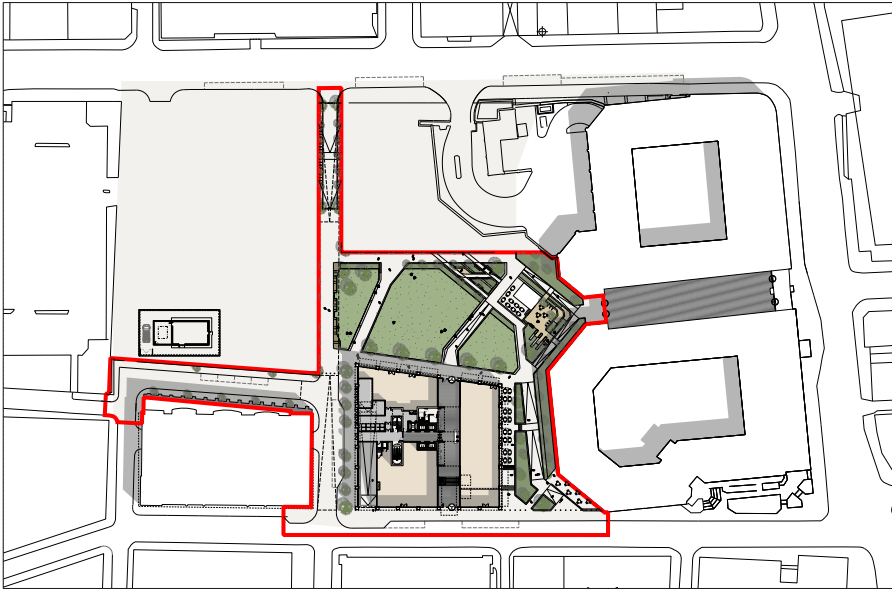




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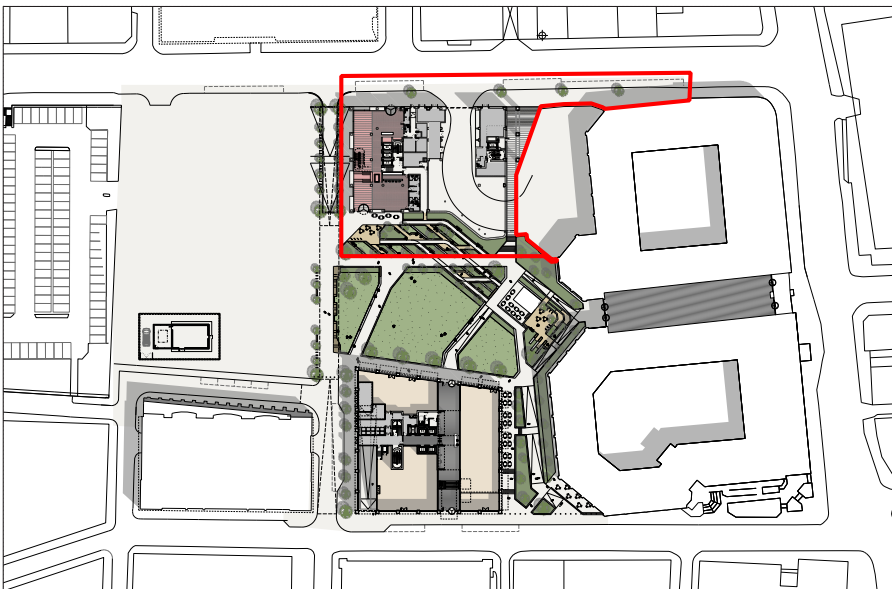
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PHASING



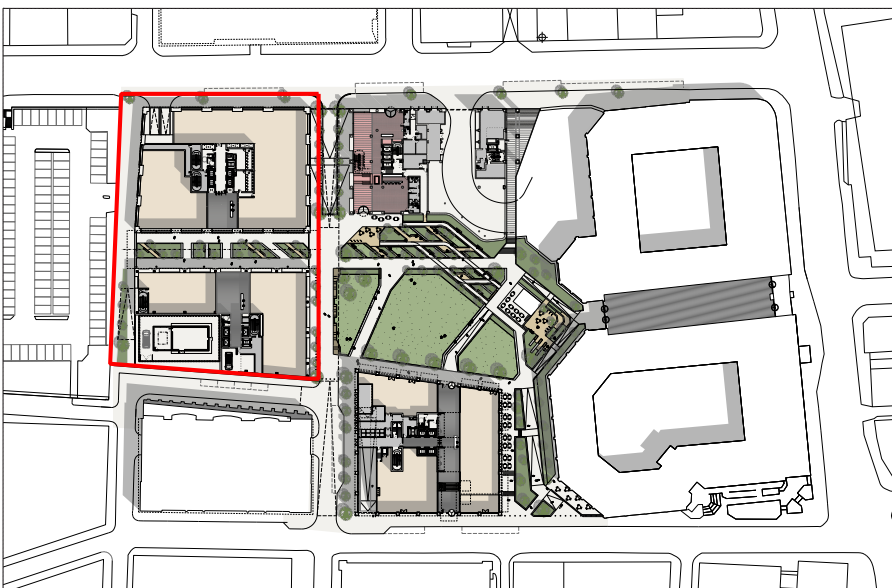
### **Illustrative phase 1**

The content of the full application inclusive of Office A and the majority of the public realm, as described in this document and associated planning application drawings



### **Illustrative phase 2**

The delivery of a hotel on plot B, plus associated public realm works to The Gardens, Edmund Street and Pall Mall.



### **Illustrative phase 3A + B**

The delivery of commercial office buildings on plots C and D, plus associated public realm in the winter gardens and surrounds.

The hybrid application has defined an element of construction that will be delivered as a first phase with the remainder seeking outline consent. The later buildings B, C and D will be brought forward based on market demand, but it is anticipated that the regeneration that will be delivered in the first phase will attract sufficient interest to trigger sequential construction following on from this.

The diagrams opposite describe how the overall masterplan scheme might be delivered in a series of phases, for illustrative purposes only. The order in which the development is phase may vary from this description depending on market demand.





# 10

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**ACCESS, SECURITY AND  
INCLUSIVE DESIGN**

E3 Cube  
Allies and Morrison



The vision for Pall Mall Liverpool is to set a benchmark for working environments in Liverpool by creating a distinct city centre destination for workers, residents and visitors to enjoy. Once completed, the development will result in an overall increase in the amount of public space with new pedestrian walkways and public seating, three office buildings, a hotel and a pavilion that could be used as a cafe, restaurant or retail space, all centred around a new green space.

The proposal has taken into consideration appropriate standards of access for disabled people as staff, visiting guests or general users of the public realm. The proposals are being developed to comply with mandatory access standards and aim to achieve the following objectives:

- Maximise access to all accommodation, its facilities and services for people who are visitors and members of staff, regardless of disability
- Ensure that, wherever possible, appropriate standards for accessibility can be met at the outset as part of mainstream inclusive design
- Meet the requirements of The Building Regulations Approved Document M- Access to and Use of buildings, 2015.
- Meet the aims of the Equality Act, 2010 (since October 2010)
- Follow design guidance given in relevant British Standards, and other currently published good practice detailing the needs of disabled people where possible
- Meet local authority access policies where relevant

Some areas of plant and spaces that are not accessed except for maintenance by servicing engineers or similar personnel are excluded. Detailed issues relating to compliance with building regulations will be dealt with at the appropriate work stage, though a number of these have been considered as part of the design work carried out in preparation for the submission of this planning application.

Access standards are in a state of continuing development, with no single authoritative document being a comprehensive source of reference. The Pall Mall development has been designed with the intent to meet and/or exceed the requirements of the following standards, legislation and guidance where practical:

- Equality Act, 2010 (October 2010) and The Disability Discrimination Act, 1995 (amended 2005)
- Building Regulations Part M, 2015 (amended 2016)
- Building Regulations Part B, 2006 (amended 2007, 2010, 2013, 2018, 2019)
- Building Regulations Part K, 2010 (amended 2013)
- British Standard 9999:2017 (October 2008)
- British Standard 8300:2018
- Joint Mobility Unit: Buildings and Internal Environments Technical Bulletins
- Joint Mobility Unit: Streets and External Environments Technical Bulletins
- Centre for Accessible Environments: Designing for Accessibility
- Design for Access for All, Supplementary Planning Document, Liverpool City Council

## 10.1 Approach and arrival

The site is located within the city centre of Liverpool and is well served by public transport. Regional train services are available from nearby Moorfields Merseyrail station, which also provides links to national rail services at Lime Street and Liverpool Central stations. Similarly, local bus routes are easily accessed via Tithebarn Street, Dale Street and Vauxhall Road.

There are four key arrival points into the site in the proposed masterplan: two from Pall Mall; one through the Exchange Station Building and; two from Bixteth Street. A fifth route is currently available from the surface car park to the north.

Primary access for pedestrians and cyclists is provided via Pall Mall, Bixteth Street and Edmund Street. Pedestrians arriving at The Gardens via Bixteth Street or Pall Mall will access the square via routes designed to gradients allowing full accessibility at Bixteth Walk, Edmund Street and, in future phases, via a bridge connection and a series of steps adjacent to the hotel on plot B.

Pedestrians arriving at Office A will access the building via one of the two entrances; one on Bixteth Street and one facing The Gardens. The Bixteth Street entrance is accessed via the existing pavement and is clearly visible from the street. The Gardens entrance is situated immediately in front of a generous strip of hard landscaping adjacent to the lawns and is clearly indicated by the proposed pathways across the site and the considered placement of trees and planting.

The illustrative scheme shows access to the plot B hotel through two entrances, with the main entrance to the reception accessed from a generous, widened footway on Pall Mall and a secondary entrance, leading to both the reception and hotel bar/ lounge area, accessed from a carefully designed arrival space in The Gardens. The illustrative scheme for the office

buildings on plots C and D show entrances facing into the winter gardens between the building plots, providing level access to both building entrances. Vehicles will access the site from Pall Mall, Edmund street and Lumber Street via Bixteth Street.

## 10.2 External areas

The masterplan has been configured to ensure that future phases of development have maximum accessibility and a minimal number of level changes at ground level. The levels shown in the illustrative masterplan and the drawings for the full application have been carefully set to create a relatively flat transition between the land owned by Liverpool City Council and the site currently occupied by NCP to the north, which also allows for level access to plots C and D. Setting the high point at the middle of Edmund Street to the northern end of The Gardens has therefore influenced the setting of internal levels in Office A and in the illustrative scheme for the plot B hotel. Providing continuity between the content of this application and the wider site to the north, both in terms of levels and the setting out of the masterplan, is critical to achieving the strategic vision described in the Commercial Quarter Supplementary Planning Document (Liverpool City Council, March 2006).

This statement is intended as a “living document”, assessing the provisions made for accessibility across the site, particularly The Gardens, in terms of approaches, paths, seating, lighting, circulation, and wayfinding against current standards which will continually be revisited throughout the design process.

### 10.2.1 Inclusive design strategy

The proposal strives to improve accessibility of public realm and The Gardens and maximises access for disabled people. The strategy is based on the social model of disability and the philosophy of inclusive design which maximises access, choice and opportunities for disabled people, with inbuilt flexibility to adapt to the changing needs of end users.

Access is considered in its broadest sense to reflect the needs of individuals with sensory, mobility and hidden impairments, learning disabilities, mental health needs, and limited reach and stature or others for whom the built environment can be disabling.

The Pall Mall Inclusive Design Strategy provides a framework for how the spaces and public realm / garden is designed and constructed to be inclusive and accessible to all. Adopted approach in creating an inclusive environment attempts to:

- Create an outdoor environment that can be used easily, safely and with dignity by everybody, regardless of age, disability or gender;
- Provide choice, convenient and avoids unnecessary effort, separation or segregation;
- Go beyond meeting minimum accessibility standards or legislative requirements;
- Recognise that everyone benefits from improved accessibility, including disabled people, older people and families with children, carers, and people who do not consider themselves to be disabled.

### 10.2.2 General design principles

Paths and routes within The Gardens and public realm areas are designed around the site in a way that:

- Makes optimum use of contours and levels for ease of access and egress;
- Enables easy navigation around the environment without confusion, logically integrating way finding and signage;
- Makes the entrances prominent and legible from the point of arrival on the site;
- Prioritises key facilities around an entrance and along any axial routes on the principle level within the development;
- Enables external circulation routes to accommodate the anticipated level and volume of people using the garden.

- Locates other facilities such as seating, resting places appropriately
- Locates building entrances and exits, including emergency exits, to enable easy management of emergency evacuation according to anticipated numbers and diversity of need.

Routes and paths towards building's entrances are designed to provide a strong, legible framework. The layout of the buildings (to be finalised as part of detailed design) and location of key facilities, such as entrance doors, reception, vertical circulation stairs and lifts, will be easily identifiable, predictable and served by direct routes.

### 10.2.3 Navigation, orientation and way-finding

The external built environment and the garden is designed and managed to facilitate convenient orientation and way-finding. Orientation and way-finding are planned at the outset of a project to ensure that the arrangement of buildings and building entrances on site enables people to navigate and orientate themselves easily.

The ease of orientation and way-finding through the garden is determined by its inherent legibility, and supported by signage. A way-finding strategy and signage will be developed as part of the inclusive design strategy and detailed at later stages of design development.

The design intended to minimise the impact of clutter through the careful location and integration of the various elements of street furniture, e.g. mounting signage and litter bins on lighting columns (where appropriate), or mounting lighting equipment on existing structures.

Paths are designed to provide a strong, legible framework within the garden and routes are designed to be easily identifiable, predictable and direct, providing at least one accessible, step-free route to destinations and building entrances.

Way-finding around the garden uses spatial, physical and environmental cues to help people plan and navigate moving from one place to another. Appropriate way-finding devices will be incorporated into the public realm and will include:

- Architectural clarity, for example: logical arrangements and clear identification of routes, entrances and elements with clearly detectable paths.
- Appropriate and clear signage (to be developed as part of the detailed design)
- Tactile surfaces
- Clearly defined footpath in Edmund Street
- Visual communication, for example: visual clarity in terms of colour and contrast, good lighting that avoids excessive reflections, glare, and shadowing

### 10.2.4 General landscaping arrangement

The topography of existing site is such that is elevated in the centre and levels tend to slope away towards Bixteth Street and Pall Mall. Areas within the garden are categorised and defined as;

#### *Winter Garden*

This acts as the link between the first phase of the development of the Commercial Quarter and potential future phases of development on the adjacent NCP car park site. The winter garden is a publicly accessible covered space between blocks C & D and provides an accessible link to the existing Pall Mall NCP car park.

#### *Edmund Street*

This street connection acts as a primary pedestrian route (gradient 1:30) from Pall Mall to The Gardens. Edmund Street is a pedestrian priority space with access during set times for maintenance and service vehicles, plus emergency services vehicles where necessary.



#### *Edmund Street (western end)*

This is an existing adopted highway which caters for vehicle access, primarily to service Building A and to provide access to the basement of adjacent existing building at the junction with Bixteth Street.

#### *The Sidings*

The area running north / south linking the 2.6m wide pedestrian footbridge (an alternative route to the accessible Edmund Street route) through to Pall Mall. The sidings provide a wide path with a 1:119 gradient.

#### *Exchange Terraces*

An elevated area opposite the Exchange Station/ Exchange Station rear entrance, with an opportunity to provide split seating areas accessed by steps and an alternative accessible path with a 1:110 gradient (upper level) and 1:25 gradient (lower level) around the pavilion.

#### *Bixteth Walk*

A key link into the site from the south, accessed from the point at which Exchange Station meets Bixteth Street with a 3.5m to 4.0m wide path and a gradient of 1:32.

#### *The Lawns*

Lying at the heart of The Gardens, the lawns constitute a large portion of the proposed landscaped open spaces. The raised edges to the perimeter of the lawns incorporate steps and informal seating with transition kerbs providing equitable access for wheelchair users.

The main pedestrian routes into The Gardens are provided from Edmund Street East / Edmund Street West and Bixteth Walk. The proposed footbridge adjacent to plot B hotel illustrative scheme offers an additional access link between Pall Mall and the garden. The landscape responds to the geometry of the illustrative plot B hotel scheme and the footbridge

link maintains pedestrian access to The Gardens from this point, where it is used as an alternative means of access for pedestrians choosing to use steps. The footbridge design is influenced by the existing vehicular access road to the service yard which requires a clearance of 4.5m.

The footbridge design and associated steps are to be detailed at later stages of design development and to comply with the BS8300:2018, Part 1 design guidance document. Footbridge steps and landing areas will be installed with tactile surfaces, handrails on both sides including guard rails along the bridge length. Nosings to steps will incorporate contrasting strips for visibility. Edmund Street is designed as a pedestrian focussed space allowing access into heart of The Gardens and beyond towards Bixteth Street. Positioning trees in line with street furniture is intended to define a clear pedestrian passage for benefit of visually impaired and blind users.

Vehicular access to Edmund Street East and Edmund Street Central from Pall Mall and The Gardens entrance from Edmund Street West is restricted and controlled by bollards. This area is primarily used by maintenance and service vehicles during restricted hours.

Edmund Street West, at its junction with Bixteth Street, will primarily provide access to the basement of the existing X Building and servicing for Office A. Edmund Street West includes a 2.5m wide pedestrian footpath defined by 70mm high kerb for benefit of all pedestrians including visually impaired and blind users. Suitable pedestrian crossings incorporating dropped kerbs and associated tactile surfaces are also provided at this junction.

One of the key routes into the site, Bixteth Walk, creates a positive pedestrian connection to The Gardens and the Exchange Station Building from the street. The pedestrian path deals with the change in level with a gentle gradient and provides step free access to the terraces and The Gardens beyond.

The lawn sits as a series of level terraces with seating with average height 450mm and, in places, a series of steps integrated into the lawn edge protection, assisting visually impaired and cane users to navigate around the paths. A series of transitional kerbs with flush channels will be positioned around the lawns to enable wheelchairs users' access onto the lawn areas.

The terraced garden directly located by Exchange Station building entrance, elevated to provide informal seating area, has an alternative level footpath to provide access to wheelchair users.

Landscaped areas will be designed and detailed to comply with the Approved Document M, Building Regulations, BS8300:2018 Part 1 and Inclusive Mobility guidance document as a minimum standard. Particular attention has been given to levels whilst the use of non-slip paving materials, colour contrast and use of surface texture or tone (to differentiate routes to assist visually impaired users finding ways around the space) will be addressed in detail at later work stages.

In general, the design ensures the following;

- Circulation routes are designed so that they are safe and easy to navigate around spaces.
- All main paths and access routes to and around buildings are wide enough to enable wheelchair users, people with assistance dogs and others to pass each other in both directions.
- All paths / routes have gradients that exceeds minimum requirements.
- Path surfaces are firm, even and free from Irregularities.
- No open drainage channels and gullies, where installed, are set off main path.
- All routes / paths are kept clear of any obstructions.
- Street furniture such as bollards, bins, seating, cycle storage are clearly identified with suitable tonal contrast for visibility and recessed away from line of pedestrian flow.

- Appropriate level and distribution of lighting to allow legibility of the space at night integrated into all outdoor areas.
- Lighting are designed and located so it does not create areas of glare or shadow.
- Seating provided at regular intervals along main paths.
- Seating with backrests and armrests are provided.
- All street furniture (seating/ posts / bins / planting etc.) will be grouped and set back off pedestrian routes and contrast with the surroundings.



### 10.3 Building entrances and receptions

The main entrance to Office A is situated centrally on the Bixteth Street elevation and is clearly indicated with a projecting canopy and an elevational treatment to the window directly above at first floor level, which is distinct from other bays at this level. The Bixteth Street entrance provides level access via either a revolving door or a single hinged pass door, which will be designed to comply with applicable standards at the appropriate work stage. Access to the reception area from the Bixteth Street entrance is provided via both a set of steps, which are accessible for ambulant disabled people, and a dedicated platform lift immediately adjacent to the stairs and entrance doors.

A second entrance into the reception from The Gardens is provided free of level changes and leads directly from a clearly defined pathway in the landscape to the entrance doors facing the landscape. The reception desk and entrance to the security gates and lift lobby are positioned to provide visibility from both entrances. Extensive consideration of options have resulted in the steps and platform lift to provide access from Bixteth Street being proposed. This is deemed to be appropriate, given that an entrance of equal status is provided via a step free route from The Gardens. This is preferable, from both a design and accessibility perspective, to making level changes in the public realm which would jeopardise the potential of the site to accommodate future development and potentially more extreme level changes in future phases.

Ground floor retail units within Office A each have their own entrances which face directly on to both the street and public realm, providing both legibility and ease of access. All retail entrances will have level thresholds. The main entrance to the retail unit facing on to Bixteth Walk is accessed via a level, step free route from The Gardens. This unit has an internal level change at it's south-western end facing Bixteth Street, which has the capacity to be negotiated via a series of

steps in combination with a platform lift, if necessary. The design of the retail units will be developed at the appropriate work stage.

The illustrative scheme for the plot B hotel features a large entrance hall providing access to internal circulation via the lifts and shared access to both the hotel reception facing on to Pall Mall and the bar/ lounge area facing The Gardens. The Pall Mall entrance is indicated as the principal way into the building, leading to a generous reception space from which both the front desk, stairs and passenger lifts are clearly visible. The secondary entrance from The Gardens is provided, giving access to the bar/ lounge and the reception. There is an internal level change shown in the illustrative scheme for the hotel which is capable of being negotiated by either a platform lift or via a dual entry lift which is part of the main bank of passenger lifts, providing a single point of access to the lifts for all building users.

The illustrative scheme for plots C and D shows main office entrances facing into the winter garden which can be reached via a step free route through the public realm. The ground level units on these plots have dedicated entrances facing into the winter garden.

All entrances have level thresholds with doors being accessible to all users. Manifestations to glazing and glass doors may be required and will be developed at the appropriate work stage. Reception desks will be designed to be accessible to wheelchair users. All reception floors will be designed to an appropriate level of slip resistance with adequate areas of matting at entrance doors. All staff and visitors to the proposed offices buildings will be required to pass through security turnstiles in the entrance lobby where wide pass gates will provided for wheelchair users.

#### 10.4 Vehicular and cycle parking

Car parking provision has been kept to a minimum across the site and is generally limited to basements within individual building plots. Additional pay and display parking will be provided on Lumber Street. There is capacity for up to 72 cycles parked in Sheffield stands in the landscape, indicated in the illustrative landscape scheme. Office A includes a full basement where there is capacity for up to 24 car parking spaces, of which 2 are dedicated wheelchair accessible bays, and up to 5 motorcycle spaces. The basement also has capacity for up to 132 secure cycle parking spaces in two tier racks. Cars and cycles will access the basement via a shared ramp at a gradient of 1:8, which is approached from Bixteth Street via a secure entrance. A separate secure door is provided for cyclists for use when the vehicular entrance is closed.

The illustrative scheme for the hotel on plot B does not provide any dedicated visitor car parking. A dedicated taxi drop-off bay can be provided for the hotel on Pall Mall. There is no private cycle storage facility shown in the illustrative hotel scheme but there is generous provision included in the public realm for guests and visitors.

The illustrative scheme for the office building on plot C includes a basement which will provide the required number of car and cycle parking spaces, plus shower and changing facilities. The illustrative plans for plot D do not show a basement to provide further car and cycle parking. Cycle parking may be provided at ground level in a secure space in combination with shower and changing facilities. All parking facilities for future phases of development will be reviewed and developed at future design stages and described in subsequent planning applications.

Please refer to the Transport Assessment for full details of parking and traffic movement relating to the proposals contained in this application.

#### 10.5 Servicing, waste management and collection

A combined goods receiving area and refuse storage space is provided at ground level in Office A and is accessed from Edmund Street via secure doors. The goods receiving and refuse store is connected internally to the goods lift. Servicing for the retail units on the northern side of the plan will be serviced using the building's goods handling area, which is shared with building staff and tenants. The retail unit to the southern side of the plan, facing on to Bixteth Walk, will be serviced from Edmund Street, from which goods can be moved manually at street level to the unit entrances on The Gardens or on Bixteth Street.

The illustrative scheme for the plot B hotel provides servicing access on Pall Mall, where a service vehicle parking bay is included on-street within close proximity to the building's goods handling and refuse storage area at ground level, which is directly accessed off Pall Mall. The illustrative office plans for plots C and D show service access on Pall Mall and Lumber Street, respectively, where goods handling and refuse storage areas can be provided with access directly on to the street. It is intended for service vehicles to park on street whilst making deliveries and collections. The pavilion site on plot E will require minimal servicing and can receive deliveries transported manually from a drop-off area on Edmund Street. No servicing provisions will obstruct accessible routes.

*PLEASE NOTE: The following sections apply to Office A only. Accessibility, security and servicing details for other buildings on plots B, C, D and the pavilion on plot E will be developed in future work stages and described in subsequent planning applications*

#### 10.6 Internal circulation

All floors are served by 5no. lifts, one of which is a combined fire-fighting, goods and passenger lift. All lifts are accessed from the ground floor entrance hall and adjacent lift lobby via security gates. The design of all lifts will meet best practice standards for accessibility. Two lifts also serve the basement. Two stairs serve all the upper levels of the building, whilst one stair, which forms part of the fire-fighting shaft, extends to basement level to provide secure access to office floors for staff and occupiers entering the building via the cycle storage and shower facilities or car park. The entrance hall, basement and upper levels are all step-free and doors and corridors will be designed to facilitate ease of movement for ambulant disabled people and wheelchair users.

All doors and corridors will be designed to standards facilitating easy movement for wheelchair users. Stairs and ramps within the building will be designed to comply with Approved Document Part M of the Building Regulations. Doors on circulation routes will be either on hold-open devices or designed with minimum opening force acceptable to the Building Control body. All doors on wheelchair routes will have 300mm offsets on the pull side and all doors will be designed to comply with Part M of the Building Regulations.

#### 10.7 Toilets

At ground level, a unisex wheelchair accessible WC is provided for use by all building users. Eight WC's are provided in the basement, split between the male and female shower and changing facilities, which both

include fully accessible combined WC and shower rooms. Separate male and female WC facilities and a unisex accessible WC are provided at each office floor level and are accessed from the lift lobbies. The details of all fittings and fixtures will comply with Approved Document Part M.

#### 10.8 Roof terraces

The roof terraces at seventh floor level will be designed to be accessible to all building users. Fittings to doors providing access to the terraces will be designed to comply with relevant legislation, standards and best practice at the appropriate work stage.

#### 10.9 Emergency evacuation

There are two escape stairs serving all levels of the building at and above ground floor escape level. The final exit route for both stairs is provided via a wide protected corridor at ground level, on which both stairs converge, discharging onto Edmund Street. The basement is served by one escape stair which provides an escape route via the ground floor escape corridor and has a secondary escape route via the vehicular and cycle ramp, discharging onto Bixteth Street.

The building core contains a single fire-fighting shaft, comprising a fire-fighting stair, lobbies, dry riser and fire-fighting lift, which is combined to serve as a goods and passenger lift during normal operational hours. Fire-fighting personnel will have access to the building in the event of an emergency via the ground level escape corridor opening onto Edmund Street and via the main entrance lobby on Bixteth Street.

The escape route provides a safe refuge point at each level above ground from which wheelchair users will be able to contact the fire control room via a two-way communication point. Signage and wayfinding will be designed to current recommended standards in order to be readable by all (including people with disabilities and speakers of different languages). Lift alarms, WC

alarms and emergency evacuation procedures will be easy to use and clearly signed. Details of such fittings and systems will be provided at the appropriate work stage.

#### **10.10 Facade cleaning and maintenance**

The proposals for Office A have integrated measures to allow access for cleaning facades via abseil from roof level. Access for cleaning and maintenance of the roof plant and its enclosure is provided via the building core, from which the roof can be safely accessed. Glass and façade components can be replaced externally with the use of a MEWP, crane or, if necessary, a scaffold. Hand standing around the building is sufficient to position such equipment. Full details of the façade cleaning and maintenance strategy will be developed at the appropriate work stage in consultation with an access consultant and/or contractor.

#### **10.11 Security**

In June 2019 the proposals contained in this document were discussed with the Merseyside Police Architectural Liaison Officer in order to establish the impact of potential security and anti-social behaviour upon the design of the building. The following points have been discussed to date:

- Management and security presence in the public realm
- Management and security presence in each of the proposed building plots
- External lighting and maintenance of trees/ planting to prevent blind spots in the public realm
- Measures to prevent antisocial behaviour within the landscape
- Measures to prevent antisocial behaviour within the curtilage of Office A
- Security measures for controlling access to the Office A basement car park

The overall strategy for security across the site based upon the principal that the site will be accessible for all members of the public, it will be privately managed in order to ensure that it remains safe to use and well maintained. External lighting will be integrated into the landscaping proposals, as well as individual buildings, to ensure legibility and safety. The landscape will be carefully maintained and managed to ensure that no trees become overgrown to the extent that they provide concealed spaces which might encourage antisocial behaviour.

The envelope design of Office A has been developed with consideration to security, with the dimension between the column face and the glass line being slightly reduced in recent design iterations to prevent hiding places within the facade line at ground level. The entrance to the basement car park in Office A will be provided via a secure access for use only by building staff and visitors. Access to the core at basement level will be via a secure key card system or similar. Details of CCTV systems, where required, will be developed at the appropriate work stage and integrated discretely into the design of buildings and the public realm. The reception areas for both Office A and in the illustrative plans for building plots B, C and D are positioned to ensure that building entrances can be monitored by staff. A 24 hour security presence will be maintained in each of the buildings plots.



# 11

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## SUSTAINABILITY AND ENERGY STATEMENT

Ernest Griffiths  
consulting engineers









### **Environment Impact Assessment Screening**

An Environment Impact Assessment screening process has been carried out, as recommended by Liverpool City Council, which has demonstrated that a full assessment is not required to accompany this submission. Specific reports have been produced as part of this process and are included in this application in support of the drawings and associated documents. These include:

- Daylight Sunlight Assessment
- Heritage Statement
- Landscape and Townscape Visual Impact Assessment
- Statement of Community Engagement
- Wind Microclimate Assessment
- Drainage Strategy
- Flood Risk Assessment
- Transport Assessment

### **Sustainability summary**

Office A and the associated public realm are being designed to achieve high standards of sustainability performance as assessed by the Building Research Establishment Environmental Assessment Methodology (BREEAM) New Construction Scheme, in relation to the office (B1) element of Office A. The scheme is being developed to target a rating of BREEAM Excellent and is being periodically assessed throughout the design process, in consultation with a sustainability consultant. Please refer to the Energy Statement for further detail on some of the features and strategies employed to date in order to ensure the proposals meet sustainability goals established to date.



# **PALL MALL DEVELOPMENT, LIVERPOOL**

## **PLOT A**

### **ENERGY STATEMENT**

#### **1.0 GENERAL**

A new building is to be constructed with a floor area of approximately 14,500 m<sup>2</sup>.

There is to be:

- A Basement with facilities of bicycle storage, showering and toilet accommodation, and with a limited number of car parking spaces.
- A main entrance at Ground Floor level.
- Retail accommodation, also at Ground Floor level.
- Seven storeys of office accommodation above the Ground Floor.
- Mechanical and electrical plantrooms at Roof level.

The office accommodation is to be developed generally to British Council of Offices Specification 2014. It is to be air-conditioned using either a 4-pipe fan-coil system or a similar VRF air-conditioning system. Toilet and showing facilities in the Basement are to be heated and ventilated. The Basement car park is to be mechanically ventilated.

The retail units at Ground Floor level are to be constructed as shells and are to be fitted out by their respective tenants. They do not form part of the present analysis.

#### **2.0 ENERGY SOURCES**

The principal sources of energy are to be grid electricity and natural gas

#### **3.0 ENERGY MODELLING**

The building has been, and will continue to be, modelled using dynamic simulation software. These tools will be used to evaluate the thermal performance of the building and of the building services systems which are to serve it. An image of the Model is shown in Appendix 1

## 4.0 OBJECTIVES

### 4.1 General

The objective of the design team is to develop a building with an EPC Asset Rating in Band 'A' and with BREEAM Excellent credentials.

Analysis at this stage of design development would indicate that these objective can be achieved by adopting the following strategies:

- Designing ductwork in an aerodynamic manner to reduce the energy losses associated with distributing air into and out of the building.
- Lighting the building with low energy LED light sources and providing daylight saving and user-operated controls; to allow the interior lighting system to adapt both to the needs of the user and to prevailing daylight conditions.
- Choosing energy efficient plant.
- Reducing heat loss by way of air-tight and thermally-insulated construction.
- Reducing heat gains by using high-performance solar glazing and providing natural shade and sun protection by way of reveals in the glazing/ façade design. Present analysis indicates that the façade design satisfies the solar overheating compliance requirements as specified in Part L2A of the Building Regulations.

### 4.2 Results of analysis at RIBA Stage 2

#### 4.2.1 Initial Energy Performance Certificate

This has been reproduced in Appendix 1 where an Asset Rating of 20 has been achieved and is therefore within the Band 'A' objective.

It is based on the building being air-conditioned by way of a 4-pipe fan-coil system. VRF systems yield similar results.

The annual energy flows (in kWh/m<sup>2</sup>) and carbon emissions (in kg CO<sub>2</sub>/m<sup>2</sup>) under standard modelling conditions are given in the corresponding block diagrams.

## 5.0 APPENDIX 1

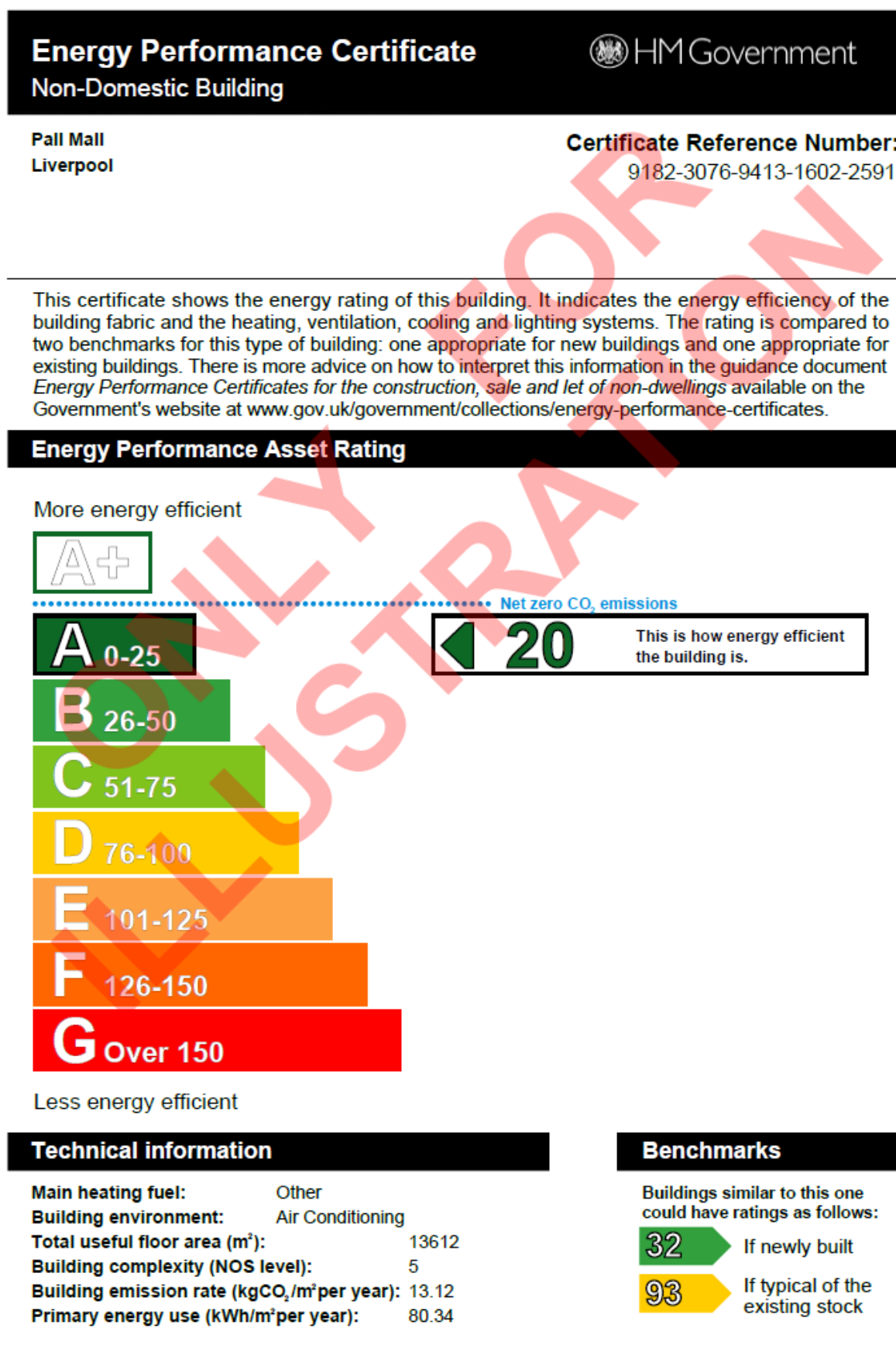
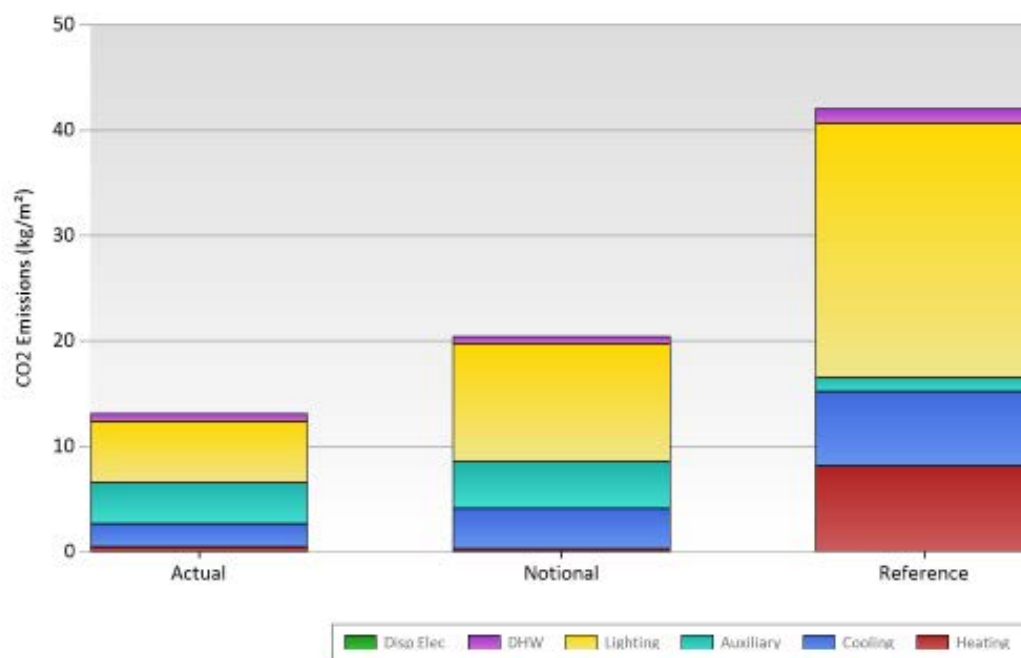


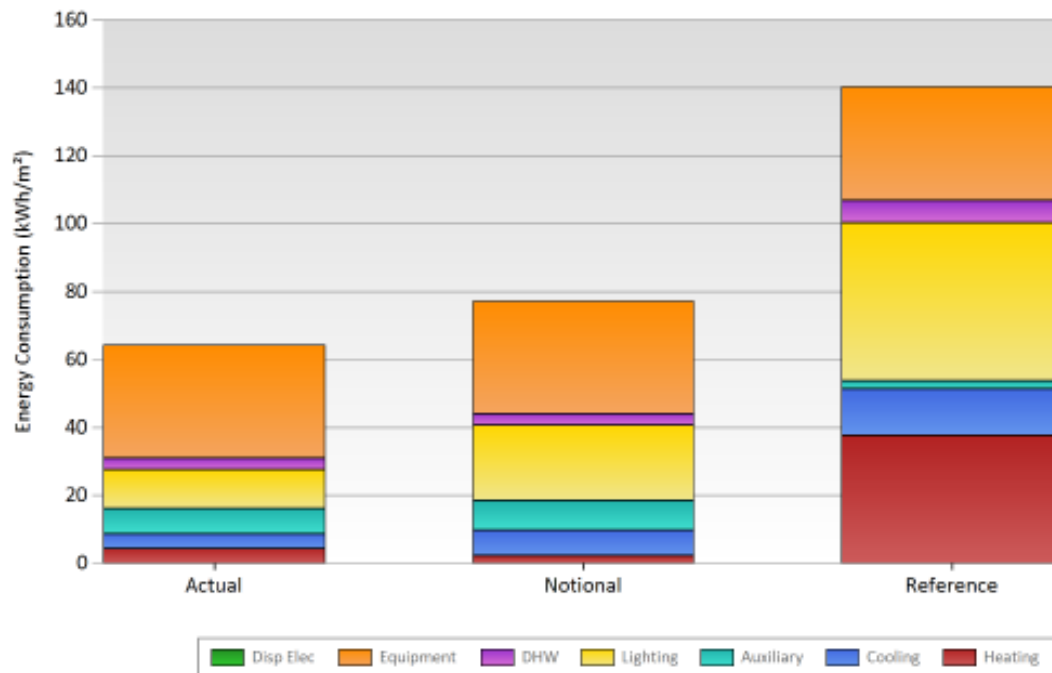
Figure 1 - As-Designed EPC for Current Stage of Design Process



	<i>Actual</i>	<i>Notional</i>	<i>Reference</i>
Heating (kgCO <sub>2</sub> /m <sup>2</sup> )	0.47	0.27	8.15
Cooling (kgCO <sub>2</sub> /m <sup>2</sup> )	2.20	3.81	7.04
Auxiliary (kgCO <sub>2</sub> /m <sup>2</sup> )	3.88	4.46	1.35
Lighting (kgCO <sub>2</sub> /m <sup>2</sup> )	5.82	11.19	24.15
DHW (kgCO <sub>2</sub> /m <sup>2</sup> )	0.75	0.70	1.42
Displaced Electricity (kgCO <sub>2</sub> /m <sup>2</sup> )	0.00	0.00	0.00
Equipment (kgCO <sub>2</sub> /m <sup>2</sup> ) *	17.13	16.87	17.30
<b>Total (kgCO<sub>2</sub>/m<sup>2</sup>)</b>	<b>13.12</b>	<b>20.43</b>	<b>42.11</b>
<b>Total Floor Area (m<sup>2</sup>)</b>	<b>13612.00</b>	<b>13612.00</b>	<b>13612.00</b>

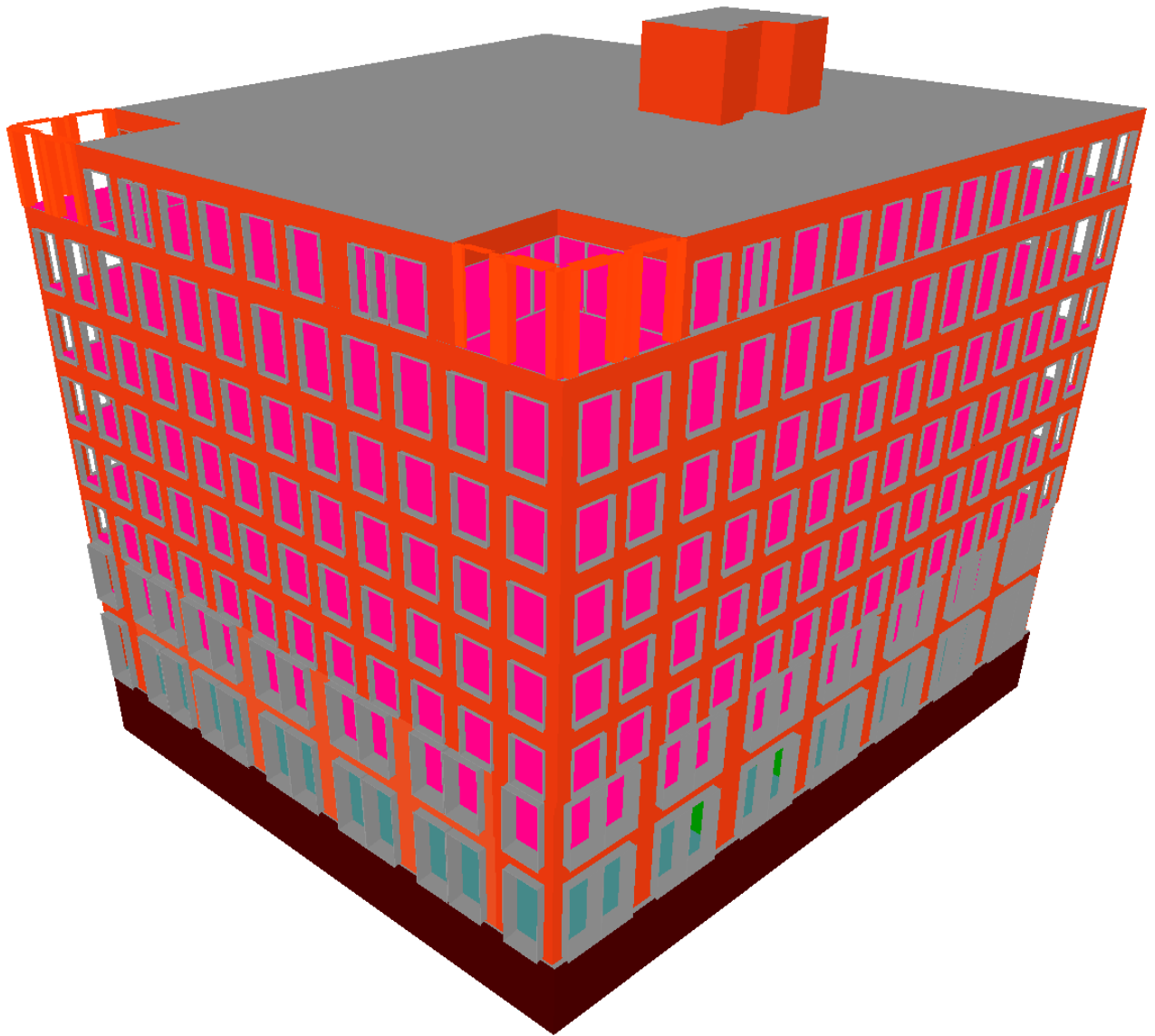
\* Energy used by equipment does not contribute to total value - it is presented here for comparison only

Figure 2 – CO<sub>2</sub> Diagram Showing a Comparison between the Actual, the Notional and Reference Buildings during the Part L Analysis.



	<i>Actual</i>	<i>Notional</i>	<i>Reference</i>
Heating (kWh/m²)	4.37	2.26	37.73
Cooling (kWh/m²)	4.29	7.53	13.57
Auxiliary (kWh/m²)	7.55	8.81	2.59
Lighting (kWh/m²)	11.33	22.11	46.54
DHW (kWh/m²)	3.47	3.25	6.57
Equipment (kWh/m²)	33.33	33.33	33.33
Displaced Electricity (kWh/m²)	0.00	0.00	0.00
<b>Total (kWh/m²)</b>	<b>64.34</b>	<b>77.30</b>	<b>140.33</b>
Total Floor Area (m²)	13612.00	13612.00	13612.00

**Figure 3 –Energy Block Diagram Showing a Comparison between the Actual, the Notional and Reference Buildings during the Part L Analysis.**



**Figure 4 – The 3D Thermal Model produced in the Dynamic Simulation Software showing the current Architectural design.**



# 12

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APPLICATION DATA





## 12.1 SUMMARY OF AREAS

Office A gross areas

LEVEL	USE	GEA (m <sup>2</sup> )	GEA (ft <sup>2</sup> )
<b>Basement</b>	Parking/ plant/ showers, changing and lockers	1,687	18,159
<b>Ground</b>	Retail and office ancillary	1,629	17,534
<b>1</b>	Office	1,629	17,534
<b>2</b>	Office	1,711	18,417
<b>3</b>	Office	1,711	18,417
<b>4</b>	Office	1,711	18,417
<b>5</b>	Office	1,711	18,417
<b>6</b>	Office	1,711	18,417
<b>7</b>	Office	1,665	17,922
<b>8</b>	Plant	619	6,663
<b>TOTAL</b> (including basement and roof plant)		<b>15,784</b>	<b>169,897</b>

Outline application building plots gross areas

BUILDING PLOT	USE	GEA (m <sup>2</sup> )	GEA (ft <sup>2</sup> )
<b>Plot B</b>	Hotel	27,260	293,424
<b>Plot C</b>	Office and retail	29,345	315,867
<b>Plot D</b>	Office and retail	14,355	154,516
<b>Plot E</b>	Retail/ cafe/ bar	270	2,906
<b>TOTAL</b> (including basement and roof plant)		<b>71,230</b>	<b>766,713</b>



## 12.2 SCHEDULE OF APPLICATION DRAWINGS

### Architectural drawings for Office A and associated public realm (Detailed application)

DRAWING NUMBER	DRAWING TITLE	SCALE	SIZE	REVISION
16161_07_001	Site location plan	1:1250	A1	P1
16161_07_020	Site elevations: Pall Mall and Bixteth Street, Existing	1:500	A1	P1
16161_07_030	Site sections: A and B, Existing	1:500	A1	P1
16161_07_031	Site sections: C and D, Existing	1:500	A1	P1
16161_07_A_001	Application boundary, detailed application	1:500	A1	P1
16161_07_A_099	Block A office, basement plan	1:100	A1	P1
16161_07_A_100	Block A office, ground floor plan	1:100	A1	P1
16161_07_A_101	Block A office, first floor plan	1:100	A1	P1
16161_07_A_102	Block A office, typical floor plan	1:100	A1	P1
16161_07_A_107	Block A office, seventh floor plan	1:100	A1	P1
16161_07_A_108	Block A office, plant level plan	1:100	A1	P1
16161_07_A_109	Block A office, roof level plan	1:100	A1	P1
16161_07_A_120	Block A office, elevation: Bixteth Street	1:100	A1	P1
16161_07_A_121	Block A office, elevation: The Gardens	1:100	A1	P1
16161_07_A_122	Block A office, elevation: Bixteth Walk	1:100	A1	P1
16161_07_A_123	Block A office, elevation: Edmund Street	1:100	A1	P1
16161_07_A_125	Block A office, elevation: Bixteth Street context	1:200	A1	P1
16161_07_A_126	Block A office, elevation: The Gardens context	1:200	A1	P1
16161_07_A_127	Block A office, elevation: Bixteth Walk context	1:200	A1	P1
16161_07_A_130	Block A office section AA	1:100	A1	P1
16161_07_A_131	Block A office section BB	1:100	A1	P1
16161_07_A_400	Block A office, bay study: Bixteth Street entrance	1:50	A1	P1
16161_07_A_401	Block A office, bay study: Upper levels	1:50	A1	P1
16161_07_A_402	Block A office, bay study: Terrace	1:50	A1	P1
16161_07_A_403	Block A office, bay study: Retail frontage	1:50	A1	P1
16161_07_A_404	Block A office, bay study: The Gardens entrance	1:50	A1	P1
16161_07_A_405	Block A office, bay study: Service entrance	1:50	A1	P1

### Architectural drawings for the masterplan parameters (Outline application)

DRAWING NUMBER	DRAWING TITLE	SCALE	SIZE	REVISION
16161_07_P_001	Parameter plan 1: Planning application boundaries	1:500	A1	P1
16161_07_P_002	Parameter plan 2: Demolition	1:500	A1	P1
16161_07_P_003	Parameter plan 3: Building plot parameters	1:500	A1	P1
16161_07_P_004	Parameter plan 4: Public realm	1:500	A1	P1
16161_07_P_005	Parameter plan 5: Vehicle and pedestrian access routes	1:500	A1	P1
16161_07_P_006	Parameter plan 6: Ground floor uses	1:500	A1	P1
16161_07_P_007	Parameter plan 7: Upper floor uses	1:500	A1	P1
16161_07_P_008	Parameter plan 8: Building plot height parameters	1:500	A1	P1
16161_07_P_009	Parameter elevations 1	1:500	A1	P1
16161_07_P_010	Parameter elevations 2	1:500	A1	P1

### Landscape drawings for both Detailed and Outline applications

DRAWING NUMBER	DRAWING TITLE	SCALE	SIZE	REVISION
RFM-XX-00-DR-L-0001	Illustrative Landscape Masterplan for Outline Application	1:250	A1	PL01
RFM-XX-00-DR-L-0002	Illustrative Landscape Masterplan	1:250	A1	PL01
RFM-XX-00-DR-L-0003	Planting Strategy	1:200	A1	PL01
RFM-XX-00-DR-L-0004	Levels Plan	1:250	A1	PL01
RFM-XX-00-DR-L-0005	Landscape Sections	1:200	A1	PL01



## 12.3 PROJECT TEAM

<b>Allies and Morrison</b>	Architects
<b>Re-form landscape architecture</b>	Landscape architects
<b>Indigo</b>	Planning consultants
<b>Curtins</b>	Structural and civil Engineers
<b>Ernest Griffiths</b>	Services Engineers
<b>Sweco</b>	Transport Engineers
<b>Olsson Fire &amp; Risk</b>	Fire Engineers
<b>John Hinchcliffe Heritage</b>	Heritage consultant
<b>Planit-ie</b>	Visualisation consultants
<b>E3 Cube</b>	Access consultants
<b>UK Networks</b>	Public consultations
<b>Devla Patman Redler</b>	Daylight/ sunlight consultants
<b>BMT</b>	Wind microclimate consultants
<b>MRB</b>	Sustainability consultants







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