

# Canada Water – Ground Contamination Management

## Technical Note – Plot A2 Remediation Works WIE12886/BN68.4

**Date:** 28 February 2019

**Client Name:** British Land

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This document has been prepared and checked in accordance with  
Waterman Group's IMS (BS EN ISO 9001: 2015, BS EN ISO 14001: 2015 and BS OHSAS 18001:2007)

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- 1.1. This document sets out how potential ground contamination at Plot A2, including from the Petrol Filling Station, will be assessed and measures implemented to ensure there is no contamination to the site. Any potential impact has been considered and appropriate mitigation is set out in full in the Environmental Statement (ES) submitted as part of the Canada Water Masterplan planning application. This briefing note gives a summary of how potential ground contamination has been assessed and management measures which are described in the Ground Conditions and Contamination Chapter of the ES (Chapter 11) and Technical Appendix 11.1 and 11.2 of the ES (Preliminary Environmental Risk Assessment and Remediation Strategy).



*Site layout plan superimposed over Masterplan development*

1.2. The works that will be carried out to ensure that there is no contamination to Plot A2 from past uses or construction of the site are set out below, in the order in which they would be carried out:

1.3. Decommissioning the Tesco Petrol Filling Station (PFS)

1.4. As per ES (11.159), the PFS will be decommissioned in line with the Association for Petroleum and Explosives Administration (APEA) best practice guidance ahead of demolition and excavation works. Indigo, a specialist in decommissioning petrol filling stations, will first carry out a survey of the existing fuel tanks and fuel lines and incoming and outgoing services. They will carry out a structural survey of the buildings to establish the appropriate method of demolition and will review the environmental reports for Plot A2 to identify any constraints. Following review of the surveys a Permit to Dig will be put in place identifying the areas of fuel tanks and fuel lines to be removed.



*Existing Petrol Filling Station*

1.5. Fuel from the underground tanks, fuel lines and pumps will then be pumped out and the tanks made safe. The sales kiosk and canopy, raised kerbing, external store room and external cashpoint will be demolished. All rubble/demolition materials will be removed.

1.6. They will then remove the pumps, chase out the fuel lines and excavate out the underground tanks and concrete surround, and the petrol interceptor. Samples will be taken from the base and sides of the excavation and tested in the laboratory for fuels to check for evidence of any fuel contamination. Any residual contamination is likely to be within the 5m depth so will be removed during the 10m deep excavation to form the new basement.

**Mitigation:** This will all be monitored by British Land's Environmental Engineer. This will include site visits, sampling and verification testing, photographs and record keeping by a suitably qualified consultant.

1.7. Ground Investigation

1.8. Ground investigation (boreholes and trial pits) will then be undertaken to check for contamination and the strength of the ground. The results of the ground investigation will be assessed by the British Land's Environmental Engineer and a report prepared setting out the approach to management of the works. The Structural Engineer will design the new foundations and building using the findings of the investigation.

**Mitigation:** Ground investigations will be a condition to the planning consent and the works will be undertaken to the satisfaction of Southwark Council.

1.9. New Basement

1.10. Construction of the new basement will follow directly without the need for any venting of the ground. The walls to the new basement will be constructed using a specialist piling rig. The walls are proposed to be 1250mm thick reinforced concrete with a waterproof membrane. The concrete will be strong and durable.

1.11. The ground inside the basement walls will be excavated down to about 10m depth. The base of the excavation will be inspected, photographed, sampled and tested in the laboratory to check for any residual contamination. The results will be assessed by the Environmental Engineer. If necessary, remediation (likely to be excavation and removal or treatment in the ground) of any residual contaminated soils below the base of the excavation will be completed. The proposed 500mm thick floor slab will then be constructed from strong and durable reinforced concrete with a waterproof membrane.

**Mitigation:** A remediation strategy will be prepared and approved by Southwark Council. This document will outline necessary remediation works. This will ensure no contamination remains which can affect the basement construction and ensure users of the leisure centre will be unaffected by the historic uses of the site.

1.12. The swimming pool will be constructed on top of the floor slab and is proposed to have 500mm thick reinforced concrete walls.

1.13. The water pipes feeding the swimming pool will be inside the basement. The water pipes outside the basement will be laid within a trench filled with clean gravel.

**Mitigation:** This approach will be approved by Thames Water the statutory authority responsible for regulation of water supply pipes in Southwark.

1.14. Dust, Dirt and Grime during Excavations and Construction

1.15. British Land are a signatory to the Considerate Constructors Scheme (CCS) that sets standards for hours of work and operational practices. The Contractor will be required to sign up to the CCS and achieve minimum standards. In addition, it is expected a planning condition will require the Contractor to submit a Contractor Construction Management Plan (Contractor CMP) prior to commencement of works which will need to be approved by Southwark Council. The broad contents of this were set out in the Plot A2 Construction Management Plan submitted with the planning application and discussed in Chapter 10: Air Quality of the ES. A summary of the information is given below.

1.16. Dust, dirt and grime will be managed by the Contractors. They will follow the methods in the Construction Management Plan which includes the following:

- Hoarding (along the site boundary to stop grime leaving the site) and restrict public access to the areas of work
- Damping down soils with water sprays to stop dust, and covering any materials prior to them being removed from site
- Wheel washing of vehicles before they leave the site to prevent dirt getting onto the roads

- Monitoring of dust, noise, vibration and odour

**Mitigation:** British Land and their Contractors and Environmental Engineer will keep Southwark Council Environmental Health Department fully informed on environmental matters. British Land will keep residents informed of progress, the programme of works and will liaise regularly with residents through meetings and other means to ensure any issues experienced by local residents can quickly be highlighted and addressed. British Land is committed to being a good neighbour and considerate constructor. There will also be a 24-hour point of contact in case any immediate concerns need to be raised

1.17. Southwark Council

- 1.18. Southwark Council are responsible for regulating risk from ground contamination to new developments. They will set planning conditions which require British Land to demonstrate they have prepared the site properly and the new buildings are safe to use.

**Mitigation:** The Environmental Engineer will prepare reports on ground contamination and remediation which will be submitted to Southwark Council for approval. Following completion of the works a Validation Report by the Environmental Engineer will be prepared confirming the risks from ground contamination have been dealt with and there is no need for further monitoring. Southwark Council Environmental Health Department will review this report and it will form the basis for discharging the contaminated land planning conditions as required by Southwark Council's Planning Officers for Plot A2.

1.19. Redevelopment Experience

- 1.20. British Land is one of the UK's largest real estate investment companies, has a long track record of delivering developments across the UK and are employing Waterman Group as their structural and environmental engineers. Waterman have been operating in the UK since 1952, with their environmental team operating for over 25 years, and have investigated, designed remediation works, designed new buildings, and prepared validation reports on many brownfield sites (like Plot A2) across London and the UK. We recently investigated, designed and successfully validated the redevelopment of a former Tesco Petrol Filling Station in Bicester, Oxfordshire. Indigo were the specialist undertaking the works. The works were signed off by Cherwell District Council.