practical completion stage.
- Design Audit and Accreditation. (Essential for dementia design award) formal visit and audit of completed and partly occupied building. Typically takes place 3-6 months after occupation commences.

Product Accreditation

DSDC partner with manufacturers to review and assess product suitability for use in a dementia-friendly environment. Well-designed products can increase independence and quality of life for older people and people with dementia. A Product Accreditation from the DSDC allows organisations to support specifiers and designers to create environments suitable for an ageing population by streamlining the product selection process.

The DSDC Accredited Product logo is awarded on the merit of the individual product and, where applicable, colour-way. For a product to be considered 'dementia-friendly' or 'dementia-inclusive' careful consideration must be given to the environment in which the product is placed. Accredited products are accompanied by technical literature which explains the design principles of a dementia-inclusive environment, supporting the application of products in practice.

When Ingleton Wood progress through stage 3 & 4 with greater understanding of the detail and products to be used in the home, we will use the DSDC's product accreditation to inform our design.

Design Audit Tool

The DSDC Design Audit Tool is a highly-respected series of resources for carrying out self-assessment of environments used by people with dementia. The tool:

- Provides a framework for making decisions about design
- Works for all physical and social environments - where the person lives but also the wider world of parks, gardens, shops, transport, community services, cafes, clubs and theatres
- Applies to existing buildings, new buildings and refurbishment projects in care homes, day centres and medical centres
- Helps identify areas for improvement easily and effectively
- Connects to DSDC's formal design accreditation process.

The DSDC Design Audit Tool will be used to review the design during stage 03 spatial development.

Rehabilitation has been identified as a household resident group for Osborne Gove. Much like designing for the complex nursing care household, there are limited changes required in the design, instead the differences are largely in patient care. Incorporating rehabilitation into the home can improve quality of life of residents, increase their independence and as a result decrease the cost of caring for these residents.

The benefits to creating rehabilitation services focus on the therapy to help residents transition back to assisted living. Rehabilitation should be an approach taken to the home in its entirety to promote the health and recovery of all.

Various principals should be adopted to meet the needs of residents requiring rehabilitation.

A salutogenic approach should be taken through the architecture to focus on factors that support human health and well-being, rather than on factors that cause disease. The focus should be to stimulate the natural recovery of health through psychological stimuli. The design of the home should enhance the patients manageability, comprehensibility, and meaningfulness of life. A salutogenic approach should incorporate good circulation, open spaces, healing gardens and a variety of outdoor areas.

A 'homely' feeling should be created as not to make residents feel like they are in an institution. The homes design should create a familiar atmosphere by implementing materials, textures, accessories and functions which are found in our homes. The atmosphere should be friendly and comfortable for residents to reduce social anxiety that comes with new places.

A Biophilic environment can also help with the healing process. Biophilia focuses on greenery, landscaping, planting and nature as a tool for recovery. The natural environment has a huge affect on the health and mental wellbeing of residents of which can be included internally and externally.

Biophilic design should also combine with outdoor activity, and a sense of openness. Open rooms with direct links to the outdoors provide a sense of freedom. Osborne Grove focuses around this central courtyard idea of which and an internal / external connection should be optimised.

The layout and design of furniture should also be considered to create diverse spaces and provide residents with choice. Residents should be able to decide between social interaction or solitude depending on their circumstance or state of mind and which would be most beneficial for their rehabilitation. Furniture can promote comfort and relaxation, reducing stress when designed correctly. The correct furniture in the correct space really adds to a residents happiness within the home.

Additional facilities can be provided to support the rehabilitation of residents both physically and mentally. This may be through occupational therapy, physical therapy and speech therapy.

Occupational therapy

Occupational therapy provides practical support to empower people to facilitate recovery and overcome barriers preventing them from doing the activities (or occupations) that matter to them. This support increases people's independence and satisfaction in all aspects of life.
"Occupation" as a term refers to practical and purposeful activities that allow people to live independently and have a sense of identity. This could be essential day-to-day tasks such as self-care, work or leisure. Occupational therapists work with residents that may have a wide range of conditions; most commonly those who have difficulties due to a mental health illness, physical or learning disabilities. They may also work across a variety of Osborne Groves households.

The role and integration of occupational therapy is to help residents overcome the effects of disability caused by illness, ageing or accident so that they can carry out everyday tasks or occupations.

An occupational therapist will consider all of the patient's needs - physical, psychological, social and environmental. This support can make a real difference giving people a renewed sense of purpose, opening up new horizons, and changing the way they feel about the future.
An occupational therapist can support social opportunities by:

- Understanding the residents difficulties and working with the older person to find ways of having more social contact.
- Developing strategies to increase a person's confidence when meeting new people and socialising within the home and their household.
- Recommending equipment, such as a walking aid, so the person feels confident when out and about.

The care home should allow for various therapy rooms or spaces available to each household. These may be household specific and/or rooms available across the home as a change of location. The ground floor includes multi-functional rooms of which may be used for occupational therapy. This household requiring rehabilitation also has access to a therapy room on their floor, directly accessible to residents.

Occupational therapy is not limited to an enclosed space. Therapy may take place outside through 1 to 1 discussion in intimate outdoor areas. The home has been designed to create a variety of small external areas and balconies that may support therapy discussion. The central courtyard may also be zoned to enhance privacy for this work.

Physical therapy

Physiotherapy plays an important role in the rehabilitation of ageing residents to prevent their deterioration and need for increased care. The home should promote physiotherapy services which include active exercise therapy aimed to improve mobility and movement dysfunctions, advising on prevention and management of falls, pressure ulcers, incontinence, malnutrition and sarcopenia, overweight, physical restraints, intertrigo, chronic wounds, behavioural and psychological symptoms in dementia, and physical inactivity, and ergonomic and behavioural training. The way and extent in which physiotherapists are involved will differ and depends on the care homes management factors such as their policies, household priority, time pressure, staffing level, collaboration with other members of the multidisciplinary team, and staff/specialist knowledge.

Physical therapy does not always require expensive or complex machinery but often 1 to 1 engagement. Much like occupational therapy these could be multi-functional rooms, designated therapy rooms or external spaces that provide privacy. Promotion of physical exercise has been considered in the overall site layout with a large central courtyard, circular household arrangement around this courtyard, ample external space, flexible activity rooms and an expansive day space. The home may wish to include exercise machines or gym equipment designed for elderly residents. This may include exercise bikes, treadmills, some weights, support railings or simply open space with cushioned flooring for activity. These do not have to take up large amounts of space or be expensive and could be formed as zones in a larger room. The day space should be shaped to allow for a range of group activities E.g., table tennis, seated volleyball etc.

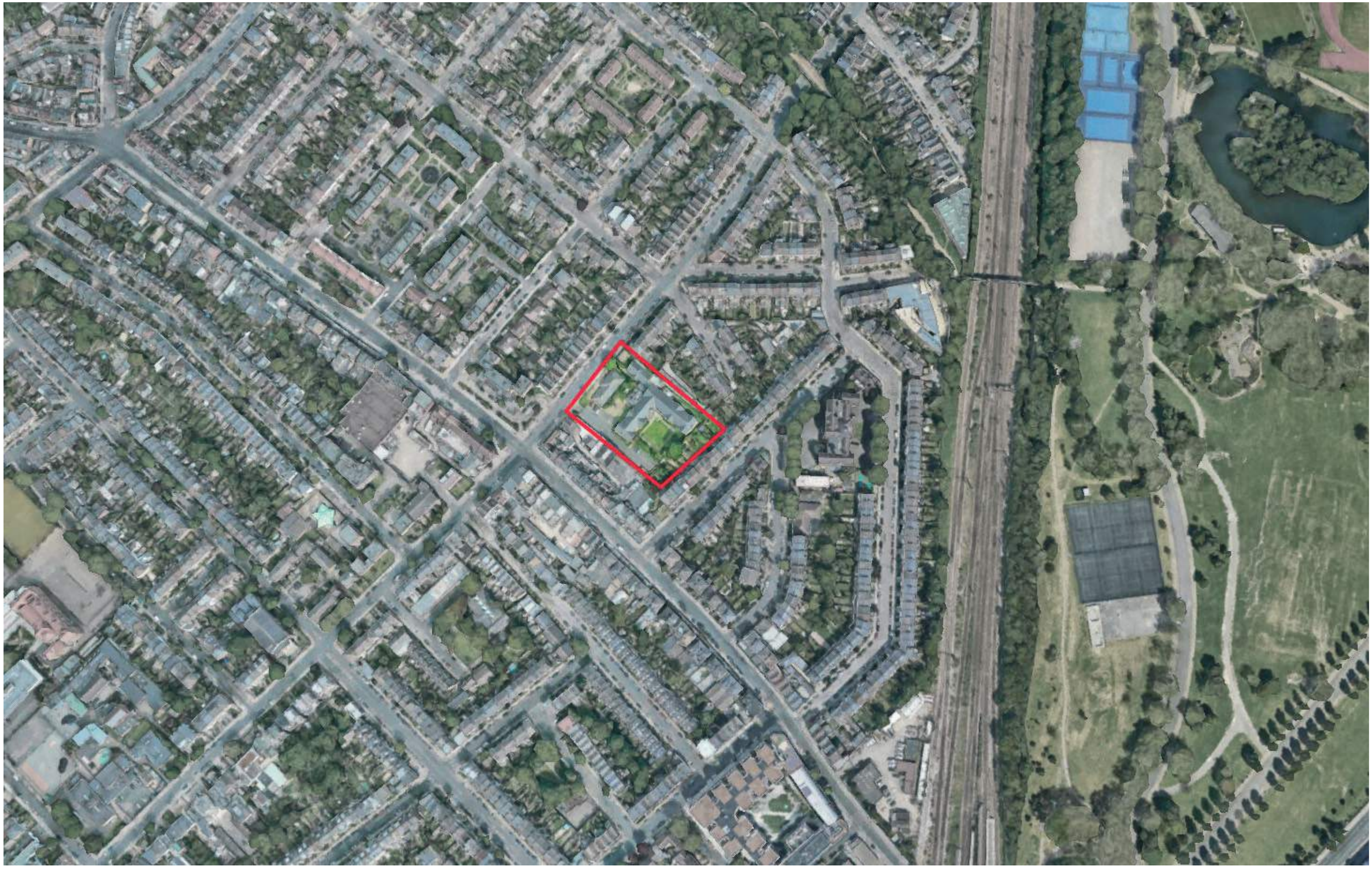
Speech therapy

As people age, there are both natural and medically caused events that take place that can lead to changes in speech, language, memory and swallowing. For example, both a stroke and Parkinson's disease can lead to Dysarthria which is a condition in which the muscles used for speech become weak or difficult to control.

Speech therapy, much like occupational therapy does not require a large expanse of space, rather one that can give privacy. Speech therapy could take place in the dedicated therapy rooms, a residents bedroom or an external space with privacy.

4.0 - Site Analysis

architecture
building services
planning
interior design
sustainability
civil and structural
project management
CDM and H&S services



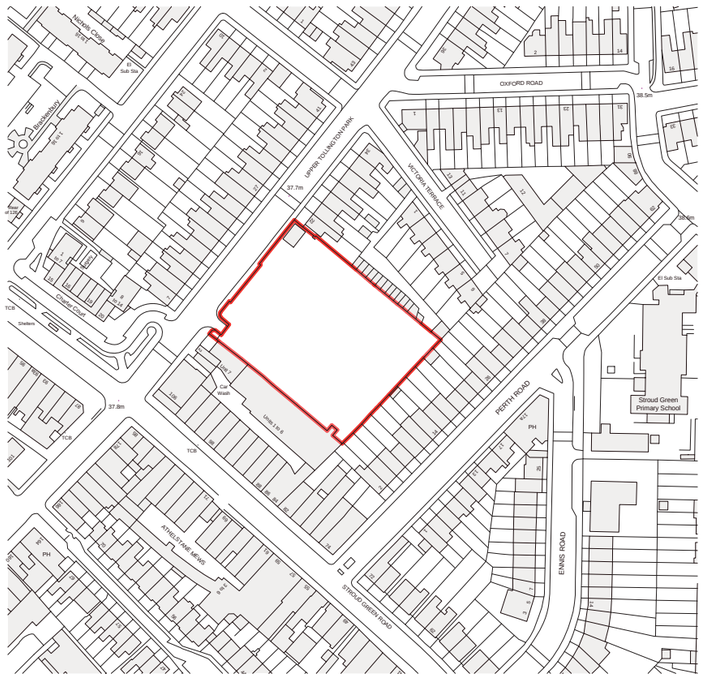
4.1 - Site Location

Osborne Grove Care Home
16 Upper Tollington Park
Finsbury Park
London
N4 3EL

The site is at the heart of Stroud Green (just off Stroud Green Road), a suburb adjacent to Finsbury Park in the northern part of Greater London. The Stroud Green area is mostly within the boundaries on the London Borough of Haringey although right at the border with the London Borough of Islington.

Finsbury park sits to the east of the site separated by the north/south railway line.

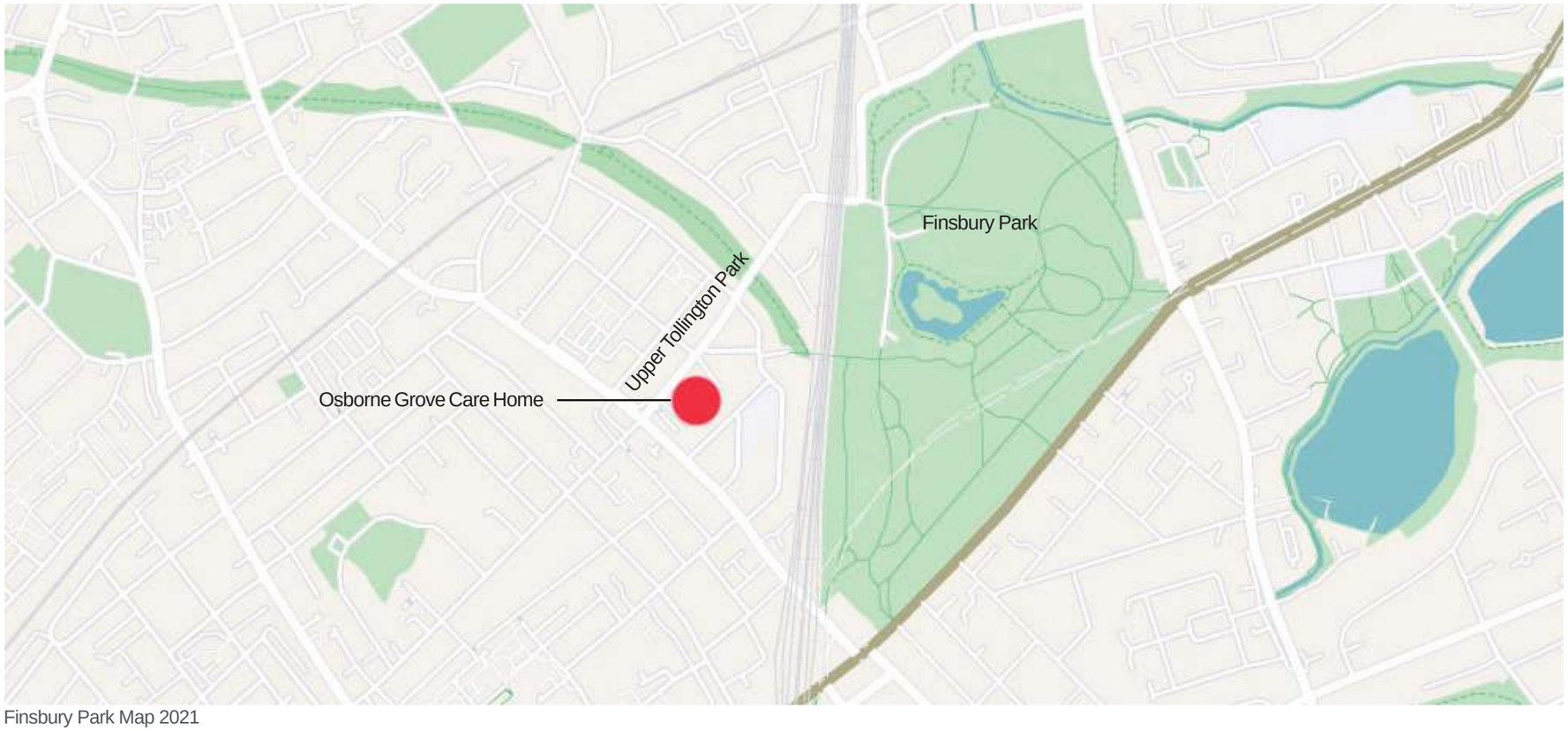
The site fronts along Upper Tollington Park Road, leading to Stroud Green Road. Victorian, 3 storey pitched roof, terraced housing sits opposite and adjacent to the Osborne Grove Site. Before a care home existed the site was previously a continuation of the terraced housing with a cul-de-sac road in the middle, called Osborne Grove.



Site Location Plan



Site Aerial



Finsbury Park Map 2021

Although records of Stroud Green can be found since the 15th century, the area has never really developed until recent times. In particular, the area knew a substantial pressure for new developments starting with the construction of the new Seven Sister main Road to the East (1832) and increasing at a higher pace soon after the completion of the mainline service from the north into King's Cross (1850s) and subsequently, the opening of the suburban station of Seven Sisters in 1861 (now Finsbury Park Station). The latter will then become a very important transport hub for the metropolitan area of London with different transport lines converging: underground Victoria Line, Piccadilly Line, and the over ground the Great Northern Line. To the west of Stroud Green Road, we have the London Overground line with Crouch Hill Station. This new connections with the wider London have created the opportunities to make Stroud Green Road a very important commercial hub in the area.

Because of the progressive intensification of the transport system, starting mostly during the second half of the 19th century, the area is dominated by housing that dates from that time with an evident dominance of the Victorian typologies. The fabric of the suburb was well defined by the end of the 19th century.

By this time, the site will be completely formed. As a consequence of the creation of the new road of Upper Tollington Park, which was designed as an extension of the already existing Tollington Park to the south of Stroud Green Road, the site had somehow 'unregular' proportions. For this reason, the more standard configuration of two lines of terraces with back-to-back gardens, could not be adopted and a couple of cul-de-sacs had been created to optimise housing development: Osborn Grove and Victoria Terrace. The former was right within the site subject to our proposal and this is what gave the name to the existing Osborn Grove Nursing Home. It is after the Second World War that the area started to change again. Because of its proximity of to the important transport hub of Finsbury Park the area was repeatedly bombed partially destroying the Victorian fabric so far consolidated. This created the opportunity to develop new types and more importantly new council housing.

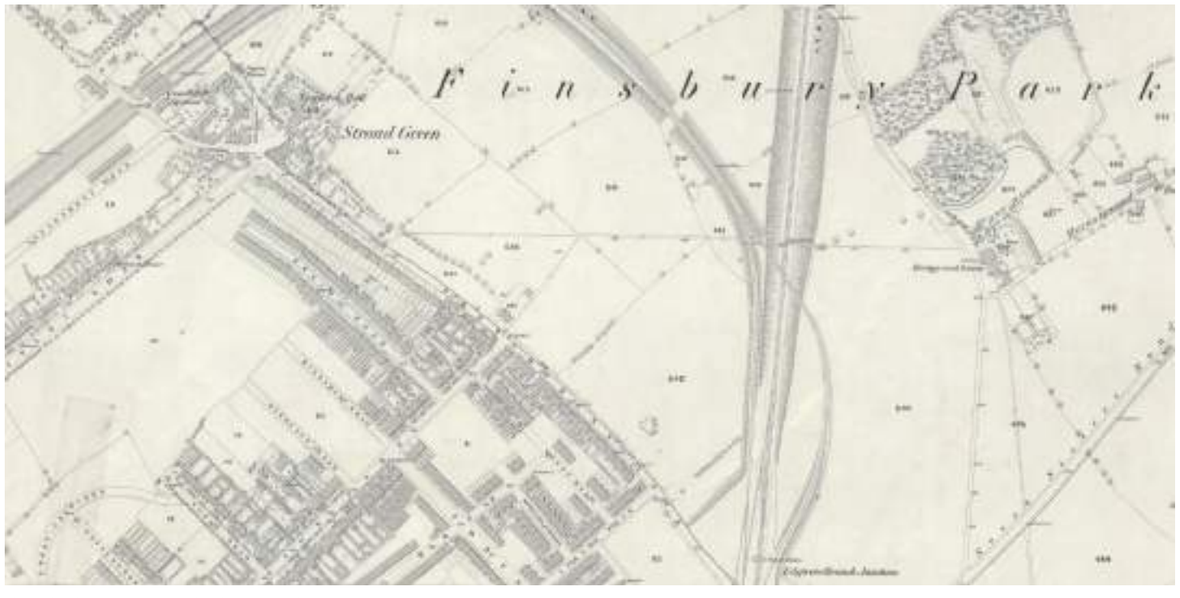
'In amongst the Victorian terraced houses of Stroud Green are numerous council houses and flats built after the Second World War to replace houses suffering extensive bomb damage. Between 1947 and 1960 a total of 25 blocks of flats and 15 houses were built by Hornsey Borough Council (today Haringey Borough Council) as part of the post-war re-construction.

The first blocks of flats, Norman Court and Wall Court, were opened to acclaim in the architectural press, and provided a model for all subsequent council dwellings built in the Borough. These former council properties now stand as monuments to a time when the local authority was a proud provider of good, affordable rented accommodation to its population. Their design and historical associations make them a special feature of the conservation area.' (A brief History of Stroud Green – Hornsey Historical Society).
Due to its history, the different stages of development and post war re-development of the area the site is surrounded by conservation areas. Although they extend their boundaries to be very closed to it, the site is not included in any conservation area.

Today, Stroud Green includes two conservation areas; a large one in Haringey to the east of Stroud Green Road, and a small one, in Islington, on the other side of the road. Haringey's Conservation Area roughly corresponds to the triangle formed by the railway line running north from Finsbury Park Station, the line of Mountview Road from east to west, and the border with Islington, beside Mount Pleasant Villas, and then the Stroud Green Road to the Seven Sisters Road. The buildings within this Conservation Area are, to quote Haringey, 'amongst the most diverse examples of domestic architecture to be found in any one area, ranging from elegantly crafted artisans cottages to Gothic and Italianate revival semi-detached houses'. (A brief History of Stroud Green – Hornsey Historical Society).



Historical Map 1847



Historical Map 1872 Finsbury Park



Historical Map 1884 Finsbury Park



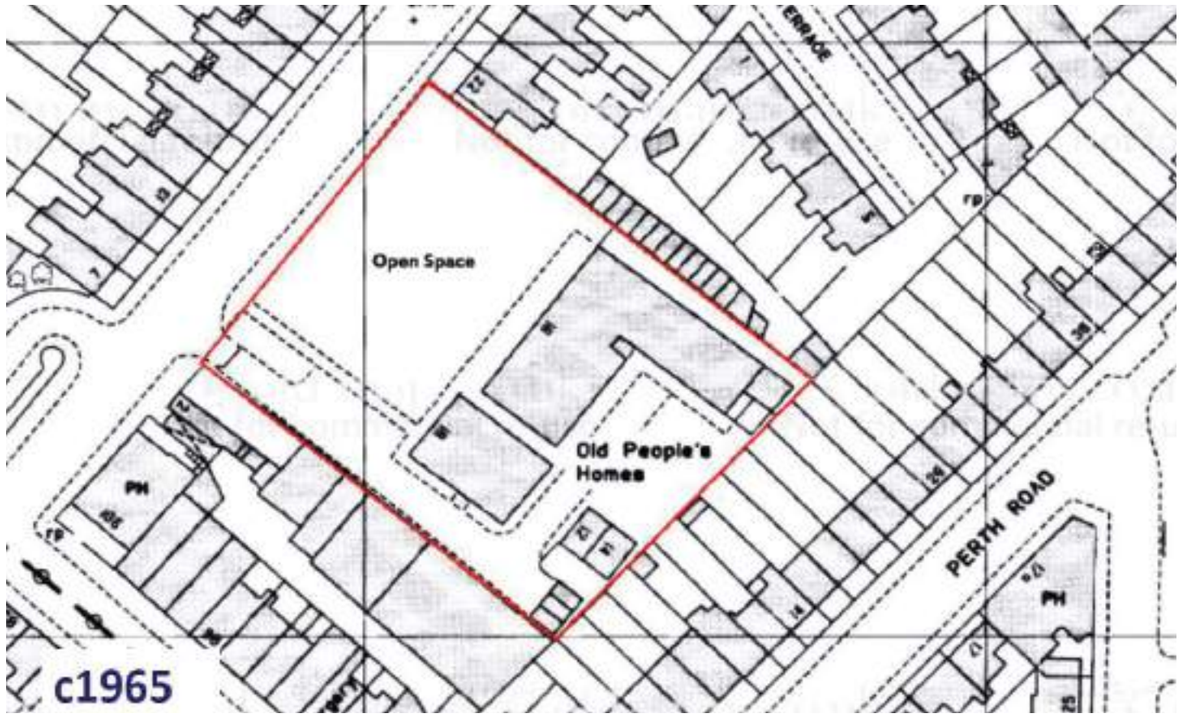
Historical Map date N/A Assumed between 1884-1935



Historical Map 1935 Finsbury Park



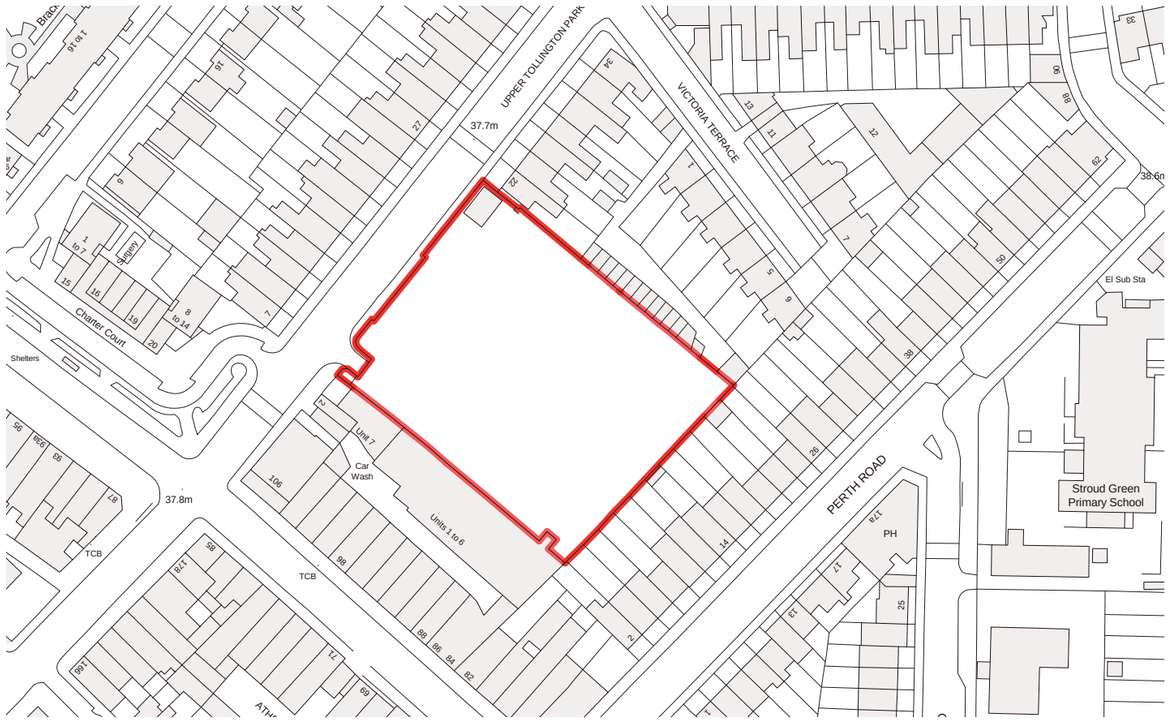
Historical Map 1947



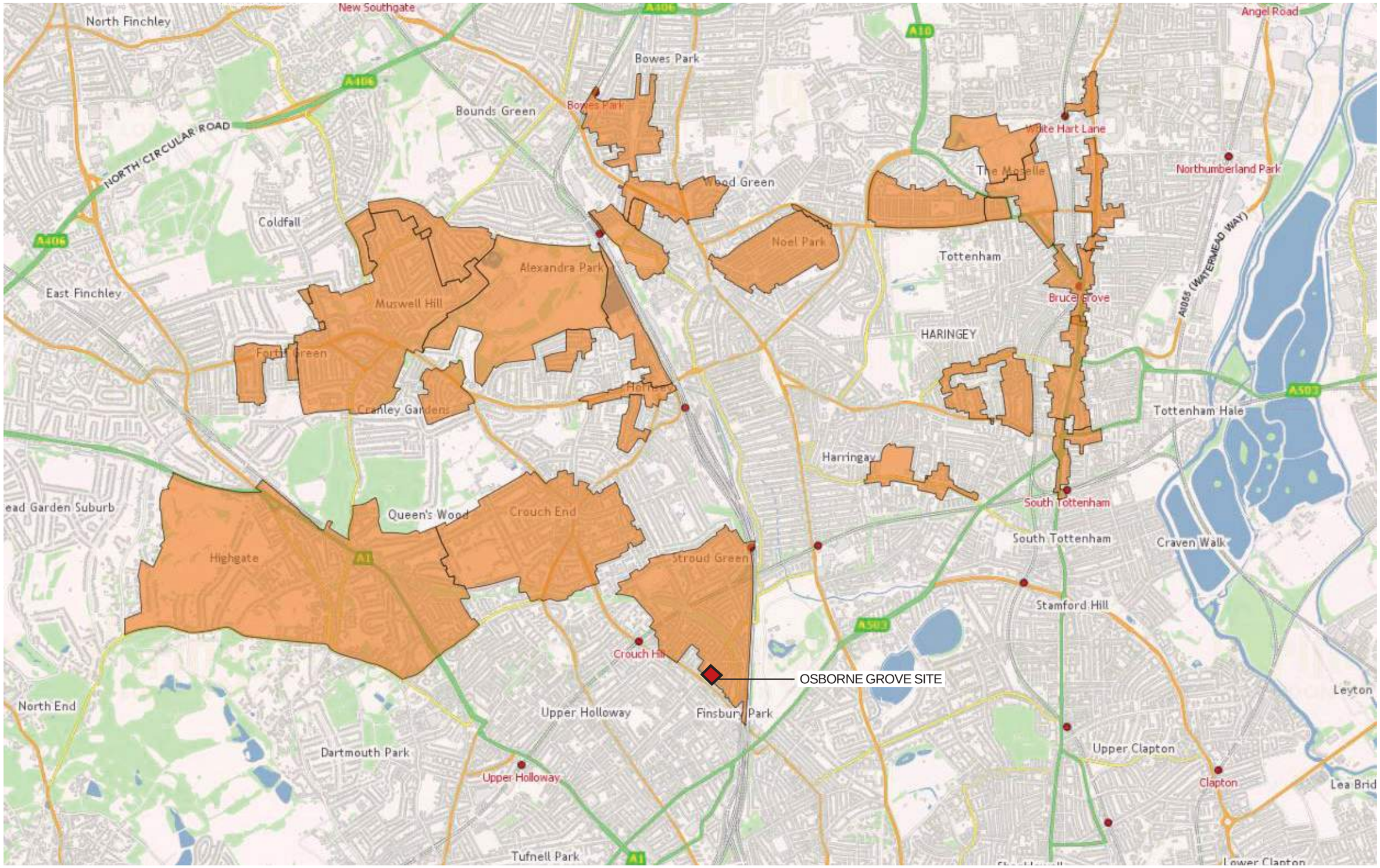
Historical Map 1965



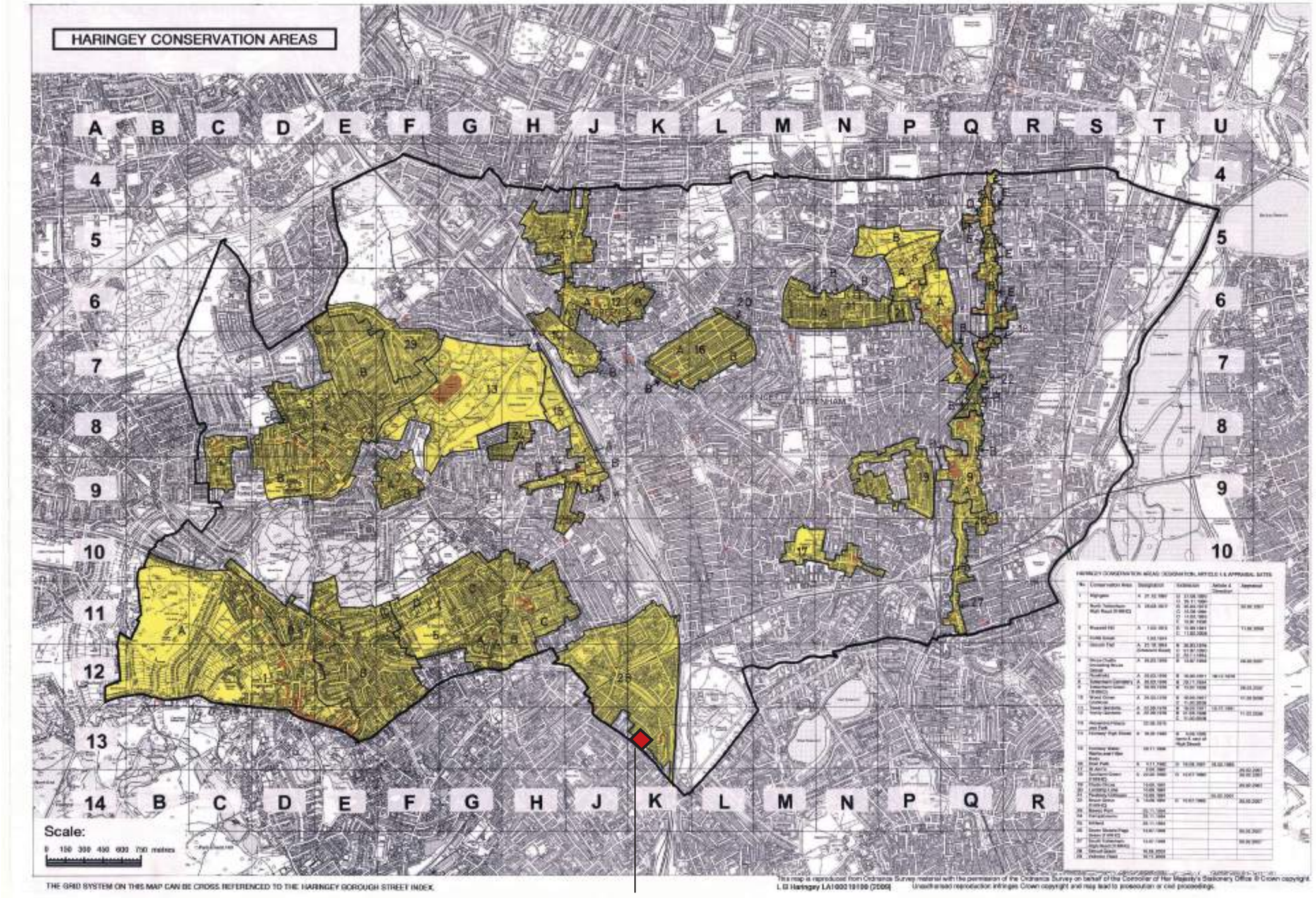
Historical Map 1987



Site map 2021



Haringey Conservation Area Map



Haringey Conservation Area Map

An early engagement meeting before the official pre-application was held between Ingleton Wood, the client and the London Borough of Haringey's planning and conservation department.

The meeting discussed the impact the proposal would have on the conservation and that a strong argument would be needed to support the proposal as it is currently shown. Comments from the conservation officer were as follows;

- Concern height wise at this point and would need to be tested further but recognises design process is still in its infancy.
- Wider contextual analysis in relation to the character of the Conservation Area will need to be undertaken. Presentation should fully explore surrounding buildings that contribute.
- Proposals will need to marry the buildings and be part of the buildings.
- Confirmed that LBH are working on the updated Stroud Green Conservation Appraisal at present and that they will be able to provide specific advice regarding reconciling new building in this location.
- 'A solidly built Conservation Area'- Efforts should be made to marry buildings with those in adjacent CA as far as possible.
- Elevational analysis should be undertaken by way of cross-sections, elevational drawings, townscape panorama.
- Relationship from within and outside Conservation Area should be analysed.
- Height needs to be tested and considers existing height may 'be a bit daunting'
- Ingleton Wood questioned what LBH's policy is on height. Conservation Officer reverted back to the adjacent CA designation and suggested testing required to assess the suitability.

As part of stage 03 and the continual development, Ingleton Wood aim to respond to these comments so that a robust and well detailed proposal be put forwards to satisfy the conservation concerns.

Following these comments, alternative proposals are being explored to lessen the massing impact on the surrounding area.



Conservation area and local 5 storey buildings



Holly Park Estate & Community Centre 4-17 storeys



Carlton Lodge 6 Storeys



Stroud Green Primary School 5 Storey with Pitched Roofs



Morris Place, The Arts Building 5 Storeys



City North East Tower 21 Storeys



The site is located adjacent to the Stroud Green Conservation Area. The Council has prepared a Character Appraisal and Management Plan (2007) to record the character of the area and provide detailed management guidance which was published in 2007. A summary of key parts of the appraisal which are relevant to the redevelopment of the site will be provided in the Planning Statement and Design and Access Statements supporting the formal application at stage 3.

The following extract has been taken from the Stroud Green Conservation and Character appraisal report.

"The Stroud Green Conservation Area is located in the North part of the London Borough of Islington on the border with the London Borough of Haringey. The character context of the wider area is that of late Victorian development – mainly shops at ground floor and residential above (Crouch Hill and Stroud Green Road) and small scale residential terraces typically built with little front garden space (Japan Crescent); this gives a more intimate and 'urban village' character.

The character of the area is derived from harmonious diversity and slow organic development. The designs and materials employed vary throughout the area, but combine to produce a piece of townscape that is important to retain and develop. The houses, shops, pubs, and commercial premises give vibrancy and mix to the character of the area and the community it serves."



Site surrounded by conservation area.



Local Context Land Use - 'Colouring London'

Upper Tollington Park

Upper Tollington Park runs the front of the site S.W to N.E. The street is lined with 3-storey Victoria terraced housing on both sides of the street. The street demonstrates a regular pattern of bay windows, pitched roofs and sash windows. Light sand brickwork is commonly used in the terraced housing. Fenestration and patterning is commonly seen around windows and entrances with regular form. The terraced housing shows small street facing front gardens with hedge lines and low level brick walls.

Adjacent to the care home closest to stroud green road sits the 3-storey car wash with pitched roof. The car wash ranges between 1 and 3 levels running the S.W boundary of the site. The car wash and attached buildings are poorly maintained, of low quality and do not fit with the main terraced street scene of Upper Tollington Park. The car wash and its joining buildings do not sit within the realms of the conservation area with the architecture clearly changing from this point towards the junction.



Upper Tollington Park Road Street View



Upper Tollington Park Opposite Care Home



Upper Tollington Park Street Elevation adjacent to site



Upper Tollington Park Opposite Care Home



Stroud Green Road in Yellow



Upper Tollington Park - Car Wash next to Care Home Site



Upper Tollington Park - Car Wash next to Care Home Site

Stroud Green Road

Stroud Green Road sits outside the main conservation area and contains a variety of architectural styles. Stroud Green Road is the main high street consisting of small local shops at ground level with flats about. The 3 storey terraced shops are of uniform arrangement and style with large sash windows lining the 1st and 2nd floors.

Further along Stroud Green Road various housing typologies can be seen. 3 storey, pitched Victorian terraced housing with basements are visible similar to Upper Tollington Park. 4 storey, brick faced, social housing blocks with external balconies are seen further north.


Stroud Green Road


Stroud Green Road Terraced Housing


Stroud Green Road Terraced Housing


Stroud Green Road Housing Block Accommodation


Stroud Green Road in Yellow



Stroud Green Road Flats above Ground Floor Shop fronts


Stroud Green Road Housing Block Accommodation

Eastern Site Boundary

The eastern boundary of the site sits adjacent to number 22 Upper Tollington Park. Number 22 is a 3-storey terraced dwelling with pitched roof with a brick facade facing the site. There are no windows or openings on this facade. The rear garden of number 22 also lies adjacent to the site.

Further south a series of single level flat roof garages line the boundary edge. The garaged area can be accessed via a track road from Victoria Terrace Road. The garages are of of low quality and have previously been climbed on to gain access the site. As a result, high level fencing had been introduced around the perimeter of the current care home.

A large proportion of this boundary is occupied by back gardens to the terraced housing along Upper Tollington Park and Victoria Terrace Road. The dwellings along this road demonstrate a typical brick terrace with high sash and bay windows. A number of these homes appear to have dormers added as later additions as a result of attic conversions.

As show the distance between the boundary and those dwellings along Victoria Terrace are between 18m and 30m. Number 22 Upper Tollington sits within 1m from the boundary line.

Regular openings and windows are seen along the backs of the Victoria Terrace Road dwellings creating regular overlooking along this boundary. This can be seen on the line of the main facades and in the stepped sections of these dwellings.

Boundary treatment and or a full replacement of the existing walls and fencing will be required as part of the proposal.



Victoria Terrace - Entrance to Rear Gardens and Garages



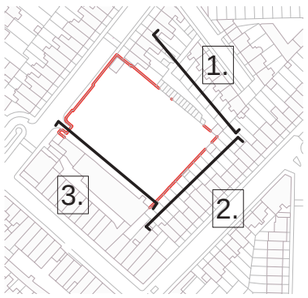
Fencing along Eastern Boundary

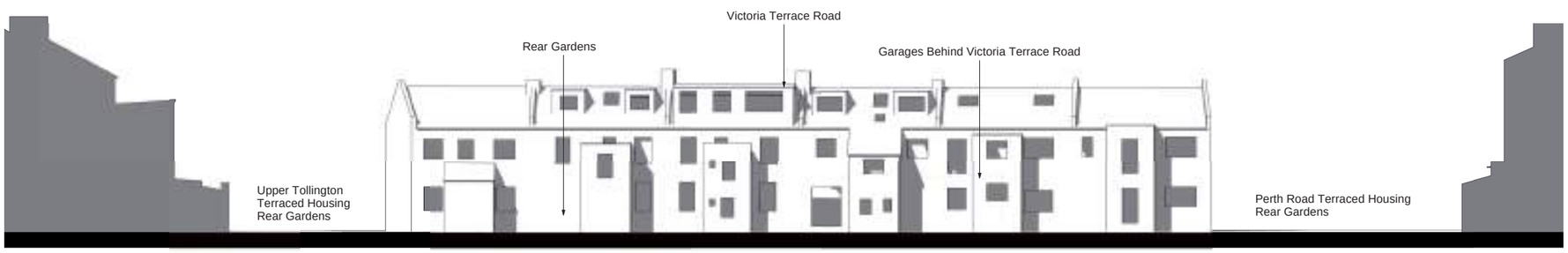


Garages Along East Boundary



Aerial View Looking East





Elevation 1: Victora Terrace Road Rear Garden Elevation

South Site Boundary

The southern boundary is similar to that of the eastern boundary. 3-4 Storey Victoria terraces with pitched and flat roofs line Perth Road. Deep gardens back on to the site with between 13m - 15m distance from the site boundary to building wall.

High level fencing and defensive greenery line the boundary to create a visual and acoustic barrier to the dwelling gardens. The proposals landscaping and boundary strategies will remove any low quality bushes or greenery and replace with high quality consistent planting to retain privacy. High level boundary walls are assumed for security protection of which should be softened by strategic planting, ie climbers where hedging cannot be integrated.

Regular openings and windows are seen along the rear facades of the dwellings and create overlooking onto their neighbouring gardens and on to the care home site. Early consideration has been given towards the care homes window design with the strategy directing views from the care home bedrooms along the gardens rather than directly into the adjacent dwellings.

The boundary contains a number of large Category C trees (Trees of low quality) of which are discussed in the Arboricultural survey and review. The proposal aims to retain some of these trees where possible where they do not restrict design.

Boundary treatment and or a full replacement of the existing walls and fencing will be required as part of the proposal.



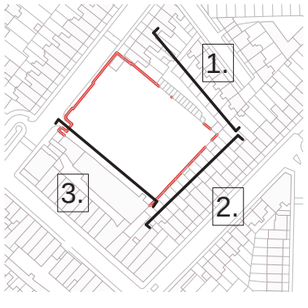
Rear of Perth Road Terraced Housing



Perth Road Street View



Aerial View Looking South





Elevation 2: Rear of Perth Road Terraced Housing Elevation

West Site Boundary

The western site boundary contains a range of 1,2 and 3 storey buildings with pitched and flat roofs. The boundary contains garage units typically used for auto vehicle repair by 'Modern Autos Repair'. These units sit outside site ownership and the redline boundary.

The facades facing onto the site are of poor quality with an exposed concrete finish. The facade shows clear signs of weathering and cracking and shows little to no maintenance. There are also clear signs of graffiti and vandalism. There are no existing windows along this boundary. An approximate 2.1m timber fence sits along the boundary line.

A clear ownership plan and agreed redline boundary should be established prior to proposed boundary works.

Elements outside of the red line boundary cannot be altered, therefore strong boundary consideration and treatment within the site should be explored at stage 3.

At the time of the site visit carried out there was little noise and disturbance from the neighbouring works. However, the general impression of the neighbouring business and from discussion with the care home stakeholders is that this may not always be the case. Further site investigations may be required to better understand the neighbouring impact on the care home site.

Boundary treatment and or a full replacement of the existing walls and fencing will be required as part of the proposal.



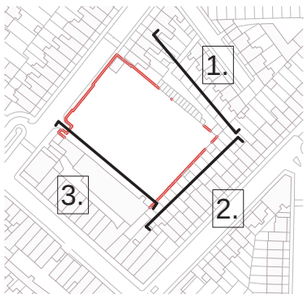
'Modern Autos Garage' Elevation from Site

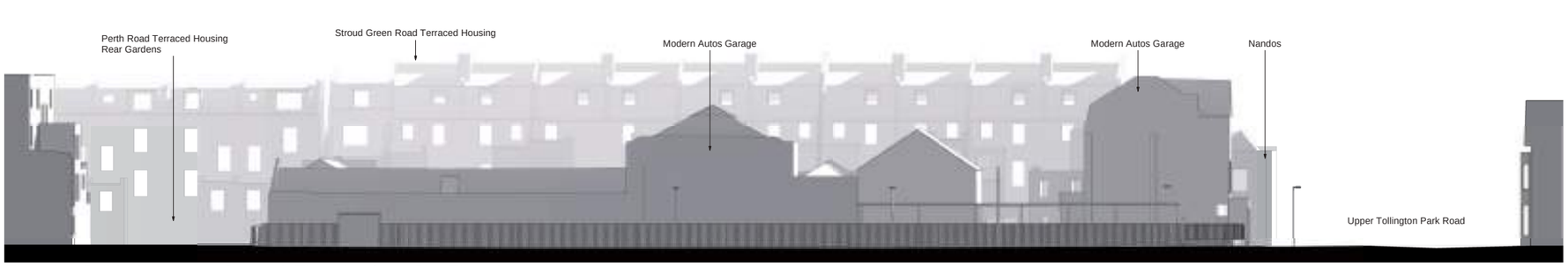


'Modern Autos Garage' Elevation from Site



Aerial View Looking East





Elevation 3: 'Modern Autos Garage' Elevation from Site Elevation








Visitor
Parking










Visitor
Parking

4.7 - Gas Governor

A gas governor sits in the Northern corner of the site facing Upper Tollington Park. The gas governor sits within Haringey's red line boundary of ownership and is part of a 100 year lease agreement. The gas govenor is managed by 'Cadent' with initial agreement for a site survey to confirm any diversion work that may need to take place and the impact of construction. This has been discussed in detail in the Mechanical report attached as appendix.

A gas governors primary function is to control the flow and pressure of natural gas provided from gas companies to the local area. The gas governor on site services the local area and terraced housing down Upper Tollington Park.

It has been established and agreed that the cost of moving the gas governor to another site is not feasible due to the cost.

The gas governor should remain in an enclosed and protected structure directly accessible from the street. External works may be required to dress the gas governor and integrate the aesthetics as part of the overall proposal. This would include removal and re-design of the existing fencing.

Further strategy is required towards protection of the gas governor during demolition and construction. The gas governor should also be addresed as part of the fire strategy report regarding protection, management and impact on the proposed development.

A risk has been highlighted surrounding the gas govenor, the impact of construction and the future fire strategy.











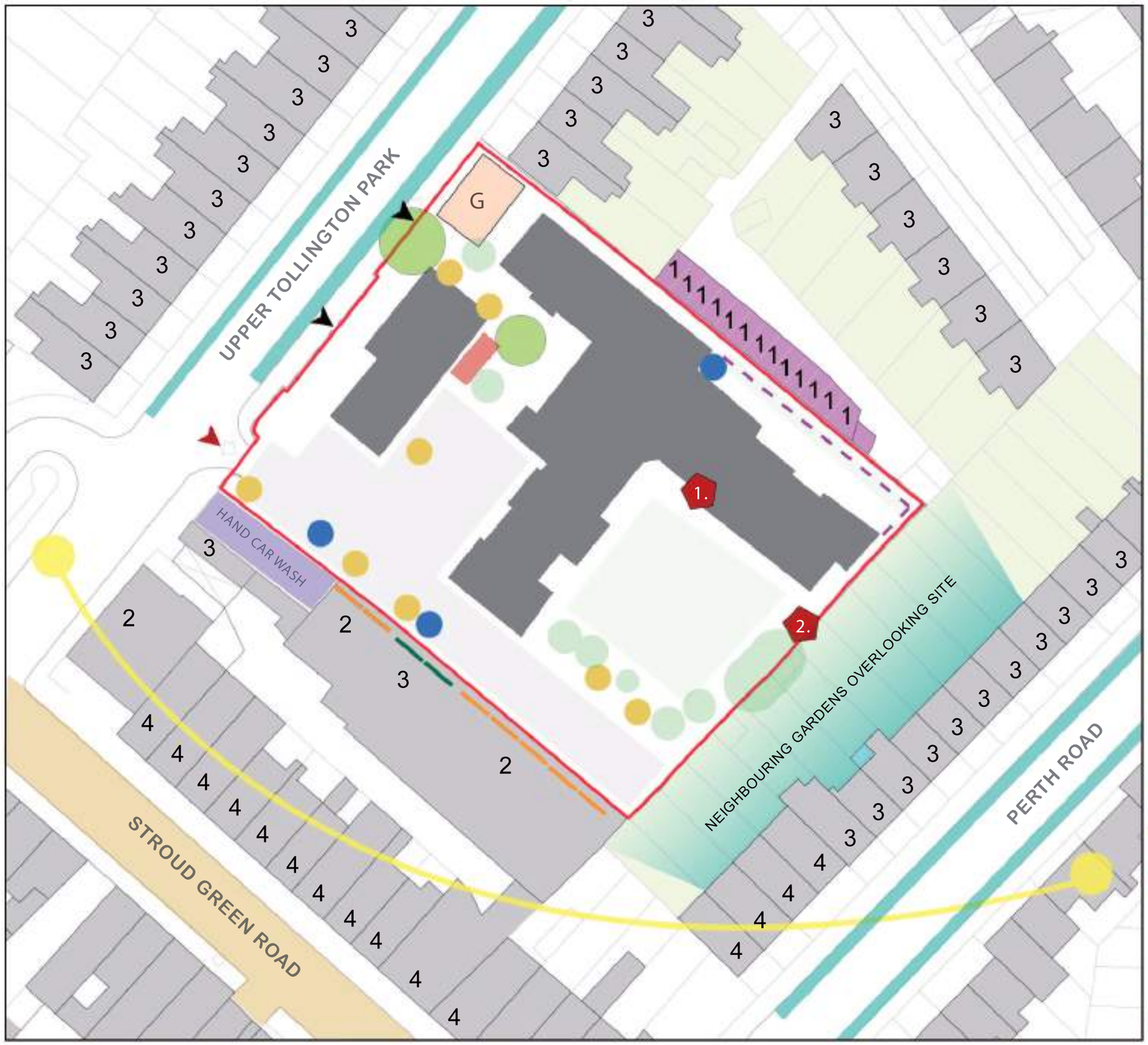
Views from outside Gas Governor



Distance between Gas Governor and boundary



Neighbouring property



Oportunities and Constraints - Key

- Existing Cat C Trees with low quality and value *(Refer to Arboricultural Survey)*
- Existing Cat B Trees with moderate quality and value *(Refer to Arboricultural Survey)*
- G - Existing Gas Governor
- 2. - Ecology Target Note 01 - Ivy covered boundary feature containing blackbird nest
- 1. - Gap in soffit box which provides moderate potential to support roosting bats.
- Two storey neighbouring property. Concrete facade in poor condition. *(Refer to photograph schedule)*
- Three storey neighbouring property. Concrete facade in poor condition. *(Refer to photograph schedule)*
- Various brick wall types approx 2.5m high level security fencing above. Poor condition. *(Refer to photograph schedule)*
- Neighbouring Single Storey Garages
- Site Boundary
- Permit and On-street Pay and Display Parking Bays
- 1 - Single Storey Building
- 2 - Two Storey Building
- 3 - Three Storey Building
- 4 - Four Storey Building
- Vehicle Entrance
- Pedestrian Entrance
- Neighbouring Gardens
- Stroud Green Rd. Local High Street
- Neighbouring Car Wash - Steel Frame Covering
- External CCTV
- External Lighting
- Sun Path
- Existing Building
- Previous Location of External Generator

N

Opportunities and Constraints Plan

Topography

A site 2D topographical and a 3D point cloud survey has been carried out for the site including neighbouring properties along the adjacent boundaries.

The site survey includes typical below ground services and drainage for the existing home and gas governor. The 3D point cloud survey shall be used to form part of the existing site information and shall be integrated into the building information model.

Assessment of the topography demonstrates a flat site with minimal change in level across the whole site.

Notes from the survey inspection are as follows;

Electric - All located where possible. Feeds to buildings located on site differ from records provided, added just in case.

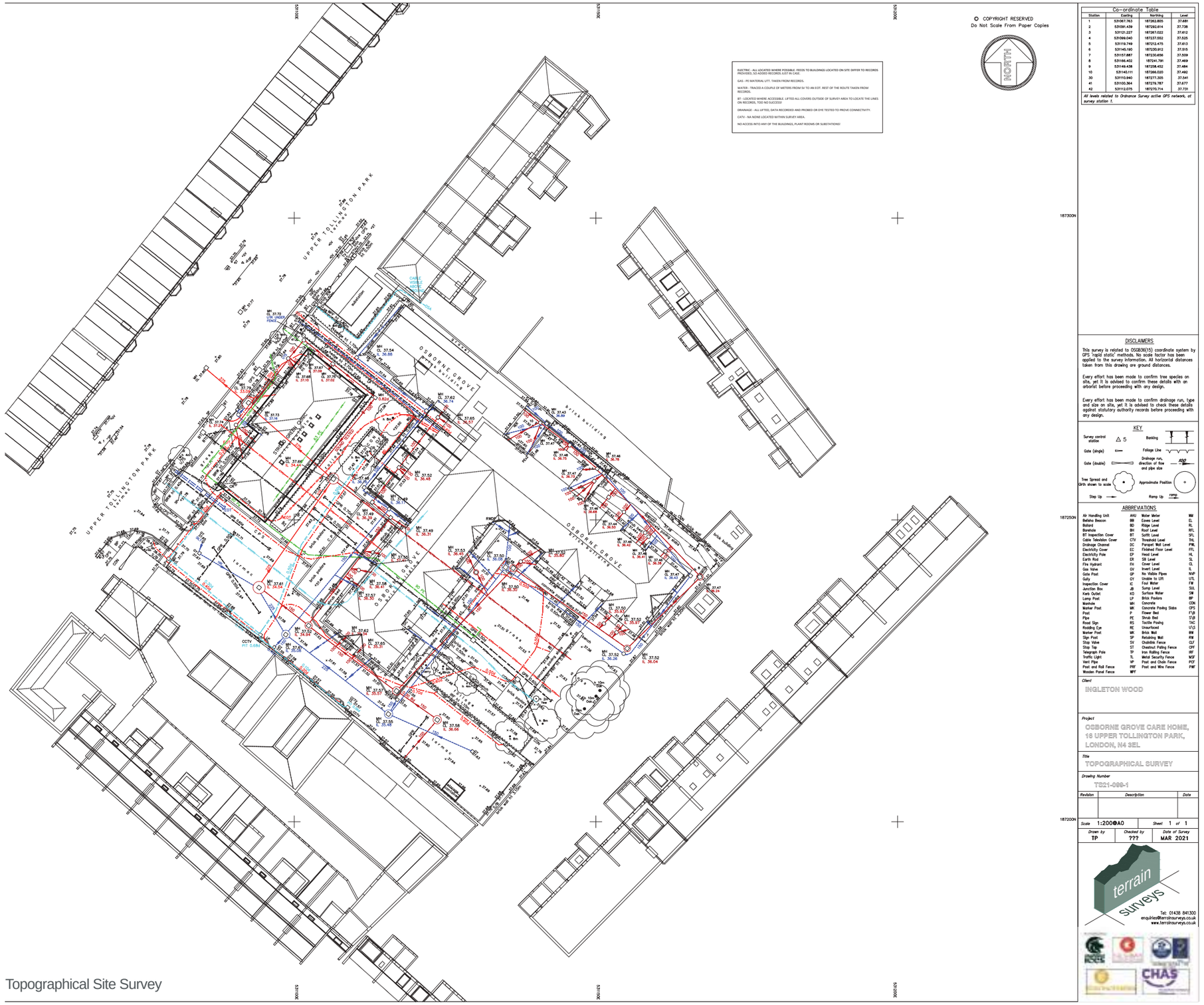
Gas - PE material UTT. taken from records.

BT - Located where accessible. Lifted all covers outside of survey area to locate the lines on records but to no success.

Drainage - All lifted, data recorded and probed or dye tested to prove connectivity.

CATV - N.A none located within survey area.

No access into any of the buildings plant rooms or substations.



Topographical Site Survey

An Acoustic report has been carried out by 'Encon Associates.' The report has been attached as an Appendix.

Executive summary

An environmental noise survey and noise impact assessment has been undertaken at the proposed care home development to assess the suitability of the site. The measured ambient sound levels have allowed a BS4142:2014, BS8233:2014 and ProPG noise assessments to be carried out.

The BS4141 assessment indicates that provided the cumulative plant noise limit level is adhered to; all noise emissions from associated plant will fall a minimum 10dB below the prevailing background sound level at the closet NSR, thus indicating low impact.

The ProPG assessment shows that the site is classed as 'Low Risk'. Consequently, it is deemed that if good acoustic design can be implemented, then the amenity of the future occupants can be fully protected.

Outline mitigation measures have been recommended in section 4.3, including glazing and ventilation. These recommendations should be sufficient to achieve the internal noise levels for the proposed development according to BS8233:2014 noise criteria. An overview of the recommendations can be found below:

Reccommendations and mitigation overview

- Living Rooms and Bedrooms require a minimum sound reduction of 27.0 Rw + ctr.
- The cumulative sound level of all external plant should not exceed the External Plant Noise Limit Level of 14.0 dBA at the closest NSR.
- Once all external mechanical plant has been specified a suitably qualified person should assess whether the External Plant Noise Limit Level can be achieved. As well as provided design and mitigation where appropriate.
- Further mitigation measures can be found in the body of the report.

Osborne Grove Nursing Home, 16 Upper Tollington Park, Stroud Green, London, N4 3EL



Residential Noise Survey

30th May 2019

Encon Associates Limited
10 Chapel Lane
Arnold
Nottingham
NG5 7D

An Ecology report has been carried out by 'The Ecology Consultancy' prior to Ingleton Wood involvement. The report has been attached as an Appendix.



Executive Summary

The proposed development site consists of one land parcel to the north east of Stroud Green Road. The site was comprised of hardstanding, bare ground, two buildings, introduced shrub, amenity grassland scattered tress and species poor hedgerow. All habitats are of site value only, with the exception of the mature sycamore trees and species poor hedgerow (a Habitat of Principal Importance [HPI]) which provide an important link to the railway corridor to the north-east, which could be utilised by a number of foraging and commuting species, and as such have local value.

There are three statutory designated sites and 31 non-statutory designated sites within a two kilometre radius of site.

Bats –The three buildings and the trees on site have potential to support roosting bats. Further assessment of the buildings and trees will be required to determine their suitability to support roosting bats.

Breeding birds – The scattered trees, species poor hedgerow, Ivy cover and introduced shrub on site has high potential to support breeding birds. If any of these areas are to be removed to make way for the development, mitigation to avoid disturbance of any active nests will be required in order to comply with legislation.

Recommendations to enhance the biodiversity value of the site in accordance with national and local planning policies comprise native scrub and tree planting, good horticultural practice, implementation of green infrastructure such as green roof and the provision of bat roosting and bird nesting opportunities.

Executive Summary

Arbeco Ltd was commissioned by Fredderick Gibberd Partnership to undertake a ground level survey of trees that could be affected by future works associated with the development of land at Osbourne Grove Nursing Home. A qualitative assessment of each tree was carried out according to British Standard BS 5837:2012, Trees in Relation to Design, Demolition and Construction– Recommendations, focusing on arboricultural values (categories A1, B1, C1)1 and landscape values (categories A2, B2, C3) 2.

The main findings of the survey are as follows:

- There were a total of 12 individual trees and one hedgerow in and adjacent to the proposed development site each are described in Appendix 1 of this report.
- Of the trees surveyed, two individuals were attributed Category B status and ten individuals, and one hedgerow were attributed Category C status.
- A tree constraints check was carried out with the London Borough of Haringey and it was confirmed that the north-east and south-east site boundaries border the Stroud Green Conservation Area. None of the trees surveyed were subject to Tree Preservation Order restrictions.
- Root protection areas were calculated in accordance with BS 5837:2012 for each of the surveyed trees and ranged from 2.2m2 to 72.4m2.
- Any work to trees should consider the potential presence of protected species, including breeding birds and roosting bats. The Preliminary Ecological Appraisal (The Ecology Consultancy, 2018) and any subsequent ecological reports should be consulted prior to the commencement of works.

Category Definitions:

- Category A: Trees of high quality with an estimated remaining life expectancy of at least 40 years.
- Category B: Trees of moderate quality with an estimated remaining life expectancy of at least 20 years
- Category C: Trees of low quality with an estimated remaining life expectancy of at least 10 years or young trees with a stem diameter below 150mm.
- Category U: Those in such a condition that they cannot realistically be retained as a living tree in the context of the current land use for longer than 10 years.

A full report and recommendations from the Arboricultural survey is given in the appendix attached.





No	Species	Ht.	S	St. 1.5 m	Canopy Spread				Cr. Cl	Ls	SC	PC	Comments /Observation	Preliminary Management Advice	LE	Cat **	RPA m^2	RPA r
					N	S	E	W										
T1	Lawson cypress	6	1	150	1	1	1	1	0	SM	Fair	Fair	-	No immediate works required	40+	C1	10.2	1.8
T2	Norway maple	9	1	330	5	4	4	4	2.5	SM	Fair	Good	-	No immediate works required	40+	B1	49.3	4.0
T3	Silver maple	11	1	200	2.5	3	2.5	2.5	2.5	SM	Fair	Good	-	No immediate works required	20-40	B1	18.1	2.4
T4	Silver maple	11	1	200	2	2	2	2	2.5	SM	Fair	Fair	-	No immediate works required	20-40	C1	18.1	2.4
T5	Japanese cherry	5	3	70; 70; 100	2	2	1	1	1.5	SM	Fair	Fair	-	No immediate works required	20-40	C1	9.0	1.7
T6	Silver birch	6	1	100	1.5	1.5	1.5	1.5	1	SM	Fair	Fair	-	No immediate works required	20-40	C1	4.5	1.2
T7	Crab apple	3	1	70	1	1	1	1	1	SM	Fair	Fair	-	No immediate works required	20-40	C1	2.2	0.8
T8	Silver maple	9	1	100	2	2	2	2	2	SM	Fair	Fair	-	No immediate works required	20-40	C1	4.5	1.2
T9	Silver maple	9	1	100	2	2	2	2	2	SM	Fair	Fair	-	No immediate works required	20-40	C1	4.5	1.2
T10	Sycamore	14	1	400	3	4	2	3	2	EM	Fair	Fair	Ivy clad, growing hard up against boundary wall	Sever ivy and re inspect	20-40	C1	72.4	4.8

No	Species	Ht.	S	St. 1.5 m	Canopy Spread				Cr. Cl	Ls	SC	PC	Comments /Observation	Preliminary Management Advice	LE	Cat **	RPA m^2	RPA r
					N	S	E	W										
T11	Sycamore	14	1	400	4	4	4	2	2	EM	Fair	Fair	Ivy clad, growing hard up against boundary wall	Sever ivy and re inspect	20-40	C1	72.4	4.8
T12	Sycamore	10	1	300	2	4	4	2	2	EM	Fair	Fair	Ivy clad, growing hard up against boundary wall	Sever ivy and re inspect	20-40	C1	40.7	3.6
H1	Common hazel	4	1	70	0.5	0.5	0.5	0.5	0	SM	Fair	Fair	-	No immediate works required	20-40	C1	2.2	0.8

5.0 - Feasibility Appraisal

architecture
building services
planning
interior design
sustainability
civil and structural
project management
CDM and H&S services

The feasibility study carried out by Frederick Gibberd proposed two options for development. Option 4 to provide a 70-bed care home. Option 8 to provide a 70-bed care home plus 20 additional self-contained, semi-independent sheltered accommodation flats. The feasibility describes 12 design principals of which have generally been adopted in their proposal. These principals for design have developed from the feasibility based on user feedback and workshops however the underlying principals have remained. The overall strategy of a circular arrangement around a courtyard works for this site and Ingleton Woods design development has ended up reflecting a development of this option.

Option 04 Review.

The lounge and dining rooms have been split up as separate spaces without connection. This was a piece of design criteria mentioned in their brief and can be seen on the ground floor for household A & B. In doing this, some residents must walk long distances to along corridors to reach lounges/dining areas on the other side of the home.

Long walking distances can also be seen on the first floor in relation to dining areas. We understand the efficiency of clustering the dining areas at the front of the home however residents must travel approx. 50m+ from their bedrooms. Social spaces should all be central to households.

A circular arrangement around the corridor works for many reasons however the layout shown creates long runs of narrow corridors. These will become narrower with the integration of handrails. Corridors with handrails would not appear to allow for comfortable passing for wheelchair residents or those in mobile beds. The long runs of corridor limit natural light which may only be available from the lounges in the form of ambient light.

Household B nurses station not able to look down corridor. This may be developed through furniture arrangement however natural surveillance is a primary driver in the layout.

The home does not fully allow for infection control procedures. Considering the recent COVID-19 pandemic infection control design considerations should be integrated.

A multi-purpose therapy room is listed in the key but not shown as part of the layout.

10 Development Options

10.1 70 BED CARE HOME
(Option 4 from Initial Feasibility Study)

This would take in the clinic site and be a new development which maximised the potential for the central garden courtyard. It would be generally two stories in height bit with the frontage to Upper Tollington Park increased to correspond to the streetscape of the terraces fronting the original Osborne Grove.

In this option the clinic is relocated to the first floor, with its own lift, so that the Day Centre can provide a more active frontage to the street and help to promote the day service offer to the wider community. This is the only option that provides a significant increase in the day centre, which has the potential for being leased out for events.

The arrangement of the households follows that of the earlier options, with the long term residential arranged back to back to allow flexibility of allocation of rooms according to demand. Day spaces are arranged to serve clusters of residents rooms with generous areas of glazing to corridors providing interest, and informal seating areas complementing the larger lounges.

On the second floor, Group E rooms are arranged in a circuit to allow for wandering and exercise with access from the day rooms to external roof terraces.

As with Option Three, a new build proposal would allow all rooms to be of a similar size, exceeding minimum standards, with a framed structure providing maximum flexibility to accommodate future changes.



Ground Floor Plan

Feasibility option 4 ground floor plan



First Floor Plan



Second Floor Plan

Feasibility option 4 first and second floor plan



It is clear to see that the Option 8 proposal has been a late addition and is not as strategically developed as option 04. The revised proposal includes 20 self-contained, semi-independant units as a separate entity running along the North/Eastern boundary of the site. (highlighted in green). From an overlaying study of the plan with the correct room areas, IW have found the plan has been squashed to accommodate the roadway.

In creating a physically separate household with a private roadway separating it from the main care home, the layout of the care home has been compromised. As a result the home has been split into two courtyards on separate levels. These smaller courtyards will require additional staffing to keep watch over residents rather than a single open space where staff can watch multiple residents.

Long runs of corridor circulation are shown in this layout often with dead ends. Lounges have been forcefully put at the end of some corridors to create destinations however this feels inefficient and removes the ‘circular’ movement around the home. The second floor shows a long run of just circulation with no rooms off of it. This feels like an inefficient use of sqm just to provide an escape route.



Feasibility option 8 ground floor plan

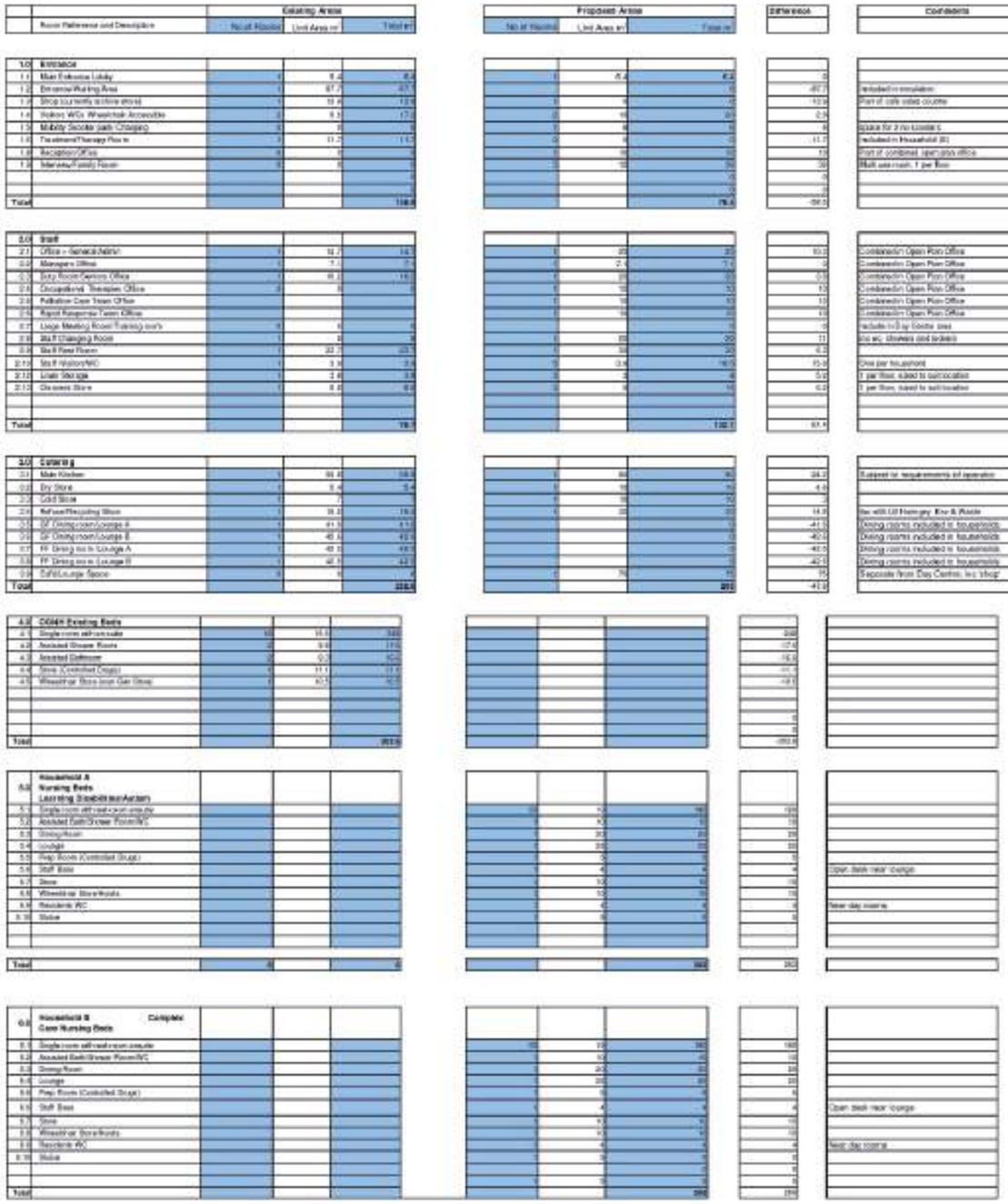
The dining and lounge rooms are not located central to each household and some residents will be required to walk from opposite corners of the household to these rooms.

The day centre, although at the front of the home now feels detached from the rest of the home and no longer integrated. The day centre is separated from the home by the ambulance bay and service rooms.

The cafe is no longer at the front of the home or a part of the day centre. Members of the public will be required to enter the estate, along the private road to the disconnected cafe. The cafe will not act as an integrated part of the community and will attract limited use.



Feasibility option 8 first and second floor plan





6.0 Early Design Concepts and Development

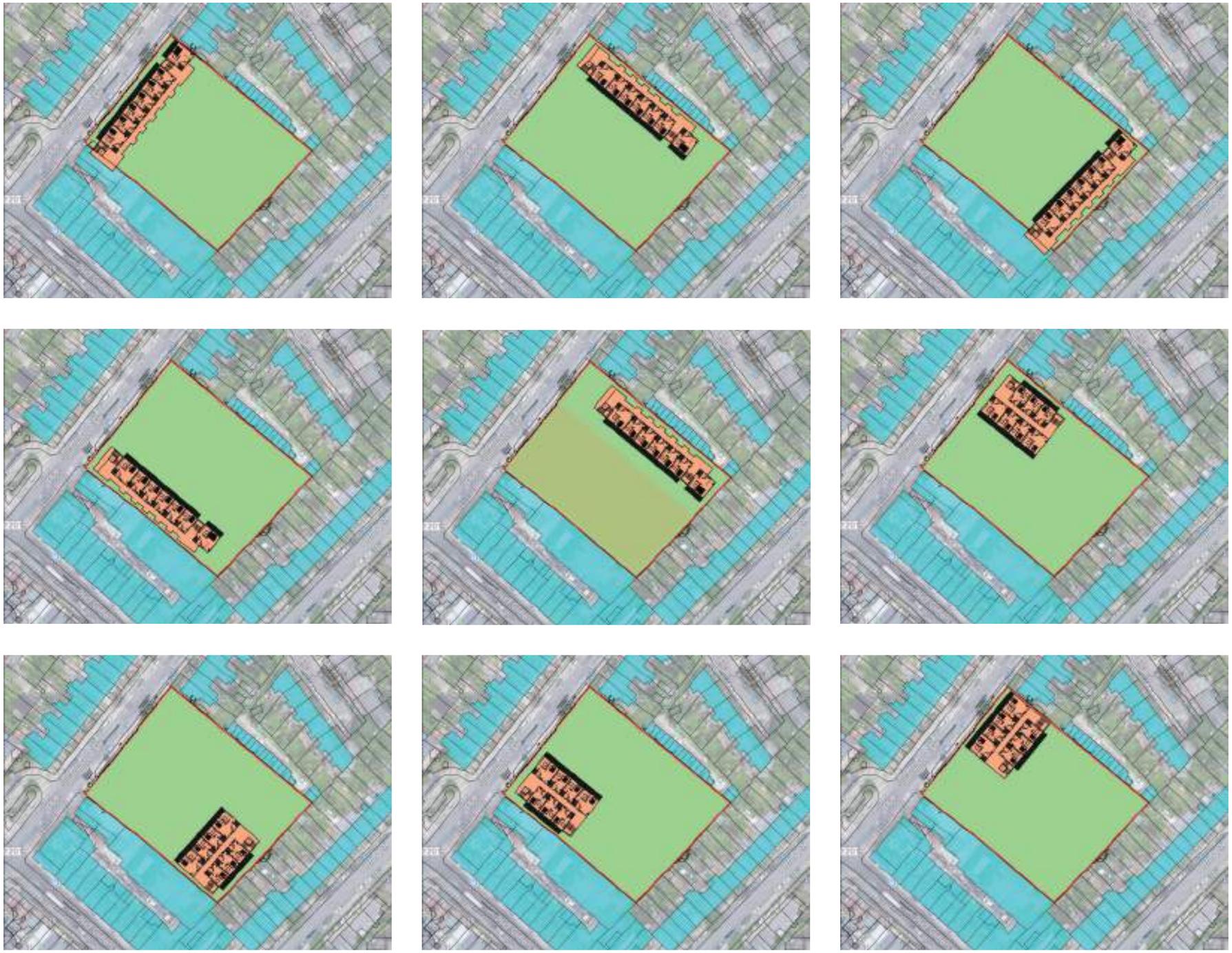
architecture
building services
planning
interior design
sustainability
civil and structural
project management
CDM and H&S services

Sheltered accommodation explored as a separate entity.

The initial brief, taken from the feasibility study was to include 20 sheltered accommodation flats, previously referred to as HAPPI flats. The private accommodation was to be its own separate entity to the main care home.

Arrangement and orientation was explored through these sketches. It was understood that the sheltered housing, if deemed a separate entity would cover a large percentage of the site. This constraint would force the rest of the home to increase in height if squeezed into the leftover site area.

As stage 02 progressed It was agreed that the sheltered housing was not required to be physically separated from the main home but could form part of the overall volume for efficiency.



Sheltered Accommodation layout options

The overall massing layout of the care home was developed in parallel with the design of the individual area building blocks. Three early proposals were discussed with the client to gather feedback and develop a holistic concept.

All proposals incorporate some key design principals.

- The layout should make full use of the land available to reduce the number of floors whilst maximising outdoor landscaped areas.
- The proposal should create a circular pattern of movement to reduce dead end corridors to promote and control movement.
- Each households should focus around dining and lounge spaces.
- Each household should be laid out maximise natural surveillance by nurses.
- Landscaping should be internal to prevent members of the public entering whilst retaining the feeling of ‘openness’ for residents to wonder.
- Publicly accessible spaces should sit at the front of the site.
- Overall height should be kept at the front of the site and retain the street frontage.

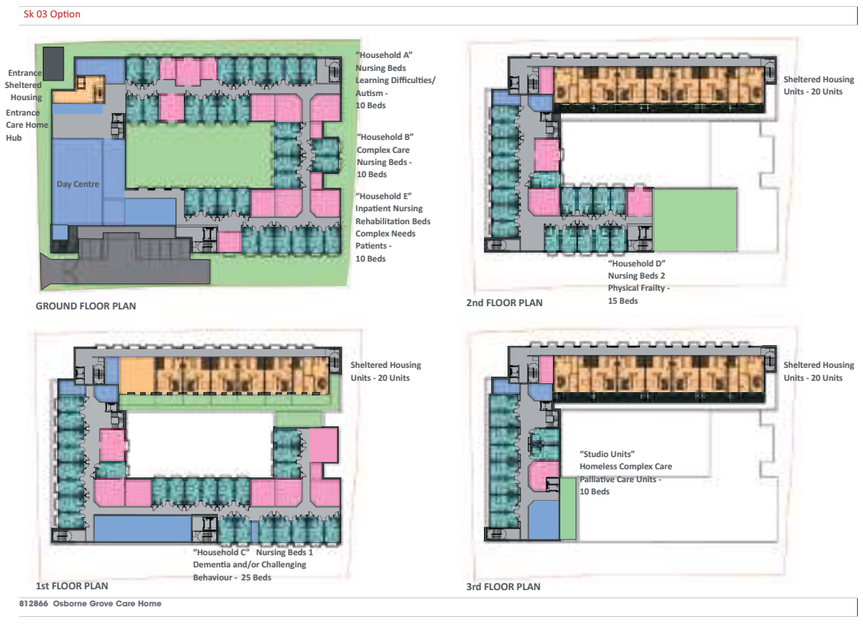
The three sketches explore these principals and have formed the development of the proposal.



Layout Development 01



Layout Development 02



Layout Development 03

The sheltered housing definition and integration with the care home has been an evolving element to the overall proposal. Their relationship to the home has changed through stage 2 resulting in a re-design of the care home to accommodate.

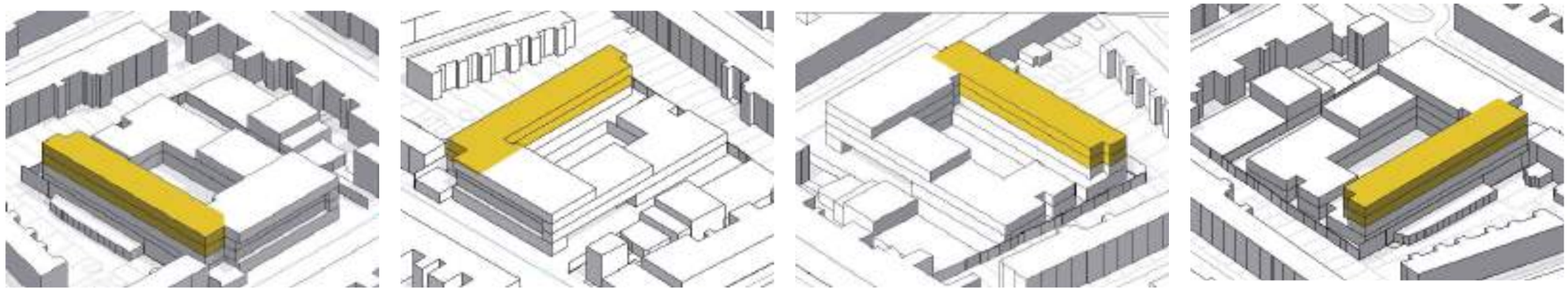
The feasibility study carried out by prior to IW involvement proposed 20 ‘HAPPI’ flats, now known as the sheltered accommodation, as a separate building to the main care home. Early in stage 02 the sheltered accommodation was placed as part of the care home volume for efficiency but with its own access. The sheltered accommodation units were set out to act independently as they did not require the same level of care as the other households as residents were can be more self-reliant.

During May 2021 Haringey changed the user group requirements for the sheltered accommodation and instead of being self sufficient, independent living, the users would be classed as semi-independent residents of whom could transition into members of the main care home if their health deteriorated to the point that they needed full time care. The 20 sheltered accommodation units would act as a ‘step-up/ step-down’ style household, slightly integrated into the home. The units would still have their own floors on the 3rd and 4th level and would share entrances with the rest of the home.

The plans show the proposal after the first change of brief. These plans have further been developed subject to additional re-design. For the final Architects drawings refer to appendix.



Feasibility proposal - Sheltered accommodtion separate to care home.



Sheltered accommodtion as part of main care home as its own entity with private access. Prior to change of brief 1



3rd Floor - Sheltered Accommodation to reflect change in brief



4th Floor - Sheltered Accommodation to reflect change in brief

Sheltered accommodtion with shared access at 3rd & 4th floors after change of brief 1.

7.0 - Proposed Design Concept

architecture
building services
planning
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sustainability
civil and structural
project management
CDM and H&S services

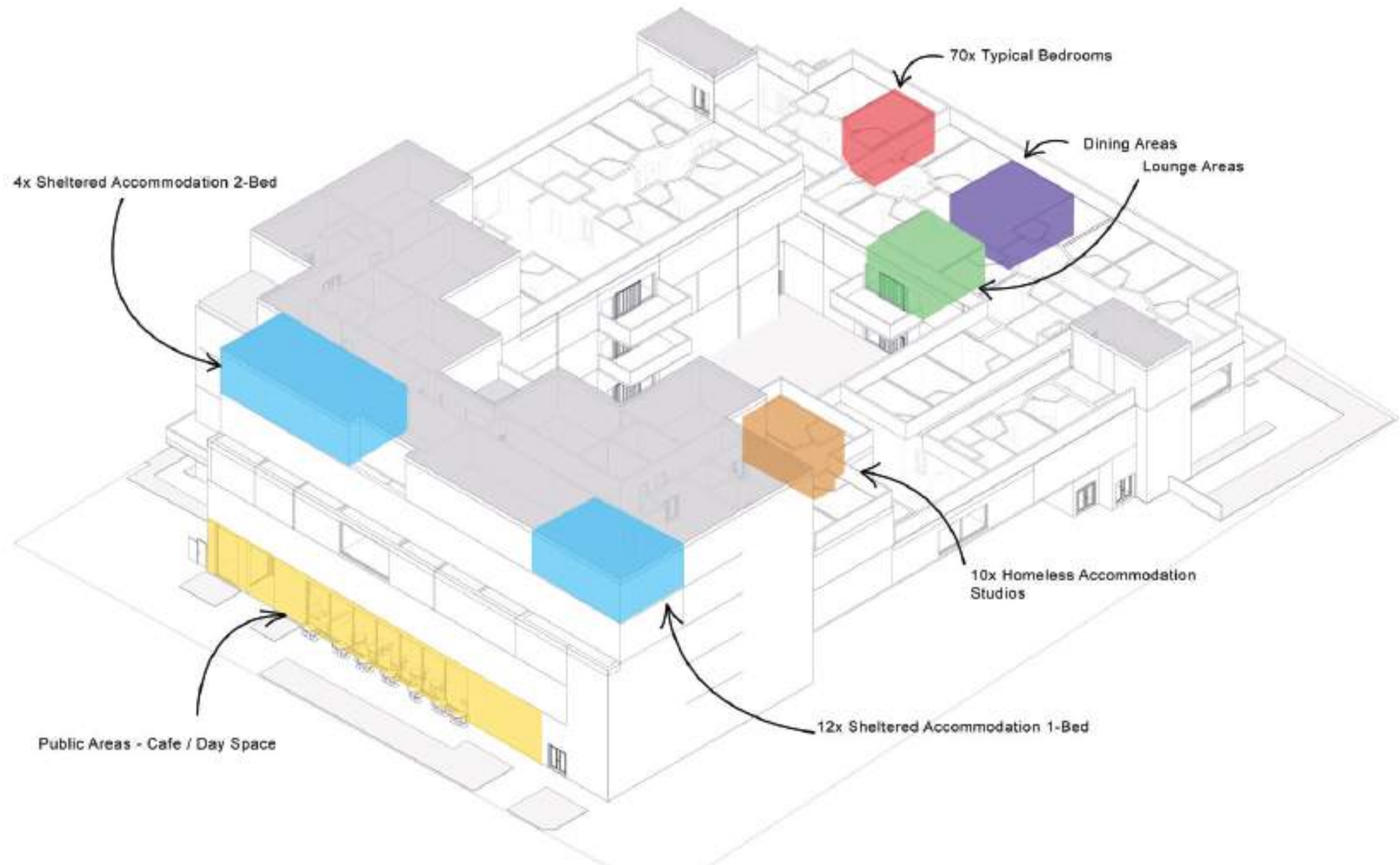
Ingleton Wood have taken an elemental approach to design, progressing from the agreed schedule of accommodation to volumes and specific room typologies. The care home includes a number of repetitive room types and area requirements therefore focusing on these room types will inform the overall building composition. Repetitive room types create familiarity throughout the home, lends itself to a structural grid and allows consistency in furniture. Room types have included;

- Bedrooms / Studio Flats
- Sheltered Accommodation
- Lounge and Dining Areas
- Support Spaces
- Circulation

As Ingleton Wood are a multi-disciplinary consultancy, we work closely with interior designers to support projects on a more intimate level. The Architecture and interior design team at Ingleton Wood have worked closely with the various user groups, councillors, and stakeholders to produce a concept design as per the RIBA Stage 2 'Plan of Work'. The feasibility report did not cover a great amount of detail on the interior design brief. However, the previous stakeholder presentations and feedback reports that were carried out provided a good insight into the design requirements.

The interior design team has a wealth of previous healthcare experience and regularly refers to Health Building Notes (HBN), guidance on dementia-friendly design by Sterling University as well as many other healthcare reading materials whilst instilling our creative ideas and technical support to create the best outcome possible.

Haringey's aspirations for this project have been for the involvement for interior design support from Ingleton Woods' initial appointment. It was fundamental to establish the types of spaces needed from a resident, visitor, member of the public and staff point of view. Additionally, a dementia-friendly space has been one of the core principles of the design in which we regularly refer to HBN 08-02 'Dementia-friendly Health and Social Care Environments' document. Ingleton Wood understand there are further considerations to be developed for requirements in specific households. Generally, the specification will be dementia-friendly as well as the standard level of healthcare grade finishes of which will be further developed at stage 03.



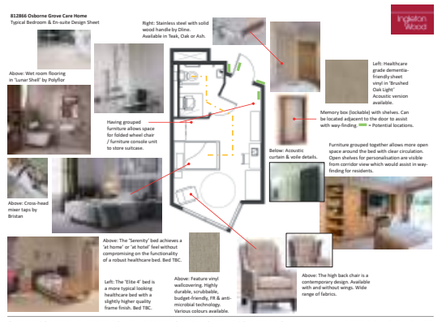
Elemental design approach - Building blocks forming Osborne Grove Care Home

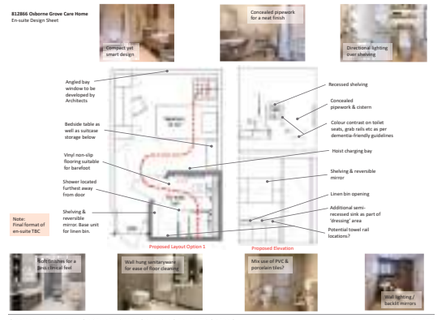
It was crucial to indicate specific design requirements that are above and beyond the base healthcare design standards for Osborne Grove Care Home. Aspirations were established through discussions with Haringey to understand lessons learnt from their previous care home experiences. Large focus was placed on the internal key areas and rooms to create a purposeful scheme consisting of space planning and general FF&E.

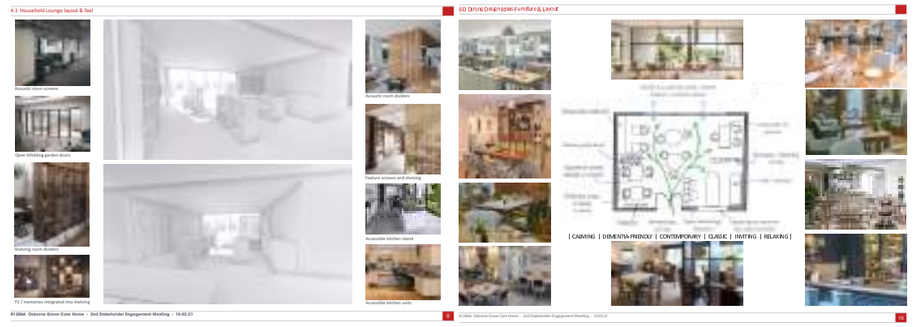
Ingleton Wood have had several stakeholder engagement meetings, progress meetings and mini design workshops to present interior design proposals. We have also welcomed client feedback in which we have incorporated into a ‘Feedback Meeting Report Tracker’ to produce a concise proposal for each of the key areas and rooms, referenced towards the end of this report. Although we have produced a comprehensive scheme at RIBA Stage 2 design, it is not final and further revisions can be considered at RIBA Stage 3 and beyond.

Design sheets

As part of the Interior design consultant services provided, Ingleton Wood have produced and included design sheets. The design sheets have been presented to and agreed with the client as part of the weekly meetings, discussing each of the key areas and rooms which had evolved from initial discussion.

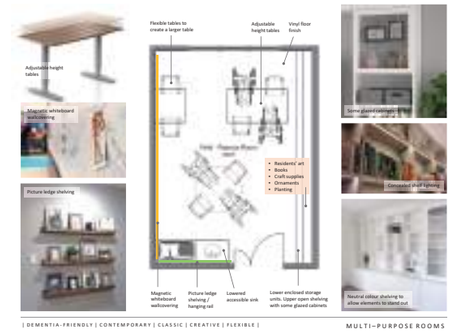


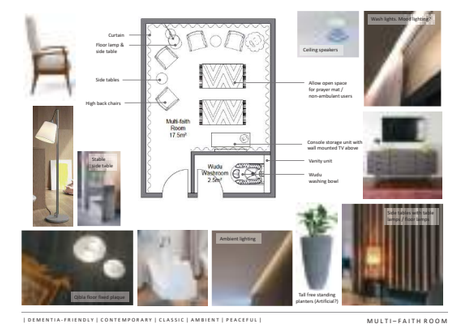
























7.1.1 - Typical Bedroom Design

The bedrooms create the fundamental building blocks to the care home. Across the 6 households there are 70 bedrooms, 10 slightly larger bedroom (studio flats) and 16 self contained sheltered accommodation flats.

The typical bedroom layout was the first building block to be designed as this was the most repetitive element throughout the home. The sketches here show the initial layouts used to inform discussion and create an optimum bedroom layout. Bedrooms within the care home will require further development to tailor the needs of individual households. The care home households are as follows;

- Group A: Nursing Beds, Learning Disabilities/Autism
- Group B: Complex Care Nursing Needs
- Group C: Nursing Beds 1, Dementia and/or Challenging Behaviour
- Group D: Nursing Beds 2, Physical Frailty
- Group E: Inpatient Nursing Rehabilitation Beds

Design criteria for typical bedroom layouts

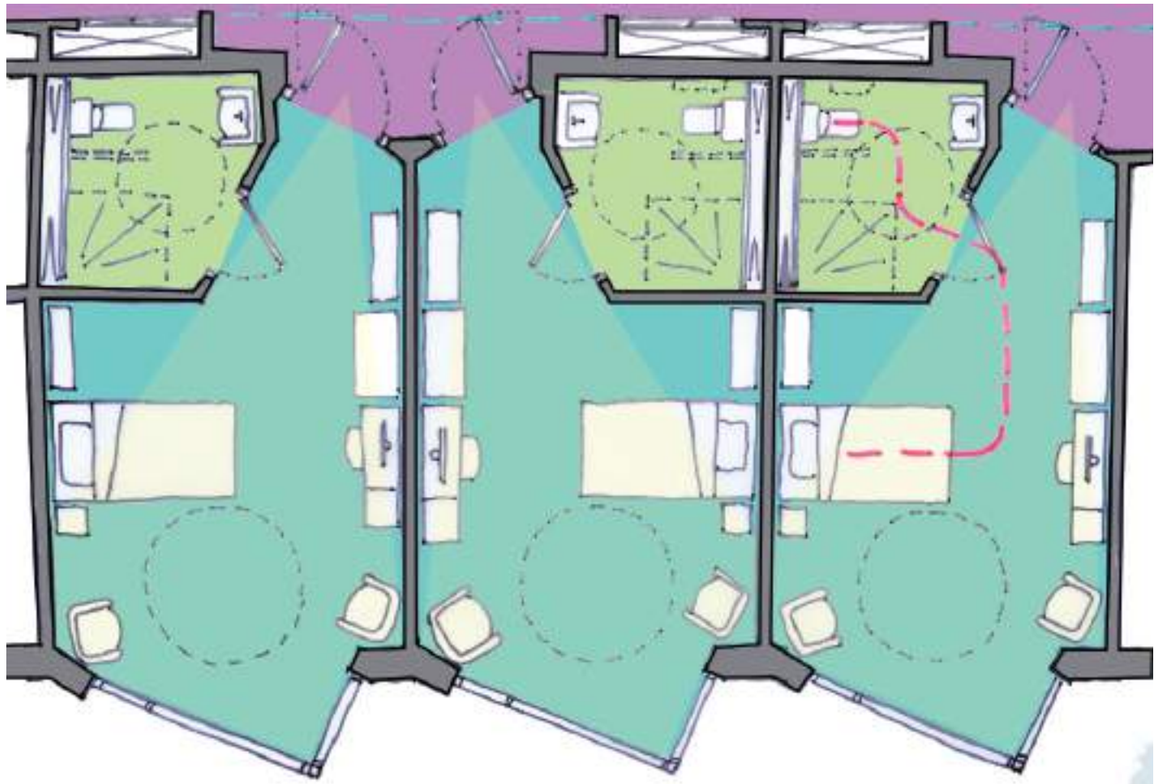
- Line of sight between staff and residents from the corridor whilst retaining a level of privacy by chamfering the wall into the en-suite
- A tall, angled bay window was preferred to maximise views out and encourages looking out at a certain direction particularly if front facing views was limited.
- The angled bay creates an opportunity for a breakout area that is away from the bed.
- A built-in furniture solution provides clear circulation space around the bed.
- Blackout curtains with the additional option of voile curtains
- Corridor facing memory box adjacent to door to assist with wayfinding and identity.
- En-suite to have wet room appropriate finishes.
- Position of items to be the same or similar throughout for ease of wayfinding for staff.
- Sanitaryware and ironmongery to be dementia-friendly whilst easy to clean.
- Mirrors to be dementia-friendly i.e. option for a cover or reversible mirror.
- Doc M Shower with fold-out seat & WC required.
- Colour contrasting toilet seat & grab rails as per dementia-friendly guidelines.



Typical bedroom layout exploration sketches



Optimum bedroom layout sketch



Optimum bedroom layout sketch



Optimum bedroom layout sketch

812866 Osborne Grove Care Home
Typical Bedroom & En-suite Design Sheet



Above: Wet room flooring in 'Lunar Shell' by Polyflor

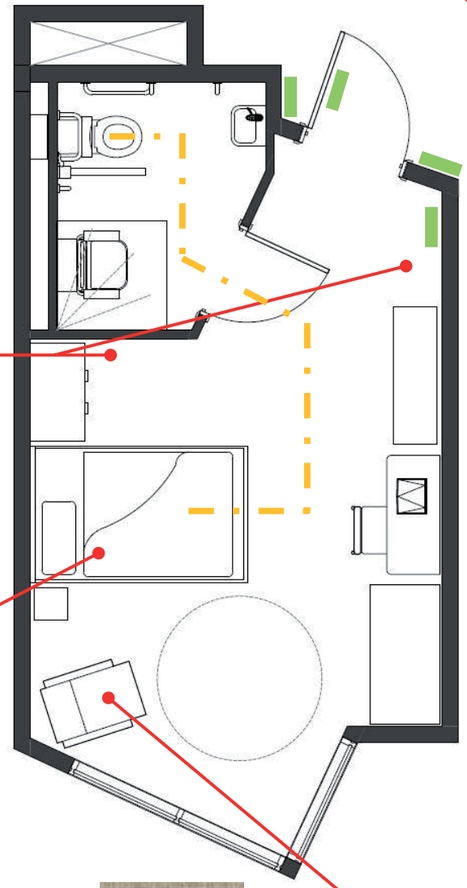




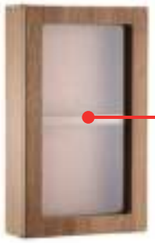
Having grouped furniture allows space for folded wheel chair / furniture console unit to store suitcase.

Right: Stainless steel with solid wood handle by Dline. Available in Teak, Oak or Ash.









Below: Acoustic curtain & voile details.





Left: Healthcare grade dementia-friendly sheet vinyl in 'Brushed Oak Light' Acoustic version available.

Memory box (lockable) with shelves. Can be located adjacent to the door to assist with way-finding. = Potential locations.

Furniture grouped together allows more open space around the bed with clear circulation. Open shelves for personalisation are visible from corridor view which would assist in way-finding for residents.





Above: Cross-head mixer taps by Bristan





Above: The 'Serenity' bed achieves a 'at home' or 'at hotel' feel without compromising on the functionality of a robust healthcare bed. Bed TBC.

Left: The 'Elite 4' bed is a more typical looking healthcare bed with a slightly higher quality frame finish. Bed TBC.



Above: Feature vinyl wallcovering. Highly durable, scrubbable, budget-friendly, FR & anti-microbial technology. Various colours available.



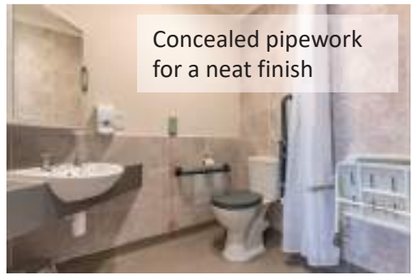


Above: The high back chair is a contemporary design. Available with and without wings. Wide range of fabrics.

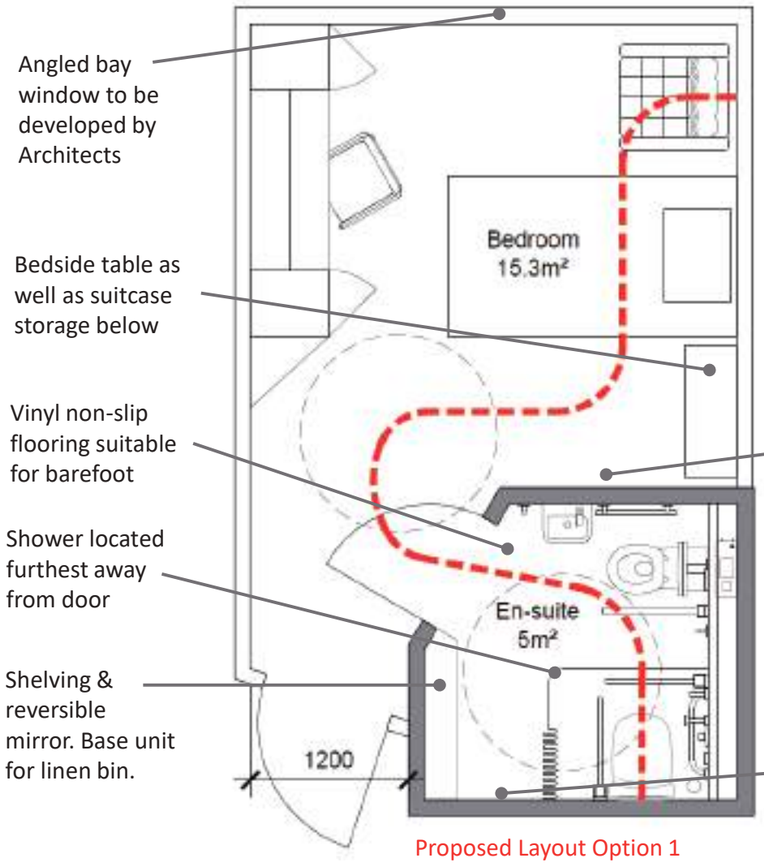
Typical Bedroom Design Sheet

812866 Osborne Grove Care Home
En-suite Design Sheet

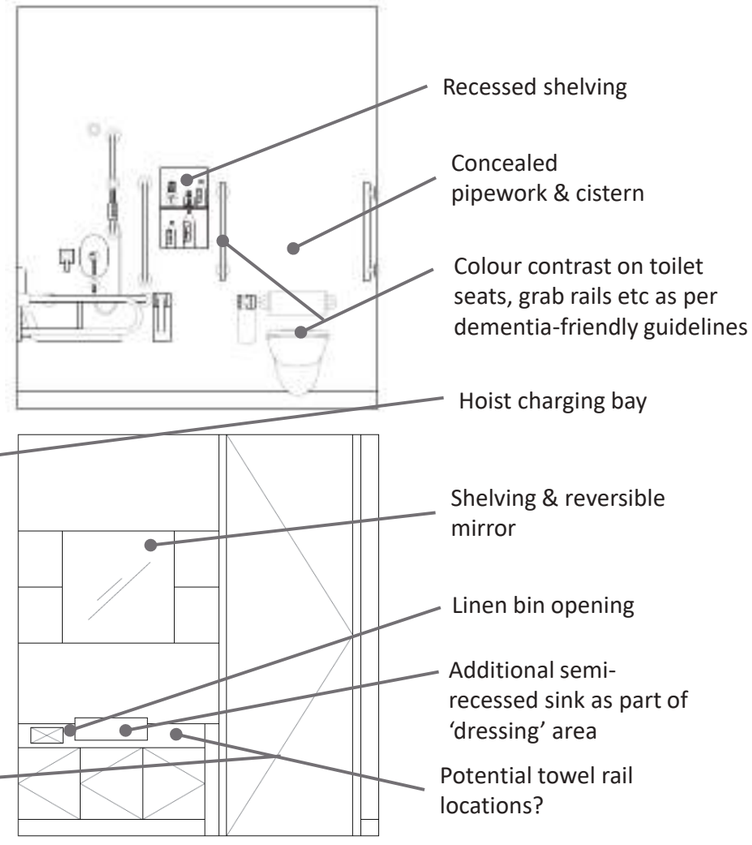








Proposed Layout Option 1



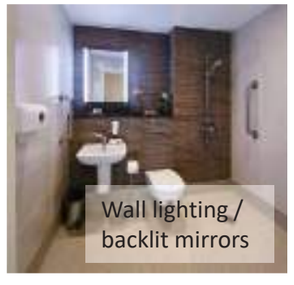
Proposed Elevation

Note:
Final format of en-suite TBC









Typical En-suite Design Sheet



Dropped ceiling with perimeter lighting



Storage unit



White / offwhite painted walls



PVC Skirting contrasting LRV





Overhead ceiling Hoist



Feature wall. Colour & type TBC



Profile bed, including rails



Durable acoustic vinyl Flooring

All colours, finishes and suppliers are to be confirmed. Visual representation only.

Optimum bedroom layout developed



Dropped ceiling with perimeter lighting



Storage unit



White / offwhite painted walls



PVC Skirting contrasting LRV





Overhead ceiling Hoist



Feature wall. Colour & type TBC



Profiling bed, including rails



Durable acoustic vinyl Flooring

All colours, finishes and suppliers are to be confirmed. Visual representation only.

Optimum bedroom layout developed

Corridors are the continuous thread that will tie the home together and should be the forefront of consideration in a functioning care home. Design standards and experience have been applied to the corridor and movement spaces. This criteria can then be emphasises through finishes and materials to create the feeling of a 'home' but with the functions of safe and intelligent care.

Wheelchair and Mobile Bed Design

HBN 00-04 has been used to influence the circulation and movement of the home. The HBN gives guidance towards the design for wheelchair movement and use that have influenced OGCH.

The overall dimension of an occupied 8L wheelchair (Approximately 1500mm x 800mm) is similar to the space requirements of an electrically propelled wheelchair. However, some electric scooters are larger and some wheelchairs have different proportions. OGCH is designed to allow for oversized wheelchairs with additional tolerance beyond the standard size as the client group have stated larger wheelchairs may be used.

Space recommendations taken from HBN 00-04 take account of the inexperience of some users in manoeuvring wheelchairs or using walking aids, but do not take account of the use of specialist large wheelchairs or mobility scooters. Therefore further consideration and judgement must be made on the areas where larger wheelchairs may be used.

Space recommendations for bed movement allow for the circulation of an extended standard hospital bed, with or without orthopaedic/other attachments, that is 2370 mm × 1000–1050 mm; and a bariatric bed, for patients weighing up to 450 kg (1000 lbs), that is 2330 mm × 1080 mm. It must be noted that Larger/wider bariatric bed usage is not covered in HBN 00-04 and larger bariatric beds are not expected to be common use.

Corridors

The dimensions for circulation widths noted and illustrated in HBN 00-04 should be unobstructed. Any projections within circulation space should be avoided, for example by recessing fire extinguishers.

Where doors open onto walls that include handrails, the dimensions provided assume that a door handle fixed at 1000mm from the floor will pass over a handrail fixed at 900mm from the floor. Door handles may be replaced by automatic door opening devices.

Corridors should be wide enough to allow two users to pass each other and negotiate doorways.

Where the requirements for means of escape are greater than that for circulation, for example the corridor is intended as a hospital street the requirements for means of escape should become the minimum requirements for the space.

Where passing spaces are provided, the distance between them should be determined by the frequency of activity along the corridor.

Potential waiting times at passing spaces (measured in seconds or number of paces) should be kept to a minimum. The average person walks at approximately 1000 mm per second, therefore a distance of 10–20 m between passing spaces is recommended.

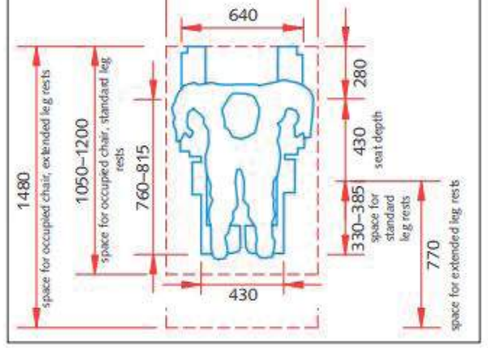
The recommended minimum clear corridor width for general traffic, where there is a low volume of traffic and passing spaces are provided, should be 1500mm. This width allows for varying users to pass in between the defined passing spaces and for the approximate positioning of a 1000 mm door across the corridor.

Where there is a higher volume of traffic, a constant clear corridor width of 1800–2100 mm will allow most users to pass comfortably. A clear width of 1800mm has been designed to at OGCH with corridors shown in the stage 2 proposal being 2.2m and up to 4.4m at passing places.

The recommended minimum clear corridor width for circulation of beds/trolleys is 2150 mm if passing spaces are provided.

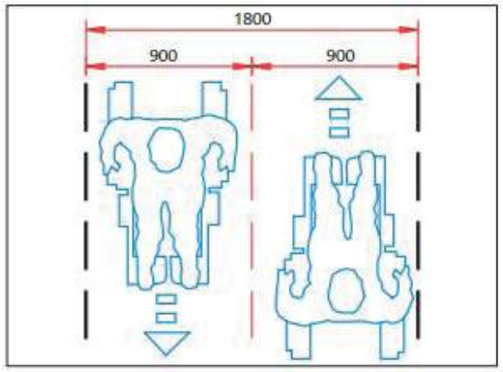
Where two beds need to pass regularly, the recommended minimum clear corridor width should be 2960mm. It assumed that the home will not regularly face two beds crossing therefore the corridor widths have been designed suitably to their use.

HBN 00-04 advises that consideration should be given to providing spaces where beds can be turned through 180 degrees particularly along long stretches of corridor and/or outside primary entrance doors or lifts. The recessed/angled entrances to rooms provides a larger turning circle suitable for these instances when necessary.

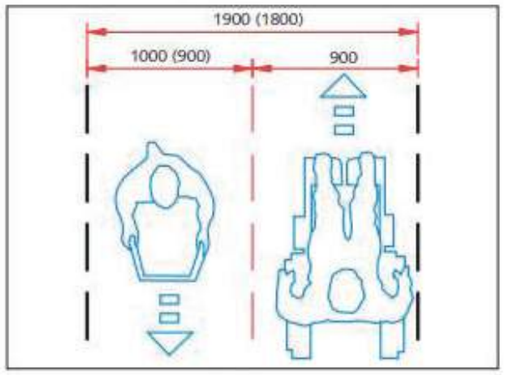


Dimensions of an occupied 8L Wheelchair

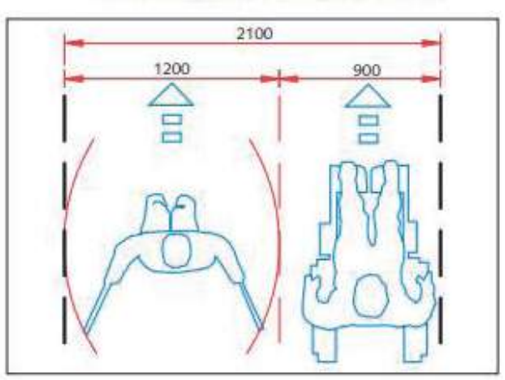
Figure 5 Space for two independent wheelchair users to pass



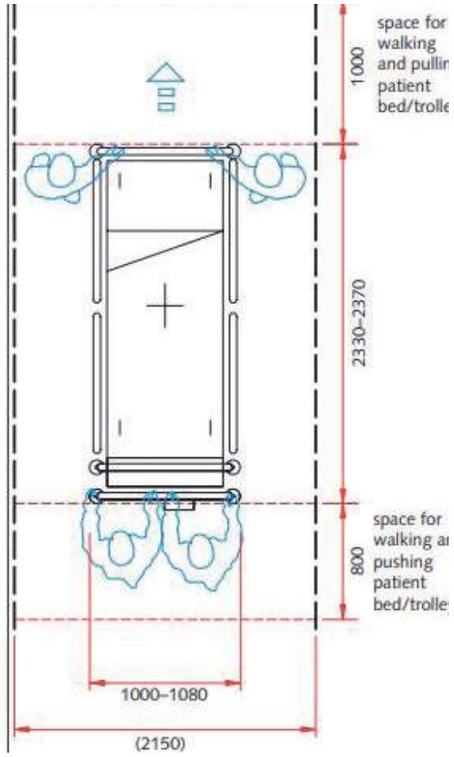
Space for two independent wheelchair users to pass

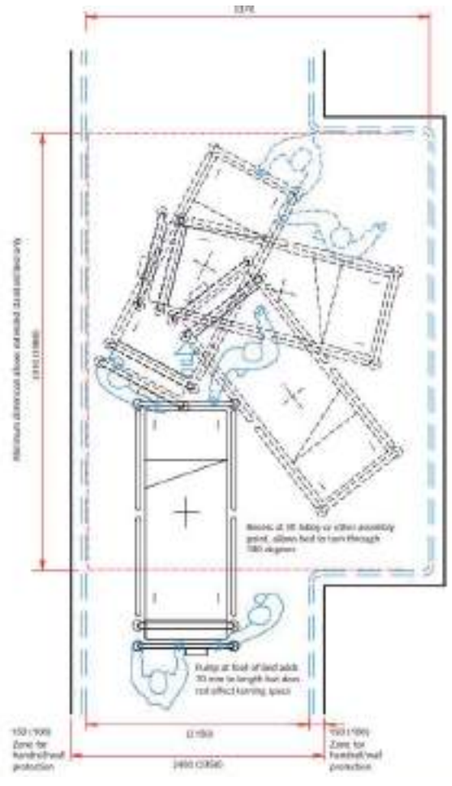


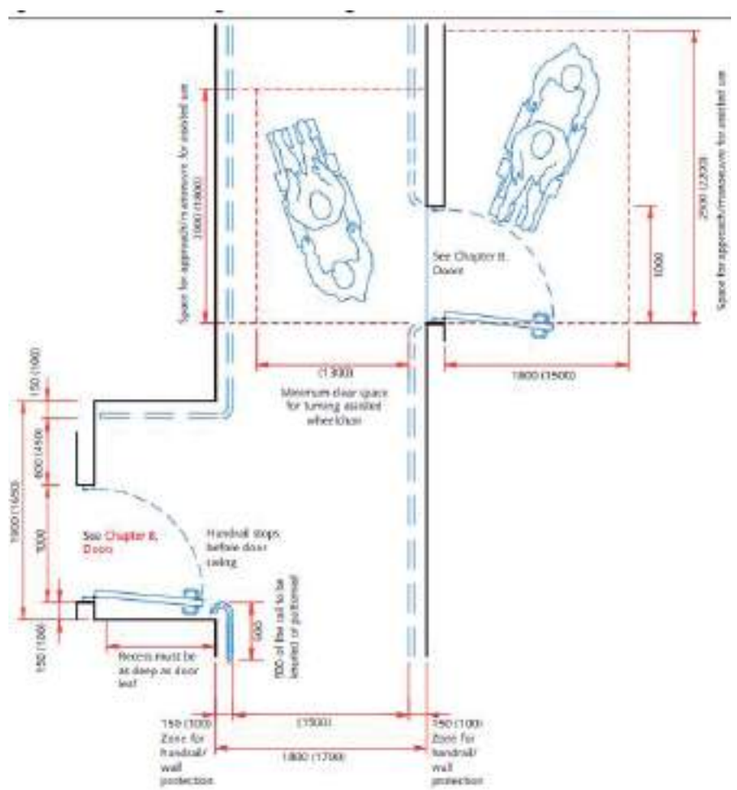
Space for independent wheelchair user and semi-ambulant person with walking frame to pass

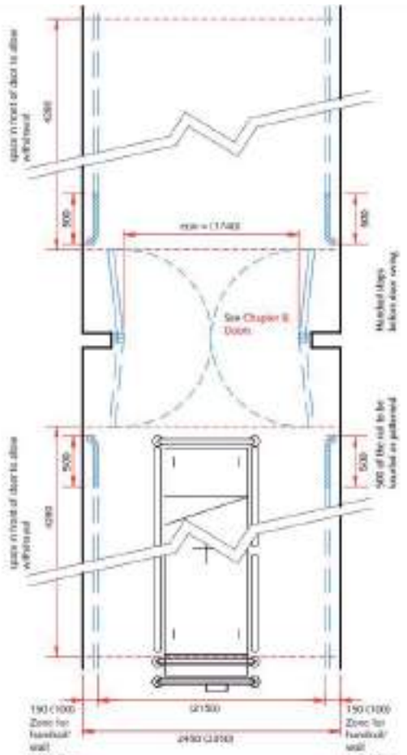


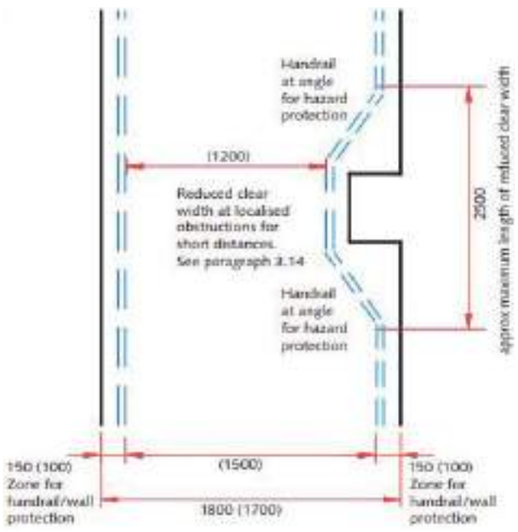
Space for wheelchair user and semi-ambulant user with crutches to pass


space for walking and pulli patient bed/trolle
1000
2330–2370
space for walking a pushing patient bed/trolle
800
1000–1080
(2150)




See Chapter B, Doors
Handrail stops before door ceiling
Recess must be as deep as door leaf
Minimum clear space for turning assisted wheelchair
See Chapter B, Doors
150 (100) Zone for handrail/ wall protection
1800 (1700)


See Chapter B, Doors
(2150)
150 (100) Zone for handrail/ wall protection


Handrail at angle for hazard protection
(1200)
Reduced clear width at localised obstructions for short distances. See paragraph 3.14
Handrail at angle for hazard protection
2500
approx maximum length of reduced clear width
150 (100) Zone for handrail/wall protection
(1500)
1800 (1700)
150 (100) Zone for handrail/wall protection

Handrails

Handrails are a continuous element repeated throughout the home and should be given dedicated consideration at an early stage. Handrails should be fitted in main communication routes and in corridors as required.

All corridors should have a clear width that allows for the fitting of handrails without reducing the required clear space for access. Where handrails and wall protectors are required, they may be combined or kept separate.

Shape and size

Handrails should be easy to grasp; the size and shape should allow a firm but comfortable grip with the whole hand.

Handrails that are too small are uncomfortable and provide an unsatisfactory grip, whereas handrails that are too large are difficult to grip for people with weak or arthritic hands.

A handrail that is round in cross-section with a diameter of 40–45 mm (differing from Approved Document M requirement of 32–50 mm) is recommended. Oval handrails with dimensions of 38 mm × 50 mm wide (that is, 1mm narrower than the 39 mm required by Approved Document M) are acceptable. In both cases, the longer dimension should be horizontal.

Handrails with a large square or rectangular cross section shall be avoided within the homes design.

Clearance

Handrails should allow enough space between the rail and the adjacent wall (or any other obstacle) for hands to pass without scraping knuckles and to aid those who want to use the rail as a support for the whole forearm.

A clearance of 60–75 mm (10 mm less than Approved Document M states) is recommended, as this allows the forearm to be rested on the rail without any danger of it getting trapped.

Recessed handrails are not recommended, as they cannot be leant on for support.

Height

The top of the handrail should be:

- 900–1000 mm above the surface of a ramp, ramp landing or pitch line of a flight of steps or along a corridor;
- 900–1100 mm from the surface of a stair landing.

A second lower rail at a height of 600 mm should be provided on stairs and landings where there are likely to be a significant number of semi ambulant users. Those households with particular mobility issues may benefit from this additional rail.

Withstand able force

Handrails should be rigid, securely fixed and able to support the weight of a person leaning on them. They should be sufficiently secure to support a person grasping them to prevent or arrest a fall:

- vertically, they should support 95% of people plus a margin of 50% (that is, 88 kg + 44 kg) = 132 kg;
- horizontally, they should support a force from an adult of 155 N + 50% = 233 N.

Provision on stairs, ramps and landings

Continuous handrails on stairways, ramps and landings help people to negotiate changes in direction. Vertical handrail risers or interruptions of handrails to accommodate newel posts and supports should be avoided.

Handrails should extend horizontally for 300 mm past each end of the change in level and, where they do not interrupt pedestrian routes, an extension of 450 mm is recommended. They should return to a wall or at least 100 mm down towards the floor, and should terminate in a way that reduces the risk of clothing being caught. Handrails on ramps may be provided on low walls but the handrail must not be located more than 50 mm back from the edge of the ramp.

Provision in corridors

Handrails should return into recessed doorways and openings, but otherwise be continuous to aid navigation.

Handrails in association with wall protection

Where handrails and wall protectors are provided:

- a minimum vertical clearance of 50 mm must be maintained between the handrail and wall protector
- where the wall protector protrudes in front of the handrail, the clear width of the corridor will be to the wall protector

Balustrades

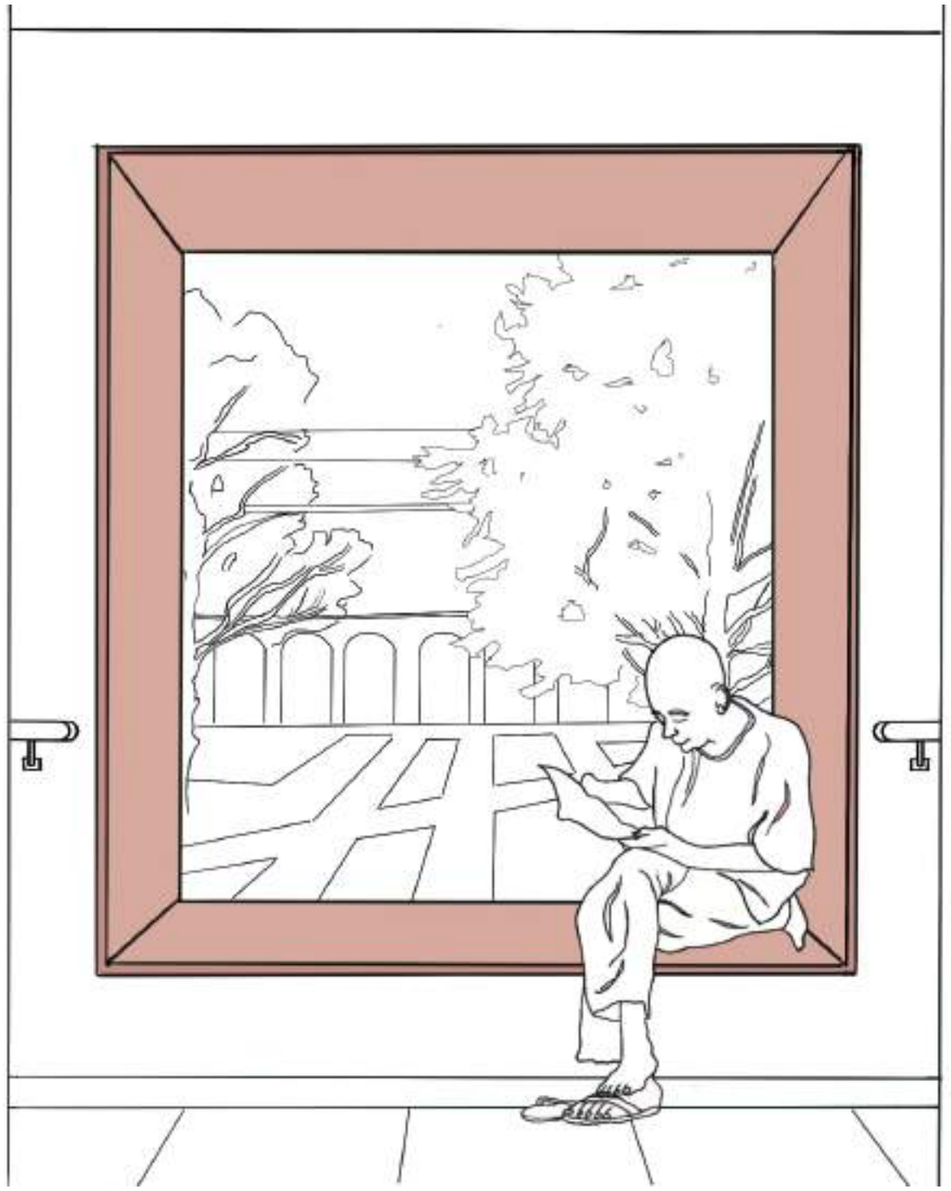
Balustrades should be provided around landings at a height of 1100 mm above the floor. The space between the balusters should be no wider than 100 mm. They should not provide toeholds for climbing.

Appearance/finishes

Handrails should be:

- easily visible, that is, contrast visually with the surface to which they are fixed;
- smooth and free of any abrasive elements;
- neither too cold nor too hot to the touch.

Handrails may have raised indicators built in to convey information such as floor level.



Corridor window seating sketch

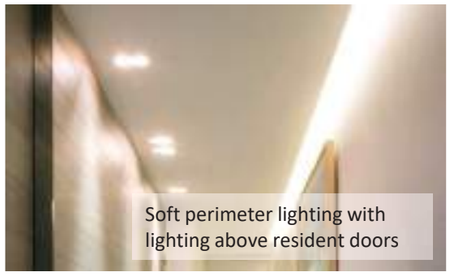
Corridors are a great opportunity to display meaningful wall art to encourage conversations and help people interact. The use of feature wallcovering, artwork and memory boxes can prompt memories, instigate conversations, and encourage movement for a happier and healthier resident. Creating a limited number of different finishes and wall aesthetics can reduce the repetitive appearance of a corridor. Corridors should also use colour and materials to their advantage in creating a sense of identity for households. These may also be used as an underlying method of wayfinding. Corridors shall be further developed in stage 03 spatial co-ordination however underlying design principals are listed below.

Summary of key points;

- Encourage continuous circulation around the building through a circular layout.
- Corridors should not create dead-ends but be continuous or create a destination point.
- Corridor colours, layout, materials and wayfinding design should assist those with memory loss, dementia and those who generally forget their orientation.
- Corridors should have their own identity for each household.
- Signage should be easily recognisable and readable, A balance between function and aesthetic should be considered.
- Lighting can be used to aid wayfinding but also support wellbeing where daylighting is limited.
- Nurse Stations should be centrally located per household for better line of sight along corridors. The positioning should promote natural surveillance.
- Widths of corridors should allow comfortable passing between large wheelchairs.
- Handrails should be of a comfortable, warm material at suitable heights along corridors.
- Rooms that are not to be accessed by residents should blend into the walls and not be obvious entrances to avoid confusion.
- Finishes should be easily maintained and cleaned using high grade products.
- Fake/False scenery should not be included as this creates confusion for residents with dementia.
- Stopping points or places for furniture should be integrated for those with trouble walking.
- Corridors should promote natural light and ventilation where possible.
- Corridors should avoid long runs.


Built-in memory box


Feature wallcovering to assist with wayfinding & memory


Soft perimeter lighting with lighting above resident doors


Dropped ceiling detail


Realistic ‘flower stall’


Nurses station as part of circulation





Upper wall in paint / vinyl wallcovering (or vice versa)

Lower wall in paint / vinyl wallcovering (or vice versa)

Coving with concealed lighting

Door frames in accent colour

Projecting signage

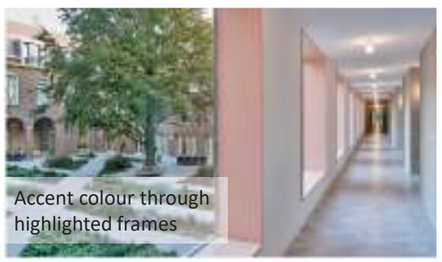
Memory boxes positioned adjacent to entrances

Corridor areas to have break out seating / rest points, decorative furniture, signage & feature walls to assist with wayfinding, memory & household personalisation

Acoustic vinyl flooring

Note: Exact colours TBC


Landscape can be confusing


Accent colour through highlighted frames

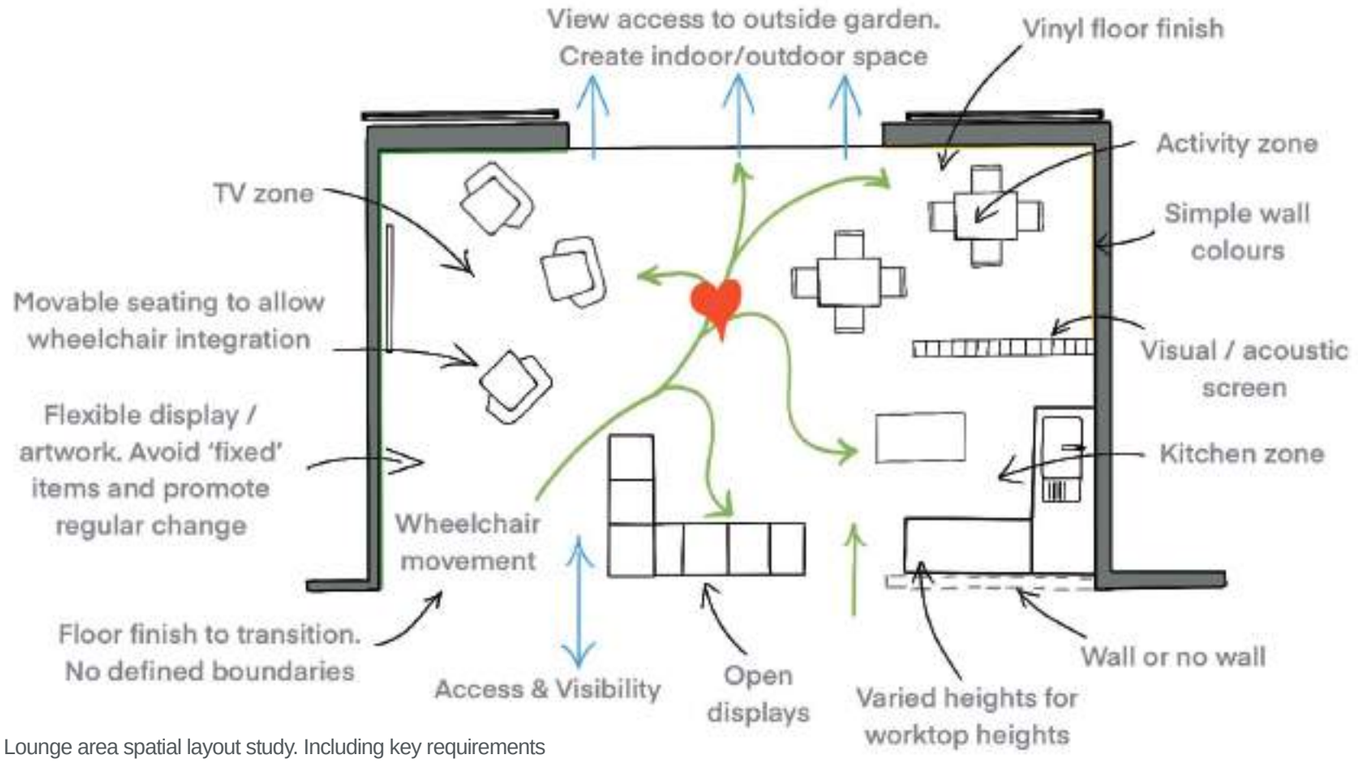



Feature / breakout area

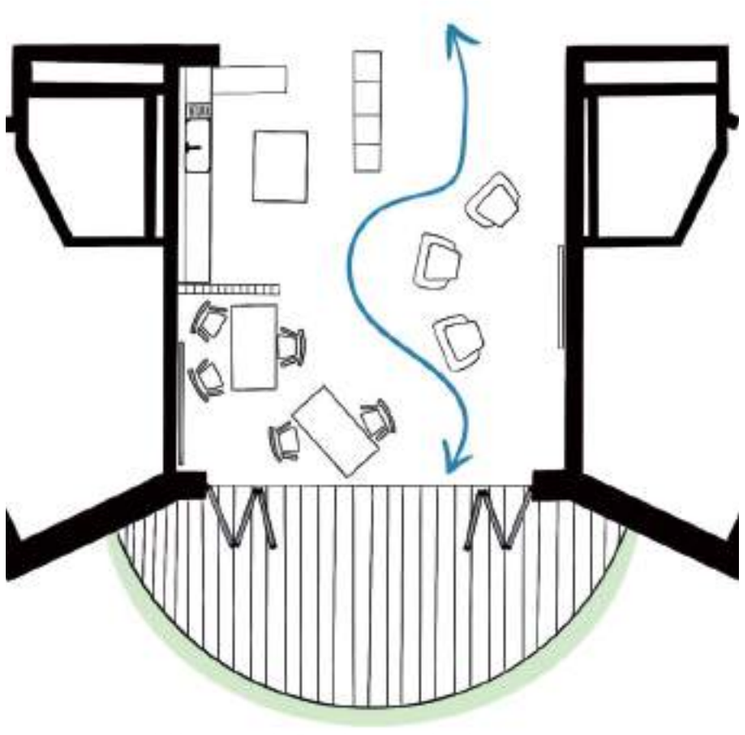
A concept design for a typical lounge area has been developed from sketches to an indicative plan layout. The strategy for the lounges should pick up on a list of design principals listed below. Each lounge shall be individually developed to cater for each households specific needs. However an element of familiarity is required in the layout and general lounge concept.

General design principals;

- Encourage views out of the lounge area externally and towards corridors where possible.
- Promote social interaction.
- Avoid making the TV the central feature by creating separate zones.
- Incorporate a range of zones to give residents flexibility in how they wish to use the space.
- Reduce seated furniture to allow for specialist resident chairs.
- Mix of lounge and dining height tables to cater for various activities.
- Create pockets of areas within in an open plan space by using display furniture & screening
- Creating interest for residents to avoid the feeling like they are in the same place every day.
- Encourage independent living with an accessible kitchen area.
- Incorporate memorabilia/artwork/books throughout communal areas to ignite memories and create a conversation starter.
- Consider the relationship between lounge and dining areas.
- Lounges must not be located at opposite ends of the household and should be centrally located to reduce walking distances.
- Lounges should be easily recognisable and visible ‘landmarks’ for residents that have difficulty orientating.
- Lounges should not feel cluttered or over stimulating.
- Lounges should be openly visible so that residents can see who or what is already occupying the lounge, allowing them to comfortably decide if they want to enter the room.
- Maximise day light/sunlight and natural ventilation.
- Layout designed to support comfortable wheelchair movement.
- Limit the noise transfer between social spaces and bedroom spaces.



Lounge area spatial layout study. Including key requirements



Lounge area spatial layout study. Development sketch



Acoustic room screens



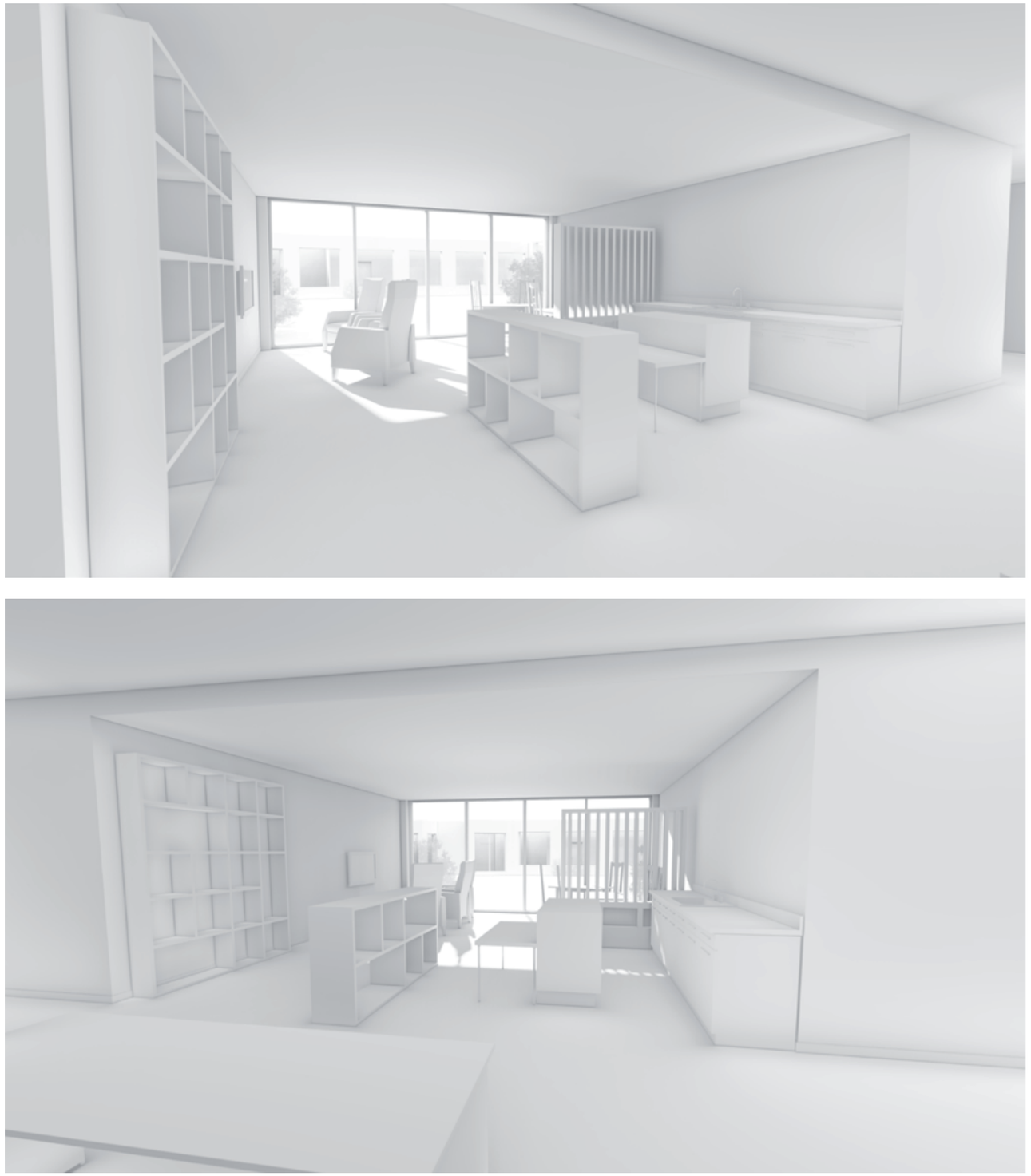
Open bifolding garden doors



Shelving room dividers



TV / memories integrated into shelving



Lounge area white model concept sketch



Acoustic room dividers



Feature screens and shelving



Accessible kitchen island



Accessible kitchen units

A concept for the dining rooms has been developed responding to the intended use and needs of residents. Sketch layouts have developed to form part of the overall plan. Each dining room shall be individually developed to cater for each households specific needs. However an element of familiarity is required in the layout much like the lounges. The dining room is smartly arranged in a restaurant style so that residents can choose to dine with family, friends or alone if they prefer. A list of general concept design principals are listed below.

General design principals;

- Encourage views out of the dining area externally and towards corridors where possible.
- Promote social interaction.
- Reduce seated furniture to allow for specialist resident chairs.
- Staff will make use of seats to assist with feeding, therefore an appropriate number of seating should be provided.
- Dining areas should include a mixture of group seating to provide the option of social or private space.
- Create pockets of areas within an open plan space by using planting/herbs on castors and screening.
- Bar/Servery area to store additional cutlery, plates, napkins, food trolleys etc…
- Incorporate memorabilia/artwork/books throughout communal spaces.
- Consider the relationship between lounge and dining areas.
- Dining areas must not be located at opposite ends of the household and should be centrally located to reduce walking distances.
- Dining areas should be easily recognisable and visible ‘landmarks’ for residents that have difficulty orientating.
- Dining areas should not feel cluttered or over stimulating.
- Dining area should be openly visible so that residents can see who or what is already occupying the space, allowing them to comfortably decide if they want to enter the room.
- Maximise day light/sunlight and natural ventilation.
- Layout designed to support comfortable wheelchair movement.
- Limit the noise transfer between social spaces and bedroom spaces.

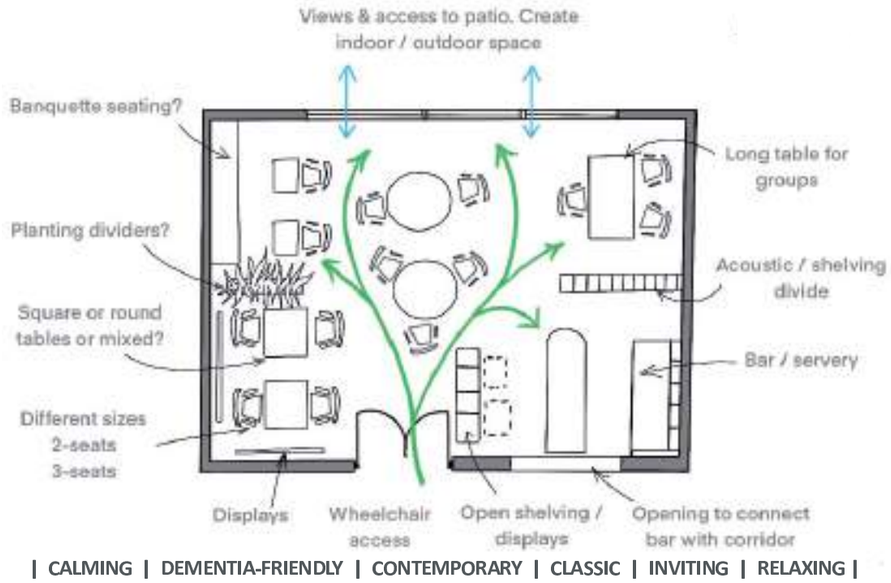












| CALMING | DEMENTIA-FRIENDLY | CONTEMPORARY | CLASSIC | INVITING | RELAXING |



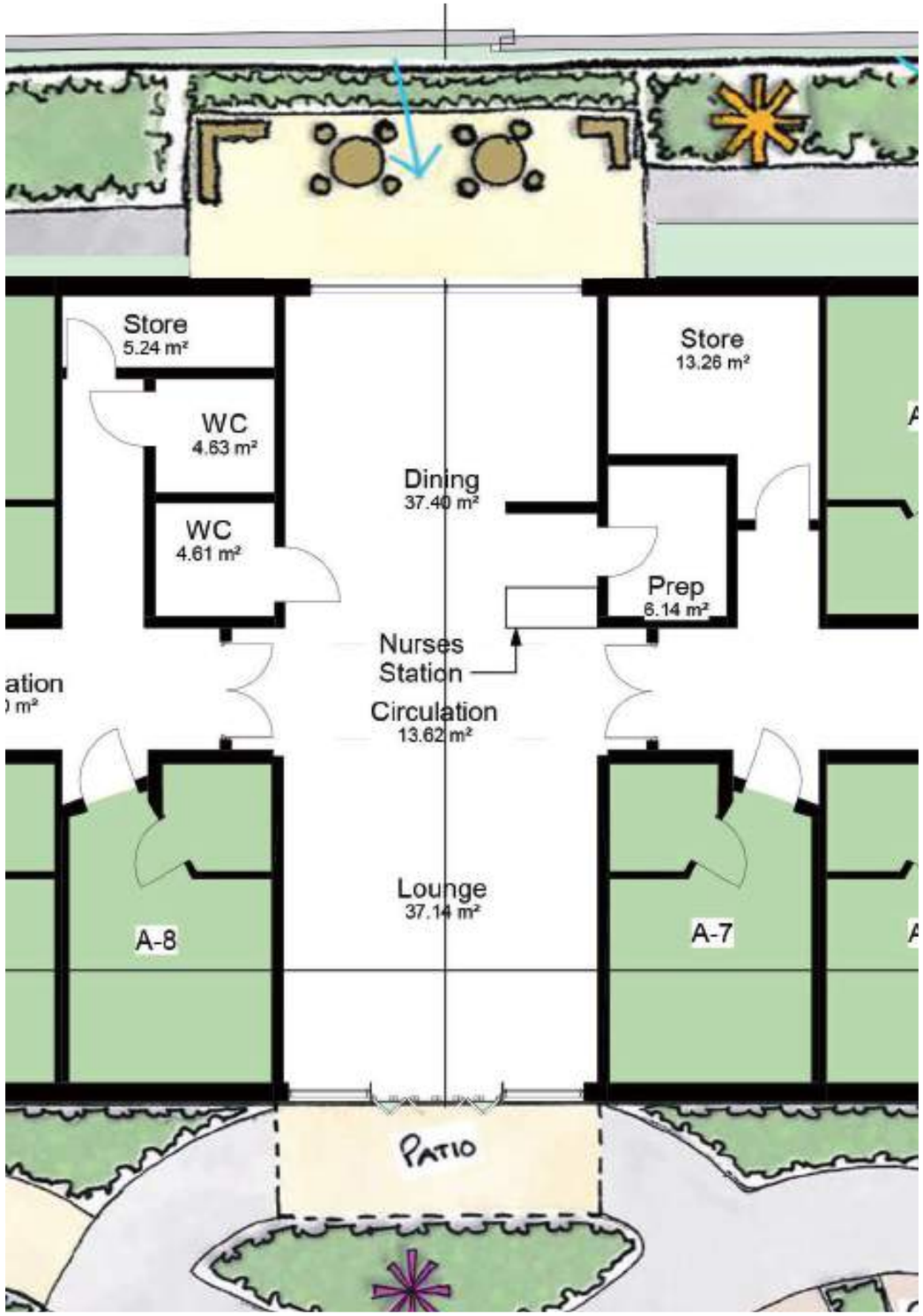








Dining area spatial layout study. Including key requirements



Dining and lounge area plan



Dining area white model concept sketch



Dining area white model concept sketch

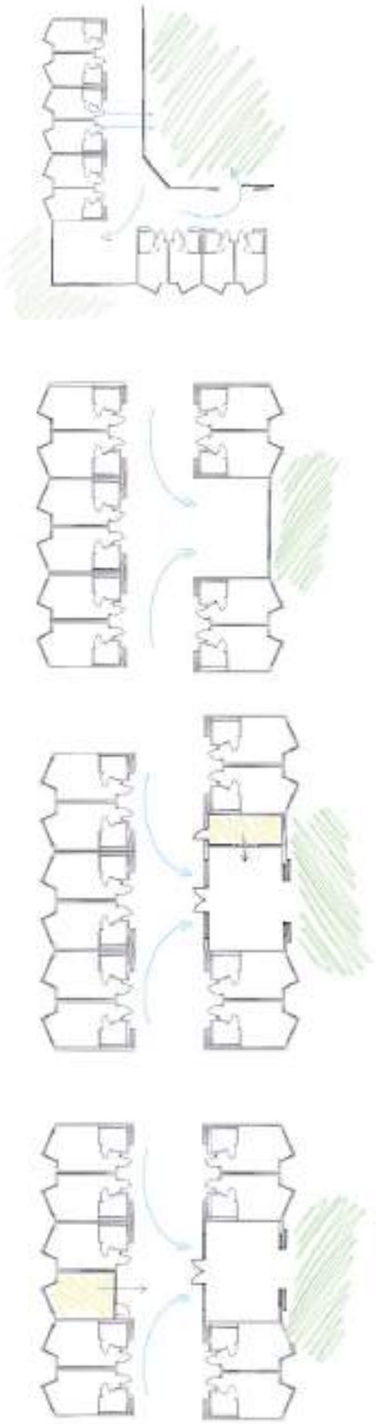
7.1.5 - Dining and Lounge Relationship

Each typical household requires a lounge and dining space. Some larger households will include more than one of these spaces to compensate and stop overcrowding. These rooms are another building block that retain a familiar design and layout across the home.

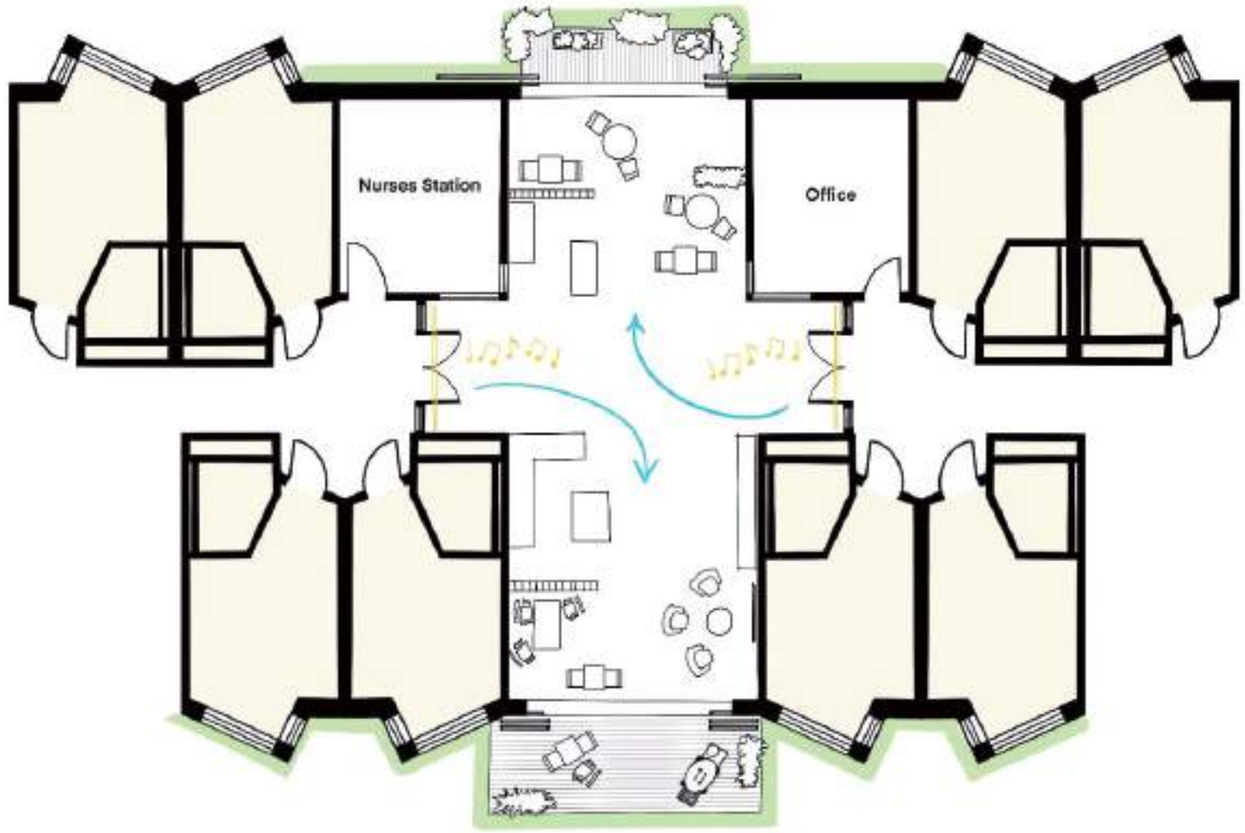
Workshops took place with the client to explore different relationships between the lounge, dining areas, nurses stations and the bedrooms of that household. The sketches show various layouts discussed with the preference being an open plan layout, with duel aspect, a dividing corridor and central to the household bedrooms.

It was agreed that dining and lounge facilities should be situated central to the households reducing long runs of corridor. This relationship creates a social hub for each household with an open plan arrangement maximising the space by incorporating the circulation into usable space.

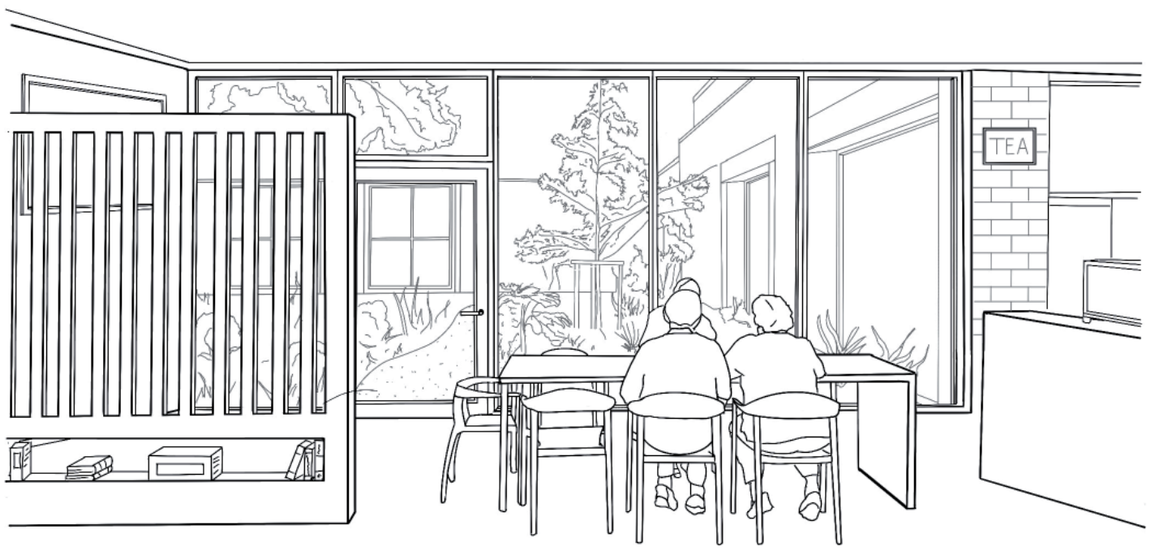
By situating lounge and dining spaces opposite one another, an opportunity for natural ventilation is created between these spaces.



Dining and lounge spatial relationships studies



Dining and lounge area combined spatial relationship

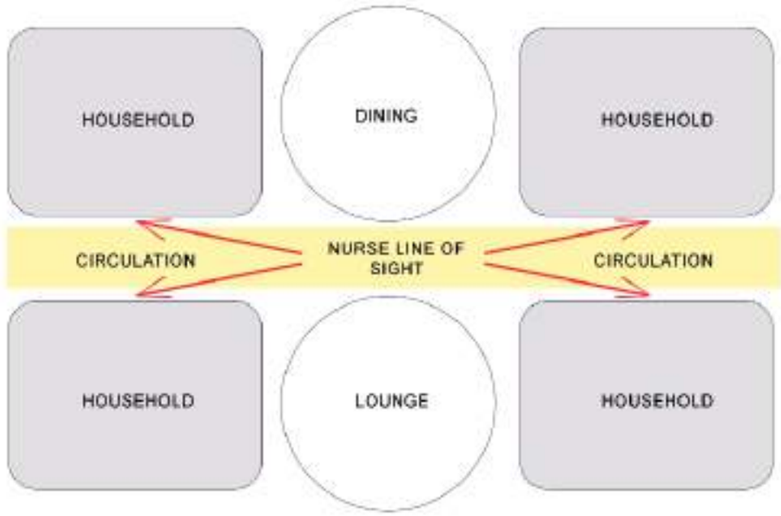


Sketch of lounge looking into courtyard

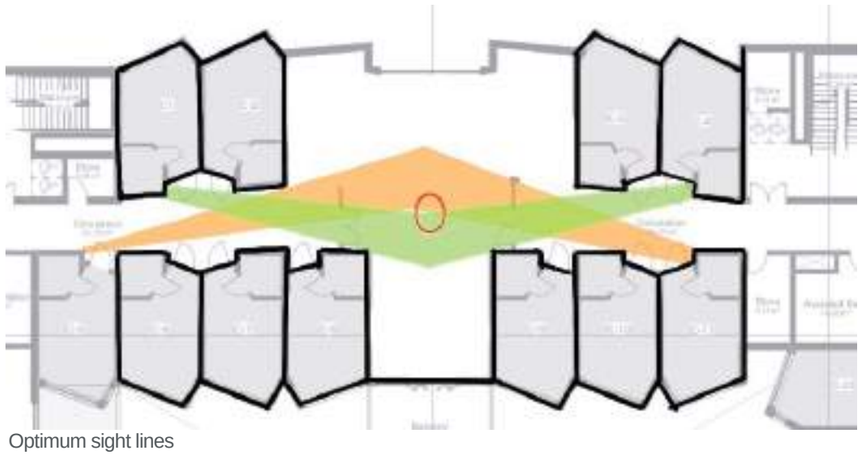
The nurses station has been an influencing element to the dining, lounge and overall household arrangement. Retaining a direct line of sight from the nurses station across the communal areas and to the doorway of every bedroom is essential in the safety and supervision of residents. The strategy understands that trips and falls are common in elderly residents and that not all can be prevented. Therefore, maximising the line of sight from a single nurse can reduce response time whilst limiting resource.

The dining and lounge areas have been identified to sit central to a household with circulation through the middle leading to each household. It is therefore apparent that a nurses station should sit central with the communal areas. As shown in the diagram.

The optimum position for a nurse would be right in the centre of the circulation, giving 360degree surveillance and an angled line of sit to the bedroom door swings. Given that having a desk in the middle of the circulation would detract from the open plan arrangement and make manoeuvring difficult for resident, the nurses station has been positioned off centre. This also allows direct access to a secure drugs store.



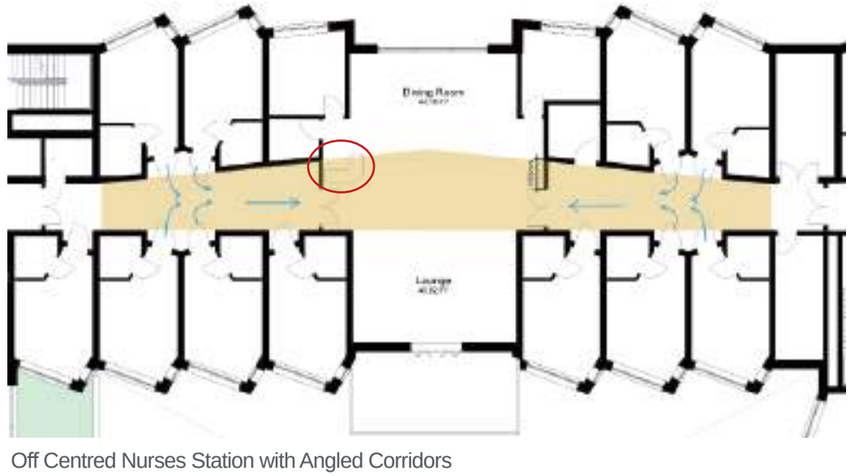
Nurse line of sigh diagram



Optimum sight lines

Angled corridors

The corridors leading to the dining and lounge areas have been purposely angled to increase the line of sight from a central nurses station but also as a wayfinding influence for those that struggle with direction and orientation. Residents that are unsure of which direction to take when leaving their room can easily identify the larger area of corridor as the direction with the lounge and dining rooms. This will also be supported by full height glazing and glazed double doors leading to the communal rooms. The angled corridors promotes resident independence whilst providing open, more comfortable corridor widths.



Off Centred Nurses Station with Angled Corridors

Destination Zones

The design of the corridors should not create ‘dead-ends’ of which will create confusion for some residents and also a harsh stop to the circulation. The proposal demonstrates a loop of circulation around the home whilst also introducing destination points on the corners of households. This concept is supported by Sterling University and aims to integrate destination zones or activity at these corners, rather than continuing the monotony of a long corridor.

Activity rooms have been placed on these corners to be are visible from each leading corridor and when residents leave their rooms. These destination points are to have glazed fronts to be easily identifiable as a social space and maximise ambient daylight that is able to bounce into the corridors from large windows.

Where activity rooms cannot be allowed for, therapy rooms are placed at the corners along with informal seating along the corridors.



Activity Rooms - Destination Zones

Balconies with large windows to maximise daylight and social activity.

7.1.8 - Day space, Cafe & Reception

The day space, cafe, reception and supporting publicly accessible facilities have all been placed at the front of the care home. It was identified that integrating the home with the community is of high priority. Creating a welcoming and inviting frontage provides an important image for the home.

Numerous workshops with stakeholders and the client group have taken place resulting in developed iterations of the front of home layout. The chosen design intends to best reflect the client and users aspirations.

The public spaces should promote a healthy environment through their open accessibility to residents and a feeling of escape from their households. These should be places where family can comfortably visit their relatives with the choice of sitting to have a coffee or playing some board games in the day space. These spaces should create their own identity within the home and reflect that of a modern but welcoming space.

Sketch studies have been carried out looking at the relationship between the day space and the cafe. It has been agreed that the day space is most beneficial facing inwards to the courtyard so that the cafe can be street facing. This creates privacy for the day space from the street. Placing the day space along the facade of the internal courtyard retains a regular shape for efficient use.

The cafe space has been positioned to create a glazed street frontage, perceived much like an urban coffee shop with window seating. This invites passers by into the home with a stretch of social energy along its facade.

In placing the cafe at the front and day space at the rear, users can move from one side of the home to the other.



Day space & Cafe relationship Sketch 01



Day space & Cafe relationship Sketch 02



Day space & Cafe relationship Sketch 03



Day space & Cafe relationship Sketch 04



Day space & Cafe relationship Sketch 05



Day space & Cafe relationship Sketch 06

Exploration sketches of the day space, cafe and entrance relationship:

Day Space

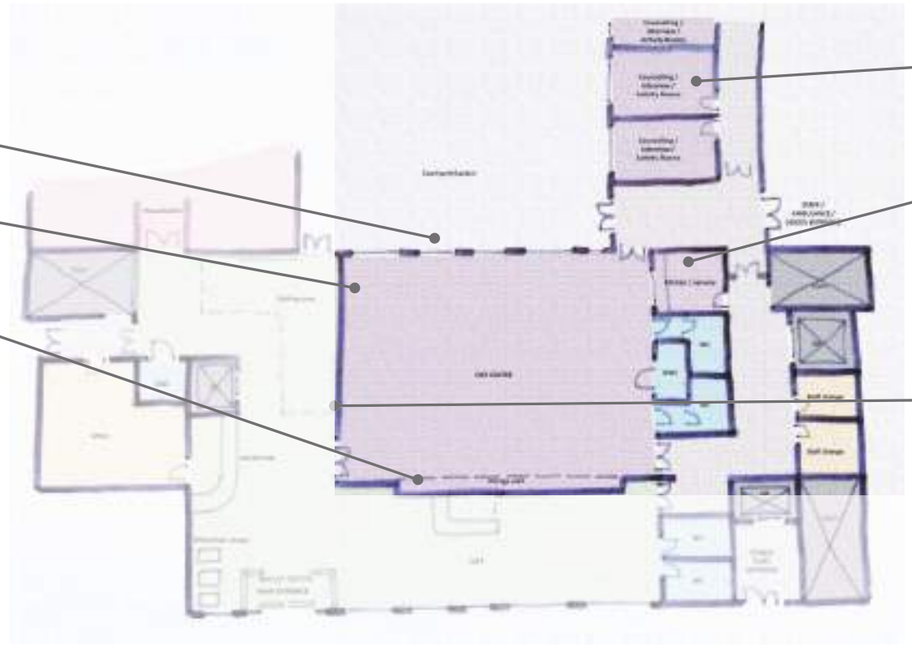
Day spaces provide residents with a chance to socialise in larger group settings through various activities and games. Although residents will have priority use, the day space will also be available for members of the public to run classes for the local community i.e. yoga class, parent and baby/toddler groups etc. A list of principal design criteria has been agreed to inform the day space.

Summary of key points;

- Counselling / Interview rooms should be located near to the day space, all at ground floor level for direct ease of access.
- Larger counselling / interview rooms should be flexible with their use also becoming a 'training room' style set-up.
- There should be a direct connection between the day space and courtyard with the aim of extending floor space / outdoor activities / access to the courtyard providing a better sense of general wellbeing.
- The day space is to be used by residents but also visitors & members of the public for community classes.
- As this is a large open plan volume, consideration is to be given towards acoustics. Various design interventions will be considered to reduce noise, reverberation whilst promoting ease of maintenance.
- Storage is essential for equipment and to support activities. Built-in wall storage with adjustable shelving is desirable to store various equipment for ball games, gardening, music etc… as well as reminiscence pieces. Storage should accommodate general and specialist chairs & tables.
- A kitchen/preparation room should be adjacent to the day space. This space should limit the transfer of smells, potentially as an enclosed space. The room should cater for family cooking activities. A desire is for a 'servery hatch' style opening.
- Methods of separation and dividing the open plan area should be explored to create zones and maximise the Day space use.





Connection between Day Space & Courtyard

High level acoustic elements i.e. felt or wool fibre or timber

Full height built-in wall cupboard storage with adjustable shelving.

Larger cupboards required to store flip-top tables. General storage required for seated ball games, music equipment, gardening equipment, reminiscence items, art equipment etc…

Note: Consider storage for stackable chairs as well as specialist chairs

Counselling / Interview / Activity Rooms adjacent to Day Space

Enclosed kitchen area required for family cooking, cooking activities etc…

Consider glazing / visibility between Café and Day Space to encourage a connection for people to use these spaces. Also, it's useful for people to see if the Day Space is vacant or not.






Reception Area

The first impression of the reception will be the welcome of the receptionist and the lively atmosphere of the public café as the waiting area becomes part of the café seating space. The reception desk is adjacent to the main entrance so it has views across the café, day space and household entrances from a security point of view. Concept design principals have been discussed and agreed with the stakeholders to outline a strategy for the reception areas. These principals are listed below.

Summary of key points;

- The reception desk should be located adjacent to the main entrance with a line of sight to the day space and café spaces.
- The reception desk should be aware and have visibility of all visitors, guests and public members entering the building.
- Access into the home and social spaces is controlled by the reception front desk. Access control is required for security purpose to the main households and into the courtyard. This may be through key fob access only.
- The reception area should link closely with a private staff office.
- The reception area should be open and inviting as an area of initial interest. This shall be the first impression of the care home.
- The design of the reception should be modern, clean, bright and inviting with the integration of greenery/ planting.
- The reception and entrance areas should limit non essential fixings with minimal wall clutter to avoid an overwhelming first impression.
- A waiting area should be provided and should be a connected part of the café seating.
- Branding / logos / slogans by the entrance are desired and shall contribute to the wayfinding and identity of the reception.
- If appropriate, a children's play area or family friendly environment should be included to create engagement with the public, visitors and younger family members. This could be a themed area.
- Staff are to enter the building via a private entrance with a staff changing immediately adjacent for infection prevention control measures.
- The reception should demonstrate clear wayfinding through its design and layout rather than wording or signs.





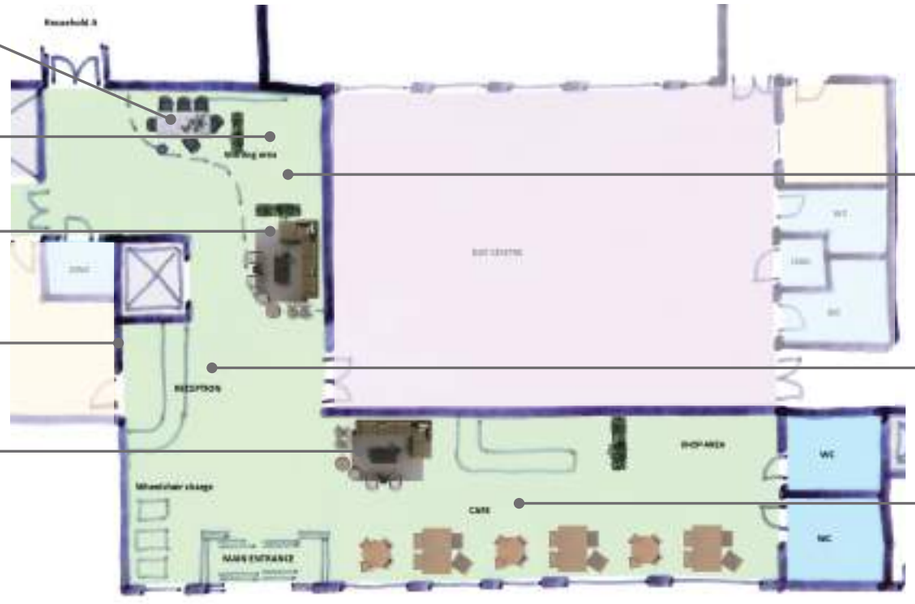

Provide a variety of seating from group tables / lounge style sofa & chairs / 2-person tables / breakout chairs

Children's play zone **OR** themed area such as a beach

Soft, lounge seating areas adjacent to Reception & lift

Feature wall
Branding? Screen?
Living Wall?

Incorporating the waiting area as part of the café seating



Note:
Exact type of seating TBC
Seating NTS

Pockets of open space to create intimate spaces for seating

Reception visible of visitors / public / staff / day centre users

Café space becomes part of visitor waiting area / refreshments






Cafe

The position of the cafe in relation to the day space has been a key element in the overall layout of the home. Design concept principals have been developed and agreed to form the stage 2 proposal. The cafe is an element open to the public aimed at integrating the home with the community. The cafe must be visible and inviting. It is this important requirement that has led to the cafe being stretched across the street frontage, informing other areas behind. Design principals have been listed;

Pockets of seating areas provide social integrations whilst those wanting a quieter atmosphere can find a more secluded space making it available to use by residents, staff, visitors and members of the public. Additionally, by considering a children's play area, the space can become more family-friendly for loved ones to visit.

Summary of key points;

- The café is to be located along the front façade of the building to reflect an urban cafe, inviting in the public.
- As the cafe will be used by the public and residents, a variety of zones, and interactions should be created to support those with different levels of social anxiety.
- The café is to have a range of seating from lounge to dining height furniture.
- The reception waiting area should be an integrated part of the café seating, yet understood as a separate area.
- Space can be used by residents, visitors, staff and public.
- The cafe should be a fully equipped commercial café, including coffee machines, cold and dry food stores and a display counter for fresh food etc...
- Cleaning of tableware should be managed in the main kitchen and therefore should be conveniently located.
- A shop is to be incorporated into the café space as opposed to an enclosed room.
- The shop should sell essentials, confectionary, and gifts.
- When the shop is closed, items to still be visible on display units rather than closed / removed via. some form of lockable glazed encasement.
- Large accessible WC's should be included to accommodate resident and public use. The facilities should be large enough for multiple occupants and well equipped to support changing if residents happen to have an accident whilst in the cafe.

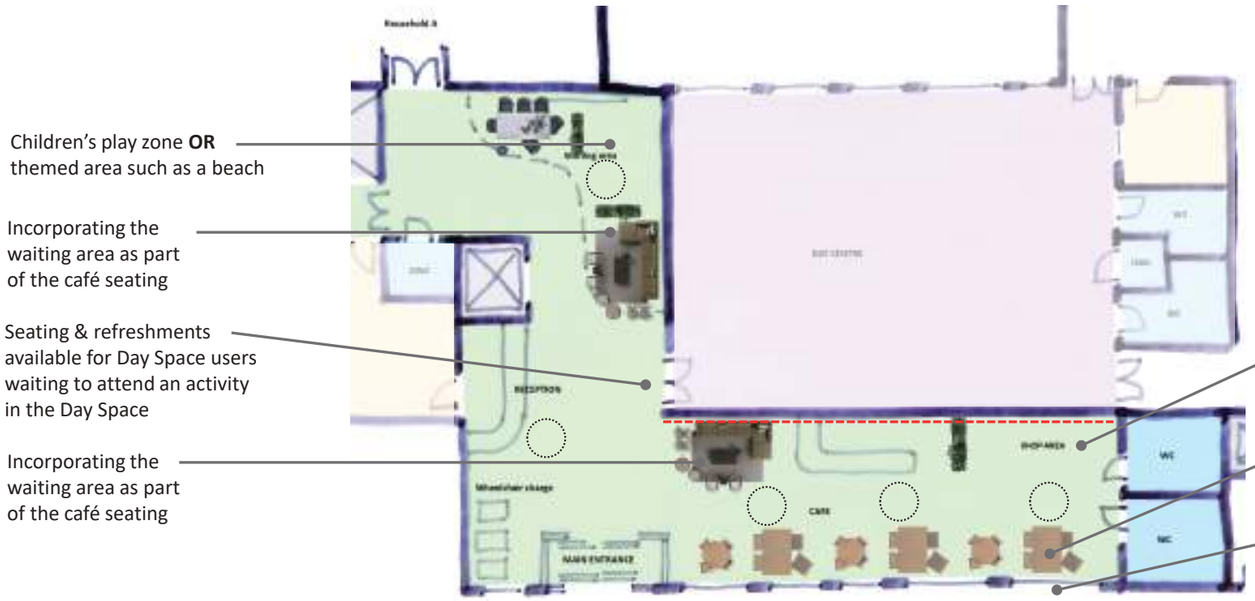




















1. A main entrance is required for residents, visitors and those from the public wishing to use the cafe, day space or supporting facilities available. The entrance should be clearly identifiable with a visible connection to some of the publicly open facilities. The development has played with placing the cafe, the day space or even both spaces along the street front, visible to the public. The reception should have a clear movement into the public spaces whilst retaining control over who may access the residential households. Control remains both horizontally and vertically.

2. A second entrance is required for direct access to the studio flats and has been placed away from the main entrance to avoid misunderstanding for which entrance to use. The private access shall have its own security controls and is intended to be used by residents who may regularly leave.

3. A third entrance is created for staff and the sheltered housing accommodation access. The entrance provides a secure infection control route for staff to directly access the changing facilities before they continue through the home. The entrance is located adjacent to the delivery goods parking and creates convenient access to the kitchen on the first floor.

This entrance shall also be used by the 3rd and 4th floor sheltered accommodation residents and is intended to be their own private entrance. A private entrance encourages independence rather than passing through the reception or home.



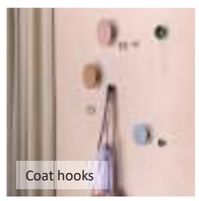
Day space & Cafe relationship Sketch 07

The counselling and interview rooms are integrated into the home, accessible to members of the public and residents forming an opportunity for social integration. Three counselling and interview rooms are included at varied sizes but their use is not intended to be limited to just private meetings. The counselling & Interview rooms should become flexible to maximise the use of these spaces when they are not used for the main intention. Where floor space is limited, these rooms should be adaptable. Concept principals have been discussed and outlined below.

Summary of key points;

- To be located near the Day Space on ground floor level as they become extension rooms for general activities when not in use as counselling / interview rooms.
- Rooms to be flexible for multi-purpose activities such as Music Room, particularly for the largest sized room.
- Smaller rooms (12m2 and 16m2) to comprise of soft furnishings.
- Larger room (20m2) to comprise of more of a 'training' style room with some soft furnishings i.e. flip-top tables and chairs as well as armchairs and side tables.
- Mix of high and low back seating to cater for various users in this space.

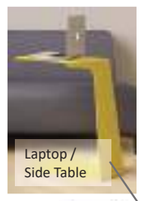
Discussions have taken place regarding the positioning of these rooms and their relationship to the internal courtyard. It has been agreed that there is opportunity to create a more open social space in front of these rooms with varied depths. To avoid a long stretch of corridor, full height, curtain wall glazing can run the length of the internal wall with built in seating. Informal seating may be placed along this stretch along with creating its own intimate identity.


Coat hooks


Coat stand

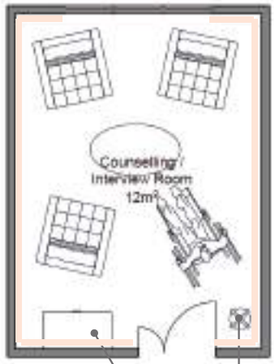

Low back chair

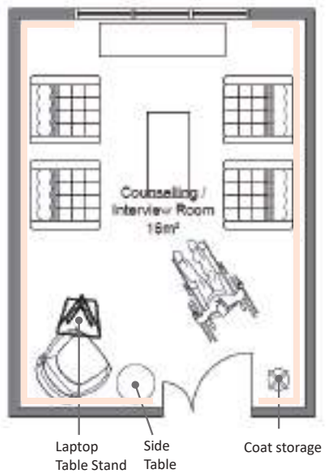

High back chair

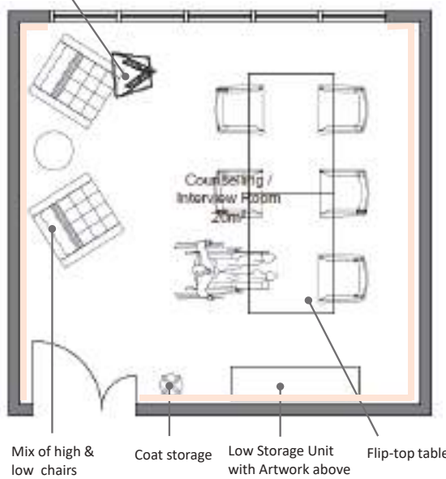

Laptop / Side Table


Display / Storage


Height Adjustable Flip Top Table







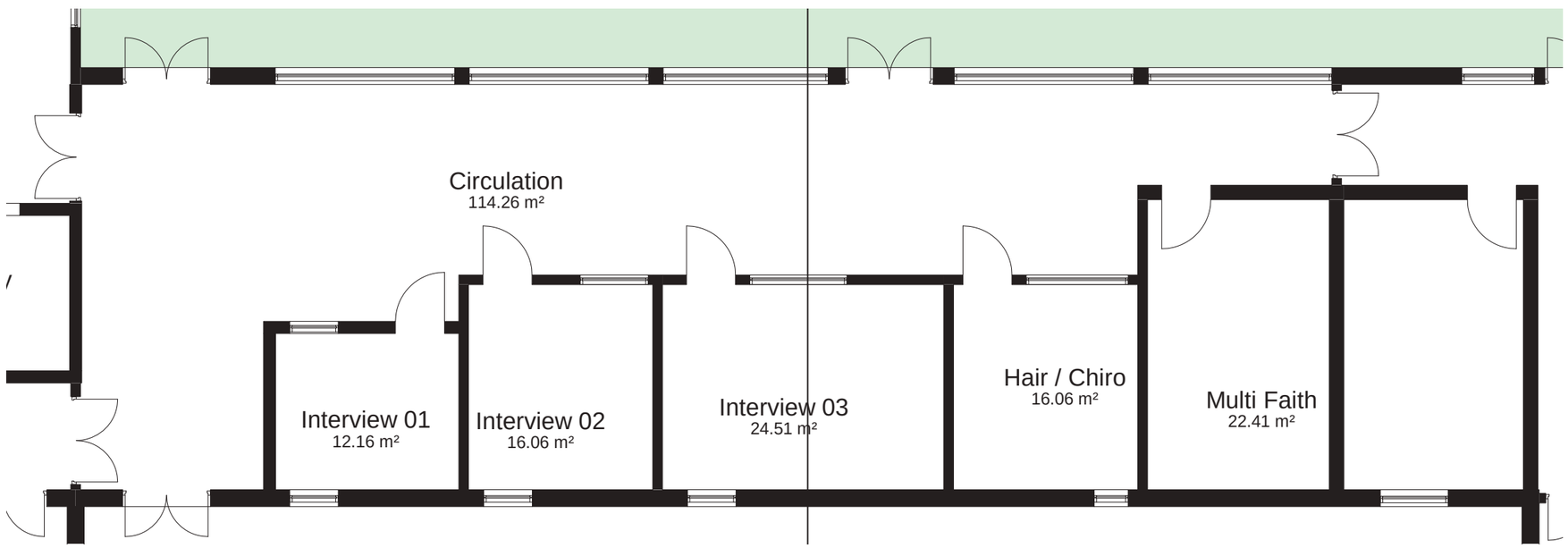












An in-house hair salon has been included in the brief and SOA. A hair salon provides a safe destination for residents to maintain their appearance. Personal grooming is important in maintaining a sense of well-being and dignity.

The space may also be used as a chiropody room as well as a general clinical room, therefore, it is important this room is stylish yet clinical. A personal grooming and well being space should maximise daylight and promote social interaction both of which will be developed during stage 3 design. Concept principals are listed below.

Summary of key points;

- Generally to be considered for any clinical needs, not only specific to Hairdressing & Chiropody although these would be the main treatments used in this room.
- Screening of hair washing zone to create a more clinical space when not in use.
- Waiting / side chair is important for family visitors or companions who may sit with a resident.
- Only 1 hair station required as only one appointment will be carried out at a time.
- Glazed frontage with seating much like a typical barber shop. Residents are then able to see what is happening inside.
- Maximise daylight for well-being.
- Allow for flexibility towards privacy. Some residents may prefer chiropody treatment without being observed.
- Space can easily become and overwhelmingly busy for residents with ASD. Reduce wall clutter and provide ample storage for equipment to be put away.

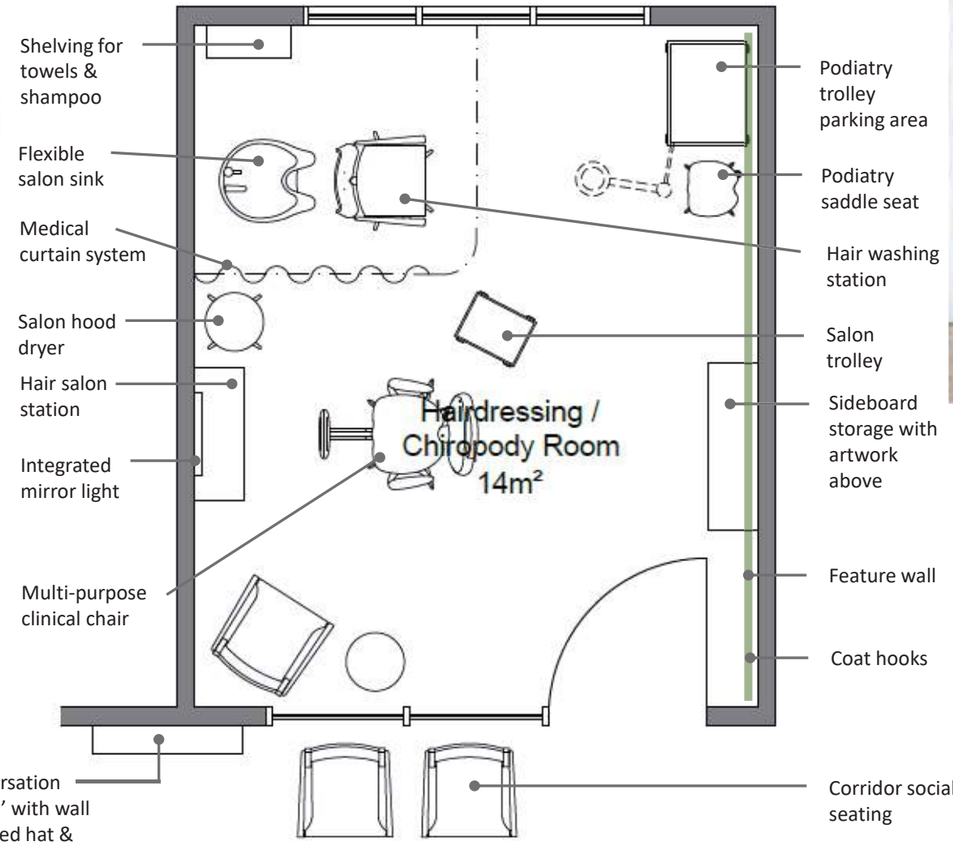






















Multi-faith rooms are available to those of all faiths and none. They are spaces to pray, meditate, reflect, and find quietness. As the space is intended to be used by a range of religions there will be no signature features, designs or colours reflecting that of one religion over another. The space requires controlled lighting therefore daylighting shall be limited to high level windows with controlled ceiling, spot and lamp light. Privacy is also key to the function of this room which will be supported by the high level windows and rooms management.

Summary of key points;

- Not limited to solely praying but used for reflection / quiet space.
- Additionally, room to be used for virtual funerals, church gatherings etc…
- A calm, relaxing ambience needed in this space.
- To be used by residents, staff & visitors.
- Consideration for an ablution washroom as standard WCs does not facilitate this.

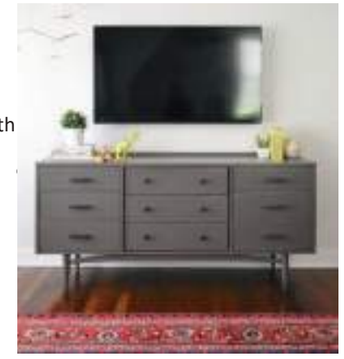






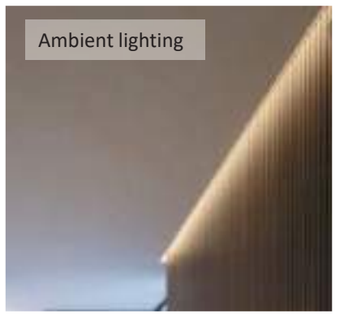













Tall free standing
planters (Artificial?)



Multi-purpose rooms shall provide a flexible space to carry out various activities from staff meetings, resident and family time as well as group activity workshops. The rooms flexibility should be demonstrated through the furniture and finishes with the shape remaining regular. Large doors should be included for moving furniture in and out of the room and be either closely located to storage or allow for ample storage within the room. The multi-purpose spaces should maximise natural light through large or full height window to support a healthy environment.

Summary of key points;

- Located one per floor.
- Furniture to be flexible i.e. flip-top tables, stackable chairs.
- Room to be used by residents or staff meeting / independent working.
- Sink facilities maximise flexibility of activities i.e. painting.
- Built-in wall storage to display resident art pieces / books / memorabilia with lower enclosed units for equipment. Additionally, some glazed cabinet doors for ease of cleaning maintenance.



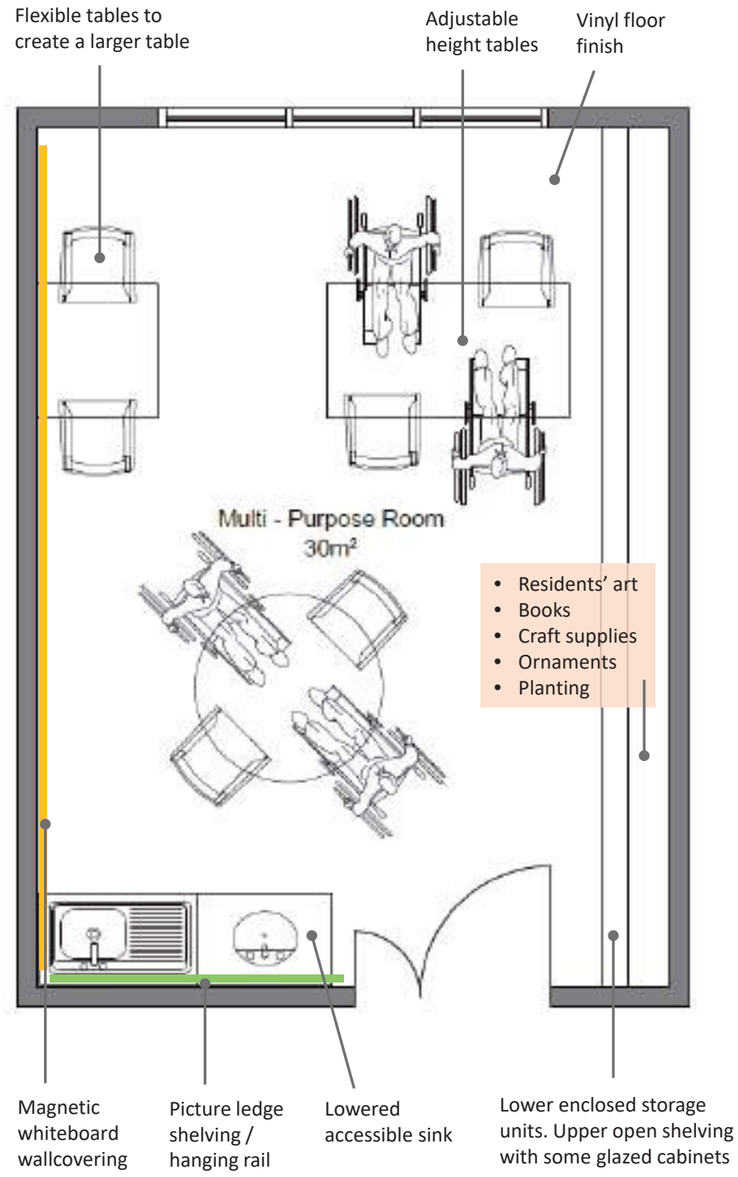
Adjustable height tables



Magnetic whiteboard wallcovering



Picture ledge shelving

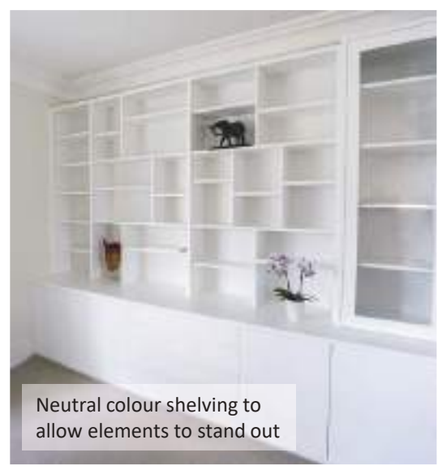




Some glazed cabinets



Concealed shelf lighting



Neutral colour shelving to allow elements to stand out

The care home accommodation includes the integration of sheltered housing, self contains units. The sheltered accommodation units were part of a late request during the feasibility study.

Through workshops the sheltered accommodation has gone from being its own separate building next to the home to being its own separate entity along the northern facade of the home with its own private entrance.

A change of scope towards the user group and their integration happened mid way through stage 02 and it was requested that the sheltered accommodation becomes part of the home sharing the main access. These units are expected to become transitional homes of semi-independence so that when they are no longer able to care for themselves they can become part of the homes main households. The 20 units as a result were placed on their own floors 3 and 4, atop of the home. As this greatly increased the mass the 20 units were reduced to 16.

The accommodation includes 12 No. 1-bed flats and 4 No. 2-bed flats situated on the 3rd and 4th floors of the building. The Flats share a stair and lift with the rest of the home.

The design of the units should be of a similar high-quality finish to that of the bedrooms across the rest of the home. However the flats should create their own sense of identity. This may be achieved through materials or personalisation.

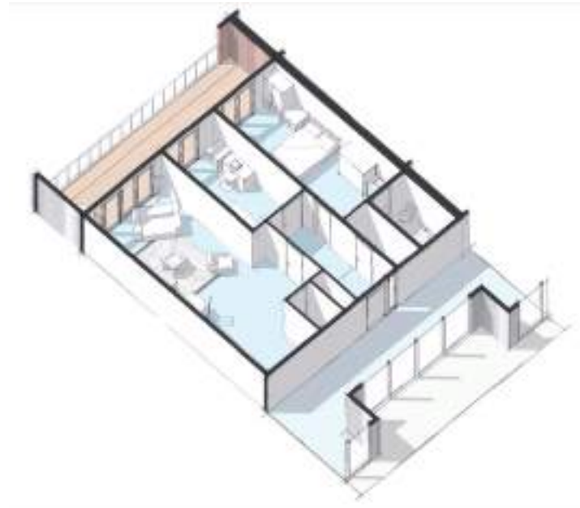
Self contained flats should be treated as dwellings and meet the standards of the London housing design guide. They should also be designed to create a sense of high quality living for elderly residents and those with deteriorating health conditions likely to progress into full time care.



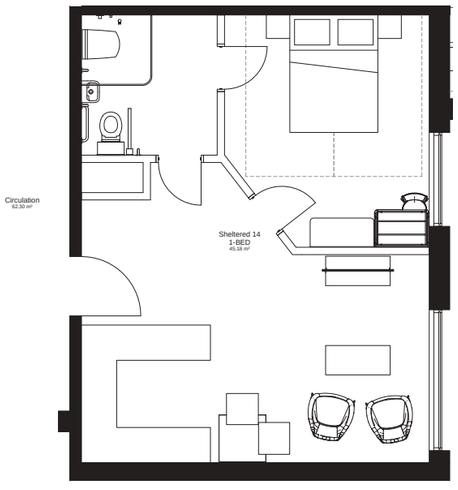
Development Sketch - Prior to change of scope



Development Sketch Prior to change of scope. 1-bed Axonometric Sketch

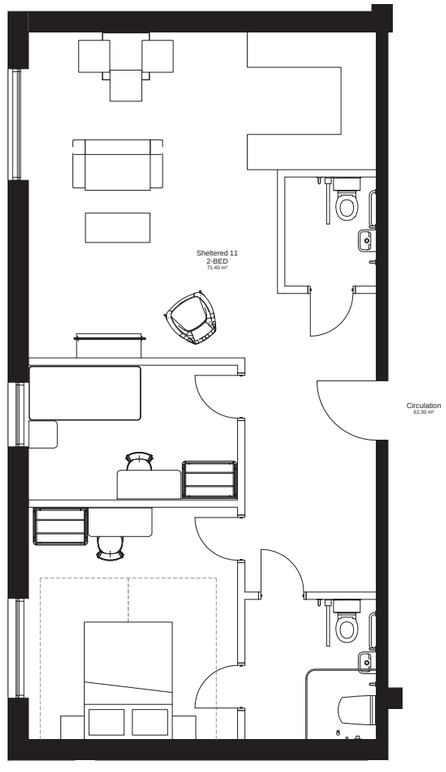


Development Sketch Prior to change of scope. 2-bed Axonometric Sketch



Sheltered Housing - Typical 1-Bed Flat

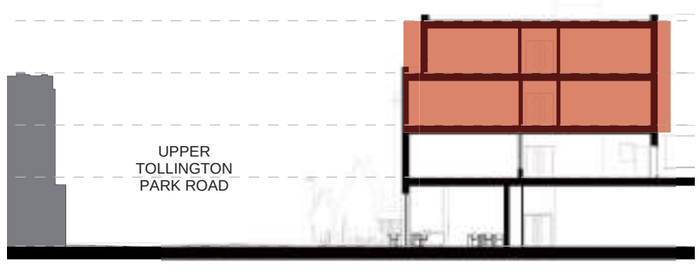
1-Bed Self contained sheltered accommodation flat



Sheltered Housing - Typical 2-Bed Flat

2-Bed Self contained sheltered accommodation flat

Sheltered Housing Units



Section with sheltered accommodation at front of building



Looking into flat - White model concept sketch



Internal View- White model concept sketch



Balcony View- White model concept sketch



Corridor View- White model concept sketch

The interior scheme has been agreed to be contemporary with classical elements. We feel it is important to provide a timeless look whilst retaining some classic details to suit the type of users in this building to ensure they feel familiar in their surroundings. This being said, the home should not look dated or like a typical monotonous care home often found in the UK.

The care home has the opportunity to incorporate biophilic design as part of its overall appearance strategy. Biophilic design focuses on the human's innate attraction to nature and natural processes. It suggests we all have a genetic connection to the world of nature. Incorporating direct or indirect elements of nature into the built environment have been demonstrated through research to reduce stress, blood pressure levels and heart rates, whilst increasing productivity, creativity and well-being. It is not just the residents that feel the effect but embracing nature through biophilic design also impacts the mindset of staff and the quality of care.

We aim to soften the built environment incorporating biophilic, natural design elements whilst maintaining conformance with regulations and legislations for healthcare design and the requirements of each user households.

A stage 02 finishes schedule has been shared with the client and cost consultants as an initial indication of the proposed finishes strategy.

Flooring & Skirting

Vinyl flooring will be considered throughout the building despite previous feedback reports which stated to have carpeted flooring within staff offices and receiving areas only. The purpose of the change in requirements is due to infection prevention control and based on previous experience, carpet was difficult to maintain to a high level of hygiene needed.

Vinyl flooring will be slip-resistant and suitable for barefoot use where required in washroom areas. As per the HBN-00-10 Part A guidance, a vinyl skirting will be specified for the majority of the areas. As the project progresses into the detailed design, further products and comparisons will be made to ensure these materials meet the needs of the end user and the requirements of the home. The pattern and colours will also follow.

The acoustic performance of flooring will be taken into account supported by the guidance of an appointed acoustician. To enhance the performance we may look at lined flooring or special underlay to reduce the dB impact. The potential for indentation issues shall also be researched with input from manufacturers as we progress to detailed design.

Walls

Walls will be painted with hard wearing, washable emulsion as per HBN-00-10 Part B guidelines with feature walls consisting of accent paint. In key areas, bespoke digitally printed vinyl wallcoverings and general vinyl wallcoverings will also be used.

Wet room areas will have porcelain tiles although further discussions will be required as the recommended HBN guidelines states the preference of PVC sheet. This is dependent on an assessment of level of clinical requirements by the client. Moreover, a consideration of using a combination of both materials to create a more domestic environment whilst ensuring the highest level of infection prevention control is the best solution i.e. the use of PVC sheet around the shower areas (immediately wet areas) with large porcelain tiles around WC and sink areas to minimise grout lines (splashback areas).

Ceiling

Plasterboard finishes are preferred where possible for a less clinical feel although further development is required working alongside the building services proposals. Dropped ceilings were agreed in bedrooms to conceal curtain and hoist tracks as this minimises the number of surfaces to be cleaned from an infection perspective. Although, further examination is required to discuss how services would be accessed for maintenance of the building.

Lighting

Lighting shall be a design combination across the architectural and electrical engineering disciplines. Discussed with the client, the use of soft, directional lighting over doors and/or signage is encouraged to assist with wayfinding.

Furthermore, the proposal of a dropped ceiling allows wall wash lights to be used as opposed to downlights as harsh lighting can agitate people suffering with dementia. Additional details such as a wall-mounted reading light beside beds was agreed as well as decorative lamps in certain shared rooms for a relaxed atmosphere. Specific workshops shall be held during the detailed design stages to develop light fixings and design.

Doors and Ironmongery

Door types and ironmongery are still to be agreed as part of the detailed design stages. Initial discussions have been carried out with the client and stakeholders. It is essential for doors, particularly bedrooms, to have some sort of unique identity to support patient's memory and wayfinding around the building. For example, having different coloured door frames or doors themselves. On the contrary, we may want to deter residents from entering a space for their safety, particularly for those suffering with dementia who have visual impairment. For example, we can deter resident's from entering a drug store room by using the same colour of the door and architrave with the colour as the surrounding wall.

Ironmongery for bedroom doors was discussed to be stainless steel lever handles for a simple one-handed operation, complemented by a power-assisted operator, to allow ease of use for residents as well as avoiding the door slamming shut. For washroom areas, panic release locks will be required for ease of opening in emergency situations.

All residents are entitled to have locks (or suitable security equivalents) to their rooms designed so they are able to operate safely to go out and come in, but which also enable staff to gain access in order to carry out their agreed tasks or in an event of any emergency. However, locks on bedroom doors is still to be agreed and further assessments will be required in respect of the locking device proposed and the resident's capacity to use it safely.

Signage and Wayfinding

Careful considerations are required for signage and wayfinding which are suitable for both dementia and non-dementia residents to create a homely, familiar environment and aid wayfinding. Meaningful symbols and signifiers used around the home can help people to locate particular rooms and objects more easily as stated in the "Good practice in the design of homes and living spaces for people with dementia and sight loss" documentation by University of Sterling.

Furniture / Fixtures / Soft furnishings

The exact type FF&E throughout the building is still to be finalised and agreed as the project progresses. However, in-depth discussions have been carried out as per the attached schedules which show the level of specification required.

Generally agreed rules meant seating in 'resident-only' areas would be high back singular chairs with arm rests. This would allow maximum support for residents whilst practising socially distance measures for infection prevent control. Additionally, a mixture of high and low back seating is required in public/ shared spaces to cater for the variety of users.

The use of furniture and soft furnishings such as curtains and planting contributes towards to the overall aim of reducing noise.

Dementia-friendly FF&E will be incorporated throughout the building with details such as colours & textures, memory boxes and memorabilia displays, contrast piped edges to furniture, matte / glare resistant finishes, purposeful signage and many more as we refer back to the EHE Environmental Assessment Tool "Is your care home dementia friendly" checklist.

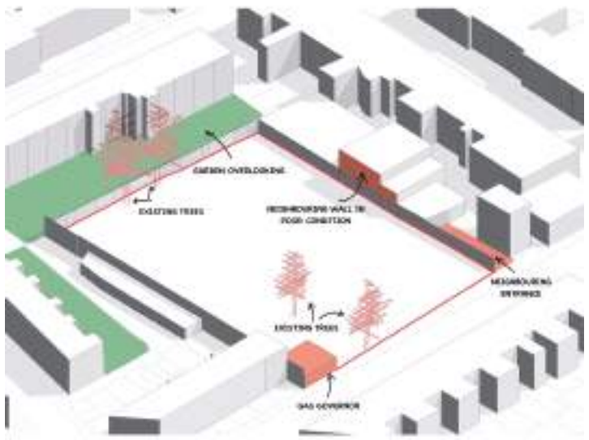
The overall massing of the proposal has been designed from the inside out, however throughout the design process the overall size and positioning of these spaces has been considered holistically.

An early massing concept was drawn up to clearly identify the extent of the site in relation to the existing and context. The massing studies show how the site has been explored as volumes.

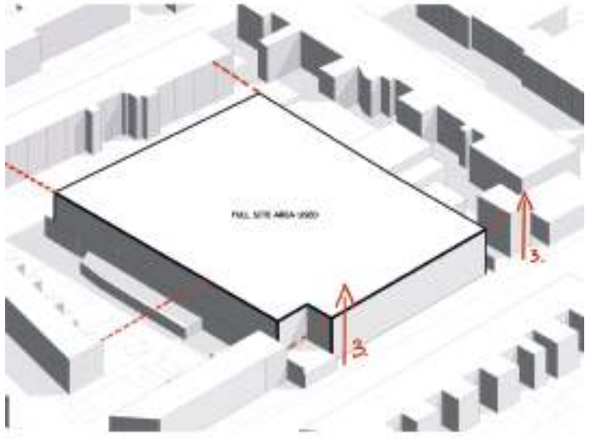
The proposal intends on a full demolition of the existing site with the retention of some trees to the south. The massing studies developed from a single volume by stepping facades away from the boundaries at higher level and creating a central courtyard. Carving out a central courtyard creates an circuit for natural movement suitable for the user groups and creates an opportunity for a fully landscaped area. A central courtyard requires the accommodation to be placed at higher levels to retain quality of space. Further studies identified areas of importance and their position on the site. For example, community facilities should be at the front of the site whilst the sheltered accommodation was to be on the upper floors as their own separate entity.

With further understanding of the accommodation required on site the principals remained however the number of floors increased. The 5 Storey proposal which includes all items desired in the original brief creates a large volume and impact on the site in relation to its 3 & 4 storey neighbouring properties.

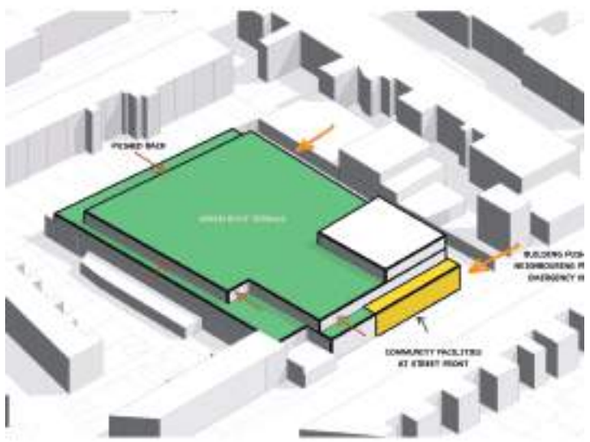
The massing has been discussed with the local planning and conservation departments and a number of responses have been discussed with the client regarding accommodation and height.



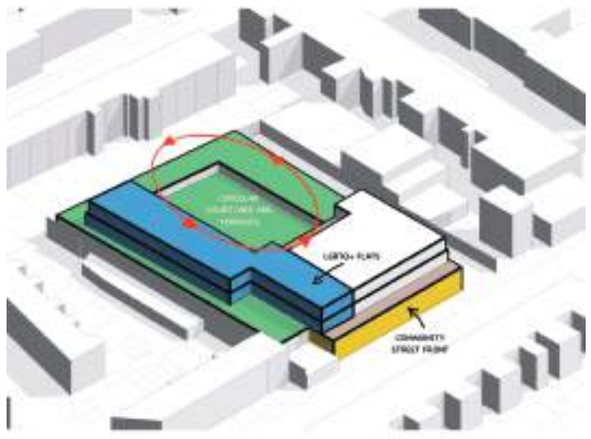
Site demolition without massing - View from North



Whole site volume at 3 storeys - View from North



Recessing upper floors to step away from boundaries - View from North



Circular courtyard and introduction of Sheltered Accommodation - View from North



Option A - Massing Development - View from North



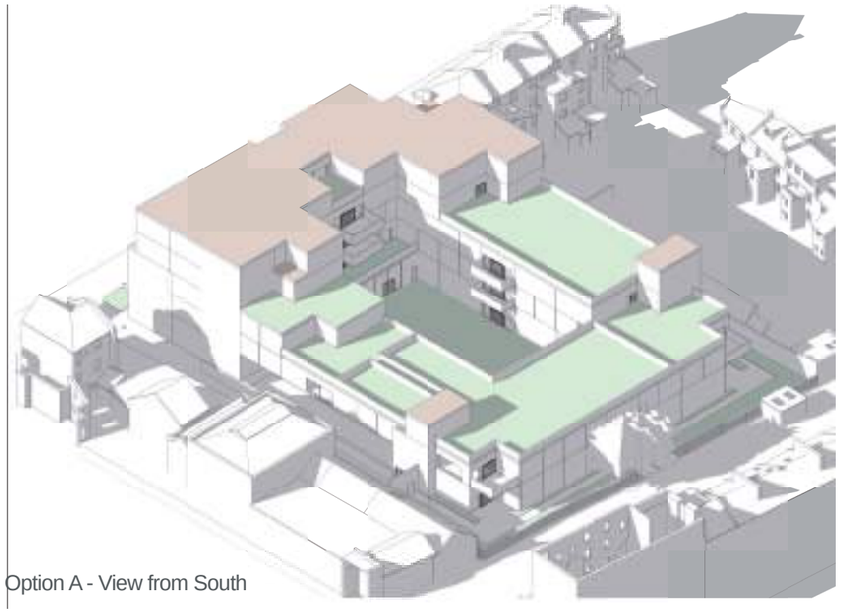
Stage 02 Proposal Post Planning Review - View from North

7.6 - Option A

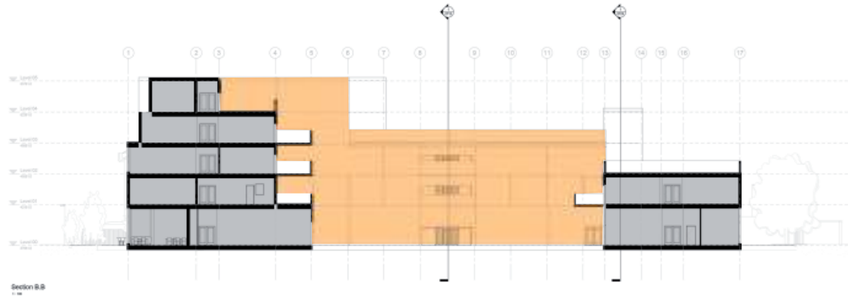
Prior to 13/05/21, Option A was proposed. The design contains all accommodation with 5 levels at the front of the site, cascading down to a two storey mass at the rear of the site. The proposal was a result of the individual room workshops and development throughout stage 2.

The proposal was developed and shared wth the cost consultant for pricing.

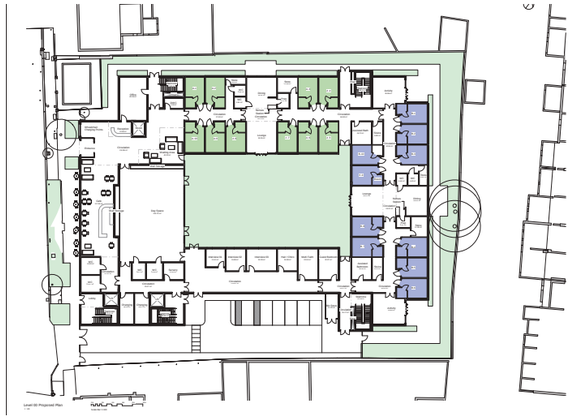
Option A was presented to the planning and conservation department for initial engagement



Option A - View from South



Option A - Site Section



Ground Floor Plan



First Floor Plan



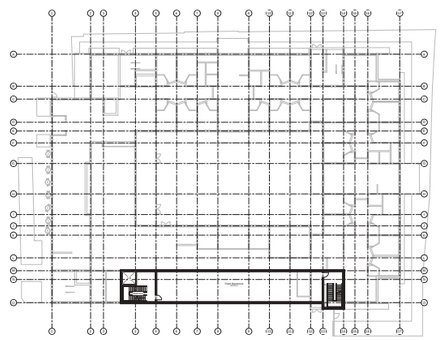
Second Floor Plan



Third Floor Plan



Fourth Floor Plan



Basement -1 Floor Plan

8.0 - Response To Planning

architecture
building services
planning
interior design
sustainability
civil and structural
project management
CDM and H&S services

Planning meeting 13/05/21
A virtual meeting was held on the 13/05/2021 with the London Borough of Haringey planning and conservation department to discuss pre-planning application advice for Osborne Grove Nursing Home. Reference PRE1002331.

The meeting attendees included Haringey's planning and conservation officers, client representatives from Haringey council and architecture and planning consultants from Ingleton Wood LLP.

This was the first of two meetings held, focused on introducing the proposals with initial consideration towards context, scale and massing. A series of plans, sections and 3D images were shown to translate the proposals and promote discussion.

The general consensus and agreement from the planning and conservation department was that there was not a committed opposition towards the 5 storey proposal, however they do have concerns regarding a scale of this nature. This being said, there is a strong argument to support the proposals given the nature of its use. Comments from the planning and conservation officers were welcomed and valuable of which will inform a suitable proposal and subsequent planning application.

Comments from the Conservation officer were as follows.

- Proposals should consider the wider area and its relationship to the site. Currently we are working within the corner of the conservation area and although not technically inside the site is surrounded by conservation area.
- The proposals and presentations should fully explore surrounding buildings that contribute to the conservation area.
- The conservation area contains strong character and architectural design.
- The proposals and presentations should understand the character of the streets.
- •Elevation analysis should be carried out. This could be analysis of elevations within the conservation area and analysis of the proposal in elevations.
- Sectional and cross sectional analysis of the site and its relationship to those buildings surrounding within the conservation area would benefit understanding.
- Explore the local townscape and its relationship to the site.
- The proposal should marry with the surrounding buildings and become part of the conservation area.
- Proposals should be aware of the proposal in the front and the conservation sits behind.
- There is no problem with the principal of developing or the proposal, however it will be a matter of the architectural language and that the new design and architecture should marry and enhance the surrounding environment.
- Massing should be tested further as it can appear daunting. This is not an objection but we would want to see further justification.

Comments from the general planning department.

- The proposal appears to be designed from the inside out and therefore should demonstrate more thought towards the context surrounding.
- An idealistic planning approach would be to lose the top floor of the proposal, however the planning department are mindful that this is a unique scheme with multiple benefits.
- The proposals and presentations need to show more detail in the elevations.
- Concern raised over the appearance of lift shafts at roof levels. These appear to look bulky and dated and will require consideration.
- Consideration should be given towards fencing type / height and if this reduces impact on surrounding neighbours. Further explore if this reduces visual and acoustic impact.
- Proposals should further demonstrate what user groups will be using what spaces to understand how the site will be used internally.
- The planning department would like to see more sections and images with greater context.
- The terraces at the back of the proposal may create overlooking. Demonstrate how this will be addressed and if there are already points of overlooking from the neighbouring buildings then these should be highlighted to support the use of terraces.
- Consideration should be given to maintaining the terraced street front. Explore how the proposal should continue the repetition.

Design response:
The comments raised in this meeting have informed a development from the main design shown to the planning department. Various re-configurations have been discussed with the client regarding massing, height and accommodation to lessen the impact on the site.



Osborne Grove shown as part of the wider conservation area

Osborne Grove Care Home shown as part of the wider conservation area highlighted in green. The proposal has been shown using VuCity. Further context is available.

Meetings have taken place with the Haringey Conservation officer to discuss the integration of the proposal within the conservation area.

As part of the planning submission a detailed study of the conservation will be carried out to further develop and justify the proposal.

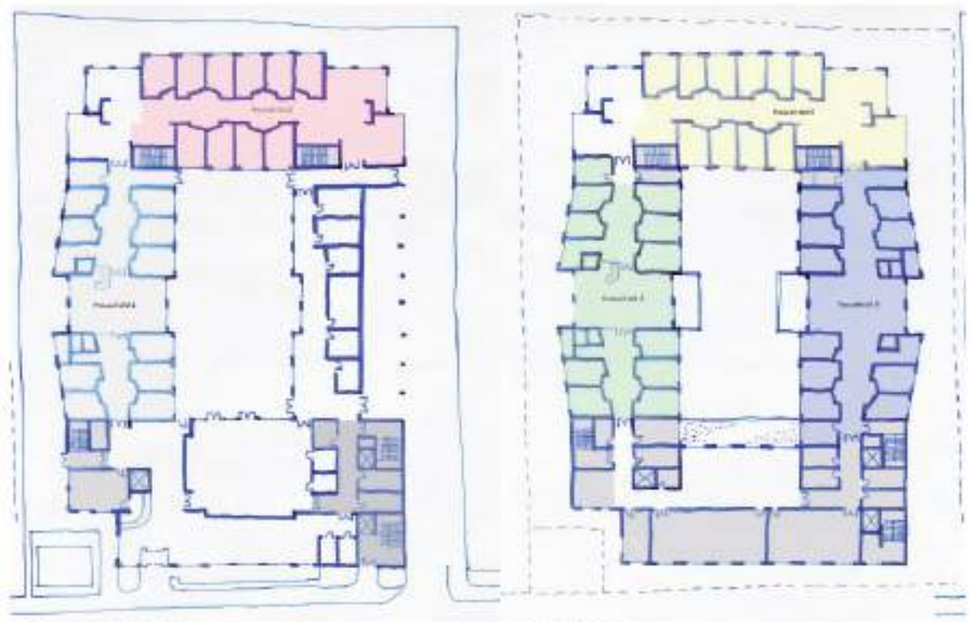




As a response to the planning meeting, Ingleton Wood were asked to explore a re-design of the home to lower the height of the building to a 4 storey proposal. To achieve this the accommodation needed to be re-distributed.

As part of the re-design, Ingleton Wood were also asked by the client to split each household into households of 10. Splitting the home into households of 10 allows the home to be more manageable.

This proposal has been agreed to form the end of the stage 2 design and any further changes would be considered a variation from this brief.



Sk. 08 - Floor Plan options with Households of Groups of 10











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This drawing is to be read in conjunction with all other relevant drawings and specifications.

Do Not Scale © Ingleton Wood LLP



Level 00 Proposed Plan

1 : 100



Scale Bar 1:100

Rev	Comment	Date	Chk
Project No: 812866	Scale @ A1: 1 : 100	Drawn By: XG	

Ingleton Wood
Wessex, Kent and London

Project:
Osborne Grove Care Home
16 Upper Tollington Park
Stroud Green
London, N4 3EL

Client:
London Borough of Haringey

Title:
GA Floor Plan - Level 00

Drawing Number:
OSBRNE-IWD-XX-00-DR-A-2400

Status	Purpose of Issue	Revision
S2	Suitable for Coordination	

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Do Not Scale © Ingleton Wood LLP



Level 01 Proposed Plan
1 : 100

Scale Bar 1:100
0m 2m 4m 6m 8m 10m

Rev	Comment	Date	Chk
Project No: 812866	Scale @ A2: 1 : 100	Drawn By: JG	

Ingleton Wood
Vision, form and function

Project:
Osborne Grove Care Home
16 Upper Tollington Park
Stroud Green
London, N4 3EL

Client:
London Borough of Haringey

Title:
GA Floor Plan - Level 01

Drawing Number:
OSBRNE-IWD-XX-01-DR-A-2401

Status	Purpose of Issue	Revision
S2	Suitable for Coordination	

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Proposed Level 02

1 : 100

Scale Bar 1:100

Rev	Comment	Date	Chk
Project No: 812866	Scale @ A0: 1 : 100	Drawn By: JG	

Ingleton Wood

Project
Osborne Grove Care Home
16 Upper Tollington Park
Stroud Green
London, N4 3EL

Client
London Borough of Haringey

Title
GA Floor Plan - Level 02

Drawing Number
OSBRNE-IWD-XX-02-DR-A-2402

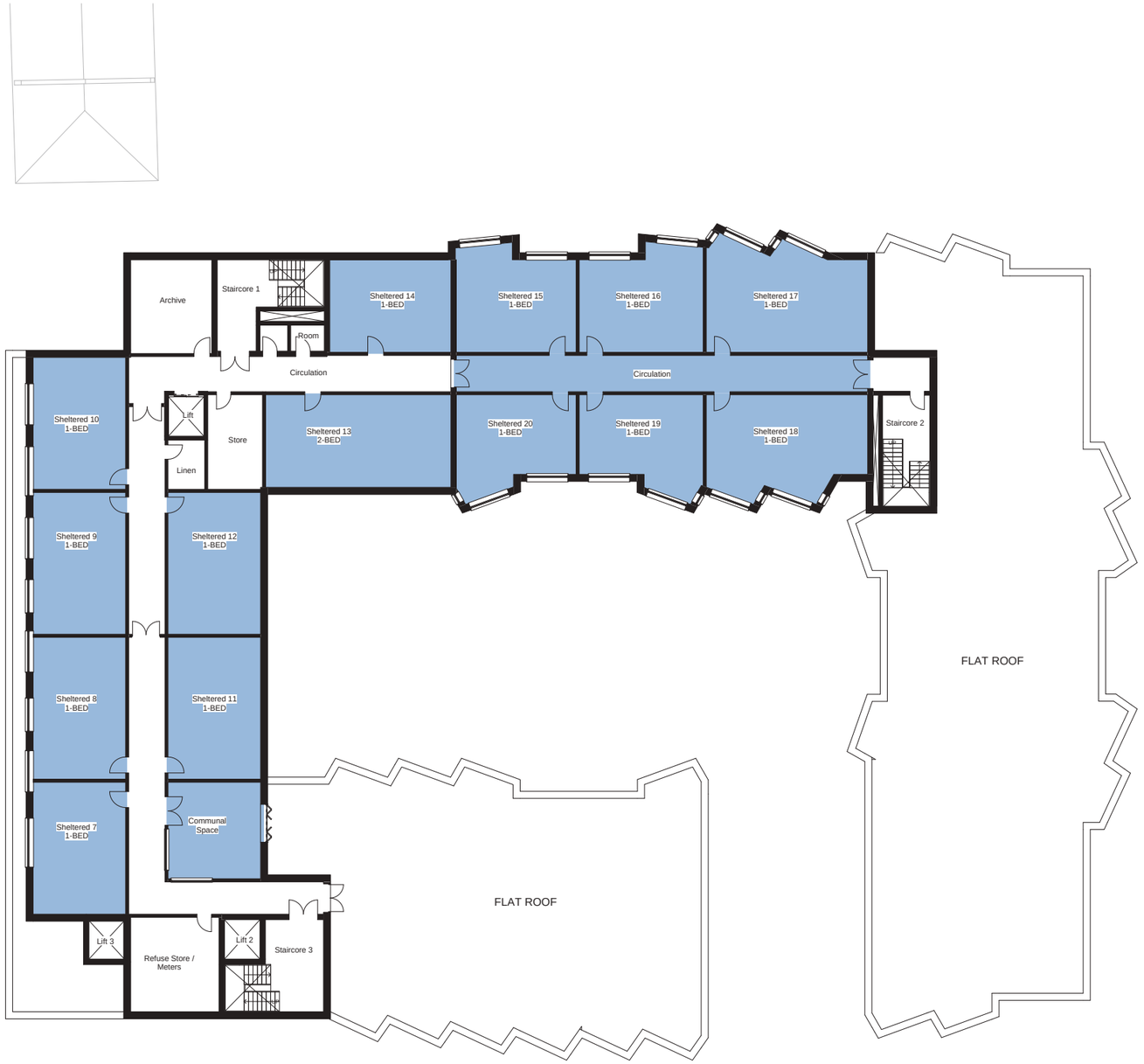
Status	Purpose of Issue	Revision
S2	Suitable for Coordination	

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Proposed Level 03
1 : 100

0m 2m 4m 6m 8m 10m
Scale Bar 1:100

Rev	Comment	Date	Chk
Project No: 812866	Scale @ A1: 1 : 100	Drawn By: JG	

Project:
Osborne Grove Care Home
16 Upper Tollington Park
Stroud Green
London, N4 3EL

Client:
London Borough of Haringey

Title:
GA Floor Plan - Level 03

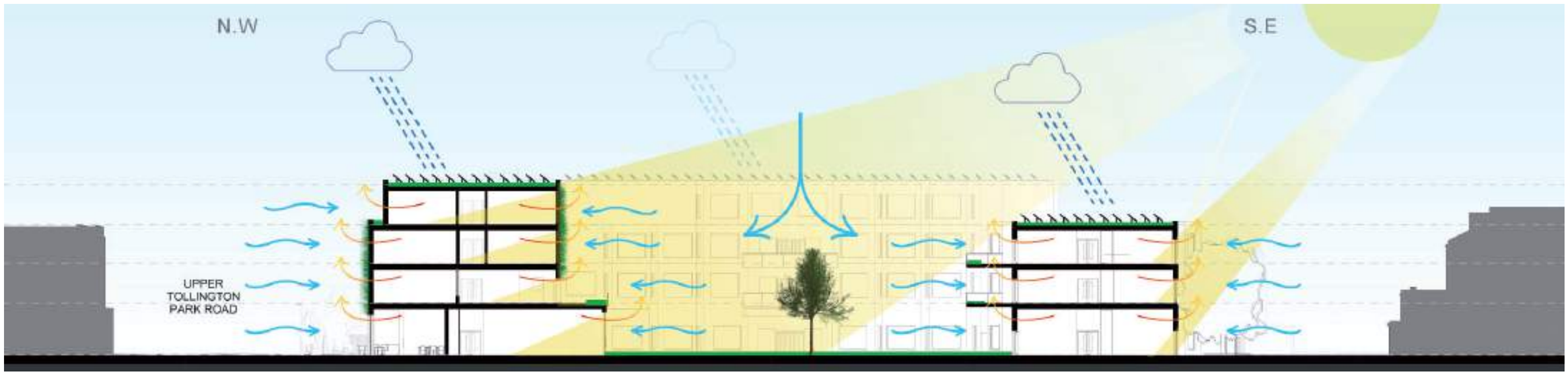
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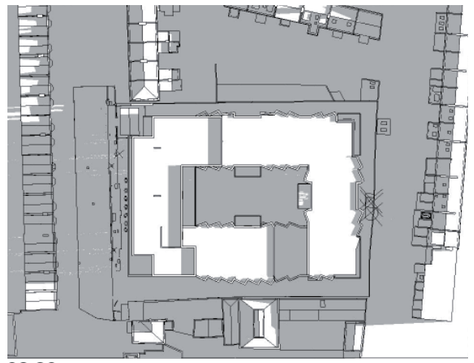


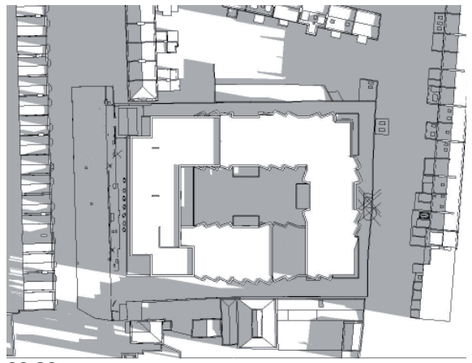
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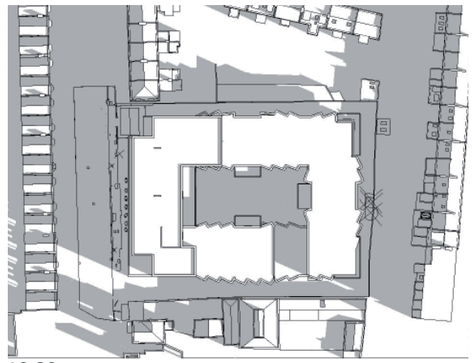
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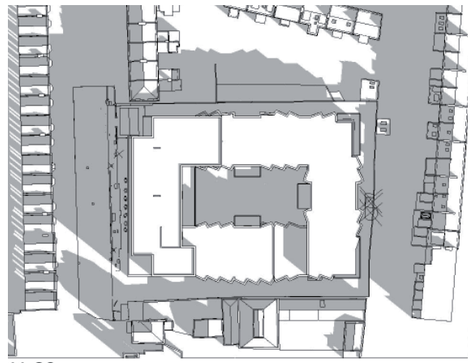



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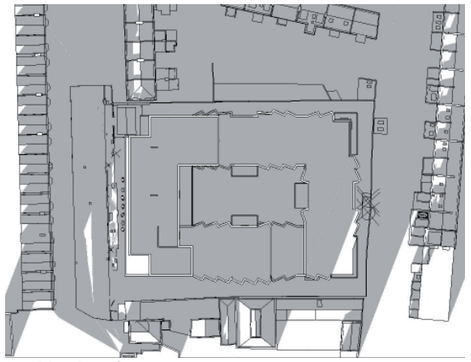

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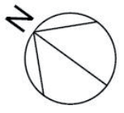

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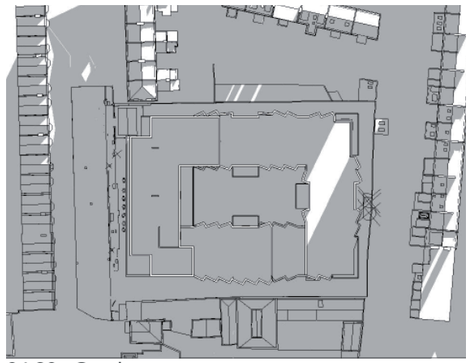

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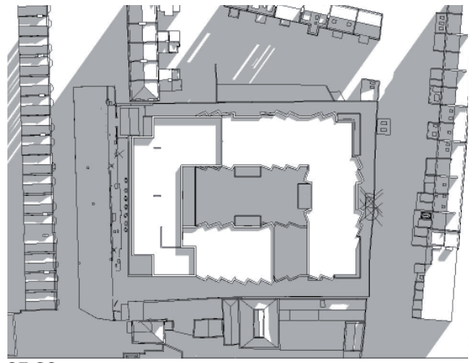

17:30 - Sunrise

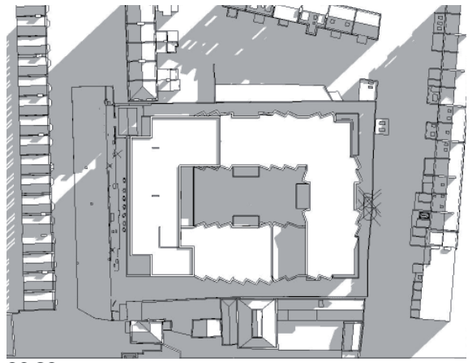
Plan View

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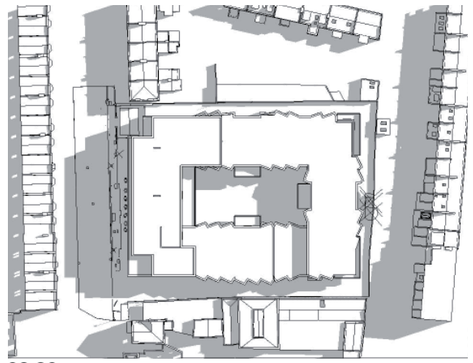


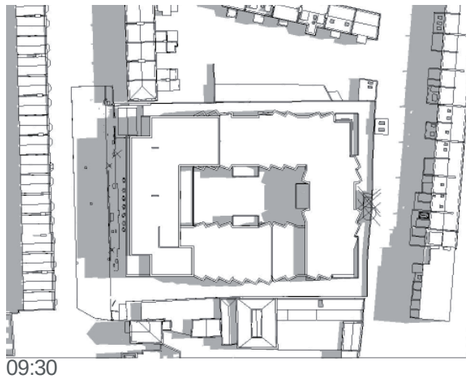

04:30 - Sunrise

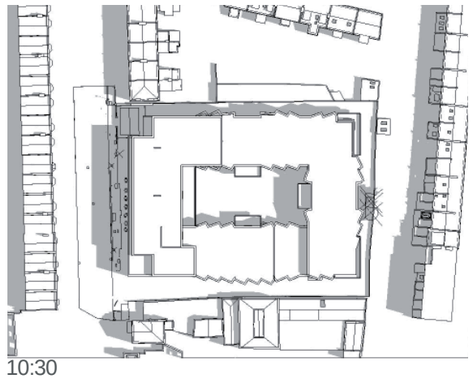

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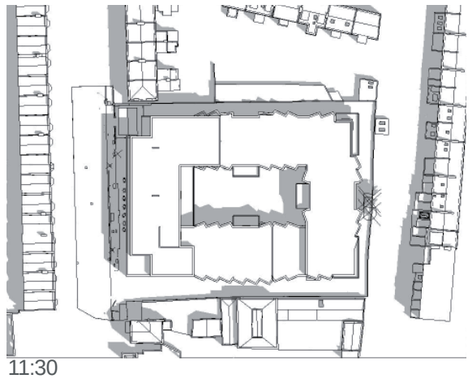

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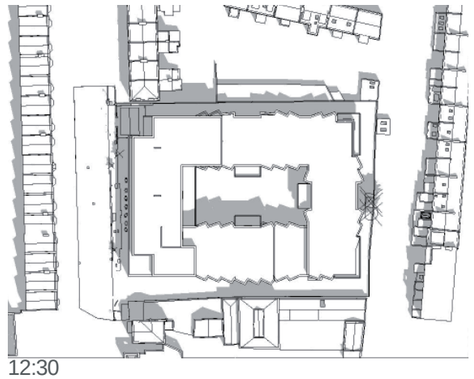

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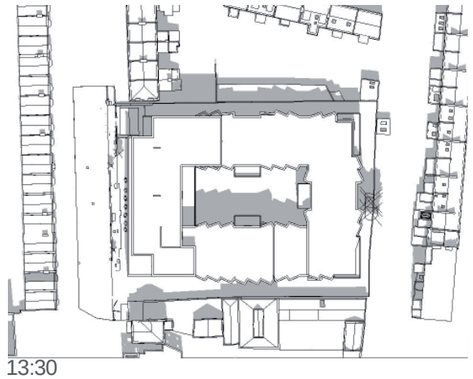

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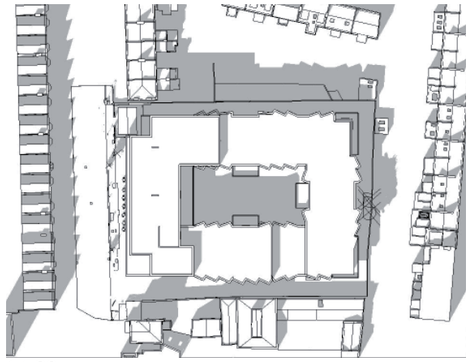

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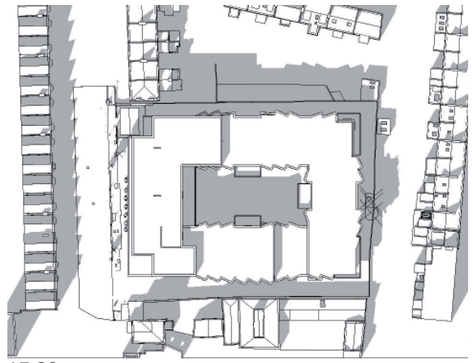

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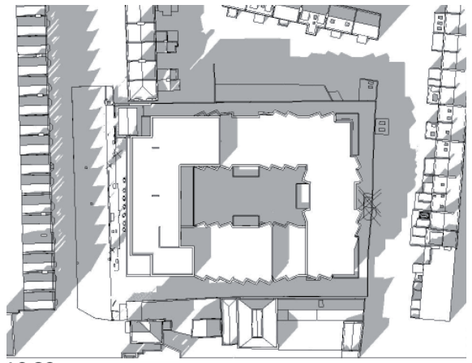

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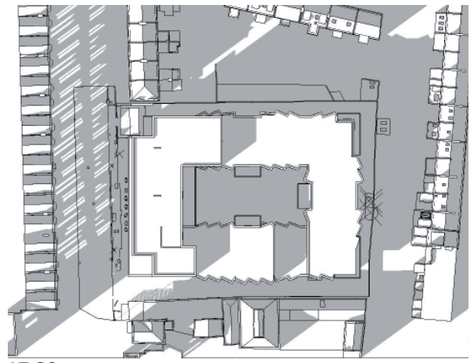

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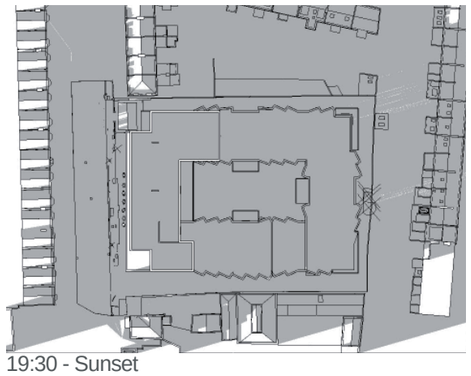

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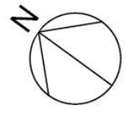

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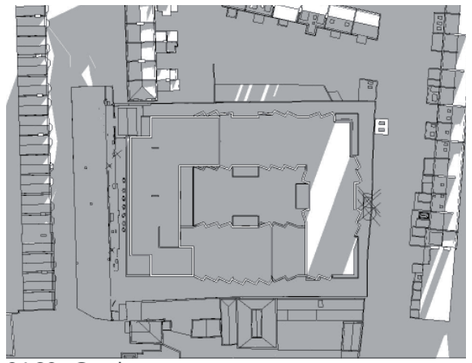

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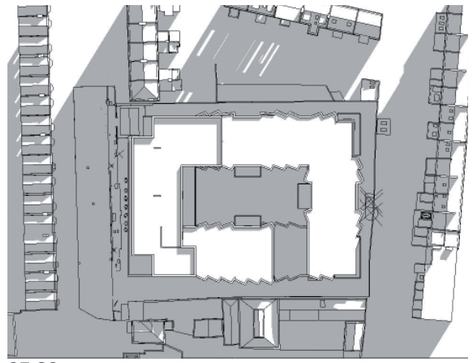

19:30 - Sunset

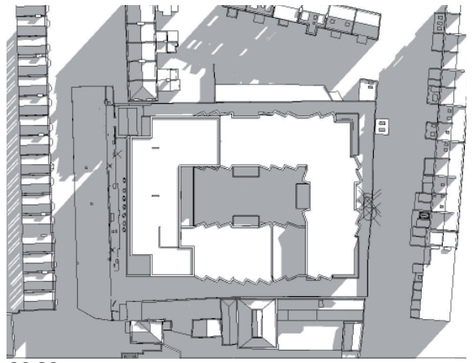
Plan View

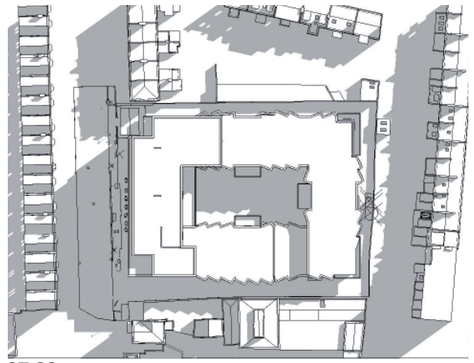
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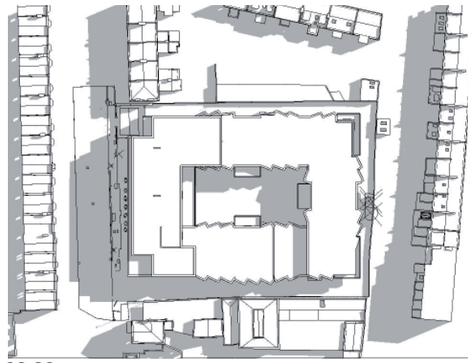


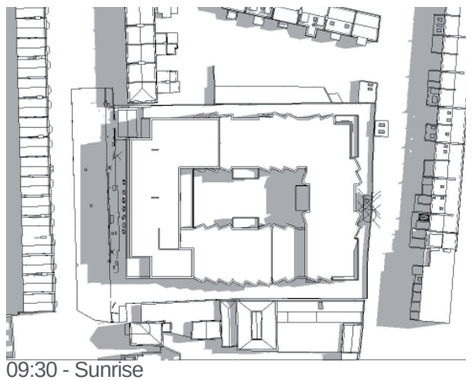

04:30 - Sunrise

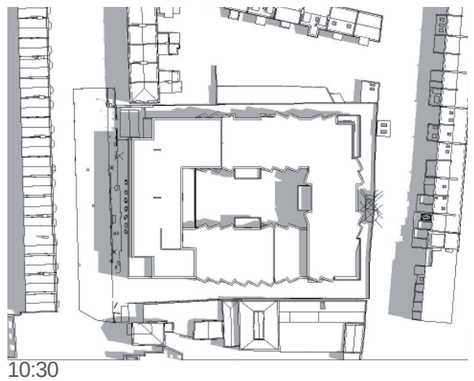

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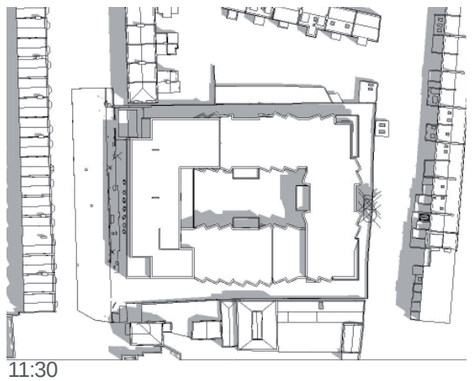

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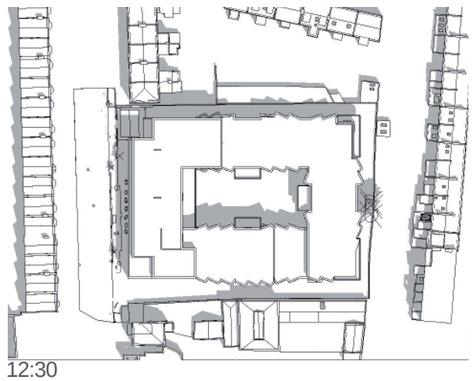

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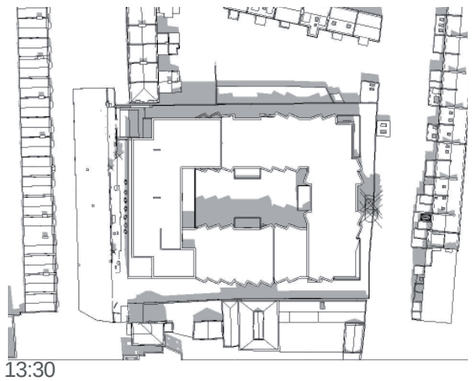

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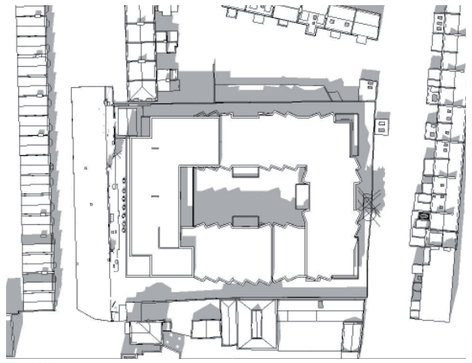

09:30 - Sunrise

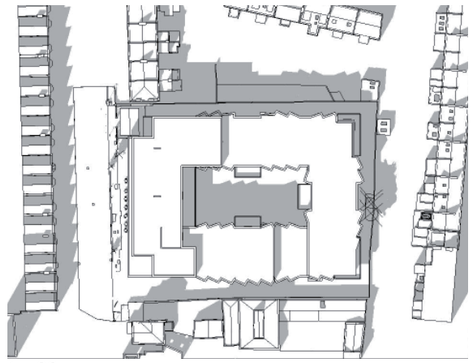

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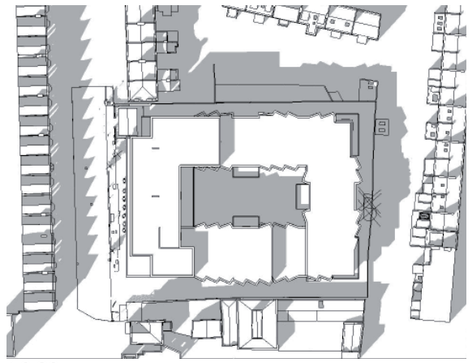

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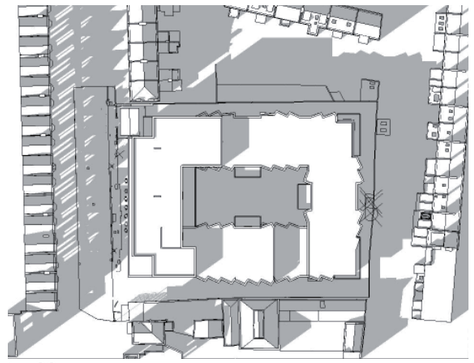

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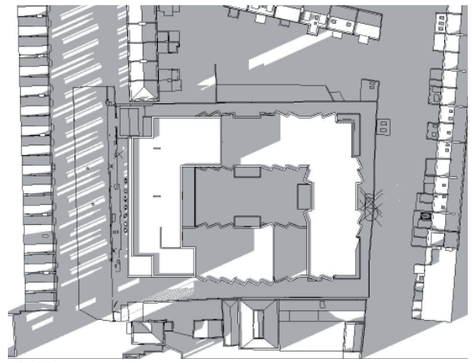

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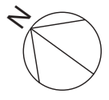

17:30


18:30


19:30 - Sunset

Plan View

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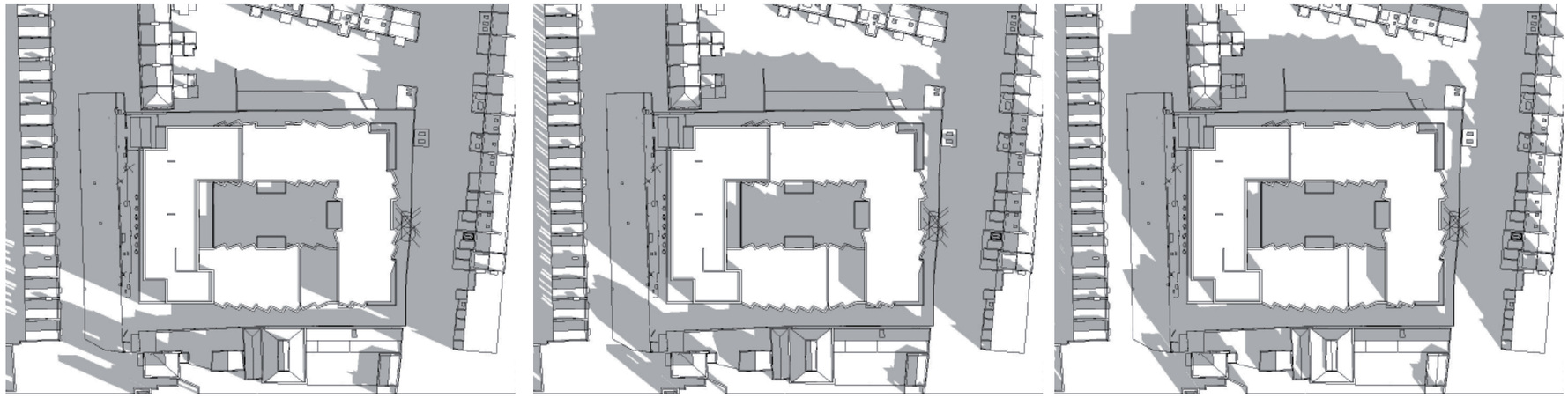


A comparative solar study has been carried out to demonstrate the effects of direct sunlight across the months of February, May and August. The studies are carried out using real world co-ordinates ranging from sunrise to sunset.

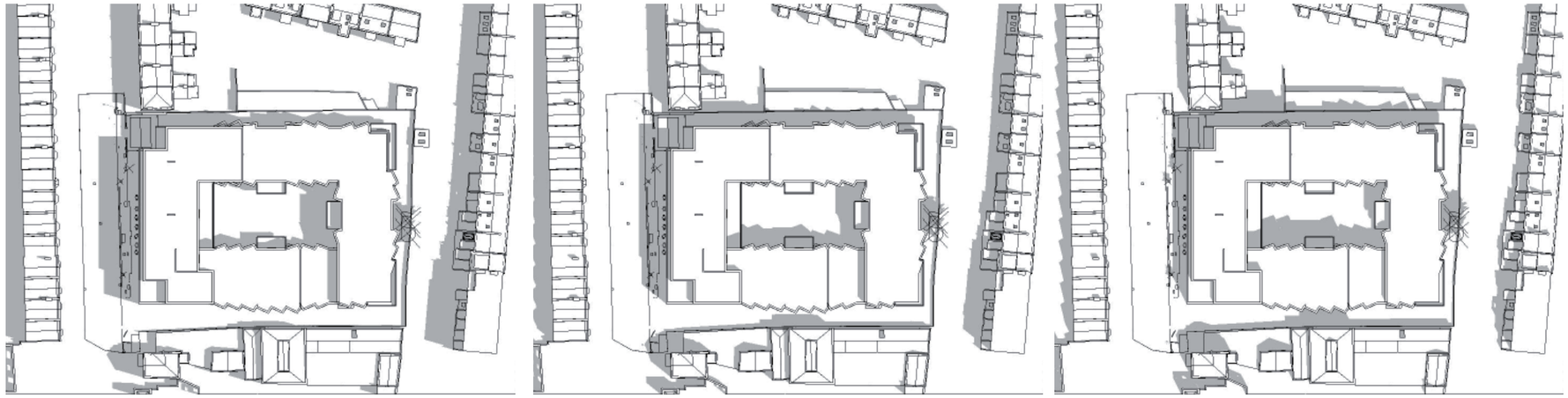
Concerns have been raised towards the overshadowing of neighbouring properties by the proposal, and the amount of sunlight available to the courtyard and day space.

During the winter months when the sun is at its lowest and shadows longest, there will be an overshadow on the northern neighbouring property along Upper Tollington Park. The gardens and garages to the northeast of the site should only be affected by overshadowing after mid-day in the winter months as the sun passed around the proposal. From spring to autumn, the site shows minimal overshadowing on the northern properties and gardens.

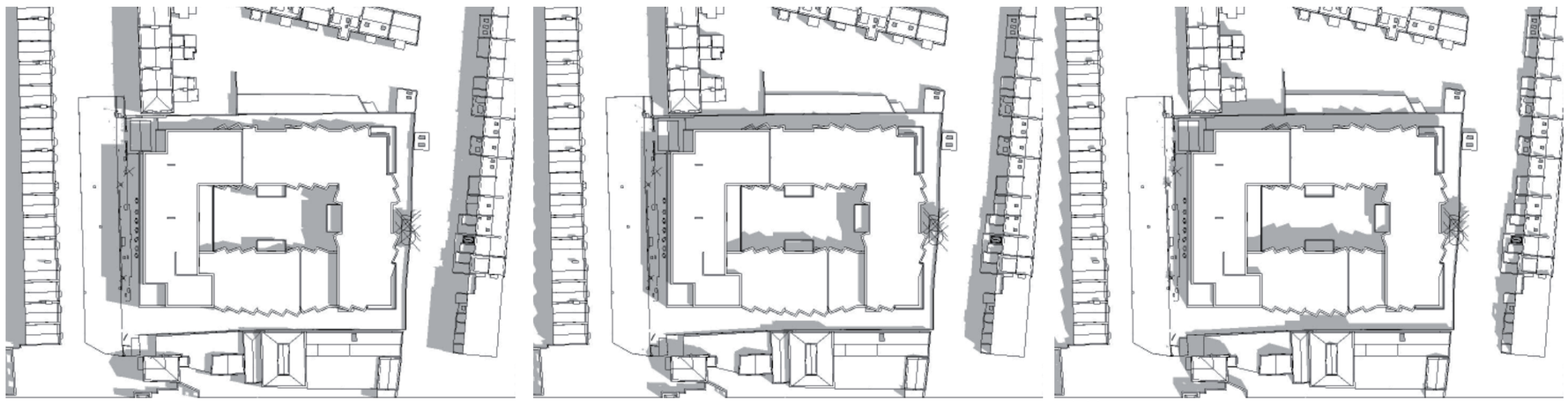
The central courtyard will receive little sunlight in winter when the sun is much lower. There is little difference in the amount of direct sunlight between a two and three storey volume on the southern facade. From spring to autumn however the central courtyard should receive a large amount of direct sunlight. The mornings should maximise sunlight and around mid-day shadows should begin increasing. The north-eastern internal courtyard facade where there are the most households will benefit from the most sunlight.



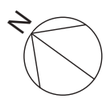
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7.10 Visibility in Context

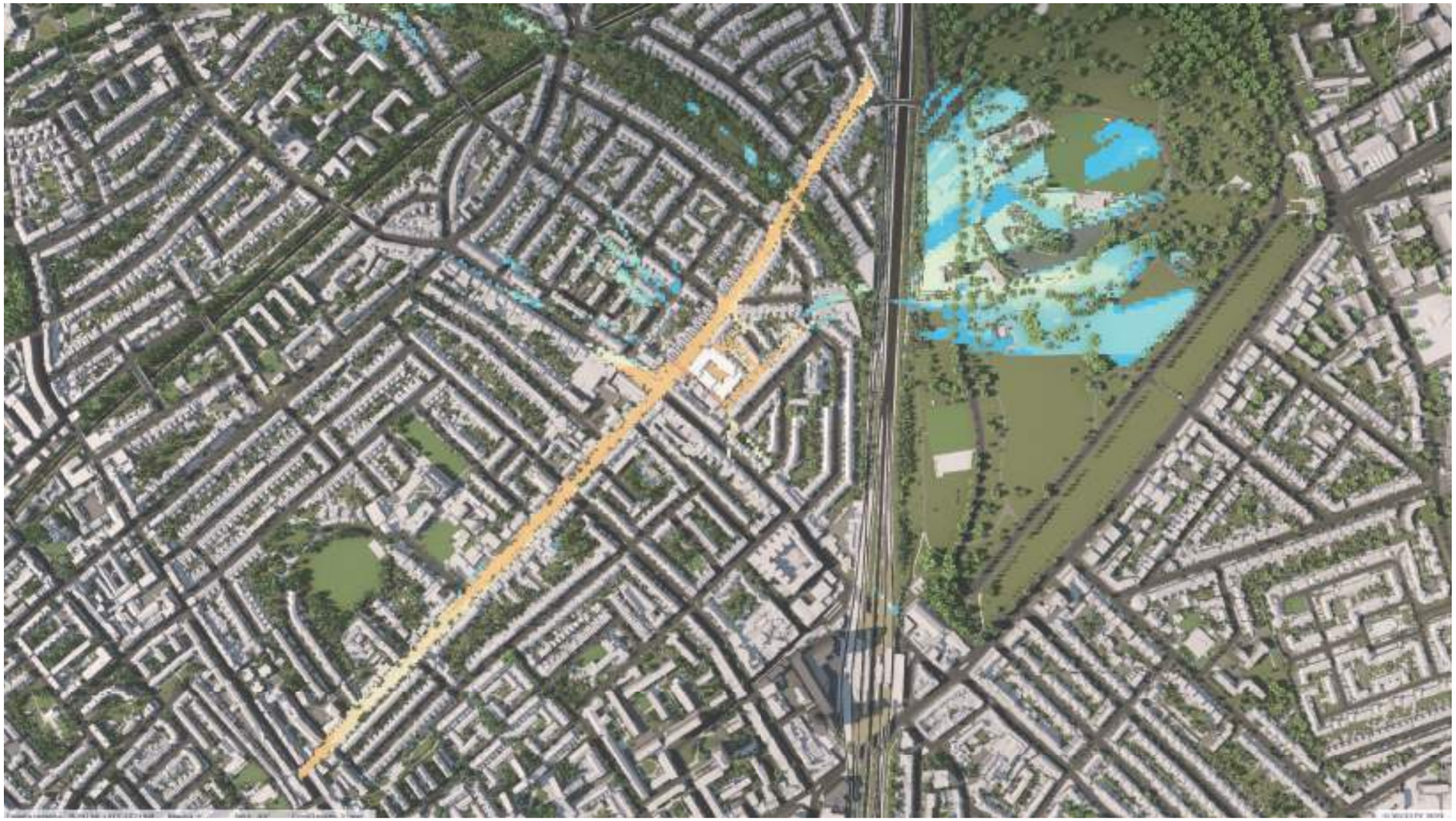
A massing study carried out by Ingleton Wood looks at the visibility of the proposal in context. The images show where in the surrounding context the project is visible from and what levels of the proposal are visible.

The orange squares refer to locations where the proposal is visible from ground to roof level.

The blue areas refer to locations where the proposal is visible only at roof level.

As shown the proposal is only visible along Upper Tollington park, the sites neighbouring gardens, a small portion along Stroud Green road and some various areas to the North and East between buildings/trees.

The Proposal will also be visible from an area within Finsbury park as the land here sits much higher above sea level. Most rooftops looking West are visible from this location.





9.0 - ‘Safety Net’ Alternative Options

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Although the feedback was generally supportive towards the proposal, concerns were raised towards the overall height and massing in relation to the context and neighbouring conservation area.

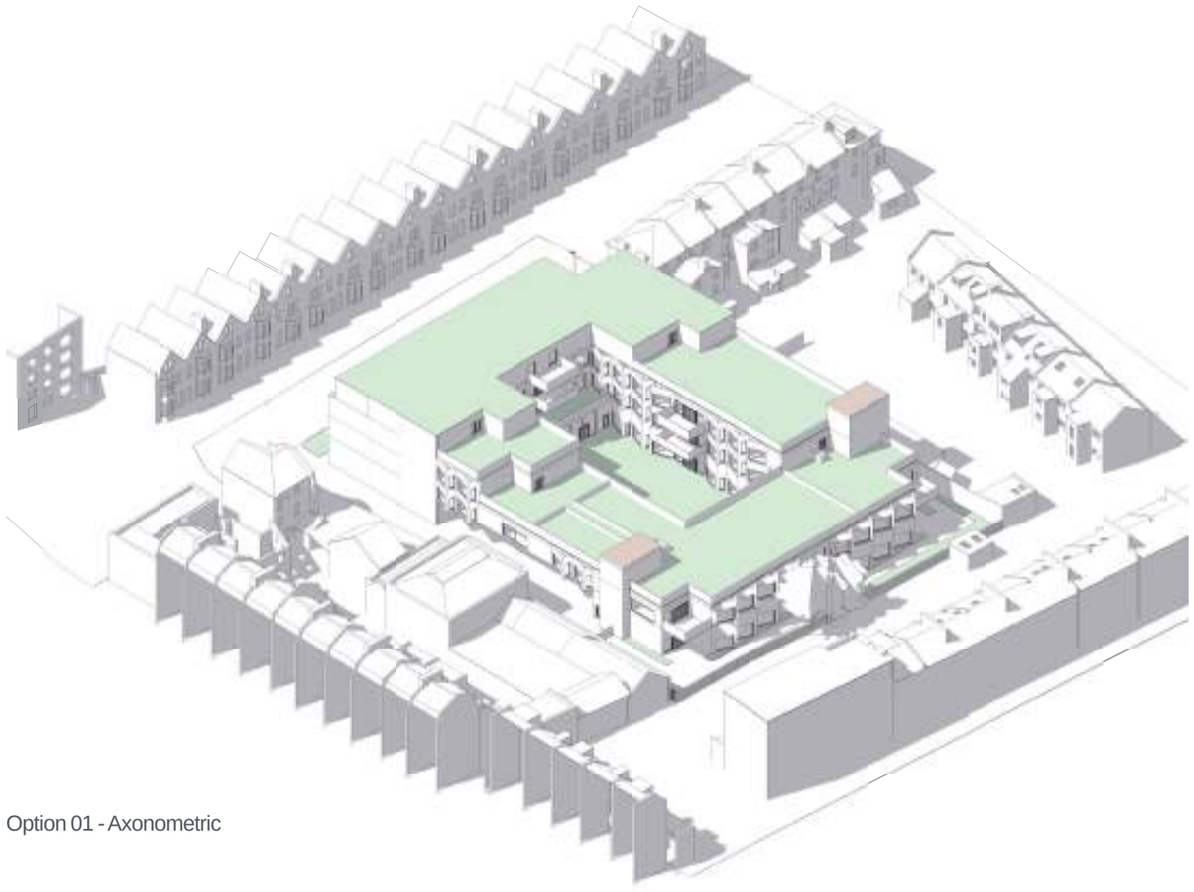
In response to these concerns Ingleton Wood have explored various ‘safety net’ options to reduce the number of floors proposed and reduce the overall massing to lessen the impact of size and height.

These options have been developed as potential backup designs of which may become the primary proposal if we face challenges with planning support. These options are to be used if the planning department strongly oppose the current proposal and its supporting argument.

1. Option 01 - Removal of the 4th floor sheltered housing.
2. Option 02 - Removal of 3rd and 4th floor sheltered accommodation.
3. Option 03 - Removal of the 4th floor and a re-design of the home to retain all accommodation including sheltered housing.

For each option a solar study has been carried out.

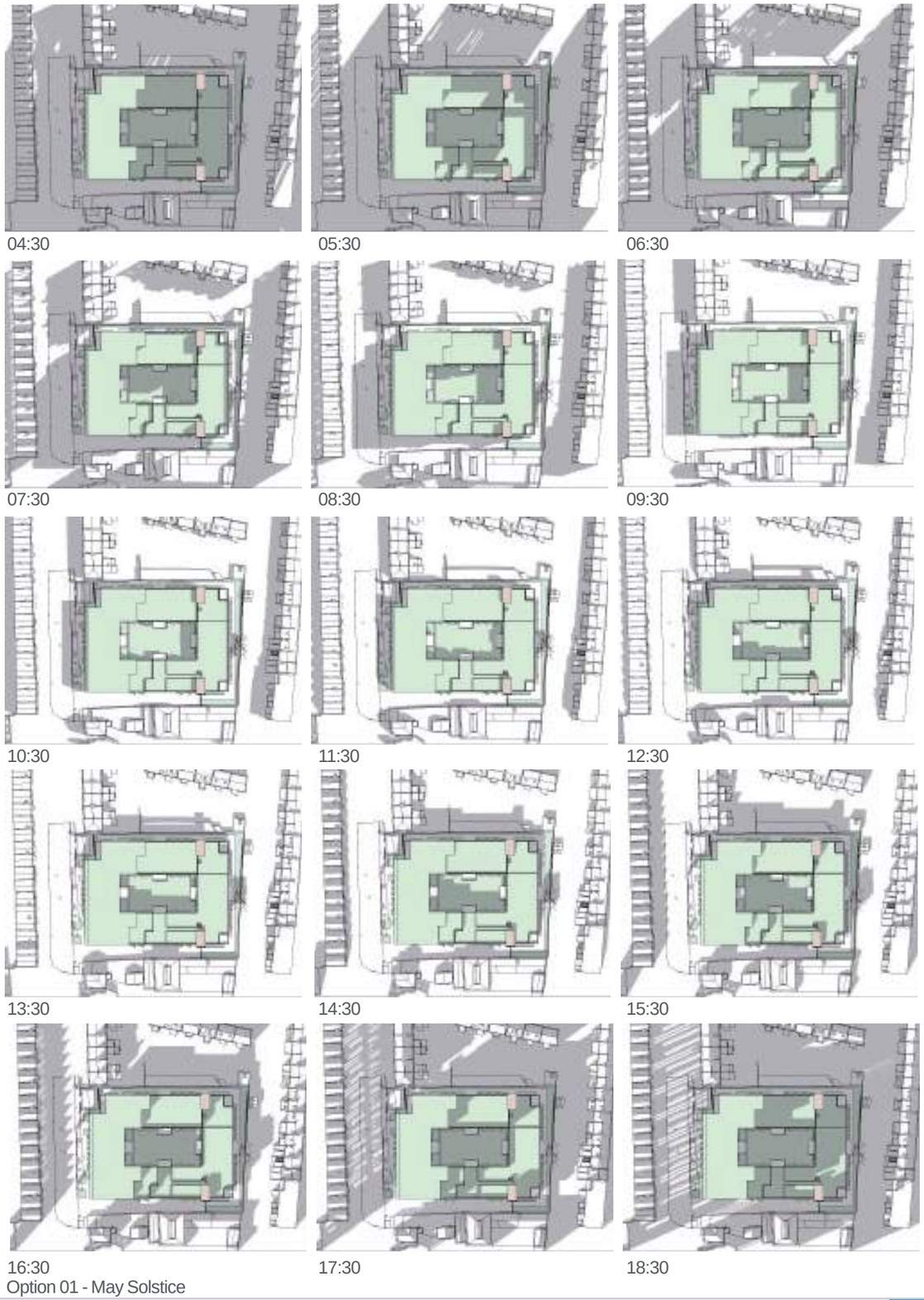
Option 01 - Removal of the 4th floor sheltered housing.



Option 01 - Axonometric

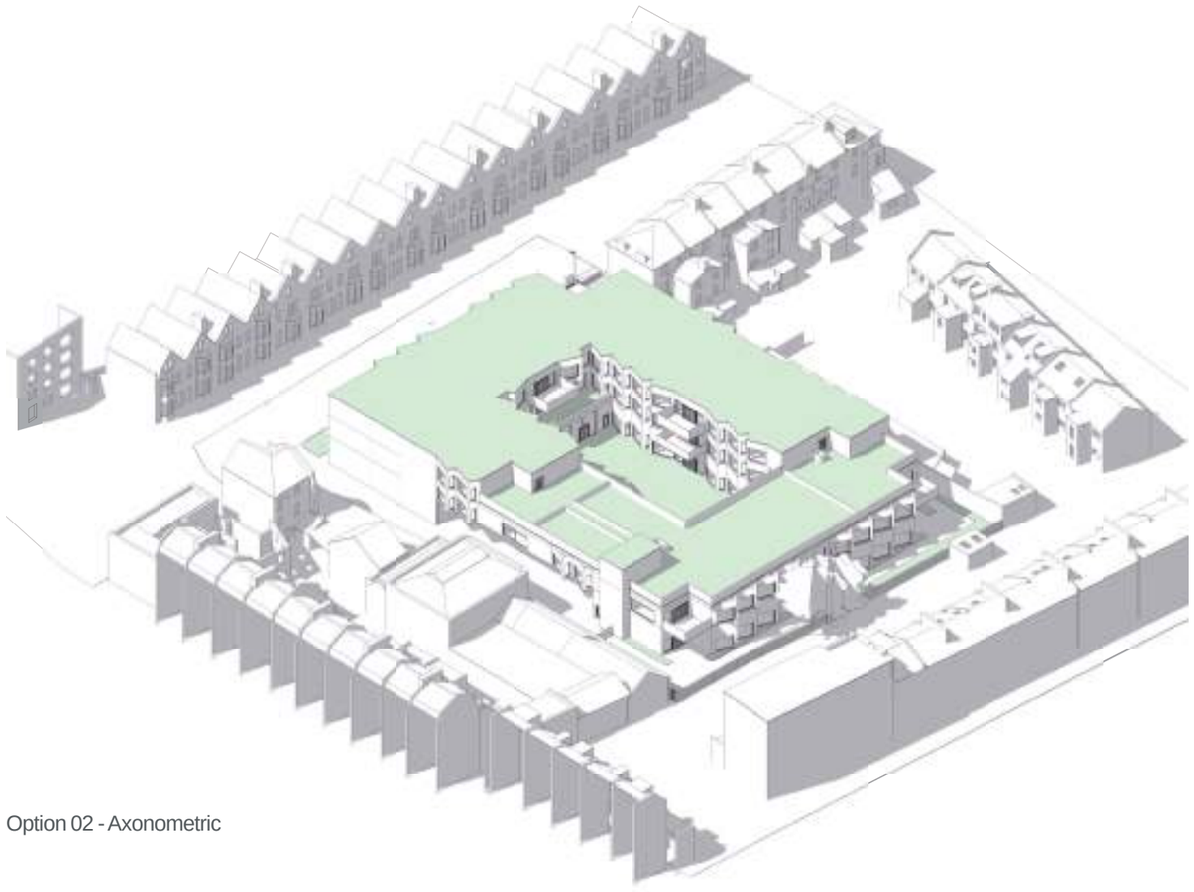


Option 01 - Section



Option 01 - May Solstice

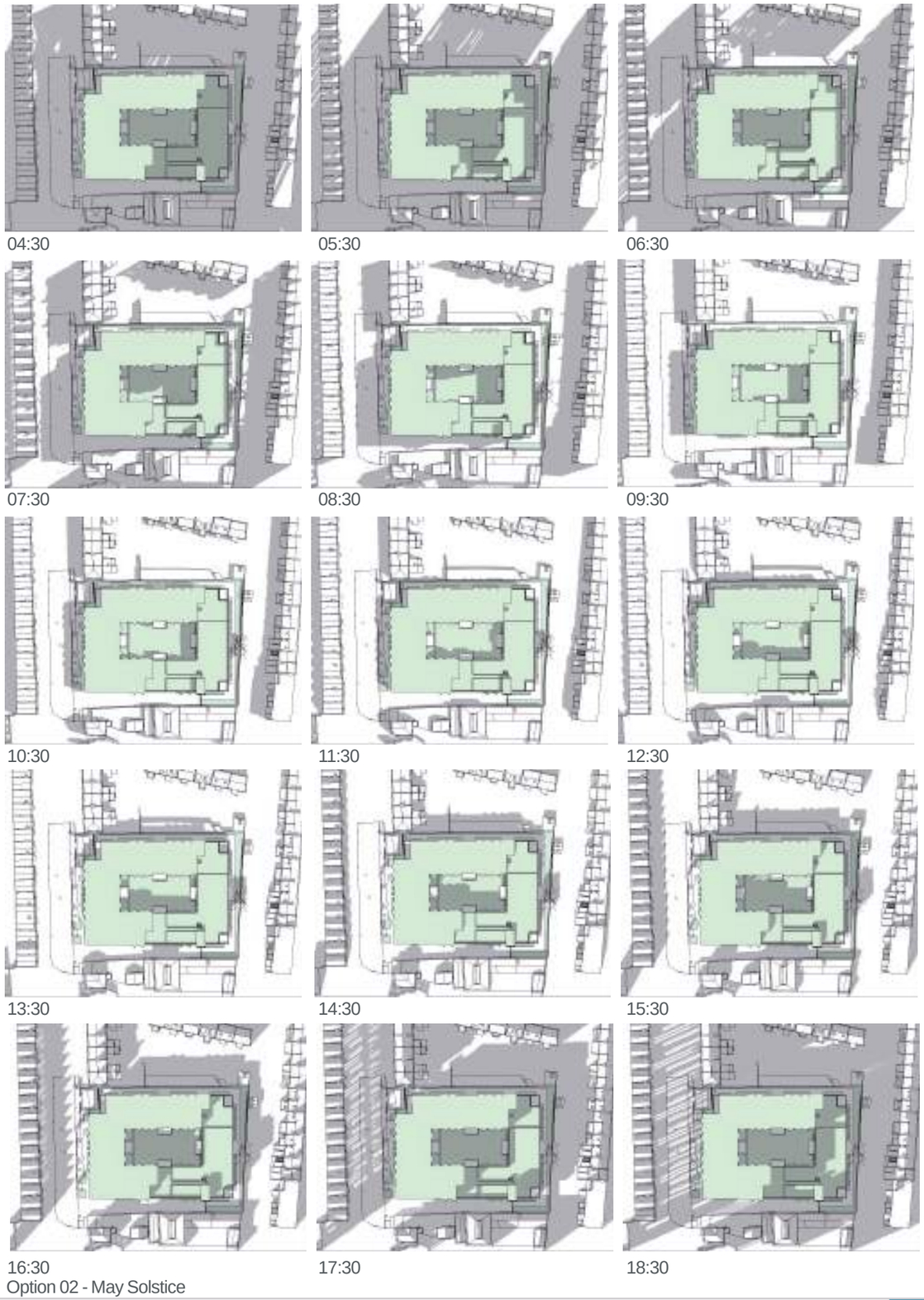
Option 02 - Removal of 3rd and 4th floor sheltered accommodation.



Option 02 - Axonometric

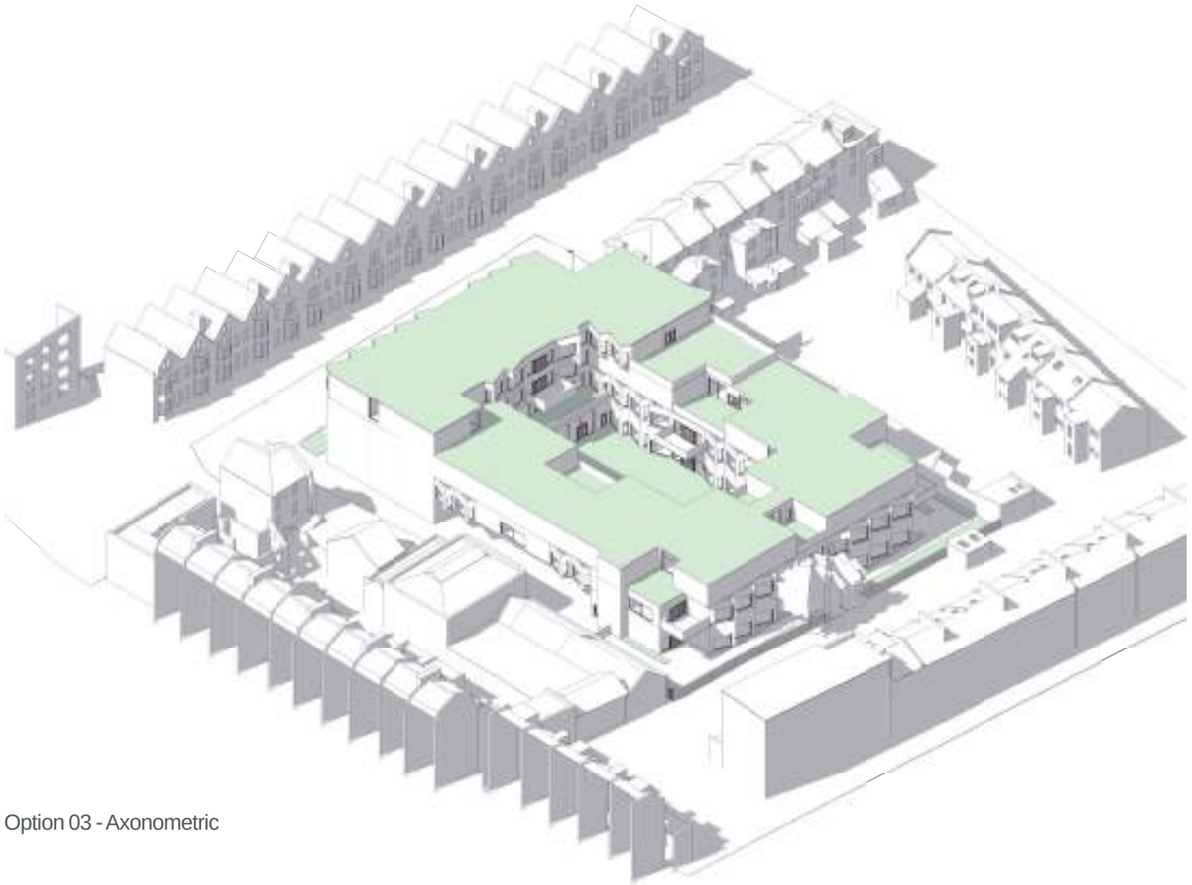


Option 02 - Section



Option 02 - May Solstice

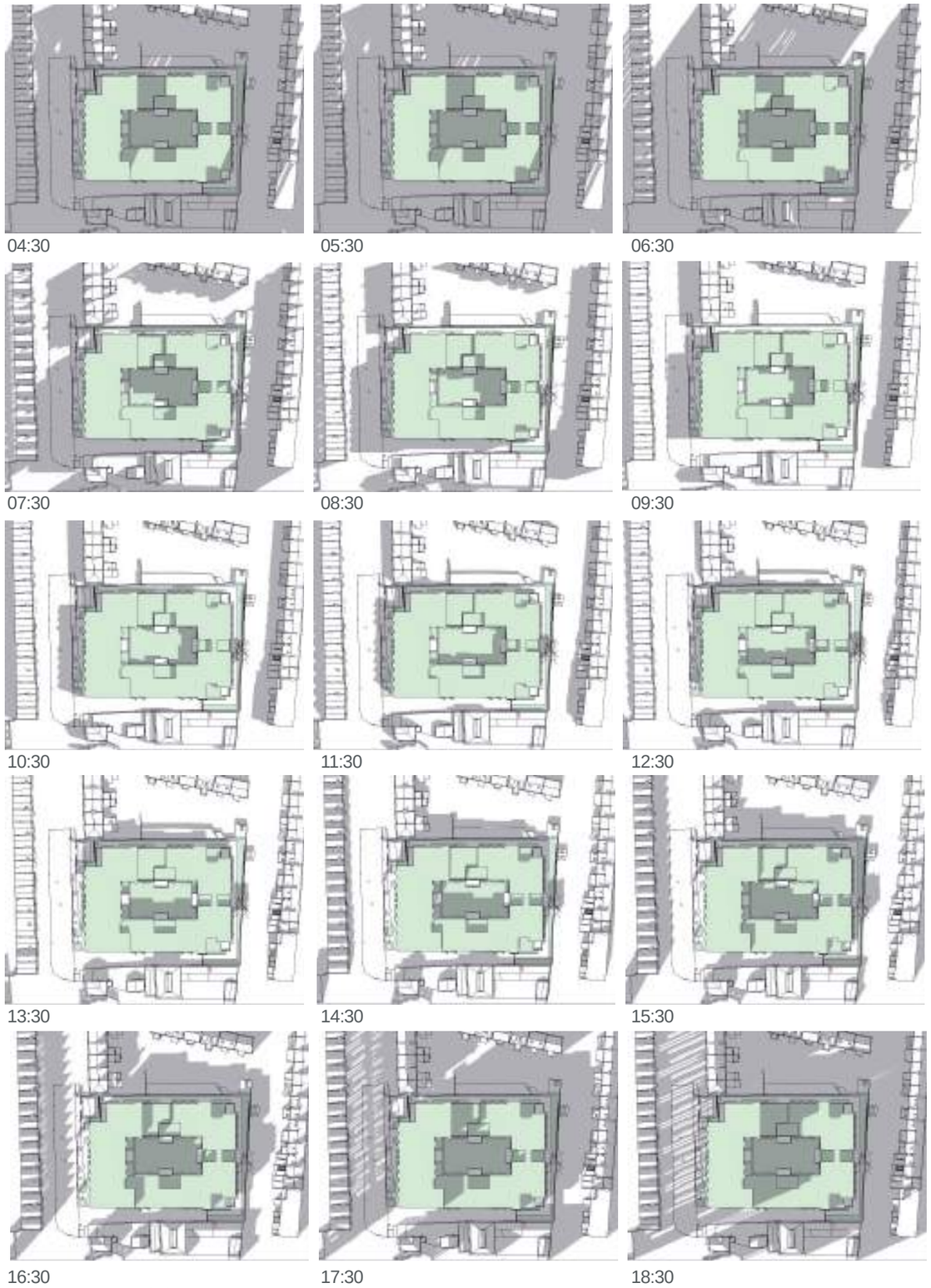
Option 03 - Removal of the 4th floor and a re-design of the home to retain all accommodation including sheltered housing.



Option 03 - Axonometric



Option 03 - Section



Option 03 - May Solstice

10.0 - Structural Engineering

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This executive summary should be read in conjunction with our full report contained within the appendices.

Our strategy and report has been based on the Option A layout as reached at the end of Stage 2, but that the same strategy applies to the revised Option B layout as later amended as a result of consultation and feedback from the planners. This will be the scheme that we will proceed with during the next Detailed Design stage.

A feasibility study was carried out prior to Ingleton Wood's appointment at stage 1. The development of the home comprises 96 units of which includes 70 standard en-suite bedrooms for those with learning disabilities, autism, complex care, dementia and/or challenging behaviour, rehabilitation and complex needs and physical frailty. 10 additional beds for homeless end of life care along with 16 sheltered housing, self-contained flats are also included within the proposal. A total of 96 units are proposed.

There was a clear aspiration at the outset of this project to create a building that impacts as little as possible on the environment, possibly even to be a zero carbon solution Enormous consideration has been given by all disciplines to creating a constant temperature throughout the building, whilst a balance of embodied carbon in the building materials of the construction against the amount of operational energy used for the lifetime of the building has resulted in the solution and building form shown.

All building materials available were considered, including concrete, steel and timber and the embodied carbon and energy use required for their creation taken into account.

Timber, especially through CLT panel systems, has the least carbon use content. However, it has very limited thermal mass and a great deal of cooling would need to be added to the building to compensate for this. Therefore, a concrete solution provides the optimal construction efficiency.

To mitigate the use of this we have proposed a prefabricated off-site panelled system that guarantees specification of materials such as recycled aggregates and low carbon cement, enhances the quality of the product and reduces substantial waste that accompanies on site solutions.
The overall sustainability solution for the project takes an holistic approach to a zero carbon solution and informs the design process from the first principles of sustainable design. The building is an efficient shape with regards the ratio of its floor area to its external wall area. All walls, floors, roof areas and windows will be designed to achieve exemplary U values to ensure that there is as little heat loss from the building as possible.

Through discussions with the Client and the Design Team, the following options have been put forward for the structural form:

Option 1 - Concrete Structure.
Option 2 – Precast Concrete Frame.
Option 3 – Steel Structure.
Option 4 – CLT frame.
Option 5 – Precast/in situ concrete with CLT floors and structural topping.

Each structural option was scored for various criteria, please refer to the presentation documents in the appendices.



CLT floor with concrete topping.



Precast concrete panels with cladding pre-fixed



Precast concrete sandwich panels (example only – cladding to suit Architectural requirements)



CLT floor with concrete topping.

Various types of construction were considered for walls and floors etc as detailed below:

External Walls: Masonry, precast concrete/sandwich, Structural Framing Systems (SFS) and Cross Laminated Timber (CLT) composite.
Internal Walls: Masonry, precast concrete/sandwich, Structural Framing Systems (SFS) and Cross Laminated Timber (CLT) composite.
Floors: In situ concrete, precast concrete/sandwich and Cross Laminated Timber (CLT) composite.

The various options were scored and it was decided to use an in situ concrete frame up to first floor (where required for long spans or areas requiring increased robustness/fire resistance) and basement areas. The reason for this is the requirement of long, clear spans at the front of the building combined with the best solution for robustness and stability.

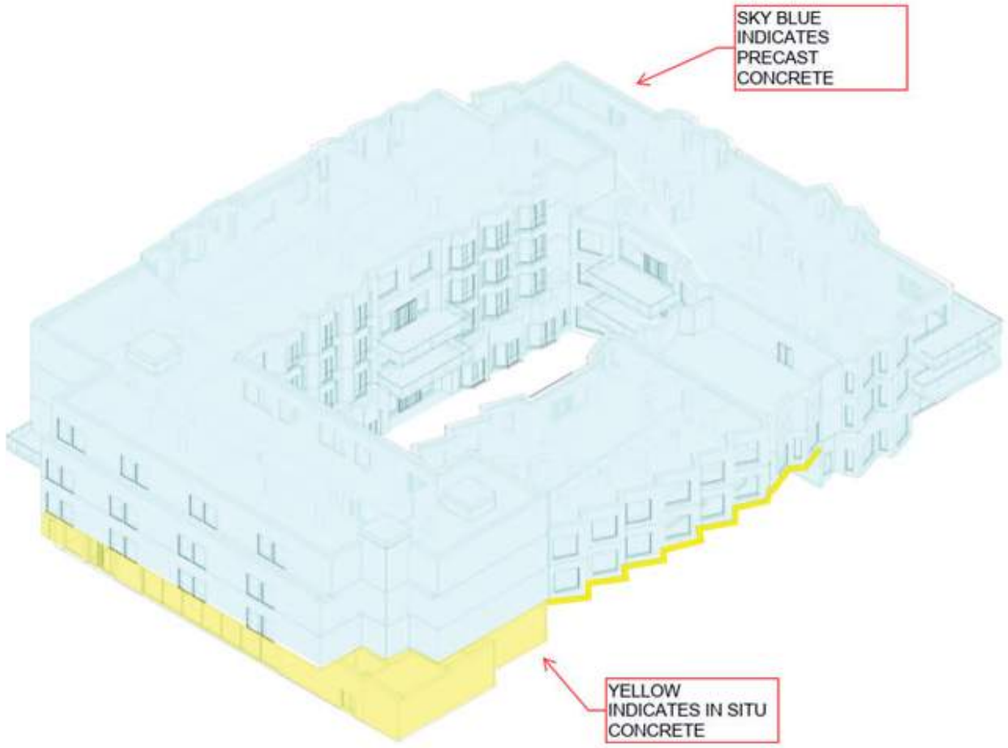
With the exception of cores, which will all be formed in reinforced in situ concrete, a precast concrete frame will be adopted throughout.

The structural zones will typically look like that shown in Figure 1.

All cores will be formed in reinforced concrete for robustness.

During the Stage 2 discussions, a hybrid scheme was initially proposed using an in situ frame at the front of the building and basement areas, precast concrete walls elsewhere and CLT composite floors with structural topping. Unfortunately, it was found that, whilst CLT performed excellently for carbon embodiment, it had several drawbacks. This are highlighted in the following table:

Number of contractors	The precast concrete and CLT floors will be installed by separate contractors. 2 to 3 contractors will be required to install the walls and floors.
Sequencing of works	The precast concrete walls will be constructed to first floor. After this has been completed, the CLT contractor will install the floors. Then a possible third contractor will install the concrete toppings and grout up the connections between the walls and the floors. This will continue for each floor. This is overly complex, time consuming and inefficient. The bespoke nature of the design should be considered as a risk, as all the contractors will need to develop their design and details and coordinate, and defects and costs associated with this are likely.
Knock on effects of hybrid design.	The sequencing of works and use of different materials will require more deliveries, vehicle movements and crane operations over a longer programme. Apart from the various neighbourly issues, this will need to be offset against the carbon embodiment potential of the timber.
Delay in watertightness	The increase programme will cause the timber to be exposed to the elements for a greater duration and they will inevitably become saturated. The timber will only be able to dry out once the roof and elevations are installed and programme time will need to be allowed for this.
Fire	The CLT floor is not fire rated and will require a fireboard soffit. As such, the CLT will be hidden from view and there will be no Architectural merit obtained for providing a hidden timber soffit. It is not possible to incorporate the fireboard into the manufacture of the floor at the factory as it will become wet on site. The fireboard can only be installed once the building is made watertight and the timber has dried to the target relative humidity.
Cost	There is a circa £350k increase in project costs for CLT floors. Preliminaries will also increase owing to an increase project programme.
Appearance	The CLT will be encapsulated by the concrete topping and fireboard soffit. Once the project is completed, the end users will never see it or be aware of its existence.
Carbon embodiment	The CLT floor outperforms precast concrete for carbon embodiment.



Foundations:

Given the local ground conditions, foundations will comprise reinforced concrete piled caps, ground beams and slabs on piles.

During our Stage 2 work, we referred to the following information:

MPA The Concrete Centre:
Concrete & BREEAM
Concrete credentials
Specifying Sustainable Concrete
Thermal mass explained
Whole life carbon and buildings

Structural Timber Association
CLT Design Guide
CLT Information paper for low impact building materials
CLT Robustness Parts 1-5
SIPS

TRADA
CLT Design and Performance

BSRIA
Energy storage in buildings

NHBC
Modern methods of construction

IStructE
Embodied carbon tool and associate documentation.

We also discussed the project with various suppliers and contractors, namely KLH, Techcrete and Creagh Precast Concrete Ltd (among others).

Conclusion:

There has been much discussion on the various materials and construction methods to reduce carbon embodiment during Stage 2.

We initially proposed a hybrid in situ concrete/precast concrete/CLT floor scheme for this project (Option A).

However, after some discussion, it appears that this proposal is overly complex, slow to construct and will inevitably cost more to build.

Furthermore, the CLT floor will be encapsulated by other materials for fire resistance and will never been seen. We therefore consider that the only significant advantage for using CLT on this scheme is carbon embodiment.

We propose to reduce the amount of in situ concrete in the scheme by stopping in situ concrete at first floor level (where it is required). Precast concrete walls and floors would be used above this level throughout the project.

Carbon embodiment will be reduced with the use of cement replacement.

We therefore recommend the following construction:

Roof and floors Precast concrete with structural topping.
Walls Precast concrete.
Elevations Precast concrete sandwich panels with elevation finishes applied at the factory.
In situ concrete Only to first floor where large spaces/ volumes are required.

11.0 - Mechanical Engineering

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The drawings and report have been designed in line with the proposal prior to the planning officer comments and subsequent re-design. The concept and strategies are still applicable to the revised development and shall be developed at stage 3.

Outline Mechanical Services Strategy

As part of the planning requirements, the proposed building will achieve zero carbon emissions via an energy efficient and sustainable design that has involved a combined effort from multiple disciplines. Mechanical services play a key role in delivering this target by producing an effective and efficient design.

This report undertakes a pre-planning review and appraisal of the present architectural proposals. Especially in relation to the design concepts of the mechanical, public health services and their impact on the carbon emission level.

During this pre-planning period, we will provide advice on the types of M&E systems that would be suitable for the building, these will include:

- Advice on appropriate heating strategy within the main building and the sheltered housing.
- Advice on a ventilation strategy.
- Advice on water distribution.`
- Advice and comments on the size of the risers and plant rooms indicated on the Architect's pre-planning drawings; and
- Advice on the opportunities of overcoming any potential overheating in the communal areas.

The heating and cooling strategies have been assessed in a separate feasibility report which should be read in connection with this report.

The proposed and most suitable solution and that will be further developed at RIBA stage 3 is Option 3.

Option 5 has been discussed, however this includes the use of biofuel in which the client has stated their infrastructure is limited and thus not suitable at this time. The options are similar and allows for future upgrade.

The summary from the feasibility study showed, the recommended heating system for this building is Option 5 which would involve hybrid design solutions, combining various low carbon and renewable heating systems operating together. Option 5 meets most of the design requirements and achieves zero-carbon status without the need for a carbon-offset payment. It has achieved the greatest carbon saving and resulted in negative carbon emission with a future proof and resilient design. The biofuel boilers are the backbone system of AHSP plants providing an additional level of redundancy which reduces points of failure in the system operation. It is also recommended with the aim of balancing the capital and operation cost of the heating system.

The second-best recommended heating system is option 3 which does not use biofuel and operates with all electric fuel. The system type used in option 3 works in a similar way as option 5. The only difference is that ASHP will contribute more heat into the heating system, providing an energy efficient but less resilient system operation when compared to option 5.
If it is required in future, the switching from option 5 to 3 or vice versa will not lead to the major system changes as the boilers can easily be tapped/connected into the hydraulic system of the heating system or can be disconnected whenever required, provided the space for a fuel tank and the space for spare ASHP plants are allocated in the building. This change does not require any impact on the existing buried utility services as the system runs with oil (biodiesel) with storage.
The recommended heating system (option 5) will include the ground source heat pump system (GSHP), providing LTHW to meet space heating requirements within the nursing beds and sheltered accommodation. While the space heating of the non-residential areas such as, offices and common areas will be served by the multi-split variable refrigerant flow (VRF) heat pump system. The domestic hot water (DHW) system will be served via dedicated air source heat pump (ASHP) plants and the boilers that run with renewable fuel (HVO).

The cooling strategy will rely on use of passive design measures to avoid the use of mechanical cooling in the building. It is our understanding from the initial client meeting; the cooling strategy will be based on adaptive comfort within the occupied areas where the internal temperature is allowed to fluctuate around the desired set point. The cooling is deemed to be not required if the rooms comply with the requirements of TM59, TM52 for residential and non-residential areas respectively. The proposed strategies applied in the earlier architectural scheme indicated that mechanical cooling could be avoided or minimized with passive design strategies. These involve high building fabric performance, thermal mass, effective use of ventilation via natural ventilation openings and the assistance of a mechanical ventilation system when required. However, this solution has been successful using the earlier architectural model, which is currently being revised. Once complete, a further thermal model is necessary to ascertain a fully working solution based on the new layouts.

Full details of the proposed heating and cooling solution can be found in the feasibility study. Once the preferred heating/ cooling solution is agreed, more details can be provided at the next stage of this project.

The remainder of this report will primarily focus on the other mechanical services strategies proposed for this building.

The fresh air ventilation to the apartments will be provided via a mechanical ventilation heat recovery (MVHR) system, located in the utility cupboard. The fresh and exhaust air will be ducted and terminated at the outside louvre above the window head within each apartment. The nursing beds and other non-residential areas within the care home will be served from the main air handling plants (AHU) located at various locations on the roof. The ventilation system will be designed to provide an adequate ventilation rate to reduce risk associated with respiratory diseases. AHU plants will be designed to operate based on a zonal ventilation system. Each block/wing used in the building will be served via a dedicated central AHU plant to reduce horizontal and vertical duct distribution in the building.

All toilets within the communal areas and nursing beds will be ventilated via centralised twin extract fans located at roof level. The kitchen shall be provided with a specialist extract system via a suitable canopy to suit the specialist kitchen design. The kitchen canopy extract system shall incorporate suitable grease filters. Make up air shall be tempered and filtered. The intake position for the kitchen ventilation system will be located at a suitable distance from the discharge location. The laundry shall be provided with high and low-level natural ventilation openings.

As the building will be supplied with low temperature hot water from the heat pump system, the temperature differential between the mean water and the room temperature will be smaller, resulting in a need of longer radiators in order to provide the required heat output. Alternatively, short but full height vertical type radiators can be provided to increase the surface area.
The panel type radiators will be provided within the apartments, while the nursing bed areas will be supplied with the thermo skirt and trench heating type emitters. As the water is supplied with low temperature, the scalding risk is minimized or avoided, however if preferred, these areas can also be provided with the low surface temperature radiators to provide extra protection. The heating in the other non-domestic areas will be delivered via ceiling or floor mounted fan coil units served by the VRF heating plants. The heating within the back and front of the house, corridors, and WC areas will be provided via panel radiators.

The domestic hot water to the apartments will be provided instantaneously through the HIU. Domestic hot water delivery temperature will be based on 50C. Thermostatic mixing valves (TMV) will be provided to all baths or shower outlets. DHW with the care home facility will be supplied from the centralized hot water cylinders/calorifiers located in the main plant room. The water will be distributed at 60C with the recirculation pump and piping system to provide rapid hot water and avoid legionella disease with the water distribution system. The water will be blended at the point of supply to the nursing beds, with cold water through TMVs to provide safe use of water for the users.

Boosted cold water will be provided to each apartment from the main cold-water tank located in the basement plant room. The residential water meters for affordable accommodation will be located within the riser and accessible from the landlord areas. The main water supply feeding into the building will be metered at the plant room level.

At the time of writing this report, the fire strategy for this building is still in development. To enable the initial plant provision, the services strategy will be based on typical fire services used in similar buildings. This includes a domestic and non-domestic auto fire sprinkler system, comprising of water tanks and fire pumps. They will be located within the basement plant room. Each block will be provided with fire smoke extract fans and

a smoke shaft. The makeup air provision will be through the AOV openings on the façade or on top of the stairs.

Buildings that are less than 50m in height need to be provided with a dry riser, with an inlet adjacent to the fire-fighting entrance of each block with outlets at each landing for firefighting purposes. A wet riser is not required.

The LTHW, BCWS and smoke ventilation risers will be located within the main corridors. The basement plant room will be ventilated via mechanical fans, with intake and exhaust positioned at H/L on the external wall of the ground floors.

The main corridors adjacent to the apartments and nursing beds will be ventilated via natural ventilation openings located on the external walls. This ventilation opening will be controlled based on internal temperature within the corridors. Where natural ventilation is not feasible, the corridors will be ventilated from the main AHU plants.

CAT5 booster set will be provided to serve all bin stores for wash down facilities, roof top plant rooms and external bip taps for irrigation purposes.

The above ground drainage will be provided with single soil vent pipes that will terminate at the roof level with AOVs. The sanitary appliances will be verticality arranged to reduce offsets within the apartments, nursing beds and other occupied areas. Where this is not possible due to room configurations, stacks will be completely enclosed. This is to reduce noise and dissuade modification or potential damage to the common services.

Mechanical Heating Plants Option Study - Executive Summary

The brief for delivering this project has been developed during this initial study period. It is evident from our initial interaction with Haringey Council that there is a desire for this development to provide an innovative, energy efficient solution to achieve zero carbon status.

Ingleton wood have been involved from the outset, working as an integral part of the design team to develop the outline scheme with an optimised design. Emphasis on air quality, passive control of overheating together with flexibility and scalability of services solutions have been major factors in the selection of a space heating solution in this landmark scheme.

The following heating design solutions have been shortlisted for this study:

Reference Model- Communal CHP with Condensing Boilers and Thermal Stores (Included for comparison purposes only)

Option 1 -Communal Air Source Heat Pump (ASHP) Plants with Solar Thermal Stores.

Option 2- Communal Ground Source Heat Pumps (GSHP) Plants for Space Heating and Dedicated ASHP plants for the Domestic Hot water System (DHW), together with Solar and Thermal Stores.

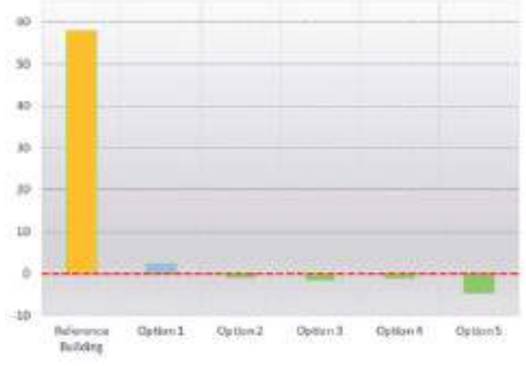
Option 3- Communal Ground Source Heat Pumps (GSHP) Plants for Space Heating of Residential and Nursing Bed Areas and VRF Heat Pump Plants for Space heating of the non-residential areas (mainly serving the offices and common rooms). Dedicated ASHP plants for the Domestic Hot water System (DHW), together with Solar and Thermal Stores.

Option 4- HVO Boiler Plants for Space heating and ASHP Plants for DHW system with Solar Thermal System.

Option 5- Communal Ground Source Heat Pumps (GSHP) Plants for Space Heating of Residential and Nursing Bed Areas and VRF Heat Pump Plants for Space heating of the non-residential areas (mainly serving the offices and common rooms) and HVO Boilers and ASHP Plants for DHW System, with Solar Thermal System.

Based on the information available at the current stage and the model assumptions built in the assessment, options 2, 3, 4 and 5 have achieved zero carbon status. The Photovoltaics (PV) has contributed to the greatest carbon saving.

Graph 1 - The carbon emission of the current options after all renewable technologies are applied (Tonnes CO2/Year)
The information presented in this graph comprises of new SAP 10 carbon factors.



The calculation has been carried out in accordance with GLA carbon correction guidelines, which applies new carbon factors for electricity (0.233 kgCO2/kWh) and gas fuel (0.210 kgCO2/kWh). The new carbon factors also show CHP machines do not enable as much carbon reduction as it used to do with SAP 2012 carbon factors. If the same graph had been presented with the old carbon factors, the CHP scheme would have been the best performing option amongst the others. However, it is currently the worst option due to low carbon factor of electricity in the current year. The best environmentally friendly scheme is option 5 which includes mix fuel types. The boilers using renewable fuel with the combination of heat pumps not only achieves zero carbon, it also marginally exceeds it. The second best is option 3, using all variations of heat pump plants.

It should be noted that, the options that achieved below zero carbon may not be fully considered as zero carbon as the carbon emission reduction is associated with the fixed building services. The energy consumed from the equipment have not been included in the assessment. This is in line with GLA's carbon assessment method; so in the context of planning requirements, this is still recognised as zero carbon based on GLA's classification.

Based on the above and the outcome of the initial results, we recommend that the heating plant of this building should incorporate a combination of Heat pump plants and Biofuel fired highly efficient boilers. Option 5 is the most resilient system type, achieving zero-carbon status with a diverse fuel type. HVO is renewable fuel and provides about 50% of the heating demand. The remaining will be supplied by the electricity grid. Until 100% renewable electricity is supplied from the grid, HVO boilers can fill the gap by sustaining the low/zero carbon operation for this building. Fuel diversity is especially beneficial to the building because it can still provide heat during a power outage, as a result of a high increase in power demand. It also helps balance the operational cost with the ever-increasing electricity prices.
When the electric grid becomes 100% renewable energy, the heat pump plants can be designed to provide 100% capacity, if the plant is sized to provide this level of resilience. Then the HVO boilers will only be needed as a backup source.

The other reason that option 5 can be beneficial, GSHP plants can be used in the cooling mode in the areas they serve, the cooling should not normally be required if all proposed passive design measures are implemented in the building. However, the cooling may be desired by the occupant during short periods or possibly in the future when the outside temperature becomes much hotter than people can cope with. Elderly people can be more sensitive to temperature and may not tolerate very hot temperatures so, providing this flexibility in the design can help them flex the temperature as needed. It also helps the building owner by not needing to invest in a new costly plant in the future. The same logic also goes into the selection of VRF plants which are also used in this option. When required, they can be operated in cooling mode. The cooling load in commercial areas can be higher than the residential areas, because of that VRF plants can be better suited for these kinds of areas and they can be operated more efficiently than ASHPs.

Option 3 operates in a quite similar way to option 5, except it does not have fuel diversity. It is a full electric scheme, operating with a heat pump plant only. If option 5 is not desired due to different fuel use, then option 3 could also be recommended for this project.

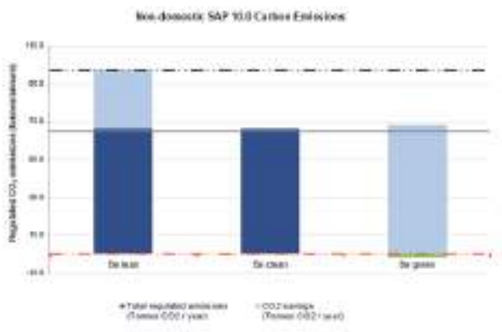
Finally, option 4 and option 2 could also work but they do not provide much saving below zero. They also do not provide flexibility when being operated e.g. cannot switch over from heating to cooling mode when required unlike the other options. Due to this, they are the least preferred options when compared with the others.

All aspects of the design have been considered holistically via a scoring matrix. Option 5 has scored the highest points which coincidences with its carbon reduction performance. Overall, it appears to be a better design when the other operational factors are all considered. Option 3 is the second best, in both carbon reduction and the scoring matrix. It can be considered as a good fall-back option.

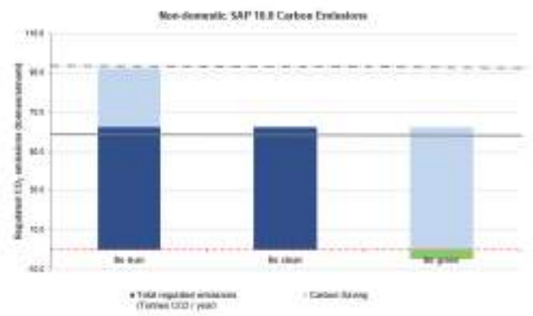


Graph 2- Graph showing score of each option based on holistic design approach.

The following graph shows GLA be lean, be clean and be green carbon reduction hierarchy for option 5 and option 3.



Graph 3 for Option 3- GLA Carbon Reduction Hierarchy



Graph 4 for Option 5- GLA Carbon Reduction Hierarchy

12.0 - Electrical Engineering

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The drawings and report have been designed in line with the proposal prior to the planning officer comments and subsequent re-design. The concept and strategies are still applicable to the revised development and shall be developed at stage 3.

Executive Summary

The introduction of new building services will fully comply with current standards and regulations including CDM/Health and Safety requirements for safe access and maintenance.

As this new development is going all electric it is proposed to build a new substation on site to cater for all options mentioned from the mechanical report. This substation will be a new standalone brick building built to UKPN 's specification. UKPN will require 24hr access to this building for maintenance and any equipment that may need to be replaced during its lifetime. Power cables will be installed from this substation to the new electrical intake room for the new development. This will also include twin wall rigid ducting to protect the cabling underground.

The backup generator will provide power to all firefighting equipment on site in the event of a power failure on the grid. The firefighting equipment which the generator will power up during the power failure will consist of firefighting lifts, smoke ventilations systems, sprinkler system and fire alarm systems should they be mains fed. A protected housing location will be provided for this unit with any acoustics issues considered should this enclosure be part of the new building.

A new panel board will be in the dedicated electrical intake room and will be complete with power factor correction and surge protection unit to protect the lv infrastructure from any voltage spikes. Distribution boards will be arranged throughout the building to enable easy identification of the areas serviced for local isolation.

The main panel will be provided with sub meters for all out going sub-main ways. The meters will be capable of being linked to the building management system. The main panel will have the provision for the connection of the PV system. The new mains panel will feed sub-distribution panels, distribution boards and mechanical control panels with low smoke multi core SWA cables running within the ceilings and service voids on steel trunking or cable tray systems.

The new mains distribution system will be in accordance with BS7671:2008+A3:2015.

New MCB distribution boards will be used to serve the lighting and small power installations in the building. These will be in storerooms, riser locations and office space. The distribution boards will be provided with RCD circuit breakers as required to comply with BS7671:2008+A3:2015.

New automatic Power Factor correction equipment will be assessed and provided to the new main low voltage switch panel located in the ground floor electrical cupboard. The equipment will be arranged with staged control to cater for differing daily demands. Power Factor unit will reduce the total power consumed by the electrical installation and provide the following benefits: -

- Financial saving
- Extended equipment life
- Increase load capacity.
- Environment benefit

Voltage optimisation will be considered on the incoming electrical service as part of the carbon reduction and energy saving strategy for the building.

Voltage Optimisation can cut electricity bills considerably and lengthen the life of the equipment. The equipment will generally run cooler at the reduced voltage, thus reducing annual maintenance costs across a plant. Voltage Optimisation helps to mitigate excess energy by ensuring equipment only receives the electrical voltage it needs to perform its task and operates more efficiently.

The lighting installation will be in accordance with the requirements of the BREEAM report which will require compliance with CIBSE Lighting Guides and SLL Code for Lighting 2012. LED lighting is proposed throughout the new building. The Dementia Friendly lighting will be designed to provide control, create different moods, and create calming environments in all areas of the new development.

The colour active luminaires in the dementia and autism areas will produce specially formulated artificial light that replicates the natural cycle of daylight, intended to promote a person's well-being, mood, health and can also help sustain a person's circadian rhythm. Switching will be in the form of rocker switch and dimmable switch to allow staff the flexibility of controls in all local areas. Additional lighting controls throughout the building will consist of CP electronics presence detectors and absence detectors.

The emergency lighting shall be provided throughout in compliance with BS 5266 and BS EN 1838. The system shall illuminate escape routes throughout each building together with toilets without borrowed light and over 8m², all firefighting equipment, manual fire alarm points and mounted internally and externally to all final exits. In addition, emergency lighting shall be installed to illuminate the main panel, control panel and all distribution panels throughout the new development. The emergency lighting will be a new standalone smart scan emergency firefly system and Lexi monitoring system throughout the building. This system will have 5-year warranty on each fitting and battery backups for each fitting will be included in the 5-year warranty as well. The smart scan emergency luminaires are self-test by default and can wirelessly connect to the smart scan website via a central gateway.

Small power will be provided to suit the areas as required with recessed socket outlets and fused connection units which will comply with BS7671. New power supplies will be provided to suit the new mechanical services layout. These will be fed directly from the lighting and small power distribution boards except for larger plant that will be fed from main control panels. Miscellaneous power supplies will also be provided throughout for the electrical and mechanical services equipment including, but not limited to, items listed below.

i. CCTV system
ii. Security system
iii. Fire alarm system
iv. Break out Spaces.
v. Hand driers within toilets
vi. Disabled persons toilet alarms
vii. Telecom's systems
viii. Extract fans including heat recovery units.
ix. Specialist information displays
x. Access control system
xi. WI-FI system
xii. Ventilation Units
xiii. Specialist Items

A new L1 analogue addressable system is proposed throughout the new building which will comply to BS5839-1:2017. All areas will be covered including any unused areas such as roof void spaces above 750mm in dept. The L1 addressable system will ensure that the earliest possible warning of fire for everyone in the building to achieve the longest possible time to escape.

The new system shall be provided with a separate 'Redcare' facility to an alarm receiving centre. Sounders and flashing beacons will be included in all WCs to comply with DDA requirements. Category M systems shall be installed in conjunction with the L1 system and voice alarm systems. The system shall be linked to the automatic gate controls to enable access to the site for the emergency services.

The new system will be linked to any AOV's and firefighting equipment throughout the building. The new system will have open protocol incorporated into the design to ensure different manufactures components can be installed on the system. The system will also be linked to door hold open devices throughout the new building and in the event of a fire will release the doors to ensure that the fire does not spread throughout the building.

New access control will be proposed to all main entrances of the building and external points such as pedestrian gates and vehicle access gates. The confirmed system will have secure access via the presentation of a keypad access control or fob access on the un-secure side of the doors and push to exit and green break glass units shall be provided on the secure side for door release. The access control infrastructure will be in line with the Secure by Design officer requirements throughout the whole site. All access control points will be provided with Fire Alarm interfaces to allow release of the doors in the event of a fire.

The dedicated distribution equipment shall be installed within suitable accessible stores or riser cupboards throughout the site. These systems will have a combination of low voltage cabling and extra low voltage cabling throughout the site for this infrastructure.

New IP CCTV systems will be provided for the most flexibility and control which will cover the whole site with particular focus on access, egress points, external perimeter of the building, car park area and other areas where vandalism might occur.

The system will be used to monitor external activity to the building which will be dictated by the necessary parties within the Haringey Care Body organization. The CCTV will be in line with the Secure by Design officer requirements also.

All cameras will be linked to a logger unit with a broadband location. The IP cameras and recorded video footage can be viewed using computers on the local network or remotely via the internet. User access can be limited by using passwords and IP filtering and video can be encrypted for additional security.

The emergency panic call system will allow a resident to place a call via a wall mounted alarm or pull cord unit. Once activated, the call will go through to a member of care staff. The Care Staff will have a digital phone in the office for incoming and outgoing calls. Digital phones will be placed in all office / reception areas. Two “Digital Extension Cordless Telephones” (DECT) will be provided. Care staff will be able to receive emergency calls, social calls, and fire text messages on this phone. They will also be able to make outgoing telephone calls. The number “1” on the handset will be programmed as a panic hot button. When pressed and held down, it will automatically connect to a dedicated Careline, who will be able to record the call and arrange the appropriate response. The disabled alarm call system will be in accordance with BS 8300 2009 + A1:2010 and Building Regulations - Approved Document M and will include the following: control units, remote indicators, overdoor lamps, pull cords, reset buttons, door audible/visual alarm system and will be linked to the main panel at reception. The alarm shall only be reset using the reset unit button from within the disabled WC. Each alarm indication LED on the control panel shall have an adjacent printed adhesive label that indicates the location of the alarm e.g., floor / room number.

Refuge alarm installation will be provided to the building complying with current standards including the lift car. This comprises a main panel located adjacent to the fire alarm panel at the reception area, intercom unit located in the refuge areas and lift car.

The integrated reception system will cover radio and satellite services throughout the site. The complete installation will meet the design principals of the building regulations and the requirements of the Haringey Care Home regulations. A digital television distribution system will service connection plates in all living room spaces and main bedroom and example of this plate installation is shown below.

New audio frequency induction hearing loop system will be provided in the care home building. The systems shall generally comprise but not limited to:
“PowerSupply, “Containment, “Controlequipment, “Concealedindicationloopcablingand “ Wireless lapel type microphone.

Room loops comprise of a microphone, an amplifier and a length of cable that is “looped” around the room, often hidden away in the ceiling, under the carpet or around the skirting board. Hearing aid users simply switch to the ‘T’ setting to amplify speech directed into the microphone. Loop systems in public buildings should be installed to the British Standard Code of Practice for Audio Frequency Induction Loop Systems BS 7594.

It is proposed to install a new fibre optic cable onto this site to a dedicated clean comms room where the main comms cabinet will be located with mechanical cooling equipment. British Telecoms will provide all infrastructure on the supplier side of the installation which will include all cabling and ducting to the termination point within the building. Dedicated phonelines will be required for lift installations, fire alarm installations and security installations. The mains comms cabinet will be a standalone unit as shown below with dedicated racks for all data points and capacity for links to patch panels located around the care home to ensure that the max distance for data cabling is kept within the 90 meters. All new telephone and data points shall be wired in Cat 6 cabling to RJ45 outlets allowing patching of either telephone or data by the IT department. This will also allow for voice communications over intercom through the IT infrastructure.

It is proposed to install new patch panels around the new building where hard-wired outlets are required. The units can be wall mounted as shown below and be placed in office space or clean storerooms with mechanical cooling present. The client will also confirm where wifi points will be required and this in turn will reduce the amount of data infrastructure in certain areas of the care home.

A BMS installation will be provided to the client’s requirements by the selected BMS specialist.

The selected lightning protection specialist will provide a risk assessment on the final layouts to determine what type of lightning protection system will be adequate for this site. It is also noted that the lightning protection system on the new roofs can be incorporated into the membrane roofing system during the build process. This will be confirmed by the lightning protection specialist during the design stage.

The new photovoltaic system for the site will be in accordance with all requirements and standards to enable registration under the UK Governments Feed-in Tariff scheme, for registration early enough to benefit from the most current rates. This system will comprise of solar PV panels, all support systems, structural framework, cable containment systems, cables, connections, and associated equipment such as inverters, isolators, contactors, metering equipment, power controls and distribution equipment necessary to provide a complete and fully functional system.

3 No Passenger lift’s will be installed to provide access from the ground floor to the fourth floors which will comply with all regulations, standards and BREEAM requirements.

13.0 - Landscaping

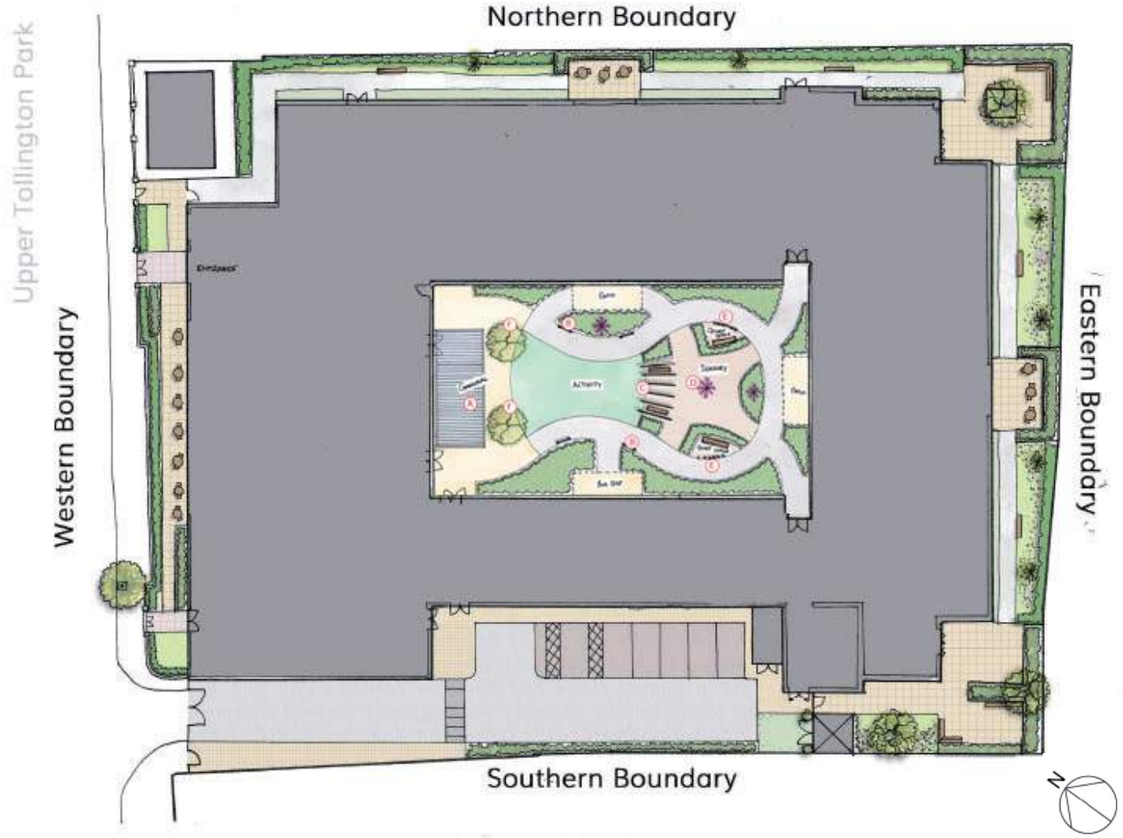
architecture
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planning
interior design
sustainability
civil and structural
project management
CDM and H&S services

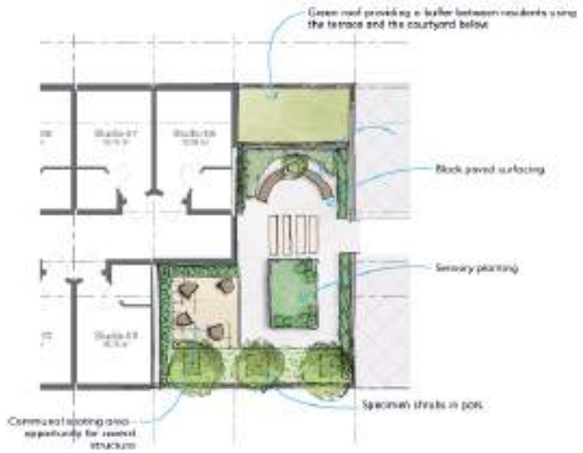
A full stage 2 landscaping report has been produced by Wynne-Williams Associates and can be found in the attached Appendix E.

The drawings and report have been designed in line with the proposal prior to the planning officer comments and subsequent re-design. The concept and strategies are still applicable to the revised development and shall be developed at stage 3.

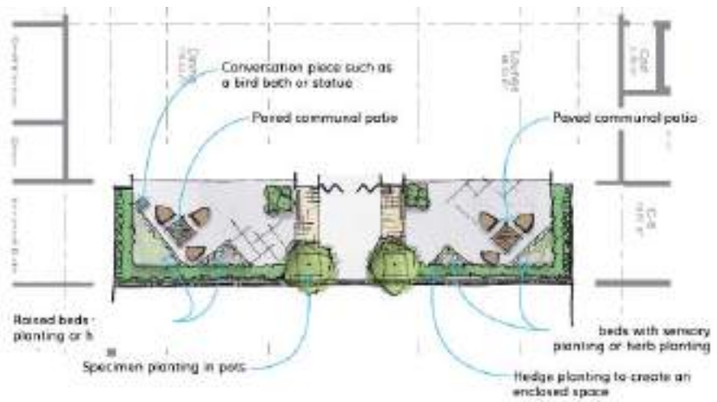
The report explores concept strategies for;

- Boundary Treatments
- Ground Floor Courtyard
- First Floor Terrace
- Second Floor North Terrace
- Second Floor South Terrace
- Third Floor North Terrace
- Third Floor South Terrace
- Fourth Floor Terrace

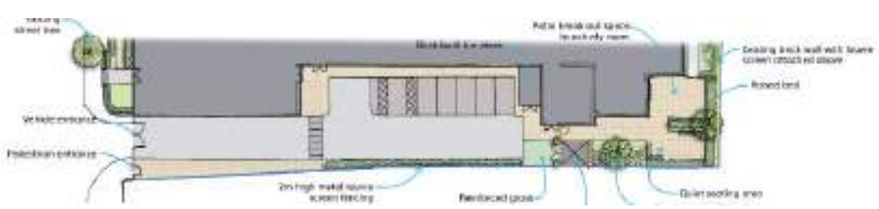














14.0 - Fire Strategy

architecture
building services
planning
interior design
sustainability
civil and structural
project management
CDM and H&S services

Ingleton Wood sought initial engagement from TriFire fire engineering consultants of whom we will have detailed input at RIBA stage 3 and 4. The proposal has been shared and their initial comments raise no concerns. Comments on the concept have been provided below.

The compartment boundaries are to provide 60 minutes fire resistance, as well as the protected stairways. The other areas to be protected are noted as follows:

- Bedrooms to be enclosed in 30 minutes fire resistance.
- Individual flats to be enclosed in 60 minutes fire resistance.
- All floors to be compartment floors of 60 minutes fire resistance.

Hazard rooms to be enclosed in 30 minutes fire resistance
- Sluice
- Kitchens
- Store rooms
- Laundry

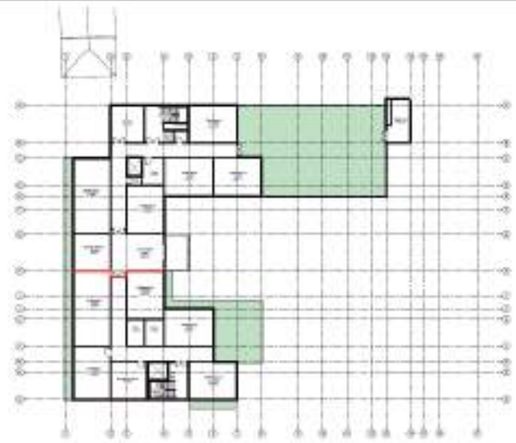
Other headline fire safety features as follows:
- Evacuation procedure to be progressive horizontal evacuation
- L1 fire detection and alarm system to be provided (automatic detection to be provided throughout all areas) with the fire alarm panel linked to an alarm receiving centre.
- Fire sprinkler system to be installed throughout in accordance with BS EN 12845.
- Structural fire resistance to be 60 minutes.
- External walls to be constructed of materials achieving Euroclass A1 (non-combustible) or A2 (limited combustibility).

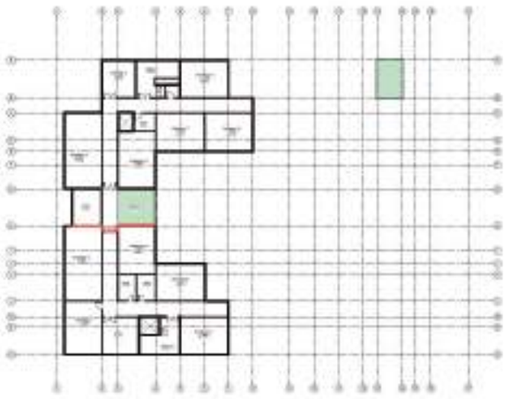
With regards to access arrangements for the fire service, the below tables show the access required:

For buildings fitted with dry fire mains, both of the following apply.
a. Access should be provided for a pumping appliance to within 18m of each fire main inlet connection point. Inlets should be on the face of the building.
b. The fire main inlet connection point should be visible from the parking position of the appliance.









TriFire Red Line Compartmentation Strategy Markups



Mark-up plans showing compartmentation for design layout prior to revised planning proposal. Compartmentation strategy shall be applied to developed layout and be co-ordinated during stage 03 spatial design.

Table 15.2 Typical fire and rescue service vehicle access route specification

Appliance type	Minimum width of road between kerbs (m)	Minimum width of gateways (m)	Minimum turning circle between kerbs (m)	Minimum turning circle between walls (m)	Minimum clearance height (m)	Minimum carrying capacity (tonnes)
Pump	3.7	3.1	16.8	19.2	3.7	12.5
High reach	3.7	3.1	26.0	29.0	4.0	17.0

NOTES:

1. Fire appliances are not standardised. The building control body may, in consultation with the local fire and rescue service, use other dimensions.
2. The roadbase can be designed to 12.5 tonne capacity. Structures such as bridges should have the full 17-tonne capacity. The weight of high reach appliances is distributed over a number of axles, so infrequent use of a route designed to accommodate 12.5 tonnes should not cause damage.

Design for Horizontal Escape

The general principle to be followed when designing for escape is that any person confronted by an outbreak of fire within the building can turn away from it and make a safe escape. The proposal allows for horizontal escape due to the nature of the residents with the circular layout benefitting this strategy. All rooms have been designed to allow escape in two directions and that if a single fire occurs in one direction, the opposite escape route should remain clear.

A revised compartmentation strategy has been shown for the latest proposals. These have been progressed from the concept outlined by TriFire and applied to the revised layout. Further development shall take place during stage 3 to agree the lines of compartmentation whilst limiting the number of compartments to remain cost efficient.

All escape routes lead to the direction of an enclosed 60minute minimum concrete stair core of which may exceed this rating through further development. Their are 5 stair cores with sufficient space to provide refuge for the households. Stair cores shall be developed alongside the services engineers in co-ordination with the fire engineering officer as the project progresses.

The design should align with the Building Regulations Part B and B1 - design for horizontal escape and Building Regulations Part M.



Ingleton Wood Proposed Compartmentation and Horizontal Escape Strategy.
This layout design is shown post planning revision.

15.0 - Detailed Master Programme

architecture
building services
planning
interior design
sustainability
civil and structural
project management
CDM and H&S services

812866 LB Haringey - Osborne Grove Care Home Stage 2 works - PROJECT PROGRAMME Rev B

ID	Task Mode	Task Name	Duration	Start	Finish
1		**1 STAGE 2 - FEASIBILITY DEVELOPMENT / CONCEPT DESIGN**	**30 days?**	**Mon 18/01/21**	**Fri 26/02/21**
2		**1.1 Appoint Consultants**	0 days	Mon 18/01/21	Mon 18/01/21
3		**1.2 Revisit proposals prepared in original Stage 2**	3 days	Wed 20/01/21	Fri 22/01/21
4		**1.3 Complete Final Project Brief**	**9 days**	**Fri 22/01/21**	**Fri 05/02/21**
5		1.3.1 Check progress against programme	0 days	Fri 22/01/21	Fri 22/01/21
6		1.3.2 Check in line with initial Project Brief	4 days	Mon 25/01/21	Thu 28/01/21
7		1.3.3 Check feedback on DQI's and stakeholders	6 days	Mon 25/01/21	Mon 01/02/21
8		1.3.4 Preliminary Project Risk Meeting	0 days	Fri 29/01/21	Fri 29/01/21
9		1.3.5 Develop Initial Brief into Final Project Brief	3 days	Fri 29/01/21	Tue 02/02/21
10		1.3.6 Project Progress Meeting 1	0 days	Fri 05/02/21	Fri 05/02/21
11		**1.4 Appoint Cost Consultant (QS)**	1 day	Mon 08/02/21	Mon 08/02/21
12		**1.5 Information Gathering**	**28 days**	**Wed 20/01/21**	**Fri 26/02/21**
13		1.5.1 Obtain further information - Legal	10 days	Wed 20/01/21	Tue 02/02/21
14		1.5.2 Obtain further information - Surveys / Investigations	28 days	Wed 20/01/21	Fri 26/02/21
15		1.5.3 Obtain further information - Acoustic/Fire consultants	15 days	Mon 08/02/21	Fri 26/02/21
16		1.5.4 Obtain further information - H&S	15 days	Mon 08/02/21	Fri 26/02/21
17		**1.6 Prepare Accommodation schedule and adjacencies**	**11 days?**	**Wed 03/02/21**	**Wed 17/02/21**
18		1.6.1 1st Client Accommodation Workshop	1 day?	Wed 03/02/21	Wed 03/02/21
19		1.6.2 Consult with external Authorities	10 days	Wed 03/02/21	Tue 16/02/21
20		1.6.3 Advise on appointments of further specialists	3 days	Wed 03/02/21	Fri 05/02/21
21		1.6.4 Consider H&S issues with PD	0 days	Fri 05/02/21	Fri 05/02/21
22		1.6.5 Confirm Accommodation schedule	3 days	Wed 03/02/21	Fri 05/02/21
23		1.6.6 Prepare bubble diagram design strategy	5 days	Mon 08/02/21	Fri 12/02/21
24		1.6.7 Prepare potential Structural & Building Services strategies	5 days	Mon 08/02/21	Fri 12/02/21
25		1.6.8 Project Progress Meeting 2	0 days	Fri 12/02/21	Fri 12/02/21
26		1.6.9 Project Design Team Meeting 1	1 day?	Fri 12/02/21	Fri 12/02/21
27		1.6.10 2nd Client Accommodation Workshop	1 day?	Wed 17/02/21	Wed 17/02/21
28		1.6.11 Contribute to preliminary cost information	2 days	Mon 15/02/21	Tue 16/02/21
29		1.6.12 Establish Planning & Building Regulations requirements	0 days	Fri 12/02/21	Fri 12/02/21
30		**1.7 Review Procurement Strategy**	**2 days**	**Wed 17/02/21**	**Thu 18/02/21**
31		1.7.1 Identify Specialist areas of Design	2 days	Wed 17/02/21	Thu 18/02/21
32		**1.8 Undertake a project design review**	0 days	Wed 17/02/21	Wed 17/02/21
33		**1.9 Review design progress against Final Project Brief**	**4 days?**	**Wed 17/02/21**	**Tue 23/02/21**
34		1.9.1 Review and update H&S strategy	0 days	Wed 17/02/21	Wed 17/02/21
35		1.9.2 Check progress against programme	1 day	Thu 18/02/21	Thu 18/02/21
36		1.9.3 Project Progress Meeting 3	0 days	Fri 19/02/21	Fri 19/02/21
37		1.9.4 Design Team Meeting 2	1 day	Fri 19/02/21	Fri 19/02/21
38		1.9.5 Care Home Bedroom/Bathroom layout workshop	1 day?	Fri 19/02/21	Fri 19/02/21
39		1.9.6 Check design and brief against DQI's and stakeholder objectives	3 days	Thu 18/02/21	Mon 22/02/21
40		1.9.7 Co-Design Steering Group Meeting - Bedrooms/Bathrooms	1 day?	Tue 23/02/21	Tue 23/02/21
41		**1.10 Prepare the developed design with all team members**	**59 days?**	**Tue 23/02/21**	**Fri 14/05/21**
42		1.10.1 Prepare Concept Layout Design	44 days	Tue 23/02/21	Fri 23/04/21
43		1.10.2 Receive Instruction to change Scope	1 day	Mon 12/04/21	Mon 12/04/21
44		1.10.3 Additional time to incorporate scope change	15 days	Mon 26/04/21	Fri 14/05/21
45		1.10.4 Project Progress Meeting 4	0 days	Tue 23/02/21	Tue 23/02/21
46		1.10.5 Care Home Bedroom/Bathroom layout feedback meeting	1 day?	Tue 23/02/21	Tue 23/02/21
47		1.10.6 Project Progress Meeting 5	0 days	Tue 02/03/21	Tue 02/03/21
48		1.10.7 Care Home Lounges/Dining workshop	1 day?	Thu 04/03/21	Thu 04/03/21
49		1.10.8 Design Team Meeting 3	1 day	Fri 05/03/21	Fri 05/03/21
50		1.10.9 Develop Structural Strategy	25 days	Mon 08/03/21	Fri 23/04/21
51		1.10.10 Additional time to incorporate scope change	15 days	Mon 26/04/21	Fri 14/05/21
52		1.10.11 Develop Building Services Design Strategy	27.5 days	Mon 08/03/21	Fri 23/04/21
53		1.10.12 Additional time to incorporate scope change	15 days	Mon 26/04/21	Fri 14/05/21
54		1.10.13 Project Progress Meeting 6	0 days	Tue 09/03/21	Tue 09/03/21
55		1.10.14 Co-Design Steering Group Meeting - Lounges/Dining	1 day?	Wed 10/03/21	Wed 10/03/21
56		1.10.15 Project Progress Meeting 7	0 days	Tue 16/03/21	Tue 16/03/21
57		1.10.16 Care Home Lounges/Dining feedback meeting	1 day?	Tue 16/03/21	Tue 16/03/21
58		1.10.17 Sheltered housing / Studio Flats workshop	1 day?	Tue 16/03/21	Tue 16/03/21
59		1.10.18 Design Team Meeting 4	1 day	Fri 19/03/21	Fri 19/03/21
60		1.10.19 Care Home Activity rooms/Circulation/Public spaces workshop	1 day?	Fri 19/03/21	Fri 19/03/21
61		1.10.20 Project Progress Meeting 8	0 days	Tue 23/03/21	Tue 23/03/21
62		1.10.21 Co-Design Steering Group Meeting - Activity rooms/Circulation/Public spa	1 day?	Wed 24/03/21	Wed 24/03/21
63		1.10.22 Kitchen & Catering workshop	1 day?	Thu 25/03/21	Thu 25/03/21
64		1.10.23 Project Progress Meeting 9	0 days	Tue 30/03/21	Tue 30/03/21
65		1.10.24 Care home Activity rooms/Circulation/Public spaces feedback meeting	1 day?	Tue 30/03/21	Tue 30/03/21
66		1.10.25 Co-Design Steering Group Meeting - Kitchen & Catering	1 day?	Wed 31/03/21	Wed 31/03/21
67		1.10.26 Landscaping workshop	1 day?	Thu 01/04/21	Thu 01/04/21
68		1.10.27 Design Team Meeting 5	1 day	Fri 02/04/21	Fri 02/04/21
69		1.10.28 Hold Town Planning pre-app discussions	2 days	Mon 05/04/21	Tue 06/04/21
70		1.10.29 Project Progress Meeting 10	0 days	Tue 06/04/21	Tue 06/04/21
71		1.10.30 Kitchen & Catering feedback meeting	1 day?	Tue 06/04/21	Tue 06/04/21
72		1.10.31 Co-Design Steering Group Meeting - Landscaping	1 day?	Tue 06/04/21	Tue 06/04/21
73		1.10.32 Sustainability/Services workshop	1 day?	Thu 08/04/21	Thu 08/04/21
74		1.10.33 Project Progress Meeting 11	0 days	Tue 13/04/21	Tue 13/04/21
75		1.10.34 Landscaping feedback meeting	1 day?	Tue 13/04/21	Tue 13/04/21
76		1.10.35 Co-Design Steering Group Meeting - Sustainability/Services	1 day?	Wed 14/04/21	Wed 14/04/21
77		1.10.36 Design Team Meeting 6	1 day?	Fri 23/04/21	Fri 23/04/21
78		1.10.37 Sustainability/Services feedback meeting	1 day?	Tue 20/04/21	Tue 20/04/21
79		1.10.38 Obtain further information - Any other Surveys / Investigations as a result of planning	10 days	Mon 26/04/21	Fri 07/05/21
80		1.10.39 Commence discussions with chosen building control authority	3 days	Mon 26/04/21	Wed 28/04/21
81		1.10.40 Project Progress Meeting 12	0 days	Tue 20/04/21	Tue 20/04/21
82		1.10.41 Project Progress Meeting 13	0 days	Tue 27/04/21	Tue 27/04/21
83		1.10.42 Project Progress Meeting 14	0 days	Tue 04/05/21	Tue 04/05/21
84		1.10.43 Project Progress Meeting 15	0 days	Tue 11/05/21	Tue 11/05/21
85		1.10.44 Design Team Meeting 7	1 day?	Fri 07/05/21	Fri 07/05/21
86		**1.11 Catering Consultancy workshops**	**17 days**	**Thu 18/03/21**	**Fri 09/04/21**
87		1.11.1 Catering workshop 1	1 day	Thu 18/03/21	Thu 18/03/21
88		1.11.2 Catering workshop 2	1 day	Thu 25/03/21	Thu 25/03/21
89		1.11.3 Catering workshop 3	1 day	Tue 06/04/21	Tue 06/04/21
90		**1.12 IT Consultancy workshops**	**15 days**	**Mon 05/04/21**	**Fri 23/04/21**
91		1.12.1 IT workshop 1	1 day	Mon 05/04/21	Mon 05/04/21
92		1.12.2 IT workshop 2	1 day	Mon 12/04/21	Mon 12/04/21
93		1.12.3 IT workshop 3	1 day	Mon 19/04/21	Mon 19/04/21
94		**1.13 FF&E Consultancy workshops**	**13 days**	**Wed 31/03/21**	**Fri 16/04/21**
95		1.13.1 FF&E workshop 1	1 day	Wed 31/03/21	Wed 31/03/21
96		1.13.2 FF&E workshop 2	1 day	Wed 07/04/21	Wed 07/04/21
97		1.13.3 FF&E workshop 3	1 day	Wed 14/04/21	Wed 14/04/21
98		**1.14 Check design implications with CDMC**	1 day	Mon 17/05/21	Mon 17/05/21
99		**1.15 Present Stage 2 proposals to communicate to stakeholders**	0 days	Fri 14/05/21	Fri 14/05/21
100		1.16 Project Risk Meeting 14	0 days	Fri 07/05/21	Fri 07/05/21
101		**1.17 Finalise coordinated design and prepare Stage Report / ER's**	10 days	Mon 17/05/21	Fri 28/05/21
102		**1.18 Develop and refine full cost plan**	**10 days**	**Mon 03/05/21**	**Fri 14/05/21**
103		**1.19 Confirm procurement method and form of contract for next Stage**	**2 days**	**Mon 31/05/21**	**Tue 01/06/21**
104		**1.20 Stage Gate Meeting**	**1 day?**	**Mon 31/05/21**	**Mon 31/05/21**
105		**1.21 Potential Udate to Stakeholders (Local Residents?)**	**1 day?**	**Fri 04/06/21**	**Fri 04/06/21**

Project: Osborne Grove Stage 2 Programme
Date: Thu 29/04/21

Task · Split · Milestone · Summary · Project Summary · Inactive Task · Inactive Milestone · Inactive Summary · Manual Task · Duration-only · Manual Summary Rollup · Manual Summary · Start-only · Finish-only · External Tasks · External Milestone · Deadline · Baseline · Baseline Milestone · Baseline Summary · Progress · Manual Progress

Page 1

16.0 - Stakeholder Consultation and Feedback

architecture
building services
planning
interior design
sustainability
civil and structural
project management
CDM and H&S services

A series of meetings have taken place with the client stakeholder panel to discuss various rooms, areas and elements of the home. The panel have been involved from the feasibility stage and have engaged with the previous project design team. The discussions and comments greatly influenced the homes design and the panel shall remain involved throughout the design process.

1.0 Stage 2 Concept Design Journey reminder

Anticipated input of Co-Design Steering Group

23rd February - Presentation, discussion & feedback on:
- Sheltered Housing Units
- Optimum Bedroom Layouts & details

10th March - Presentation, discussion & feedback on:
- Lounge Areas
- Dining Areas

24th March - Presentation, discussion & feedback on:
- Activity Rooms
- Circulation

31st March - Presentation, discussion & feedback on:
- Catering Strategy
- Landscape strategy

TBA - Presentation, discussion & feedback on:
- Sheltered Housing Units
- 'End of Life' Studio Units

14th April - Presentation, discussion & feedback on:
- Day Centre
- Public support spaces - Cafe, Reception etc

5th May - Presentation, discussion & feedback on:
- Site and Building layouts

19th May - Draft Stage 2 report












812866 Osborne Grove Care Home - 6th Stakeholder Engagement Meeting - 05.05.21

16.2 - Feedback Tracker

Throughout stage 02 there have been regular client, stakeholder and end user representative meetings with feedback that has influenced the design. Feedback from these meetings have been picked up in a tracker with response.

Client Engagement Meeting Tracker		Initial Feedback / Comments From Stakeholder Engagement	Response	Additional Discussion Required.
1.00 Entrance	**Reception**	Incorporate branding / motto / public sector partnership branding?	Noted and shall be incoporated into stage 3/4 design development.	
		Display screen required	Noted and shall be incoporated into stage 3/4 design development.	
		What type of entrance system i.e. double doors, auto sliding doors, revolving doors?		Further discussion regarding entrance door system i.e. double doors, auto sliding doors, revolving doors?
		Client welcomes a mini workshop with NK / Electrical team to establish security requirements in terms of - Access to the building outside of Receptionist hours? - Access to the building for visitors? Staff? - Access to the Sheltered Housing? No reception required - Access to Studio Flats? Reception w/ Receptionist required - Access within the Ambulance Bay area		NK to discuss with client and options put forwards in stage 2 Elec report.
2.00 Staff	**Staff Offices**	Further development required in terms of space planning to understand quantity of desk spaces		Please confirm number of staff for each team / minimum number of desks required in this room
		Desks to be flexible & 'drop down' for any staff member (no fixed desks) as all staff are laptop based	Noted and shall be incoporated into stage 3/4 design development. ID to develop furniture strategy.	
		Desks to allow monitor and plug in for laptop charging etc... with task chair	Noted and shall be incoporated into stage 3/4 design development. ID to develop furniture strategy.	
		Storage units to be considered i.e. mid & high tambour units, mid & tall cupboards (mostly required for operation manager & finance)	Noted and shall be incoporated into stage 3/4 design development. ID to develop furniture strategy.	
		Bear in mind, storage units will be required in Nurse Base stations within each household too. Nurse Base Stations need Notes Trolley	Noted and shall be incoporated into stage 3/4 design development. ID to develop furniture strategy.	
		1 printer	Noted and shall be incoporated into stage 3/4 design development. ID to develop furniture strategy.	
		No pedestals under desks	Noted and shall be incoporated into stage 3/4 design development. ID to develop furniture strategy.	
		High back meeting booths (4 person) consider accessible as possible. Client preferred access from both sides & non fixed table to support this.	Noted and shall be incoporated into stage 3/4 design development. ID to develop furniture strategy.	
		Meeting tables for informal / formal meetings, quick drop down	Noted and shall be incoporated into stage 3/4 design development. ID to develop furniture strategy.	
		Allow for some sit/stand desks	Noted and shall be incoporated into stage 3/4 design development. ID to develop furniture strategy.	
		Option 1 layout preferred where the desks and breakout space is more balanced in the room	Noted and shall be incoporated into stage 3/4 design development. ID to develop furniture strategy.	
		No benches, chairs only	Noted and shall be incoporated into stage 3/4 design development. ID to develop furniture strategy.	
		Preference for 2 meeting booths instead of individual quiet booths	Noted and shall be incoporated into stage 3/4 design development. ID to develop furniture strategy.	
3.00 Catering				
4.00 Household A - Learning Disabilities / Autism **5.00 Household B - Complex Care** **6.00 Household C - Dementia and/or Challenging Behaviour** **7.00 Household D - Physical Frailty** **8.00 Household E - Complex needs Patients**	**Bedrooms**	Staff need to look into rooms.	Vision panel included in door. Door angled to maximise vision splay into room.	
		Residents still need privacy from corridor onlookers.	Door to include blind to shut vision panel for privacy.	
		Important for residents to look out windows.	Floor to ceiling height windows. Angled bay window to encourage wheelchair sitting in window.	
		Promote independence.	Care home shall promote independence throughout.	
		All beds to be suitable for bariatric residents.	All beds and seating within rooms to accommodate bariatric residents.	Beds still to be confirmed? Assumed mix or profiling beds and nursing beds, Single and small doubles.
		Hoist to move out the way of bed and continue into en-suite.	Hoist suppliers contacted. Optimum hoist and track layout has been included. Will be shown on reflected ceiling plans at stage 03. Full height door is required to en-suite to accommodate track.	
		Consider dementia friendly design.	Dementia friendly design included throughout care home.	
		Ceiling heights too low in current home.	Higher ceilings to be incorporated approx 2.8m? TBC at stage 03.	
		Locks to bedroom doors discussed.	Doors to be lockable from the inside for privacy and can be unlocked via keys from the outside by nurses.	Please confirm.
		Power assisted doors discussed with client.	Good practice to provide for those with physical frailty and complex care.	Please confirm.
	En-suites	Users to lift themselves from toilet to wheelchairs.	En-suite layout includes wheelchair zone and direct access between WC & wheelchair position including grab rails.	
		Floor types discussed. Vinyl preferred.	Vinyl to be used for en-suite wetroom.	
		Client liked the flexibility of clip in shower chair.	Shower chair included within design layout.	
		Taps to be functional and capable of operation using elbows.	MC to explore further tap options and propose as part of finishes schedule.	
	Lounges	Open plan vs closed plan discussed. Concerns with acoustic transfer to bedrooms.	Corridor doors to separate social spaces from bedrooms creating acoustic barrier. Open plan arrangement can therefore be retained.	
		Lots of natural light	Large glazing to terrace / patio area to create	
		Zoneing the room	Proposed battening / acoustic / soft screening to break up the spaces but still retain visibility.	
		Not keen on fixed wall displays	Design to include hanging displays to encourace regular changing.	
	Dining	Open plan vs closed plan discussed. Concerns with smells and sounds.	Dining to be its own partitioned room. Glazing / windows and glazed doors into dining space to allow residents to look into room before entering.	
		Discussed planting in dining room.	Mobile herb boxes to be included to separate spaces and act as a sensory element. Can be included in lounges/on balcony terraces and in gardens.	
	Circulation	Floors in shared spaces cleaned up to 3-4 times a day using high chlorine based products.	Flooring material to be robust and suitable for regular cleaning cleaning with strong products. This includes skirtings.	

		Any wall coverings behind hand rails need to be easily cleanable.	All walls to be easily cleaned and withstand regular product use. Hand rails to sit away from wall to allow easy cleaning.	
		No dead ends.	Circular layout is proposed with no ends of corridors. Where corridors cannot be circular they will lead to a destination.	
	Prep Room	Drug store requires a large amount of storage	Store to include wall cupboard, base units and shelving. Security level and access to be confirmed.	Confirm any specialist drug storage eg locked fridges. Key locked cabinet.
9.00 Community Areas	**Café**	To be used by visitors, residents, staff & community/public	Café revised to allow 'open' integration to reception and easily accessed via vertical circulation.	
		Further development required to explore open plan Café & Reception area (so café area becomes part of waiting space)	Arrangement revised to respond to comments.	
		A modern, family friendly space	Feeling' to be achieved through the interior design at stage 3/4. 'Modern, family friendly space can be achieved through materiality. Waiting area supports these needs.	
		Consider playzone area / children space	ID developing this through waiting area. Will be reflected through furniture strategy.	
		Further consideration to the façade / appearance to the reception as café needs to look like its open to the public	Plan has been revised to suit this comment. Café spans street front to create inviting façade.	
		Consideration manifestation / graphics to glazing to support the above comment	Details to be developed at stage 3/4. Large glazing has potential to allow manifestation.	
		Cleaning/clearing up within the café will be managed in the main kitchen	Convenient access to stair/lift core and servery which may include dumbwaiter/vertical transport.	
		Open to the idea of a feature area i.e. mock beach theme w/ deck chairs, false backdrop, sand pit for children	Themes to be developed at stage 3/4 detailed design.	
		Public spaces to have a less corporate feel but more homely in a classic yet contemporary style	Noted and can be achieved through interior design strategy picked up in FFE schedule at stage 3/4.	
		Not a hotel atmosphere but it needs to feel like a destination	Noted and can be achieved through interior design strategy picked up in FFE schedule at stage 3/4.	
		Further development required for children's play area / themed area within seating areas	Noted and can be achieved through interior design strategy picked up in FFE schedule at stage 3/4.	
	Shop (As part of café)	Shop to sell essentials i.e. shampoos etc..., sweets & chocolates & gifts	Noted. Shop integrated as part of café area. Potentially separate section to café bar.	
		Shop to be run by Café staff	Noted and included as part of café bar.	
		Shop items to be mobile & lockable so able to 'put away' outside of opening hours	Lockable storage to be included. Picked up in stage 3/4 detailed design and ID strategy.	
		Shop items to be located as part of café space as opposed to separate room	Shop integrated as part of café area. Potentially separate section to café bar.	
		No shop shutters	Noted. Shutters not included.	
	Day Space	Linking day space with access to the courtyard.	Day space has almost full access to internal courtyard facade maximising its access.	
		Resident Activities held (not limited to); seated badminton, seated ball games, music groups, ping pong table, gardening activities, reminiscence items, general games	Large open area to accommodate indoor sports. Increased ceiling heights to public areas at ground floor.	
		Full height wall cupboard storage. Storage cupboards to have wide doors, hinged (not sliding doors), adjustable shelving, labelled shelving, larger cupboards to house flip top tables, lockable	Plans revised to include full length & height storage to two walls.	
		Enclosed kitchen area required for family cooking, cooking activities	Plans revised to include separate room to be used as kitchen area and cooking activities.	
		Incorporate high level acoustic elements i.e. felt or wool fibre or timber	Noted. Acoustics to be developed as part of stage 3/4 detailed design and ID strategy.	
		Avoid making it feel like a gym hall	Noted. Can be achieved through correct choice of materials, ie no laminate wood floorings / basketball hoops etc. Space to be comfortable yet flexibile to indoor sports. To be developed as part of stage 3/4 detailed design and ID strategy.	
		2 walls required for storage	Plans show two full storage walls. Plans to show specific furniture sizes and how furniture will be stored.	
		WCs to be DDA WCs only with 1 changing room	All WC's across the home are fully accessible DDA compliant.	
		Further considerations for flooring finishes	Noted and shall be incoporated into stage 3/4 design development. ID to develop furniture strategy.	
10.00 Utilities		Concerns raised over where plant and substation will be located.		Raised potential for basement plant area. To be explored and developed further.
11.00 Sheltered Housing Flats	**Bedrooms**	Discussed balconies being split into two zones to allow for winter garden.	Flats split into two zones which include glazed front, conservatory type space and an open balcony space.	
		Mobility scooters discussed. Not required in flats however storage required outside flat.	Space for mobility scooter to be stored in front of flat. Corridor width to be increased to allow for storage.	Does this need to be in a covered, secure store or can this be open? Residents must already pass through secure access.
		Refuse and bin stores outside flats.	Secure, concealed and small refuse store to be included outside each flat suitable for approx 50L bin. Can be integrated with scooter charging point.	
	Circulation	General security to be considered. Previous break in along northern boundary via gas govenor.	Distance from boundary to reduce climbing into home. Open walkway design and layout does not give direct access from gas govenor.	
		Discussed open walkway circulation.	Walkway to be considered external space. Creates 'front door' feeling. Not required to be heated and reduces external wall build up.	
		Maximise greenery.	Walkway to include a generous amount of planters with seating spots included. Include hanging baskets and fixing points.	
12.00 Studio Units - Homeless Complex Care / Palliative	**Bedrooms**	Need extra power sockets behind beds. Need to be easy access	Allow for sockets above/below and or/next do bed to support easy access.	
		Concern with too many cables	Cable management to be considered and incorporated.	
		No requirement for ceiling or wall mounted hoists	Hoist storage included separate to bedrooms.	Confirm approx. number of mobile hoists
		Curtains need to be easy to take down/put up due to infection control.	Curtain rail/pole to be visible and easily accessible. Not recessed.	
		Kitchenette does not require cooker. Include microwave, kettle, cupboard storage.	Kitchenette to include microwave, kettle and sufficient power sockets to accommodate additional small appliances. Above and below counter cupboards to be integrated. Kitchenette to fit room layout and provide a 'soft, homely' feel.	
		Include table and two chairs for eating or for visitors to sit at.	Small table and chairs to be included. Storage furniture to be revised to make room for table and chairs.	Including table and two chairs will result in loss of some storage. Confirm new layouts.
			Balconies not needed.	No response required.
		Residents will likely smoke in their rooms.	Sprinklers design to be developed in stage 3/4 to be aware of potential smoking in rooms. Rooms to include openable windows and sufficient ventilation. Agreed that the management of residents will encourage smoking outside. Furniture and finishes to minimise the use of woods and fabrics where possible to reduce the smell of smoke staining. Replica materials used where suitable. Smoke detectors could potentially be covered by able residents. Consider location away from furniture and slightly increasing height of ceiling.	
	Communal	Linked to terrace.	Terrace access currently shown through communal area and separate doorway.	
		Specialist drug store required at this level	To be included as part of nurses office. Securely locked. Store to be air conditioned, maintain temperature and include fridges to store drugs.	
		Full time nurses station required.	Included as part of SOA.	
	Terrace	Terrace will be used for smoking.	Terrace to be shielded from the view of the rest of the home to avoid overseeing of smokers. Method of shielding to be developed under stage 03. Terrace to be zoned to accommodate those that do not want to smoke.	
		Beds to be movable to terrace	Level access included throughout. Door width to accommodate Hospital sized single bed.	
13.00 Construction / Sustainability		Explore the potential of using a CLT or timber structure. Concerns raised over maintaining a comfortable temperature, the affects of a sprinkler system on panels and fire. Timber construction if visible can have mental health benefits for residents.	IW are engaging with Eurban specialist in solid timber construction.	
		Embodied Carbon raised as a planning requirement	IW 's understanding is that embodied carbon is only a planning requirement for a referrable application to the mayor and in this case is only encouraged not a requirement.	
		DLT raised as a potential.	IW to discuss this with Eurban. Further research required into DLT.	

16.3 - Quality Checklist

The HBN 03-02 Facilities for CAMHS quality of life checklist has been used as a comparison for the Osborne Grove Care Home proposal. The tool has not been directly designed to target older residents, however the core principals still apply for healthcare projects and can be tailored towards the user groups for a care home.

The tool highlights specific aims related to Health Building Notes of what is required and how we as a design team have responded to this criteria. The checklist also correlates with the desires and requirements of the stakeholders and their engagement.

What are we trying to create?		What is required?	How do we achieve it?	Scheme compliance with HBN checklist
Healing Environment	1	**Natural daylight is maximised**	High ceilings with clerestory windows, glazed corridors, and glazed doors opening out of the communal space add to the amount of light entering the building.	**Green**
	2	**All areas look clean, friendly and smell clean.**	Correct cleaning regimes, maintenance and replacements programme in place. Finishes to promote cleanliness.	**Green**
	3	**Ambient temperatures and ventilation adequately controlled.**	Thermostats and controls easily available to alter ambient temperature. Opening windows in all areas but particularly in bedrooms. Overall building construction and mechanical strategies designed to create comfortable temperatures and ventilation.	**Green**
	4	**Noise levels are adjusted to meet the needs of the people living / residing here.**	Sound attenuation available where required. Use of textile floor coverings and furnishing where applicable to deaden sound reverberation.	**Green**
	5	**There is access to external space that includes a covered area for use during inclement weather.**	Landscape Architects consulted and involved within the design to produce a high quality external space with sufficient coverage.	**Green**
	6	**Social spaces are located to provide views into external areas.**	Garden areas, sufficiently large to accommodate all needs, are available from the communal space. Terraces and balconies included for all households and shall have views of other external areas.	**Green**
	7	**A quiet, low stimulus area is provided.**	Sufficient acoustic controls measures put in place between corridors and quiet areas. Separate areas for activity. Dining and lounge areas to be split into zones to control low stimulus and quiet areas.	**Green**
	8	**Areas which need to be quiet are located as far away as possible from any sources of unavoidable noise.**	Quiet rooms provided in areas away from communal areas. Activity rooms to be located at ends of corridors away from bedrooms split by acoustic doors.	**Green**
	1	**There is a perception of space, and overcrowding is avoided**	Planned spaces are large enough to accommodate the persons expected to be in them. Large public spaces have been designed for limit overcrowding. Corridors shown wider that 1.8m up to 4m width to create comfortable movement around the home.	**Green**
	2	**The ward should not be accommodated on more than two floors.**	Not Applicable	**Select...**
	3	**Sleeping and day areas are separate.**	Rooms separate from social and day use spaces. Public spaces at front of home with bedrooms at rear.	**Green**
	4	**All bedrooms should be single rooms with en-suite**	100% single bedroom accommodation with en-suites.	**Green**
	5	**There are adequate quiet spaces for young people and staff**	Multi-purpose rooms available for quieter use. Younger people only applicable to visitors. Separate staff rest rooms strategically placed within home.	**Green**
Space	6	**The day rooms are open at night for people who cannot sleep.**	Operational policy however day use spaces within households can remain accessible.	**Green**
	7	**Adequate private spaces are provided for interactions.**	Sufficient multi-functional meeting/interview rooms are available.	**Green**
	8	**The ward size and design is appropriate to the service user population.**	Rooms and room areas meet the requirements of HBNs as shown in schedule of accommodation. Wards not applicable. Assumption applied to overall care home.	**Green**
	9	**The ward/unit provides suitable access and facilities for people who require assistance**	All areas are accessible and designed to meet relevant HBNs. High level of design consideration given to access, safety and	**Green**

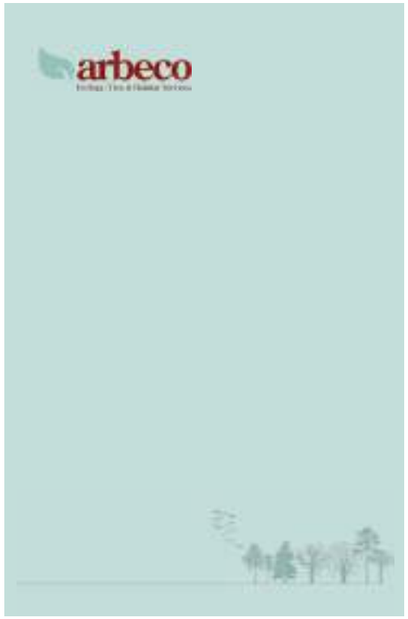
What are we trying to create?		What is required?	How do we achieve it?	Scheme compliance with HBN checklist
	10	**The ward environment is sufficiently flexible to allow for specific individual needs in relation to gender, ethnicity and disability.**	Ward not applicable. Assumed for general home. Flexible spaces created with the provision for different individual gender, ethnicity and disability needs. Multiple DWCs and accessible changing provided. Multi-faith room provided. Home designed to HBN's with consideration towards a wide variety of learning, physical and mental disabilities.	**Green**
	11	**The ward offers a range of semi-private and public spaces outside the private bedroom, which allow people a different level of participation with the life of the ward.**	Ward not applicable. Assumed for general home. Dining, lounge, activity, café, day space and flexible spaces integrated into home for varied levels of participation.	**Green**
Privacy, Dignity and safety	1	**Bedrooms should be within a gender-specific area.**	Not applicable to care home design.	**Select...**
	2	**Privacy in toilets and bathrooms in ensured.**	En-suite bedrooms through-out will ensure that this requirement is met. DWC's and accessible bathrooms within all households.	**Green**
	3	**Sight-lines are unimpeded. All exits and entrances are within sight of staff**	Good visibility from and to all areas is important to ensure privacy, dignity and safety is maintained for all. Clear way-finding and lines of sight designed to promote independence when escape is needed.	**Green**
	4	**There is a designated space for young people to receive visits from family and friends, including other children/young people.**	Not applicable to young people. Principle applied to residents. Various rooms are available for familiy to visit including private and social areas of the home.	**Green**
	5	**There is at least one room for interviewing and meeting with individual young people and carers/relatives, which is furnished with comfortable seating.**	Multi-functional rooms are provided within shared areas which have comfortable informal seating and can be used for interviewing/meetings.	**Green**
	6	**Privacy in receiving medication with the opportunity to ask and receive answers to questions regarding medication.**	Medication should be taken to the bedroom (operational policy)	**Green**
Security	1	**Personal effects area safe and accessible.**	Bedroom doors are lockable by residents when in the room and upon leaving (nurses retain overiding access in case of emergency). Locked storage will be available in nurses offices.	**Green**
	2	**Existing alarm systems are appropriate to the needs of the ward/unit.**	Staff have an appropriate personal attack alarm with response protocols in place. Patient-to-staff call systems are in place in assisted sanitary facilities as required.	**Green**
	3	**Whilst ensuring appropriate levels of security, the environment is open and does not unnecessarily restrict young people.**	Not applicable for young people. Principal applied to residents. Circular design to allow openness between households depending on agreed management protocol.	**Green**
Activity	1	**There are activity areas inside and outside.**	Shared and publicly accessible day space at front of care home. Multi-functional rooms at ground level with activity rooms on each floor. Central courtyard, terraces and secure gardens to promote outdoor activities.	**Green**
	2	**Inside and outside activity areas are safe**	Secure access from street front and walled perimeter to 3 boundaries. Activity areas are contained in courtyard, terraces and gardens.	**Green**
	3	**The ward has direct access to an outside space for exercise and access to fresh air, which is safe and has seating available for relaxation.**	In addition to outside space around the unit as a whole, there should be direct access from the communal ward area to a garden.	**Green**
	1	**Areas are accessible for someone using walking aids/wheelchair.**	Suitable designs should incorporate full accessibility for anyone using walking aids and/ or a wheelchair. Corridors designed to accommodate comfortable passing. 1010mm Door widths minimum to allow large wheelchair access.	**Green**
	2	**The ward is managed to allow optimum and accessible use of available space and rooms.**	The Home is a circular layout to promote movement. Open plan dining and lounge areas with cleaar wayfinding to optimise accessibility of available spaces.	**Green**

What are we trying to create?		What is required?	How do we achieve it?	Scheme compliance with HBN checklist
Access	3	**Reception areas area well-planned.**	Clear entrance located at front of home with control measures into the rest of the home. Visual observation of those entering and using the café space. Seating area adjacent to control movement and waiting.	**Green**
	4	**Signage is clear and visible.**	Wayfinding all to minimum building regulation standards. Clear and intelligent signage included specifically aimed at resident user groups to support ease of movement and promote independence. Clearly visible and understandable.	**Green**

17.0 - Surveys

architecture
building services
planning
interior design
sustainability
civil and structural
project management
CDM and H&S services

The following surveys have been carried out and are attached to this report



Osborne Grove Nursing Home / Arboricultural Services / **Report for Frederick Gibberd Partnership**

Arboricultural Survey

encon associates

Osbourne Grove Nursing Home.



BREEAM 2018 New Construction (Shell only)
Pre-Assessment Report

28th April 2019

Encon Associates Limited
10 Chapel Lane
Arnold
Nottingham
NG5 7DR

A3415

BREEAM Pre-Assessment

London Drainage Facilities
Stondon Road, Ongar Essex CM5 9RX
Tel. 0800-612-2179
cctv@london-drainage.com

wrc

Project

Project Name:	FrederickGibberdPartnership 112764
Project Description:	Routine Inspection
Project Date:	13/05/2019
Project Standard:	MSCC4 Sewers & Drainage GB (SRM4 Scoring)



Drainage Facilities



Osbourne Grove Nursing Home, Haringey / Preliminary Ecological Appraisal / Report for Turkington Martin (London)

Ecology Survey

Osborne Grove Nursing Home, 16 Upper Tollington Park, Stroud Green, London, N4 3EL



Residential Noise Survey

30th May 2019

encon associates

Encon Associates Limited
10 Chapel Lane
Arnold
Nottingham
NG5 7D

Residential Noise Survey



Ground Investigation Survey

Asset location search

Property Searches

Ingleton Wood
OAKINGTON BUSINESS PARK
DRY DRAYTON ROAD
CAMBRIDGE
CB24 3DQ

Search address supplied	Osborne Grove Nursing Home 16 Upper Tollington Park London N4 3EL
Your reference	Osborne Grove Care Home
Our reference	ALS/ALS Standard/2021_4410733
Search date	23 April 2021

Knowledge of features below the surface is essential for every development

The benefits of this knowledge not only include ensuring due diligence and avoiding risk, but also being able to ascertain the feasibility of any development.

Did you know that Thames Water Property Searches can also provide a variety of utility searches including a more comprehensive view of utility providers' assets (across up to 35-45 different providers), as well as more focused searches relating to specific major utility companies such as National Grid (gas and electric).

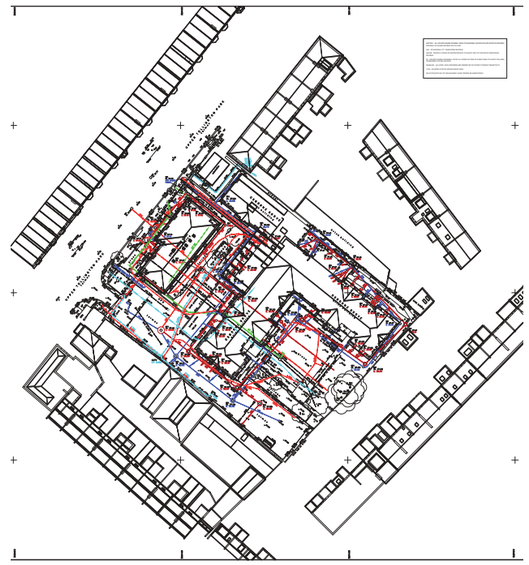
Contact us to find out more.

Thames Water Utilities Ltd
Property Searches, PO Box 3189, Slough SL1 4WW
DX 151280 Slough 13

searches@thameswater.co.uk
www.thameswater-propertysearches.co.uk

0800 009 4540

Thames Water Asset Location Survey



Topographical and Point Cloud Survey

18.0 - Conclusion

architecture
building services
planning
interior design
sustainability
civil and structural
project management
CDM and H&S services

Architecture

At the end of stage 2 the agreed architectural brief is to progress is with the revised proposal in response to planning comments. The proposal is for demolition of the existing site, except for the gas governor and a full re-design and construction of a 100-bed nursing home including self-contained flats. This concluding proposal allows for 7 households of 10 bedrooms, 10 homeless/end of life studios, 20 'semi-independent,' self-contained flats. This includes a café, day spaces, multi-function rooms, activity rooms, lounges, dining areas and supporting facilities required for a fully operational care home. The proposal also aims to make full use of the site with a central landscaped courtyard, soft and hard landscaping, household balconies, limited parking and refuse. The accommodation is shown in the concluding accommodation schedule.

A sustainable approach is being taken as far as realistically achievable including aspirations for BREEAM outstanding and a Net zero carbon building. These aspirations are achieved through a combination of multi-discipline inputs.

Structural Strategy

There has been much discussion on the various materials and construction methods to reduce carbon embodiment during stage 2. We initially proposed a hybrid in situ concrete / precast concrete / CLT floor scheme for this project (Option A). However, after some discussion it appears that this proposal is overly complex, slow to construct and will inevitably cost more to build. Furthermore, the CLT floor will be encapsulated by other materials for fire resistance and will never be seen. We therefore consider that the only significant advantage for using CLT on this scheme is for carbon embodiment in the structure. Following a further review of the project, we propose to reduce the amount of in situ concrete on the scheme by stopping it at first floor level (where it is required). Precast concrete walls and floor would be used above this level throughout the project. Carbon embodiment will be reduced with the use of cement replacement. Having considered the above, we recommend the following:

Roof and floors – Precast concrete with structural topping.
Walls – Precast concrete.
Elevations – Precast concrete sandwich panels with elevation finishes applied at the factory.
In situ concrete – Only to first floor where large spaces/ volumes are required.

Electrical Strategy

- Intrusive surveys of existing underground services on site for diversion works.
- Standalone Substation, Backup Generator and Auto change Over Switch.
- LV Distribution throughout the site which will include all distribution boards, sub main cables, sub-metering with dedicated containment infrastructure for all electrical services.
- Power Factor Correction and Voltage Optimisation equipment on main LV Infrastructure to reduce energy bills, reduce CO2 emissions and help prolong the life time of the LV distribution installation.
- LED internal and external lighting systems which includes smart standalone emergency fittings, lighting controls and software for automatic emergency testing weekly.
- Specialist systems which will include Fire Alarm, Access Control, CCTV, Nurse Call, Panic Alarm, Disabled Alarm, Induction Hearing Loop, BMS, Lightning Protection, Refuge Alarm, Photovoltaic Arrays, ICT Infrastructure, Passenger Lifts, TV & Radio Infrastructure throughout the development.

Mechanical Strategy

Heating System

Based on feedback of the stage 2 report it has now been decided that the proposed heating solution for the building will be based on a full electric heat pump scheme. The major equipment used in this solution includes a ground source heat pump (GSHP) and air sourced heat pump (ASHP) plants operating together to meet the space heating requirement for the building. Non-domestic areas will be heated via VRF heat pump plants. This system correlates with option 3 contained in the heating plant feasibility study produced as part of the stage 2 report.

The heating will be delivered in the households/nursing beds via fan assisted trench heaters or perimeter heating. The final choice of the emitters will be finalised within stage 3. The heating in the apartments will be delivered via standard panel radiators. The heating in the other non-domestic areas will be delivered via ceiling or floor mounted fan coil units. The heating within the front and back of the house, corridors, and WC areas will be provided via panel radiators.

Domestic Hot and Cold-Water System

Domestic hot water will be provided via ASHP plants, and a solar thermal system located at the roof level. Hot water will be supplied to all wet rooms within the main building from the centralized domestic hot water calorifiers based on a 2 piped recirculation system. Domestic hot water in the sheltered accommodation will be provided simultaneously via heat interface units located in the utility cupboards. Thermostatic mixing valves (TMV) will be provided to all baths or shower outlets in the building.

Boosted cold water systems (BCWS) will be provided to the building from the main cold-water tanks located in the basement plant room. The BCWS from the plant room shall be distributed via dedicated risers in each core. The water meter for each apartment shall be located within the BCWS riser, located on each floor level and will be accessible from the main corridors.

Cooling System

The cooling strategy will rely on use of passive design measures to avoid the use of mechanical cooling in the building. The building orientation, window to wall ratio, building fabric, thermal mass and natural and mechanical ventilation

design has been developed to ensure that the occupied zones do not require comfort cooling. It is anticipated that these passive measures will avoid the use of mechanical cooling in all, if not most of the occupied areas. Where this is not possible, the comfort cooling will be provided with an adaptive temperature control. During extreme weather conditions, where passive measures cannot control overheating, the heat pump plants can be operated in reverse cycle mode to provide cooling in some areas of the building,

The rooms with very sensitive users, clinical areas and drug stores will be provided with comfort cooling based on a fixed temperature control. The server rooms will be provided with dedicated cooling plants that will operate independently.

General Ventilation System

Ventilation in the residential areas/shelter accommodation will be provided via mechanical ventilation with a heat recovery system (MVHR), which will supply continuous 'whole house' and boost ventilation for the apartments. A Kitchen extract system will be provided via an extractor fan located above the hob in the cooker hood. This would be a recirculation type unit. The ventilation in the household/nursing beds, offices and other common areas will be supplied via centrally located air handling plants (AHU). This will provide tempered fresh air with a heat recovery system. AHU will be provided with an evaporative cooler (humidifier) which will be installed on the return air path to provide sensible cooling to assist with overheating.

Natural ventilation will be provided to households, apartments and other common areas via openable windows and the acoustic louvres throughout.

Corridor Ventilation System

Building lobbies and corridors will be provided with the ventilation to remove heat gains and improve the air quality in the space. Environmental fans connected on the smoke shafts and AOV openings located at the top of the stairs will operate together, providing air circulation within the corridors to remove the build-up of heat in the corridors.

Smoke Ventilation System

The building will be provided with mechanical smoke ventilation systems in the common parts. The lobbies and stairs will be protected by a mechanical smoke extract system. The smoke shaft will be provided to each main cores and corridors, which will be based on minimum 0.6m2 (free area) dropping through the floors. The makeup air will be provided to the corridors through the AOV located at the top of the stairs. The final strategy and details of the smoke ventilation system will be confirmed and developed by the fire consultant.

Automatic Fire Suppression System

The building will have an automatic fire sprinkler system that will be fed from the main sprinkler tanks, located within the basement plant room.

Dry Risers

Buildings that are less than 50m in height will be provided with a dry riser with an inlet adjacent to the fire-fighting entrance of each block.

Above Ground Drainage System

Foul water will be collected from the apartments and the other wet rooms via a single pipe ventilated stack system. SVPs will rise through the roof to be ventilated into fresh air.

Rainwater Drainage System

The roof areas will have gravity drainage rainwater outlets. Horizontal and vertical pipework will distribute rainwater to the below ground system or sewer. All rainwater drainage shall be routed within the warm envelope of the building to avoid potential freezing.

Medical gas

The medical air will be supplied to clinical rooms from a compressed air plant that includes high quality drying and filtration equipment. The system will be designed with adequate resilience and redundancy to ensure the continuity of supply is maintained at all times.

SECOND FLOOR

8.00	**STAFF & SUPPORT SPACES**		
8.01	Archive store		31.0
8.02	Store		21.0
8.03	IT Room		7.0
8.04	Linen		7.0
			66.0
9.00	**HOUSEHOLD F -**		
9.01	Single Room with wet-room ensuite 1		22.0
9.02	Single Room with wet-room ensuite 2		22.0
9.03	Single Room with wet-room ensuite 3		22.0
9.04	Single Room with wet-room ensuite 4		22.0
9.05	Single Room with wet-room ensuite 5		22.0
9.06	Single Room with wet-room ensuite 6		22.0
9.07	Single Room with wet-room ensuite 7		22.0
9.08	Single Room with wet-room ensuite 8		22.0
9.09	Single Room with wet-room ensuite 9		22.0
9.10	Single Room with wet-room ensuite 10		22.0
9.11	Lounge		46.0
9.12	Dining Room		50.0
9.13	Nurses Sation/Staff base		5.0
9.14	Prep Room (Controlled drugs)		5.0
9.15	Wheelchair / Hoists store		14.0
9.16	Staff / Visitors WC		6.0
9.17	Residents WC		12.0
9.18	Assisted Bath / Shower Room / WC		22.0
9.19	Sluice		8.0
			388.0
10.00	**HOUSEHOLD G -**		
10.01	Single Room with wet-room ensuite 1		22.0
10.02	Single Room with wet-room ensuite 2		22.0
10.03	Single Room with wet-room ensuite 3		22.0
10.04	Single Room with wet-room ensuite 4		22.0
10.05	Single Room with wet-room ensuite 5		22.0
10.06	Single Room with wet-room ensuite 6		22.0
10.07	Single Room with wet-room ensuite 7		22.0
10.08	Single Room with wet-room ensuite 8		22.0
10.09	Single Room with wet-room ensuite 9		22.0
10.10	Single Room with wet-room ensuite 10		22.0
10.11	Lounge		39.0
10.12	Dining Room		44.0
10.13	Nurses Sation/Staff base		5.0
10.14	Prep Room (Controlled drugs)		9.0
10.15	Wheelchair / Hoists store		9.0
10.16	Staff / Visitors WC		4.0
10.17	Residents WC		4.0
10.18	Sluice		0.0
10.19	Multi Purpose /Activity Room 1		40.0
10.20	Multi Purpose /Activity Room 2		43.0
			417.0
11.00	**STUDIO UNITS - Homeless complex care / Palliative care units**		
11.01	Studio Room with wet-room ensuite 1		25.0
11.02	Studio Room with wet-room ensuite 2		25.0
11.03	Studio Room with wet-room ensuite 3		25.0
11.04	Studio Room with wet-room ensuite 4		25.0
11.05	Studio Room with wet-room ensuite 5		25.0
11.06	Studio Room with wet-room ensuite 6		25.0
11.07	Studio Room with wet-room ensuite 7		25.0
11.08	Studio Room with wet-room ensuite 8		25.0
11.09	Studio Room with wet-room ensuite 9		25.0
11.10	Studio Room with wet-room ensuite 10		25.0
11.11	Communal Room		40.0
11.12	WC 1		6.0
11.13	WC 2		6.0
11.14	Office 1		18.0
11.15	Refuse store(s) / Meters		20.0
11.16	Bathroom		6.0
11.17	Hoist Store		10.0
11.18	Furniture store		10.0
11.19	Reception		7.0
			373.0
12.00	**RESIDENTIAL SHELTERED HOUSING UNITS**		
12.01	Flat 1		46.0
12.02	Flat 2		46.0
12.03	Flat 3		46.0
12.04	Flat 4		46.0
12.05	Flat 5		46.0
12.06	Flat 6 - 2 Bed		72.0
12.07	Refuse Store(s) / Meters		17.0
			319.0
	2F Circulation		**577.0**
	SECOND FLOOR TOTAL AREA		**2,140.0**

THIRD FLOOR

13.00	**RESIDENTIAL SHELTERED HOUSING UNITS**		
13.01	Flat 7 - 2 Bed		72.0
13.02	Flat 8		46.0
13.03	Flat 9		46.0
13.04	Flat 10		46.0
13.05	Flat 11		46.0
13.06	Flat 12		46.0
13.07	Flat 13		46.0
13.08	Flat 14		46.0
13.09	Flat 15		46.0
13.10	Flat 16		46.0
13.11	Flat 17		46.0
13.12	Flat 18		46.0
13.13	Flat 19 - 2 Bed		72.0
13.14	Flat 20 - 2 Bed		72.0
13.15	Communal area		35.0
13.16	Furniture / Archive store		31.0
13.17	Refuse Store(s) / Meters		27.0
13.18	Store		22.0
13.19	IT room		7.0
13.20	Linen Store		7.0
13.21	Plant Room		21.0
			872.0
	3F Circulation		**313.0**
	THIRD FLOOR TOTAL AREA		**1,185.0**

	72.4%	TOTAL GROSS AREA	5,769.0
	27.6%	TOTAL CIRCULATION	2,194.0
		TOTAL NETT AREA	**7,963.0**

Appendix A - Architects Drawings

architecture
building services
planning
interior design
sustainability
civil and structural
project management
CDM and H&S services

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Level 00 Proposed Plan

1 : 100

Scale Bar 1:100

Rev	Comment	Date	Chk
Project No: 812866	Scale @ A2: 1 : 100	Drawn by: JG	

Project
Osborne Grove Care Home
16 Upper Tollington Park
Stroud Green
London, N4 3EL

Client
London Borough of Haringey

Title
Setting Out Plan - Ground Floor

Drawing Number
OSBRNE-IWD-XX-00-DR-A-3100

Status	Purpose of Issue	Revision
S2	Suitable for Coordination	

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Level 01 Proposed Plan
1 : 100

Scale Bar 1:100

Rev	Comment	Date	Chk
Project No: 812666	Scale @ A3: 1 : 100	Drawn By: JG	

Project
Osborne Grove Care Home
16 Upper Tollington Park
Stroud Green
London, N4 3EL

Client
London Borough of Haringey

Title
Setting Out Plan - 1st Floor

Drawing Number
OSBRNE-IWD-XX-01-DR-A-3101

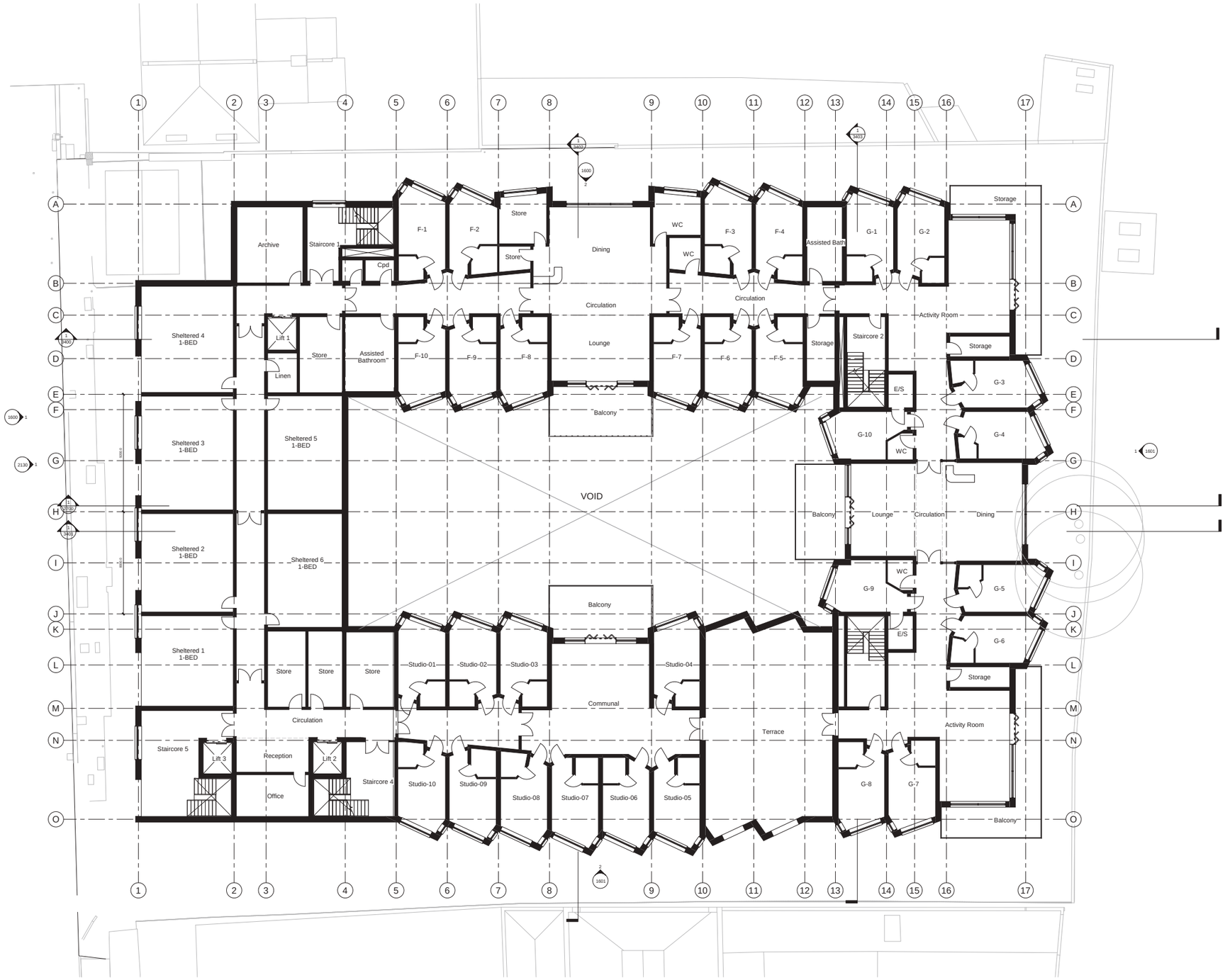
Status	Purpose of Issue	Revision
S2	Suitable for Coordination	

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Proposed Level 02
1 : 100

Scale Bar 1:100

Rev	Comment	Date	Chk
Project No: 812866	Scale @ A1: 1 : 100	Drawn By: XG	

Ingleton Wood
Wessex, Kent and London

Project
Osborne Grove Care Home
16 Upper Tollington Park
Stroud Green
London, N4 3EL

Client
London Borough of Haringey

Title
Setting Out Plan - 2nd Floor

Drawing Number
OSBRNE-IWD-XX-02-DR-A-3102

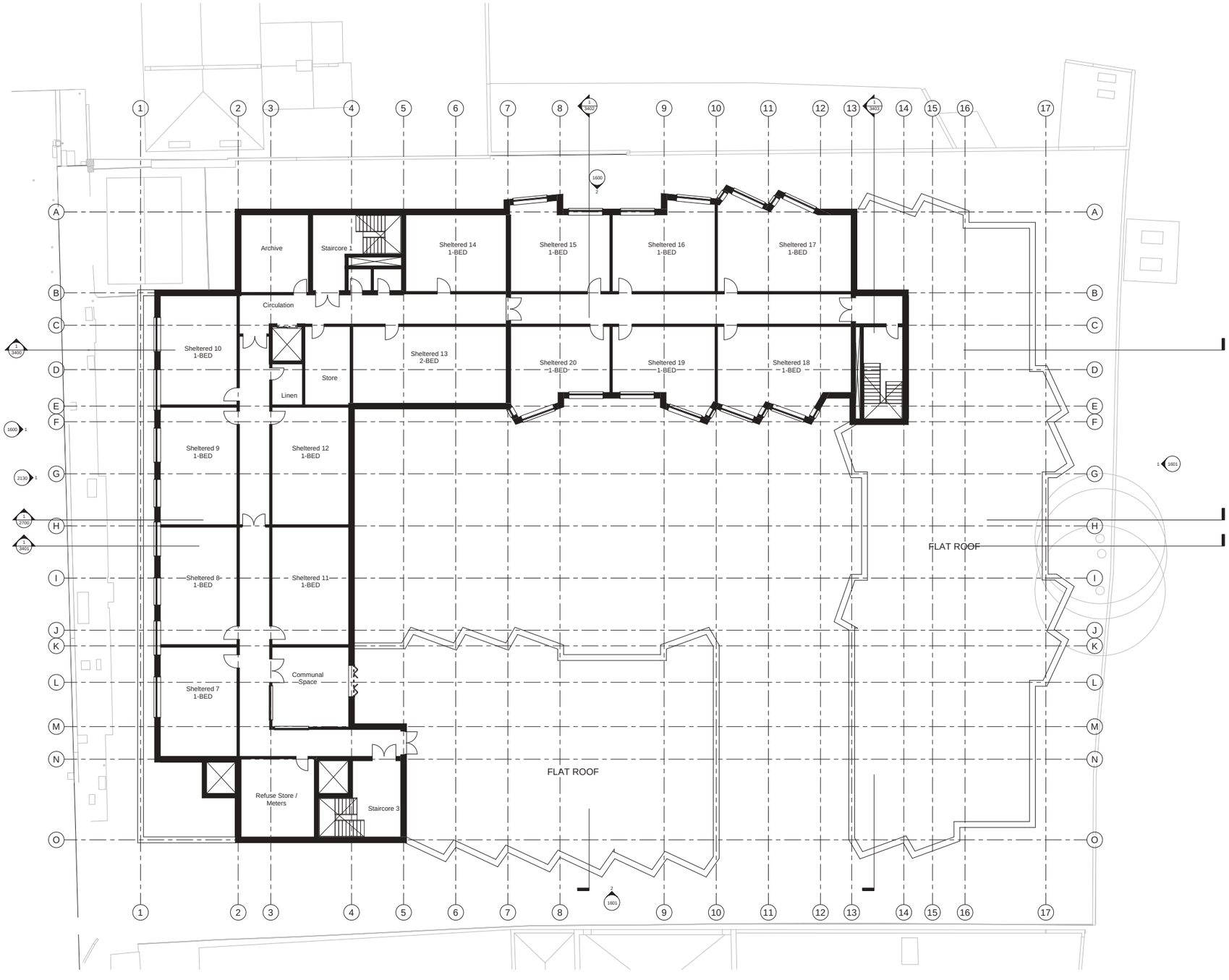
Status	Purpose of Issue	Revision
S2	Suitable for Coordination	

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Proposed Level 03
1 : 100

Scale Bar 1:100

Rev	Comment	Date	Chk
Project No	Scale @ A3	Drawn By	
812866	1 : 100	JG	

Project
Osborne Grove Care Home
16 Upper Tollington Park
Stroud Green
London, N4 3EL

Client
London Borough of Haringey

Title
Setting Out Plan - 3rd Floor

Drawing Number
OSBRNE-IWD-XX-03-DR-A-3103

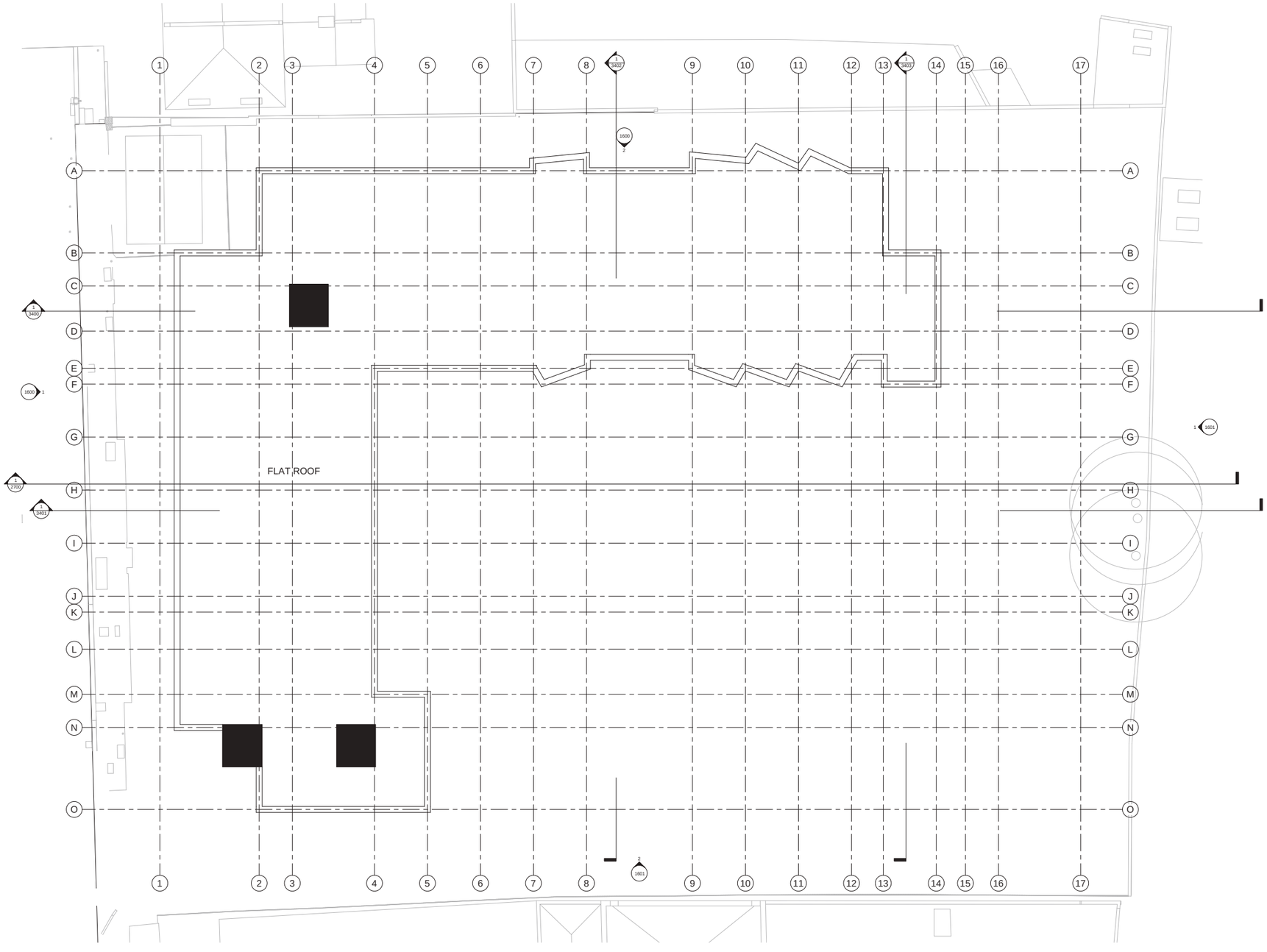
Status	Purpose of Issue	Revision
S2	Suitable for Coordination	

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Proposed Level 04

1 : 100

0m 2m 4m 6m 8m 10m

Scale Bar 1:100

Rev	Comment	Date	Chk
Project No. 812666	Scale @ A3 1 : 100	Drawn By JG	

Ingleton Wood

Project
Osborne Grove Care Home
16 Upper Tollington Park
Stroud Green
London, N4 3EL

Client
London Borough of Haringey

Title
Setting Out Plan - 4th Floor

Drawing Number
OSBRNE-IWD-XX-04-DR-A-3104

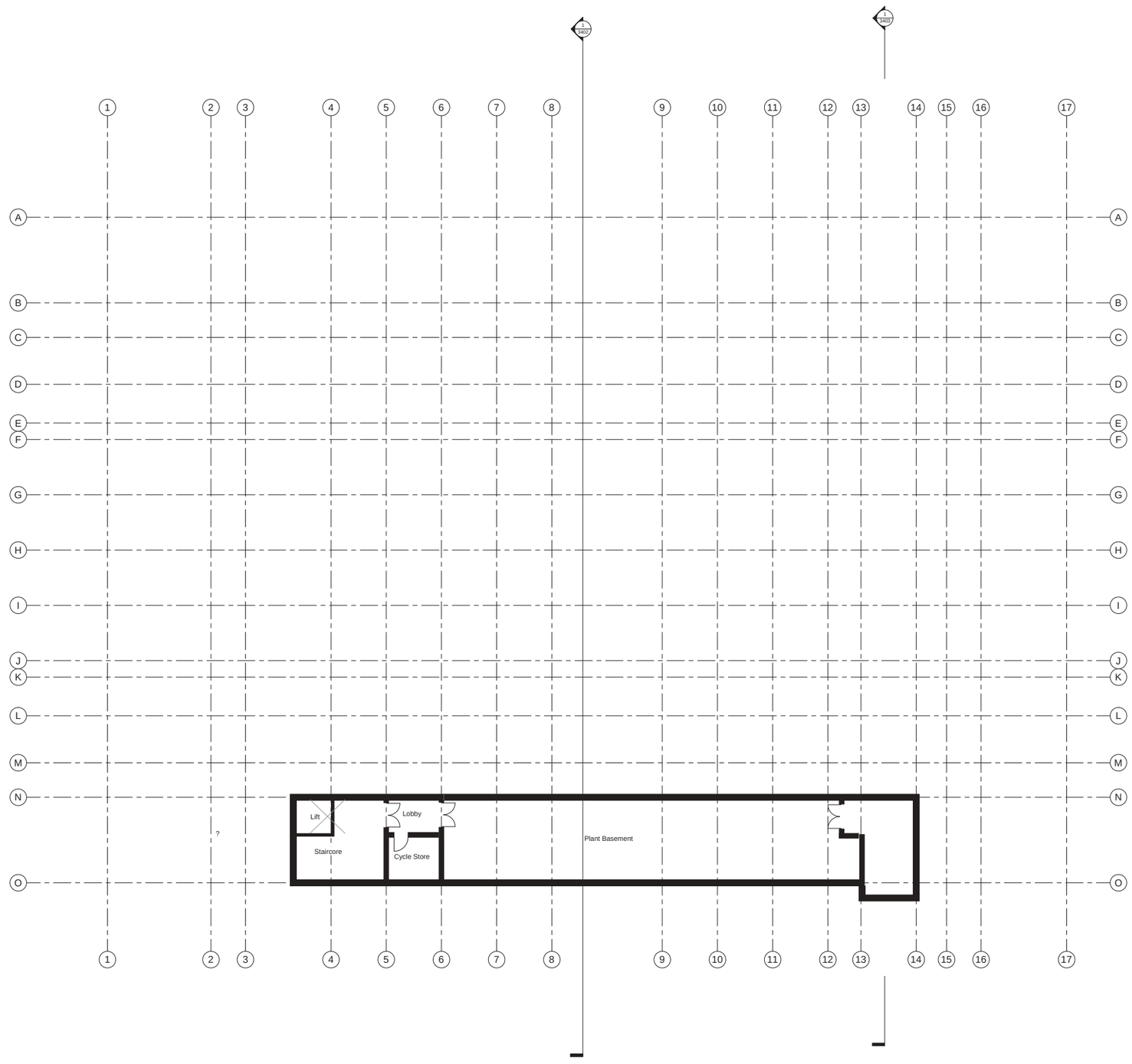
Status	Purpose of Issue	Revision
S2	Suitable for Coordination	

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3100-Level -01 BG
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Scale Bar 1:100

Rev	Comment	Date	Chk
Project No: 812866	Scale @ A1: 1 : 100	Drawn By: XG	

Ingleton Wood

Project
Osborne Grove Care Home
16 Upper Tollington Park
Stroud Green
London, N4 3EL

Client
London Borough of Haringey

Title
Setting Out Plan - Below Ground -01

Drawing Number
OSBRNE-IWD-XX-B1-DR-A-3110

Status	Purpose of Issue	Revision
S2	Suitable for Coordination	



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Level 00 Proposed Plan
1 : 100



Scale Bar 1:100

Rev	Comment	Date	Chk
Project No: 812866	Scale @ A1: 1 : 100	Drawn By: XG	

Project
Osborne Grove Care Home
16 Upper Tollington Park
Stroud Green
London, N4 3EL

Client
London Borough of Haringey

Title
GA Floor Plan - Level 00

Drawing Number
OSBRNE-IWD-XX-00-DR-A-2400

Status	Purpose of Issue	Revision
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Level 01 Proposed Plan
1 : 100

0m 2m 4m 6m 8m 10m
Scale Bar 1:100

Rev	Comment	Date	Chk
Project No: 812866	Scale @ A2: 1 : 100	Drawn By: JG	

Ingleton Wood

Vision, form and function

Project:
Osborne Grove Care Home
16 Upper Tollington Park
Stroud Green
London, N4 3EL

Client:
London Borough of Haringey

Title:
GA Floor Plan - Level 01

Drawing Number:
OSBRNE-IWD-XX-01-DR-A-2401

Status	Purpose of Issue	Revision
S2	Suitable for Coordination	

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Proposed Level 02

1 : 100

0m 2m 4m 6m 8m 10m

Scale Bar 1:100

Rev	Comment	Date	Chk
Project No: 812866	Scale @ A0: 1 : 100	Drawn By: JG	

Ingleton Wood

Yiktan, Ihsm and Tomi Bere

Project
Osborne Grove Care Home
16 Upper Tollington Park
Stroud Green
London, N4 3EL

Client
London Borough of Haringey

Title
GA Floor Plan - Level 02

Drawing Number
OSBRNE-IWD-XX-02-DR-A-2402

Status	Purpose of Issue	Revision
S2	Suitable for Coordination	

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Proposed Level 03
1 : 100



Scale Bar 1:100

Rev	Comment	Date	Chk
Project No: 812866	Scale @ A0: 1 : 100	Drawn By: JG	

Project:
Osborne Grove Care Home
16 Upper Tollington Park
Stroud Green
London, N4 3EL

Client:
London Borough of Haringey

Title:
GA Floor Plan - Level 03

Drawing Number:
OSBRNE-IWD-XX-03-DR-A-2403

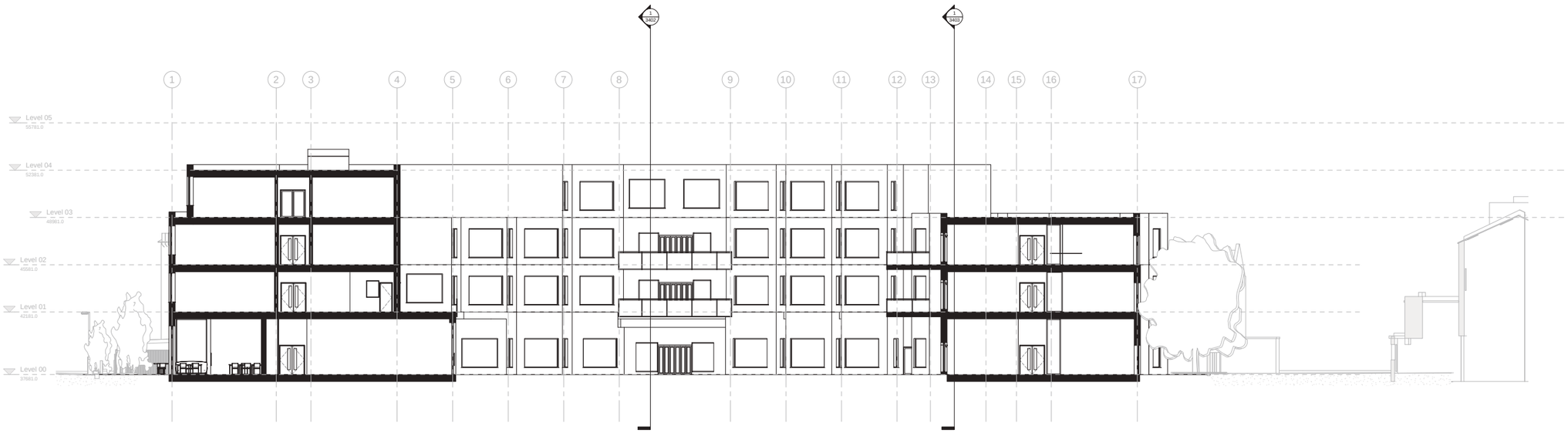
Status	Purpose of Issue	Revision
S2	Suitable for Coordination	





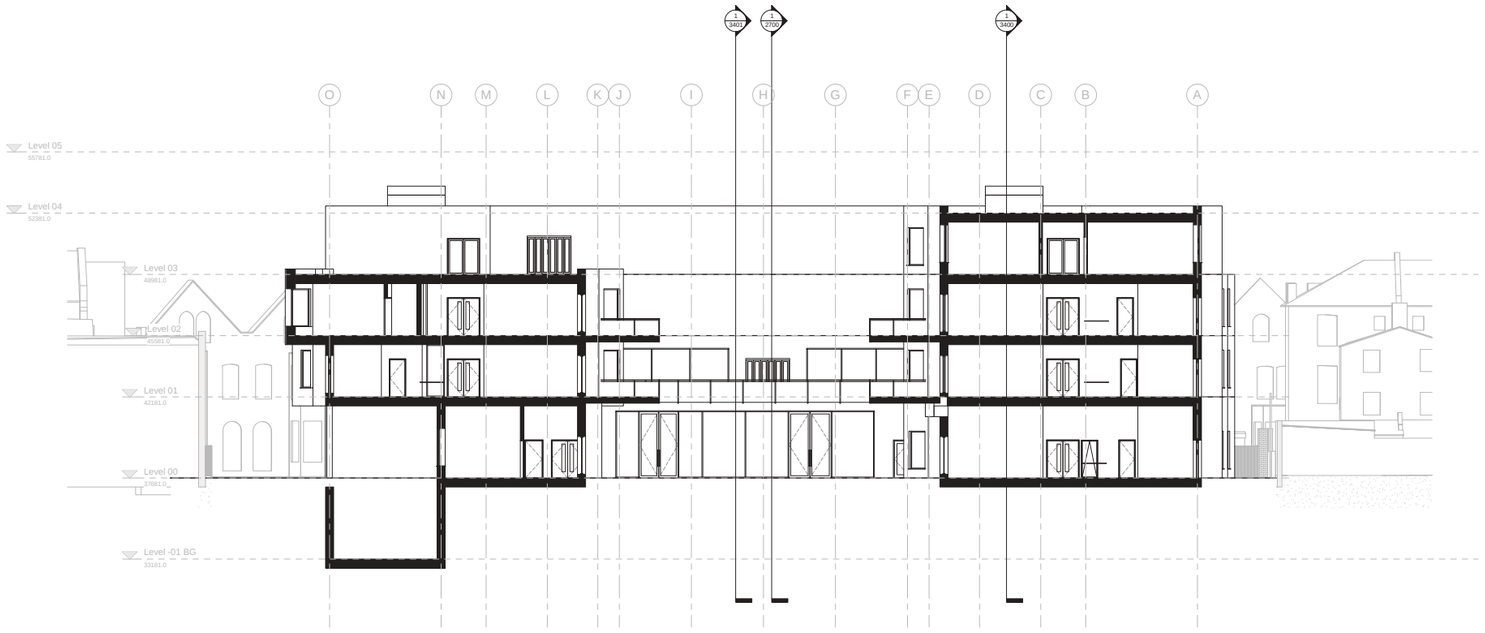
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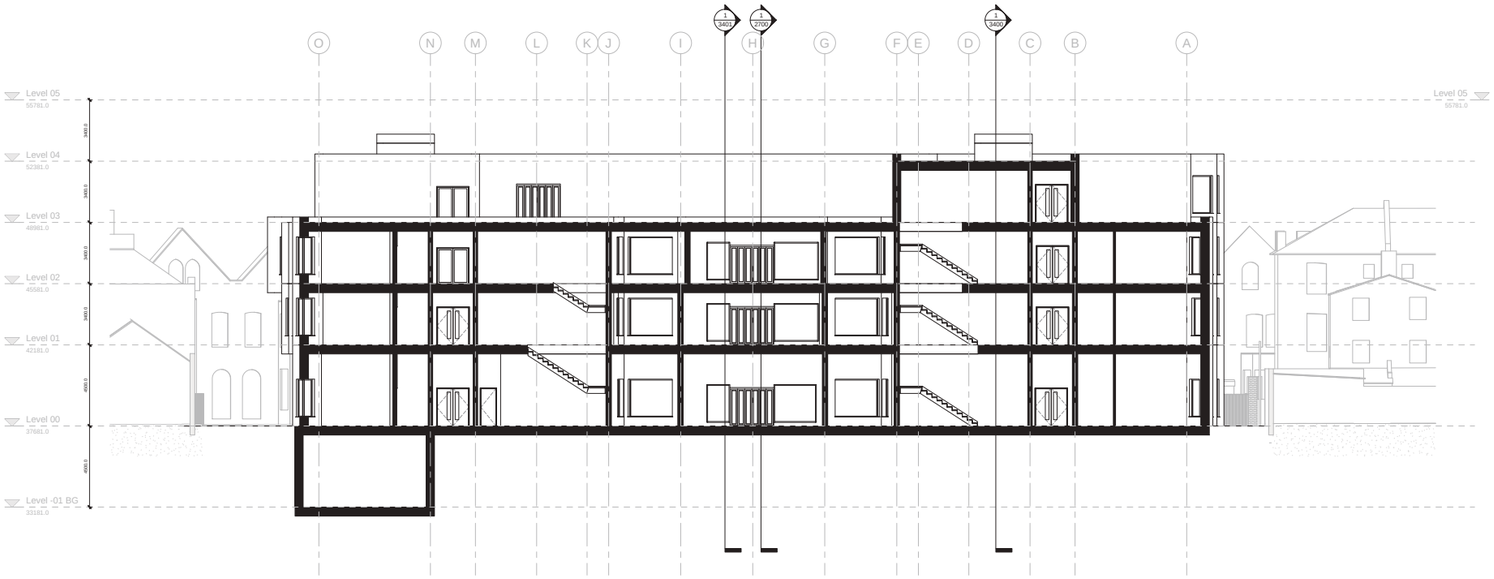
Section B.B

1 : 100



Section C.C

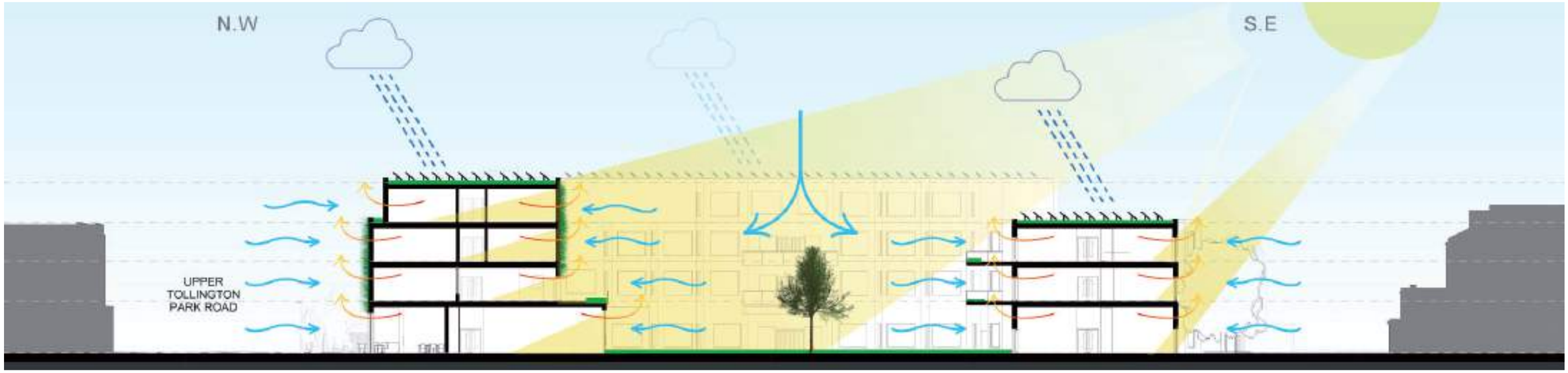
1 : 100



Section D.D

1 : 100




N.W
S.E
UPPER
TOLLINGTON
PARK ROAD




Camera Location [539775, 90, 187374] Bearing 116° Pitch -13° Focal Length 37mm


Camera Location (521149, 39, 187358)
Bearing 220°
Pitch 5°
Focal Length 37mm


Camera Location (538075, 38, 197158)
Bearing 51°
Pitch 2°
Focal Length 27mm





Appendix B - Planning Report

architecture
building services
planning
interior design
sustainability
civil and structural
project management
CDM and H&S services

Appendix C - Structural / Civils Strategy Report

architecture
building services
planning
interior design
sustainability
civil and structural
project management
CDM and H&S services

Appendix D - Mechanical H&C Feasibility Report

architecture
building services
planning
interior design
sustainability
civil and structural
project management
CDM and H&S services

Appendix E - Mechanical Strategy Report

architecture
building services
planning
interior design
sustainability
civil and structural
project management
CDM and H&S services

Appendix F - Landscape Report

architecture
building services
planning
interior design
sustainability
civil and structural
project management
CDM and H&S services

Appendix G - Catering Presentation

architecture
building services
planning
interior design
sustainability
civil and structural
project management
CDM and H&S services

Appendix H - BREEAM Pre-Assessment and Report

architecture
building services
planning
interior design
sustainability
civil and structural
project management
CDM and H&S services

Appendix I - Electrical Report

architecture
building services
planning
interior design
sustainability
civil and structural
project management
CDM and H&S services

Appendix J - BIM Execution Plan
DRAFT

architecture
building services
planning
interior design
sustainability
civil and structural
project management
CDM and H&S services

Appendix K - Civils Drainage Strategy Report

architecture
building services
planning
interior design
sustainability
civil and structural
project management
CDM and H&S services

Appendix L - CDM Report

architecture
building services
planning
interior design
sustainability
civil and structural
project management
CDM and H&S services

Appendix M - Stroud Green Character Appraisal

architecture
building services
planning
interior design
sustainability
civil and structural
project management
CDM and H&S services

Appendix N - Arboricultural Report

architecture
building services
planning
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sustainability
civil and structural
project management
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Appendix O - Ecology Report

architecture
building services
planning
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sustainability
civil and structural
project management
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Appendix P - Thames Water

architecture
building services
planning
interior design
sustainability
civil and structural
project management
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Appendix Q - UXO Survey

architecture
building services
planning
interior design
sustainability
civil and structural
project management
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Appendix R - Ground Investigation Survey

architecture
building services
planning
interior design
sustainability
civil and structural
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Appendix S - Acoustic Strategy Report

architecture
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