



Providing Ground Solutions

A2 Dominion

**156 West End Lane, West
Hampstead**
Proposed Site Investigation Scope



January, 2020



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Figure 2	Proposed Exploratory Location Plan

1. INTRODUCTION

Card Geotechnics Limited (CGL) has been commissioned on behalf of A2 Dominion to undertake an intrusive ground investigation at their site known 156 West End Lane, West Hampstead, herein referred to as 'the site'. Up until recently, the site was occupied by a builder's yard/warehouse with Travis Perkins as tenants.

It is understood that the proposed development will comprise mixed height residential blocks, with associated parking and areas of soft landscaping.

The objective of this report is to support the discharge of Condition 26a of Planning Permission 2015/6455/P issued by London Borough of Camden.

Condition 26 states:

"At least 28 days before development commences:

a) a written programme of ground investigation for the presence of soil and groundwater contamination and landfill gas shall be submitted to and approved by the local planning authority; and

(b) following the approval detailed in paragraph (a), an investigation shall be carried out in accordance with the approved programme and the results and a written scheme of remediation measures [if necessary] shall be submitted to and approved by the local planning authority.

The remediation measures shall be implemented strictly in accordance with the approved scheme and a written report detailing the remediation shall be submitted to and approved by the local planning authority prior to occupation".

2. SITE CONTEXT

2.1 Introduction

The site has been the subject of a previous desk study for the site produced by RSA Geotechnics Limited¹. Pertinent information is reproduced below, however the previous report should be referred to for full details.

2.2 Site Location and Description

The site is located at 156 West End Lane, West Hampstead, NW6 1SD. The Ordnance Survey grid reference for the approximate centre of the site is 525600E, 184870N. A site location plan is attached as Figure 1.

The site is rectangular in shape and approximates to 0.64Ha in size. The site is bounded to the south by Thameslink railway line, to the east by a Multi-Use Games Area (MUGA), and to the north by the rear gardens of housing fronting onto Lymington Road and to the west by the north to south trending West End Lane.

The site is split into two distinct areas: The western quarter of the site comprises a five-storey brick building fronting onto West End Lane, formerly used as council offices and as a builder's merchant. The remainder of the site comprises the builder's yard with storage areas for various items.

2.3 Proposed Development

It is understood that the development will comprise 164 self-contained residential dwellings, 763sqm of flexible non-residential use, 1093sqm of employment floorspace, and 63sqm of community meeting space in buildings ranging from 3 to 7 storeys. The development will include the provision of a new vehicular access from West End Lane, and eight accessible car parking spaces. The development will also include new areas of public open space, the widening of Potteries Path and associated cycle parking, and landscaping.

2.4 Site History

CGL has undertaken a review of previous desk study, which indicates that from the earliest available maps of 1871, the site was part of a larger field, with a small road crossing the north eastern corner and a railway cutting within the south westernmost section of the site.

¹ RSA Geotechnics Limited (2015). Desk Study Report – 156 West End Lane, West Hampstead, London, NW6 1UF. Report number 14152DS. Dated November 2015.

From 1915, the site comprised various small buildings and a Hall in the western quarter of the site, with tennis courts and associated pavilion building in the remainder of the eastern area of the site at this time. In the mid-1940's, two large buildings had been constructed within the western quarter of the site, and later maps identified these buildings as a garage. During the walkover undertaken by RSA, an electrical substation was observed within the existing building, and an above ground fuel tank was identified in the yard abutting the eastern end of the southern boundary of the site. Evidence of hydrocarbon staining on the concrete was also noted around the tank.

The desk study concluded that there was the potential for contamination on the site from both the previous use as a garage, and current use as a builder's yard and depot.

CGL has also reviewed the planning history for the site which indicates that the garage in the western half of the site was historically used as a petrol station with associated fuel tanks. The site (and fuel station) were redeveloped in the 1970's to provide the current site layout, however it is recognised that there is potential for historical contamination to remain in this area.

2.5 Anticipated Ground Conditions

With reference to the British Geological Society (BGS) Geological Sheet Map 256², the site is underlain by solid geology of the London Clay Formation. No superficial deposits are shown to be present at the site, although Head propensity deposits are indicated to the north of the site.

Historical BGS borehole records have been reviewed by CGL, which confirm the London Clay extends to approximately 65m below ground level.

² British Geological Survey. (2006). *North London*. England and Wales Sheet 253. Bedrock and Superficial Geology. 1:50,000.

3. PROPOSED INVESTIGATION METHODOLOGY




3.1 General

It is proposed to carry out a ground investigation at the above site to support the proposed development as detailed in planning application 2015/6455/P.

The purpose of the investigation is to assess ground and groundwater contamination and to determine appropriate remedial actions where necessary. The ground investigation will be carried out in accordance with the principles of BS 10175:2011, Investigation of potentially contaminated sites, Code of Practice.

3.2 Intrusive Works

In order to investigate the above sources, the first phase of ground investigation (pre-demolition) will comprise:

-  The excavation of two cable percussion boreholes to 30m depth. Including in-situ testing, and installation of groundwater monitoring wells. The purpose of the boreholes is primarily to provide geotechnical design information for foundations; however, contamination testing and groundwater monitoring standpipes will be installed as required.
-  Excavation of seven window sample boreholes to a maximum depth of 6m below ground level. Including in-situ testing and installation of gas and groundwater monitoring wells in selected locations. Soil samples will be obtained from the window sample boreholes and will be tested for a suite of contaminants, including metals, hydrocarbons and asbestos screening.
-  Foundation Inspection Pits along the northern boundary of the site to investigate boundary conditions and retaining wall details.

The proposed Phase 1 exploratory location plan is included as Figure 2, and Table 1 below outlines the rationale for each location.

Table 1. Rationale for exploratory hole locations

Location	Target Depth (m bgl)	Rationale for location
WS01	6	Targeting south western area of site in vicinity of historical petrol station, and adjacent to electrical sub station
WS02	6	Targeting south western area of site in vicinity of historical petrol station
WS03	6	General site coverage – Contamination, gas and groundwater monitoring in selected locations.
WS04	6	
WS05	6	
WS06	6	
WS07	6	Targeting above ground fuel tank
BH01	30	Targeting deep ground conditions
BH02	30	Targeting deep ground conditions
TP1	Base of foundation	Adjacent to northern retaining wall to obtain existing foundation details
TP2	Base of foundation	Adjacent to northern retaining wall to obtain existing foundation details
TP3	Base of foundation	Adjacent to northern retaining wall to obtain existing foundation details
TP4	Base of foundation	Adjacent to northern retaining wall to obtain existing foundation details
TP5	Base of foundation	Construction of TfL retaining wall, contamination coverage

3.3 Soil Sampling

During the investigation, soil samples will be collected for chemical analysis and will be tested for contaminants including heavy metals, hydrocarbons, and asbestos screening. Should contamination be visually or olfactorily observed or suspected, the impacted soils will be targeted for sampling.

Geotechnical testing of soil samples will also be undertaken including classification testing, undrained triaxial testing, sulphates to BRE SD1, and particle size distribution testing.

3.4 Ground Gas and Groundwater Monitoring

We have allowed for one gas and groundwater monitoring visit following completion of site works. If water is encountered, samples will be obtained and tested for a similar suite of contaminants as for the soils, including heavy metals, hydrocarbons, hardness, and sulphates. Should the ground gas assessment and/or the ground model suggest additional visits are required, these will be undertaken.

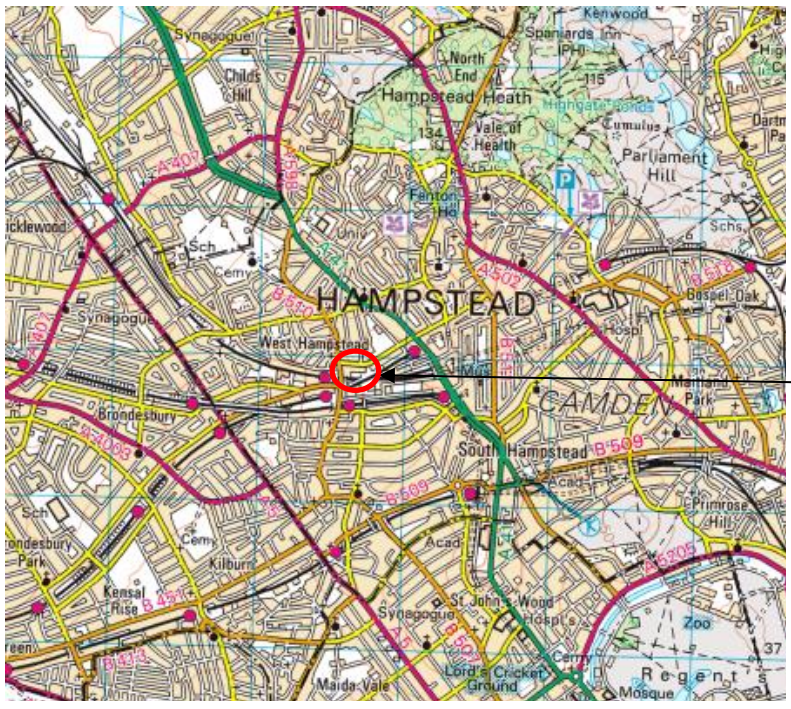
3.5 Reporting

Upon completion of the ground investigation, CGL will update the Conceptual Site Model regarding contamination, human health risk, soil gas, and groundwater contamination risk and will provide a Geotechnical and Geo-Environmental Interpretative Report (GGEIR), setting out details of the ground investigation, factual data, human health risk assessment, preliminary waste classification, initial contamination remediation recommendations, and recommendations for geotechnical and geo-environmental aspects of the proposed development. Where necessary, recommendations will be made for additional Phase 2 investigation works.

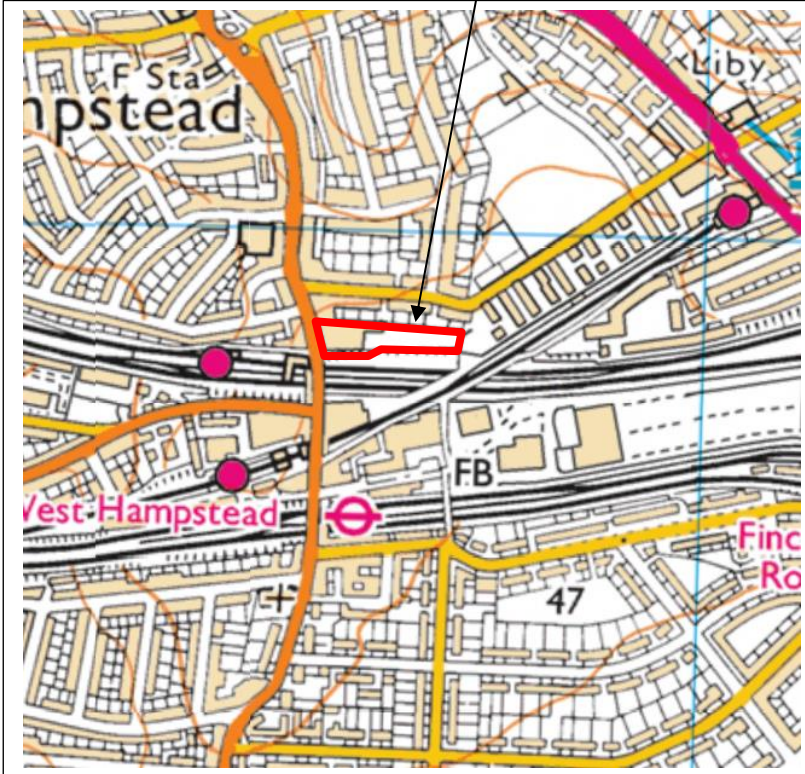
4. CONCLUSION

Following the ground investigation as set out in Section 3 above, our GGEIR report should be submitted to the London Borough of Camden in support of the discharge of condition 26b. If necessary, a Remediation Method Statement (RMS) will be developed for the site and submitted to the Local Planning Authority, this will include recommendations for remediation of soil and groundwater contamination, if encountered.

FIGURES




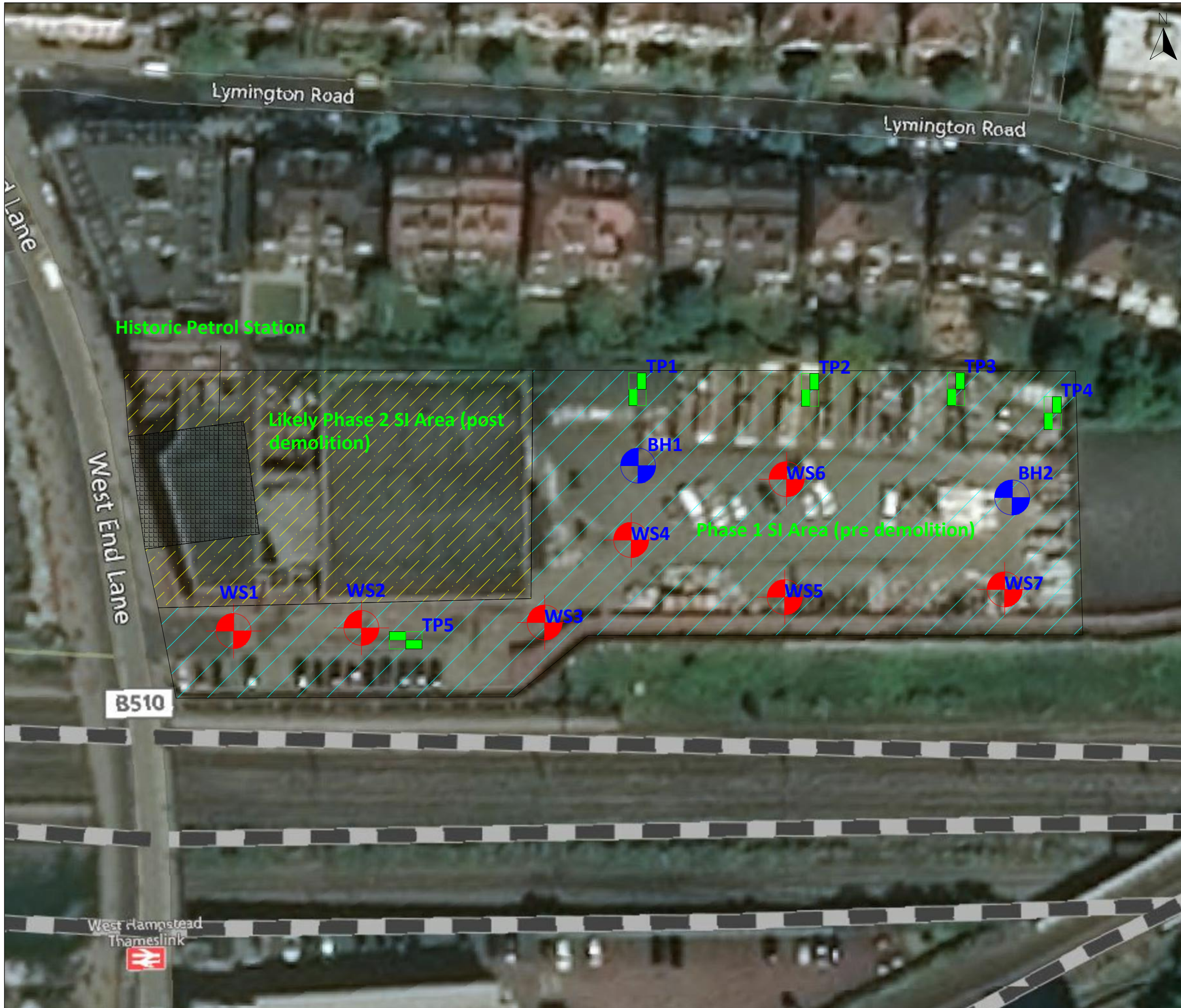
Site






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<p>Client</p> <p>A2 Dominion</p>	<p>Project</p> <p>156 West End Lane, West Hampstead</p>	<p>Job No</p> <p>CG/38293</p>
	<p>Title</p> <p>Site Location Plan</p>	<p>Figure 1</p>



KEY

-  Trial Pit
-  Borehole
-  Window Sample

0	29/11/2019	Proposal stage
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		Card Geotechnics Ltd 4 Godalming Business Centre Woolsack Way Godalming Surrey GU7 1XW T: 01483 310600
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