



# **WEST HENDON**

## **ENVIRONMENTAL STATEMENT NON-TECHNICAL SUMMARY**

March 2013

Halcrow



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# West Hendon Development

WH5.0 Environmental Statement – Non-Technical  
Summary

Version 1

Barratt Metropolitan LLP

February 2013

# Non-Technical Summary

## 1. Introduction

Barratt Metropolitan Limited Liability Partnership (BMLLP) commissioned Halcrow Group Ltd, a CH2M HILL Company, to undertake an Environmental Impact Assessment of the proposed redevelopment of the West Hendon site in Barnet, London (Grid Ref: 522033 188045) (Figure 1). Due to the size (approximately 13ha) and nature of the proposed redevelopment, an environmental impact assessment was required under the Town and Country Planning (Environmental Impact Assessment) Regulations 2011 (Statutory Instrument No. 1824 of 2011), to support the submission of a planning application.

An Environmental Statement has been prepared to document the findings of the environmental impact assessment and in particular, identify the likely significant effects of the proposed redevelopment. This Non Technical Summary summarises the content of the Environmental Statement.

## 2. The application site

The application site lies within the administrative boundary of the London Borough of Barnet, but is also close to the boundary of the London Borough of Brent. The application site boundary incorporates the redevelopment site and stretches of The Broadway (the A5), Station Road and Herbert Road to the east and Cool Oak Lane to the south (see Figure 1). Two areas for potential new footbridges are also included, one adjacent to Cool Oak Lane Bridge and one to the north of the application site over Silk Stream.



*Photo showing aerial view of the West Hendon Application Site*

The application site mainly currently consists of a 1960s residential estate, with buildings ranging in height from two to six storeys, with a 14 storey tower toward the centre of the site, a community centre and retail and residential buildings on the western side of The Broadway. There are a number of minor residential roads within the application site and a local loop of the A504 called Perryfield Way.

The application site is bordered by The Broadway to the east and Brent Reservoir to the west (the reservoir is also known as the Welsh Harp). The areas to the east and south, and a small area to the north, are predominantly residential. To the north are large commercial and industrial premises. Woodland is present to the north and west of the site, lining Brent Reservoir (which is a site of high nature conservation importance), with playing fields further west (beyond the reservoir). The M1 and a railway line run parallel to the A5, approximately 150m to the east of the application site (at its nearest point).

### **3. The proposals**

The proposed development at West Hendon is for the mixed use (mainly residential) redevelopment of the application site to include, as shown on Figure 2:

- Up to 2,000 houses and flats (to be implemented in a number of residential blocks, including 4 tower blocks);
- Space for commercial units in the lower floors of the buildings near or on The Broadway;
- Site for a primary school;
- A community centre;
- Transport improvements, including provision of new access routes, footway and busway improvements, new pedestrian crossings, junction and existing road improvements, new internal roads;
- Provision of two new footbridges;
- Associated landscaping (including planting up of public spaces);
- Provision of children's play areas.

The existing 597 homes within the estate will be demolished and replaced by a new neighbourhood of up to 2,000 new homes. Public open space (e.g. including an improved York Park), communal/private gardens and formal children's play areas will be provided to improve the quality and quantity of accessible open space within the application site.

All required infrastructure and utilities (i.e. electricity, gas, telecommunications, foul water, potable water) will be provided to the redevelopment. A district heating network linked to an energy centre, will use a combination of gas-CHP (i.e. combined heat and power) and gas-fired boilers to provide low carbon heat and hot water for the development.

It is currently anticipated that the proposed development will be brought forward in four phases over a 17-year period, each of which will include the necessary demolition, preparatory works and subsequent construction works.

A planning application will be submitted to The London Borough of Barnet which will include an application for full planning permission for part of the development (six residential/commercial blocks, and associated car parking, landscaping, utilities and transport infrastructure); and outline planning permission will be sought for the remainder (i.e. remainder of residential/commercial blocks, school site, community centre, two footbridges, transport improvements, associated landscaping, car parking and utilities).

#### **4. Alternatives considered**

A previous masterplan for the site was developed and received planning permission in 2008. Parts of this previous masterplan have or are currently being constructed. These include eight residential units at the location called 'Pilot' and 186 residential units at 'Lakeside'. However, this previous project will not be progressed further.

Through the masterplanning process for the current proposals, a range of redevelopment proposals was considered for the application site, including completing the previous part implemented masterplan. This was not a financially viable option and the previous masterplan included a number of now outdated design principles. Therefore, the need for a new masterplan was identified based around a number of design principles. All options considered identified the importance of Brent Reservoir, The Broadway, the need to reinstate a logical and direct pedestrian path from the site to the railways station and the need to connect the site to the surrounding urban area. A number of these issues were not adequately addressed by the previous masterplan. A preferred option was identified which was presented to and discussed with the London Borough of Barnet.

Further development of this preferred option was then undertaken which has led to the current proposals. Throughout this process, regular reviews were undertaken with the council, local residents and other stakeholders as listed below under consultation.

#### **5. The Scope of the Environmental Assessment**

As the first key stage of the environmental impact assessment process, a scoping assessment was undertaken in 2012 to identify the significant environmental effects of the proposed redevelopment across a range of environmental topics. A Scoping Report was prepared and submitted to The London Borough of Barnet to seek a Screening and Scoping Opinion under the environmental impact assessment Regulations. This was received from The London Borough of Barnet in January 2013 and confirmed the need for and the required scope of the environmental impact assessment (see Table 1).

Table 1: Range of environmental topics considered within the environmental impact assessment

• <b>Transport</b>	• <b>Socio-economic</b>
• <b>Air quality</b>	• <b>Health impact assessment</b>
• <b>Noise and vibration</b>	• <b>Cultural heritage</b>
• <b>Ground conditions</b>	• <b>Material resources</b>
• <b>Water environment</b>	• <b>Daylight/sunlight</b>
• <b>Biodiversity</b>	• <b>Wind</b>
• <b>Landscape and visual amenity</b>	• <b>Cumulative effects</b>

## 6. Consultation

In addition to the Screening and Scoping Opinion consultation with The London Borough of Barnet (and through this process a number of statutory environmental bodies), specific consultation has been undertaken as needed for each specialist topic to discuss the scope and the approach/methods to be used for specific assessments. Those consulted included (amongst others) the Environment Agency, Canal and River Trust, Natural England, Transport for London, Welsh Harp Joint Consultative Committee, West Hendon Estate Residents Regeneration Group and The London Borough of Barnet’s specialist officers (such as Transport, Planning, Environmental Health Officer, Greater London Authority).

## 7. Approach to the Environmental Impact Assessment

The environmental impact assessment, as reported in the Environmental Statement, reflects the scope identified by The London Borough of Barnet and has been undertaken in accordance with the requirements of the environmental impact assessment Regulations and relevant good practice. For each environmental topic, existing baseline conditions were identified and described, informed by surveys and investigations as needed. The potential impacts of the phased construction and operation of the proposed redevelopment on sensitive receptors were assessed and where necessary, measures were proposed to reduce, mitigate or avoid identified adverse effects. The significance of these residual effects, whether adverse or beneficial, were then identified.

In particular, the environmental impact assessment has taken into account the following key aspects of the proposed redevelopment:

- The phased construction programme means that different types of activities (construction and operational) will be undertaken across the application site at any given point in time. This complexity has been considered within the environmental impact assessment to ensure that impacts on existing and newly introduced receptors are fully considered;
- The nature of the planning application meant that the environmental impact assessment has considered different levels of development information depending on whether the application was for outline or full planning permission.

## **8. Key findings of the Environmental Impact Assessment**

This section presents a summary of the key findings of the environmental impact assessment across the range of environmental topics considered, which reflect the scope of the environmental impact assessment identified by The London Borough of Barnet. Full details of these assessments are provided in the Environmental Statement.

### **a. Transport**

The Transport Chapter of the environmental impact assessment describes the baseline conditions and potential impact of the proposed development on all modes of transport (e.g. road traffic, public transport, pedestrians and cyclists) and describes proposed mitigation measures which will be brought forward to enhance all transport connections around the application site.

Detailed traffic modelling, as described in a separate Transport Assessment, provides predicted changes in future traffic flows resulting from other planned developments within the vicinity and the additional impact of the proposed traffic resulting from the proposed development. These predicted changes have been used to assess potential impact on all roads within the study area in terms of the impact on drivers, pedestrians and cyclists.

In terms of mitigation, a series of transport improvements will be undertaken as part of the development of the site. As well as access junctions to the site, the use of Perryfield Way as a main road will cease and it will become a residential road, therefore removing high traffic volumes from the estate. Also, a number of pedestrian crossings will be created on the West Hendon Broadway, Cool Oak Lane and Station Road. The various mitigation measures will be implemented in phases.

Potential adverse impacts are also addressed and eliminated, where possible, within the proposed detailed design of the highway improvements that are integral to the proposals; and which include improved footways, pedestrian crossings and streetscape improvements.

The assessment shows that during construction there will be some residual minor adverse impact on access routes to the site due to construction traffic. These routes will change during the phasing of the scheme and avoid any particular residential area being impacted throughout the works.

In relation to the future development-related traffic, the assessments indicate that during the early phases there will be some minor adverse impacts, mainly along the A5 corridor, whilst the later phases indicate moderate beneficial impacts for significant areas of residential development with minor adverse impact on stretches of the A5 corridor. These changes are related to the reallocation of traffic from currently unsuitable residential streets to an appropriate road corridor that will result from the implementation of the major highway works.

## **b. Air quality**

Some construction activities are likely to generate dust which has the potential to cause nuisance (e.g. discolouration of surfaces) at nearby properties if uncontrolled. However, with the adoption of mitigation measures, such as wetting down, these impacts are predicted to be temporary, of low significance with no long-term effects.

Vehicles and combustion processes emit pollutants which are harmful to human health and ecosystems. The development is located within an Air Quality Management Area (an area of poor air quality), declared largely as a result of vehicle emissions. The assessment indicates that the traffic and energy centre emissions associated with the proposed development will have a slight adverse effect on air quality at existing properties within the vicinity of the development (on and off the site). Air quality effects at Brent Reservoir (an area of high nature conservation importance) are expected to be negligible.

There will be an increase in residential properties as a result of the development, introduced into an area where air quality is currently poor (i.e adjacent to The Broadway). Mitigation measures, including mechanical ventilation, will be undertaken to improve air quality for residents living in these properties which will ensure that air quality meets acceptable standards.

## **c. Noise and vibration**

A noise survey has been undertaken and the main existing source of noise was identified as being from road traffic.

During construction significant noise or vibration impacts could occur at times, possibly affecting both existing local residents and new residents to the site as the development progresses. Therefore, mitigation will be implemented to minimise noise impacts. These measures will include (amongst other actions) the use of the quietest working equipment available and low vibration piling methods within 20 metres of structures and services (such as pipelines).

Once the development is in use (i.e. operational) there is not predicted to be a significant change in road traffic noise levels resulting from any change to traffic flows, possibly with improvements to those properties adjacent to Perryfield Way due to removal of the gyratory. Design targets have been identified for noise from new plant (such as that associated with the proposed energy centre) on the application site. Assuming these targets are adhered to, noise impact from fixed plant will not have a significant impact. Noise impacts on future users of the application site will be reduced by the use of window glazing and detailed consideration of the layout of the development. This is particularly appropriate for development adjacent to The Broadway, which is the main road in the area.

With appropriate mitigation in place, all noise impacts during operation have been identified as being not significant.

#### **d. Ground conditions**

A review of ground conditions, including groundwater, has been undertaken to identify the potential for significant effects relating to land contamination and groundwater and how remediation, if required, could mitigate those effects to enable the development proposals to proceed in a manner that ensures risks to occupants, buildings, controlled waters, landscaped areas and the wider environment are minimised to an acceptable level.

Based on the proposed scheme, limited identified contaminant sources and potential standard construction / mitigation measures, there is not expected to be any significant pollutant linkages associated with the development. There are not expected to be any significant environmental effects from normal usage of the proposed development on the ground conditions. Any pollution incidents which occur during the lifetime of the proposed development would be controlled, as required, following best practice prevailing at that time.

#### **e. Water environment**

The application site is bounded by the Brent (or Welsh Harp) Reservoir to the west, Dollis Brook (or River Brent) to the south and Silk Stream to the north. Brent Reservoir is known to suffer from water quality issues. The site lies within an area considered to be at low risk from flooding from the reservoir or rivers. There is a risk of flooding when rainfall is particularly heavy and this risk has been considered in a Flood Risk Assessment for the site.

During construction, impacts will relate to the disturbance of earth and soil which may run into the reservoir and from using substances that can cause pollution as part of construction activities, such as cement and fuel. With mitigation, such as following the Environment Agency's guidelines, the risk of an effects occurring can be reduced. The construction of the bridge over the Silk Stream is also a high risk activity with potential to cause pollution during its construction, for a temporary period. Therefore, this will be undertaken in accordance with methods to be agreed with Natural England to prevent any pollution.

Following construction, to reduce the risk of flooding during a rainfall event, rainwater will be temporarily stored underground, in pipes and in a pond before being allowed to enter Brent Reservoir. These flood risk reduction methods will also provide improvements for water quality by removing pollutants from the water. This will be an improvement compared to the existing situation.

#### **f. Biodiversity**

The Application Site is urban in nature being dominated by residential blocks, the majority of which were constructed in the 1960s. The areas surrounding these blocks comprise amenity grassland, scattered ornamental shrubs as well as roads and footways. Adjacent and immediately to the west is the Brent Reservoir Site of Special Scientific Interest (SSSI), which signifies an area designated for its nature conservation importance. It is notified primarily for its bird interest and in particular for breeding great crested grebe and wintering gadwall and shoveler.

The assessment of the ecological effect of the proposed development is founded on a clear understanding of; (i) the ecological receptors associated with the Application Site and the Brent Reservoir; and (ii) the likely impacts of the construction and operation of the development.

Ecological receptors have been identified and valued following a desk study to review existing biological records and relevant research papers in relation to bird collision. This informed field studies within both the Application Site and the Reservoir involving habitat assessment and detailed surveys in relation to breeding and wintering birds, as well as roosting bats. The scope, specification and interpretation of these surveys were informed by consultations with Natural England, the Canal and River Trust, the Environment Agency and the Welsh Harp Conservation Group.

Detailed spring and summer surveys established the areas of greatest importance for birds breeding on the reservoir. Autumn and winter surveys recorded the abundance and distribution of wintering birds across the waterbody, as well as their response to disturbance through surveys undertaken on undisturbed week days as well as more disturbed weekend days when the waterbody is used for water sports.

The Application Site includes no habitats of intrinsic ecological value. However, features within existing buildings and the adjacent woodland jointly provide conditions that support an assemblage of birds characteristic of heavily urbanised areas, while buildings include voids and cracks that can be expected to be used on a transient basis by crevice dwelling species of bat.

Subject to precautionary management to ensure nesting birds and roosting bats are not injured or disturbed, the proposal will have no significant effect on the populations of either birds or bats associated with the site during construction. As the scheme becomes operational dedicated measures, including carefully specified bird/bat bricks and boxes, vegetated roofs, new native landscape planting, creation of wetland features as well as sensitive management of potential indirect impacts, including lighting, will continue to provide suitable conditions for species associated with the site and for target species known to be present in the local area. As such there will continue to be no significant effect on bats and birds associated with the Application Site, and there may potentially be a minor beneficial effect on both populations.

Managing the impacts on the Brent Reservoir SSSI likely to arise from the construction and use of footbridges over the Silk Stream and Cool Oak Lane, enhancing the interface between the SSSI and the Application Site and measures to manage potential disturbance impacts resulting from an increased number of residents in West Hendon will jointly ensure there will be no significant effect on the key features for which the Brent Reservoir SSSI is notified.

### **Landscape and visual amenity**

The redevelopment proposals were assessed against the existing situation as part of the landscape and visual assessment. In terms of landscape character the impacts were assessed to be positive overall, primarily as the character of the West Hendon

Estate will be greatly improved through the removal of worn and badly designed buildings, but also because of the positive effect this will have on the surrounding areas – especially The Broadway, and it will be a catalyst for further improvements.

The visual impacts can be broadly divided into those from urban areas and those from open green space. The views from urban areas, such as The Broadway, The Hyde and the A406, are expected to be improved as the new buildings act as landmarks for the proposed town centre and add interest against the urban backdrop. However, there are negative impacts expected on views from Brent Reservoir and West Hendon Playing Fields when considered in the context of open skyline, not due to an assumption that the buildings themselves would be unattractive. From a townscape (as provided by Peter Stewart Consultancy), as opposed to a landscape perspective, the tall buildings provide a strong sense of identity to the development, marking the presence in the wider townscape of an area that today has no presence at all.

#### **g. Socio-economic**

The assessment established the baseline socio-economic conditions for the application site and its surroundings, in order to identify possible receptors that may be impacted by the development proposals. This review highlighted a number of possible socio-economic receptors, including the housing market, labour market and social infrastructure (for example: GP/dental surgeries, education facilities, community facilities).

The assessment identified the likely impacts of the development proposals on these receptors. Moderate adverse impacts were identified in relation to housing demolition during the construction stage, and provision of primary school and open space infrastructure in the operational stage. Mitigation measures have been proposed to alleviate the possible adverse impacts associated with these receptors during operation including the provision of a primary school on the site. The proposals will provide a number of beneficial impacts for other receptors, through an increase in affordable housing supply and opportunities for wider regeneration.

#### **h. Health impact assessment**

The aim of the health impact assessment was to assess the potential effects on the physical, social and mental health of current and future residents of the West Hendon estate, and the distribution of the health effects within those residents.

The baseline information shows that the health of people in Barnet is generally better than the England average. However, there are significant pockets of deprivation within Barnet and about 15,700 children live in poverty, which is significantly worse than the England average. The West Hendon estate is one of the most deprived areas of Barnet and this deprivation has an influence on health.

The assessment showed that there are likely to be negative health effects for some future residents of the estate, for example, related to the existing poor air quality and noise disturbance during construction and demolition. However, these will be

effectively mitigated through the implementation of good site management during construction.

The health impact assessment found that there would be uncertain health effects on existing residents that will have their homes demolished as part of the redevelopment, with some people more content with their new accommodation than others. Existing residents who are secure tenants will be re-housed on-site, whereas non-secure tenants will be re-housed elsewhere in the Borough. However, continued communication with residents throughout the redevelopment should help to minimise any negative health outcomes.

The redevelopment is expected to have many positive health outcomes. Indoor housing conditions are likely to significantly improve from current conditions and there will be improvements to the communal areas, footpaths and road safety, in particular the removal of the current high traffic use of Perryfield Way. There will also be significant improvements to the quality of recreational and play space and much improved access to nearby recreation areas, such as the Brent Reservoir and West Hendon Playing Fields. A new on-site primary school, nursery and community centre and increased retail provision will help maintain or improve social networks, provide job opportunities and increase the opportunities for walking and cycling.

#### **i. Cultural Heritage**

The assessment of cultural heritage used a range of available resources to establish the known archaeological and built heritage baseline of the application site. An estimate of the potential buried archaeological resource was also made, based on the available evidence.

In terms of built heritage, the proposed development will not have any major adverse effects on designated structures, either physically or to their settings. Some historic (but not designated) buildings will be removed as part of the proposals, and this will have an adverse effect both on the buildings themselves and the local historic townscape. An existing record of the buildings will be taken.

The site has been subject to large-scale development impacts in the past, and the potential for previously unknown buried archaeology is therefore generally low. There is a slightly higher potential for buried archaeology at the edges of the site boundary, which might be affected by development activity. Further investigation will inform the need to carry out full archaeological investigation in these areas.

#### **j. Material resources**

The likely significant effects associated with and the use of natural resources (such as aggregate and wood) and the generation and management of solid waste as a result of the construction and operation of the proposed development has been assessed.

During construction the principal impacts will be the use of natural resources, the energy associated with the manufacture and transport of materials, and the solid waste generated that cannot be avoided, reused or recycled on-site and which will require treatment or disposal off-site. These impacts will be mitigated by using

sustainably sourced materials, re-using and recycling waste where possible and developing a Waste Plan (incorporating good practice for waste management during construction). Following mitigation, the effects of the construction of the proposed development are assessed to be not significant.

During the operation of the development, the principal impacts will be the household and commercial wastes generated that will require collection, recycling, composting or disposal off-site. These impacts will be mitigated by ensuring that each residential and commercial property is provided with suitable space to enable the householder and business to effectively separate and store recyclable waste and other waste. Following mitigation, the effects of the operation of the development are assessed to be not significant.

#### **k. Daylight/sunlight**

The daylight and sunlight reductions to be experienced by the surrounding residential properties will be principally within the guidance set out in the BRE guidelines and are therefore likely to be unnoticeable to the occupants. Overall, the effects to the surrounding properties are considered to be acceptable when put into context of the whole development and the benefits the regeneration will bring to the local area.

The daylight and sunlight assessments undertaken to the detailed application buildings show that adequate levels of daylight and sunlight are likely to be enjoyed to the proposed apartments. In addition, all proposed amenity spaces will enjoy good levels of sunlight.

#### **l. Wind**

A wind impact assessment for the proposed development was carried out using both a qualitative desktop study and a quantitative analysis using Computational Fluid Dynamics (a mathematical model). A range of different wind conditions were considered and the effect of the development on local wind speeds, winds off-site and pedestrian comfort was assessed. This analysis identified that the proposed development has a marginal impact on wind conditions off-site. The predicted maximum wind speeds on-site are consistent with the proposed usage and as such significant additional mitigations are not recommended.

#### **m. Cumulative effects**

Effects which on their own may not be considered to be significant can, when taken in combination with other scheme or non-scheme effects, cause significant effects, and may possibly require mitigation. To address this, the environmental impact assessment has considered the potential for cumulative effects resulting from other planned developments in the vicinity of the application site (e.g. the Brent Cross town centre regeneration) and the potential for additional effects resulting from the proposed development (e.g. the combined effects on residents of increased noise levels, dust levels, and changes in visual amenity). Consultation with The London Borough of Barnet and Brent Council was undertaken to identify the other planned developments to be considered within this assessment.

This assessment concluded that no significant cumulative effects are anticipated during the demolition, construction and operation of the proposed redevelopment in combination with other planned developments, although the additional traffic generated on the local road network could cause disruption to road users.

Cumulative effects resulting from the proposed redevelopment are most likely to affect residents and site workers during the construction period. They will experience increased noise and dust levels, changes in air quality due to increased traffic emissions, and changes in landscape character and views. Measures are identified to mitigate and manage these effects, to ensure that no significant cumulative effects result.

## **9. Conclusions and recommendations**

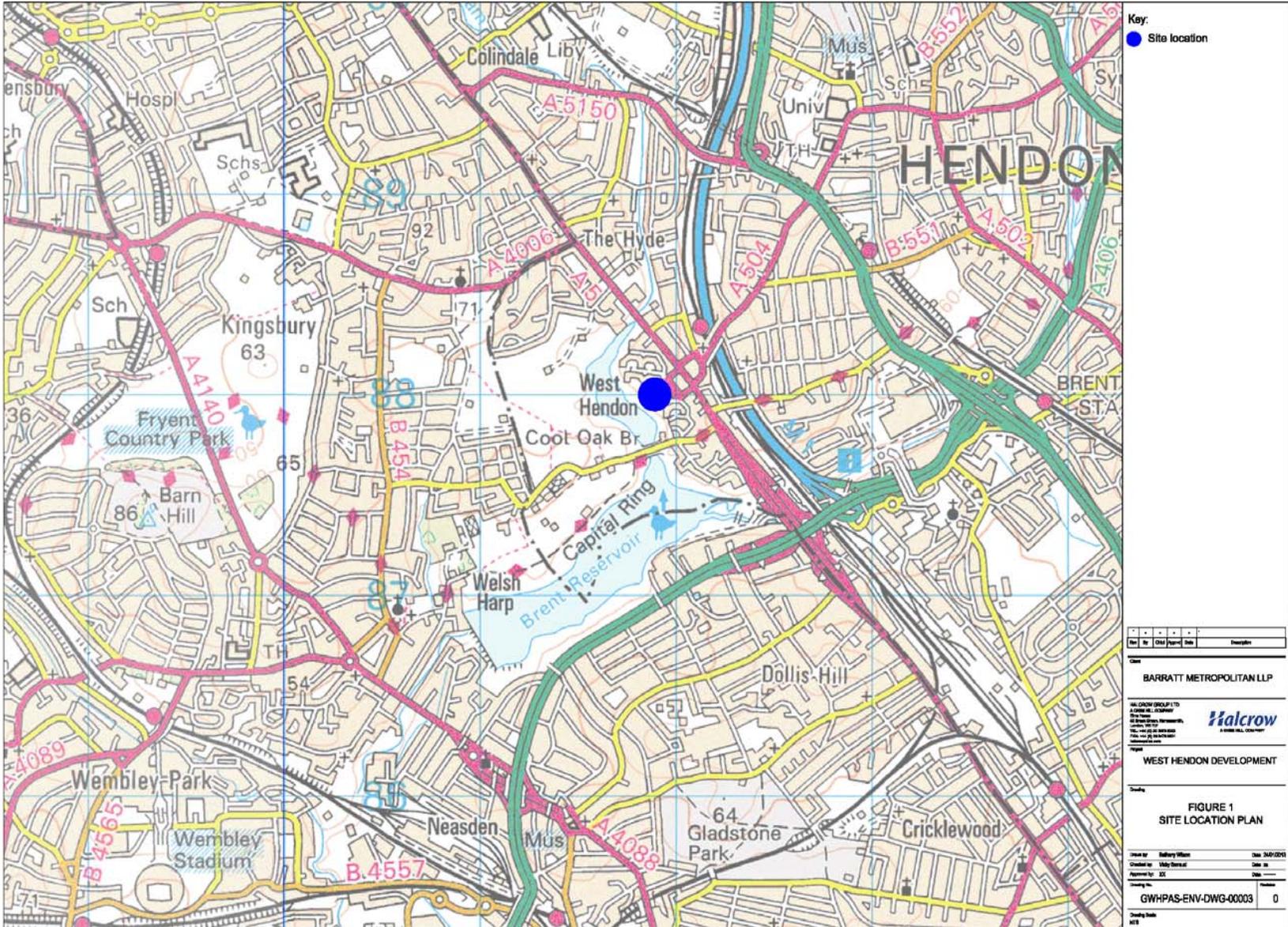
In light of the size of the proposed development of the West Hendon site, a comprehensive environmental impact assessment of the project has been carried out. Significant impacts have been identified and appropriate measures either incorporated into the project or proposed for the next stage(s) of the project.

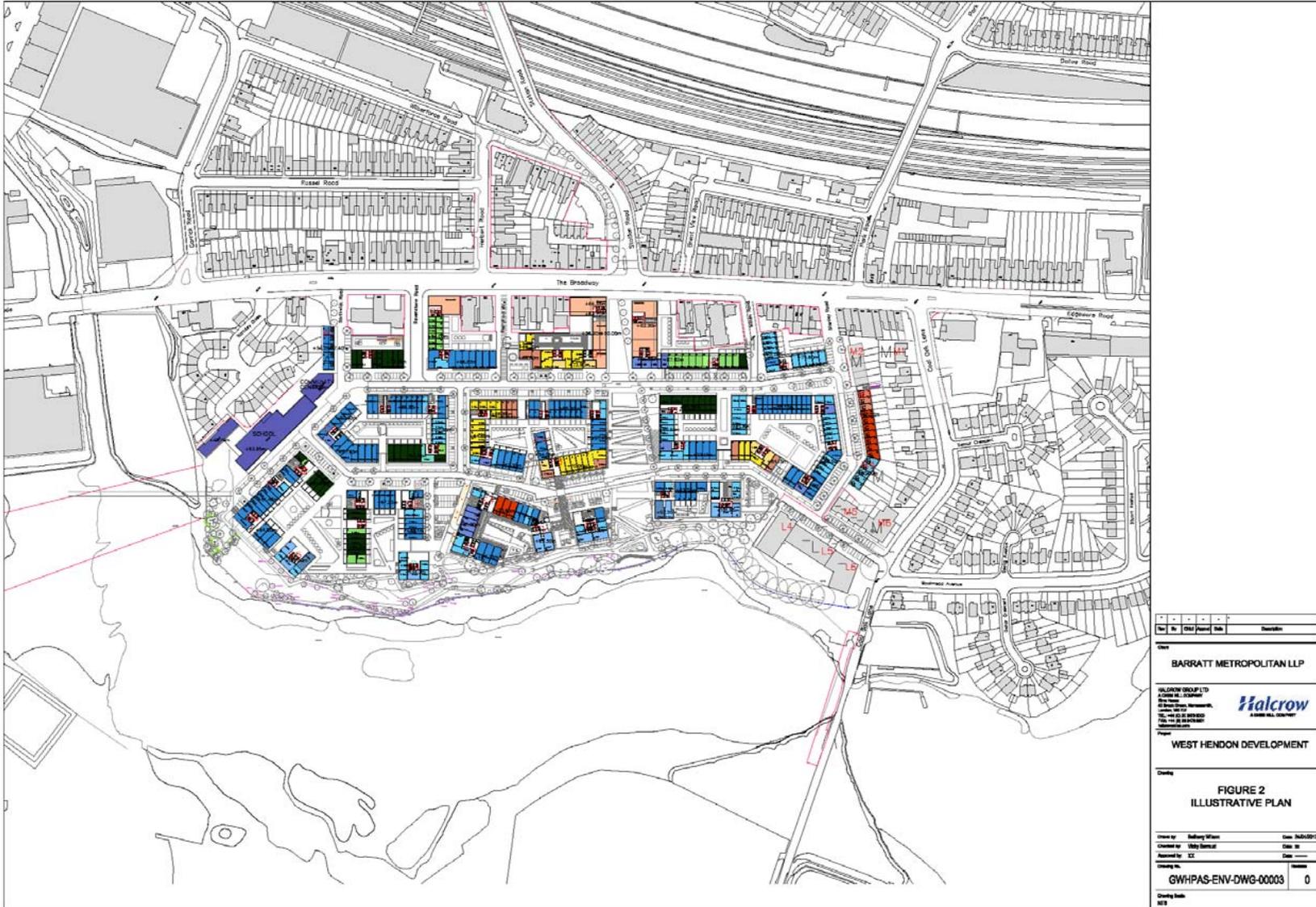
In conclusion we have identified a number of temporary adverse effects during construction (such as noise, visual impacts and possibly dust nuisance) but these will be offset by many significant beneficial impacts during operation. Benefits include new houses, a school and a community centre. There will initially be a shortage of primary school places but by Phase 5 this will be resolved by the provision of the school. There will be significant landscape and visual improvements from demolishing the existing estate and replacing it with the proposed development. Though for some users of the area, particularly those using the open, green areas to the west, the visual impact is likely to be adverse.

The removal of Perryfield Way as a gyratory will be a significant improvement and benefit with the establishment of a more residential style of street pattern. This will bring significant access improvements to the station.

A Health Impact Assessment has been undertaken and this shows that the redevelopment is expected to have many positive health outcomes. However, the decanting process is likely to have mixed impacts with some possible adverse health effects. There will also be significant improvements to the quality of recreational and play space and much improved access to nearby recreation areas, such as the Brent Reservoir and West Hendon Playing Fields.

Mitigation will be taken forward to the construction phase by use of a Management Plan, which will provide greater details on the actions required to minimise the environmental impacts.





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[halcrow.com](http://halcrow.com)





**Halcrow**

Elms House  
43 Brook Green  
London W6 7EF  
020 3479 8000  
020 3479 8001  
halcrow.com

telephone  
facsimile  
web