

TFL_PSF_9131 SITE INVESTIGATIONS: SMALL SITES INITIATIVE LAND AT BRIDGE VIEW ROAD, LONDON BOROUGH OF HAMMERSMITH AND FULHAM, W6 9DD

Site Ref. 310

Summary Report

SEPTEMBER 2017

Land at Bridge View Road, London Borough of Hammersmith and Fulham, W6 9DD

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Author	Various	
Checker	Alison Pugh	
Approver	Angela Mulgrew	
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1 Introduction

Arcadis Consulting (UK) Limited (Arcadis) has been commissioned by Transport for London (TfL) to undertake a number of technical surveys for a site referred to as Land at Bridge View Road, Hammersmith ('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 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.

The Site is roughly rectangular in shape and is located within the London Borough of Hammersmith and Fulham, approximately 0.45 km east of Hammersmith Tube Station (Grid Reference of 523025,178350). It is approximately 0.05 hectares in area.

The Site is an area of highway verge with two bituminous tarmac covered car parking spaces in the east of the Site. The Site adjoins a public footpath to the north, east and west and along the southern boundary is a brick boundary wall.

To the north is Hammersmith Bridge Road with the Hammersmith Flyover Great North (A4) beyond. To the east is Bridge View, to the south are the rear gardens of the properties along Bridge Road and Mall Road. To the west is Mall Road with Furnivall Gardens, beyond. The northern banks of the River Thames and the Hammersmith Bridge are present approximately 200m south and south-east of the Site respectively.

The surveys carried out for Land at Bridge View Road, Hammersmith comprise the following;

- Topographical and Buried Services Survey (Ref 1);
- Arboricultural Survey (Ref 2);
- Flood Risk Review (Ref 3);
- Ecology Survey (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 Arboricultural Survey

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

- A Tree Schedule (including all trees on and within proximity of the Site);
- A Tree Constraints Plan (for trees on and within proximity of the Site); and
- A Preliminary Arboricultural Method Statement (AMS) outlining general mitigation measures.

The majority of the Site comprises closely mown amenity grass, groups of informally planted trees, mature shrubs within a shrub bed and an area of hard standing parking bays within the adopted highway.

The Site and adjoining areas are within The Mall Conservation Area (designated in 1968). None of the trees within or adjoining the Site are protected by a Tree Preservation Order (TPO).

A total of 12 arboricultural items were recorded within the study area (the Site and its immediate surroundings):

- Four individual trees on-Site;
- Six individual trees adjoining the Site;
- One group of trees adjoining the Site; and
- One amenity hedge adjoining the Site

One individual off-Site tree has been identified as a Category A (trees of high quality). One individual tree on-Site has been identified as Category B (trees of moderate quality). Two individual trees on-Site, five individual trees off-Site, one off-Site group of trees and one off-Site amenity hedge have been identified as Category C (trees of low quality). One individual on-Site tree has been identified as Category U (trees of poor quality unsuitable for retention).

With the exception of the one London plane (Category A tree of high quality) none of the trees on or off-Site are likely to present a significant constraint to any future development of the Site.

The Category A tree is planted within a strip of close mown grass verge that form part of the TfL public footpath to the north-east of the Site. The tree is a principle member of the wider population of London plane street trees within the highway controlled by TfL and the Local Planning Authority (LPA). It dominates the immediate streetscape and it is indicative of The Mall Conservation Area. The London plane has high public visual amenity value and it is recommended that any future development incorporates the retention of this tree into its design.

While not likely 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. Individual LPAs may ask for re-provisioning in excess of 1 to 1 for trees of Category A or B grade or ask for additional re-provisioning for trees within a Conservation Area.

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) would be required in support of any planning application. 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.

Although a Preliminary AMS has been provided within the Arboricultural Survey Report (Ref 2), a bespoke AMS may be required post planning and when the construction details are known by the LPA to protect the retained trees within and adjoining the Site.

The Site is within a Conservation Area and any proposals submitted to the LPA might require the support of a Landscape Character Assessment and Landscape Strategy Plan. This is because any new development will introduce new built forms and massing within areas that historically have been public green open space.

3 Flood Risk Review

Following an assessment of flood risk to the Site from all likely sources, it is considered that there is a medium risk of flooding from surface water, groundwater and sewers and a low risk of flooding from rivers and artificial sources. The degree of tidal flood risk is dependent on the installed defences on the River Thames, which protect the Site up to the 0.1% tidal flood event.

Overall, it is considered that the Site is inappropriate for Highly Vulnerable development types (residential use is not classified within this category). Following the production of a flood risk Assessment (FRA) and Drainage Strategy it is considered likely that flood risk would not limit any other development types on the Site, including residential development.

The Environment Agency (EA) *Flood Map for Planning* identifies the Site as benefitting from the protection of defences, however the EA *Flood Map for Planning (ignoring the presence of defences)* identifies the Site in Flood Zone 3. Following the NPPF guidance, the Site would not be appropriate for 'Highly Vulnerable' development types (which includes emergency services stations and command centres; basement dwellings; caravans, mobile homes and park homes intended for permanent use; and installations requiring hazardous substance consent).

The Site would be suitable for 'Water Compatible' and 'Less Vulnerable' development types, but would trigger application of the Exception Test for 'More Vulnerable' (which includes residential land uses) and 'Essential Infrastructure' uses.

To satisfy the Exception Test, a FRA would need to be prepared and this report would be a key requirement in support of a planning application for development on the Site. The FRA would be a more detailed assessment than is presented in the Flood Risk Review (Ref 3) and would need to be specific to the type and layout/configuration of the development that is proposed.

The FRA should demonstrate that any proposed development would not be subject to an unreasonable risk of flooding and that developing the Site would not subsequently increase flood risk to third parties. The EA *Thames Tidal Breach Modelling* map identifies the Site within the likely flood extent following defence breach, with maximum flood depths of up to 0.8m during the extreme tidal flood events. 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.

It is considered that there is a medium risk of surface water flooding and sewer flooding and there is a known history of sewer and surface water flooding in areas local to the Site. Surface water drainage and runoff from the Site, including available connections with the sewer network, should be further investigated and it should be ensured that drainage is managed to a high standard prior to any planning application. Further investigation should include the calculation of current rainfall-runoff rates and volumes, greenfield runoff rates for the Site and confirmation of the available capacity of the local and wider sewer networks.

The Site is considered to have a medium risk of groundwater flooding and the London Borough of Hammersmith and Fulham's Strategic Flood Risk Assessment (SFRA) 2016 Update states that '*it is essential that groundwater flood risk is assessed in relation to any development*' and '*groundwater flood risk must be considered when designing Sustainable Drainage Systems [SuDS], in particular the potential impact of increased infiltration SuDS on properties further down gradient*'.

Any future planning application should be supported by a Drainage Strategy, detailing methods to manage runoff from the Site, which would ideally be controlled to match greenfield rates. The SFRA 2016 Update identifies the Site as in an area unsuitable for infiltration SuDS.

4 Ecology Assessment

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

Based on the assessment undertaken to date, the ecology on the Site is not considered to present a significant constraint to the development of the Site.

An area of Local Importance for Nature Conservation, Furnivall Gardens, is located approximately 30m to the west of the Site. Due to the habitats present on Site the only likely potential impact on the designated site from future development would be that of recreational pressure. However due to the size of the Site, and the existing use of the area this is not likely to have a significant effect.

The Site supported a limited range of habitats and was comprised of closely managed amenity grassland, partially boarded by introduced shrubs with 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 lack of positive management, 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 introduced shrubs, scattered 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 will be some ecological benefit from the removal of non-native and invasive species listed on the 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.

Trees should be re-provisioned on the Site within any development. If on-Site re-provisioning is not possible then 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.

5 Geotechnical and Geo-Environmental Desk Study

The geo-environmental and geotechnical desk study comprised a review of existing historical and current information on the Site. No intrusive site investigations were undertaken for the Site.

The historical review revealed that previous development within the Site has been limited to residential properties. Adjacent to the Site, redevelopment of the roads and houses have also been recorded as are localised areas of commercial / industrial uses that have been recorded as close as 100m from the Site.

Potential risks to human health, controlled waters and the built environment have been identified associated with potential on-site sources of Made Ground. Possible risks to human health from the off-site sources of Made Ground have also been identified. It is recommended that an intrusive site investigation is carried out prior to redevelopment to quantify these risks. This should include the contamination testing of soils and leachates, groundwater monitoring and gas monitoring in accordance with best practices and current guidance.

Potential founding solutions will be dependent on the thickness of Made Ground and the geotechnical properties of the natural deposits. At this stage, conventional shallow foundations may not be appropriate for the Site but this would depend on the thickness of the Made Ground and the underlying ground conditions. Deeper trench fill may be possible but in areas of deeper Made Ground, or where deeper soft / loose bands are recorded either piling or ground treatment e.g. vibro-stone columns should provide a suitable foundation solution (Ref. 5).

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.

The Site is located in an area where 'medium' risk of encountering unexploded ordnance. Further assessment of the potential for encountering UXO should be undertaken and a watching brief for UXO by a qualified professional may be required during works.

6 References

1. 40Seven (May 2017) Topographical Survey. Land at Bridge View Road, Hammersmith (Site Ref.310)
2. Arcadis Consulting (UK) Limited (June 2017) Land at Bridge View Road, Hammersmith, W6 9DD Preliminary BS5837 :2012 Tree Survey (Report 1004-UA009686-UE21R-01)
3. Arcadis Consulting (UK) Limited (June 2017) Land at Bridge View Road, Hammersmith, W6 9DD Flood Risk Review. (Report Number 1002-UA009686-UU41R-01)
4. Arcadis Consulting (UK) Limited (June 2017) Land at Bridge View Road, Hammersmith, W6 9DD Ecology Assessment (Report Number 1003-UA009686-UE21R-01)
5. Arcadis Consulting (UK) Limited (June 2017) Land at Bridge View Road, Hammersmith, W6 9DD Geotechnical and Geo Environmental Desk Study (Report Number 1001-UA009686-UP32R-01)

Arcadis Consulting (UK) Limited

Arcadis House
34 York Way
London N1 9AB
United Kingdom
T: +44 (0)20 7812 2000

[arcadis.com](https://www.arcadis.com)

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