Oriel

Sustainability Statement

October 2020

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Oriel
Creating the centre for advancing eye health

Moorfields Eye Hospital NHS Foundation Trust

NHS

Moorfields Eye Charity

UCL INSTITUTE OF OPHTHALMOLOGY

Oriel
Creating the centre for advancing eye health

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Oriel
Sustainability Statement

Prepared for:

Moorfields Eye Hospital NHS Foundation Trust
UCL Institute of Ophthalmology
Moorfields Eye Charity

Prepared by:

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Executive Summary

Overview

Moorfields Eye Hospital NHS Foundation Trust, on behalf of Oriel[1], has commissioned AECOM to undertake a Sustainability Statement to accompany a planning application for a new facility that would allow the existing Moorfields Eye Hospital on City Road (Moorfields at City Road) and University College London (UCL) Institute of Ophthalmology (IoO) services at Bath Street to relocate into a single building at the existing St. Pancras Hospital site (hereafter referred to as the 'Proposed Development').

The Proposed Development will be located at part of the existing St. Pancras Hospital site within the London Borough of Camden (LBC) (hereafter referred to as the 'Site').

Proposed Development

An overview of the Proposed Development is as follows:

- The Proposed Development comprises a single building, between seven and ten storeys in height (including Ground Level and Lower Ground Level, as well as plant at Roof Level), as well as provision of public realm at ground level, blue badge parking, and vehicular drop off points along St Pancras Way. The building is arranged around a central atrium and connection space. There is also a roof terrace on the Sixth Floor Level on the south-western corners of the building.
- The Proposed Development will be up to 69.15 metres (m) Above Ordnance Datum (AOD) in height and will have a gross external area of approximately 48,851 square metres (sq. m) and a gross internal area of approximately 46,468 sq. m.
- The Proposed Development will comprise a mix of uses including clinical, research and education purposes, including accident and emergency (A&E) department, outpatients, operating theatres, research areas, education space, café and retail areas, facilities management, office space and plant space.

For further details on the design of the Proposed Development, please refer to the Design and Access Statement (DAS) which is submitted with the planning application.

Summary of Design Response

The Proposed Development will contribute to sustainable development, as identified in the technical reports submitted with the planning application, in relation to key sustainability issues as follows:

- Optimising the use of land by building on previously developed land. The Site is within the Kings Cross / St Pancras Conservation Area and is immediately adjacent to, and contiguous with, the Regent's Canal Conservation Area to the north. The Site itself does not contain any listed buildings, albeit two of the

[1] Oriel is a joint venture between Moorfields Eye Hospital NHS Foundation Trust, UCL Institute of Ophthalmology and Moorfields Eye Charity

buildings on the Site are classed as positive contributors (medium contribution) to the Kings Cross / St Pancras Conservation Area. The DAS confirms that the Proposed Development will be highly positive in architectural and urban design terms, and will greatly enhance the site, its surroundings, and the setting of heritage assets.

- A Daylight, Sunlight and Overshadowing Assessment and a Wind Microclimate Assessment have been undertaken and these studies concluded that overall, the Proposed Development would not cause unacceptable harm to any surrounding properties and should be acceptable on a daylight and sunlight basis, and that the wind microclimate around the ground level of the Proposed Development is expected to be suitable for the intended usage of the development. The wind conditions at the Sixth floor roof terrace are suitable for any pedestrian activity at all but one location throughout the year. Wind conditions at the remaining one location are suitable for pedestrian strolling or other more strenuous activities. This location comprises a fire escape only and as such will not be in regular use.
- The proposed energy strategy for the Proposed Development includes the following measures, which results in a site-wide regulated carbon saving of 383.7 tCO_2/year, which is 27% of the Site regulated carbon emissions of 1,401.0 tCO_2/year:
  - Energy efficient fabric and buildings services design such that the Site meets Building Regulations Part L 2013 target emissions rates through energy efficiency alone;
  - All-electric heating and cooling solution is being proposed, including a closed loop ground source heat pump (GSHP) with potential to also connect to the Regent's Canal to help meet heating and cooling demands as well as air source heat pumps (ASHPs) to meet peak demands;
  - Additionally, solar photovoltaics are to be provided to the roof areas to meet electrical demand especially at peak times; and
  - Comprehensive monitoring and metering systems for measuring actual energy and carbon performance, which will be reported to the GLA as part of the 'Be Seen' stage of the energy hierarchy.
- Specification of low water use fittings, water meters, leak detection and flow control devices to minimise water usage is proposed as well as adopting practices from the existing buildings that have been fundamental in reducing water use such as automated overnight legionnaire flushing of buildings.
- To reduce the burden on the environment of the major building elements, the overall impact will be assessed using whole life cycle models and Environmental Product Declarations (EPDs). Materials will also be responsibly sourced in line with a Sustainable Procurement Plan, to be produced as part of the Building Research Establishment Environmental Assessment Method (BREEAM) (Mat 03).
- The Proposed Development will provide internal, dedicated and appropriately labelled and segregated waste management facilities, to enable and encourage future occupants to recycle waste.

- A Pre-demolition audit will be produced in line with the Circular Economy Statement to identify opportunities to reduce, re-use and recycle waste materials, where viable. A Construction Resource Management Plan (CRMP) will also be produced by the contractor/s.
- An ecologist has been appointed at an early design stage to inform the design process. A Preliminary Ecological Appraisal (PEA) has been undertaken and appropriate measures, as necessary, will be implemented for the avoidance, mitigation or compensation of the potential impacts of the Proposed Development on the identified ecological receptors and to maximise potential enhancements to biodiversity. The Tree Survey Report and Arboricultural Impact Assessment Report confirm that 13 trees features are to be removed to facilitate the Proposed Development, with 16 trees being provided in replacement.
- A Biodiversity Net Gain (BNG) Assessment has also been carried out and confirms a net gain in biodiversity for the Proposed Development.
- The Landscape Design Report confirms that the Urban Greening Factor (UGF) will be 0.18 for the building. This is lower than the 0.3 which is required for commercial buildings due to the constraints on the Site at ground level and the operational use of the building. The UGF calculation does not currently include six trees which are proposed on St Pancras Way. If these trees were to be included these would increase the UGF to 0.25.
- The Proposed Development will include the implementation of mitigation measures help to create a development which has the capacity to adapt to the projected effects of climate change including: a fabric first approach to the building envelope; use of native and drought resistant planting; a biodiverse (green) roof; a drainage strategy accounting for future climate change; provision of low water-use fittings; and the use of durable materials.
- The Site is located within Flood Zone 1 and as such, has a low risk of flooding. The proposed Flood Risk Assessment and Drainage and Sustainable Urban Drainage Systems (SuDS) Strategy confirms an 85% reduction in surface water runoff over the existing conditions which is appropriate for the size and scale of the Proposed Development, including an allowance of 40% for climate change. SuDS measures proposed, include a below ground cellular storage attenuation tanks and porous paving.
- The overall geo-environmental risk for the Proposed Development is considered to be low and no evidence is currently available to suggest that ground remediation is required.
- The Proposed Development Site falls within Camden Air Quality Management Area (AQMA). An Air Quality Assessment (AQA) has been carried out and concludes that the Proposed Development will be air quality neutral in regard to both transport and building-related emissions since the Proposed Development will be car-free (with the exception of three blue badge parking spaces) and will use electricity for all heating and cooling systems. A number of measures are proposed to mitigate dust effects during demolition, earthworks, construction and track out activities.
- Indoor comfort and health and wellbeing will be promoted by providing generous levels of daylight, locating air intakes away from sources of external pollution,

provision of cyclist facilities and selection of internal finishes with a low Volatile Organic Compound (VOC) content, where feasible.

- The building will be designed in line with best practice standards to reduce noise emissions during occupation and construction of the development. A Noise and Vibration Impact Assessment has been undertaken by suitably qualified acoustician to understand the background noise conditions at the Site and to adopt the best practice mitigation measures where relevant to reduce noise emissions, limiting noise pollution in line with London Borough of Camden (LBC) and BREEAM criteria.
- Secure by Design principles have been considered and will continue to form part of the design philosophy.
- The proposed external lighting will be designed in line with best practice, to be automatically controlled for prevention of operation during daylight hours and ensure that upward lighting will be minimised, reducing unnecessary light pollution, energy consumption and nuisance to neighbouring properties.
- Inclusive design has been an integral part of the design philosophy to ensure that the building will be easy to navigate for building users with sight difficulties. Ensuring level access, comprehensive way-finding and intuitive design has been considered.
- A Transport Assessment and Travel Plan have been produced and include a list of measures to encourage staff and visitors to use sustainable modes of transport, including walking and cycling. Given the Site's central London location, public transport will be the main mode of transport to the Proposed Development. In addition, a study of the journey and user experience between the public transport links and vehicle drop-off to the entrance of the building (referred to as the Last Half Mile study) has been completed to ensure that the accessibility needs of patients and visitors with a range of disabilities and conditions will be met, including the potential for a dedicated accessible shuttle service from a nearby station.
- A Delivery and Servicing Plan (DSP) has been produced to minimise the impact of the delivery and servicing vehicle movements on the surrounding highway. This is intended to be achieved through time planning of deliveries and servicing activity including good communication between the DSP management team, building management suppliers and staff, sustainable procurement practices and consolidation of freight to reduce the number of vehicle trips made to the Site. The DSP promotes the use of sustainable freight modes and greener vehicles, where appropriate.
- A BREEAM Pre-assessment has been undertaken and a full BREEAM 2018 New Construction assessment will be undertaken during the post planning stage, with a target to achieve BREEAM 'Excellent' for the Healthcare Teaching or specialist hospitals assessment.

Overall, the Proposed Development aligns with national, regional and local policy. The approach that is being implemented embeds sustainability principles fully into the design of the Proposed Development.

1 Introduction

1.1.1 Moorfields Eye Hospital NHS Foundation Trust, on behalf of Oriel[2], has commissioned AECOM to undertake a Sustainability Statement to accompany a planning application for a new facility that would allow the existing Moorfields Eye Hospital on City Road (Moorfields at City Road) and University College London (UCL) Institute of Ophthalmology (IoO) services at Bath Street to relocate into a single building at the existing St. Pancras Hospital site (hereafter referred to as the 'Proposed Development').

1.1.2 The Proposed Development will be located at part of the existing St. Pancras Hospital site within the London Borough of Camden (LBC) (hereafter referred to as the 'Site').

1.1.3 The development proposals consist of the following:

- The Proposed Development comprises a single building, between seven and ten storeys in height including Ground Level and Lower Ground Level, as well as plant at Roof Level, as well as provision of public realm at ground level, blue badge parking, and vehicular drop off points along St Pancras Way. The building is arranged around a central atrium and connection space. There is also a roof terrace on the Sixth Floor Level on the south-western corners of the building.
- The Proposed Development will be up to 69.15 metres (m) Above Ordnance Datum (AOD) in height and will have a gross external area of approximately 48,851 square metres (sq. m) and a gross internal area of approximately 46,468 sq. m.
- The Proposed Development will comprise a mix of uses including clinical, research and education purposes, including accident and emergency (A&E) department, outpatients, operating theatres, research areas, education space, café and retail areas, facilities management, office space and plant space.

1.1.4 For further details on the design of the Proposed Development, please refer to the Design and Access Statement (DAS) which is submitted with the planning application.

1.1.5 This report provides a summary of the contribution that the Proposed Development will make to sustainable development and examines how the Proposed Development responds to national, regional and local sustainability policies.

1.1.6 This Sustainability Statement has been prepared using information included in a number of documents that are submitted with the planning application for the Proposed Development. The sustainability measures described herein have been developed in consultation with members of the design team and wider project team.

[2] Oriel is a joint venture between Moorfields Eye Hospital NHS Foundation Trust, UCL Institute of Ophthalmology and Moorfields Eye Charity

1.1.7 The following documents, which are submitted alongside the planning application, have been consulted while developing this statement:

- Air Quality Assessment (AECOM);
- Arboricultural Impact Assessment Report (including Arboricultural Method Statement) and Tree Survey Report (AECOM);
- Archaeological Assessment (AECOM);
- Biodiversity Net Gain Assessment (AECOM)
- Circular Economy Statement (AECOM);
- Daylight, Sunlight and Overshadowing Assessment (AECOM);
- Delivery and Servicing Plan (AECOM);
- Design and Access Statement (Penoyre & Prasad Architects);
- Energy Strategy (AECOM);
- External Lighting Assessment (AECOM);
- Flood Risk Assessment and Drainage Strategy (AECOM);
- Landscape Design Report (White Arkitekter);
- Noise and Vibration Impact Assessment (AECOM);
- Outline Construction Management Plan (AECOM);
- Phase 1 Geotechnical and Geo-environmental Desk Study (AECOM);
- Preliminary Ecological Appraisal (AECOM);
- Townscape, Heritage and Visual Impact Assessment (KM Heritage);
- Transport Assessment (AECOM);
- Travel Plan (AECOM); and
- Wind Microclimate Assessment (BRE).

2 The Site and the Proposed Development

2.1.1 The Site is located within the existing St. Pancras Hospital, near Kings Cross. It is currently in the ownership of Camden and Islington Foundation NHS Trust (the C&I Trust) and includes sections of Granary Street and St. Pancras Way. The Site, which covers an area of approximately 1.33ha, is located in an urban area and currently consists of several buildings within St Pancras Hospital as shown in Figure 2-1 below.

2.1.2 King's Cross Central Limited Partnership ('KCCLP') is the development partner of the C&I Trust and they intend to submit a planning application for redevelopment of the remaining part of the St Pancras Hospital site in 2021. The entire St Pancras Hospital site is shown in blue in Figure 2-1 below.

2.1.3 The design for redevelopment of the wider site is at an early stage, however it is currently envisaged that the development will retain the existing Chapel, Gatehouse and Workhouse buildings. The buildings to the east of the Site would be demolished and replaced by new buildings. It is currently anticipated that planning permission will be sought for a mix of uses including employment, residential and retail/food and drink, as well as some healthcare and office facilities for the C&I Trust.

Figure 2-1 Red line showing the extent of the plot where Proposed Building will be located within the wider St Pancras Hospital Site

2.1.4 The Site is bordered by (and includes parts of) St Pancras Way to the west, Granary Street to the north and by the remainder of the St. Pancras Hospital to the east and south, with St Pancras Gardens located further to the south. Further to the east lies the Regent's Canal, which provides a link from the Paddington Arm of the Grand Union Canal to the Limehouse Basin and the River Thames in east London.

2.1.5 Existing ground levels on the Proposed Development generally fall from north east to south west, with the high point being approximately 23.00m Above Ordnance Datum (AOD) in the north east of the Proposed Development and a low point of approximately 19.09m AOD to the south west. At the south east corner is the main point of entry into the hospital.

2.1.6 To the south of the Site, beyond the wider hospital buildings, are St Pancras Gardens and St Pancras Old Church. To the west along St Pancras Way are newer mixed-use buildings, such as the Travis Perkins building combining retail on the ground level and student residences above. To the north, the low 1970s 'Ugly Brown Building' which will be replaced by a consented development (planning reference 2017/5497/P) while further to the east lie the recently completed (or almost complete) tall residential buildings along Camley Street.

2.1.7 The Proposed Development will comprise a new building which will house both the Moorfields at City Road and UCL IoO services to create a seamless and collaborative environment for clinicians, researchers, academics and administrators in one flexible, fully integrated facility.

3 Planning Policy Context

3.1 Policy overview

3.1.1 The sustainability strategy for the Proposed Development has been developed in response to national, regional and local policies that aim to ensure a sustainable built environment.

3.1.2 Section 38(6) of the Planning and Compulsory Purchase Act 2004 (Ref. 1) requires planning applications to be determined in accordance with the statutory Development Plan, unless material considerations indicate otherwise. At a national level, Central Government adopted the National Planning Policy Framework (NPPF) in February 2019 (Ref. 2). The Statutory Development Plan for the Site comprises the London Plan 2016 (consolidated with alterations since 2011) (Ref. 3), Camden Local Plan (Ref. 4), Camden Planning Guidance (CPG) Energy efficiency and adaptation (Ref. 5) and Draft Canalside to Camley Street Supplementary Planning Document (SPD) (Ref. 6), at a local level. Until it is adopted the draft new London Plan (Ref. 7) does not form part of the statutory development plan, however it is a material consideration in determining planning application.

3.1.3 The main policies of relevance are summarised below.

3.2 Regional Policy (Greater London Authority)

The London Plan

3.2.1 The London Plan (Ref. 3), published in March 2016, sets out the relevant London-wide planning policy guidance and forms a component of the statutory development plan. The key objectives of the London Plan include the delivery of economic growth and housing, while promoting high standards of design and environmental and social sustainability: a fundamental objective is to accommodate London's population and economic growth through sustainable development.

Draft New London Plan

3.2.2 The draft new London Plan was first published on 27 November 2017. The version of the plan that the Mayor intended to adopt is referred to as the 'Intend to Publish' (Ref. 7) which was issued on 9 December 2019. Whilst it was anticipated that the draft new London Plan would be adopted in the period post Mayoral election, in early summer 2020, the Mayor of London received a letter from the Secretary of State on 13 March 2020 directing him to make specified changes to the Plan prior to adoption. The timescales for adoption are now less clear but are due to be confirmed imminently. Although the draft new London Plan has not been adopted yet, the policies represent a material consideration for the Proposed Development and the design team has ensured that the planning application has responded to these policies.

Sustainable Design and Construction SPG

3.2.3 The Sustainable Design and Construction Supplementary Planning Guidance (SPG) (Ref. 7) provides guidance on how to achieve the London Plan objectives, supporting the Mayor's strategic targets. It sets out a series of 'Mayor's Priorities' and 'Best Practice' ambitions, against which the following sections of the SPG are organised:

- Resource management – land (including basements and lightwells and local food growing), Site layout and building design, energy and carbon dioxide emissions, water efficiency, materials (including reuse of waste), nature conservation and biodiversity;
- Climate change adaptation – overheating, heat and drought resistant planting, resilient foundations, urban greening, trees, surface water flooding, flooding and risk management; and
- Pollution management – contaminated land, air pollution, noise pollution, light pollution, water pollution (surface and wastewater treatment).

3.2.4 The above structure has been used to inform preparation of this Sustainability Statement.

3.3 Local Planning Policy

3.3.1 The Camden Development Plan consists of a series of documents that provide a positive approach to managing development by helping to assess planning applications and create a more vibrant, sustainable community to improve quality of life for all. This is the starting point for planning decisions in the borough.

3.3.2 There are several key documents that make up Camden's Development Plan and those of relevance to the Proposed Development include:

- Camden Local Plan, adopted July 2017 (Ref. 4);
- Camden Planning Guidance (CPG) Energy efficiency and adaptation (Ref. 5); and
- Draft Canalside to Camley Street Supplementary Planning Document (SPD) (Ref. 6).

Camden Local Plan

3.3.3 The Camden Local Plan (Ref. 4) is the key strategic document in Camden's Development Plan. It sets out the vision for shaping the future of the Borough and contains policies for guiding planning decisions. The Local Plan was adopted by the Council on 3 July 2017.

3.3.4 The design of the Proposed Development will need to respond to the relevant policies in the Camden Local Plan, including the following:

- Policy CC1 Climate change mitigation requires: "*all development to minimise the effects of climate change and encourage all developments to meet the highest feasible environmental standards that are financially viable during construction and occupation."* A demonstration of how "*London Plan targets for carbon dioxide emissions have been met*" is also required, alongside any proposals which involve "*substantial demolition to demonstrate that it is not possible to retain and improve the existing building*" and, "*…optimise resource efficiency.*"
- Policy CC2 Adapting to climate change confirms that, "*expecting non-domestic developments of 500 sqm of floorspace or above to achieve "excellent" in BREEAM assessments and encouraging zero carbon in new development from 2019.*" In addition, the explanatory text confirms that "*all development should install green roofs, permeable landscaping, green walls and combination green and blue roofs, where appropriate*."
- Policy CC3 Water and flooding requires developments to, "*incorporate water efficiency measures".* The explanatory text states that this "*can be achieved through the installation of water efficient fittings and appliances (which can help reduce energy consumption as well as water consumption) and by capturing and re-using rain water and grey water on-Site...Major developments and high or intense water use developments, such as hotels, hostels and student housing, should include a grey water and rainwater harvesting system. Where such a system is not feasible or practical, developers must demonstrate to the Council's satisfaction that this is the case."*

Camden Planning Guidance (CPG) Energy efficiency and adaptation (2019)

3.3.5 The Camden Planning Guidance (CPG) Energy efficiency and adaptation (Ref. 5) provides further details in Chapter 11:

- "*BREEAM Excellent is required for all non-residential development of 500sqm or more floorspace"*
- *"Achieve 60% of all available Energy and Water credits and 40% of available Materials credits."*
- *"Resource efficiency: for demolition diversion of 85% from landfill."*
- *"The Sustainability Statement will still need to demonstrate how the sustainable design and construction principles outlined above have been incorporated into the design and proposed implementation."*
- *"The BREEAM Design Stage certificate…must be submitted to the Council prior to construction to discharge the relevant condition or Section 106 planning obligation."*
- *"A copy of the post-construction certificate must be submitted to the Council."*

- Chapter 5 Renewable energy technologies also states that for "*any development undertaking a BREEAM assessment…we expect the full 'BREEAM Low and Zero Carbon Feasibility Report' to be submitted alongside the Energy and Sustainability Statements."*

Draft Canalside to Camley Street Supplementary Planning Document (SPD)

3.3.6 The Camden Local Plan (Ref. 4) identifies the Camley Street area as an area of expected growth and identifies four key priorities:

- Creating a more vibrant, attractive area that builds on its location adjacent to King's Cross Central and close to Camden Town;
- Enhanced connectivity and public realm, with more active overlooking of the street at different times of the day;
- Creating new public spaces and greening of the street environment; and
- Making more efficient and intensive use of land, taking opportunities to provide a mix of uses, including new housing and employment floorspace.

3.3.7 The purpose of the Draft Canalside to Camley Street Supplementary Planning Document (SPD) (Ref. 6) is therefore to put in place a framework for the area which reflects, and can help meet, these priorities to ensure that growth and new development contributes positively to improving this part of the city, from which local neighbourhoods can share the benefits. A number of objectives are identified below, to:

- Create an ambitious mixed-use neighbourhood that connects and integrates well with surrounding neighbourhoods; economically, socially and environmentally;
- Make the area more pleasant for walking/and cycling; connecting areas and activities and integrating the area better with surrounding neighbourhoods;
- Ensure site development designs and layouts add to permeability and where feasible allows for potential future connections to be established;
- Promote high quality design and site layouts that can facilitate and future proof connectivity; and
- Integrate green infrastructure into new development in a range of forms to contribute to environmental quality (biodiversity, sustainable drainage, improved air quality and energy infrastructure).

3.3.8 The Draft Canalside to Camley Street Supplementary Planning Document (SPD) (Ref. 6) will support the Climate Action Plan for Camden (Ref. 9) which provides a supporting framework for environmentally sustainable social and economic renewal in a post-coronavirus Camden; for example, by creating healthier streets for walking and cycling, sustaining reductions in road transport pollution and improving access to green space.

4 Assessment Methodology

4.1.1 This Sustainability Statement has been structured around the Greater London Authority's (GLA's) and LBC's sustainable development aims and objectives and assesses/reviews the sustainability features included in the Proposed Development.

4.1.2 Specifically, the Proposed Development has been assessed against the following key topics listed in the adopted London Plan 2016 (Ref. 3), the Mayor of London Sustainable Design and Construction SPG (Ref. 8) and LBC planning policy:

- Resource management;
- Nature conservation and biodiversity;
- Climate change adaptation;
- Pollution management;
- Sustainable design and construction; and
- Sustainable transport.

4.1.3 The sustainability measures described in this Sustainability Statement have been developed in consultation with members of the design and project team through the review of the various documents as listed in Section 1: Introduction.

4.1.4 Furthermore, a Pre-assessment of the Proposed Development has been undertaken against the BREEAM UK New Construction (NC) 2018 scheme (Ref. 10), with a target of BREEAM 'Excellent' proposed. The details of the BREEAM Pre-assessment are provided in Section 6: BREEAM.

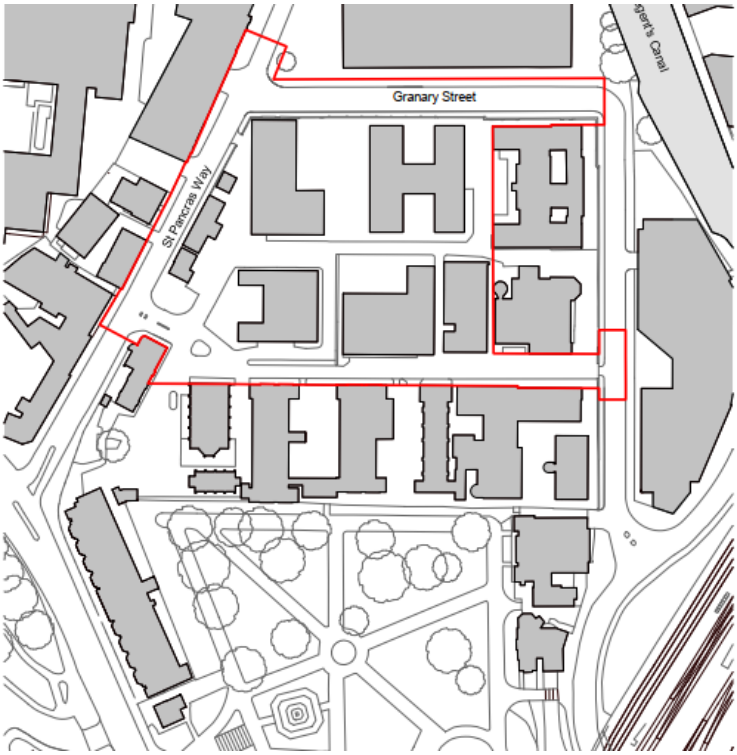
5 Sustainability Assessment

5.1 Resource Management

Land use

5.1.1 The existing buildings within the Site, as shown in Figure 5-1, will be demolished and the Site will be redeveloped to provide the new build healthcare, education and research facility. The existing buildings on the Site comprise mainly low rise and low quality mid-20th century buildings that are of poor aesthetic and physical condition. The Site does not include any listed buildings; two of the buildings (Camley Centre – Estates and Facilities building and the kitchen building) are Victorian/Edwardian and are considered to be positive contributors (medium contribution) to the Kings Cross / St Pancras Conservation Area (Ref. 11). In heritage terms, there is a greater scope for a more comprehensive scheme of demolition and redevelopment within the Site than across the remainder of the St. Pancras Hospital Site. This was one of the reasons why Oriel chose to redevelop this proportion of the Site and relocate Moorfields at City Road and UCL IoO services to this place.

Figure 5-1 Site Location Plan



5.1.2 The Site comprises mainly existing buildings and hard standing, and was formerly part of the St Pancras workhouse. It therefore comprises previously developed land.

5.1.3 In line with the Mayor's Priorities as set out in the Sustainable Design and Construction SPG and the adopted London Plan, 100% of the Proposed Development will be on previously developed land, therefore the development works will optimise the use of land and provide improved

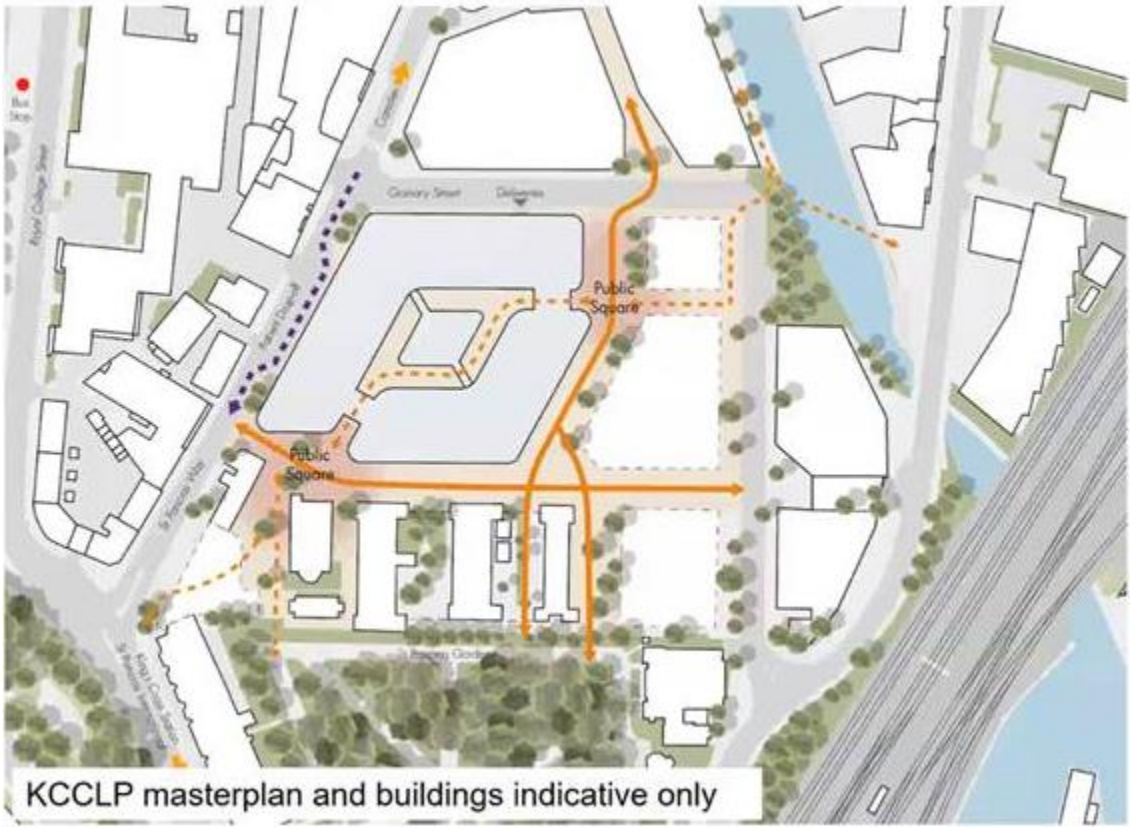
connection to the green (St. Pancras Gardens) and blue (Regent's Canal) spaces adjacent to the Site.

5.1.4 Refer to the DAS submitted alongside the planning application for further details.

Site Layout and Building Design

5.1.5 The DAS outlines the design for the Proposed Development. The design for the Proposed Development has been informed by an analysis of the history of the Site and its context as well as discussions with LBC, the C&I Trust and the adjoining site developer, KCCLP. It has drawn inspiration from the existing grain of the Site to open up new routes and axes across the emerging wider masterplan proposals including connection to St. Pancras Gardens, as shown in Figure 5-2.

Figure 5-2 New connections through the Site [Extract from the DAS]



5.1.6 The massing of the building has been shaped through an understanding of the scale of the existing and emerging context. The building is lower to the southwest where it addresses the lower existing Victorian and residential buildings along St Pancras Way, stepping up towards the northeast where new higher density buildings are emerging. A datum at the sixth floor acknowledges the scale of the existing St Pancras Hospital workhouse buildings to the south of the Site. The proposed colour and materiality of the façade reflects the existing context; the bronzed aluminum fins harmonise with the red brick of the neighbourhood while the light terracotta infill panels provide a backdrop and echo on the darker terracotta found in the older buildings' detailing.

5.1.7 The proposed design will assist in embedding the Proposed Development into its local context of Kings Cross St Pancras and helps create a positive relationship between the building and the local townscape.

5.1.8 Refer to the DAS, submitted with the planning application, for further details.

Archaeology

5.1.9 An Archaeological Desk-Based Assessment has been carried out for the Proposed Development and is submitted with the planning application. Key conclusions of the assessment are presented below:

- The Site falls outside of an Archaeological Priority Area (APA), although there are two APAs in close proximity to the Site that may impact upon the significance of the Site. The two APAs are:
  - Regent's Canal and Rail Infrastructure; and
  - St Pancras Old Church and Burial Ground.
- There are no designated heritage assets located within the Site.
- One non-designated asset, the St Pancras Workhouse lies within the Site Boundary. The St Pancras Workhouse holds a local and regional significance with the potential to find human remains relating to post-medieval London. The groundworks during the construction phase of the project will impact upon the archaeological remains of the St Pancras Workhouse.
- A high potential for early medieval, medieval and post medieval remains, and low potential for Palaeolithic and Mesolithic, Neolithic, Bronze Age, Iron Age, Roman, and Modern remains.
- Evidence of Early Medieval and Medieval period remains would likely consist of occupation, settlement, and human remains. The evidence from the Post-Medieval period would consist of the remains and structures from the Camden Workhouse within the Site, with potential for inhumations related to this structure.
- The Historic Landscape Character of the Site is defined as industrial/hospital and is not considered sensitive to change.

5.1.10 A proportionate and targeted programme of archaeological investigation may be required in those areas not disturbed by previous land uses and will be carried out by the project team.

5.1.11 Refer to the Archaeological Desk-Based Assessment, submitted with the planning application, for further details.

Preservation of heritage features

5.1.12 A Townscape, Heritage and Visual Impact Assessment (THVIA) has been undertaken for the Proposed Development and is submitted in support of the planning application.

5.1.13 The Site is within the Kings Cross / St Pancras Conservation Area and is immediately adjacent to, and contiguous with, the Regent's Canal Conservation Area to the north. The Site contains no listed buildings,

however there are a number of listed structures in the vicinity of the Site, principally the listed memorials and church within St Pancras Gardens, a Grade II registered landscape. The nearest locally listed building to the Site is 26 Crowndale Road, the former Old St Pancras Church House.

5.1.14 Two of the buildings within the Site (Camley Centre – Estates and Facilities building and the kitchen building) are Victorian/Edwardian and considered to be positive contributors (medium contribution) to the Kings Cross / St Pancras Conservation Area (Ref. 11).

5.1.15 The Site comprises a range of different historic buildings, from the Victorian era to post-war and more contemporary structures. The buildings which the new facility will replace are primarily post-war and recognised to be of little historic value. The DAS confirms that the Proposed Development will be highly positive in architectural and urban design terms, and will greatly enhance the Site, its surroundings, and the setting of heritage assets.

5.1.16 Refer to the THVIA and DAS, submitted with the planning application, for further details.

Daylight, Sunlight and Overshadowing

5.1.17 A Daylight, Sunlight and Overshadowing Assessment has been undertaken with the aim to assess impact of the Proposed Development on levels of daylight and sunlight within surrounding neighbouring properties. The assessment confirms that daylight effects arising from the existing development on the Site remain variable due to the arrangements, orientation and heights of buildings in the local area, although there is a larger influence on daylight and sunlight effects with the Proposed Development in place due to the increased massing and its proximity to existing buildings/windows.

5.1.18 The location and size of the Proposed Development does contribute to some shadowing to the small amenity/habitat area adjacent to Regent's Canal (this is an extremely limited effect as the area will be more influenced by development on Camley Street and the replacement for the Ugly Brown Building).

5.1.19 Refer to the Daylight, Sunlight and Overshadowing Assessment, submitted with the planning application, for further details.

Wind Microclimate

5.1.20 A Wind Microclimate Assessment has been carried out to assess the likely impact of the Proposed Development on the pedestrian level wind conditions in and around the Site, and will be submitted with the planning application. The assessment confirms the following details:

- The pedestrian level wind conditions around the Proposed Development including more sensitive locations are suitable for the intended usage throughout the year (both summer and winter seasons were tested).
- All entrances to the Proposed Development have wind conditions suitable for the intended entrance usage throughout the year.

- The wind conditions at the 6th floor roof terrace are suitable for any pedestrian activity at all but one location throughout the year. Wind conditions at the remaining one location are suitable for pedestrian strolling or other more strenuous activities. This location comprises a fire escape only and as such will not be in regular use.

5.1.21 Refer to the Wind Microclimate Assessment, submitted with the planning application, for further details.

5.2 Energy use and carbon emissions

5.2.1 An Energy Strategy has been produced for the Proposed Development and is submitted with the planning application. The Energy Statement describes the proposed energy strategy as per the GLA Energy Hierarchy of 'Be Lean'; 'Be Clean'; 'Be Green'; and 'Be Seen, as set out in the draft new London Plan (Ref. 7).

5.2.2 The Proposed Development is expected to achieve a regulated carbon saving of 27% through energy efficiency alone against the draft new London Plan (Ref. 7), and further savings are proposed to be made through the use of heat pumps and solar PV where possible. As required by the GLA Energy Assessment Guidance (October 2018) (Ref. 12) and the draft new London Plan, SAP 10 carbon factors will be used as the basis for calculation of carbon savings. These new carbon factors recognise that the grid electricity is now more decarbonised and as a result that electric led systems such as heat pumps are lower carbon than equivalent gas-based alternatives. The proposed heat pump led solution will assist in meeting the planning policy and the energy hierarchy as set out in the London Plan.

5.2.3 Calculations at this stage suggest this strategy would save 383.7 tCO_2/year, which is 27% of the baseline emissions of 1,401.0 tCO_2/year. The Proposed Development is working towards the 35% reduction in regulated carbon emissions, that is required by the current adopted London Plan (Ref. 3). An off-set payment is being proposed whilst the rest is met through an energy efficient building fabric, ground and air source heat pump systems and PV panels. The potential for the nearby canal to provide low-carbon heat and cooling is also being explored with the Canal and River Trust (CRT). This will be analysed post planning once the available modelling can be undertaken in collaboration with CRT to confirm the amount of energy which could be provided by the canal.

5.2.4 The Proposed Development will exceed LBC's requirement to 'achieve 60% of available Energy credits' (for the BREEAM assessment).

5.2.5 The below sections detail the response of the design to each level of the energy hierarchy.

'Be Lean' – Passive Design and Energy Efficiency

5.2.6 Efficient façade with high performance glazing and shading (where appropriate) to reduce heat transfer whilst allowing good light transmittance and appropriate levels of winter heat gain.

5.2.7 High performance u-values, low air permeability and a low level of thermal bridging is proposed.

5.2.8 Highly efficient building services equipment, including fans, pumps and lighting is proposed which balance the clinical and energy efficiency requirements.

'Be Clean' – District Heating

5.2.9 The Proposed Development is located near to several existing District Heating (DH) networks, namely the Somerstown and King's Cross Energy Network. Both these DH networks have been reviewed and discounted as they are both gas-fired Combined Heat and Power (CHPs) with higher carbon emissions than the alternative heat pump solutions. They also do not have Decarbonisation Strategies which is required by the GLA before connection can be considered. However, the building will be designed to allow future connection of DH network if a low carbon heat/cooling source can be implemented.

'Be Green' – On-site Renewable Energy Generation

5.2.10 An all-electric heating and cooling solution has been proposed for the building, comprising a closed-loop ground source heat pumps (GSHPs) for the baseload heating and cooling with potential connection to Regent's Canal to provide supplementary input depending upon the modelling to be carried out post planning. Peak demands will be met by reversible air source heat pumps (ASHPs) for the remainder of space heating and to assist with cooling demand in the summer. This combined system is deemed the most suitable for the energy profile and use of the building and helps to maximise the efficiencies of the proposed systems without oversizing the baseload GSHP system.

5.2.11 Solar photovoltaics (PV) are proposed on the roof to generate electricity and offset grid electricity and help meet peak demands, which will further reduce carbon emissions. The proposed east-west orientation of the panels is to maximise the available area to accommodate the PV array whilst navigating any obstructions.

'Be Seen' – Monitoring, Verification and Reporting

5.2.12 A comprehensive monitoring and metering systems to measure actual energy and carbon performance will be installed as part of the works. These will enable the building's landlord to report operational energy use to the Mayor for at least five years via an online portal in line with the 'Be Seen' criteria in the draft new London Plan (Ref. 7). The current guidance on this final stage of the energy hierarchy was published in April 2020 (Ref. 13) and is under consultation. The design team will respond and modify the monitoring strategy accordingly once the final guidance document is issued.

Demand Side Response

5.2.13 The draft new London Plan policy SI2 (Ref. 7) encourages developments to minimise both annual and peak energy demand. The Energy Strategy outlines the measures that will be reviewed for the Proposed Development to respond to this policy. These include the utilisation of thermal stores associated with the GSHPs to reduce the number of heat pumps required; the solar PV array on the roof will help to meet the peak electrical demands,

by reducing the draw from the grid; and a Smart network is being proposed which will be reviewed during the post-planning detailed design stage to consider how the different systems will communicate with each other without compromising the resilience and performance of the building.

In use

5.2.14 The final step of the hierarchy ('Be Seen') requires comprehensive monitoring and reporting of energy demand and carbon emissions. Operational demands will need to be reported to the Mayor for at least five years via an online portal. The energy metering strategy to be developed for the Proposed Development will take into account these requirements. Current guidance from GLA on this is in 'consultation draft' form (Ref. 13) and the design team will respond to this criteria post planning, committing to providing operational energy data for the first five years of operation.

5.2.15 Refer to the Energy Strategy, submitted with the planning application, for further details.

5.3 Water efficiency

5.3.1 The Proposed Development will exceed LBC's requirement to 'achieve 60% of all available Water credits' (for the BREEAM assessment).

5.3.2 The design of the Proposed Development will aim to minimise internal potable water consumption within the building by 40% over the baseline building water consumption (as calculated by BRE's water calculator tool) in line with the BREEAM NC 2018 credit Wat 01. This will be achieved through the specification of water-efficient sanitary fittings such as low flush toilets, low flow showers and wash hand basins. In addition, solutions that help save water in the existing buildings will be incorporated into the design such as automated overnight legionnaire flushing of the sanitaryware on a timed basis instead of relying on individuals to flush system. This was found to save a substantial amount of water due to the extent of sanitaryware required in the building.

5.3.3 Reflecting the Mayor's 'Best Practice' measures as described in the GLA Sustainable Design and Construction SPG, water meters are proposed to help prevent water wastage. The water meters will be connected to the Building Management System (BMS) to provide visibility of the consumption in order to make changes to minimise usage.

5.3.4 Water leak detection and flow control devices will be provided in line with the BREEAM criteria. These will shut off the supply to the WCs when they are not in use and provide a monitoring system to alert if there is a major leak to further reduce water wastage.

5.3.5 As required by Camden Local Plan Policy CC3, greywater and rainwater harvesting systems have been reviewed by the project team for use internally to assist with toilet flushing, however due to clinical and hygiene reasons they have not been considered. This is due to the potential to spread bacteria from harvested and collected water which are often opposed by the Infection Control team and must not be used in accommodation where there are immune-compromised patients. In addition

to this, Health Technical Memorandum 04-01: Safe water in healthcare premises, Part A (Ref. 14), states that, "*Greywater and rainwater should not be collected for use on, or in, healthcare premises."*

5.3.6 Although not suitable for internal re-use, there is potential for rainwater harvesting to be applied externally to the roof terrace planting for irrigation purposes and/or window/Solar PV cleaning. A small local system with rainwater harvesting and filters is currently proposed to the roof terrace.

5.3.7 In addition, to reduce water demand for landscape irrigation, the following measures will be implemented where feasible:

- Selecting drought-resistant planting;
- Selecting and arranging plants and soft landscaping to maximise use of rainfall in place of irrigation; and
- Using water-efficient irrigation, by either relying solely on precipitation or employing an automatic drip irrigation system, to regulate watering as required depending upon weather conditions and control and optimise the amount of water use through soil moisture sensors.

5.4 Materials

5.4.1 The Proposed Development will exceed LBC's requirement to 'achieve 40% of available Materials credits' (for the BREEAM assessment).

5.4.2 Preference will be given to materials with lower environmental impacts. To reduce the burden on the environment of the major building elements, the overall impact will be assessed using whole life cycle models including for embodied carbon in line with BREEAM and the draft new London Plan (Ref. 7) Policy SI2 Minimising Greenhouse Gas Emissions. A Life Cycle Assessment (LCA) has been used to appraise the key building elements that will constitute the majority of the building's embodied carbon such as the superstructure, substructure, the façade and hard landscaping materials in line with BREEAM NC 2018 credit Mat 01.

5.4.3 New materials will be selected with a priority to have lower embodied carbon and will use robust independently verified Environmental Product Declarations (EPDs) to source these materials. Furthermore, materials chosen will be robust, low maintenance and long lasting to suit the location and intended use.

5.4.4 Smart procurement will be implemented where possible, which will involve examining the sourcing of materials and logistics strategies of the supply chain to see if reductions in vehicle movements could be made, and a Sustainable Procurement Plan (SPP) will be implemented by the contractor. The SPP, produced as part of the BREEAM assessment (NC 2018 credit Mat 03), outlines initiatives such as how new materials, including building elements and finishes will be responsibly sourced, where feasible, in accordance with the following certification of responsible sourcing schemes:

- BES6001 (preferred) or ISO14001 (product manufacturer and supply chain); and

- FSC (Forest Stewardship Council) or PEFC (Programme for the Endorsement of Forest Certification) for solid timber and timber products.

5.4.5 All thermal insulation products used in the building, where feasible, will have a low embodied impact relative to their thermal properties and will be responsibly sourced, where feasible, in accordance with the SPP.

5.4.6 Furthermore, the use of cement replacements within the concrete elements will be explored to reduce the embodied carbon. A minimum of 35% ground granulated blast furnace slag (GGBS) is proposed for in-situ concrete and higher percentages will be investigated prior to construction as this area of technology improves, refer to the Circular Economy Statement, submitted with the planning application, for further details.

Embodied Carbon in the Construction

5.4.7 The design team has carried out an Life Cycle Assessment (LCA) to assess the embodied carbon impact of the construction of the Proposed Development in accordance with the BREEAM NC 2018 credit Mat 01 and section 9.2.10 of the draft new London Plan (Ref. 7). This was carried out during the pre-planning Concept Design and will enable the team to calculate the total carbon impact of the scheme and identify high impact materials which could be replaced with lower impacting materials.

5.4.8 A Whole Life-cycle carbon (WLC) assessment, as required by the draft new London Plan, will be undertaken in addition to the LCA.

5.4.9 IMPACT compliant software has been used to calculate the embodied carbon for the Proposed Development. The embodied carbon impact will be assessed and reviewed post-planning during the detailed design development to ensure that the carbon impact is further reduced where feasible.

Circular Economy Principles

5.4.10 The principles of circular economy have been examined by the design team during the pre-planning stage and a Circular Economy Statement has been developed in accordance with the GLA guidance (Ref. 15) and is submitted alongside the planning application. The Circular Economy Statement details the circular economy opportunities identified for the Proposed Development, as explored through application of the nine circular economy principles.

5.4.11 The DAS confirms that the existing buildings on the Site are coming to the end of their lives and this is one of the reasons the Site has been considered for redevelopment. These buildings are of low quality and the fabric has deteriorated. A Pre-Demolition Audit of the existing buildings will be undertaken and opportunities to reclaim components and materials will be implemented, wherever possible. An initial desk-based analysis of the opportunities for reclamation has been undertaken and it is noted that there are some Victorian buildings with London Stock bricks set in lime mortar and roof slates that could be reclaimed.

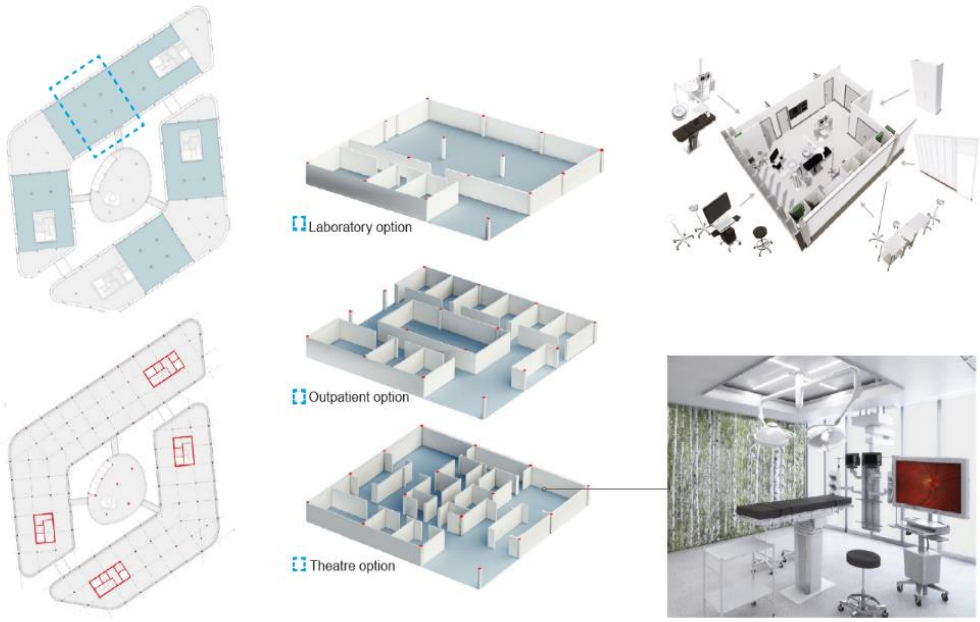
5.4.12 The building will be constructed in layers with the structural frame being designed for longevity and adaptability, whilst other components such as the

façade being able to be changed during the buildings lifetime to allow flexibility without affecting the structural integrity. Specific areas/wards/spaces in the building will be adaptive especially where there could be future changes in their use. Where possible, inherent finished materials will be preferred such as exposed ceilings to the corridors to minimise the materials used in the first fit-out and to provide flexibility to changes without additional material waste or modification.

5.4.13 The use of Design for Manufacture and Assembly (DfMA) has been considered in the design to reduce waste in the production and construction of the building. Modular elements will be prioritised such as the Oriel Tower (also known as the central core) which could be pre-fabricated and assembled on site on a floor-by-floor basis. Other elements will be considered such as the unitised façade system, demountable partitioning, pre-fabricated plant rooms and plant skids where sufficient material efficiency are feasible.

5.4.14 The structure is designed to enable flexibility and adaptability, by using a uniform structural grid to minimise the number of columns providing an open floor plates. This will provide flexibility on how floors are fitted-out and serviced. Uniform floor-to-ceiling heights will be provided capable to accommodate different uses depending on how the spaces evolve over the building's lifetime. This is illustrated by Figure 5-3 below which shows how a specific space in the building could be converted from a Laboratory to an Outpatient to an Operating Theatre.

Figure 5-3 Adaptable interior fit-out for internal spaces



5.4.15 Refer to the Circular Economy Statement, submitted alongside the planning application, for further details.

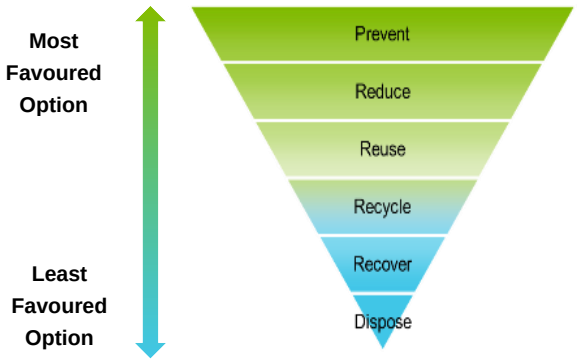
5.5 Waste

5.5.1 Sustainable waste management procedures will be adopted during demolition, construction and operational stages to enable waste minimisation and high recycling rates.

Construction, Demolition and Excavation Waste

5.5.2 Waste management measures will be implemented in the Proposed Development in accordance with the Waste Hierarchy (see Figure 5-4). In line with the BREEAM NC 2018 credit Wst 01, the Proposed Development aspires not to generate more than 13.3m^3 (or 11.1 tonnes) of construction waste per 100m^2 GIA and to divert at least 70% by volume (or 80% by weight) of non-hazardous construction waste from landfill, in addition to the 80% by volume (or 90% by weight) of demolition waste.

Figure 5-4 Waste Hierarchy



5.5.3 In line with BREEAM NC 2018 credit Wst 01, at least 80% by volume (or 90% by weight), of demolition waste will be diverted from landfill, if feasible.

5.5.4 The Proposed Development will exceed LBC's requirement for 'demolition diversion of 85% from landfill' and will target 95% beneficial use, as required by the draft new London Plan (Ref. 7).

5.5.5 The Principal Contractor will be required to monitor waste generated during the construction works to maximise reuse and recycling potential, which should allow for the levels of reuse and recycling to be increased throughout the construction period.

5.5.6 A Resource Management Plan (RMP) will be developed in line with the BREEAM NC criteria before works commence on Site by the Principal Contractor to identify the waste arising from the Proposed Development, with the aim of minimising waste, as well as recording and reporting accurate data on waste arising. The RMP will investigate opportunities to minimise and reduce waste generation covering non-hazardous waste related to on-Site construction, dedicated off-Site manufacture or fabrication generated by the building's design and construction.

5.5.7 When determining the most suitable option for waste disposal, the mode of waste transportation and alternatives to reduce adverse environmental effects, transport times and waste capacity will be considered in line with the Best Practicable Environmental Option (BPEO). All waste management options identified during the demolition, excavation and construction phase

of the Proposed Development will consider the Site's location, natural environment and available infrastructure.

Operational Recycling & Waste

5.5.8 An Operational Recycling and Waste Management Strategy has been prepared for the Proposed Development and is submitted alongside the planning application. The Operational Recycling and Waste Management Strategy confirms that a best practice approach to the segregation of waste will be implemented and all material streams are proposed to be segregate at source. The Operational Recycling and Waste Management Strategy is in line with the Waste Regulations 2011 (as amended) (Ref. 16) which requires waste to be segregated at source where it is technically, environmentally, economically practicable (TEEP) to do so. The number of bins required and the collection frequency for the Proposed Development are shown in Table 5-1 below.

Table 5-1 Operational Recycling & Waste number of bins and collection frequency

Material Type	*Size of bin*	*Number of bins/units*	*Collections per week**
Hazardous Waste (Animal Bedding)	1100	2	Once a week
Plastic	1100	9	Daily
Metal (cans)	1100	1	Daily
Cardboard	Bale	3	Once a week
Paper	1100	12	Daily
Glass	240	1	Twice per week
Food	120	12	Twice per week
Healthcare waste (clinical, offensive, sharps, infectious)	770	23	Daily
Residual Compactor and Compactor Pod	Compactor "Pod" 2 Tonne capacity	1	Once every 4 days

** Based on a seven-day working week, all collections allow for the provision of an additional day's waste in the event of a missed collection.*

5.5.9 Segregating materials and waste at source allows for the materials to be recycled back into new products, contribute to a circular economy, and (as can happen when combining materials) potentially reduce 'downcycling' of materials.

5.5.10 In line with the BREEAM NC 2018 criteria, the bins will be clearly labelled, to assist with segregation, storage and collection of the recyclable waste streams. The waste store within the Proposed Development will be easily accessible to facilities operators for the deposit of materials. Adequate signage will be provided to encourage occupants to participate in maximising the diversion from landfill.

5.5.11 The recycling levels will exceed the municipal waste recycling target of 65% by 2030, required by the draft new London Plan (Ref. 7).

5.5.12 Refer to the Operational Recycling and Waste Management Strategy, submitted with the planning application, for further details.

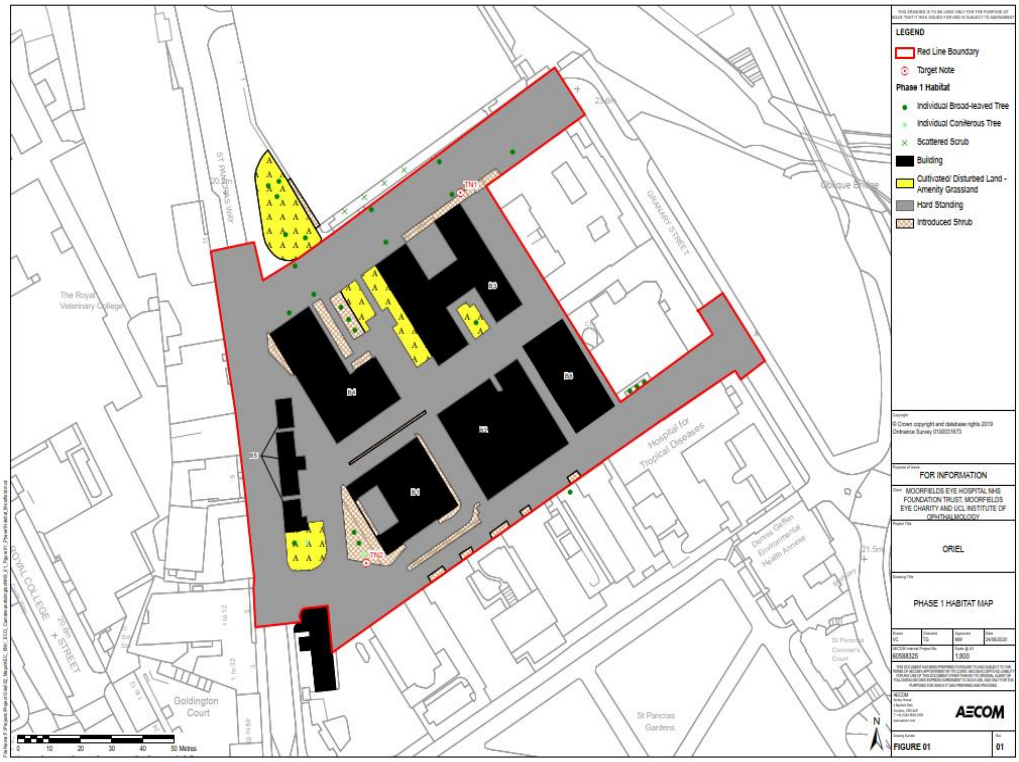
5.6 Nature Conservation and Biodiversity

5.6.1 A suitably qualified ecologist (SQE), as defined by BREEAM, has been appointed at early design stages to review the existing Site's ecology and to provide advice on enhancement opportunities as part of the Proposed Development.

5.6.2 A Preliminary Ecological Appraisal (PEA) Report for the existing Site, that includes a Preliminary Bat Roost Assessment of the existing buildings and trees, has been prepared and is submitted alongside the planning application. The PEA describes the baseline ecological conditions of the Site and identifies potential ecological receptors (nature conservation designations and protected and/or notable habitats and species) that may constrain or influence the design and implementation of the Proposed Development.

5.6.3 The PEA found that the Site comprises buildings and hard standing (totaling 92% of the Site together), with the remainder consisting of Introduced Shrub and Amenity Grassland (making up 5% and 4% respectively), as shown in Figure 5-5 below.

Figure 5-5 Phase 1 Habitat Survey



5.6.4 The PEA concluded overall that the Site is of low ecological value due to the preponderance of buildings and hardstanding and limited natural habitat within the Site. Three existing buildings were classified as being of low suitability to support roosting bats and one building was assessed as having. Limited habitats that provides foraging and nesting opportunities (trees and introduced shrub) for birds and foraging habitats for bats were also identified on the Site. Dusk emergence and dawn emergence surveys were completed on these buildings in May to September 2019. No bats were recorded emerging from or returning to the buildings and very limited bat activity was recorded around the buildings. It was concluded that roosting bats are likely to be absent from the Site. Further details are provided in the 2019 Bat Survey report which is submitted with the planning application.

5.6.5 Opportunities for mitigation and enhancement have been proposed to obtain net gains for biodiversity. These include, among others: living roofs, living walls with climbing plants, planting street trees or installation of planters, use of native species or species with wildlife benefit in a Well-Being Garden and insect hotels, log piles, bat and bird boxes.

5.6.6 Refer to the PEA Report, submitted with the planning application, for further details and Section 5.7 below on increased Green Cover and Trees.

5.7 Climate change adaptation

Tackling Increased Temperatures and Drought

5.7.1 The design of the Proposed Development incorporates the below mitigation measures to help create a development which has the capacity to adapt for the projected effects of climate change:

- Designing a fabric first approach with a high-performance façade and glazing being proposed to ensure that the building envelope U-values exceed those required by the Part L of the Building Regulations;
- Creating a biodiverse (green) roof area;
- The proposed planting will include native and drought resistant species to reduce water required for irrigation;
- A Flood Risk Assessment and Drainage Strategy has been produced to mitigate the risk of off-site flooding and integrate the use of Sustainable urban Drainage Systems (SuDS) within the Proposed Development;
- The provision of low water-use fittings to reduce the demand for water use;
- The use of durable materials in accordance with BREEAM NC 2018 credit Mat 05 (Designing for durability and resilience); and
- A Climate Change Adaptation Strategy has been produced in accordance with BREEAM NC 2018 credit Wst 05 (Adaptation to climate change) to identify the hazards and risks associated with future climate, and proposed mitigation measures.

Increased Green Cover and Trees

5.7.2 A Tree Survey Report and an Arboricultural Impact Assessment have been prepared and are submitted with the planning application. These reports identify the likely direct and indirect impacts of the Proposed Development on the trees on or immediately adjacent to the Site along with suitable mitigation measures to allow for the successful retention of significant trees or to compensate for trees to be removed, where appropriate. The Arboricultural Impact Assessment confirms that 13 tree features are to be removed to facilitate the Proposed Development; this includes three individual trees classed as moderate quality (Category B) including one tree (T29) which is subject to a tree protection order (TPO) and eight individual trees and two tree groups classed as low quality (Category C).

5.7.3 The loss of these trees is necessary to achieve the construction and landscaping proposals for the Site. Tree loss will be mitigated with a robust and high-quality scheme of new tree planting (16 replacement trees) which represents an opportunity to increase the quality, impact, diversity and resilience of the local tree stock. The tree replacement will match the asset value of the existing trees to be removed.

5.7.4 A Biodiversity Net Gain (BNG) Assessment has been prepared and is submitted alongside the planning application. The BNG confirms that the Proposed Development is predicted to result in a net gain of 0.11 area-based biodiversity units (23.16%). Providing 13.16% greater biodiversity units than the minimum value of 10% required by the forthcoming Environment Bill (Ref. 17). The Figure 5-6 below illustrates the proposed roof level soft landscaping.

Figure 5-6 Rooftop planting proposals

5.7.5 A Landscape Design Report has been prepared and submitted alongside the planning application. The Landscape Design Report confirms that an Urban Greening Factor (UGF) of 0.18 has been calculated for the Proposed Development. The draft new London Plan (Ref. 7) does not provide a target for clinical, research or education facilities, and thus the Proposed Development has been compared against the predominately commercial development target which is 0.3. The Proposed Development has a limited extent at ground level, and is constrained by existing buildings and roads surrounding it. Access and health and safety requirements to plant at roof level also limit the ability to provide additional areas of green roofs. The Urban Greening Factor has the potential to increase to 0.25 if the six proposed trees on St Pancras Way, located at the edge of the Proposed Development, are included in the calculation.

5.7.6 Refer to the Tree Survey Report, Arboricultural Impact Assessment, Biodiversity Net Gain Assessment and Landscape Design Report, submitted with the planning application, for further details.

Flooding Risk and Surface Water Run-off Management

5.7.7 A Flood Risk Assessment (and Drainage Strategy (FRADS) has been prepared, which includes consideration of Sustainable Urban Drainage Systems (SuDS), and is submitted alongside the planning application. It confirms that the Site is located in Flood Zone 1 - an area assessed as having a less than 1 in 1,000 annual probability of river or sea flooding (<0.1%).

5.7.8 The Regent's Canal, which feeds into St Pancras Basin further to the south, is situated within 55m of the Site at its closest point to the north east of the northern tip of the Proposed Development. The FRADS confirms that the Site is at low risk of flooding from the following sources: fluvial, tidal, groundwater, sewers, surface water runoff and reservoirs/artificial sources. The risk of flooding from pluvial sources is considered to be Medium. However, the mitigation measures allow this flood risk to be reduced to low.

5.7.9 The FRADS confirms that the Site sits within a Critical Drainage Area. The Site borders the King's Cross Local Flood Risk Zone and for precautionary reasons the Site has been treated in a similar way to developments inside such a zone.

5.7.10 The FRADS confirms that surface water runoff from the Site will be reduced by 85% over the existing Site runoff levels. An allowance of 40% has been made for climate change in all calculations in line with the Environment Agency's guidance. This will be achieved through on-site storage and flow restrictions. The following SuDS have been deemed most appropriate to provide source control, improve water quality, reduce flood risk and restrict surface water run-off:

- Permeable surfacing where possible; and
- Cellular storage attenuation tanks (the minimum volume of tank storage will be 280m^3).

5.7.11 Refer to the FRADS, submitted with the planning application, for further details.

5.8 Pollution management

5.8.1 A site-wide strategy has been developed to minimise and mitigate the impact of the Proposed Development and prevent or avoid water, ground, air and noise pollution.

Land Contamination

5.8.2 The Phase 1 Geotechnical and Geoenvironmental Desk Study Report, submitted alongside the planning application, confirms that the overall geo-environmental risk of the Site is considered to be low and no evidence is currently available to suggest that ground remediation is required.

5.8.3 During a walkover survey, vegetation on the Site appeared to be in good condition and no obvious evidence of spillages was observed.

5.8.4 A network of service tunnels is present across the Site, supplying the hospital buildings with heat/steam. A considerable number of asbestos tags were observed across the Site during the walkover survey. Where identified, asbestos containing materials will be removed by a suitability licensed asbestos removal contractor and managed in accordance with the relevant statutory controls governing asbestos disposal prior to the demolition phase.

5.8.5 A Phase 2 intrusive ground investigation will be required in order to substantiate the preliminary findings.

5.8.6 Refer to the Phase 1 Geotechnical and Geoenvironmental Desk Study Report, submitted with the planning application, for further details.

Air Pollution

5.8.7 The entire Site falls within the Camden Air Quality Management Area (AQMA). The Proposed Development has been designed to minimise emissions to air. An all-electric heating and cooling solution is being proposed, which is anticipated to reduce the nitrogen oxides (NO_x) emissions from the building. . Note There will be two oil-fired standby generators, but these are incorporated to provide a back-up supply to the building in the event of a temporary power failure.

5.8.8 An Air Quality Assessment (AQA) has been prepared, and submitted alongside the planning application, which presents the findings of an assessment of the likely effects on air quality as a result of the Proposed Development. The AQA considers the construction phase of the Proposed Development and the impact on local air quality of emissions from road traffic associated with construction and operation of the Proposed Development.

5.8.9 The results of the assessment of impacts associated with the demolition and construction phase indicate that, in the absence of mitigation, the removal/demolition of existing structures, earthworks, construction and track-out, can be described as medium to high risk with regard to dust soiling, and low risk in terms of human health impacts. A range of mitigation measures will be followed to reduce the nuisance and human-health impacts of the dust and particulate matter (PM_{10}) which, if effectively implemented, would reduce impacts to an insignificant level.

5.8.10 The dust effects have been considered during construction, including demolition, earthworks, construction and track out, and a number of mitigation measures are recommended, such as:

- Development and implementation of a Dust Management Plan;
- Erection of solid screens or barriers around dust activities or the Site boundary that are, at least, as high as any stockpiles on Site; and
- Avoiding the use of diesel or petrol-powered generators and using mains electricity or battery powered equipment where possible.

5.8.11 The impacts of the complete and operational Proposed Development on local air quality have been assessed and impacts at all existing receptor locations are considered to be negligible. The AQA confirms that the Proposed Development will be car-free as no car parking spaces are proposed, with the exception of blue badge parking (three parking bays). Overall, the operational traffic impacts from the Proposed Development on local air quality are considered to be not significant.

5.8.12 In addition, the Proposed Development will be air quality neutral in regard to both transport and building-related emissions. No additional mitigation is required to off-set excessive emissions of NO_x and PM_{10} for this source of emissions when considered in isolation. Therefore, the Proposed

Development does not contravene any national or local planning policies related to air quality.

5.8.13 The mitigation measures have been designed to ensure that the construction works will result in negligible to minor impacts, which are not significant. The measures should be implemented through the Outline Construction Management Plan (CMP) which is submitted with the planning application.

5.8.14 Refer to the AQA, submitted alongside the planning application, for further details.

Noise and Vibration

5.8.15 A Noise and Vibration Impact Assessment has been carried out for the Proposed Development and is submitted alongside the planning application. The assessment confirms the following:

- Noise and vibration generated by construction activities is likely to exceed the Lowest Observable Adverse Effect Level (LOAEL) at nearby sensitive receptors throughout the construction programme. The Significant Observed Adverse Effect Level (SOAEL) may be exceeded at receptors that are part of the wider St Pancras Hospital site during demolition and substructure works. Through an effective communication strategy, noise monitoring to determine compliance with noise limits and adoption of Best Practical Means to reduce construction noise as far as reasonably practicable, it is considered that all reasonable steps have been undertaken to reduce noise emissions and, therefore, exceedances of the SOAEL will be minimised.
- Changes in road traffic noise due to both construction and operational traffic have been identified as negligible and not significant.
- Building services plant has been derived at 10 dB below the measured background noise level with temporary limits during emergencies set at 10dB above the background noise level. Building services plant will be designed to achieve the specified noise limits at nearby sensitive receptors in line with LBC and BREEAM requirements.

5.8.16 Refer to the Noise and Vibration Impact Assessment, submitted alongside the planning application, for further details.

5.8.17 During the construction stage, good industry standards, guidance and practice procedures (such as the Considerate Contractors scheme) will be followed in order to minimise noise and vibration effects. Sources of noise and vibration will be managed to avoid and minimise impacts, and mitigation measures documented within the Outline CMP will be implemented, which will take into account the relevant guidance documents.

Light Pollution

5.8.18 The Proposed Development will aim to ensure that external lighting design directs and concentrates lighting to the appropriate areas and that upward lighting is minimised, reducing unnecessary light pollution, energy consumption and nuisance to neighbouring properties.

5.8.19 An External Lighting Assessment has been prepared and is submitted alongside the planning application. The assessment concluded that it is expected the majority of receptors will experience a noticeable visual change with the new structure and new lighting in place, however measurable effects are expected to be largely contained within the Site or the St Pancras Hospital site, with most following similar patterns to existing streetlighting/floodlighting. The potential for light spill, sky glow and glare created by new lighting associated with the Proposed Development will be controlled through the selection and placement of lighting equipment.

5.8.20 External lighting will be designed in line with best practice guidance such as BS 5489-1:2013 Code for the practice for the design of road lighting - lighting of roads and public amenity areas (Ref. 18), BS EN 12464-2:2014 Light and lighting - lighting of workplaces - Part 2: Outdoor workplaces (Ref. 19) and Table 2 of ILP Guidance notes for the reduction of obtrusive light, 2011 (Ref. 20).

5.8.21 External lighting will be automatically controlled for prevention of operation during daylight hours and presence of detection in areas of intermittent pedestrian traffic, in line with BREEAM NC 2018 credit Pol 04.

5.8.22 Refer to the External Lighting Assessment, submitted alongside the planning application, for further details.

Water Pollution

5.8.23 Throughout the construction and operational phases, standard mitigation measures and pollution control best practices will be applied to ensure that effects on nearby water resources are limited as set out in the Outline CMP.

5.8.24 During the construction phase, mitigation measures will be developed and detailed in a CMP, to be produced by the Principal Contractor once appointed. These mitigation measures will include the production of an emergency spillage action plan, designating areas for washing and cleaning of equipment and surrounding the proposed drainage with appropriate granular bedding materials.

5.8.25 Once the Proposed Development is complete and operational, mitigation measures will be applied to limit the potential for impacts on water resources.

5.9 Health and wellbeing of the design

Designing Inclusive Environments

5.9.1 Inclusive design has been an integral part of the design philosophy and will continue to inform the design process as it develops. Considerations have been made for all users including, but not limited to, people with mobility impairments and people with visual or hearing impairments. Approved Documents M (July 2020) (Ref. 21), K (January 2013) (Ref. 22) and B (May 2020) (Ref. 23) are taken as a benchmark for determining accessibility and means of escape.

5.9.2 The DAS states that the role of the design for the Proposed Development in increasing patient satisfaction lies firstly, in its ability to help provide a high quality experience in the period before, after and in between the sessions with practitioners and carers; and secondly in helping the staff operate at their best for the patients. The design strategies to date have focused on patient journeys, addressing issues such as the ease of arrival, accessibility, clarity of wayfinding, and provision of pleasant places for waiting, in ready reach of the destinations. As the interior design develops post-planning, these strategies will be tested in consultation with the building's user groups and be supplemented by careful attention to people's different needs.

5.9.3 Refer to the DAS, submitted with the planning application, for further details.

Secure by Design

5.9.4 Secure by Design principles have been considered and will continue to form part of the design philosophy and inform the design process as it develops. A Suitably Qualified Security Specialist, in collaboration with a local Designing Out Crime Officer (DOCO), has identified the key security risks for a central London Site and the mitigation measures to address these risks. In response, the design team will prioritise the key actions to create a safe building and these will be further explored post planning during the detailed design stage.

5.9.5 The DAS confirms the following security-related features:

- During the day the building will be open to all - patients and their carers, staff, students and the general public. All patient and public circulation takes place within the oriel itself using the security-controlled lifts and stairs. Access to the cores will be via swipe access for staff only;
- At night the building will be accessible to staff and authorised persons only. The north entrance will be shut, and the south entrance monitored via the security office located adjacent to the lobby. The outer sliding door will still be operable so that patients and their carers coming to use the A&E after hours can come in and turn left into the after hours A&E entrance. Staff will be able to enter the building via the second set of sliding doors with swipe access. There will be night-time security within the building.

5.9.6 Refer to the DAS, submitted with the planning application, for further details.

Indoor Comfort and Health and Wellbeing

5.9.7 The design of the building will promote a healthy living environment. Matters such as acoustics and glare will be carefully analysed and resolved where required. To help staff operate at their best, the design aims to achieve excellent space planning and adjacencies for all parts of the building together with good facilities for the staff. The DAS confirms that a staff and students-only roof terrace will also provide access to outdoor space to support wellbeing, providing an area for gathering, small group socialising and outdoor teaching and learning. The terrace will be landscaped to incorporate greening and improve the Site's biodiversity.

5.9.8 The provision of cyclist parking and facilities will be publicised to encourage physical activity for the building users; staircases will be located centrally for ease of access (as well as in the three cores), be open, visible and attractive to encourage their use over lift use.

5.9.9 To promote internal air quality, mechanical ventilation fresh air inlets will be located as far away from sources of external pollution as possible. This will help ensure that poor air quality is not circulated within the building.

5.9.10 A project-specific indoor air quality plan, in line with the BREEAM NC 2018 criteria, will be produced for the building to facilitate a process that leads to design, specification and installation decisions and actions that minimise indoor air pollution during occupation of the building.

5.9.11 Healthy indoor air quality will be further promoted in all areas of the Proposed Development through the specification of internal finishes and fittings with low emissions of VOCs, where feasible. Where these products are specified, these should meet the relevant standards for VOC emissions.

5.9.12 Internal acoustics will be designed in accordance with relevant standards by a suitably qualified acoustician to ensure that the building's acoustic performance is fit for purpose.

5.9.13 Refer to the DAS, submitted with the planning application, for further details.

Sustainable Construction methods

5.9.14 An Outline CMP has been prepared and is submitted with the planning application, and will be updated by the Principal Contactor, once appointed. The CMP is a 'Live' document and has been prepared to communicate the construction delivery strategy and methodology for the construction of the Proposed Development.

5.9.15 In addition, the Site will be registered with the Considerate Contractors Scheme (CCS) to ensure that the construction Site is managed in an environmentally and socially considerate, responsible and accountable manner. The Principal Contractor will comply with and exceed, where possible, the minimum requirements of the CCS.

5.9.16 An Outline Construction Logistics Plan (CLP) has been prepared and is submitted with the planning application. The key objectives of the CLP include minimising the impact of construction vehicles on the local community and local transport networks, ensuring best practice is followed

(including Construction Logistics and Community Safety, CLOCS, and Fleet Operator Recognition Scheme, FORS) and encouraging construction workers to travel to the Site via sustainable transport modes. Refer to the Outline CLP, submitted with the planning application, for further details.

5.9.17 The CLP will be updated by the Principal Contractor once appointed. A Construction Logistics Manager will be appointed in due course and will be responsible for implementing, monitoring and updating the CLP.

5.9.18 During the construction process, environmental impacts will be monitored including recording and reporting energy use, water consumption and transport data (where measured) resulting from all on-site construction processes throughout the build programme in line with the BREEAM criteria.

5.10 Sustainable transport

5.10.1 A Transport Assessment and Travel Plan have been produced, and are submitted alongside the Planning Application, and confirm that the Site is located within an area of 'excellent' public transport accessibility, which has been given a 6b Public Transport Accessibility Level (PTAL) rating, which is the highest achievable rating. This reflects the high availability and frequency of public transport facilities within walking distance of the Site, and therefore would be highly accessible to significant numbers of potential staff and patients.

5.10.2 The Site is located within a short walking distance (approximately 450m) of four bus stops; the closest bus stops to the Site are located on the B512 Crowndale Road, Royal College Street and Camden Street. These stops are served by routes 46 and 214. St Pancras International Rail Station and King's Cross Rail Station and Kings Cross/St Pancras London Underground station are located approximately 900m (a 11-minute walk) to the south of the Site. Mornington Crescent London Underground Station is located an 8-minute walk to the west of the Site.

5.10.3 The Site is located towards the edge of the current Transport for London (TfL) cycle hire scheme coverage and there are two docking locations within a short walk of the Site. One is outside the Royal Veterinary College on Royal College Street and one is outside St Pancras Station on Pancras Road. Between them, these hire stations provide 72 bicycle hire docking stations. The northern extension of Cycleway 6 (C6) between Kings Cross Station and Kentish Town opened in September 2019. C6 runs close to the site on Royal College Street and Pancras Road.

5.10.4 The Proposed Development is proposed to be car-free with three blue badge car parking bays to be provided.

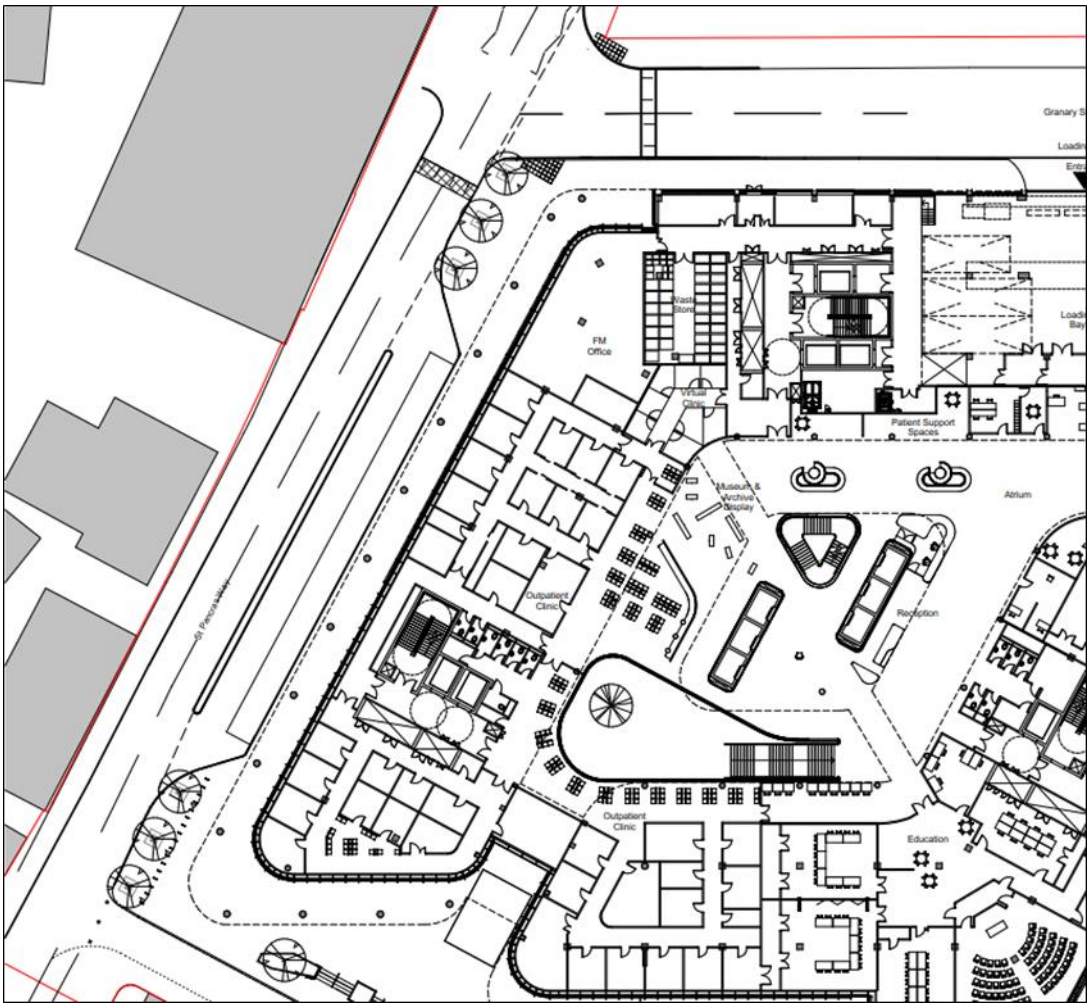
5.10.5 As part of the Proposed Development, 390 long-stay cycle parking spaces and 16 showers will be provided within the building, which will be provided at lower ground floor/basement level, while 112 short stay cycle parking spaces would be designated externally.

5.10.6 The provision of a shuttle bus service is being investigated that will operate between the Site and St Pancras Station to improve accessibility for patients

and reduce the need for private vehicles and taxis which would reduce the congestion around the Site.

5.10.7 The Delivery and Servicing Plan (DSP), submitted alongside the planning application, confirms that the Proposed Development includes a dedicated off-street delivery and servicing area which incorporates space for light goods vehicles (LGVs), heavy goods vehicles (HGVs), a waste compactor and gas and oil deliveries. In addition, there is a separate drop-off/pick-up area on St Pancras Way for Non-Emergency Patient Transfer (NEPT) and space for four car/taxis (as detailed in Figure 5-7 below). A future 2m wide cycle lane could be incorporated by reducing the carriageway to a single 3.5m wide lane. Consolidation methods will be considered to reduce and minimise the number of vehicles such as the London Boroughs' Consolidation Centre (LBCC), potentially providing financial, environmental and operational benefits through reducing cost, vehicle emissions and reducing time.

Figure 5-7 Lower Ground floor drop-off point on St Pancras Way



5.10.8 A Travel Plan Coordinator (TPCo) will be appointed and will be responsible for the day-to-day operation, delivery, monitoring and review of the Travel Plan with reference to their operations and will report to the management and Developer.

5.10.9 Refer to the Transport Assessment, Travel Plan and Delivery and Servicing Plan, submitted with the planning application, for further details.

6 BREEAM

6.1 Introduction to BREEAM

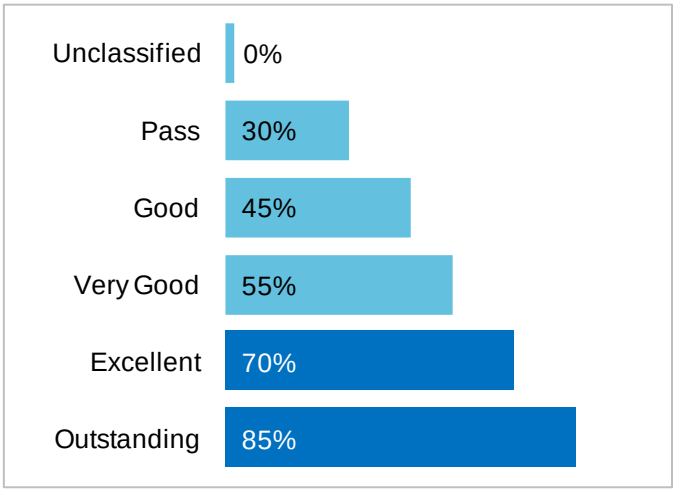
6.1.1 BREEAM is the world's leading and most widely used environmental assessment method for buildings. It sets the standard for best practice in sustainable design and has become the de facto measure used to describe a building's environmental performance.

6.1.2 BREEAM seeks to minimise the adverse effects of new buildings on the environment at global and local scales, whilst promoting healthy indoor conditions for the occupants. Building projects are assessed at the design and post-construction stages using a system of environmental issues grouped within the following categories:

- Management;
- Health and Wellbeing;
- Energy;
- Transport;
- Water;
- Materials;
- Waste;
- Land Use & Ecology;
- Pollution; and
- Innovation.

6.1.3 The assessment of the building results in a final report and BRE Global BREEAM certificate detailing the performance of the assessed building against the environmental issues covered by the standard. The building's performance is expressed as a BREEAM rating to the scale shown on Figure 6-1 below.

Figure 6-1 BREEAM rating benchmarks



6.2 Proposed Target Rating

6.2.1 The Proposed Development has been registered with the BRE under v3.0 of the BREEAM NC 2018 manual (Ref. 10). A BREEAM Pre-assessment has been undertaken at this stage which is proposed to achieve the rating as detailed in Table 6-1 below:

Table 6-1 BREEAM – Proposed Target Rating and Score

Building type	*Target Rating*	*Target Score*
Healthcare Teaching or specialist hospitals (Fully fitted out)	Excellent	77.46%

6.2.2 Section 6.3 provides further detail on the route to this rating. The Healthcare Teaching or specialist hospitals assessment is targeting to achieve a BREEAM 'Excellent' rating which is in line with the current London Plan, the draft new London Plan I and Camden planning policy.

6.3 BREEAM Pre-assessment

6.3.1 This initial Pre-assessment is an indication of credits that could be targeted for the Proposed Development and is based on a series of assumptions and discussion with the design team.

6.3.2 In order to address the sustainability issues within BREEAM, a number of meetings have been held between the BREEAM Assessor and the design team. These workshops/meetings and early stage reports were used to identify target credits based on current design intent. A BREEAM Pre-assessment was then produced and circulated to the client and design team for comment.

6.3.3 BREEAM credits targeted within the BREEAM Pre-assessment are proposed to be achieved and therefore addresses the Camden Planning Guidance (CPG) Energy efficiency and adaptation (Ref. 5) stipulation below:

- "Achieve 60% of all available Energy and Water credits and 40% of available Materials credits."

6.3.4 A summary of the Proposed Development's performance is provided in Table 6-2 below.

Table 6-2 BREEAM Pre-assessment Results

Credit Ref.	*Credit Name*	*Healthcare Teaching or specialist hospitals*	
		Available Credits	*Targeted Credits*
	Scope	Fully fitted	
	Target Score	**77.46%**	
	Target BREEAM Rating	Excellent (≥70%)	
Management			
Man 01	Project Brief and Design	4	4
Man 02	Life Cycle Cost and Service Life Planning	4	4
Man 03	Responsible Construction Practices	6	6
Man 04	Commissioning and Handover	4	4
Man 05	Aftercare	3	3
	Totals	**21**	**21**
Health and Wellbeing			
Hea 01	Visual Comfort	6	1
Hea 02	Indoor Air Quality	4	0
Hea 04	Thermal Comfort	3	2

Credit Ref.	*Credit Name*	*Healthcare Teaching or specialist hospitals*	
		Available Credits	*Targeted Credits*
Hea 05	Acoustic Performance	3	3
Hea 06	Security	1	1
Hea 07	Safe and Healthy Surroundings	1	1
	Totals	**19**	**8**
Energy			
Ene 01	Reduction of Energy Use and Carbon Emissions	13	8
Ene 02	Energy Monitoring	2	2
Ene 03	External Lighting	1	1
Ene 04	Low Carbon Design	3	3
Ene 06	Energy Efficient Transportation Systems	2	2
Ene 07	Energy Efficient Laboratory Systems	1	1
Ene 08	Energy Efficient Equipment	2	0
	Totals	**24**	**17**
Transport			
Tra 01	Transport Assessment and Travel Plan	2	2
Tra 02	Sustainable Transport Measures	10	10

Credit Ref.	*Credit Name*	*Healthcare Teaching or specialist hospitals*	
		Available Credits	*Targeted Credits*
	Totals	**12**	**12**
Water			
Wat 01	Water Consumption	5	3
Wat 02	Water Monitoring	1	1
Wat 03	Water Leak Detection	2	2
Wat 04	Water Efficient Equipment	1	1
	Totals	**9**	**7**
Materials			
Mat 01	Environmental Impacts from Construction Products – Building Life Cycle Assessment (LCA)	7	7
Mat 02	Environmental Impacts from Construction Products – Environmental Product Declarations (EPDs)	1	1
Mat 03	Responsible Sourcing of Construction Products	4	2
Mat 05	Designing for Durability and Resilience	1	1
Mat 06	Material Efficiency	1	1
	Totals	**14**	**12**
Waste			

Credit Ref.	*Credit Name*	*Healthcare Teaching or specialist hospitals*	
		Available Credits	*Targeted Credits*
Wst 01	Construction Waste Management	5	3
Wst 02	Use of Recycled and Sustainably Sourced Aggregates	1	0
Wst 03	Operational Waste	1	1
Wst 05	Adaptation to Climate Change	1	1
Wst 06	Design for Disassembly and Adaptability	2	1
	Totals	**10**	**6**
Land Use and Ecology			
LE 01	Site Selection	2	2
LE 02	Ecological Risks and Opportunities	2	2
LE 03	Managing Negative Impacts on Ecology	3	2
LE 04	Managing Impacts on Ecology	4	2
LE 05	Long Term Ecology Management and Maintenance	2	2
	Totals	**13**	**10**
Pollution			
Pol 01	Impact on Refrigerants	3	1
Pol 02	Local Air Quality	2	2

Credit Ref.	*Credit Name*	*Healthcare Teaching or specialist hospitals*	
		Available Credits	*Targeted Credits*
Pol 03	Flood and Surface Water Management	5	3
Pol 04	Reduction of Night Time Light Pollution	1	1
Pol 05	Reduction of Noise Pollution	1	1
	Totals	**12**	**8**
Innovation			
Man 03	Responsible Construction Practices	1	1
Mat 01	Third Party Verification	1	1
	Totals	**2**	**2**

7 Conclusions

7.1.1 This Sustainability Statement demonstrates how the design of the Proposed Development addresses the standards set out in the adopted London Plan 2016, the Mayor of London's SPG Sustainable Design and Construction 2014, the draft new London Plan and Camden's sustainability objectives, as outlined in the Camden Local Plan and Camden Planning Guidance (CPG) Energy efficiency and adaptation.

7.1.2 The key beneficial impacts of the Proposed Development in relation to sustainability can be summarised as follows:

- Optimising the use of land by building on previously developed land, with a high-quality design appropriate to the historical context of the Site and local townscape;
- Achieving a site-wide regulated carbon saving of 383.7 tCO2/year, which is 27% of the Site regulated carbon emissions of 1,401.0 tCO2/year, via passive design, energy efficiency, an all-electric heating and cooling solution and by installing photovoltaic panels to generate renewable energy;
- Good practice environmental design, including good daylight, ventilation and acoustics which will contribute to occupant health and wellbeing;
- Ensuring that staff and students have access to roof terraces and landscaped areas offering amenity space and views;
- Specifying water efficient fittings to reduce potable water demand;
- Using responsibly sourced materials with robust environmental information, including low-VOC finishes and fittings, where feasible;
- Providing ecological enhancements through a landscape strategy that aims to have a net positive impact to the Site biodiversity, providing 13.16% greater biodiversity units compared with the minimum value of 10% required by the forthcoming Environment Bill (Ref. 17), and an UGF of 0.18. This is through the introduction of rooftop planting and replacement tree plantings;
- Promoting the use of sustainable transport by providing a car free development, incorporating cycle parking, lockers and changing rooms, improving permeability of the Site for pedestrians; and
- Participating in the CCS and implementing best practice Site management procedures to minimise environmental disruption.

7.1.3 In addition, an initial BREEAM Pre-assessment has been undertaken for the development. Full BREEAM NC 2018 assessments will be undertaken post planning. An 'Excellent' rating is being targeted to be achieved for the 'Healthcare Teaching or specialist hospitals' in alignment with Camden planning policy.

7.1.4 Overall, the Proposed Development aligns with national, regional and local policy. The approach that is being implemented embeds sustainability principles fully into the design of the Proposed Development.

8 References

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Ref. 22. The Ministry of Housing, Communities and Local Government (2013) Approved Document K: protection from falling, collision and impact.
Ref. 23. The Ministry of Housing, Communities and Local Government (2020) Approved Document B: fire safety.

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