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Environment Agency

Tobias Finlayson
London Borough of Haringey
Development Control
639 High Road
London
N17 8BD

Our ref: NE/2020/131662/01-L01
Your ref: HGY/2020/0795

Date: 07 April 2020

Dear Tobias,

Redevelopment of the site to provide a single building of between 4 and 9 storeys in height, comprising 75 residential units (C3) and 953 sym of flexible commercial floorspace (use classes A1-A5, B1 and B8), with associated cycle parking, plant, refuse and recycling provision, landscaping and all necessary ancillary and enabling works.

Former Petrol Filling Station, 76 Mayes Road, London, N22

Thank you for consulting us on the above planning application

The previous use of the proposed development site as a petrol filling station presents a high risk of contamination that could be mobilised during construction to pollute controlled waters. Controlled waters are particularly sensitive in this location because the proposed development site is within source protection zone 1 for public water drinking supply.

We have reviewed the information submitted and believe the proposed development will be acceptable subject to the following **6 planning conditions** being included on any planning permission granted. Without these conditions we would object to the proposal due its adverse impact on the environment.

EA Condition 1
No development approved by this planning permission shall commence until a remediation strategy to deal with the risks associated with contamination of the site has been submitted to, and approved in writing by, the local planning authority. This strategy will include the following components:

1. A preliminary risk assessment which has identified:
    - all previous uses
    - potential contaminants associated with those uses
    - a conceptual model of the site indicating sources, pathways and receptors
    - potentially unacceptable risks arising from contamination at the site
2. A site investigation scheme, based on (1) to provide information for a detailed assessment of the risk to all receptors that may be affected, including those off-site.
3. The results of the site investigation and the detailed risk assessment referred to in (2) and, based on these, an options appraisal and remediation strategy giving

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full details of the remediation measures required and how they are to be undertaken.

4. A verification plan providing details of the data that will be collected in order to demonstrate that the works set out in the remediation strategy in (3) are complete and identifying any requirements for longer-term monitoring of pollutant linkages, maintenance and arrangements for contingency action.

Any changes to these components require the written consent of the local planning authority. The scheme shall be implemented as approved.

Reason(s)
To ensure that the development does not contribute to, and is not put at unacceptable risk from or adversely affected by, unacceptable levels of water pollution in line with paragraph 170 of the National Planning Policy Framework.

NB: The submitted phase 1 report is considered sufficient to address part (1) of this condition, however further information is required to address the remaining parts 2-4.

EA Condition 2
Prior to any part of the permitted development being occupied, a verification report demonstrating the completion of works set out in the approved remediation strategy and the effectiveness of the remediation shall be submitted to, and approved in writing, by the local planning authority. The report shall include results of sampling and monitoring carried out in accordance with the approved verification plan to demonstrate that the site remediation criteria have been met.

Reason(s)
To ensure that the site does not pose any further risk to human health or the water environment by demonstrating that the requirements of the approved verification plan have been met and that remediation of the site is complete. This is in line with paragraph 170 of the National Planning Policy Framework.

EA Condition 3
The development hereby permitted shall not commence until a monitoring and maintenance plan in respect of contamination, including a timetable of monitoring and submission of reports to the local planning authority, has been submitted to, and approved in writing by, the local planning authority. Reports as specified in the approved plan, including details of any necessary contingency action arising from the monitoring, shall be submitted to, and approved in writing by, the local planning authority.

Reason(s)
To ensure that the site does not pose any further risk to human health or the water environment by managing any ongoing contamination issues and completing all necessary long-term remediation measures. This is in line with paragraph 170 of the National Planning Policy Framework.

NB: The requirements of this condition need to be considered along with the potential for construction activities to mobilise contamination as well as any monitoring required as part of any remedial strategy.

EA Condition 4
If, during development, contamination not previously identified is found to be present at the site then no further development (unless otherwise agreed in writing with the local planning authority) shall be carried out until a remediation strategy detailing how this

contamination will be dealt with has been submitted to, and approved in writing by, the local planning authority. The remediation strategy shall be implemented as approved.

Reason(s)
To ensure that the development does not contribute to, and is not put at unacceptable risk from or adversely affected by, unacceptable levels of water pollution from previously unidentified contamination sources at the development site. This is in line with paragraph 170 of the National Planning Policy Framework.

EA Condition 5
Piling, deep foundations or other intrusive groundworks (investigation boreholes/tunnel shafts/ground source heating and cooling systems) using penetrative methods shall not be carried out other than with the written consent of the local planning authority. The development shall be carried out in accordance with the approved details.

Reason(s)
To ensure that the proposed Piling, deep foundations or other intrusive groundworks (investigation boreholes/tunnel shafts/ground source heating and cooling systems) does not harm groundwater resources in line with paragraph 170 of the National Planning Policy Framework.

NB: Prior to any piling or other intrusive groundworks commencing it must be demonstrated that deterioration of controlled waters will not occur. This is likely to require the following aspects:

- Pile design, particularly toe depth in relation to underlying aquifers.
- Where piles penetrate into the saturated zone (particularly within an SPZ1) monitoring of controlled waters receptors along with strategy to mitigate any observed impact are likely to be required.

EA Condition 6
A scheme for managing any borehole installed for the investigation of soils, groundwater or geotechnical purposes shall be submitted to and approved in writing by the local planning authority. The scheme shall provide details of how redundant boreholes are to be decommissioned and how any boreholes that need to be retained, post-development, for monitoring purposes will be secured, protected and inspected. The scheme as approved shall be implemented prior to the occupation of any part of the permitted development.

Reason(s)
To ensure that a sufficient monitoring network is maintained to allow for the completion any monitoring required as part of a verification plan, to demonstrate “betterment” or that no deterioration has occurred. Also, to ensure that redundant boreholes are safe and secure, and do not cause groundwater pollution or loss of water supplies in line with paragraph 170 of the National Planning Policy Framework.

Additional Information
The site is underlain by a significant thickness of London Clay which is likely to provided protection to the deeper aquifer from which potable water supplies are drawn. While superficial deposits are not mapped at the site, information within the submitted report suggests that perched groundwater (potentially contaminated) is present. In addition, there is uncertainty around remaining underground storage tanks and the installation of aspects of the ground source heat pump system which have the potential to penetrate the London Clay.

We are in agreement with the recommendations made within the submitted contamination report to ensure that these gaps in the conceptual site model are addressed. Consideration also needs to be given to aspects of the development which might create preferential pathways into the deeper aquifer, such as investigation boreholes for geotechnical purposes etc and piled foundations.

Having reviewed the drainage strategy, it is understood that all surface water will be disposed of too mains sewers. **Should there be any changes to this drainage proposal we need to be re-consulted.**

Advice to Applicant
We recommend that developers should:

1. Follow the risk management framework provided in LC:RM, Land Contamination: Risk Management when dealing with land affected by contamination.
2. Refer to the Environment Agency Guiding principles for land contamination for the type of information that we required in order to assess risks to controlled waters from the site. The Local Authority can advise on risk to other receptors, such as human health.
3. Consider using the National Quality Mark Scheme for Land Contamination Management which involves the use of competent persons to ensure that land contamination risks are appropriately managed.
4. Refer to the contaminated land pages on GOV.UK for more information.

We expect the site investigations to be carried out in accordance with best practice guidance for site investigations on land affected by land contamination.
E.g. British Standards when investigating potentially contaminated sites and groundwater, and references with these documents:

- BS5930:2015 Code of practice for site investigations;
- BS 10175:2011+A1:2013 Code of practice for investigation of potentially contaminated sites;
- BS ISO 5667-22:2010 Water quality. Sampling. Guidance on the design and installation of groundwater monitoring points;
- BS ISO 5667-11:2009 Water quality. Sampling. Guidance on sampling of groundwaters (A minimum of 3 groundwater monitoring boreholes are required to establish the groundwater levels, flow patterns and groundwater quality.)
- Use MCERTS accredited methods for testing contaminated soils at the site.

A Detailed Quantitative Risk Assessment (DQRA) for controlled waters using the results of the site investigations with consideration of the hydrogeology of the site and the degree of any existing groundwater and surface water pollution should be carried out. This increased provision of information by the applicant reflects the potentially greater risk to the water environment. The DQRA report should be prepared by a “Competent person” E.g. a suitably qualified hydrogeologist.
In the absence of any applicable on-site data, a range of values should be used to calculate the sensitivity of the input parameter on the outcome of the risk assessment.

Further guidance on the setting of compliance points for DQRAs can be found here (https://www.gov.uk/guidance/land-contamination-groundwater-compliance-points-quantitative-risk-assessments).

Where groundwater has been impacted by contamination on site, the default compliance point for both Principal and Secondary aquifers is 50m.

Where leaching tests are used it is strongly recommended that BS ISO 18772:2008 is

followed as a logical process to aid the selection and justification of appropriate tests based on a conceptual understanding of soil and contaminant properties, likely and worst-case exposure conditions, leaching mechanisms, and study objectives. During risk assessment one should characterise the leaching behaviour of contaminated soils using an appropriate suite of tests. As a minimum these tests should be:

- upflow percolation column test, run to LS 2 – to derive kappa values;
- pH dependence test if pH shifts are realistically predicted with regard to soil properties and exposure scenario; and
- LS 2 batch test – to benchmark results of a simple compliance test against the final step of the column test.

Following the DQRA, a Remediation Options Appraisal to determine the Remediation Strategy in accordance with CRL11.

The verification plan should include proposals for a groundwater-monitoring programme to encompass regular monitoring for a period before, during and after ground works. E.g. monthly monitoring before, during and for at least the first quarter after completion of ground works, and then quarterly for the remaining 9-month period.)

Where SUDs are proposed; infiltration SUDs should not be located in unsuitable and unstable ground conditions such as land affected by contamination or solution features. Where infiltration SuDS are to be used for surface run-off from roads, car parking and public or amenity areas, they should have a suitable series of treatment steps to prevent the pollution of groundwater. For the immediate drainage catchment areas used for handling and storage of chemicals and fuel, handling and storage of waste and lorry, bus and coach parking or turning areas, infiltration SuDS are not permitted without an environmental permit. Further advice is available in the updated CIRIA SUDs manual http://www.ciria.org/Resources/Free_publications/SuDS_manual_C753.aspx

Final Comments
Thank you again for consulting us on this application. If you have any queries please don't hesitate to contact me on the details below.

Yours sincerely,

Mr Tom Craig
Planning Advisor

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