Harrods Wharf

6 Somerville Avenue Barnes London SW13 8AD

DESIGN AND ACCESS STATEMENT 1178 Doc 001_Rev E 22.01.21

JAMIE WALLER

Lifschutz Davidson Sandilands

Architects Design consultants Urban planners

executive summary

This document has been prepared by Lifschutz Davidson Sandilands and forms part of the application submitted on behalf of Jamie Waller for the redevelopment proposals on the wharf site adjacent to the Thames and the Grade II listed Harrods Furniture Depository building in the London Borough of Richmond upon Thames.

The purpose of this document is to summarise the analysis, design development and concepts that have been applied to the proposals. In addition, to illustrate how accessibility to the development has been addressed.

This Design and Access statement should be read in conjunction with the following supporting material submitted with this application:

- Application forms
- Site location plan and the application drawings
- Planning statement
- Green and brown roof report
- Foundation assessment
- Lighting strategy
- Energy statement
- Sustainable Construction checklist
- Tree Survey and Arboricultural Impact Assessment
- Flood Risk Assessment (FRA) and Sustainable Drainage Systems
- Preliminary Ecological Appraisal
- Acoustic Assessment
- Transport statement





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Introduction

The purpose of this document is to review the opportunities and constraints of the wharf site adjacent to the Thames and the Grade II listed Harrods Furniture Depository building in the London Borough of Richmond upon Thames.

Due to the closure of the Grade II listed Hammersmith Bridge, the site has been identified as a potential location from which to run a ferry service to allow people to cross the river north/south to travel to work or school. The bridge closure is causing notable disruption to the lives of local residents and so their is significant community need for the proposed development.

The proposals have been designed so that they can be constructed quickly, in order to support the ferry operations and the significant number of people expected to use the service, some facilities will be required on the wharf site such as WCs, ticket office, staff facilities and fuel storage, as well as a covered area for people to queue for the service and maintain social distancing. Infrastructure improvements such as lighting, will also be required to the footpaths along the access to the site for security.

This initial study reviews how the facilities could be arranged and constructed quickly, in order to deliver an operational ferry terminal for local people as soon as possible.

The Port of London Authority (PLA) is in discussions with 3 ferry companies and will select one to operate the site. The jetty will form part of a separate application.

The design team have seen the various ferry operators proposals and have arranged the proposed structures on the site to work with either of the options.



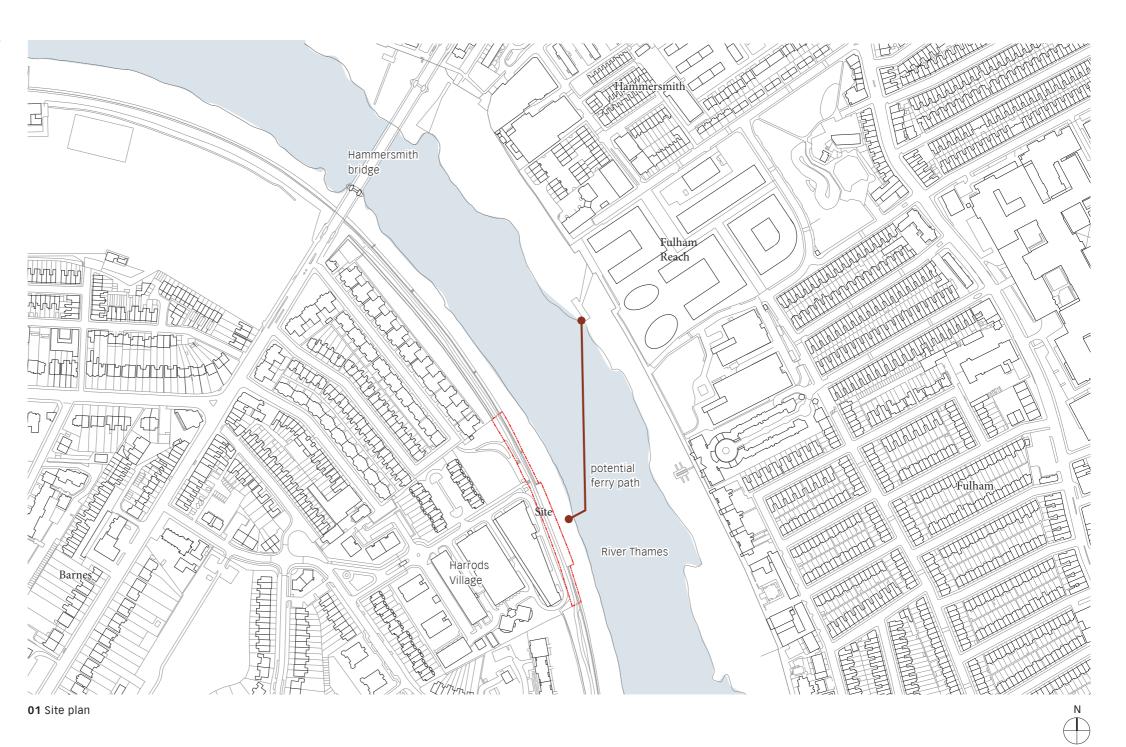
image source: shutterstock

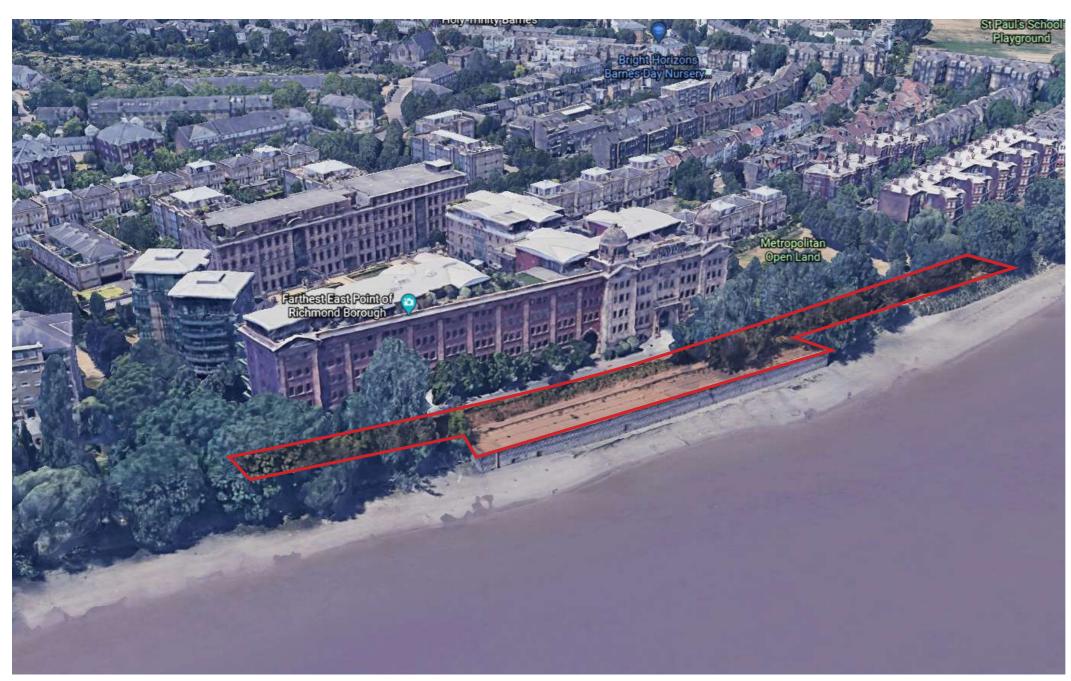


site analysis

Site location and development context

The wharf occupies a prominent riverside location to the south of Hammersmith bridge. The site is bound by the river Thames and the Thames footpath which runs in front of the existing Grade II listed Harrods furniture depository building which was converted into residential accommodation as part of the Harrods Village development in 2000.





02 Aerial view of site looking west

Thames footpath

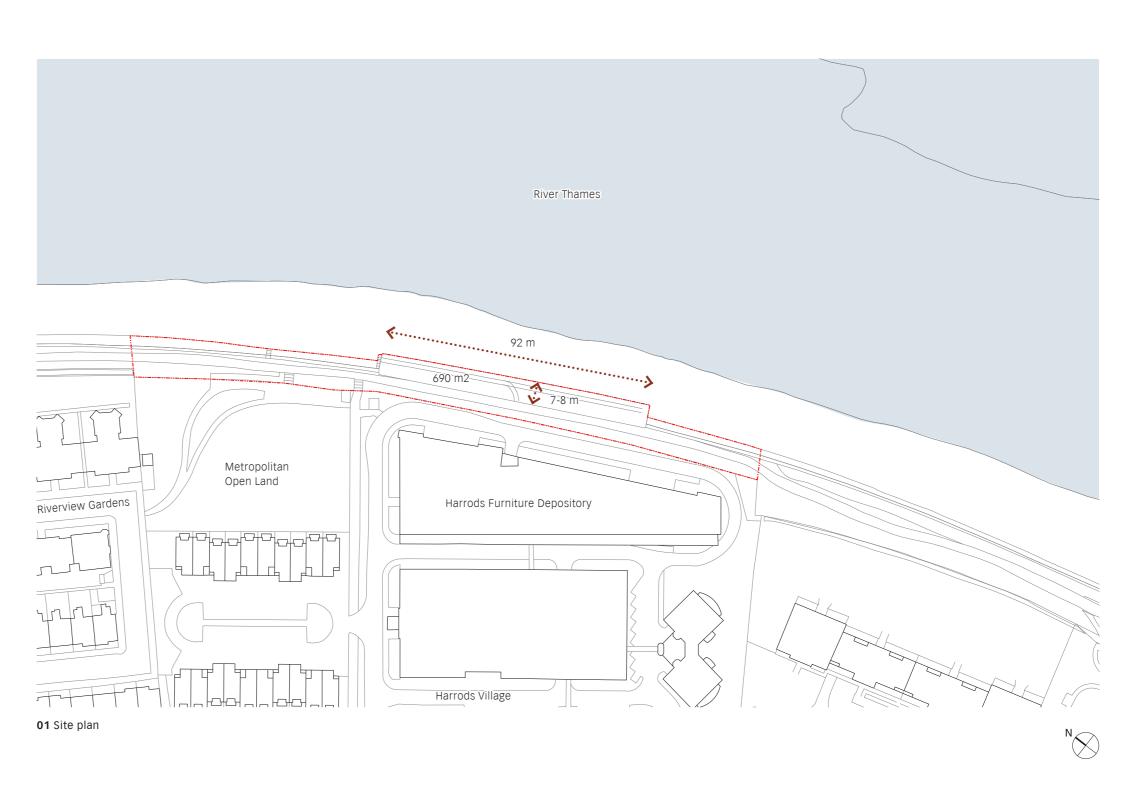
The Thames footpath runs through the site connecting the WWT London Wetland Centre to the Metropolitan Open Land park to the north. The site contains a number of existing trees and provides views across the river

key:

site extent

Existing site

The existing wharf is approximately 92m in length and between 7-8m deep giving an existing wharf area of 690 sqm.



nen kun eks enn iki kui

The local context

The site is comprised of a strip of land along the river Thames bound to the west by Harrods Furniture Depository and the existing Thames footpath. The site is in a prominent location and is seen from across the river in the LB of Hammersmith and Fulham.

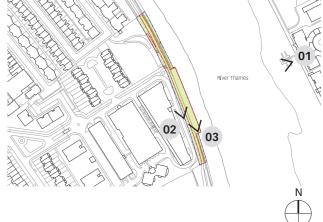
01 view from Hammersmith looking west across Thames



02 Thames footpath looking North

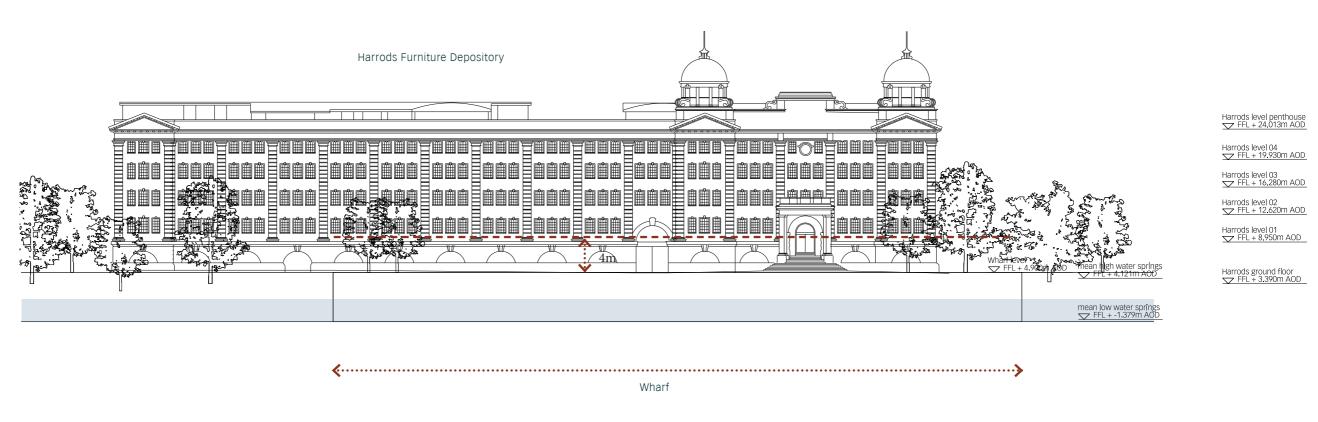


03 Land fronting Harrods Furniture Depository looking north

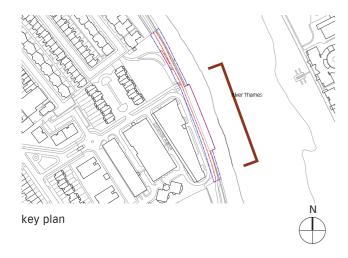


Existing elevation

The residential accommodation in the Depository Building starts at first floor level, with car parking and ancillary uses at ground floor.



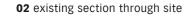
02 existing elevation of site



residential Harrods level penthouse FFL + 24.013m AOD residential residential Harrods level 03 FFL + 16,280m AOD residential residential Harrods level 01 FFL + 8,950m AOD car park / ancillary space mean high water springs FFL + 4,121m AOD Harrods ground floor → FFL + 3.390m AOD mean low water springs FFL + -1.379m AOD 7m 2.5m 15m Thames Wharf tow path residential frontage residential building

Existing site section

The existing wharf is separated from the residential building to the west by a 2.5m footpath as well as a 15m zone to the front of Harrods Furniture Depository. The residential building has a car park/ancillary space to the lower level.





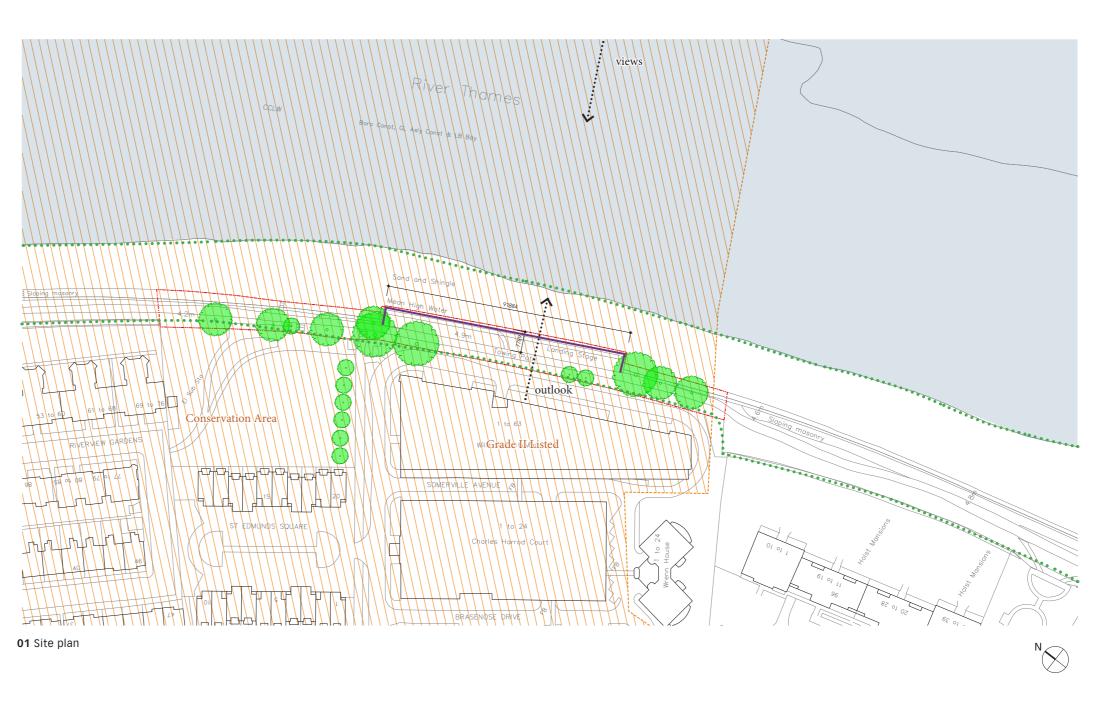
local context

Conservation areas and listed buildings

The site is within Metropolitan Open Land (MOL) as well as an Other Site of Natural Importance, it is located in the Castlenau Conservation Area, and the Thames Policy Area (for both the Mayor of London and the Local Authority). It lies within the flood zone and the Harrods Depository building is Grade II listed. The site is also within a locally designated view from Poet's Corner in Richmond Park.

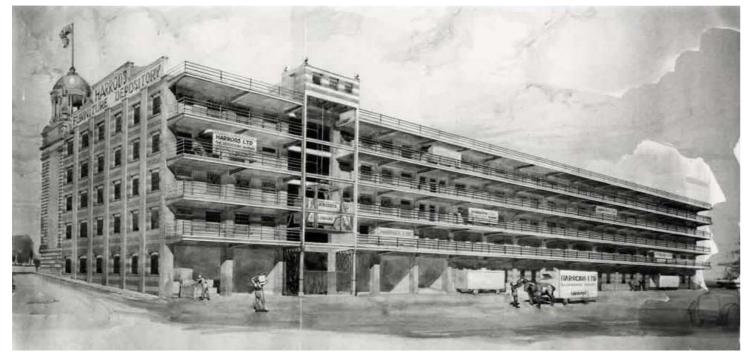
There are no tree preservation orders (TPOs) on the site, however as the site is within a conservation area any pruning or removal of trees will be subject to a notification application to the council.







01 Historic image from Hammersmith looking west across Thames, 1921



03 Historic image showing shipping containers in storage and being moved around with horses, 1921.

source: Historic England



02 detail showing crates on the jetty, 1921



04 Historic image showing shipping containers on site, 1921.

Historical images

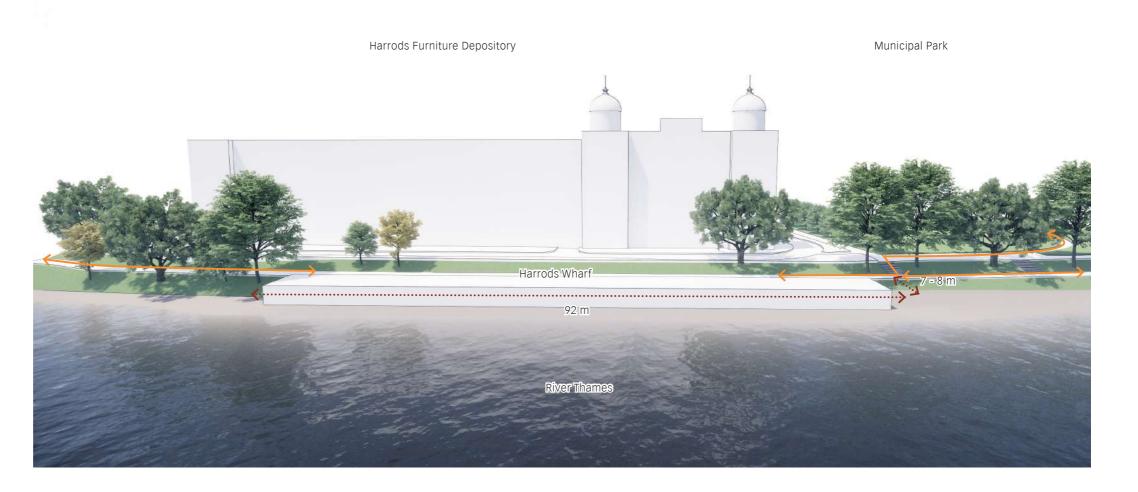
Historically, the wharf was used to store furniture shipments awaiting delivery to Harrods clients or the store itself. The images below show a crane on the wharf and shipping containers being

site access

Existing site access

The existing wharf is currently inaccessible to the public and is secured with high metal railings. The primary access route to the site will be from Castelnau to the north via the Thames footpath or through the Metropolitan Open Land.

The route through the Metropolitan Open Land contains an existing accessible ramp however this area along with the footpath is poorly light.



Site Area:

690 Sq.m







01 Stair and ramp access from the park and Harrods Village.

02 Photo looking west along river path adjacent to the site.

03 Photo from within the site looking west.

02 design principles

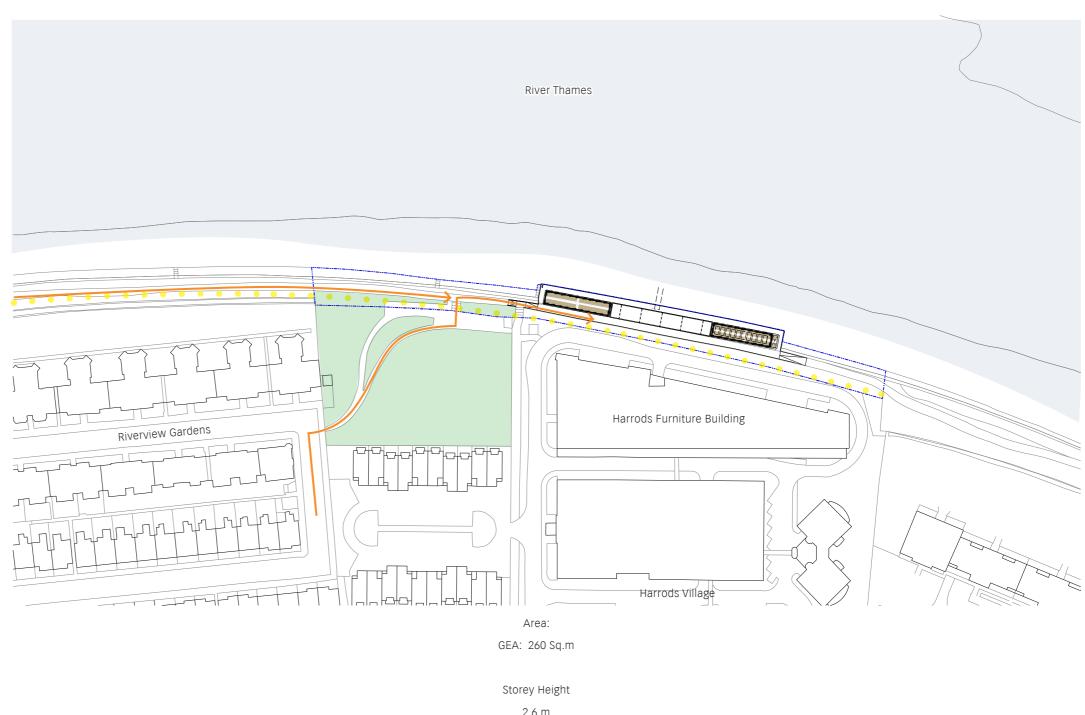
massing

Massing development

The proposed plan suggests two single storey pavilions connected by a covered area to be used for queuing and cycle storage.

One pavilion will house a ticket office for ferry passengers as well as staff back of house and storage area. The other pavilion will house a cafe/kiosk and WC's.

The jetty design does not form part of this application

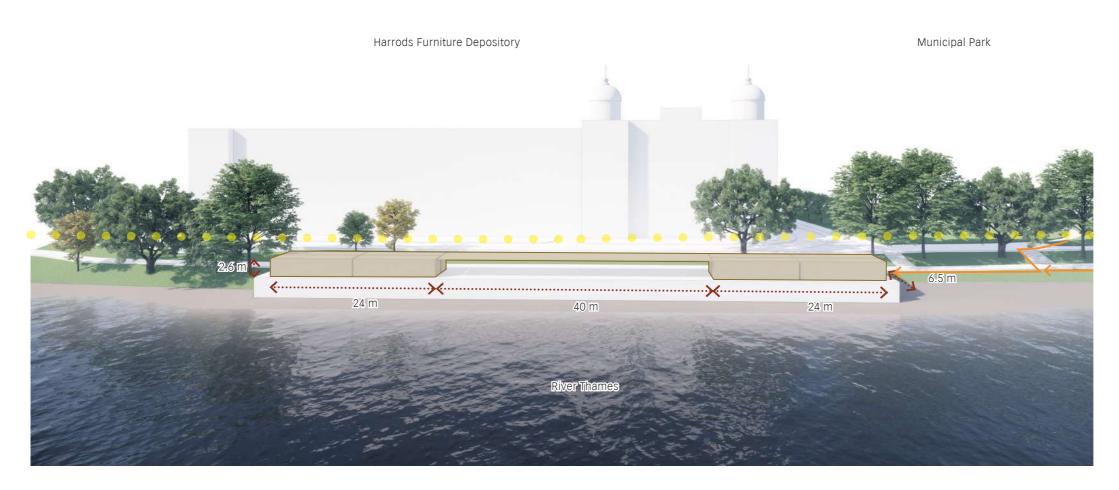




2.6 m

Massing proposal

This image illustrates the massing of the proposals when viewed from the river. The massing comprises two pavilion buildings connected by a covered waiting area.



Area:

GEA: ~ 260 Sq.m

Storey Height



use, amount, layout, scale

Use and amount

use: the site will be used as a ferry port, including ticket office, staff lounge, storage, cafe and WC's

amount: the existing area is 0 sqm as there is currently no development on the site

the proposed (GIA) areas are:

ticket office - 22 sqm

staff lounge - 43 sqm

storage - 34 sqm

cafe/kiosk - 8 sqm

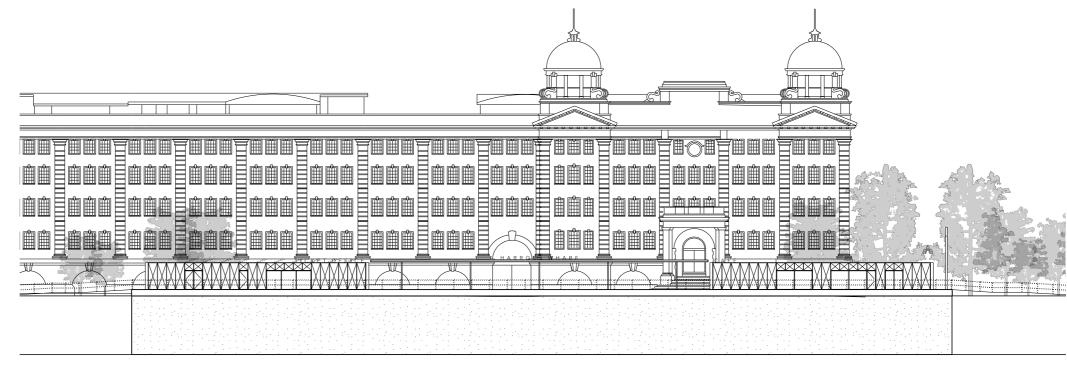
waiting area - 70 sqm

WC's- 29 sqm

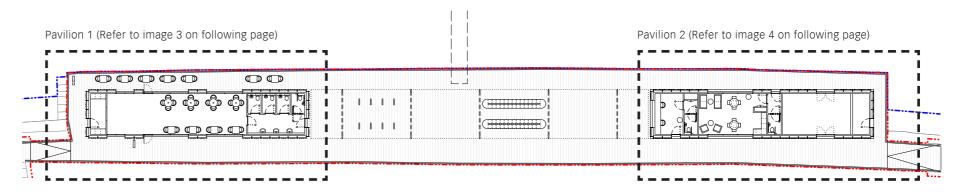
total proposed area:

GEA - 276 sqm

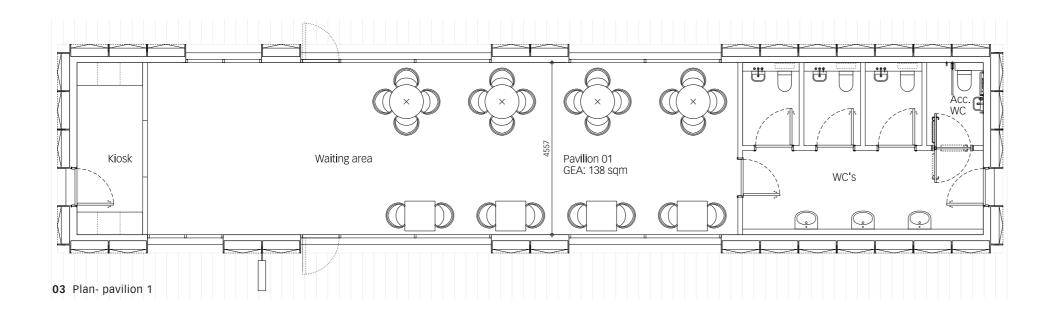
GIA - 218 sqm

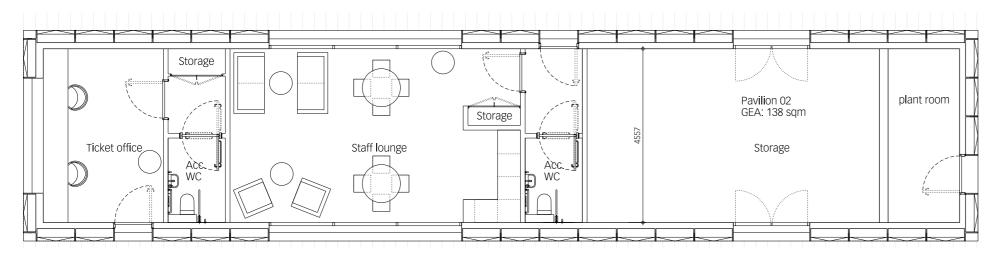


01 East elevation



02 Plan - general arrangement





04 Plan- pavilion 2

Layout and scale

Layout: It is envisaged that the jetty will be accessed centrally, the cafe/kiosk is located to provide natural surveillance to the surrounding site and waiting area, the ticket office is clearly visible from the jetty and waiting area.

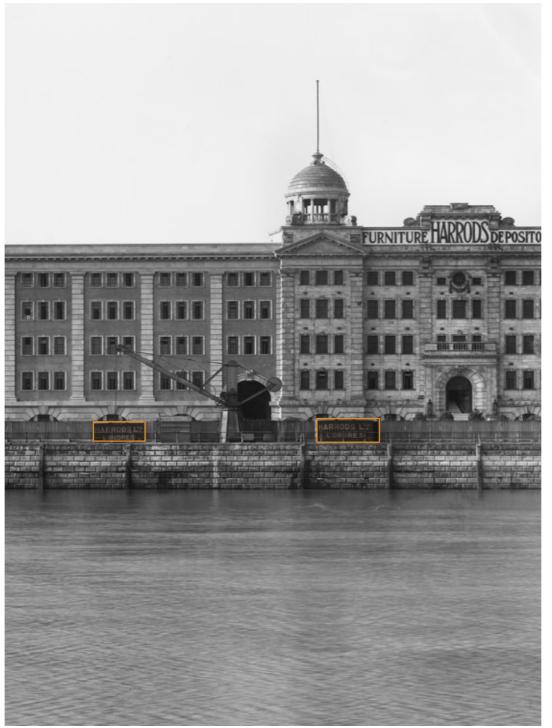
Scale: The building is 3720mm tall including a 700mm decking zone above the existing wharf level, the pavilions are one storey with a covered waiting area with a top height of 4020mm above the existing wharf level.

03 external appearance

container architecture - precedents

Modular architecture, such as repurposed shipping containers, were explored as an efficient way to construct the pavilions. It is unlikely that shipping containers will be used, as they may not meet the energy requirements, but the size and shape of a shipping container is ideal as it allows for transportation to site by the River.

The wharf itself had previously been used to store containers for the furniture depository which are highlighted in image 01.



01 image showing Harrods Wharf storing containers, 1921 (Historic England)



02 Cargo, Alec French Architects. Bristol, UK



03 Cargo, Alec French Architects. Bristol, UK



04 POP Brixton, Turner Works. London, UK



06 POP Brixton, Turner Works. London, UK



08 Wahaca Southbank, Softroom. London, UK



05 Amagansett Modular, MB Architecture. New York, US



07 Amagansett Modular, MB Architecture. New York, US



09 Barneveld Noord station, NL Architects. Barneveld, Netherlands

external appearance

Pavilions

The building is designed to be constructed quickly from pre-fabricated parts, to allow it to serve the community need as quickly as possible.

The pavilions are clad in lightweight, back lit panels, which glow at night.



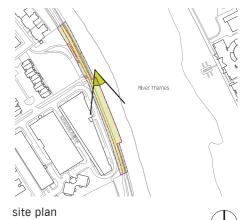


 ${f 01}$ View of the proposals looking west across river



Harrods Wharf

Single height pavilion buildings fronting the river with covered waiting area and cycle storage.

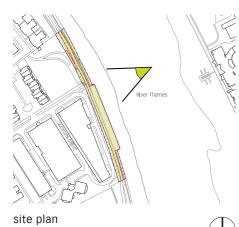


02 View of the proposals looking south from Harrods Wharf

external appearance

Clear signage is to be provided for the wharf through totem signage and lettering at roof level.





 ${f 01}$ View of the proposal looking west across river



The existing handrail is to be replaced to match the existing, but at the required height above the raised deck to provide a suitable balustrade. The railings will be painted white.

Seating will be provided within the covered waiting area.



02 View of the proposal from within waiting area.

external appearance

The cafe/kiosk space will provide passive surveillance to the site and will be easily accessed from the Thames footpath and includes projecting circular signage.





 ${\bf 01}$ View of the proposal from the river path looking into cafe/kiosk.









Sainsburys, Coventry, Lifschutz Davidson Sandilands

Face to Face, London, Lifschutz Davidson Sandilands

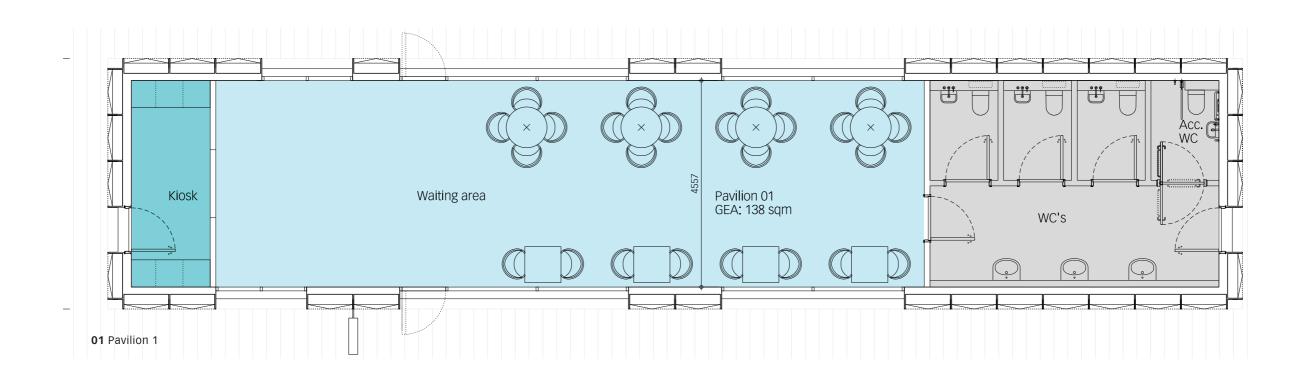
Kunsthaus, Bregenz, Peter Zumthor

Maggies Centre, Merseyside, Carmody Groake

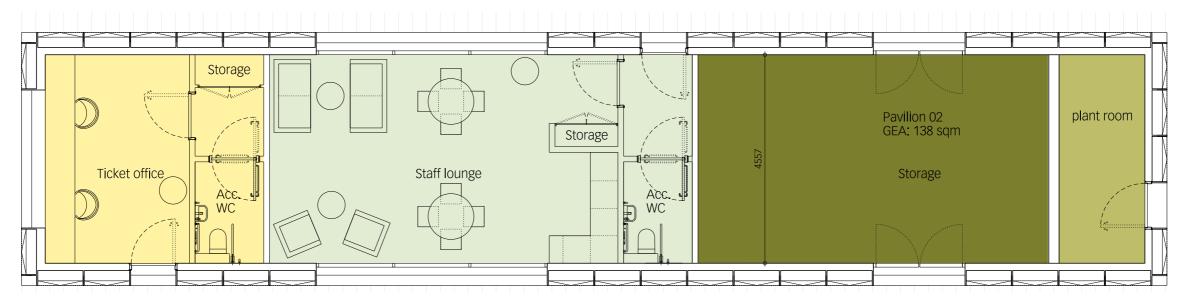
04 building configuration

building organisation

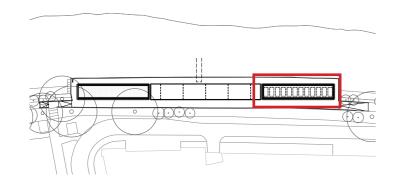
The building configuration is driven by a requirement for a new ferry terminal. The staff lounge, ticket office and storage area directly meet the requirements of the terminal and the additional cafe/kiosk space provides greater activation to the site and improves customer amenities.







02 Pavilion 2





accessibility

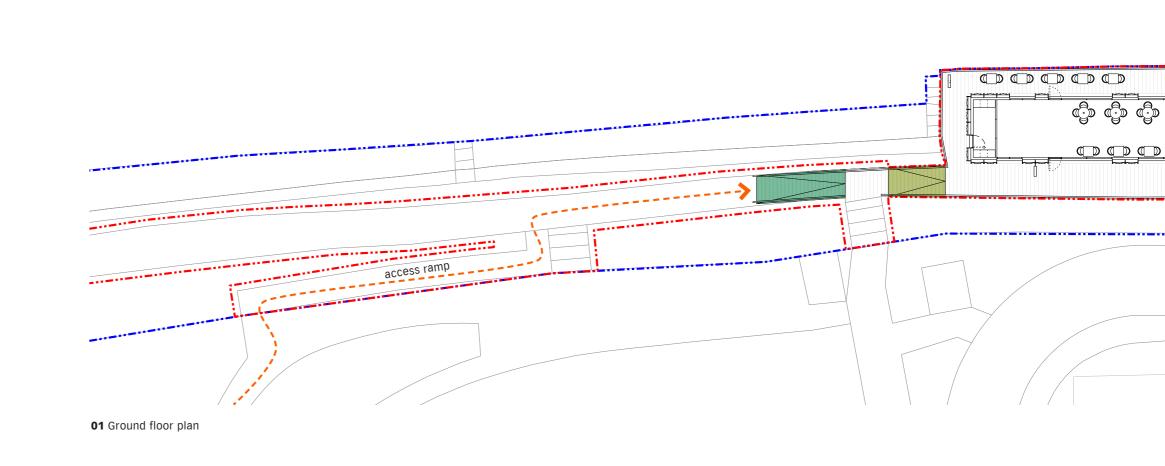
inclusive design

Accessibility

The two proposed pavilions as well as the ferry access point will all have step free access from the proposed wharf decking, the ferry terminal is access via ramps suitable for wheelchair users.

An accessible WC is provided within the cafe/kiosk pavilion as well as further accessible WC's in both the ticket office and staff lounge.

Easily accessible cycle parking is provided in the form of 8 Sheffield stands (16 spaces) under the covered waiting area. Sheffield stands allow for adapted bicycles to be parked.



--> Ac

1:15 ramp

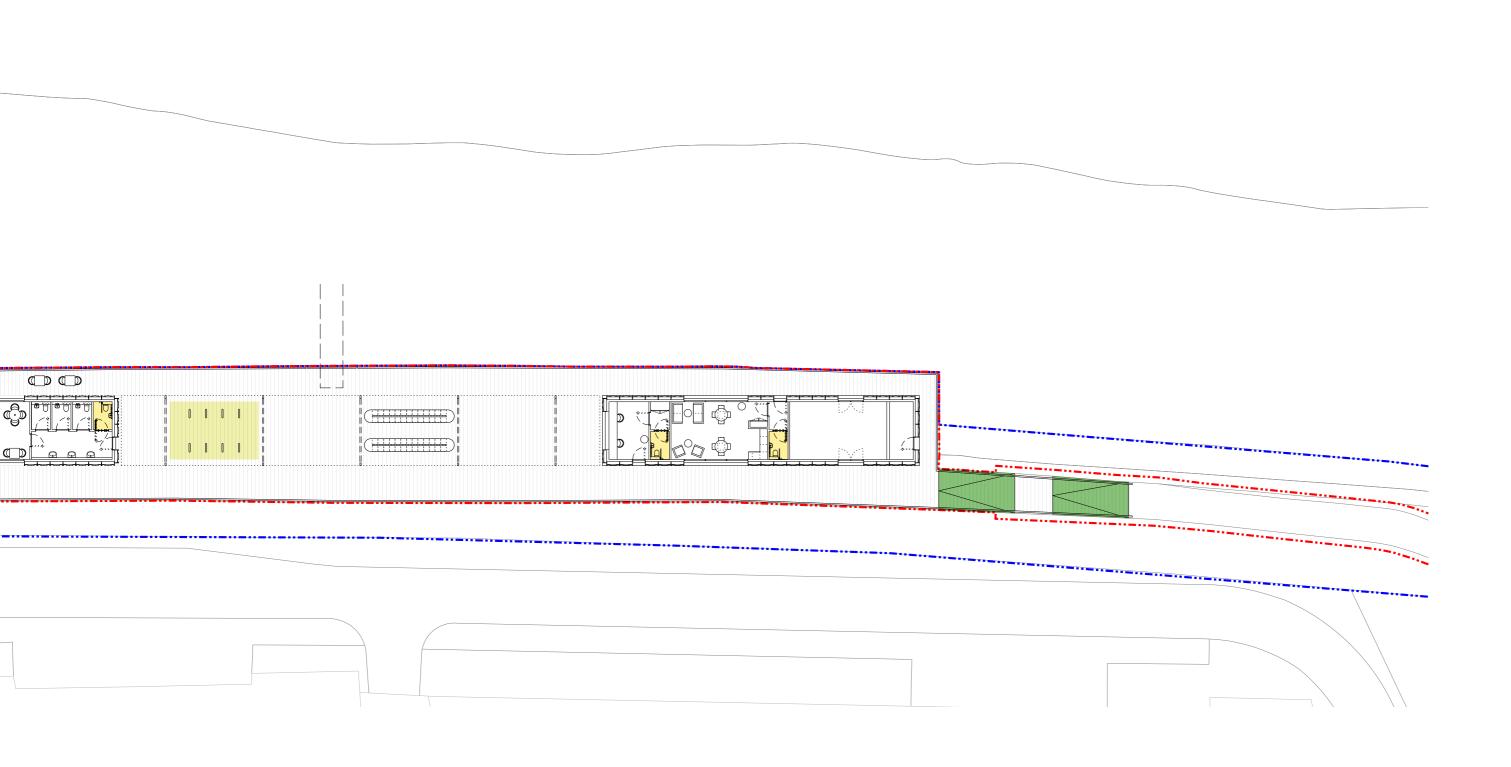
1:16 ramp

1:17 ramp

--> Accessible access route

Accessible WC

Sheffield stand cycle storage



06 technical considerations

energy and sustainability

The energy and sustainability strategy consists of the following elements:

Photovoltaic panels - PV panels to be utilised to generate part of the energy requirement of the development, these will be located on the roof of pavilion 2.

ASHP - It is proposed to utilise Air Source Heat Pumps to supply heating with an Electric Instantaneous Hot Water for the domestic hot water.

Enhanced U/values - fabric of the buildings improved from basic compliance with part L. Refer to Energy Statement for specific values.

Green/brown roof's - It is proposed to utilise green roofs to the pavilions. This strategy will help increase biodiversity at a key location along the river front as well as lessen the visual impact from Harrods Village residential properties.

Recycled materials - we are proposing to use recycled materials such as recycled composite decking.



01 Green roof



03 Recycled structure



02 PV panels to roof



04 Converted shipping container



05 Recycled composite decking

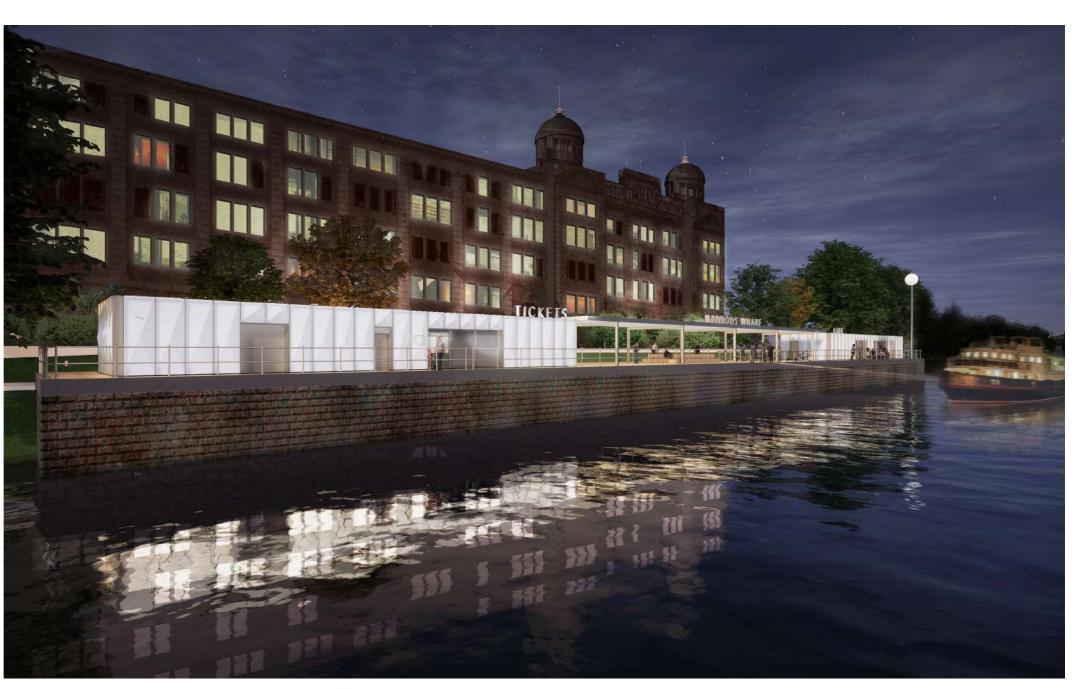
refuse strategy

The refuse strategy will depend on both the café/kiosk and ferry operator and will be subject to further development with the Local Authority and operators once they are on board.

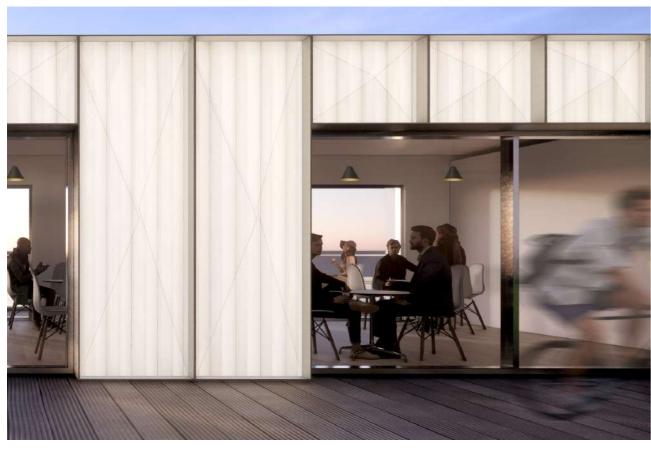
lighting strategy

Lighting

Refer to the lighting strategy report in Appendix A of this document



01 View from the river at night



02 back lit facade panels



03 low level bollard lighting



04 4m high lamp post





05 Illuminated River, London, Lifschutz Davidson Sandilands

conclusion

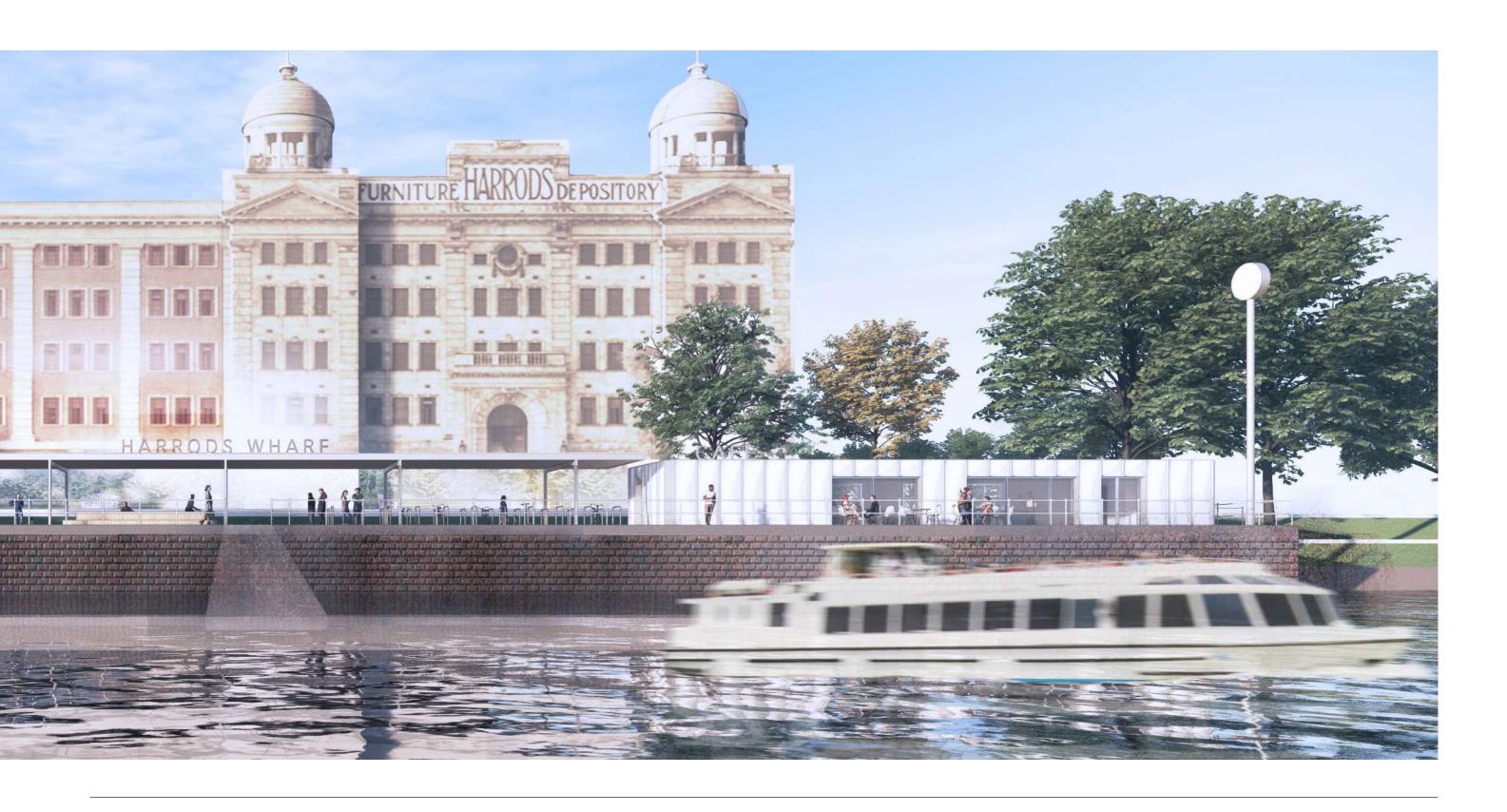
conclusion

The proposal within this document aims to provide a development which will successfully deliver the following key objectives:

- A response to community need for a river crossing in lieu of Hammersmith Bridge
- To provide a high-quality and functional facility to support the ferry river-crossing services
- A building with a simple façade and form that does not detract from the listed building behind it
- Enhanced destination in this strategic riverside location
- A sustainable development
- Design technology that seeks to minimise construction period and disturbance
- A balanced and well developed massing solution, responsive to the scale of the surrounding urban fabric.
- Contribute to the rich and diverse nature of the local context and provide a vibrant new retail frontage
- Respect the setting of the Grade II listed building
- A building organisation which will provide a ticket office, staff back of house, storage and cafe/kiosk which meet the required regulations and accessibility requirements and improvements to the urban realm
- Add to the 'greening' and biodiversity through the introduction of green roofs
- Further activity and passive surveillance of Thames footpath



01 Proposed development: view from Hammersmith looking west across river



08 Appendix A: Foundation assessment



Harrods Wharf Pier Foundation Assessment

December 2020





Contents:

Introduction

- 1) Site visit report
- 2) Bearing capacity assessment
 - 3) Structural principles
- 4) Potential foundation details



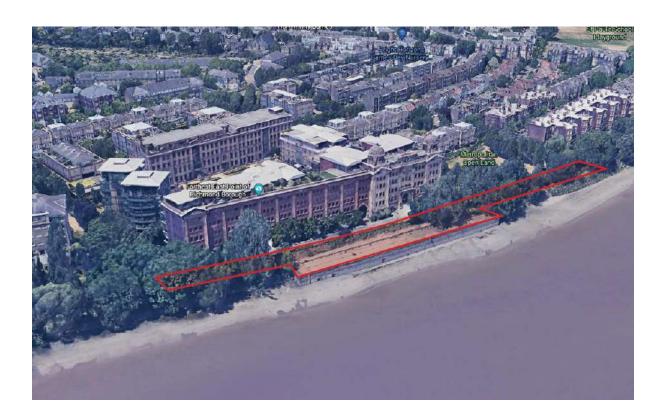
Author: Ed Moseley Date: 04/12/2020



Introduction

This report has been prepared by London Structures Lab on behalf of Jamie Waller, based upon information received from Lifschutz Davidson Sandilands Architects on the 24th of November. The report addresses the proposal for a new ferry terminal at Harrods Wharf and identifies potential foundation solutions based upon the design information available.

A visual inspection of the site was undertaken and a bearing capacity assessment has been made, it does not account for the protection of the pavers, as no assessment has been made with regards to their condition or robustness. Assumptions have been made with regards to the superstructures design and are set out within the report. Should these assumptions need to be changed the design may need to be adjusted to suit, however the principles established are expected to remain valid.





1) Site visit report

The site was visited on the 27th of November for a visual inspection of the existing condition. The wharf is of robust construction and there was very little deterioration of the wall observed, the fence and rails all seemed to have been maintained to a degree and whilst the paint protection was flaking in places no significant corrosion was observed and there does not appear to be any cracking of the concrete base encasement. The top surface showed no evidence of subsidence and has remained relatively level, indicative of a robust subbase.

The central portion of the wharf, where historically the crane was located, has cobbles rather than pavers. This area shows some distortion of the ground and this could be due to the nature of the area and how it was laid or, more likely, due to historically being more heavily trafficked.

All areas of the wharf show evidence of vegetation growing, this does have the potential to deteriorate structural elements should it be allowed to continue, and it is recommended that this issue is addressed in the near future to prevent it causing issues to the durability or functionality of the wharf for its proposed use.

At the NW corner of the wharf a water supply point and what is believed to be an electrical point were observed.



View of the wharf looking SE



View of the wharf looking NW





End of wharf where water and electrical connection points are located. Foliage can be seen in the wharf wall.



End of wharf where foliage can be seen in the wharf wall.



Mid way along the wharf length where a cobble finish has been used, believed to have historically been the location of the wharf crane.



Thames path running adjacent to the wharf.



Electircal point



Water point



Historical picture of the wharf in the days where it was functioning as a delivery point, showing the unloading crane and the crates that were placed on the wharf.



2) Bearing capacity assessment

The bearing capacity assessment has been made using the knowledge of the wharfs historical use as a point of unloading for the delivery of furniture, combined with the visual assessment of the site. As no site-specific testing has been undertaken to date conservative assumptions have been made and a bearing test will need to be performed prior to the installation, it is expected that this could assist in the reduction of foundation sizes.

Using the council paving design guidance we can design to a bearing capacity of 100 kN/m2 for concept design. There is potential for this to lead to some slight settlement beneath loaded areas relative to the unloaded areas, which may require some remediation should the structures be removed. This would not cause damage to the wharfs wall structure but may require the repair/ replacement of pavers located beneath the footings.

California Bearing Ration (CBR) testing can be performed to identify a site-specific value for the bearing capacity, which is likely to identify slightly higher values, but would carry the same note of caution about localised ground movements.

3) Structural principles

To define a foundation solution assumptions have to be made about the structure being supported. Should these assumptions change there is potential for them to influence the design of the foundations. For our assessment we have assumed the following key points:

- The enclosed areas will be formed using stiff walls of some form (either as a wall or with bracing incorporated into the design) in the longitudinal direction of the proposal.
- The canopy frame is to be a separate structure to the enclosed areas and is to be designed to act
 as a sway frame. Ballast will be used to prevent any uplift identified.
- The decking will be installed independently of the structures and will supported using a proprietary product.

4) Foundation designs

The foundation solutions proposed cover the following four scenarios:

- 1. Decking over the footpath
- 2. Decking over the paved wharf
- 3. Support for the enclosed areas
- 4. Support for the canopy structure



Decking

Where the decking sits over the pavers it should be installed using a proprietary system such as QwikBuild by Outdure. Where the deck sits above the footpath this should be supported using screw footings to ensure a robust bearing capacity.







Screw footing

Enclosed Area

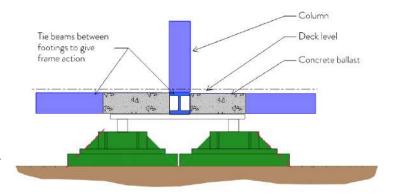
To give the opportunity to use something like a steel shipping crate for the structure we will assume for now that the construction is supported from a strip footing that runs the length of the building. This would require a spreader of 450mm width to run beneath the wall of the installation. To ensure demount ability a system like the Jackpad system can be used, with footings at circa 1m spacing.



Single Jackpad footing, $450 \times 450 \text{mm}$ on plan, minimum 200mm tall. Based on an assumed spacing of 1000mm, should a wider spacing be preferred the ground will need to be verified for a suitable beaing capacity.

Canopy Structure

It is assumed that the canopy structure may be light weight and as a result have a potential of wind to uplift it. If the canopy is installed as a fabric structure, then this could result in a requirement to ballast each footing by circa 330kg. It is suggested that this is done using concrete blocks placed on the footing system.



Suggested footing detail, using a Jackpad solution with ballast. It is assumed that the footings will be tied together to limit the stressess at the bases.

Alternatives can be explored

09 Appendix B: Lighting strategy

0723

LONDON, UK

HARRODS WHARF

DESIGN AND ACCESS STATEMENT

DESIGN BOOK 01A JANUARY 2021

View of the proposal looking south from Harrods Wharf

INTRODUCTION

The intention of this document is to set out a basis for the use of artificial light within and around the Harrods Wharf project.

A variety of factors are considered together with relevant illumination methods and responses. Primary requirements include the provision of a safe and secure environment for people using the Harrods Wharf project, the development of a post-dusk presentation that is contextual within this part of the London Borough of Richmond (taking into account adjacent residential use) and the response to the presence of a local ecology.

A balanced approach is therefore described answering the various needs and requirements as indicated above so that Harrods Wharf becomes a positive and enhancing post-dusk addition.

KEY ADJACENCIES



Indicated in this diagram are two key adjacencies, Harrods Village and Castlenau. These are predominantly residential locations and will, therefore, be key informing aspects in relation to post-dusk lighting arrangements for Harrods Wharf.

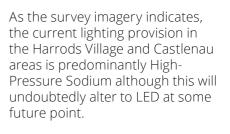
CURRENT LIGHTING CONDITIONS



Current Street Lighting Provisions (Looking South on Castelnau)



Current Street Lighting Provisions (Riverview Gardens)



The fitting types include standard, utilitarian lamp-post fixtures and period reference Windsor type lanterns.

There is also a metal-halide feature lighting installation on the riverside frontage of the Harrods Depository building although this appears to be switched off at this point in time.

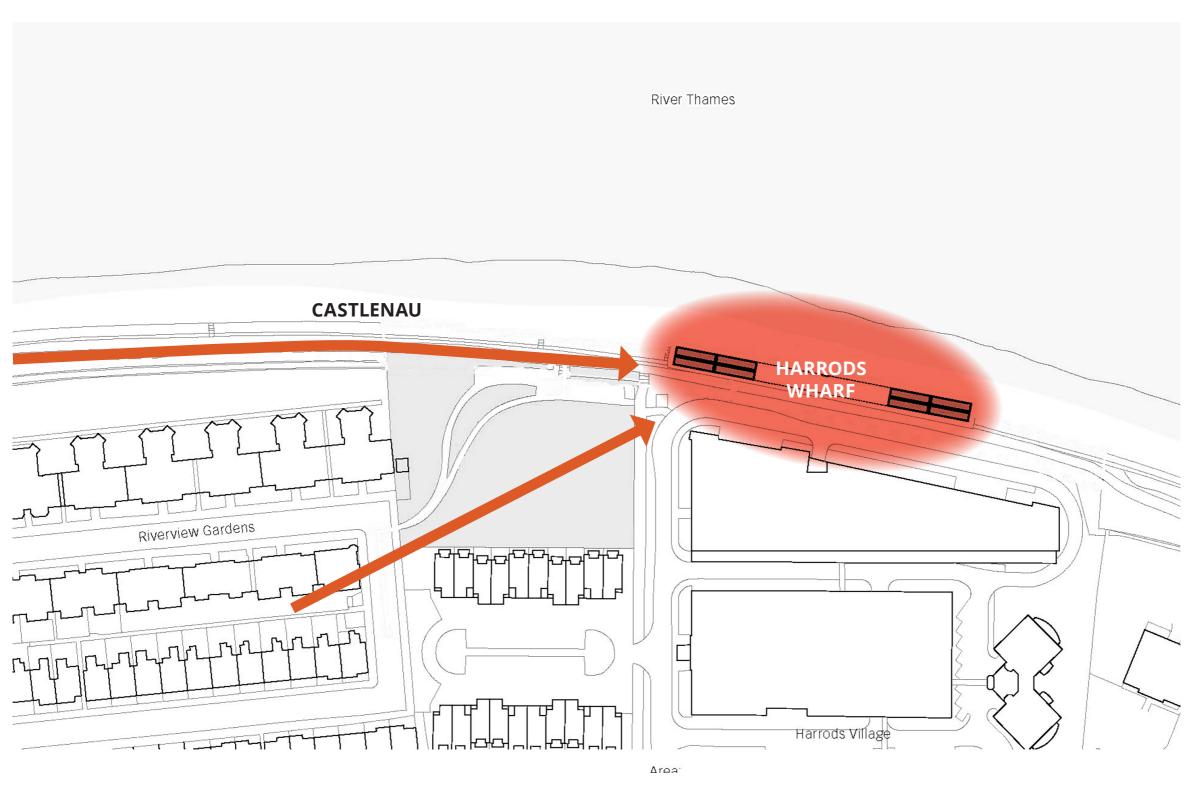


Current Street Lighting Provisions (Trinity Church Road)



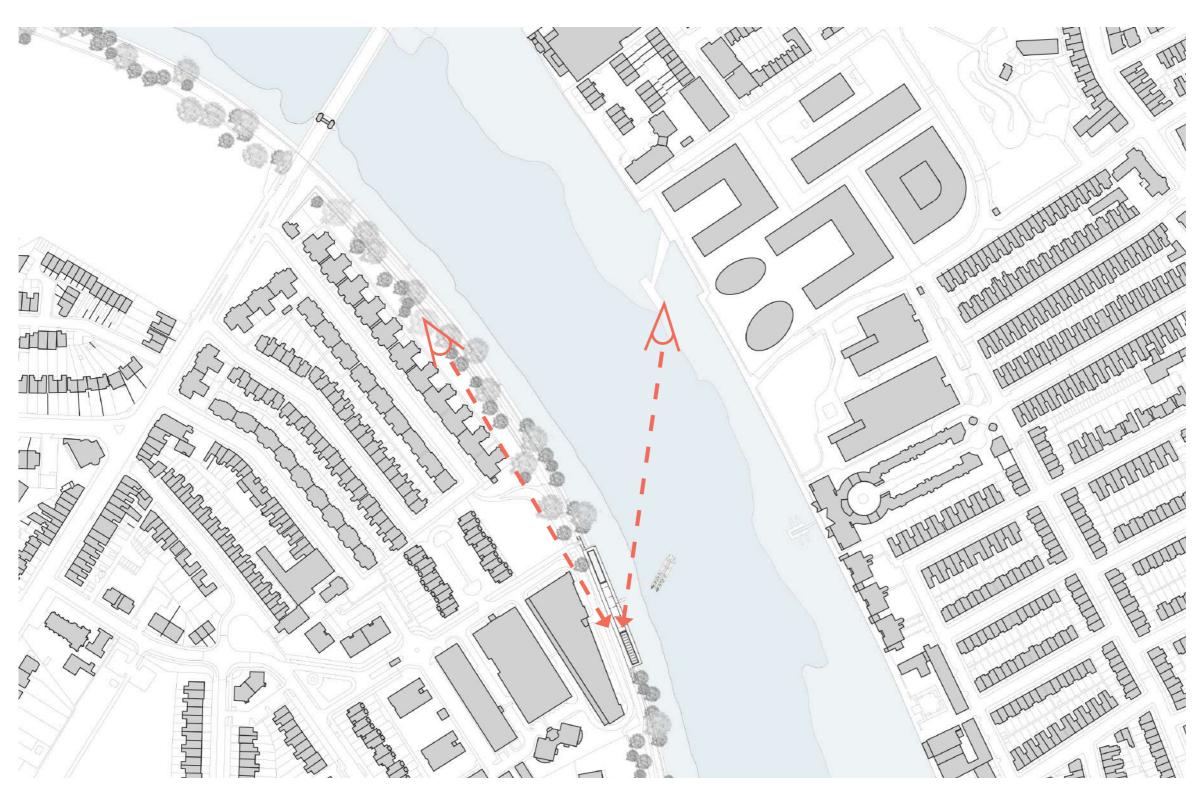
Current Street Lighting Provisions (Clavering Avenue)

CONNECTING THE SITE



Primary connections, both visual and physical, for the Harrods Wharf site include the Castlenau residences, Harrods Village and, of course, the river edge and towpath. Ensuring that these connections are positive and work fully will be important when considering illumination methods for the Harrods Wharf project.

PRIMARY ARRIVAL VIEWS



Arrival views to the Harrods Wharf scheme, whether travelling to or departing from the terminal, will be from the North. It is anticipated that the majority, if not all of the departing passengers will be accessing the Wharf from the Castlenau direction.

ECOLOGY





Harrods Wharf has a number of key ecological adjacencies.

These include the closely located London Wetlands Centre, the more distant Leg O Mutton Pond and some relatively large school and public playing fields. The river-edge in the Harrods Wharf location is quite heavily tree lined and is relatively under-used, thus providing potential Wildlife locations.

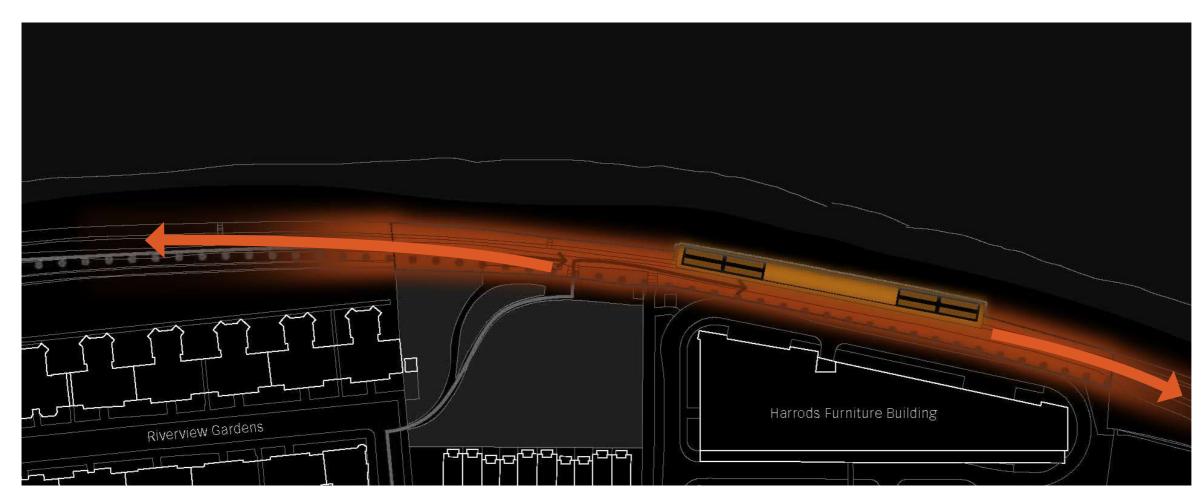
As part of a planning application for a temporary pedestrian/ cycle bridge in the vicinity of Hammersmith Bridge, Transport for London has commissioned and Bat Survey Report which includes the Harrods Wharf riverside. This has indicated the presence of foraging bats in this location, albeit in relatively low numbers. No bat roosts appear to have been identified and the most common species are a number of different types of the relatively light tolerant Pipistrelle.

The presence of bats and the potential presence of other wildlife species has helped to determine a lighting approach for the Harrods Wharf project. Key outputs, in this respect, include the use of tightly controlled, full cut-off lighting arrangements, specific limitations to illuminance levels, the provision of artificial light at the 'warm-end' of the spectrum (warm-end light is less obtrusive in this context), the removal of ultra-violet radiation and the use of intelligent lighting control.

In addition to the provision of warm end light (2500K to 2700K), the spectral outputs of the proposed luminaires will be checked to ensure that there is no 'blue-end' component present even with a warm tone light (blue end outputs can still be present, even in warmer light colour temperatures). Specifically, the intention will be to remove/reduce to insignificant levels, any emissions below 540 Nanometers.

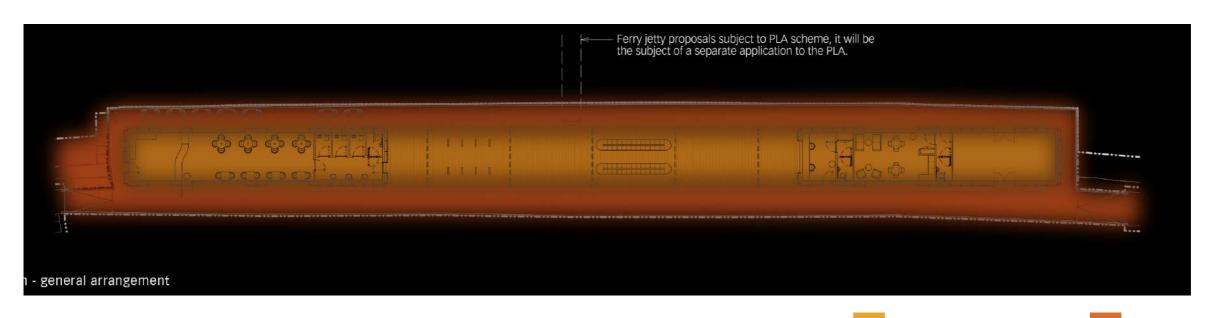
These methods and techniques are covered in more detail below, but it is interesting to note that there is a symbiosis here – the methods described above in response to local ecology will also accommodate the requirements of adjacent residential locations.

COLOUR TEMPERATURE PLANS



The adjacent plans indicate a broad design intent with regard to the colour temperature placement across the Harrods Wharf scheme. The intention is to user warm colour tones to provide a comfortable, attractive location for people using the Wharf, a characteristic that will also support the local ecological requirements.

As the top diagram indicates, there is an intent to knit the Wharf lighting installation in with the new installation that is being trialled by the London Borough of Richmond along the towpath. A key part of this continuity will be the use a warm colour temperatures (2500K to 2700K), an important response to both human and wildlife interaction.

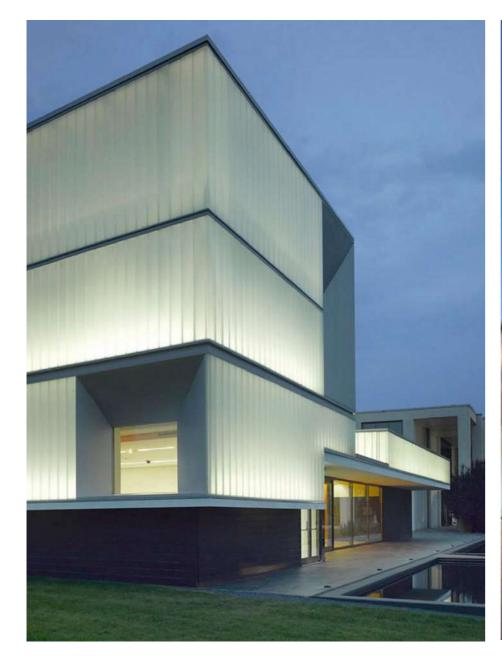


2700K

2500K

DESIGN INTENT CONTAINERS

GENTLY ILLUMINATED AT NIGHT TO PROVIDE A QUIET FOCUS









DESIGN INTENT CANOPIES

BACK ILLUMINATED TO CREATE A CONTAINED PRESENTATION THAT IS POSITIVE AND RESPONSIVE







EQ2LIGHT

AMBIENT

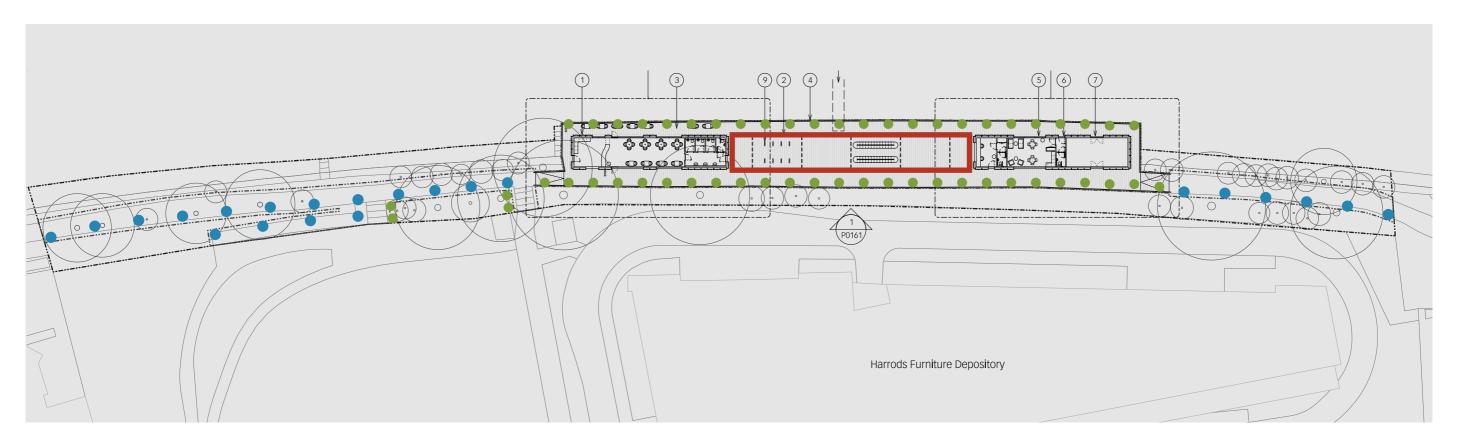
USING FULL CUT-OFF TECHNOLOGY TO ENSURE A QUIET PRESENTATION LEADING UP TO AND AROUND THE WHARF

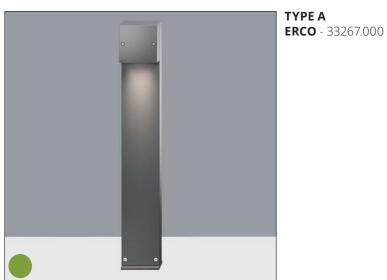




LIGHTING PLAN / LUMINAIRES

SITE WIDE PLAN

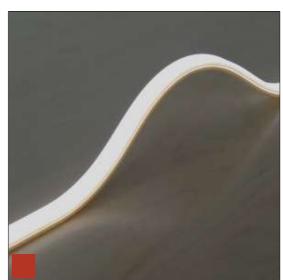




Full cut-off low level bollard situated on the Wharf at 4-6 metre centres to create supplementary ambient illumination.



Full cut-off 4m high lamp post at 6 to 8 metre centres to provide a quiet ambient illumination.

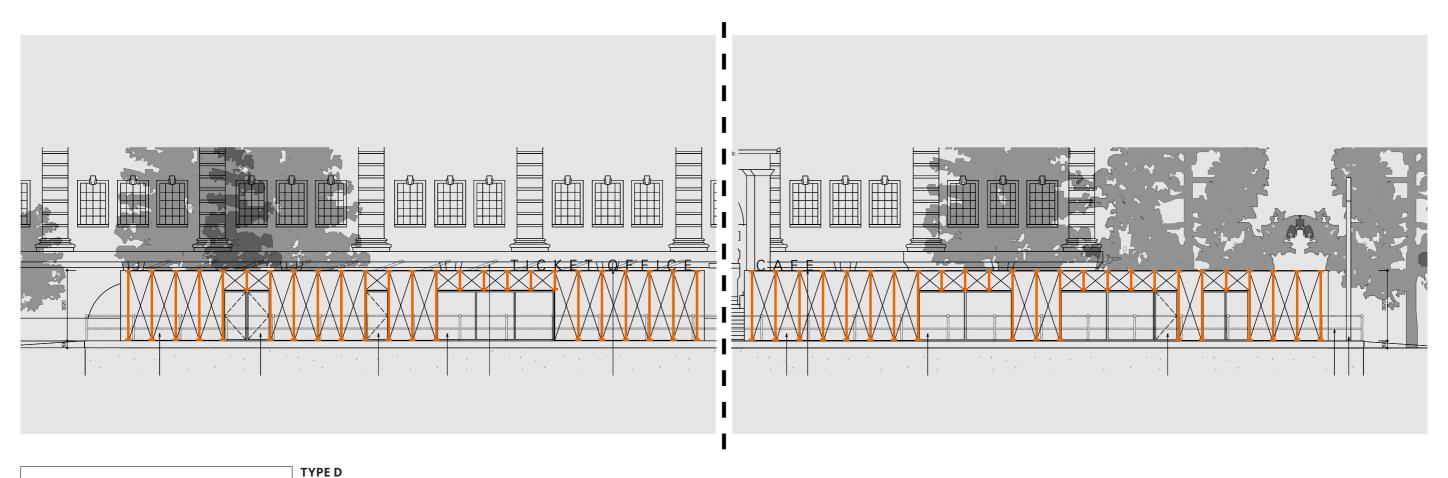


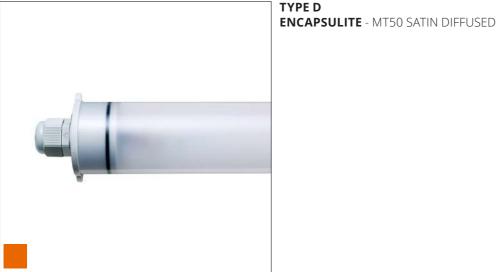
Warm colour tone LED to gently back light the central Wharf canopy to provide ambient illumination and focus.



LIGHTING PLAN / LUMINAIRES

EAST ELEVATION





Robust LED battens integrated within the container façades to create a gentle presence for the Wharf in post-dusk conditions. This fitting will sit behind the main container facade framework to provide gentle back illumination.



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LIGHTING CONTROL / TECHNICAL MEMORANDA

LIGHTING CONTROL

Lighting control will be used as part of the Harrods Wharf lighting scheme to ensure relevant operation and to assist in creating a sustainable solution. In its simplest form, it will provide a dusk to timed switch-off ensuring that correct operational periods and curfew times are maintained.

The intention for Harrods Wharf however is to use lighting control to add in some additional operational capacity. This will include the capacity to dim all or part of the installation at relevant times, provide part night performance (across the course of an evening operation or in response to specific ecological requirements) and also to enable the lighting installation to be set at low level which is then triggered to a maintained level by activity. The latter of these two capacities is particularly important when considered from the security, sustainability and light pollution perspectives.

TECHNICAL MEMORANDA

A full range of technical memoranda will be consulted as part of the development of the Harrods Wharf scheme with key, primary documents including the following:

British Standard 5489-1:2020 and the Associated EN13201-2:2015

This British Standard document provides a basic platform for the use of artificial light within the Harrods Wharf scheme. A key reference is table A6 'Lighting Classes for City and Town Centres', where a Classification of C2 to C4 will be reviewed in relation to a 'Pedestrian Only' space.

Chartered Institute of Building Services Engineers, Lighting Guide 6: 2016

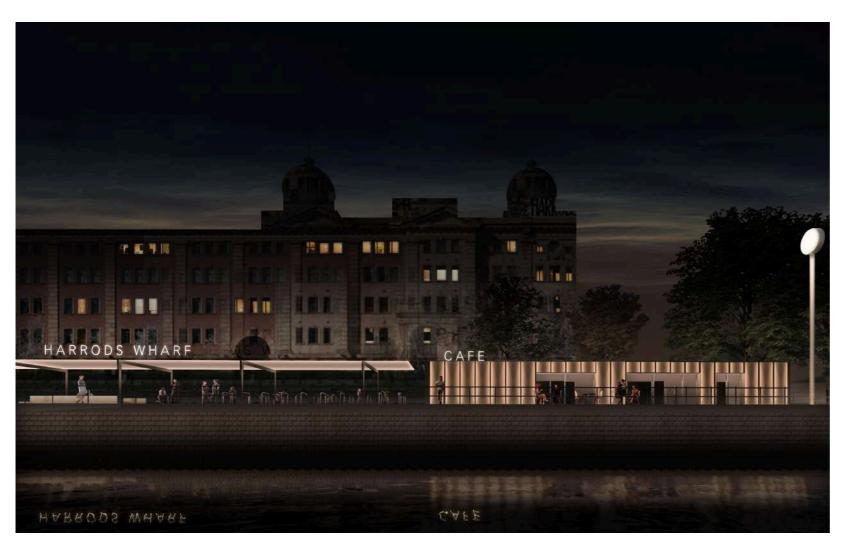
In particular, focusing on the guidance indicated for 'Pedestrian Routes, Cycleways and Subways' and also the Appendix 4 section of the document that provides guidance in relation to Birds, Mammals, Bats, Reptiles, Amphibians and Invertebrates. It should be noted that much of this guidance is embodied in the methodologies describes previously in this document.

Institute of Lighting Professionals, Guidance Note 01/20, 'Guidance Notes for the Reduction of Obtrusive Light'

Again, the principles of lighting control, optical control/methods are fully incorporated into the proposed scheme described above. Pre- and post-curfew illumination and intensity levels will be based upon an environmental classification of E4.

Institute of Lighting Professionals, Guidance Note 08/18, 'Bats and Artificial Lighting in the UK'

A key piece of Guidance recognizing the particular requirements of Bats in the urban environment. Specific performance guidance with regard to lamp spectral outputs, ultra-violet emissions, illuminance limitation zones and dimming/part night lighting are all incorporated in the proposals described above.



View of the proposal looking west across the river Thames

CONCLUSION

The methods and approach outlined above will, in our view, enable the provision of a positive new addition to the river edge in this part of the London Borough of

Lighting arrangements will combine the twin requirements of providing a facility that is safe and secure for people using the Wharf, whilst at the same time, incorporating the performance and adaptability that will be needed to respond the local ecological requirements.

The proposed lighting methods will also work within the context of adjacent residential locations, using both luminaire optical performance and lighting control to ensure a cognisant and relevant performance.