

TFL_PSF_9131 SITE INVESTIGATIONS: SMALL SITES INITIATIVE 46 BRENTMEAD PLACE, BARNET, NW11 9LJ

Site Ref:1633

Summary Report

JULY 2017

Incorporating

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CONSULTANCY



46 Brentmead Place, Barnet, NW11 9LJ

Summary Report

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This report dated 11 July 2017 has been prepared for Transport for London (TfL) (the "Client") in accordance with the terms and conditions of appointment dated 02 May 2017 (the "Appointment") between the Client and **Arcadis Consulting (UK) Limited** ("Arcadis") for the purposes specified in the Appointment. For avoidance of doubt, no other person(s) may use or rely upon this report or its contents, and Arcadis accepts no responsibility for any such use or reliance thereon by any other third party.

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1 Introduction

Arcadis Consulting (UK) Limited (Arcadis) has been commissioned by Transport for London (TfL) 'the Client' to undertake a number of technical surveys for a site at Brentmead Place, Barnet, North London ('the Site').

The objective of the survey work is to provide robust and pragmatic advice associated with arboriculture, ecology, flood risk and geotechnical and geo-environmental conditions. This report provides a summary of the technical surveys commissioned for the Site and reference should be made to the individual reports for further detailed information.

This report provides a summary of the technical surveys undertaken for the Site. The Site is currently vacant land located north of the A406 North Circular Road, in the London Borough of Barnet. The Site is centred at grid reference of 523830, 188206 and around the postcode of NW11 9LJ. It is approximately 0.036ha in area and is currently comprised of hardstanding, grass, scrub and scattered trees.

The immediate surrounding residential area is characterised by low rise housing. To the immediate south of the Site is the A406 main road, beyond which lies further residential housing. To the north lies the Lower Dollis Brook, which is a tributary of the River Brent.

The surveys undertaken during this study at Brentmead Place include the following;

- Topographical Survey (Ref 1);
- Arboricultural Survey (Ref 2);
- Ecology Survey (Ref 3);
- Flood Risk Review (Ref 4); and
- Geotechnical and Geo-Environmental Desk Study (Ref 5).

A summary of the findings of these surveys are detailed in the following sections.

2 Topographical Survey

The topographical survey indicates that the Site slopes gently down to the west with an approximate 2.5m change in height between the eastern (43.03m OS) and western (40.06m OS) sides of the Site. The location of the concrete bollards are shown inside the access gate. The Site is surrounded by a hoarding / fence and wall to the west.

3 Arboricultural Survey

An arboricultural survey was conducted in accordance with British Standard 5837: 2012 Trees in Relation to Design, Demolition and Construction – Recommendations.

The trees within and adjoining the Site are not protected by a Tree Preservation Order (TPO) and the Site and adjoining properties are not within a Conservation Area (CA).

A total of 19 arboricultural items were recorded within the study area (within and adjoining the Site). These were recorded as 16 individual trees, two hedgerows and one group of trees. These arboricultural items have been categorised according to their arboricultural quality and value. Thirteen individual trees, two hedgerows and one group of trees have been identified as Category C (trees of low quality) and three individual trees have been identified as Category U (trees of poor quality unsuitable for retention). The dominant tree species is Tree of Heaven which is considered to be an invasive species which provides limited public visual amenity value to the surrounding areas. Given the current poor quality of the trees within the Site, they are not likely to be a significant constraint to future development.

Should any future development proposal require the removal of trees or incursions into the Root Protection Areas (RPAs) of any trees, an Arboricultural Impact Assessment (AIA) is likely to be required in support of any planning application. This would include the following:

- A Tree Schedule (ensuring that all trees within the potential zone of influence of any proposed development are included);
- A Tree Constraints Plan (as above);
- A Tree Impact and Protection Plan with regards to the trees to be removed and potential impacts on the trees to be retained;
- General mitigation requirements with regards to potential impacts on trees to be retained;
- A proposed tree replacement strategy; and
- A Preliminary Arboricultural Method Statement (AMS).

A bespoke AMS may be required post planning and when the construction details are known by the Local Planning Authority (LPA) to protect the retained trees within and adjoining the Site.

While unlikely to prevent development, tree protection for trees to be retained and tree re-provisioning for any trees lost due to development are a material consideration for planning determination. If trees cannot be replaced on-Site due to development, off-Site options for tree re-provisioning to ensure no net loss should be considered. Sustainable replacement planting has the potential to enhance biodiversity value and landscape character of the Site.

All new tree planting should be in accordance with British Standard 8545: Trees: From Nursery to Independence in the Landscape – Recommendations, 2014 and all tree works must be carried out by a qualified contractor in accordance with BS3998:2010: Tree Work – Recommendations.

4 Ecology Assessment

The ecological assessment comprised a desk-based study using publically available information and an ecological constraints survey to identify potential ecological constraints present on Site.

Ecology is not considered to present a significant constraint to the development of the Site.

A Grade 2 Site of Borough Importance for Nature Conservation (SBINC) The Lower Hollis Brook is located immediately north of the Site. Little publicly accessible data is available regarding the SBINC, however it is likely to be a wildlife corridor for species including bats and birds. No other designated Sites or ancient woodlands with the potential to be impacted by any development on the Site were identified. It is recommended that the Local Planning Authority ecologist and/or the local Wildlife Trust should be consulted prior to any works commencing to determine if any specific design / construction control measures/mitigation measures are required.

The Site supported a limited range of habitats and was dominated by hardstanding, ephemeral short perennial and tall ruderal species, scattered scrub and scattered trees. The habitats on Site are considered to have 'less than local' value. Although the habitats on Site are generally of poor quality due to the number of non-native invasive species, lack of positive management and fly tipping, these habitats are valuable in terms of general green Infrastructure, likely performing ecosystem services (such as water quality and volume attenuation, air quality attenuation etc.).

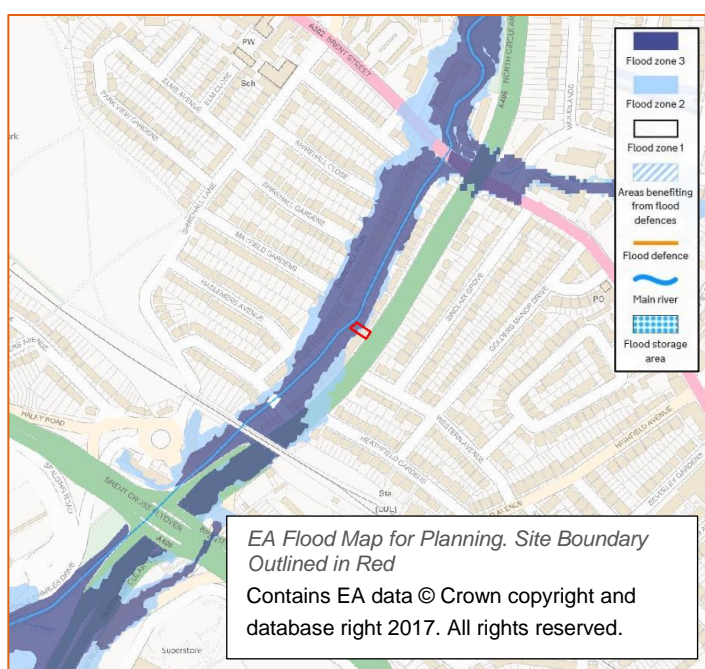
Within the Site, there was limited potential for protected or notable species. Nesting birds are likely to be utilising the trees and scrub on the Site, including potentially species listed on the London Biodiversity Action Plan (BAP) such as house sparrow. Removal of all scrub vegetation on the Site will need to be conducted outside of the bird nesting season (March – August inclusive) or under an ecological watching brief. There is potential that bats commute along the river corridor to the north of the Site. Lighting should be designed to ensure that this corridor is not significantly impacted.

There will be some ecological benefit from the removal of non-native and invasive species listed on the LISI (London Invasive Species Initiative) list which are present on the site. There is no legal obligation to control or remove the species however it is good practice to do so. Removal of the vegetation from the site to facilitate the development would likely adequately eradicate the majority of the LISI species from the site. An approach to ensure that the Tree of Heaven was removed to an extent that prevented regrowth would be recommended, this should be discussed with an appropriate contractor.

There is the opportunity for enhancements for general biodiversity and green infrastructure and for London BAP species. Consideration to biodiversity roofs, rain gardens and other green infrastructure should be included in any future development. Bird boxes for sparrows would be a valuable enhancement, along with appropriately located bat roosting boxes and dead wood loggeries if possible.

5 Flood Risk Review

The degree of flood risk varies across the Site. The Environment Agency (EA) *EA Flood Map for Planning* identifies the Site as being divided between Flood Zone 1 in the east and Flood Zone 3 in the west, in proximity to the River Brent. More detailed data provided by the EA indicates that the westernmost areas of the Site are vulnerable to inundation during more frequent flood events and may therefore be classified as in Flood Zone 3b (the functional floodplain – refer to figure). Further consultation with the EA will be required during planning to confirm the Flood Zone classification.



If areas are classified in Flood Zone 3b, following the NPPF Guidance, these areas would be suitable for 'Water Compatible' development types only and would trigger the application of the Exception Test for 'Essential Infrastructure' uses. These areas would not be appropriate for any other form of development, including residential.

However, the remainder (approximately two thirds) of the Site (in Flood Zone 1) would be suitable for all forms of development, including residential (refer to figure).

Should the current boundary of the Site continue to include the area of Flood Zone 3, which is potentially Zone3b (the functional floodplain), a Flood Risk Assessment (FRA) would need to be prepared in support of a planning application for any development on the Site. The FRA would be a more detailed assessment than is presented in this Flood Risk Review and would need to be specific to

the type and layout/configuration of development that is proposed.

The FRA should demonstrate that the proposed development would not be subject to an unreasonable risk of flooding and would not increase flood risk to third parties. Further investigation, via the FRA, would therefore be required to demonstrate how the Site can be developed safely, identifying necessary design measures to provide adequate protection in these flood scenarios, without increasing flood risk to third parties.

Although there are no records of surface water flooding in areas local to the Site, it is considered that there is a high risk of surface water flooding. The Barnet London Borough Council Surface Water Management Plan states that '*it is essential that the impact of future development on existing infrastructure, including the drainage systems, is assessed*'. Surface water drainage and runoff from the Site, should be further investigated and it should be ensured that drainage is managed to a high standard. This should include the calculation of current rainfall-runoff rates and volumes and greenfield runoff rates for the Site. A Drainage Strategy should be developed, detailing methods to manage runoff from the Site, which would ideally be controlled to match greenfield rates.

It is advised that the Site boundary be altered within any future planning application to exclude land within Flood Zone 3, particularly if a Flood Zone 3b designation is confirmed by the EA. This would avoid the need for any further assessment of flood risk at the planning application stage, with the exception of producing a Surface Water Drainage Strategy.

6 Geotechnical and Geo-Environmental Desk Study

The Site was most recently occupied by a residential property however, historically, two residential properties have been recorded and the river was also narrowed.

An intrusive site investigation has not been undertaken at this stage, however Made Ground is anticipated to be present from the various phases of redevelopment including the narrowing of the river. Off-site sources of contamination are likely to be limited to Made Ground associated with demolition and redevelopments adjacent to the site given the largely residential area of the surrounding area.

Potential risks to human health, controlled waters and the built environment have been identified from potential on site Made Ground and ground gas / vapours and there are possible risks to human health from the off-site sources (Made Ground). It is recommended that an intrusive site investigation should be undertaken prior to redevelopment to quantify these risks. This should include chemical testing of soils, groundwater monitoring and gas monitoring in accordance with the recommendations in CIRIA C665 and CLR 11 and consideration of shrinkage and swelling, sulphate attack and the potential for relict shear slip surfaces.

Based on the findings of the desk study report, and assuming that the Site will be developed for residential use with gardens, it is anticipated that some remediation (off-site disposal, clean cover, gas membrane, basic asbestos monitoring and pipe upgrade but excluding foundation) may be required. Indicative costs are provided in the desk study report (Ref 5) which are based on the information known to date.

The Site is in an area where 'low' risk of encountering unexploded ordnance is present and further assessment is not considered necessary.

7 References

1. 40Seven (May 2017) Topographical Survey 46 Brentmead Place, Barnet NW11 9L (Site Ref 1633) (Drawing Number 1633 – Brentmead Place)
2. Arcadis Consulting (UK) Limited (July 2017) 46 Brentmead Place, Barnet NW11 9LJ, Preliminary BS5837 :2012 Tree Survey (Report 704-UA009686-UE21R-01)
3. Arcadis Consulting (UK) Limited (July 2017) 46 Brentmead Place, Barnet NW11 9LJ Ecological Assessment (Report 703-UA009686-UE21R-02)
4. Arcadis Consulting (UK) Limited (July 2017) 46 Brentmead Place, Barnet NW11 9LJ Flood Risk Review (Report Number 702-UA009686-UU41R-04)
5. Arcadis Consulting (UK) Limited (July 2017) 46 Brentmead Place, Barnet NW11 9LJ Geotechnical and Geo Environmental Desk Study (Report Number 701-UA009686-UP32R-02)

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