



H A L E
W H A R F
T O T T E N H A M H A L E

REVISED DESIGN AND ACCESS
STATEMENT

Allies and Morrison

January 2017

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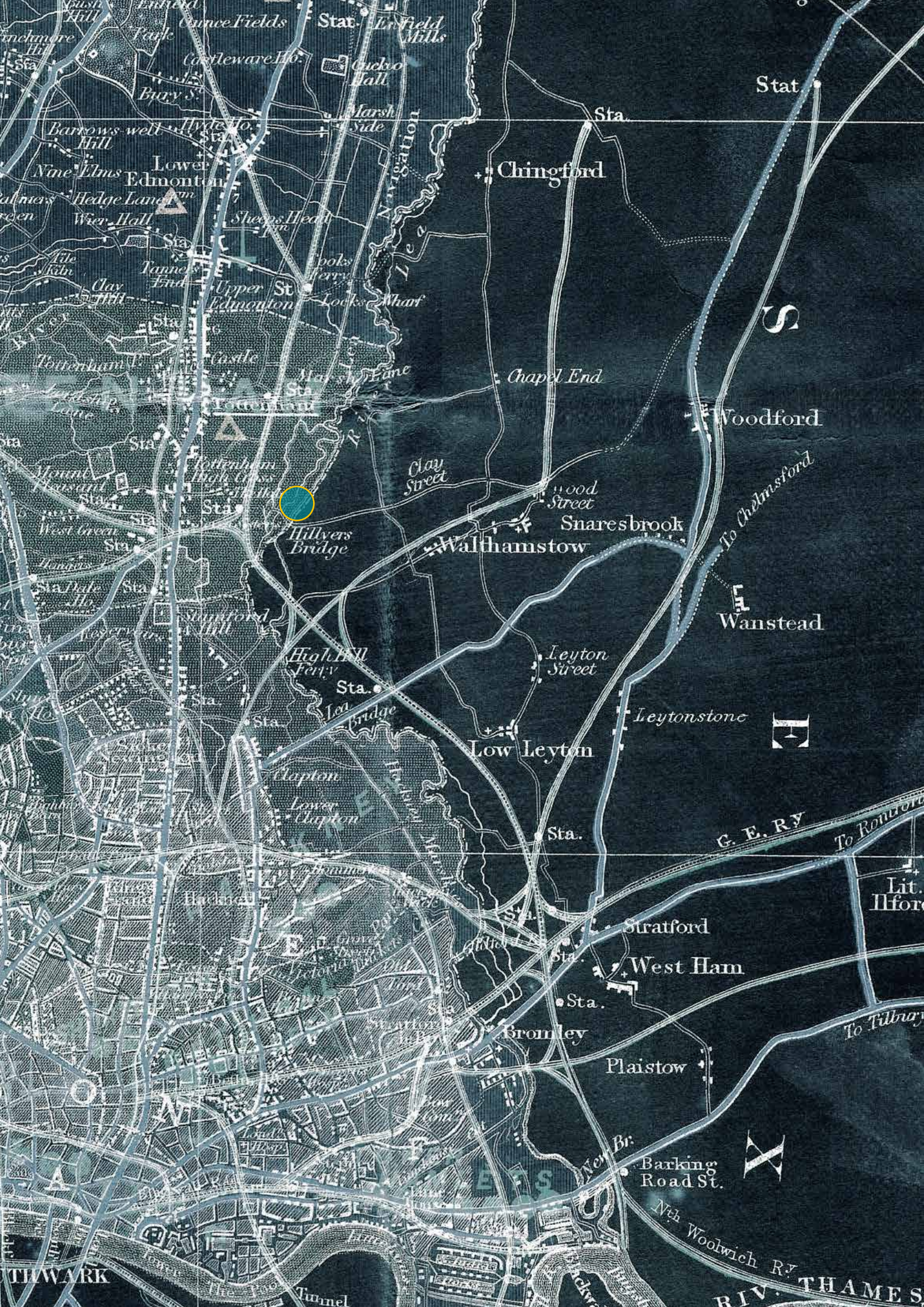
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Stat.

Sta.

Chingford

Woodford

Chapel End

Snaresbrook

Walthamstow

Wanstead

Leyton Street

Low Leyton

Leytonstone

G. E. R. Y.

Stratford

West Ham

Bromley

Plaistow

Barking Road St.

North Woolwich Rly.

RIV. THAMES



1 INTRODUCTION

1.1 FORM OF THE APPLICATION

This Design and Access Statement (DAS) has been prepared by Allies and Morrison on behalf of Muse Developments and the Canal and River Trust. The DAS explains the design and access principles which have been applied to the development. Included in this document is an illustrated description of the site, the project brief and the design principles for the proposed development. Also included is an Access Statement produced by the Centre for Accessible Environments (CAE).

The application is a 'hybrid' planning application, comprising an outline planning application for the whole Site with details submitted for part of the Site. Details of access, appearance, landscaping, layout and scale are submitted for the detail application area. No detailed information is provided for the outline component with the matters of access, appearance, landscaping, layout and scale being reserved for approval under subsequent reserved matters applications.

The parameters that define and guide development of the outline component of the scheme are set out in the planning application parameter plans and design codes.

The Parameter Plans and Development Specification describe the proposed development and outline the key elements of the application in regard to, layout, scale, appearance, landscaping and means of access. The illustrations in this DAS for the outline application proposals are intended to explain the proposed parameters and design codes including a degree of flexibility. The principles establish the basis for the future design work and demonstrate the client's commitment to developing a high quality scheme.

The submission of this application follows extensive pre-application consultation with the Local Planning Authority, The London Borough of Haringey Quality Review Panel, The Greater London Authority, Transport for London and other key stakeholders as well as public consultation in February 2016.

This statement should be read in conjunction with the application forms, drawings and the following specialist reports.

- Development Specification
- Planning Statement
- Transport Assessment
- Consultation Statement
- Affordable Housing Statement
- Sustainability Statement
- Energy Strategy
- Internal Daylight Assessment
- Outline Site Waste Management Plan
- Environmental Statement
- Framework Travel Plan
- Delivery and Service Plan
- Flood Risk Assessment
- Water Framework Directive Assessment
- Below Ground Drainage Strategy
- Arboricultural Impact Appraisal and Method Statement
- Habitat Regulation Assessment Screening Report

This Revised Design and Access Statement, January 2017, incorporates revisions to the outline application parameters which have reduced the footprint of buildings in the northern part of the site by approximately 38 metres. The Illustrative scheme has been modified as a result with Block G being removed and Blocks C, D and E increasing in height by one storey within the height parameters originally proposed.

The orange band in the footer of this document identifies pages have been updated to incorporate the revisions.



View from the Lee Navigation towpath, looking north towards Hale Wharf © moka-studio GbR and Paul Reilly



1.2 PURPOSE OF THE DOCUMENT

The format and content of this DAS has been based upon the guidance supplied by CABE in their publication “Design and Access Statements – How to write, read and use them”

The purpose of this DAS is to illustrate how the design of the development has developed leading up to the planning application and to describe the design thinking behind the submitted scheme. The statement is in seven sections which cover the site, the design, and access. The purpose of each section is as follows:

- *Chapter 1 - Site Context and Analysis:* Setting out the site constraints and opportunities which have guided the design proposals.
- *Chapter 2 - Design Evolution and Consultation:* Describing the project objectives, consultation and the evolution of the design.
- *Chapter 3 - Outline Illustrative Masterplan:* Describing the illustrative masterplan and the key principles underpinning the design which inform the outline application Parameter Plans.
- *Chapter 4 - Detail Application:* Describing the detailed design principles and proposals of the first phase of development.
- *Chapter 5 - Landscape:* Describing the key principles and proposals of the landscape design and the public realm.
- *Chapter 6 - Access:* Focusing on the provision for access to the development and wheelchair housing.

Design Codes are included in Chapter 4, which inform the design of the outline illustrative scheme in the later phases, to promote high quality design. The Codes follow introductory illustrative text and focus on key aspects affecting the appearance and design quality of the scheme including: use, typologies, roofs, gaps between buildings, appearance, parking, courtyard streetscape and waterside edges.



TOTTENHAM
MARSHES

LOCKWOOD
RESERVOIR

ALLOTMENTS

HIGH
MAYNARD
RESERVOIR

TOTTENHAM
HALE STATION



HALE
VILLAGE

LOW
MAYNARD
RESERVOIR

PADDOCK

RIVER
LEA

RESERVOIR
NUMBER
4

RESERVOIR
NUMBER
2

RESERVOIR
NUMBER
1

WARWICK
RESERVOIR
EAST

RESERVOIR
NUMBER
5

1.3 DESCRIPTION OF THE DEVELOPMENT

The site comprises 2.28 hectares. The net residential site area comprises 1.78 hectares.

The site is long and narrow in shape, with Ferry Lane (A503) to the south, the River Lee Navigation Channel running along the western boundary and the River Lea and River Lea Diversion along the Eastern boundary with the Lockwood Reservoir and the Paddock Community Nature Park beyond. The existing Hale Village development is located across the Lee Navigation and Pymmes Brook to the west of the site. The site is currently occupied by low rise workshops, warehouses, storage, showrooms and offices and is largely inaccessible to the public.

Planning approval is sought for demolition of the existing buildings on the site, with redevelopment to provide a residential led mixed-use development of up to 505 residential units, as well as the provision of employment space and retention of commercial mooring facilities along the River Lee Navigation Channel boundary; together with pedestrian footbridges, landscaping, public open space, car, cycle, motorcycling parking and associated works.

The proposal maintains access for leisure moorings to the north of the site and responds to the various constraints and environmental sensitivities of its unique location.

The full detail application is comprised of 2 blocks which provide 249 residential units, 307m² of commercial space and an optional basement energy centre, with associated landscaping and infrastructural works to the southern end of the site. This includes interim parking for the detail application residential units. Building heights range from ground plus 15 to ground plus 20 storeys.

The outline component is comprised of 8 blocks, providing up to 256 residential units and up to 1,300m² commercial/community space, with pedestrian footbridges, landscaping, car, cycle, motor cycling parking and associated works. Heights of the blocks range from ground plus 3 to ground plus 9 storeys.

The proposed density for the site is 284 units/hectare or 772 habitable rooms/hectare.



1.4 DESIGN BRIEF AND OBJECTIVES

1.4.1 Objectives

Through the context analysis and briefing process the following key design objectives have been identified for the development:

- *Creating a new neighbourhood for Tottenham Hale:* Delivering high quality homes, streetscapes and waterside spaces within the Tottenham Hale Housing zone by providing a range of housing types including flats and family homes.
- *Sensitivity to site character and context:* Creating a scheme that is sensitive in terms of scale, character and appearance to its surrounding urban and ecological context; in particular to areas of environmental importance such as the Paddock Community Park, Lee Valley Park and Walthamstow Wetlands.
- *Increased connectivity of the site to its surroundings:* Maintaining visual connections to the parklands and facilitating new physical connections along the green grid.
- *Maximising the waterfront potential of the site:* Creating a waterside scheme that responds to its context and uses new public waterside and courtyard spaces to create a renewed sense of place.

1.4.2 Residential Masterplan

The new masterplan will establish a new sustainable waterside development that offers high quality homes using a range of housing typologies to suit Haringey's diverse residents.

The proposed new design will create:

- A unique waterside neighbourhood that is integrated within its locality.
- A clear urban structure that responds appropriately to its context.
- A built fabric that is robust, energy efficient, durable and has low maintenance requirements.
- An urban form that provides a range of housing sizes, tenures and building types.
- An open neighbourhood that is welcoming and accessible for both residents and visitors from the surrounding community.
- An energy efficient development where adequate energy infrastructure is in place and buildings are designed to meet all current sustainability targets.
- A safe environment where streets and open space benefit from natural surveillance.
- An inclusive place that is physically accessible for all and able to adapt to meet the residents changing needs across their lifetimes.

Opposite: View looking south towards the site from the Lee Navigation footpath © moka-studio GbR and Paul Reilly

1.5 PLANNING POLICY SUMMARY

This section summarises the planning policy framework relevant to the design and access of the applications proposals. Detailed consideration of the relevant planning policy is provided within the accompanying Planning Statement. National planning policy is contained within the National Planning Policy Framework, adopted March 2012. The development plan comprises the London Plan (adopted March 2015); Minor Alterations to the London Plan (MALP) (adopted March 2016); Haringey's Local Plan Strategy Policies (LPSP) (adopted March 2013); and Saved Policies from the Unitary Development Plan (Saved March 2013). The following planning policy documents are in the final stages of preparation – the pre-submission versions stage January 2016 – and as such also form a material consideration: Alterations to Strategic Policies (ASP); Development Management DPD (DM DPD); and Tottenham Area Action Plan (TAAP). It is understood that LBH intends to adopt all emerging planning policy documents in August 2016. Once adopted, the LPSP will be updated by the ASP, whilst the DM DPD and TAAP will replace saved policies within the UDP. LBH and the GLA have also published additional, Strategies, Frameworks, Supplementary Planning Guidance (SPGs), Supplementary Planning Documents (SPDs), which are also of relevance to the Site.

1.5.1 Site Allocation

The Site is located within the Upper Lee Valley Opportunity Area where the Opportunity Area Planning Framework (OAPF) (July 2013) sets out an overarching framework for the area. The Site also lies within the wider Tottenham Housing Zone within the Mayor's Housing Zones Brochure (October 2015), being one of the capital's big growth opportunities. At a local level, the Site is allocated in adopted and emerging policy for a comprehensive mixed use redevelopment. The Site lies within the limits of the TAAP, and specifically identified as within a Growth Area in which the Council will direct development towards. The TAAP specifically allocates the Site as the Hale Wharf Site Allocation which promotes the Site for a mixed use development.

1.5.2 Regional Planning Policy

The London Plan, published in March 2015, is consolidated with all alterations to the London Plan since 2011, and is the overall strategic plan for London and is acknowledged as 'an essential part of achieving sustainable development'. The London Plan was updated in March 2016 to incorporate Minor Alterations relating to housing standards and parking standards.

The site is within the Upper Lee Valley OA where Policy 2.13 seeks to optimise residential and non-residential output and densities, meeting and exceeding minimum guidelines for housing and employment. Specifically, the OAPF identifies the Site as being within the Possible Tall Building Location for Tottenham Hale. Opportunity areas are identified as sites appropriate for tall buildings, whilst their designs should relate to the surrounding area and landscape, incorporate the highest standards of design; have ground floor activities; contribute to the site and wider area; and make a significant contribution to local regeneration (London Plan Policy 7.7).

The GLA have also published SPD's on standards and guidance for housing, open space, density, car and cycle parking standards etc.

1.5.3 Local Plan Strategic Sites (2013) and Alterations to the Stratgic Policies (2016)

The LPSP was adopted in March 2013 and sets out the long term vision and strategy for development in Haringey up until 2026. Since its adoption there have been a number of changes at national and regional level, which affect planning locally, thus these policies are being reviewed and updated through the ASP. The adopted LPSP confirms that the Council will promote development in the Tottenham Hale Growth Area (Policy SP1 and Figure 3.2), whilst the Site is identified as an 'Employment Area – Regeneration Area', suitable for uses appropriate in a mixed use development (Policy SP8).

1.5.4 Saved Unitary Development Policies (2013)

The UDP was adopted in 2006, the LPSP superseded the UDP to become the main statutory plan alongside saved policies from the UDP. Schedule 3 of the UDP specifically identifies the Site as an 'Employment Area – Regeneration Area'.

1.5.5 Development Management DPD (2016)

The DM DPD supports the LPSP and ASP, setting out criteria based policies which planning applications will be assessed, and once approved will replace saved policies within the UDP.

The DM DPD includes policies on housing standards, private amenity space, parking standards and density etc., which should generally follow the policies within the London Plan and GLA SPD's. Policy DM11 however expects the optimum housing potential of a site to be determined through a rigorous design-led approach.

1.5.6 Tottenham Area Action Plan (2016)

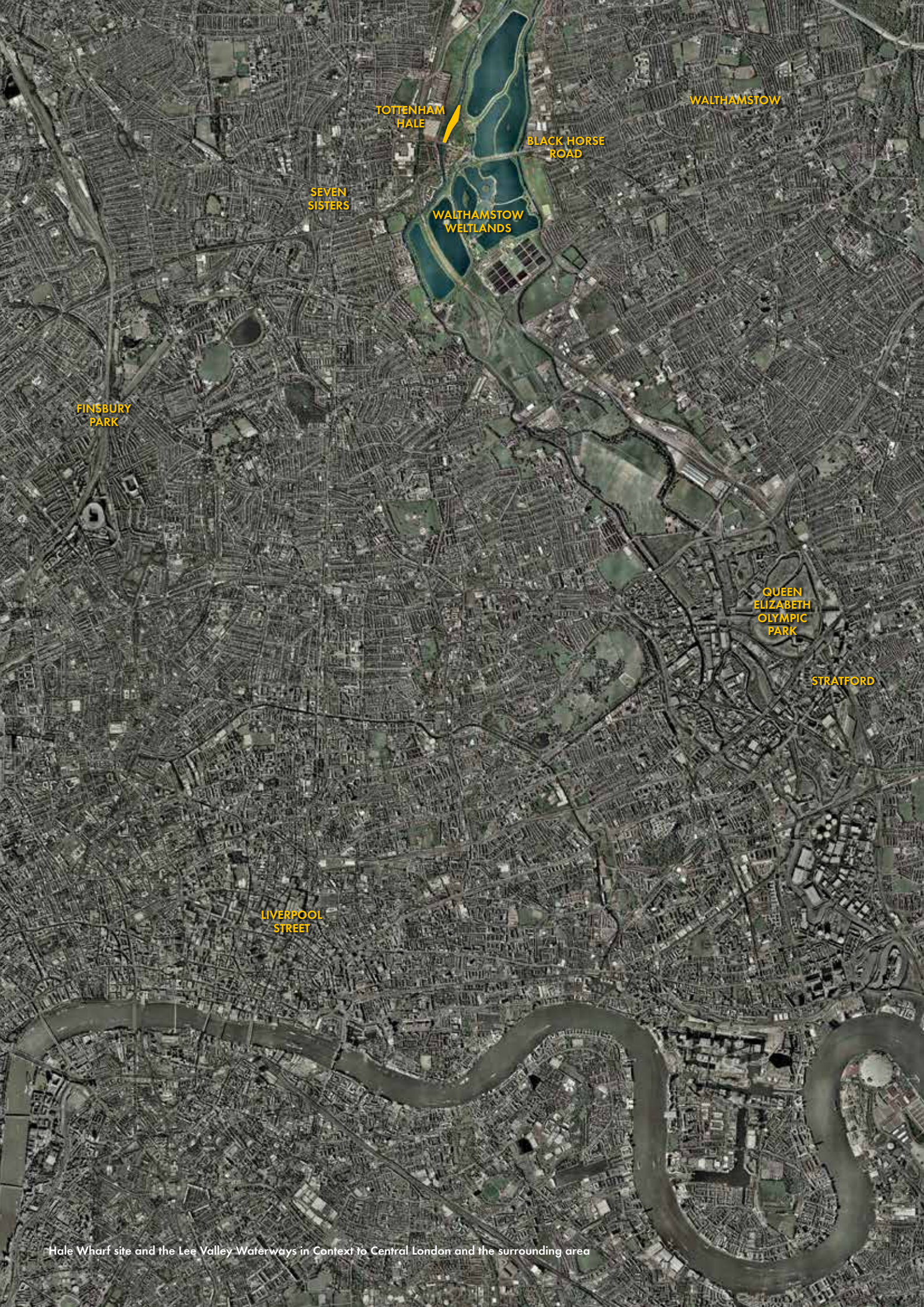
The emerging TAAP sets out the key development sites and policies specific to the Tottenham Hale area to ensure the delivery of new homes and jobs in the area.

Emerging Policy AAP1 expects all development proposals in the AAP to come forward comprehensively, where a masterplan will be required to accompany development proposals which form part of a Site Allocation. Specifically, the emerging site specific AAP Policy TH9: Hale Wharf allocates the Site for a:

“Comprehensive redevelopment to provide a mix of uses, with replacement employment new residential and a leisure destination linked to the Lee Valley Regional Park.”

The boundary includes the garage site and the Lock Keepers Cottage within the site allocation. The allocation sets an indicative development capacity of 405 net residential units and 3,200sqm of commercial floorspace. The site allocation identifies a set of site requirements for development to achieve, including (inter alia) improved connections, continued house boat facilities and provision of moorings. The allocation also sets out some development guidelines, including (inter alia) providing a range of unit sizes and types, building heights to respond to the Green Belt, buildings to be orientated to allow a continuous sight line from the Green Link into the Lee Valley Regional Park etc. This site allocation will supersede the Site's previous allocation within the Tottenham Hale Urban Centre Masterplan SPD (2006) which identified the Site for a residential-led mixed-use scheme.

Emerging Policy AAP3 notes higher densities and capacities may be acceptable in appropriate locations and the Council will support higher density mixed use tenure development as a mechanism to increase housing delivery in Tottenham. Whilst Emerging Policy AAP6 notes taller buildings will be appropriate along parts of Ferry Lane and that the recommendations within the Tottenham Hale Urban Characterisation Study (February 2015) (prepared as an evidence based document for the preparation of the Local Plan) will be taken into account.



TOTTENHAM
HALE

WALTHAMSTOW

BLACK HORSE
ROAD

SEVEN
SISTERS

WALTHAMSTOW
WETLANDS

FINSBURY
PARK

QUEEN
ELIZABETH
OLYMPIC
PARK

STRATFORD

LIVERPOOL
STREET

Hale Wharf site and the Lee Valley Waterways in Context to Central London and the surrounding area

2 SITE CONTEXT AND ANALYSIS

2.1 TOTTENHAM HALE (STRATEGIC CONTEXT)

The site is located at the eastern edge of Tottenham Hale within the London Borough of Haringey (LBH), close to the border of the London Borough of Waltham Forest. The area is identified for regeneration at all levels of planning policy. Tottenham Hale is one of the 'Housing Zones' designated by the Mayor of London for significant investment in the delivery of new homes over the coming years and the London Plan Upper Lea Valley Opportunity Area (OAPF) identifies Hale Wharf as a potential residential landmark site.

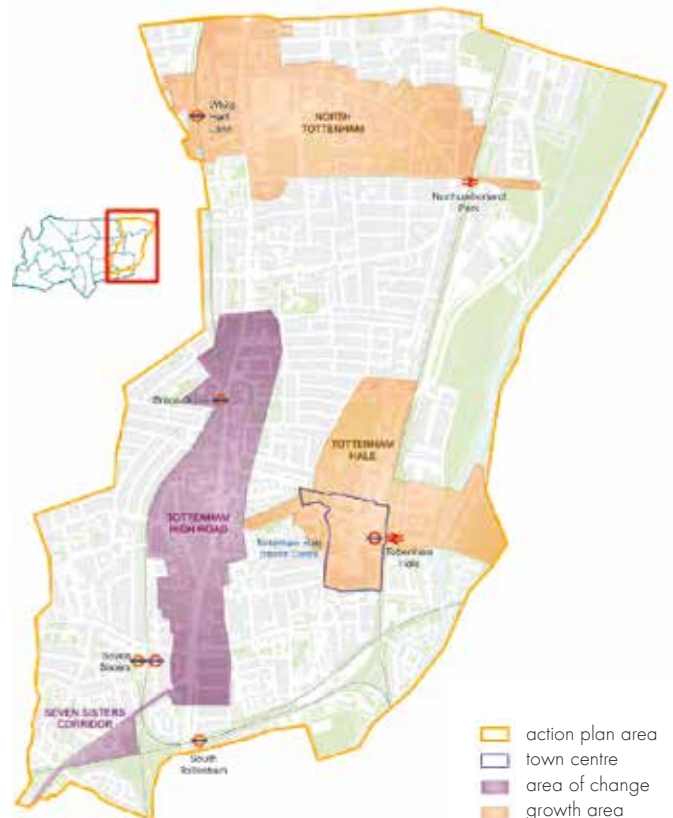
The great potential of the site stems from its close proximity to excellent transport links - with a PTAL rating of 6a towards the southern end and 3 towards the northern end of the site, desirable waterside location, and its potential as a new neighbourhood that will provide physical and visual connections from the existing residential neighbourhoods of Tottenham Hale to the west of the site and to the Lee Valley waterways and parkland beyond the site to the east.

The long narrow site is bounded to the south by Ferry Lane (A503) and edged by the River Lee Navigation to the west and the River Lea and River Lea Diversion to the east with the Paddock Community Nature Park and Walthamstow Wetlands beyond.

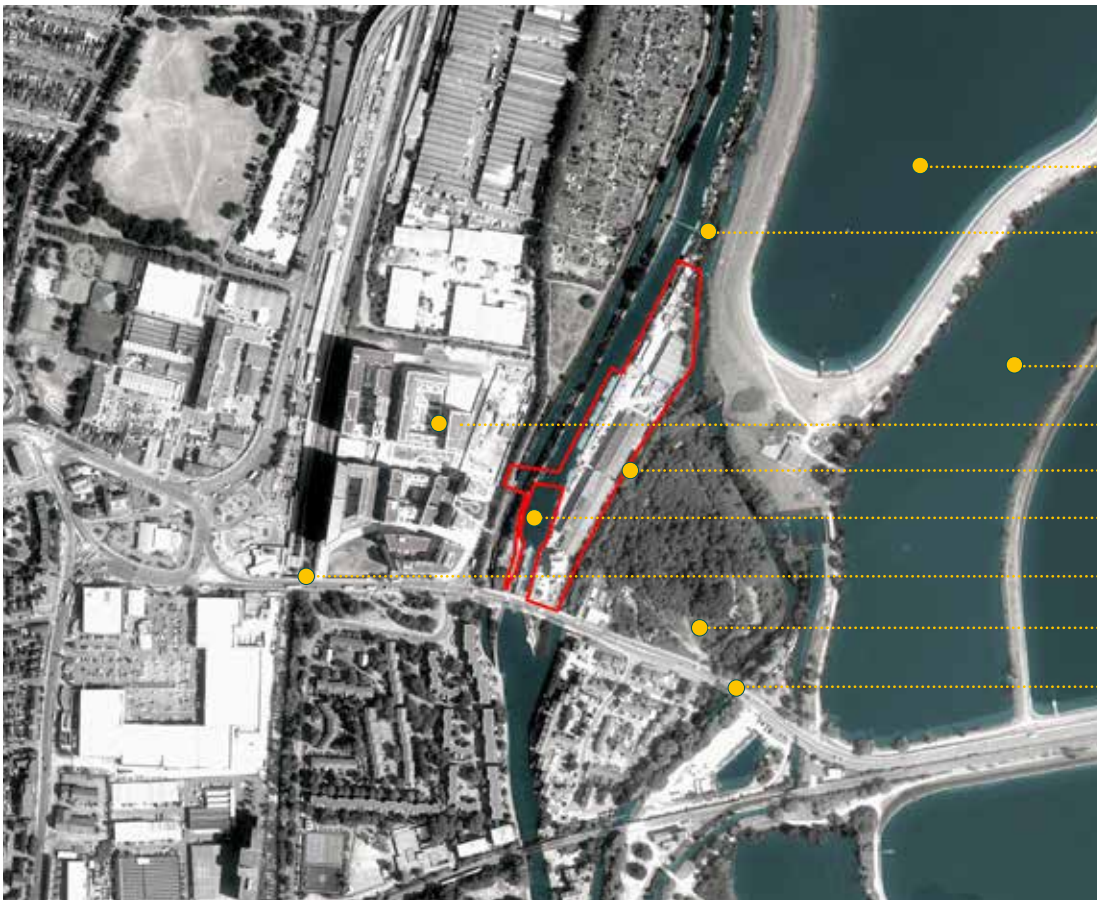
The site has diverse surroundings in terms of scale, use, height and character. The site is currently occupied by low rise commercial warehouses and a small office building. The site is largely inaccessible to the public and therefore feels isolated from its rich urban and ecological context.



Tottenham Hale's Location in Haringey and Greater London



Tottenham Area Action Plan Key Diagram
© London Borough of Haringey



LOCKWOOD RESERVOIR
(WALTHAMSTOW WETLANDS)

RIVER LEA

LOWER MAYNARD
RESERVOIR
(WALTHAMSTOW WETLANDS)

HALE VILLAGE

LEA DIVERSION

LEE NAVIGATION

TOTTENHAM HALE STATION
THE PADDOCK
COMMUNITY PARK

FERRY LANE



View of Hale Village from Ferry Lane



View of Tottenham Lock from Site



Hale Wharf - urban context

2.2 SITE LOCATION AND CONTEXT

2.2.1 Tottenham Hale Station

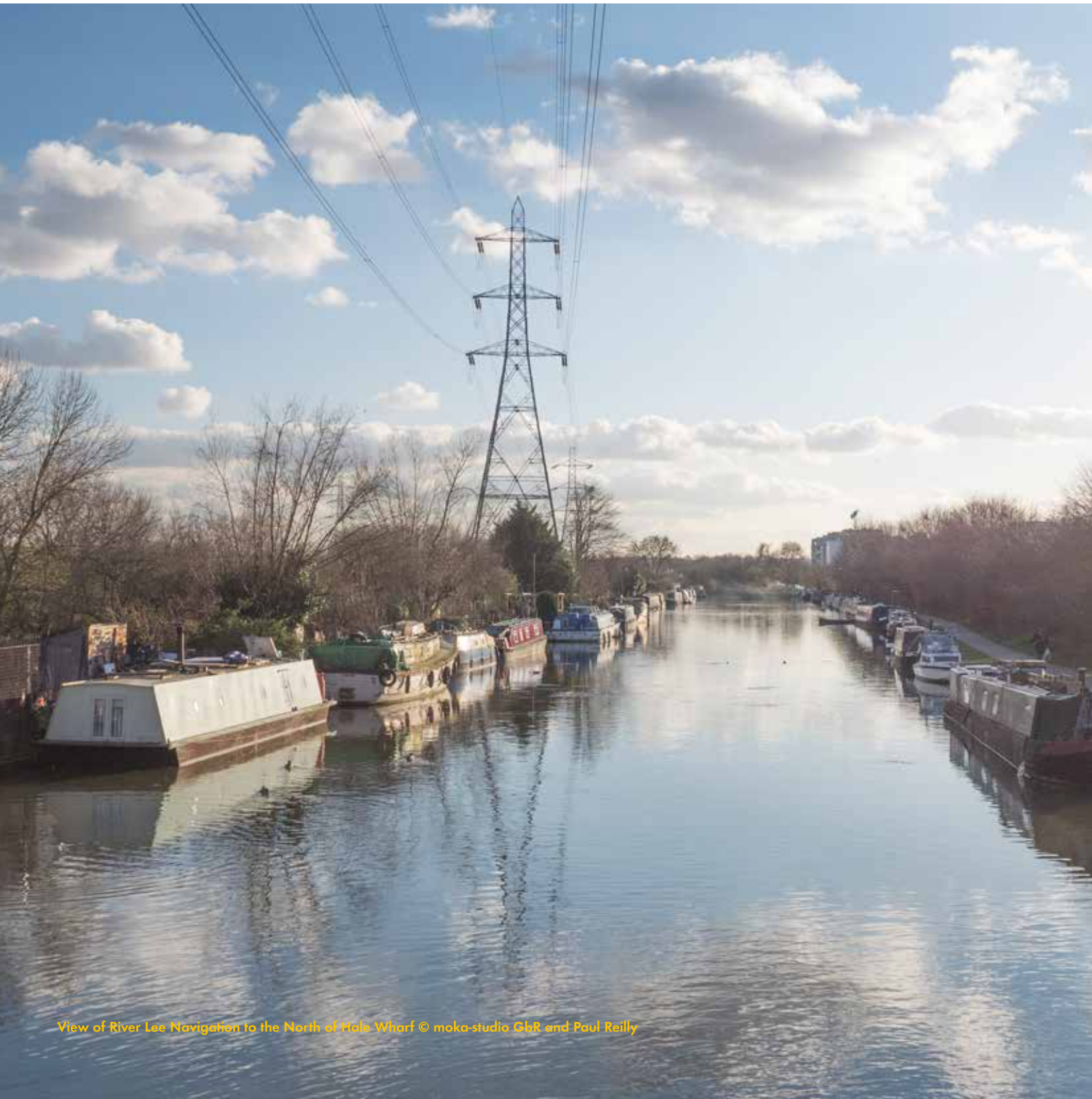
The site is close to Tottenham Hale station, being within a 5-10 minute walk. The station provides frequent links to the centre of London as well as to the neighbouring town centres of Seven Sisters and Blackhorse Road, via the Victoria underground line. The bus station serviced by many bus routes provides access to the wider surrounding area. West Anglian train service provides regular services in to London Liverpool Street as well as to Stratford, Cambridge, Herford East and Harlow Town. Future potential upgrades to the station include Crossrail 2, which would provide fast links from Tottenham Hale to Hertfordshire and Surrey.

2.2.2 Ferry Lane

Ferry Lane (A503) provides the main point of access to the site at its southern tip. The character of the areas varies along the road. To the west of the site the road is flanked by Tottenham Hale station to the north and commercial premises of Tottenham Hale Retail Park to the south, before the road joins with Broad Lane, the main artery towards Seven Sisters. To the east of the site Ferry Lane runs between the Paddock and Walthamstow Reservoirs and serves as the main artery to Blackhorse Lane and Walthamstow beyond (London Borough of Waltham Forest).

2.2.3 Residential Neighbourhoods and Hale Village

Tottenham Hale is a largely residential area. Neighbourhoods in closest proximity to the proposed site are located along Ferry Lane on formerly industrial land and are comprised of a combination of medium and low-rise housing. Hale Village, a large mixed used development including residential, student accommodation, health care, commercial and leisure uses, lies to the west of the site and provides a new character in terms of both scale and density for the surrounding area.



View of River Lee Navigation to the North of Hole Wharf © moka-studio G&R and Paul Reilly



Hale Wharf - aquatic context

2.2.4 Lee Valley Waterways and Tottenham Lock

The River Lee Navigation (a canalised river) and River Lea Diversion run to the west and east of the site respectively and define its character as part of the spine of the Lee Valley and potential as a spectacular waterside site.

The Tottenham Lock is located along the south-west of the site and is an important junction on the canal network of the Lee Navigation being used regularly by small boats and barges.

2.2.5 The Paddock Community Park

The Paddock is located to the east side of the site, separated from it by the River Lea Diversion, and is surrounded on two sides by the river. It is currently only accessible from Ferry Lane and is classified as a 'Site of Importance for Nature Conservation' by Haringey council. The site was re-opened as a community nature park in 2000.

2.2.6 Lee Valley Regional Park

The Lee Valley Regional Park is a 26 mile long, 10,000 acre park. Created by an act of Parliament, the park acts as a 'green lung' running along the Lee Valley from the Thames River through London, Essex and Hertfordshire, providing green open spaces, nature reserves and a number of watersports facilities along its extents. The area of the park to the north and south of the site is mostly comprised of designated Lee Valley pathways which run the length of the site along the eastern side of the River Lee Navigation.

2.2.7 Wathamstow Wetlands (SSSI and Ramsar site)

The Lockwood reservoir sits to the north-east of the site. The reservoirs are a complex of 10 large water bodies constructed in the late 19th century by the East London Waterworks company. The 211 hectare complex is considered an important ecological asset - it is classified as being of an area of Specific Scientific Interest (SSSI) and holds a European Ramsar designation.



Aerial view of Hale Wharf site and Harris Lebus Works Looking South 1900s © www.harrislebus.com



Aerial view of Hale Wharf Site and Harris Lebus Works Looking South 1940s © www.harrislebus.com



Aerial view of Hale Wharf Site and Harris Lebus Works Looking South 1960s © www.harrislebus.com



Aerial view of Hale Wharf Site Looking South 2008 © www.harrislebus.com

2.3 SITE HISTORY

2.3.1 Tottenham Hale a Victorian Suburb

The inhabitation of the area of Tottenham Hale or 'The Hale' is first documented by the existence of a weir in the Domesday Book of 1086. Despite this it was not until the mid 19th century when the area of Tottenham as a whole began to develop into a significant London suburb. The character of the wider area changed drastically in 1872 when the introduction of cheap daily rail tickets enabled a growing population of workers to commute from Tottenham to central London. This resulted in the expansion of Tottenham Hale as a Victorian commuter suburb and led to large-scale residential development along the high road, leading up to the area west of the station.

2.3.2 The Lee Valley Waterways - Industry on the site and its immediate surroundings

There was little residential development to the west of Tottenham Hale station and around the site itself during this time. In the 1700's the canalisation of the River Lee Navigation Channel and construction of the Tottenham Lock next to the site allowed for the expansion of industrial building along the wharf and its adjacent sites. The 18th century saw light industrial use on the site with a mill occupying the southern end of the site also home to warehouses for timber and gun powder storage.

In the 1900's the surrounding area was developed for heavier industrial use with sites such as that to the south-west of Hale Wharf being used for large factories such as that of the Harry Lebus furniture factory. It was only from the mid 20th century that these factory sites began to be demolished to make way for large residential developments.

Sources: Wikipedia and Hidden London



Hale Wharf Site and Wider Context. 1798



Hale Wharf Site and Wider Context. 1863



Hale Wharf Site and Wider Context. 1938



View south along the River Lee Navigation Channel



View from Ferry Lane towards River Lee Navigation Channel over Tottenham Lock

2.4 THE SITE AND ITS USES TODAY



Business barges along the River Lee Navigation channel



Pallette storing yard on site

The long narrow site is situated between the River Lee Navigation running along its western boundary and the River Lea Diversion along its eastern boundary. The main point of access to the site from Tottenham Hale is from Ferry Lane (A503) at the southern end. There is restricted access at the northern tip of the site to the Lee Valley Regional Park.

The site is currently occupied by low-rise commercial use buildings including workshops, warehouses, storage facilities and show rooms. Three business barges are moored in the River Lee Navigation along the eastern edge of the site, which will be retained in the scheme. Heron House, an office building which includes commercial space, is located in closest proximity to the Ferry Lane entrance of the site.

There is restricted public access to the site. Despite its proximity to valuable community park and recreational land, the site is currently in poor ecological condition, being overgrown and hard-surfaced with no drainage.

-  bus stops close to site
-  Tottenham Hale tube station
-  Tottenham Hale train station
-  primary vehicular access
-  Victoria Line
-  train Links
-  Lee Valley walk/ pathway



Existing vehicular and public connectivity

2.5 CONNECTIVITY



Tottenham Hale Station



View West along Ferry Lane



View from Stonbridge Lock South



Local shops - Chesnut road



Hale Village



Ferry Lane looking east



River Lea



Tottenham Hale Rail Station



Ferry Boat Inn, Ferry Lane



The Paddock

© moka-studio GbR and Paul Reilly

The shape of the site and its location between two existing water courses means that access into and out of the site is solely from the A503 Ferry Lane at present. Vehicle access is via a simple priority junction onto Ferry Lane, which runs through Tottenham Hale to the west and connects to the A10 and to the east runs through Walthamstow before joining the A104 close to the North Circular.

Pedestrian access on Ferry Lane is via well-lit footways that to the west links to Tottenham Hale and to the east towards Blackhorse Road and Walthamstow. Approximately 40m to the west of the site, access is available onto the Lea Valley Walk, which follows the route of the Lea Navigation Towpath from Waltham Abbey to the north to East India Dock to the south. The nearest pedestrian crossings on Ferry Lane are located at the Millmead Road / Ferry Lane signal junction around 80m to the west of the site and via a zebra crossing located approximately 90m east of the site.

Ferry Lane benefits from having existing on-carriageway cycle lanes located on each side of the carriageway at the site frontage. To the east this becomes an off-carriageway shared footway / cycleway running along the north side of Ferry Lane. The Lea Valley Walk also forms part of Route 1 of the National Cycle Network.

The site benefits from being within close proximity to bus services that currently run along Ferry Lane past the site as well as all of the services that access Tottenham Hale Bus Station, which is less than 400m from the site.

The site benefits from being less than 400m from Tottenham Hale National Rail Station and Tottenham Hale London Underground Station. Tottenham Hale London Underground Station is served by the Victoria Line, which runs from Brixton to Walthamstow Central, giving access to Oxford Circus, Euston and King's Cross St Pancras.

- site extents
- retail
- commercial
- public house/ bar
- schools
- place of worship/community use
- + healthcare



Existing local amenities diagram

2.6 LOCAL FACILITIES

A range of facilities are easily accessible within 10 minutes walk of the site.

Nearby facilities include a retail park, with shops including a supermarket and pharmacy. There is also a small supermarket within the Hale Village development.

There are three schools within walking distance of the site, Ferry Lane Primary and Welbourne Primary School and a new Harris Academy Upper school.

The Tottenham Hale Kidney and Diabetes centre is sited within the Hale Village development and a new GP practice has been also been announced to open in the Hale Village development in 2016.

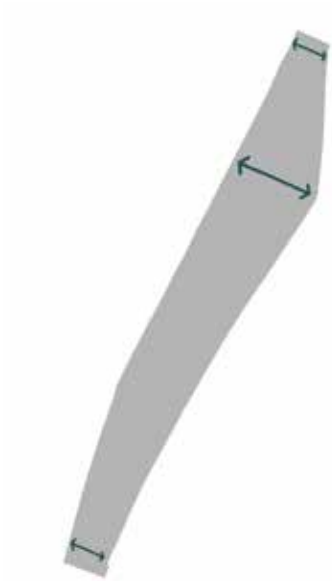


Diagram of proposed connections to and through Hale Wharf

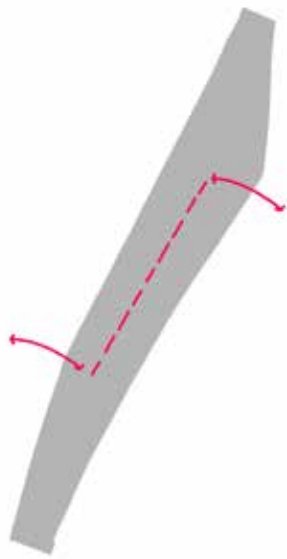


View South West towards Hale Wharf from the walthamstow reservoirs © moka-studio GbR and Paul Reilly

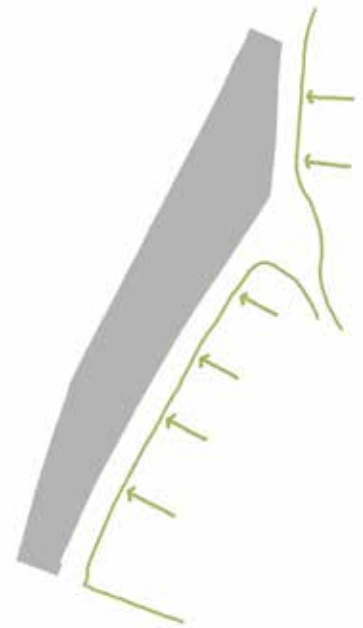




Narrow site



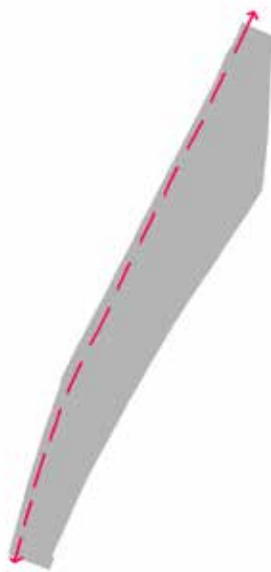
Bridge Access/ Green Grid



The Green Belt



Lock maintenance



Continued access



Biodiverse edges

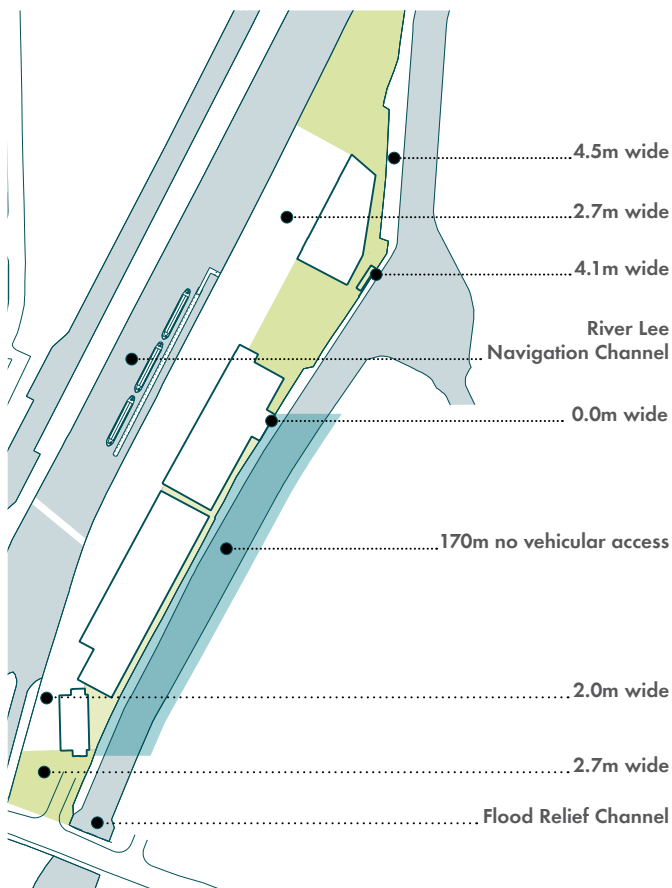
2.7 SITE CONSTRAINTS

The proposed development of the site has been designed to be mindful of the site constraints:

- *A Narrow site:* The site's narrowness, especially to its northern and southern extents provides a challenge in terms of providing an appropriate density and mix of housing. However, this narrowness provides an opportunity for a unique and dynamic set of waterside and courtyard spaces.
- *The Green Belt:* The site is surrounded to its eastern and north-eastern edges by the green belt. The sensitivity of any development in relation to the ecological assets of the Lee Valley Park, Paddock and Walthamstow Reservoirs is of utmost importance.
- *On-going maintenance of Tottenham Lock:* The lock is an integral part of waterside transport infrastructure within the Lee Valley waterways. The scheme must ensure that any development considers and allows for the ongoing use and maintenance of the lock.
- *Biodiverse edges:* A biodiverse zone is required to the eastern and western edges of the site. This zone is currently largely obstructed and will be largely reinstated in the proposed illustrative masterplan.
- *Providing access through the site:* The long and narrow nature of the site makes the provision of vehicular access through the site difficult. Continued access must be provided to leisure moorings to the north of the site.
- *Thames water asset:* A sludge pipe runs from the Paddock to the north eastern side of the site. Where it lands at Hale Wharf a no building zone must be maintained 3 metres to either side of the pipe and the landing sensitively incorporated in to the open space strategy of the scheme.



Overgrown edge of site to River Lea Diversion Channel



Existing water edge condition



View south along the River Lee Navigation Channel Towpath © moka-studio GbR and Paul Reilly

2.7.1 Flood risk and drainage

The site lies in a relatively complex water environment as there are a number of watercourses in close vicinity to the site. Along the eastern site boundary the River Lea divides into two separate channels; River Lea Flood Relief Channel along the eastern boundary, and the River Lee Navigation Channel along the western boundary.

A comprehensive Flood Risk Assessment has been undertaken to accompany the Environmental Impact Assessment (EIA), and detailed flood modelling data for these two watercourses has been purchased from the Environment Agency to inform the site design.

The Environment Agency indicative flood maps for planning show the site to be situated in Flood Zone 2. However, comparison of topographical site survey data with the Environment Agency modelled flood levels adjacent to the site shows that the site is situated above the 1 in 1000 year (0.1% annual probability) flood level. Therefore tidal and fluvial flood risk is considered to be low. Flood risk from all other sources has been assessed as part of the Flood Risk Assessment and are also deemed to be low.

The maximum 1-in-1000 year flood level adjacent to the site is 8.55m AOD. It is proposed that the minimum building finished flood level at the site is 9.00m AOD, broadly in line with existing levels at the application site. This will provide a 450mm freeboard above the maximum modelled flood level and ensure that flood risk to site occupants will remain low following development. Further consultation with regulators will be ongoing throughout the planning process, and the design will incorporate any further flood resilience features that may be necessary.

The surface water management system will need to demonstrate that it will not increase flood risk to downstream receptors. As the application site is currently entirely impermeable, the proposed scheme will introduce softer landscaping throughout, reducing the amount of surface water discharging into the River Lea. As part of this scheme, various Sustainable Drainage Systems (SuDS) will be incorporated to manage runoff back into the River Lee Navigation and Flood Relief Channel by slowing down, storing and treating rainfall runoff. This will lead to a net improvement in terms of water quality discharged into the adjacent watercourses, and a reduction in the peak flows compared to the current situation. As a result of these measures downstream flood risk will in fact be reduced due to the development.

The application site is at low risk of tidal and fluvial flooding. Flood risk to the application site from all other sources has also been assessed to be low. The proposed building Finished Flood Levels within the proposed development are to be set to a minimum of 9.00 m AOD. This allows for a minimum of a 450 mm freeboard above the 1-in-1000 year flood level at the application site. This will ensure that the proposed development remains at low risk of tidal/ fluvial flooding and there will be no loss of floodplain volume or corresponding increases in flood risk to downstream receptors. On this basis the magnitude of effects to the water environment during the operational is assessed to be minor to negligible, with some moderate benefits.

2.7.2 Ecology

Within 500m of the application site there is one national designation; Walthamstow Reservoirs Site of Special Scientific Interest (SSSI) which is 20m north of the proposed development at its closest point. The Walthamstow Reservoirs SSSI is considered to have national importance based on their designations. The reservoirs contain one of the country's major heronries and a particularly large concentration of breeding wildfowl.

There are four locally designated Sites of Importance for Nature Conservation (SINCs) within 500m of the proposed development area, the closest of which is Lee Valley, directly adjacent to the proposed development. Tottenham Marshes (350m to the north) and Tottenham Hale to Northumberland Park Railside (250m to the south and west) are considered to have Borough/District importance based on their identification in local policy. East Hale Allotments are located approximately 50m to the west of the application site.

Ecological surveys and a desk study of the application site found that the adjacent waterways, wetland and woodlands are likely to provide valuable foraging and commuting habitat to bat and wetland bird species. The application site itself was found to have little ecological value.

The application site lies adjacent to a number of areas protected for nature conservation that are being considered as part of the environmental assessments:

- *Lee Valley Special Protection Area (SPA);*
- *Lee Valley Ramsar Site;*
- *Walthamstow Reservoirs Site of Special Scientific Importance (SSSI);*
- *Sites of Importance for Nature Conservation (SINCs):*
- Lee Valley SINC – borders the site, includes waterways and Paddock Community Nature Park to the east;
- Tottenham Marshes SINC;
- Tottenham Hale to Northumberland Park Railside SINC; and
- East Hale Allotments SINC.

The following ecological surveys have been undertaken to gain an understanding of the wildlife at the proposed development:

- *Extended 1 Habitat Survey*, undertaken in August 2014, including whether the habitats are likely to support protected species (such as bats, reptiles, amphibians etc.) or harmful plants. All buildings, structures and trees were considered for their potential to support a bat roost.
- *Water Vole Survey* of adjacent River Lee Navigation and Flood Relief Channel was undertaken in October 2014 and verified in March 2016.
- *Otter survey* of adjacent River Lee Navigation and Flood Relief Channel was undertaken in October 2014 and verified in March 2016.

The Environmental Statement considers areas protected under national legislation and local policy and areas protected under international legislation are fully considered as part of a Habitats Regulations Assessment (HRA) screening process. As part of the assessment there have been a number of potentially sensitive receptors identified:

Designated sites:

- Walthamstow Reservoirs SSSI;
- Lee Valley SINC ('Metropolitan Site');
- Tottenham Marshes SINC ('Borough Grade I Site');
- Tottenham Hale to Northumberland Park Railside SINC ('Borough Grade II Site'); and
- East Hale Allotments SINC ('Local Site').

Habitats:

- Terrestrial habitats forming part of nationally and locally designated sites; and
- Aquatic habitats as part of nationally and locally designated sites.

Species:

- Bats;
- Birds;
- Water voles; and
- Fish.

Design interventions included within the proposed development due to the proximity of the designations and sensitive receptors have incorporated building massing which ascends from the closest parts of the designated sites at the northern end of the application site increasing in height with distance from the SPA/SSSI towards Ferry Lane at the south end of the site.

The proposed development will incorporate a number of mitigation and enhancement measures at both the construction and operational phases, these include:

Construction

- Development and implementation of a Construction Environmental Management Plan (CEMP) by the principal contractor. To include:
- Provisions for control of invasive non-native plants (including mitigation of the risks of spreading and to contractors for potential harmful plants such as giant hogweed);
- Provisions for the prevention of disturbance to nesting birds through avoidance of clearance during the nesting season, or the presence of an Ecological Clerk of Works (ECoW); and
- Pollution prevention commitments including measures to control the emission of dust during construction.
- Use of acoustic hoarding on the eastern boundary of the development site during construction to reduce noise disturbance; and
- Lighting strategy to address light spill during construction.

Operational

- Floating reedbeds within the pontoon on the River Lee Navigation Channel;
- Landscape planting which will include native or nectar-rich species, which will benefit wildlife such as birds and insects;
- Integration of ecological enhancements into the development including bat roost and bird nesting features where possible and in habitat incorporated into the landscape design and play space where appropriate;
- Lighting strategy to address light spill during operation; and
- Pollution prevention plan.

The application site itself was found to have little ecological value and following assessment it is considered that the proposed development would have no significant adverse ecological effects following implementation of the proposed mitigation and enhancements measures.



Potential improvements of the Paddock Community Nature Park. Diagram showing improved routes and bridge link to Hale Wharf © London Borough of Haringey. Tottenham Hale: Green and Open Space Strategy



The Paddock Community park



River Lee Navigation tow path north of Hale Wharf © Canal and River Trust

2.8 SITE OPPORTUNITIES

The development site offers numerous opportunities:

- *The Tottenham Housing Zone:* Development of the site would allow for provision of a substantial number of homes to meet the housing zone target and the creation of a new neighbourhood for Tottenham Hale.
- *Transport links:* The site is already in close proximity to good public transport, cycle and pedestrian links which will be further improved by improved cycle and pedestrian routes through and across the site.
- *Green and Open Space Strategy:* The location of the site between the existing neighbourhoods of Tottenham Hale to the west and the ecological assets of the parklands and reservoirs to the east mean that the site is ideally placed to provide part of a 'green grid' from existing neighbourhoods of Tottenham Hale to nature and quality open space.
- *The Waterside Site:* It is a rare opportunity to have such a substantial waterside site available for development. The Canal and River Trust has identified Hale Wharf as a landmark site along the Lee Valley waterway network.
- *Improved connections:* The site is mostly inaccessible to the public at present, the development of the site and new bridges will allow access in to the site and its new waterside public spaces.
- *Ecological habitat:* The site currently is in a very poor ecological state, a new sustainable landscape masterplan of connected waterside public and private spaces will incorporate means of increasing and improving ecological habitats on the site.



View of the Walthamstow Wetlands © moka-studio GbR and Paul Reilly

