

## 4.0 Vision for the Community Hub

### 4.1 The vision for the delivery of world class community provision in King's Cross

King's Cross has become a gateway to Europe. Our intention is to develop and expand the current facility utilising sustainable models of best practice in the design of a community hub.

A centre of excellence is based on believing in and investing in our communities by providing, in imaginative ways, comprehensive community services within a modern environment which addresses a climate change agenda.

The centre will be completed using best practice from elsewhere and which incorporates a design approach to create multipurpose facilities that inspire a sense of pride and ownership by the community.

### 4.2 Camden plan

The new and improved 'hub' will contribute greatly to Camden Council's objectives of the Camden Plan which the council is pursuing to develop a strategic relationship with VCS by creating strategic partners to deliver services across the borough by focusing on outcomes.

Our vision for the re-development supports that concept, as we aim to bring various community groups, organisations and service providers together by delivering outcomes based on the Camden Plan and make our community much more resilient and independent.

Our proposals will support the following Camden Plan themes:

- Developing new solutions with partners to reduce inequality
- Creating conditions for and harnessing the benefit of economic growth
- Investing in our communities to ensure sustainable neighbourhoods

### 4.3 Use of the new Centre

KCBNA will endeavour to make the facility a buzzing community hub through opening up the centre to as many local people and groups as funding allows.

- Local primary schools and community groups such as Age Concern will have access to the Art, Music and Media room

- Local community groups will be able to use the gym facilities for a range of activities such as Tai-Chi, Yoga and gentle chair exercise for the over 50's.
- The meeting rooms will be used by local tenants associations for meetings as well as King's Cross Safer Neighbourhood Team, King's Cross Working Sector Group, King's Cross Area Forum meetings, Youth Council Meeting, community consultation meetings, which will also be attended by young people.
- IT Room - Local community groups, local schools and colleges will be able to use the facilities and utilise the resources.
- The centre will also provide an office base for KCBNA's youth team, KCB Somali and Chinese community workers and King's Cross Families in Focus.

The programme for the new centre will be developed through full consultation and engagement work with young people, the local community and stakeholders.





health, mental health, substance misuse, conflict resolution, youth crime, anti-social behaviour and youth engagement events.

- Young Women's Project: a drop-in service once a week on Thursday. The aim of the project is to empower and build young women's personal and social skills through positive activities such as kick boxing, gardening, cooking, health and beauty and various workshops.
- Families in Focus: support local families in King's Cross with multiple and complex needs. They work in Partnership with KCBNA's team to deliver sessions, workshops and work with challenging families by running parenting classes and one-to-one support.
- Small Community Groups: who hire our facilities to deliver a range of community activities at a minimal cost. The local authority, NHS, Police and other statutory bodies also use our premises for public meetings, consultations, community events and running training courses

#### 4.4 Opening hours

The new King's Cross Community Hub will be open Monday to Friday from 10.00am to 9.00pm.

Opening during the weekend will be agreed with the local residences and the Council

#### 4.5 Background and current user groups

Both youth and community activities take place at the centre, which in its current state, is far from ideal in terms of delivering quality services which are 'fit for purpose' in a deprived neighbourhood.

Our community members are demanding modern facilities and not a traditional 'Community Centre'.

The current user Groups are:

- KCB Youth Centre: offers a drop in service three nights a week for over 200 young people. Activities consist of learning opportunities, one-to-one support, team building, trips, educational advice, healthy eating, motor mechanics projects, internet access, drama, film & photography projects, music projects and workshops covering: sexual









## 5.0 Transport

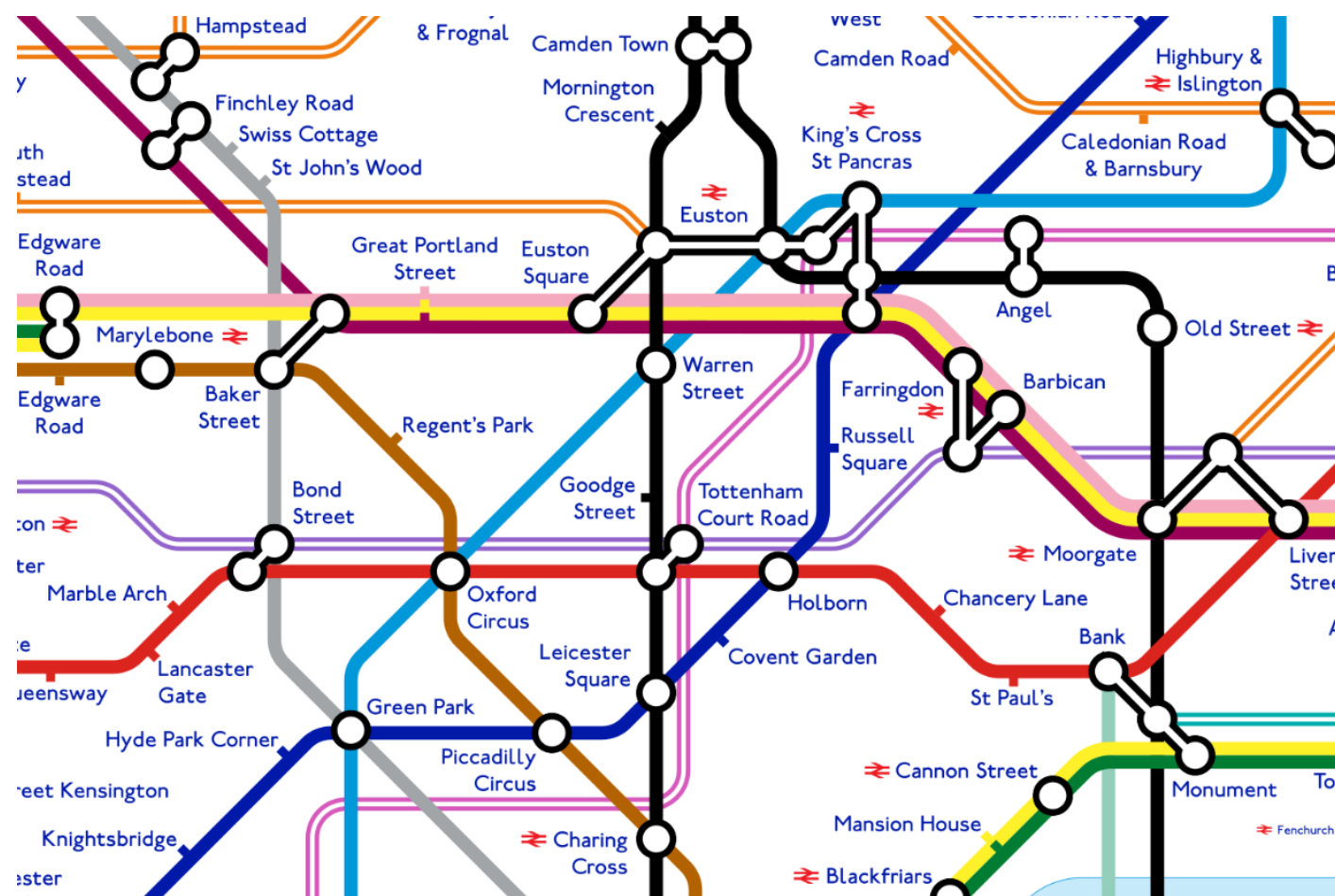
The proposed development of the site would not give rise to any adverse transport impact on the local network.

There will probably be a small increase of the deliveries due to the café', but these will be limited and the new King's Cross Community Hub will have the capacity to fulfil the delivery demand for supplies waste and recycling storage for this proposal.

The deliveries will be managed by appointment and in accordance with the local parking and loading local regulation.

Argyle Street is located in central London, short distance from King's Cross and St Pancras Station with access to Victoria, Piccadilly, Northern, Circle, Hammersmith and Metropolitan lines.

There are also several Buses nearby connecting King's Cross to different areas of London.



King's Cross Station and St Pancras offer train connections to major destination around England, including Brighton, Cambridge, Luton Airport, Gateway Airport, Leeds, Newcastle and Edinburgh.







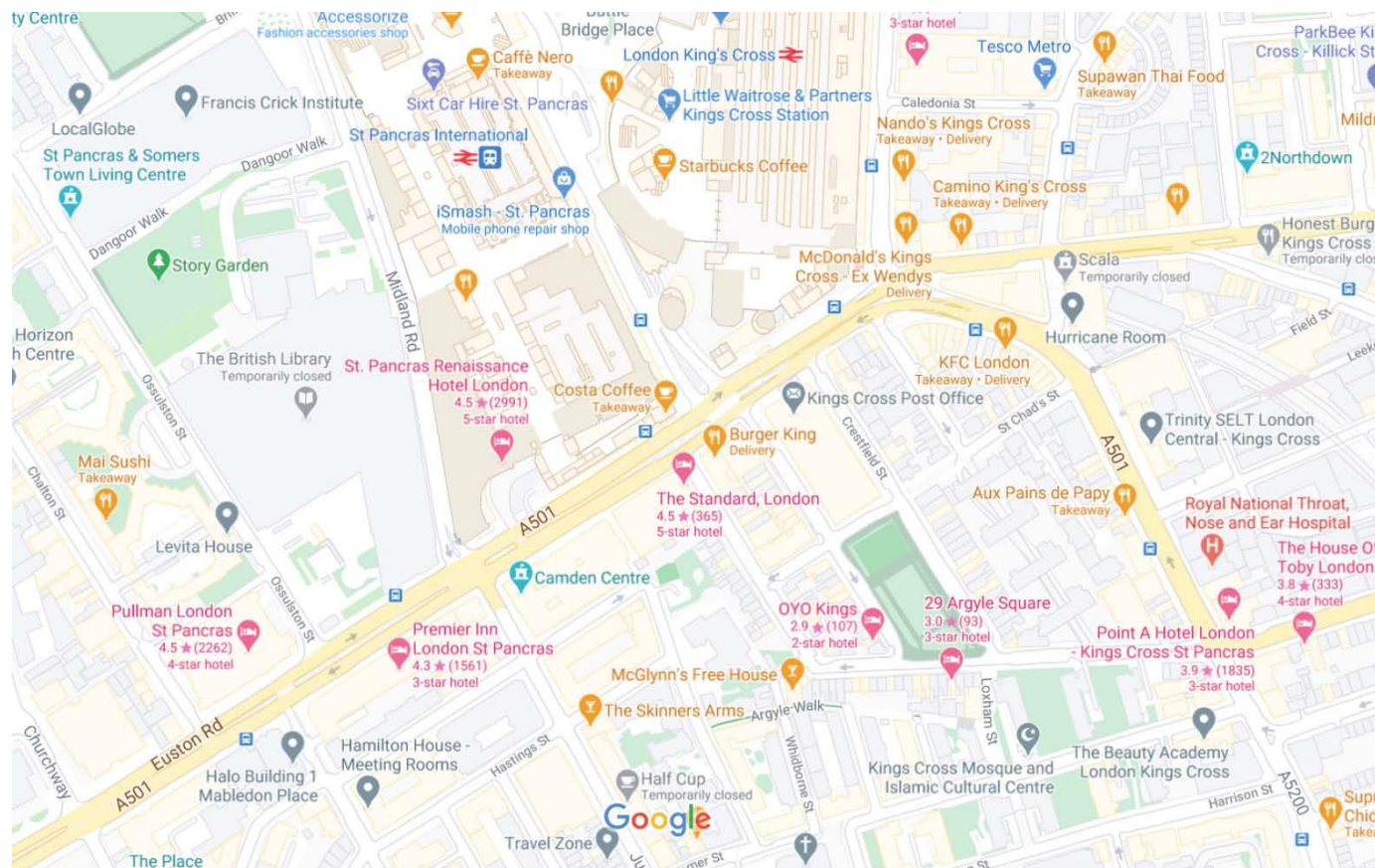
St Pancras International includes the Eurostar trains to Europe, including Paris, Amsterdam, Brussel, Rotterdam and Lille.

Many staff and visitors of the King's Cross Community Hub will have the opportunity of cycling to where they can park bicycles in a secure racked area at the front next to the entrance.

There are many shops, pharmacies, bars, cafes, pubs and restaurants nearby.

The area also offers a wide choice of hotels such as St Pancras Renaissance, Pullman St Pancras and Point A King's Cross.

There are also some cultural centres such as The British Library and the Welcome Collection, and religious places nearby such as St Pancras New Church, Holy Cross Church and Kings Cross Mosque and Islamic Centre.



## 6.0 Tree Survey and proposal

The current proposal includes new green areas at the front and the rear to integrate with the public realm, the Birkenhead Estate and the new allotments.

A detailed landscape proposal will be provided in accordance with consultation with Camden Planning Department and the local residents.

At the front the green hedge in front of the low fence will soften the visual impact. The new garden at the front and stepped planters outside the café will open up the new Community Hub to the street.

Plants and shrubs will be selected with the users of the centre and the local residents to offer a variety of species flowering all year round.

At the rear, the garden around the extension and the ramp will provide an opportunity for the local residents to select particular plants, herbs, flowers, they would like to have. This garden can also be used for biodiversity of plants.

Two new trees around the extension and three additional trees on the green area on the left will be planted to replace the ones removed.

A tree Protection and Construction Method Statement for the redevelopment of the King's Cross Community Hub has been prepared by Arboricultural Consultant in December 2020.

The purpose of this report is to provide a consideration of the arboricultural implications created by the proposed development.

In accordance with the specifications and recommendations of BS5837:2012 "Trees in Relation to Design, Demolition, and construction – recommendations", all the trees on and near the site that could be affected by the development and list their details in Appendix A have been inspected.

The application is for the redevelopment of the existing Kings Cross Brunswick

Neighbourhood Association building including front and rear extensions and lower ground level development. As a result, ten trees were inspected. The implications of the proposal are:

- Trees 1 (Cherry Plum), 5 and 6 (Purple-leaf Plum) and tree 9 (Downy Birch) will require removal to facilitate the redevelopment.

- Trees 3 (Downy Birch), 4 (Italian Alder), 7 and 8 (Fastigate Hornbeam) are outside the proposed construction area. These trees will be protected and retained.

- Trees 2 (Purple-leaf Plum) and 10 (Downy Birch) are within the construction area.

These trees will be retained and will require special precautions (refer to 8.1 Tree Protection Method Statement) to minimise the risk of damage to the roots.

This report includes guidance on tree protection measures and providing these are adhered to there will be no adverse impact on the long-term potential on the retained trees.

### Inspection

Trees likely to be affected by the development were identified and inspected] from ground level only. The trees were inspected based on the Visual Tree Assessment (VTA) method as proposed by Mattheck and Breloer (1994) and were not climbed. No invasive examination technique (such as increment boring, or internal decay detection) was carried out. As the inspection was visual only, no guarantee, either expressed or implied, of the internal condition of the wood of these trees can be given.

### Marking

The existing site plan provided in CAD format was converted for use in Arbortrail tree data collection software. Crown measurements were taken using a laser rangefinder (Leica Disto D510). The trees surveyed were referenced with a number corresponding to the particular tree on the site plan. Where appropriate, close growing trees were entered as a group and given a generic entry within the tree schedule.

Each reference number refers to a survey sheet entry completed on site to show the following data:

- Sequential tree reference number (recorded on tree survey plan)
- Species - Common name followed by the Latin name for the first entry of each different species
- Height in metres
- Trunk diameter in millimetres, measured in accordance with Annex C of BS 5837:2012
- Crown radius measured at the four cardinal points – where only one measurement is given, the crown is symmetrical
- First significant branch height and direction of growth
- Crown clearance above ground level



- Life stage (young, semi-mature, early mature, mature, over-mature, veteran)
- General observations, particularly of structural and/or physiological condition, and/or preliminary management recommendations
- Estimated remaining contribution in years (less than 10, 10+, 20+, more than 40)
- Category U or A to C grading, to be recorded on the tree survey plan

3.2.3. Survey sheet entries are shown at Appendix A of this report.

**Statutory Tree Protection**

The Town and Country Planning (Tree Preservation) (England) Regulations 2012 allows for trees either as groups, or individuals, or as woodlands, to be protected by Tree

Preservation Orders (TPO). These have the effect of preventing the cutting down, topping, lopping, uprooting, wilful damage or wilful destruction of trees except in certain circumstances, other than with the consent of the local planning authority.

A Conservation Area is an area designated by the Local Planning Authority as one of “special architectural or historic interest, the character or appearance of which it is desirable to preserve or enhance”. Special controls exist with regard to demolition and alteration of buildings; Listed Building Consent must also be obtained for any demolition, even if the building is not itself listed. Similarly, trees are given some protection with the requirement for the local authority to be given six weeks written notice before carrying out any work on trees; this gives the authority time to decide if a TPO is necessary.

The site falls within the Kings Cross St Pancras Conservation Area. The boundary with the Bloomsbury Conservation Area runs down the middle of Argyle Street to the south and along the western boundary of the site where 19 Grade II listed houses on Argyle Square back on to the site. It is unlikely that the trees surveyed are subject of TPO as they are on land owned and maintained by London Borough of Camden Housing Services.

**Species diversity**

Species Number

Cherry Plum 1

Purple-leaved Plum 3

Downy Birch 3

Italian Alder 1

Fastigate Hornbeam 2

Total: 10

The tree population comprises four different genera. It is typical of Local Authority amenity planting and there are no rare or unusual species present.

**Age distribution**

Age class Number

Semi-mature 2

Early mature 2

Mature 6

Young 0

Dead 0

Total: 10

The age of the trees is skewed towards trees with a life expectancy of 20 to 40 which are likely to provide medium-term continuity of canopy cover in the area.

**Grade classification**

Tree grade BS5837:2012

Definition

Number

A High 0

B Moderate 3

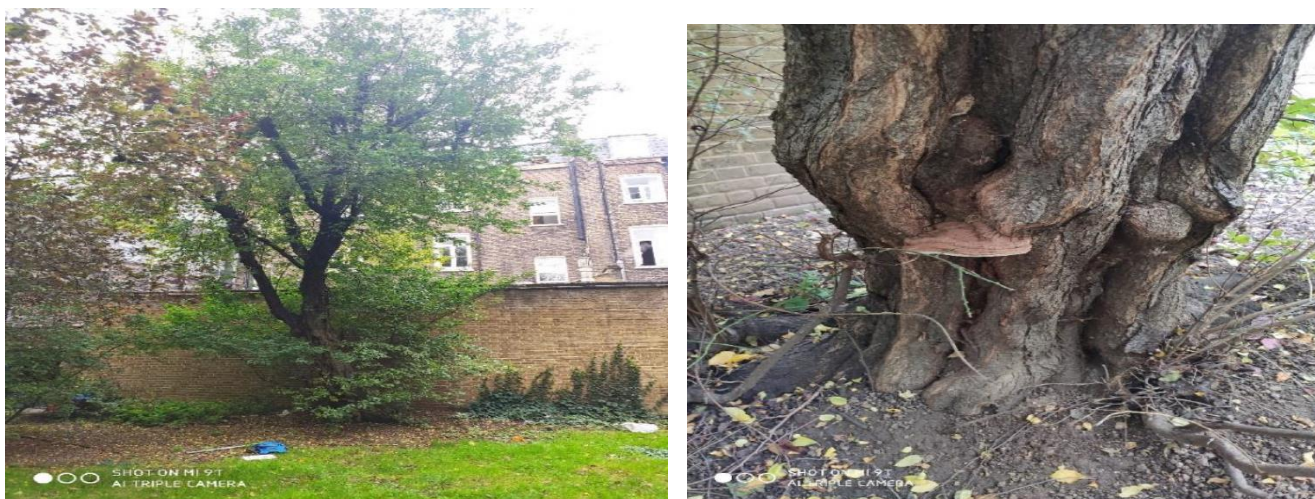
C Low 6

U Remove 1

Total: 6

Tree 1 has been categorised as U (Trees unsuitable for retention) as it has a fungal bracket of Ganoderma on the trunk and is in such a condition that it cannot realistically be retained in the context of the current land use for longer than 10 years.





Photographs 1 and 2 showing tree 1 (Cherry Plum) and fungal bracket on trunk



## Arboricultural Impact Assessment

### Impact on Trees

- Existing trees are an important factor on construction sites, whether on or near the working areas. BS5837:2012 – “Trees in relation to design, demolition and construction
- Recommendations” is intended to assist decision-making with regard to existing and proposed trees in the context of design, demolition and construction. Root systems, stems and canopies, with allowance for future movement and growth, need to be taken
- BS5837:2012 - Trees in relation to design, demolition and construction – recommendations have been used to calculate the RPAs. It should be noted that this method is primarily used to calculate the volume of soil required to maintain healthy growth based on the trunk diameter of the tree. In practice, roots may extend beyond this area, and in some cases the spread may be less. The majority of a tree’s root system is generally considered to be in the top 600mm of the soil, extending radially in any direction for distances frequently in excess of the tree’s height.
- The proposed development will have no impact on the root protection areas of trees 3, (Downy Birch), 4 (Italian Alder), 7 and 8 (Fastigate Hornbeam). These trees will be retained, and protective fencing installed to prevent construction access to these trees.

- Trees 1 (Cherry Plum), 5 and 6 (Purple-leaf Plum) and tree 9 (Downy Birch) will require removal to facilitate the redevelopment. Trees 1, 6 and 9 are within the footprint of the proposed building and so cannot be retained.
- The basement excavation extends into the west side of the RPA of tree 5 and in addition, the tree is located within the proposed garden area. Plum trees are recognised by a number of authorities as being shallow to moderately deep rooted on clay soils.
- Excavations within the RPA may lead to significant root damage or loss and result in a decline in the health of the tree concerned. Plum trees (*Prunus* species) are vulnerable to infection by *Ganoderma* as the infection is considered to be associated with root damage and severance. As with any fungal species that causes root and butt rot in living trees, decay by *Ganoderma* can cause mechanical failure of the stem base or root plate.
- Trees 2 & 10 will be protected and retained. The circular representation of the root protection areas extends into the proposed construction areas. the basement excavations encroach slightly into the RPA of Tree 2 (Purple-leaf Plum). This is a very minor incursion and is unlikely to have a significant impact on the stability or health of the tree. In addition, new paving is proposed over approximately 25% of the area of the RPA. This will need to be of porous permeable design laid on a 'minimal dig' base to prevent damage to the rooting zone.
- Tree 10 (Downy Birch) is located at the front of the property within the existing stepped and ramped access to the building and the. There are several elements of hard landscaping and hard surfacing making the prediction of the root locations difficult. The existing ground level slopes downward towards the existing building and the encroachment within the RPA to create the lower ground level patio area is less than 15% of the RPA. Birch trees tend to be shallow rooted and intolerant of root damage so any works within the RPA will require careful
- Tree Survey – BS5837:2012 Refer to Section 8 Arboricultural Method Statement below for details of tree protection.
- The outside area around the rear extension has been re-designed to provide new garden/planting areas around the existing ramp and the new building. In the context of the loss of trees, a comprehensive new landscaping scheme to include new tree planting will be submitted including a selection of species chosen enhance the amenity of the development. The final species selection can be made after consultation with the relevant interested parties.

## Protection Plan (TPP)

- The TPP illustrates the location of the protective barriers and must be displayed on site in a highly visible area so that all staff involved in the works have a point of reference for tree protection issues.
- Construction Exclusion Zone (CEZ)
- For the purpose of this report the CEZ can be defined as all the area within the RPAs of retained trees outside the work areas and the areas behind the tree protection fencing.
- Site operations are not permitted in the CEZs without reference to the Arboricultural
- Method Statement in this report (refer to section 8 of this report).

## Development

- Threats to trees during development
- These may be listed, in general terms as:
  - • Compaction of ground
  - • Covering rooting areas with impervious surfaces
  - • Excavations for foundations
  - • Excavation for service runs
  - • Alterations in ground level
  - • Access and movement of machinery
  - • Need for temporary site storage
  - • Crown damage by passage of high-sided vehicles

British Standard 5837 (1991) 'Trees in relation to construction' provided useful guidance for the assessment and formulation of measures for the mitigation of such threats.

Using the experience gained from this Standard, it was revised and upgraded to

'Recommendation' status as British Standard 5837 'Trees in Relation to Construction' (2005).

This British Standard was withdrawn on 30th April 2012 and replaced with Trees in Relation to Design, Demolition and Construction - Recommendations BS 5837: 2012. To assist in the prediction of the likely impact of development on retained trees, a model is used. This model is based on the age, vitality and size of individual specimens.

The British Standard relies heavily on the creation of a protected zone (RPA) around each tree. This area should be protected from disturbance "in order to avoid unacceptable damage to the



tree as a result of severance or asphyxiation of the root system.” The recommended minimum area (m<sup>2</sup>) for each tree to avoid potentially harmful disturbance have been calculated for all the trees on site and entered into the tree schedule (appendix A).

7.1.4. BS 5837: (2012) acknowledges that the shape of the tree root system may be affected by several factors and that the shape of the RPA should reflect this. Any deviation in the RPA from the original circular plot should take account of the following factors whilst still providing adequate protection for the root system:

- a) The morphology and disposition of the roots, when influenced by past or present existing site conditions (e.g. the presence of roads, structures and underground apparatus);
- b) Topography and drainage;
- c) Likely tolerance of the tree to root disturbance or damage based on factors such as species, age, condition and past management.

## **Root Damage**

Trees that are growing satisfactorily have achieved equilibrium with their surroundings.

Any construction work that affects this equilibrium could be detrimental to health, future growth and the safety of the tree.

The part of the tree most susceptible to damage is the root system, which, because it is not immediately visible, is frequently ignored. Damage or death of the root system will affect the health, growth, life expectancy and safety of the rest of the tree. The effects of such damage may only become evident several years later.

The majority of a tree’s root system is generally considered to be in the top 600mm of the soil, extending radially in any direction for distances frequently in excess of the tree’s height. However, roots are adventitious and if conditions suitable for root development exist to a greater depth, the roots may extend to depths of three metres or more. Works within the root spread may damage the root system.

Close to the trunk are the main structural roots that develop in response to the tree’s need for structural stability. Beyond these major roots, the root system rapidly subdivides into smaller diameter roots; off this main system a mass of fine roots develops.

Tree root systems can be damaged in a number of ways during construction works.

## 7.0 Daylight and Sunlight Impact

A Daylight and Sunlight Report for the Kings Cross Neighbourhood Association, 51 Argyle Street, London WC1H 8EF was issued on 11 November 2020 by Right of Light Consulting.

### Overview

Right of Light Consulting has been commissioned by Kings Cross Neighbourhood Association to undertake a daylight and sunlight study of the proposed development at Kings Cross Neighbourhood Association, 51 Argyle Street, London WC1H 8EF.

The study is based on the various numerical tests laid down in the Building Research Establishment (BRE) guide ‘Site Layout Planning for Daylight and Sunlight: a guide to good practice, 2nd Edition’ by P J Littlefair 2011.

The aim of the study is to assess the impact of the development on the light receivable by the neighbouring properties at 1 to 24 Fleetfield, 1 to 24 Fleetway, 20 to 24 Argyle Square and 49 & 51 Argyle Street.

The window key in Appendix 1 identifies the windows analysed in this study.

Appendix 2 gives the numerical results of the various daylight and sunlight tests.

Where room layouts are not known the daylight distribution test has not been undertaken.

The results demonstrate that the proposed development will have a relatively low impact on the light receivable by its neighbouring properties. Non-compliance with the BRE recommendations is limited to the sunlight test in respect of garden 2 at 1 to 24 Fleetfield. In our opinion, taking into account the overall high level of compliance with the BRE recommendations, and the mitigating factors set out in section 4, the proposed development is acceptable in terms of daylight and sunlight.

### Methodology of the study

The Daylight and Sunlight Study has been prepared in accordance with:

Local Planning Policy

- The Local Authority take the conventional approach of considering daylight and sunlight amenity with reference to the various numerical tests laid down in the Building Research Establishment (BRE) guide ‘Site Layout

- Planning for Daylight and Sunlight: a guide to good practice, 2nd Edition’ by P J Littlefair 2011. A new European standard BS EN 17037 ‘Daylight in Buildings’ was published in May 2019. An update to the BRE guide to take into account the European standard is not anticipated until sometime in 2020. It is not yet clear, how and to what extent, the European recommendations will be adopted by the BRE and Local Authorities.
- The standards set out in the BRE guide are intended to be used flexibly. The BRE guide states:
- “The guide is intended for building designers and their clients, consultants and planning officials. The advice given here is not mandatory and the guide should not be seen as an instrument of planning policy; its aim is to help rather than constrain the designer. Although it gives numerical guidelines, these should be interpreted flexibly, since natural lighting is only one of many factors in site layout design.”

### National Planning Policy Framework

- The BRE numerical guidelines should be considered in the context of the National
- Planning Policy Framework (NPPF), which stipulates that local planning authorities should take a flexible approach to daylight and sunlight to ensure the efficient use of land. The NPPF states:
- “Local planning authorities should refuse applications which they consider fail to make efficient use of land, taking into account the policies in this Framework. In this context, when considering applications for housing, authorities should take a flexible approach in applying policies or guidance relating to daylight and sunlight, where they would otherwise inhibit making efficient use of a site (as long as the resulting scheme would provide acceptable living standards).”

### Daylight to Windows

- Diffuse daylight is the light received from the sun which has been diffused through the sky. Even on a cloudy day, when the sun is not visible, a room will continue to be lit with light from the sky. This is diffuse daylight.
- Diffuse daylight calculations should be undertaken to all rooms within domestic properties, where daylight is required, including living rooms, kitchens and bedrooms.



- The BRE guide states that windows to bathrooms, toilets, storerooms, circulation areas and garages need not be analysed. These room types are non-habitable and do not have a requirement for daylight.
- The BRE guide states that the tests may also be applied to non-domestic buildings where there is a reasonable expectation of daylight. The BRE guide explains that this would normally include schools, hospitals, hotels and hostels, small workshops and some offices. The BRE guide is not explicit in terms of which types of offices it regards as having a requirement for daylight. However, it is widely accepted amongst consultants and local authorities, that for planning purposes, offices (which are commercial in nature) do not have a requirement for daylight. The point is touched on in the 'Daylighting and Sunlighting' guidance note published by the Royal Institution of Chartered Surveyors (RICS), which gives guidance to surveyors on how to produce their reports:
- "The report should establish the limits of the assessment. For example, existing commercial premises are rarely assessed for loss of amenity."
- The BRE guide contains two tests which measure diffuse daylight:

#### Test 1 Vertical Sky Component

- The Vertical Sky Component is a measure of available skylight at a given point on a vertical plane. Diffuse daylight may be adversely affected if after a development the
- Vertical Sky Component is both less than 27% and less than 0.8 times its former value.
- The BRE guide states that the total amount of skylight can be calculated by finding the Vertical Sky Component at the centre of each main window. The BRE guide does not define the term 'main window'. However, in our opinion, where a room has multiple windows, the largest window is usually taken as the main window and the smaller window(s) as secondary. Although we generally follow the practice of testing all windows, including secondary windows, our interpretation of the BRE guide is that the Vertical Sky Component targets do not apply to secondary windows.

#### Test 2 Daylight Distribution

- The distribution of daylight within a room can be calculated by plotting the 'no sky line'. The no sky line is a line which separates areas of the working plane that do and do not have a direct view of the sky. Daylight may be adversely affected if, after the development, the area of the working plane in a room which can receive direct skylight is reduced to less than 0.8 times its former value.

- The BRE guide states that both the total amount of skylight (Vertical Sky Component) and its distribution within the building (Daylight Distribution) are important. The BRE guide states that where room layouts are known, the impact on the daylighting distribution can be found by plotting the 'no sky line' in each of the main rooms. Therefore, we are of the opinion that application of the test is not a requirement of the BRE guide where room layouts are not known. We don't endorse the practice of applying the test based on assumed room layouts, because the test is very sensitive to the size and layout of the room and the results are likely to be misleading. However, we can provide additional daylight distribution data upon request by the local authority, if neighbouring room layout information is confirmed.

#### Sunlight availability to Windows

- The BRE sunlight tests should be applied to all main living rooms and conservatories which have a window which faces within 90 degrees of due south. The guide states that kitchens and bedrooms are less important, although care should be taken not to block too much sunlight. The tests should also be applied to non-domestic buildings where there is a particular requirement for sunlight.
- The test is intended to be applied to main windows which face within 90 degrees of due south. However, the BRE guide explains that if the main window faces within 90 degrees of due north, but a secondary window faces within 90 degrees of due south, sunlight to the secondary window should be checked. For completeness, we have tested all windows which face within 90 degrees of due south. The BRE guide states that sunlight availability may be adversely affected if the centre of the window:
  - a) receives less than 25% of annual probable sunlight hours, or less than 5% of annual probable sunlight hours between 21 September and 21 March and
  - b) receives less than 0.8 times its former sunlight hours during either period and
  - c) has a reduction in sunlight received over the whole year greater than 4% of annual probable sunlight hours.

#### Overshadowing to Gardens and Open Spaces

- The availability of sunlight should be checked for all open spaces where sunlight is required. This would normally include:

- a) Gardens, usually the main back garden of a house
  - b) Parks and playing fields
  - c) Children's playgrounds
  - d) Outdoor swimming pools and paddling pools
  - e) Sitting out areas, such as those between non-domestic buildings and in public squares
  - f) Focal points for views such as a group of monuments or fountains.
- One way to consider overshadowing is by preparing shadow plots. However, the BRE guide states that it must be borne in mind that nearly all structures will create areas of new shadow, and some degree of transient overshadowing is to be expected. Therefore, shadow plots are of limited use as interpretation of the plots is subjective. Shadow plots have not been undertaken as part of this study.
  - The BRE guide also contains an objective overshadowing test which has been adopted for the purpose of this study. The guide recommends that at least 50% of the area of each amenity space listed above should receive at least two hours of sun light on 21 March. If as a result of new development an existing garden or amenity area does not meet the above, and the area which can receive two hours of sunlight on 21 March is less than 0.8 times its former value, then the loss of light is likely to be noticeable.

## Result of the Study

### Windows & Amenity Areas Considered

- The aim of the study is to assess the impact of the development on the light receivable by the neighbouring properties at 1 to 24 Fleetfield, 1 to 24 Fleetway, 20 to 24 Argyle Square and 49 & 51 Argyle Street.
- Appendix 1 provides a plan and photographs to indicate the positions of the windows and outdoor amenity areas analysed in this study. Appendix 2 lists the detailed numerical daylight and sunlight test results.

### Daylight to Windows

#### Vertical Sky Component

- All windows with a requirement for daylight pass the Vertical Sky Component test.

#### Daylight Distribution

- As the room layouts of the neighbouring properties are unknown, the daylight distribution test has not been undertaken.

### Sunlight to Windows

- All windows that face within 90 degrees of due south have been tested for direct sunlight. All windows with a requirement for sunlight pass both the total annual sunlight hours test and the winter sunlight hours test. The proposed development therefore satisfies the BRE direct sunlight to windows requirements.

### Overshadowing to Gardens and Open Spaces

- All gardens and open spaces tested meet the BRE recommendations with the exception of garden 2 at 1 to 24 Fleetfield. However, there are mitigating factors to mention:
- The result is very marginal with 49% of the garden receiving at least two hours of sunlight on 21st March after the development against a target of 50%.
- Whilst the overshadowing test shows there will be an increase in overshadowing, we are of the opinion that garden 2 will retain a reasonable amount of sunlight, particularly during the summer months. The BRE test is applied on 21 March since this gives the average



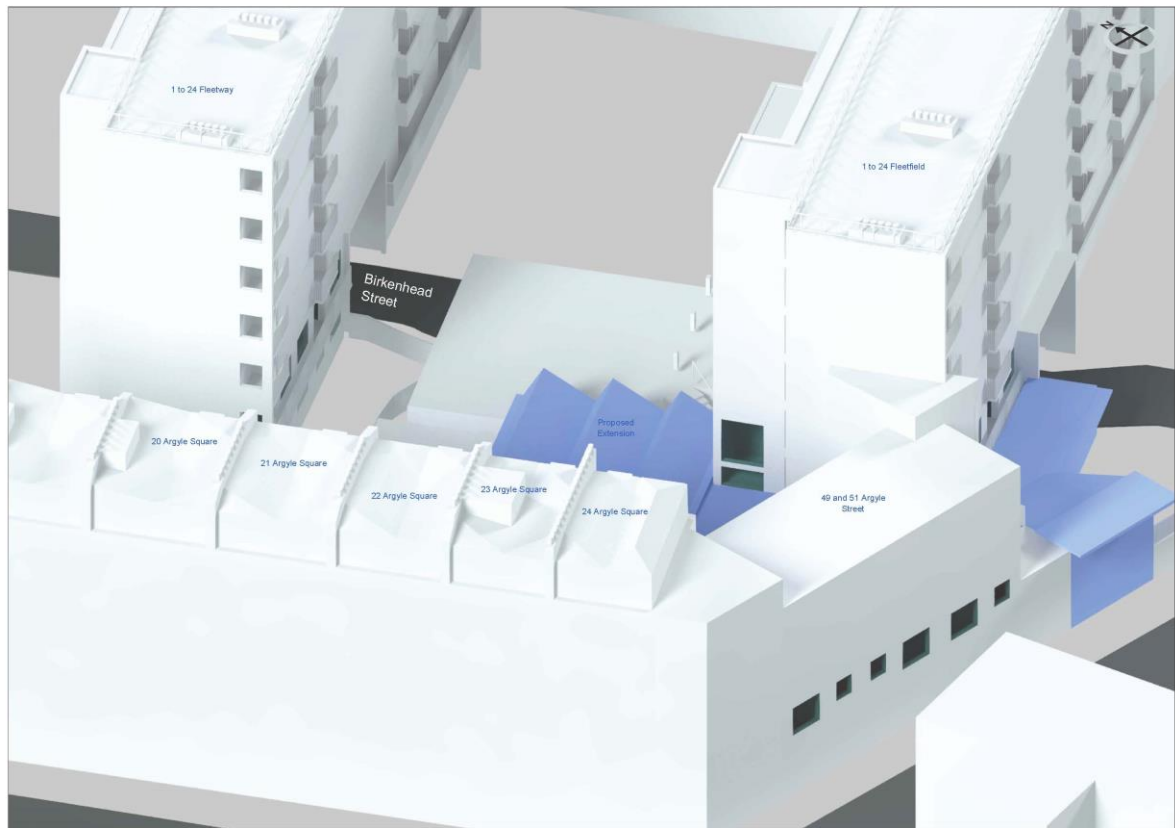
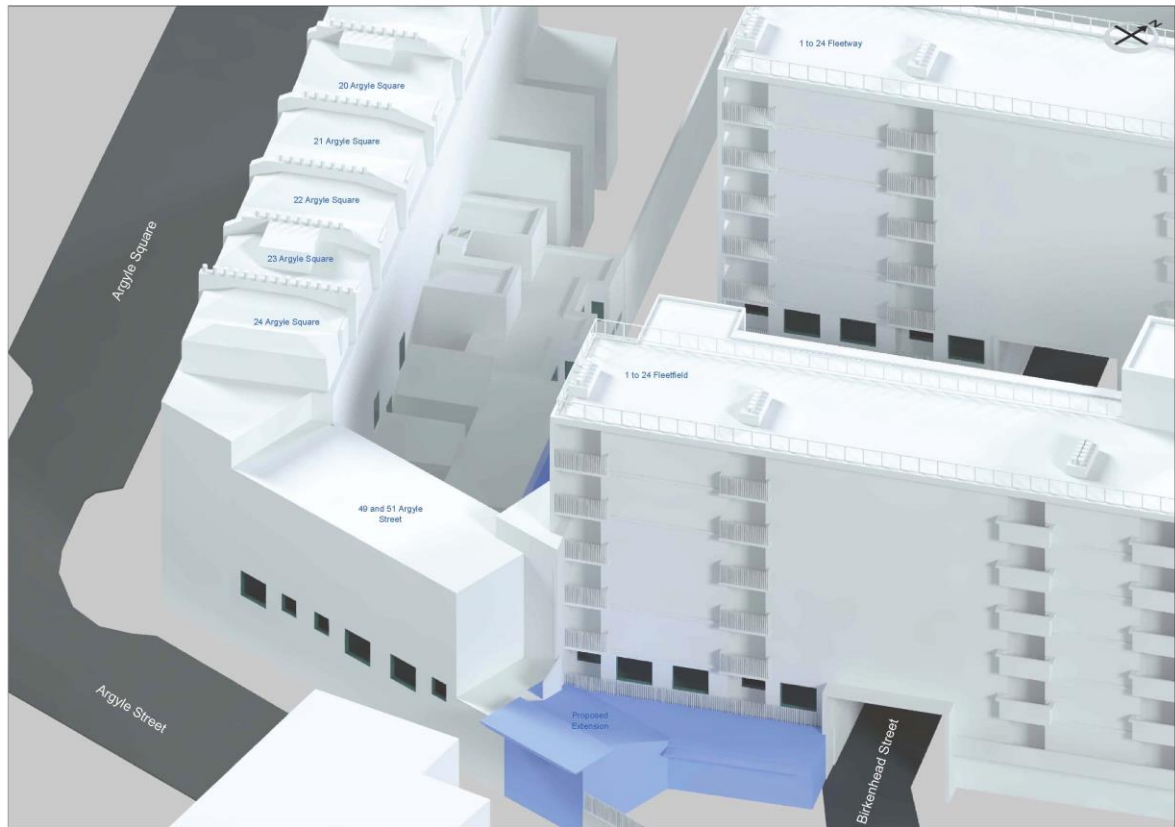
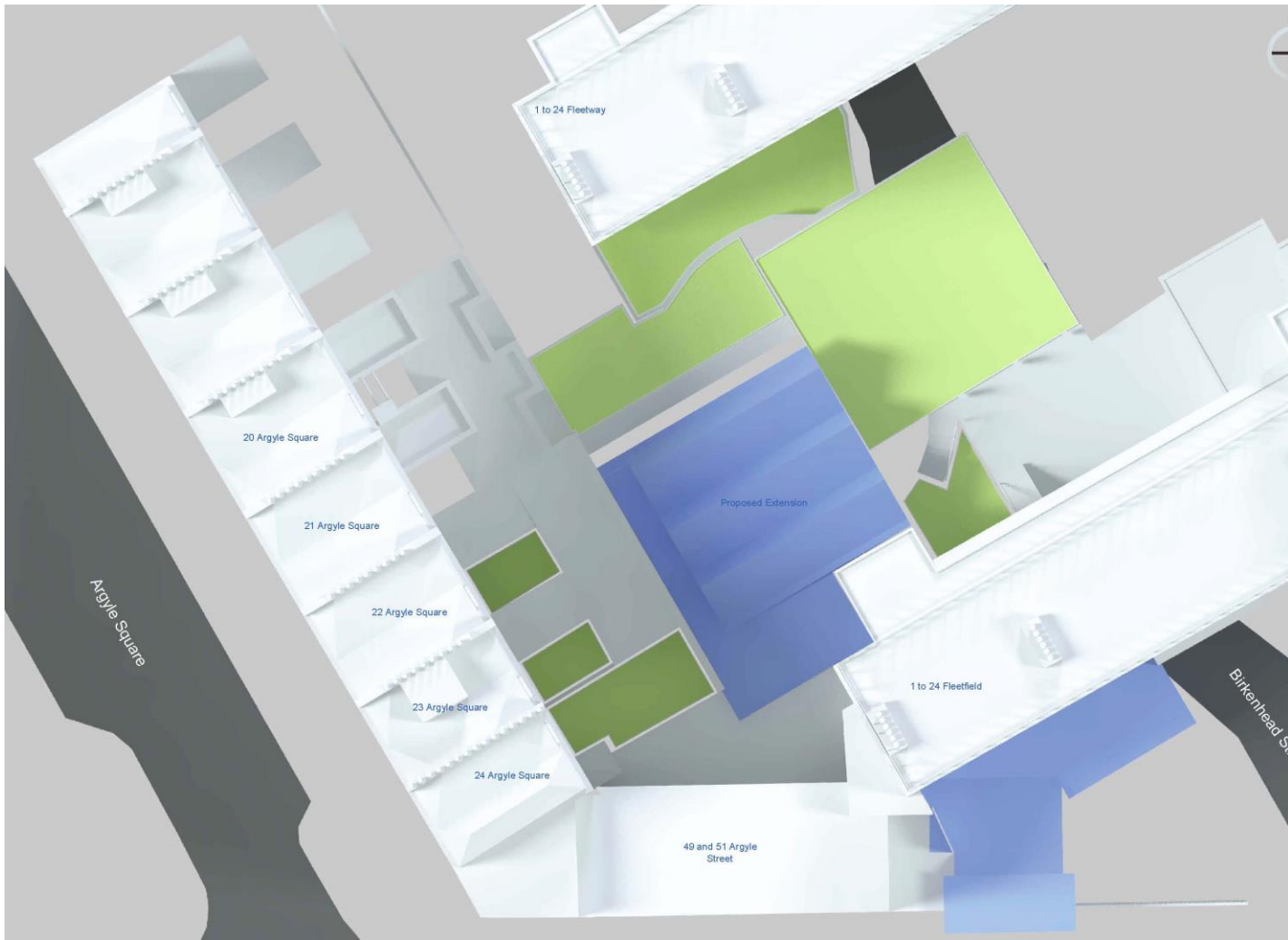
level of overshadowing throughout the year. Overshadowing will be less during the summer months when gardens tend to be used more.

- Conversely, there will be more overshadowing during the winter months when gardens tend to be used less. Therefore, in our opinion, whilst the garden 2 will experience an increase in overshadowing, it will retain a reasonable level of sunlight amenity.
- The residents of 1 to 24 Fleetfield also have access to other larger communal gardens and recreational spaces on the estate, for example, gardens 1, 3 & 7, which meet the BRE Overshadowing to gardens and amenity spaces test.

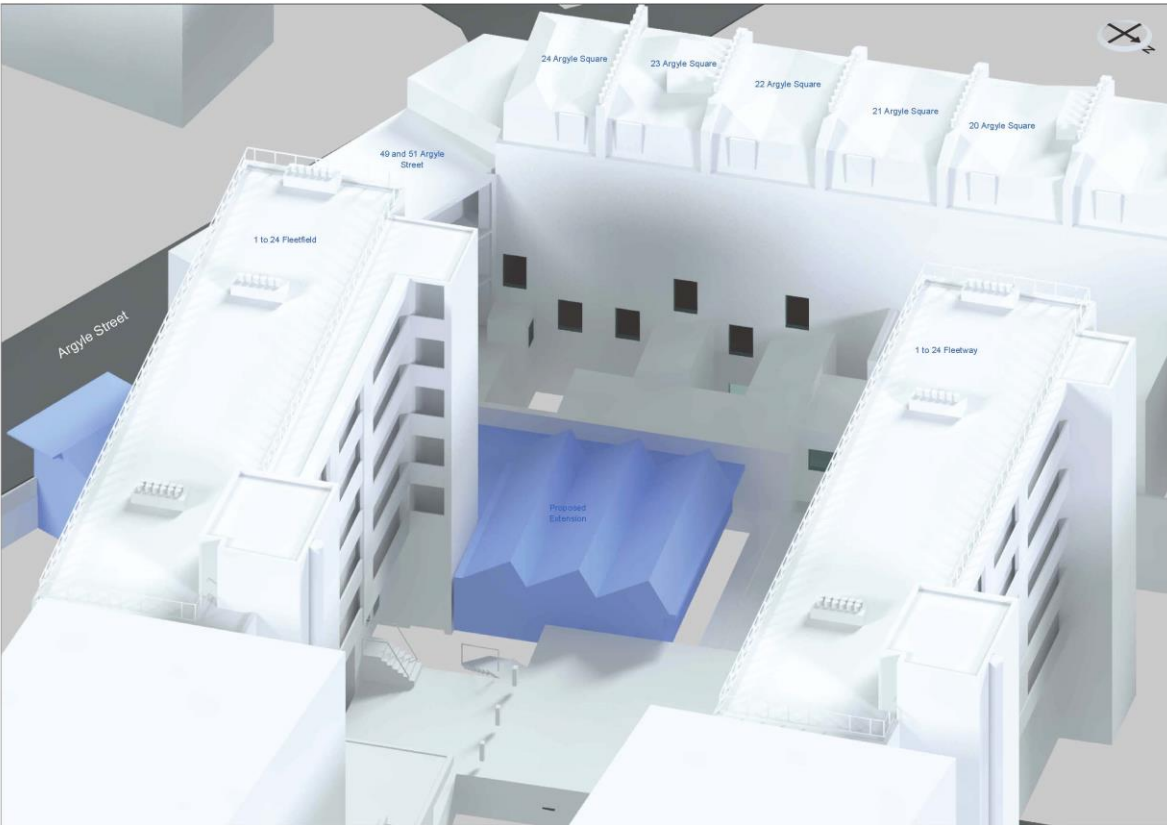
## **Conclusion**

The results demonstrate that the proposed development will have a relatively low impact on the light receivable by its neighbouring properties. Non-compliance with the BRE recommendations is limited to the sunlight test in respect of garden 2 at 1 to 24 Fleetfield. In our opinion, taking into account the overall high level of compliance with the BRE recommendations, and the mitigating factors set out in section 4, the proposed development is acceptable in terms of daylight and sunlight.

WINDOW & GARDEN KEY

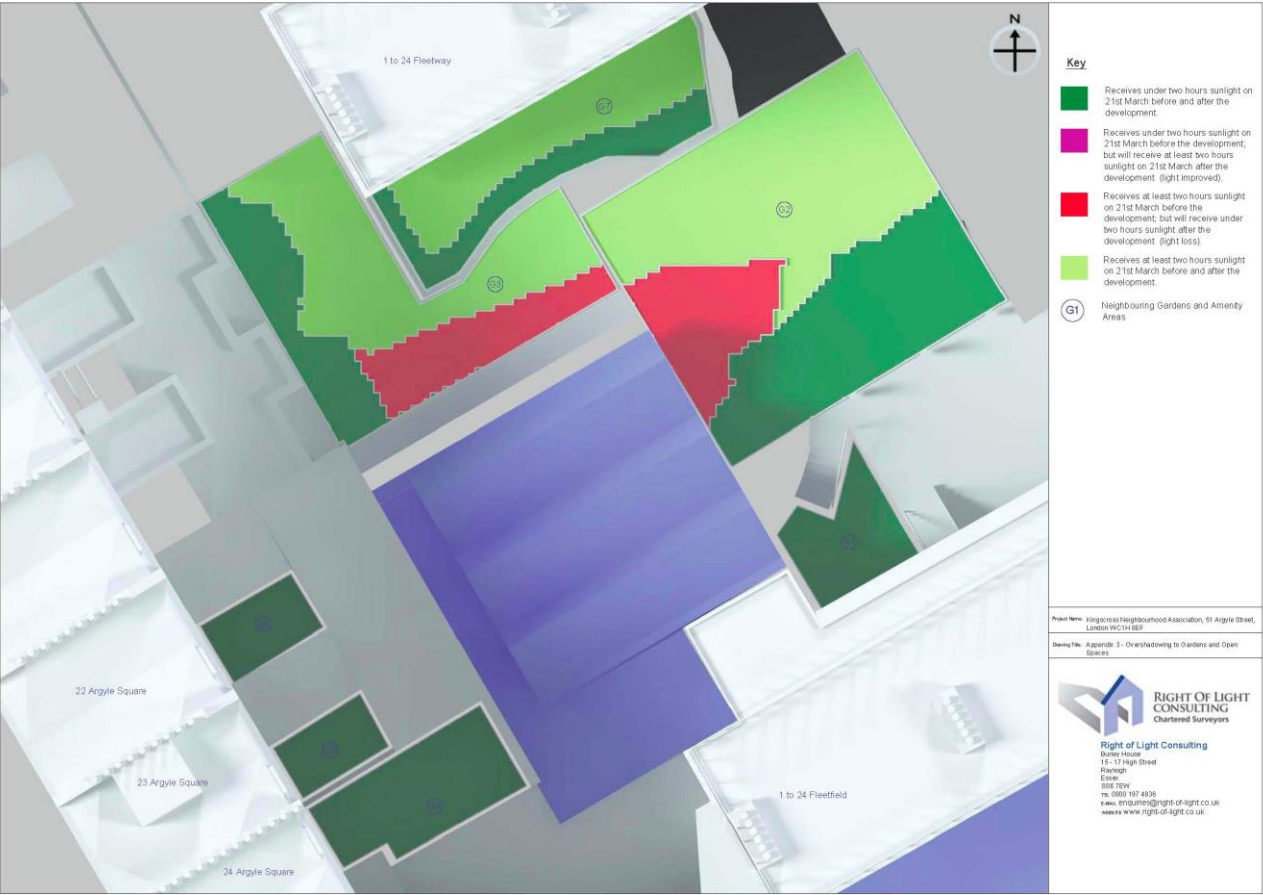
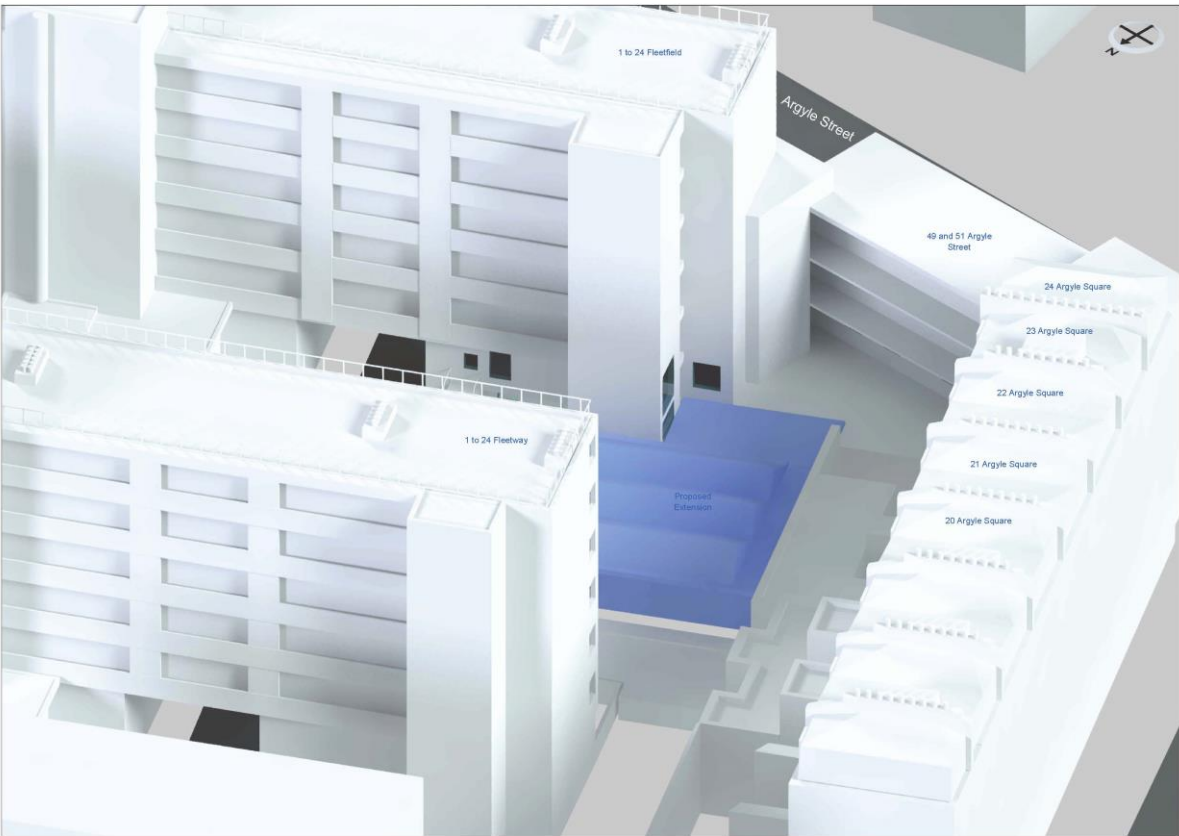






**Appendix 2 - Overshadowing to Gardens and Open Spaces**  
**Kings Cross Neighbourhood Association, 51 Argyle Street, London WC1H 8EF**

Reference	Total Area	Area receiving at least two hours of sunlight on 21st March						
		Before		After		Loss		Ratio
<u>1 to 24 Fleetfield</u>								
<u>Ground Floor</u>								
Garden 1	24.49 m2	0.0 m2	0%	0.0 m2	0%	0.0 m2	0%	1.0
Garden 2	146.78 m2	94.36 m2	64%	71.86 m2	49%	22.5 m2	15%	0.76
Garden 3	90.3 m2	67.51 m2	75%	47.15 m2	52%	20.36 m2	23%	0.7
<u>24 Argyle Square</u>								
<u>Basement Floor</u>								
Garden 4	26.32 m2	0.0 m2	0%	0.0 m2	0%	0.0 m2	0%	1.0
<u>23 Argyle Square</u>								
<u>Basement Floor</u>								
Garden 5	9.21 m2	0.0 m2	0%	0.0 m2	0%	0.0 m2	0%	1.0
<u>22 Argyle Square</u>								
<u>Basement Floor</u>								
Garden 6	10.29 m2	0.0 m2	0%	0.0 m2	0%	0.0 m2	0%	1.0
<u>1 to 24 Fleetway</u>								
<u>Ground Floor</u>								
Garden 7	57.06 m2	38.56 m2	68%	38.56 m2	68%	0.0 m2	0%	1.0



OVERSHADOWING TO GARDENS AND OPEN SPACES

OVERSHADOWING TO GARDENS AND OPEN SPACES

## **8.0 Noise Assessment**

A statement by Dr Nicholas Pillans, of Acoustic Design Consultancy, dated 06 November 2020 explains the needs to delay the Provision of Environmental Noise Survey due to the Covid 19 outbreak as agreed with Camden Noise Officer Nick Priddle.

### **Delayed Provision of Environmental Noise Survey**

The proposals for the Community Hub Project include the provision of an air conditioning system for the buildings. This will include air source heat pumps for both cooling and heating of the premises. The design parameters for the system are largely finalised but the precise details of the attenuation measures needed to ensure effective silencing of the system cannot be established at present because the current restrictions on movement as a result of the Covid outbreak have created environmental noise levels which are completely unrepresentative of those which would prevail if and when the restrictions are finally removed. Any environmental noise survey undertaken at present would underestimate the noise levels normally prevailing around the Community Hub site; designing an attenuation system on the basis of such data would lead to the provision of an environmentally undesirable and expensive amount of acoustic protection.

This issue was discussed in detail with the local authority's Noise Officer Nick Priddle who proposed a way of progressing the planning application in the absence of an environmental noise survey:

“it is possible to submit the application without an acoustic assessment with reasonable justification, which you appear to have put forward. The reasoning for not submitting acoustic details will have to be put in the application or it will be refused at validation.

It should follow that a pre-commencement plant noise condition is imposed.”

### **Dr Nicholas Pillans**

Acoustic Design Consultancy

6 November 2020

## 9.0 Structural Engineer Assessment

### Proposal

Alterations to existing buildings.

- 49 Argyle Street. The alterations to the main 49 Argyle Street building at ground level mainly comprise of removal of non-load bearing partitions, and a new lintel to the plant room. The circular columns should be retained as these provide support to the building above. The existing single storey roof structure maybe modified as required to accommodate new roof lights, although it is likely to be more straightforward and timelier to create a new roof, given the relatively small area. Existing lintels will need to be checked that they have not suffered deterioration as embedded reinforcement of older structures can be subject to corrosion. Some allowance for repair is to be included.
- Fleetfield. It will be necessary to establish the load bearing walls within Fleetfield prior to finalising the new office and toilet arrangement. This is especially the case to the wall within the present toilet, which may be a rear elevation line. It is likely that overall the arrangement will be satisfactory, though may require some retention of piers and some lintel or beams elements.

New Entrance, café and planting area.

- Terraced planting area. Each step is 1.2m or less. To avoid structure taking up too much ground space which may reduce local permeability a system such as cantilevered king posts (i.e. galvanized UC sections) with railway sleeper or pre-cast concrete planks is suggested. A gabion wall system could also be chosen, or a typical masonry structure, though the former would take up more space, and the later more liable to movement from nearby or self-seeded trees.
- Entrance and café. The entrance and café boundary wall will require reinforced concrete retaining walls, although reinforced hollo-block wall maybe an option. The café roof structure is cantilevered to avoid loading the Fleetfield balconies, and careful detailing will be required to ensure the new green roof drains away from Fleetfield. The columns and beams supporting the roof could be timber (for instance glulam beams) or steelwork – both of which could be exposed. Timber would still require steelwork connections. They could also be pre-cast concrete to match the ‘parent’ building; however, this option would release more carbon and possibly be less timely.

New office and multi-purpose room extension.

- Framing. Owing to the large spanned roof, a steelwork frame is proposed for the main structure, which can then sit within the timber clad walls.

Roof.

- The roof is a serrated, almost industrial style roof, with roof lights to one plane and a green roof to the other. The structure could either be formed with large span steel beams (457UB or 305UC depth) or a steel Vierendeel trusses, as indicated on the scheme drawings, which would be lighter if entail a greater amount of fabrication. If the truss could be formed with all three sides then this could be lighter still. It is anticipated there will be a cross beam at the location of a proposed partition screen, which would enable the screen to be hanging, greatly easing the opening / closing of it. This arrangement will need to be discussed and agreed at the next design stage as subsequent alterations will impact on the design of the roof and foundations.

### Investigation

Geology.

A site investigation will be required to check local ground conditions and to establish bearing strength. As some depth of made ground is expected, and with known trees, it is proposed to undertake bore holes to the front and rear areas to approx. 5m depth.

Boundary conditions. Trial pits will also be included in the site investigation to establish the existing sections and formation of the foundations local to the proposed extensions.

Piling.

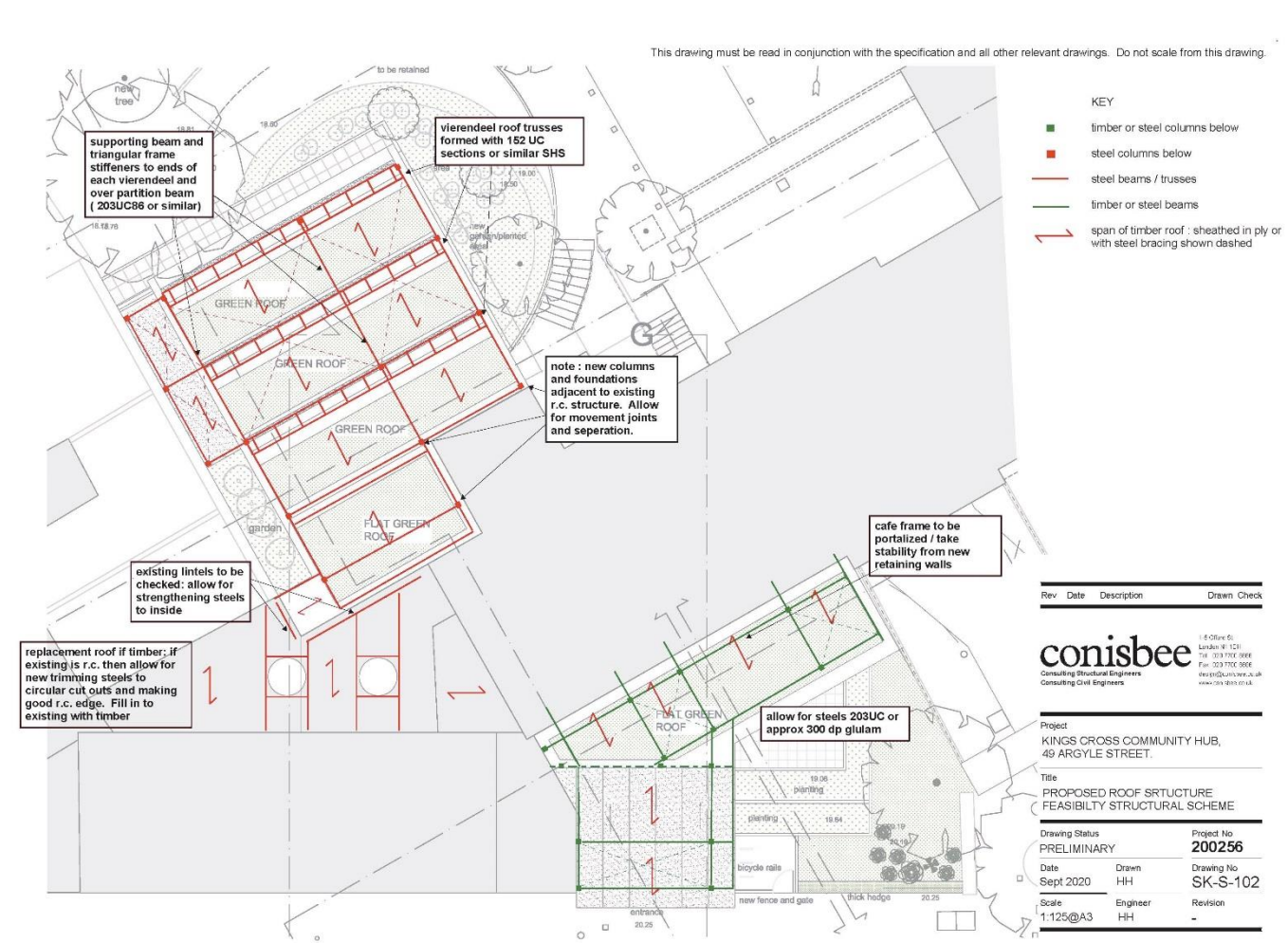
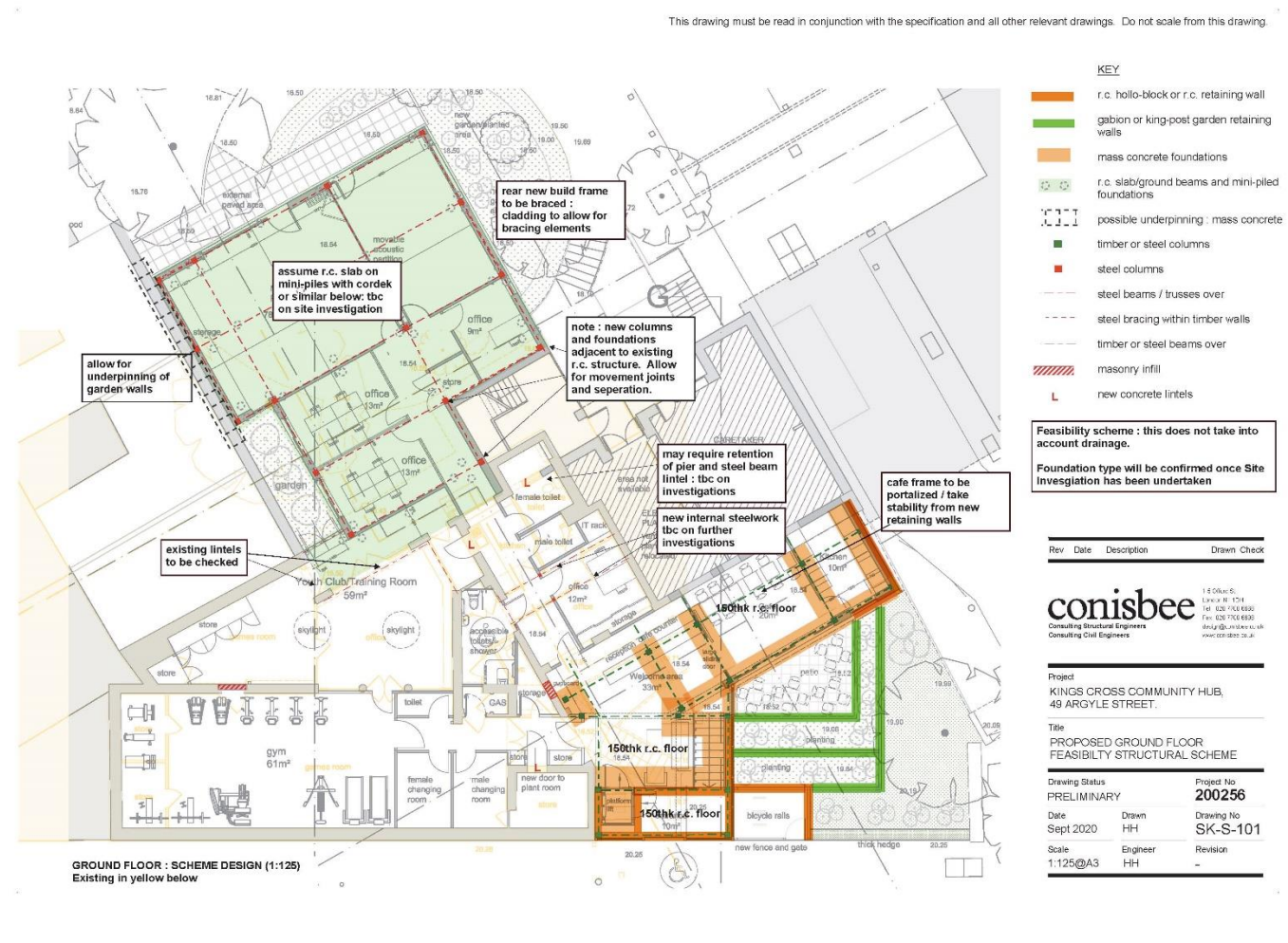
In the event of piling being the most suitable option, then the contractor will need to allow for a further deeper borehole to establish parameters for specialist piling design if necessary.

Regarding Fleetfield it will be necessary to establish the load-bearing wall lines or/and location of reinforced concrete columns. Access to the other similar area on the ground floor may assist, or at least a layout arrangement, as it is possible the ground and first floors are different with the first-floor floor deck being a transfer structure. Some local opening-up will also highlight whether internal walls are load bearing.



CONCLUSION

The proposed scheme is structurally feasible and with careful design and co-ordination between the design teams will be a practical and elegant structure with the least impact on the environment.



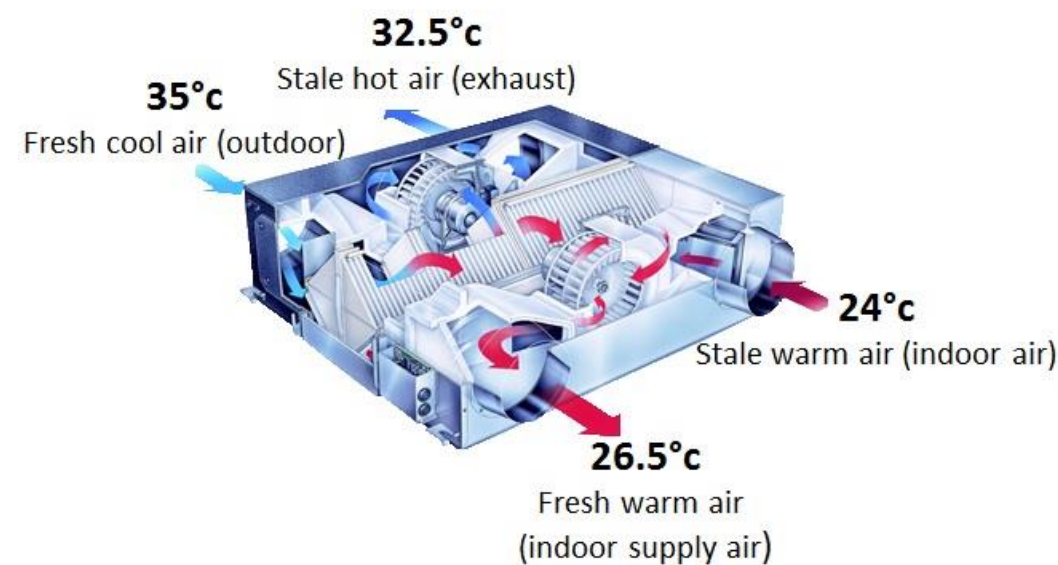
## 10.0 Mechanical and Electrical proposal

### Ventilation:

All of the ventilation systems will be designed to fully comply with Part F and Part L of the Building Regulations and the fire strategy for the building.

It is important that the ventilation systems are efficient and incorporate equipment to allow the heat contained in the extracted air to be reclaimed before discharging to the atmosphere.

The internal areas of the project at ground floor will be provided with mechanical supply and extract ventilation from three decentralised mechanical supply and extract ventilation systems. The mechanical supply and extract ventilation will be provided by heat recovery units such as Lossnay units or VAM units. These units will be located at high level at the ground floor and will have ducted air intakes and discharges. These ducts will rise through the roof above and terminate.



The supply air to the spaces will be provided by ceiling based supply air grilles and connections to the comfort cooling/heating cassette units. The extract ventilation will be taken from the spaces via ceiling based extract grilles.

Each of the ductwork connections to the heat recovery unit will be provided with attenuators to ensure that the discharge and intake achieve a rating of 5dB (LAeq), below the typical background (LA90) level at the nearest noise sensitive location.

All of the ventilation plant will also be provided with flexible connections and anti-vibration mounts to avoid transmission of noise and vibration to the building fabric.

The size of the MVHR units will be calculated on the number of occupants within the various areas being served.

The toilet and changing areas will be provided with supply air either by ceiling grilles or supply air to the adjacent corridor area with air being induced into the toilet area by undercut doors or air transfer grilles in the doors.

The proposed kitchen area is relatively small and will be provided with mechanical supply and extract ventilation for background ventilation plus a dedicated kitchen extract system.

### Heating & Cooling:

The heating and cooling to all the main areas of the project will be provided from a VRF comfort cooling & heating system. The system will consist of an air source heat pump condenser unit located in the garden area at ground floor.

The VRF system will be very energy efficient and will form part of the energy and sustainability strategy for the project.

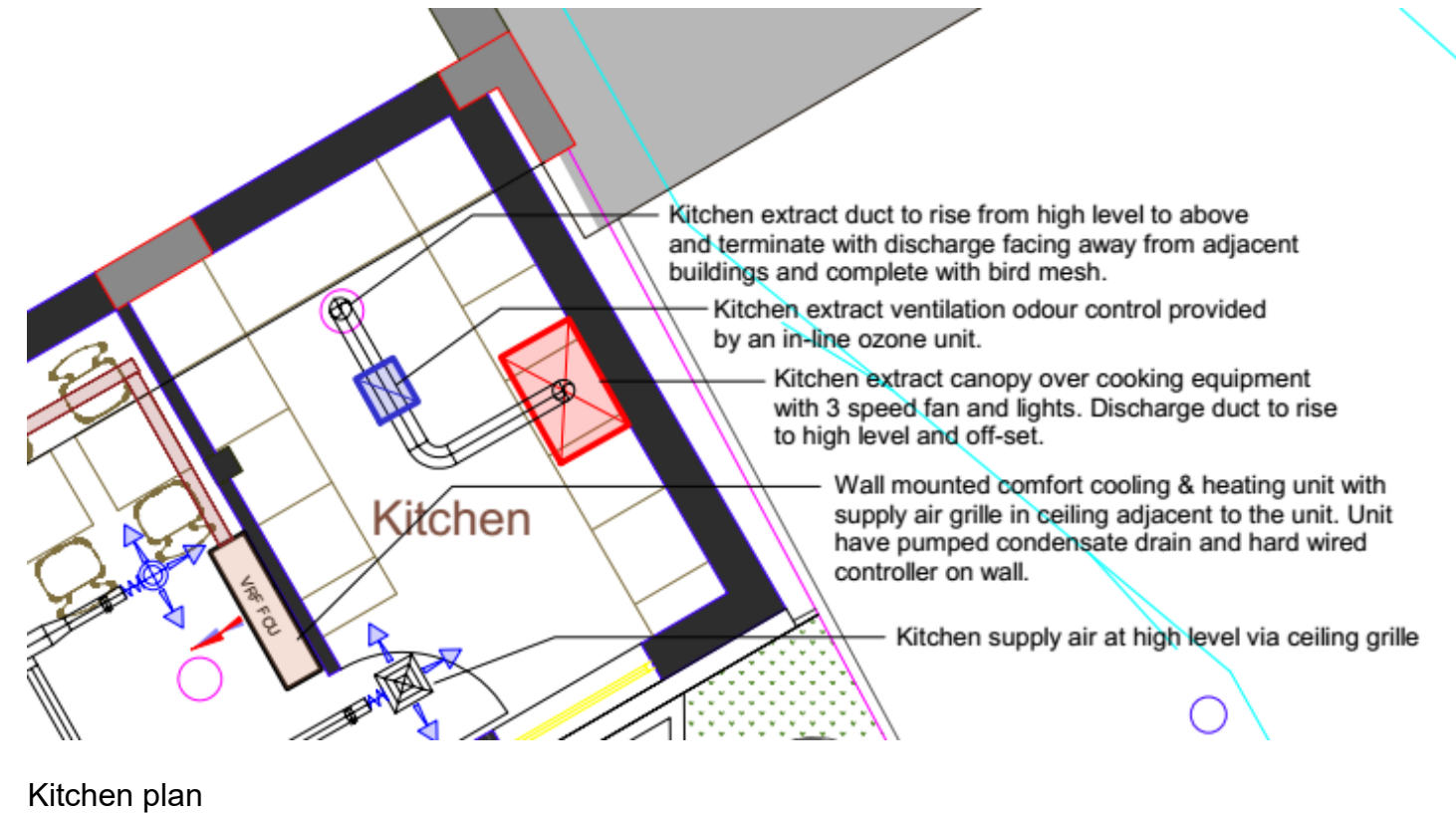
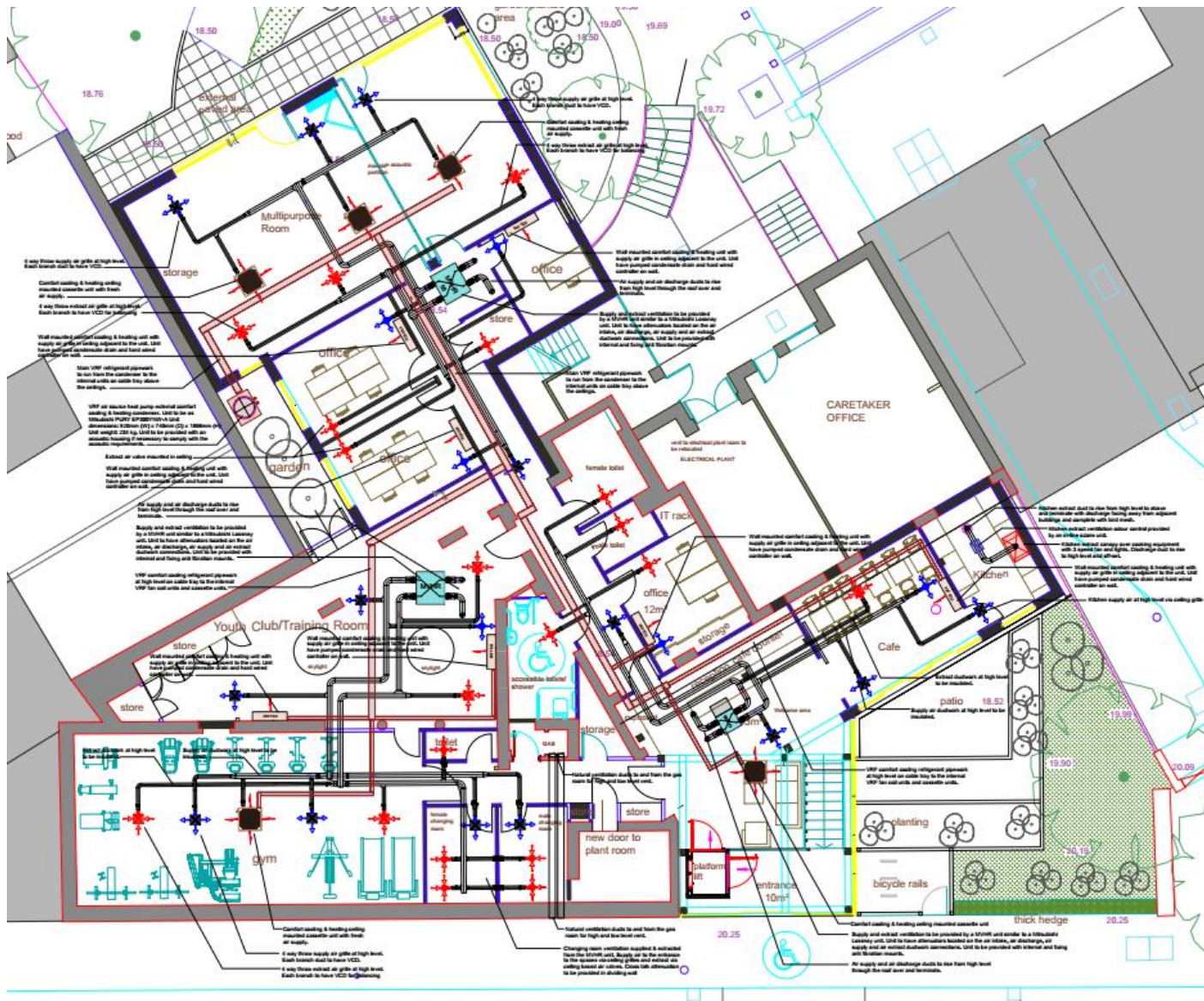
The refrigerant pipework will be installed from the condenser to a number of internal comfort cooling/heating units. The internal units will be either ceiling based cassette units or wall mounted fan coil units. The system will be able to provide simultaneous heating or cooling to the various spaces dependent on the space temperature settings and heating and cooling requirements.

The controls of the VRF system will consist of individual room controllers plus a central controller that will have the facility for the setting of the times for operation, monitoring of the temperatures plus fault identification with any element of the system.

The system will include the facility for each of the areas to be shut down automatically if the areas are not occupied. There will be a setback temperature to ensure that the areas neither cool down too much nor overheat.







Kitchen plan

Floor plan layout

## 11.0 Design for Inclusive Access

The hotel as existing complies with planning conditions which were discharged in August 2016.

The fourth floor extension is accessibility compliant being fully wheelchair Accessible and served by lifts. Both access and Emergency provision for accessibility and evacuation in accordance with the Equality Act 2010 is included in the vertical circulation and stair design.

The main access into the new King's Cross Community Hub at Argyle Street is a level threshold access to allow disabled and ambulant residents using the new entrance and access the lift or the stair down to the lower level.

Circulation will link the entrance/reception area to the café', kitchen and gym at the front; to the Youth Club and Training Room in the middle and to the offices and Multipurpose room at the rear. There are toilet facilities close to the entrance lobby and also one of the accessible toilets and shower room located within easy access of the passenger lifts.

The new king's Cross Community Hub will be fully wheelchair Accessible and emergency provision for evacuation will be included in the stair design.

In case the lift is not available due to maintenance, fully accessible access is provided by the 2 fire exits from the Multipurpose Room at the rear. The Community Hub's staff will be trained to assist and provide support to the ambulant, wheelchair and elderly people as required



## 12.0 Design for Sustainability

All the proposed new works will be subject to approval by an Approved Inspector or the local authority under the Current Building Regulations and any planning conditions subject to approval.

The proposed works will be in accordance with Camden Planning Guidance (CPG) on Energy and resources to support the policies in the Camden Local Plan 2017, the Camden Planning Guidance I Energy efficiency and adaptation dated January 2021, and Local Plan Policies CC1 Climate change mitigation and CC2 Adapting to climate change.

Other relevant policies in the Local Plan include:

- C1 Health and wellbeing
- A1 Open space
- A2 Biodiversity
- D1 Design
- D2 Heritage
- CC3 Water and flooding
- CC4 Air quality
- CC5 Waste

The new building will be designed in line with the energy hierarchy prioritising Natural 'passive' measures over active measures to reduce energy.

A new building to be:

**Lean;** use less energy

**Clean;** supply energy efficiently

**Green;** use renewable energy

The Building performance of the proposed Community Hub will achieve a high standard with enhanced insulation, bio diverse plant, habitat creation and renewable energy technology.

All windows and curtain walling will have high thermal performance to all facades windows.

New external walls and roof will include high specification of thermal insulation.

Self-closing taps and dual flush WCs will be used throughout. All existing windows will be replaced with double glazing units consisting of insulating glass and thermally efficient frames.

The heating and cooling to all the main areas of the project will be provided from a VRF comfort cooling & heating system. The system will consist of an air source heat pump condenser unit located in the garden area at ground floor. The building envelope will be treated to enhance air-tight -performance along with other carbon reducing measures.

Recycled waste will be sorted by the staff as they carry out the daily house-keeping. Recycled waste will be kept separate from the general waste and will be stored in bins. General waste will be collected in designated bins located in the dedicated storage.

### Refurbishment and Extension of the new King's Cross Community Hub

- Manufacturing off site of structural elements, windows, roof-lights, fit-out reduces wastage and improves build quality.
- Timber used supplied from sustainably managed forests.
- Higher thermal density of composite walls with window/doors replaced by insulated thermally broken frames etc. means that the building can be more efficient in its operational use of energy for heating and deliver greater carbon saving efficiency.

### Super-insulated external walls and airtight construction

- Replacing the existing windows allows improvement of thermal performance by making the building air-tight. These elements reduce the energy required by lowering the total heat loss through leakage reducing space heating requirements. New windows will be double glazed.

### Heating and cooling system with ventilation control

- The heating and cooling to all the main areas of the project will be provided from a VRF comfort cooling & heating system. The system will consist of an air source heat pump condenser unit located in the garden area at ground floor. The VRF system will be very energy efficient and will form part of the energy and sustainability strategy for the project.
- The system will be able to provide simultaneous heating or cooling to the various spaces dependent on the space temperature settings and heating and cooling requirements.

- The system will include the facility for each of the areas to be shut down automatically if the areas are not occupied.
- Any areas that are not served by the VRF comfort cooling and heating system will be heated by electric panel heaters with built-in thermostatic controllers and timeclocks.
- The internal areas of the project at ground floor will be provided with mechanical supply and extract ventilation from three decentralised mechanical supply and extract ventilation systems.
- The mechanical supply and extract ventilation will be provided by heat recovery units such as Lossnay units or VAM units. These units will be located at high level at the ground floor and will have ducted air intakes and discharges. These ducts will rise through the roof above and terminate.

### **New Boiler**

A new energy efficient condensing boiler will provide the hot water for the toilets, shower and kitchen, which will make the centre more energy efficient, reduce the fuel bills and cut the carbon footprint.

### **Reduction in water usage**

- Low flow rated shower heads, Dual flush WC's and Automatic taps with low flow rates.

### **Natural Ventilation**

- All the windows in the reception, café, kitchen and Youth Club/Training room are openable to allow manager users to actively over-ride and control the internal environment which in its default reset mode with regulate energy use.
- The 2 offices and the multipurpose room at the rear have openable window or skylights to allow manager users to actively over-ride and control the internal environment which in its default reset mode with regulate energy use.

### **Natural light**

- New south facing windows and glass entrance will provide natural light to the rear extension.

- Two new skylights and a new window facing the internal garden will provide natural light in the Youth Club/Training room in the existing building.
- The form of the rear extension building with its 'north-light' roof glazing will provide high levels of daylight even in the deepest parts of the building while minimising heat gain.

### **Low energy lighting and robust light fittings.**

- This low energy lighting is also connected to both light sensors which automatically dims the lights when the natural light levels increase and they are on time delay motion detectors to avoid lights being left on when the room is unoccupied.

### **Building management system and energy use monitoring.**

- This low energy in use building is able achieve maximum energy efficiency by employing sensors to allow the various technologies employed to interact and thereby operate building services controls to minimize the use of energy.

### **Bio-diverse green roof and native planting reinstatement**

- Bio-diverse planting scheme has been implemented on the roof of the front and rear extension reducing surface water run-off and creating habitats for flora and fauna.
- Around the rear extension wildflower landscape will be re-planted with ecologically bio-diverse planting promoting wildlife habitats.
- Native planting of shrubs and small trees will be used for the front garden.
- Vegetable, fruits and flowers will be grow in new allotments

The contractor qualification of tender process for selection requires the contractor to work in more sustainable way including the use of energy; management of waste and recycling.

## Appendix A. List of drawings

16L12PR01A	A3	Location Plan as photos as Existing
16L12PR02	A2	Floor plan as existing
16L12PR03	A2	Section AA as existing
16L12PR04	A2	Section BB as existing
16L12PR05	A2	Section CC as existing
16L12PR06	A2	Section DD as existing
16L12 SP01	A1	Birkenhead Estate Site Plan as existing
16L12 SP02	A1	Birkenhead Estate Site Plan as proposed
16L12 AL01B	A2	Lower Ground Floor plan as proposed
16L12 AL02B	A2	Roof plan as proposed
16L12 AL03A	A2	Front elevation as proposed
16L12 AL04B	A2	Rear elevation as proposed
16L12 AL05C	A2	Section BB as proposed
16L12 AL06A	A2	Section CC as proposed
16L12 AL07A	A2	Section DD as proposed
16L12 AL08B	A2	Section EE as proposed
16L12 AL09A	A2	Section FF and GG as proposed



## Appendix B. 3D CGI views

## **Appendix C:**

**Pre-Planning Advice dated 20th December 2017 ref: 2017/6154/PRE**



**Appendix D:**

**Pre-Planning Advice date: 27th April 2018 ref: 2018/1321/PRE**

**Appendix E:**

**Camden Design Review Panel**

**Report of Chair's Review Meeting: King's Cross Community Hub dated 14  
September 2018**