

TFL_PSF_9131 SITE INVESTIGATIONS: SMALL SITES INITIATIVE LAND AT BEECHWOOD AVENUE, BARNET, N3 3BB

Site Ref. 439

Summary Report

SEPTEMBER 2017

Incorporating

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LAND AT BEECHWOOD AVENUE, BARNET, N3 3BB

Summary Report

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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 Land at Beechwood Avenue, Barnet, N3 3BB ('the Site').

TfL is aiming to divest a number of small sites to enable prospective regeneration. The objective of the survey work is to provide robust and pragmatic advice associated with topography, ecology, arboriculture 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.

The Site is located north of the A406 North Circular Road, in the London Borough of Barnet. The Site is centred at grid reference of 525193, 189457 and is approximately 0.58 hectares in size. The Site is currently comprised of dense scrub with scattered broadleaved and coniferous trees. The immediate surrounding area is characterised by low rise residential housing.

The surveys undertaken at Beechwood Avenue include the following;

- Topographical Survey (Ref 1);
- Ecology Survey (Ref 2)
- Arboricultural Survey (Ref 3); and
- Geotechnical and Geo-Environmental Desk Study and Preliminary Investigation (Ref 4).

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

2 Topographical Survey

Due to dense vegetation across the Site, the topographical survey was limited to areas where clearance had taken place for the ground investigation works.

The Site gently slopes upwards from west to east. The eastern boundary is indicated to have a level between 65-68m OS, whilst the western boundary is shown as 61-62m OS.

The path across the Site indicates that the ground levels within the Site are higher than at the boundaries. The southern boundary is recorded between 62 – 64m OS whilst within the Site the levels are around 65-66m OS.

3 Ecology Survey

The ecological assessment comprised a desk-based study using publicly available information. An ecological constraints survey to identify potential constraints present on Site was conducted.

No Statutory or non-statutory designated sites (including ancient woodlands or woodlands listed on the Ancient Woodland Inventory (AWI)) were identified within the vicinity of the Site to have the potential to be significantly impacted by development on the Site.

The Site was dominated by dense scrub predominantly bramble, buddleia and small saplings of ash and cherry trees, with a ground flora dominated by ivy and garden escapee species such as Spanish bluebell. To the east of the Site was an area of young woodland containing sycamore, cherry, tree of heaven, London plane, hawthorn and other species. A row of pollarded London plane trees were present along the roadside to the south of the Site.

Japanese Knotweed (*Fallopia japonica*) a non-native invasive species which is listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) was recorded on Site during the vegetation clearance supervision. This will require demarcation and exclusion of works (minimum of 7m) and site supervision of any further vegetation clearance is recommended as there is potential for further stands of this species to be recorded. When further development details are known an accredited specialist Japanese Knotweed contractor should be contacted for treatment advice.

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. However these habitats are valuable in terms of general green infrastructure, likely performing important 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.

Not all of the trees on Site were fully inspected for roosting bat potential (access was limited due to the dense scrub present). None of the trees on Site which were inspected had any evidence of potential roost features (PRF's) for bats. Further tree inspections are recommended when access permits and when there is a greater level of information with regards to the potential impact on trees from the proposed development.

No mammal burrows were observed on the Site, however there was a strong smell of fox around the Site and there is potential that fox earths may be present within the dense scrub area. Foxes are protected against inhumane injury or killing, therefore site supervision is recommended during any Site clearance so that recommendations to humanely remove fox earths can be provided if required.

There is potential for grey squirrels to be breeding within the trees on Site. This species is non-native and of negligible ecological value. However squirrels are protected from inhumane injury or killing. If squirrel dreys are found on site, these should be removed in a humane manner.

There is potential for the London BAP species Stag beetle to be present within the Site. Site supervision with regards to this species during site clearance is recommended and retention of an area of dead wood habitat on Site if stag beetle is confirmed to be present.

Trees should ideally be re-provisioned on the Site within any development, if on-Site re-provisioning is not possible off-Site mitigation should be considered. These should be of a suitable species, preferably native species of local origin. In addition, consideration to biodiversity roofs, rain gardens and other green infrastructure should be included in any development. Bird boxes for sparrows would be a valuable enhancement, along with appropriately located bat roosting boxes and dead wood loggeries if possible.

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

4 Arboricultural Survey

An arboricultural constraints walkover and assessment was conducted to describe the general arboricultural features and potential constraints with regards to trees on Site.

No trees on Site were found to be within a Conservation Area. Records as at March 2017 from the London Borough of Barnet (LBB) confirm that there are no Tree Preservation Orders (TPOs) associated with the trees on the Site.

The Site is covered in dense scrub with predominantly young individual trees of approximately 20 years old or younger which have arisen from natural regeneration. There are a few individual trees likely to have been planted which may be in excess of 40 years old. Due to the lack of positive management, the trees were generally in poor condition.

The western side of the Site is largely covered with scrub and small young trees, with a canopy cover of approximately 5%. The trees within this area are largely 10 to 15 years old and predominantly ash (*Fraxinus excelsior*) and cherry (*Prunus* sp.) saplings, surrounded by dense bramble (*Rubus fruticosus* agg.) and butterfly-bush (*Buddleia davidii*). There are a few larger trees within the scrub area to the west of the Site, including an ash and cherry. At the northern boundary of the Site there are a group of likely early mature to mature fruit trees including pear (*Pyrus* sp.) which are likely to have been planted and may be in excess of 40 years old.

To the east of the Site the tree cover is denser (at 85% cover), creating a small woodland copse containing largely young trees. The small area of young woodland contained primarily sycamore (*Acer pseudoplatanus*), cherry, ash, tree of heaven (*Ailanthus altissima*), elder (*Sambucus nigra*) and hawthorn (*Crataegus monogyna*). The understorey in this area is largely saplings, bramble, viburnum (*Viburnum* sp.) and butterfly-bush.

The eastern end of the southern boundary of the Site adjacent to the A406 consists of a row of heavily managed London plane (*Platanus x acerifolia*), trees likely to be in-excess of 40 years old. There are several leylandii (*Cupressus x leylandii*) on the eastern boundary along with a large tree of heaven. These trees appear to have been planted on the Site and may be in excess of 40 years old.

Trees present outside of the Site but potentially within the zone of influence of the Site, include some large eucalyptus trees (*Eucalyptus* sp.) within a residential garden to the north and what's likely to be an early mature London Plane (*Platanus x acerifolia*) within the pavement of Beechwood Avenue.

The majority of the trees within the Site are likely to be Category C (trees of low quality). Currently, the Site is densely vegetated and is publicly visible from all sides and currently provides screening from the A406 North Circular Road to the residential properties on Edge Hill Avenue and Beechwood Avenue. Despite poor management, the row of pollarded London plane provide a public visual amenity to the immediate and surrounding area.

Discussion with the LBB is recommended to discuss the approach to development of this Site. Selected scrub clearance may be required (under arboricultural supervision) in order to obtain a full topographical survey of the Site to facilitate the undertaking of a full Arboricultural Survey in accordance with BS 5837:2012. Should the future development require the removal of trees or incursions into the Root Protection Areas (RPAs) of any trees, an Arboricultural Impact Assessment (AIA) would be required in support of any planning application.

A bespoke Arboricultural Method Statement may be required post planning and when the construction details are known to protect the retained trees within and adjoining the Site.

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.

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.

5 Geotechnical and Geo-Environmental Desk Study and Preliminary Investigation

The geo-environmental and geotechnical desk study comprised a review of existing historical and current information on the Site. Based upon the historical review, the Site was undeveloped until the 1930s when approximately eight houses developed on the Site. These were demolished sometime between the 1990s and 2002. The surrounding area had remained largely residential with some local amenities.

A preliminary Site investigation has been undertaken comprising five window sampling boreholes to investigate ground conditions and to provide an indication of the levels of contaminants in the Site.

Potential risks to human health, controlled waters and the built environment have been identified from on-Site Made Ground. Gross contamination was not encountered during the preliminary Site investigation. Concentrations of contaminants (lead, PAH and asbestos) were recorded within the Made Ground but these were only marginally elevated and the risks are likely to be mitigated during development or with coverage by buildings/hardstanding or a clean cover system where gardens or soft landscaping are proposed.

Further development-specific ground investigation will be required to confirm any mitigation. Required workstreams may include (but would not be limited to):

- Confirming concrete design for sulphate resistance for foundations and services;
- Determining the extent and depth of buried obstructions within the Site;
- Further gas monitoring and assessment of the potential risk of ground gases to receptors, and determining whether gas protection measures would be required for future development; and
- Consideration of shrinkage and swelling, trees, potential for relict shear slip surfaces and buried services may need to be considered during the design.

Based on the findings of the desk study and investigation, 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.

Material re-used on site would need to be assessed in terms of its chemical and geotechnical suitability for reuse as engineering or landscaping fill. If off-site disposal is required, a waste assessment for the Made Ground and shallow soil materials would need to be undertaken to determine whether they are classified as hazardous or non-hazardous waste. Based on a preliminary assessment, Made Ground associated with the structures in the west of the Site may be hazardous due to elevated lead concentrations, and other Made Ground material may be hazardous depending on the quantity of asbestos present.

6 References

1. 40Seven (August 2017) Topographical Survey. Land at Beechwood Avenue, Barnet, N3 3BB (Site Ref.439)
2. Arcadis Consulting (UK) Limited (September 2017) Land at Beechwood Avenue, Barnet, N3 3BB. Ecology Assessment (Report Number 102-UA009686-UE21R-01)
3. Arcadis Consulting (UK) Limited (September 2017) Land at Beechwood Avenue, Barnet, N3 3BB Arboricultural Constraints Assessment Report (Report 103-UA009686-UE21R-01)
4. Arcadis Consulting (UK) Limited (August 2017) Land at Beechwood Avenue, Barnet, N3 3BB Preliminary Geotechnical and Geo Environmental Report (Report Number 101-UA009686-UP32R-01)

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