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Welwyn-Hatfield District Council  
Development Control  
The Campus  
Welwyn Garden City  
Hertfordshire  
AL8 6AE

**Our ref:** NE/2020/132717/01-L01  
**Your ref:** 6/2020/3420/MAJ  
**Date:** 8 January 2021

Dear Clare,

**Biopark, Broadwater Road, Welwyn Garden City, AL7 3AX.**

**Demolition of existing buildings and construction of 289 residential units (use class C3) and community hub (use class E/F2), with public realm and open space, landscaping, access, associated car and cycle parking, refuse and recycling storage and supporting infrastructure.**

Thank you for consulting us on the above application on 24 December 2020.

We are currently operating with a significantly reduced resource in our Groundwater and Contaminated Land Team in our Hertfordshire and North London Area. This has regrettably affected our ability to respond to Local Planning Authorities for some planning consultations. We are not providing specific advice on the risks to controlled waters for this site as we need to concentrate our local resources on the highest risk proposals.

The previous land use at this site suggests the potential presence of contamination. Since the site is situated in a vulnerable groundwater area within Source Protection Zone 3, and located on a principal aquifer, these proposals need to be dealt with in a way which protects the underlying groundwater. Please therefore take note of the following advice.

Where land contamination may be an issue for a prospective development we encourage developers to employ specialist consultants/contractors working under the National Quality Mark Scheme.

#### **Advice for LPA/Applicant**

We recommend that the requirements of the National Planning Policy Framework and National Planning Policy Guidance are followed. This means that all risks to groundwater and surface waters from contamination need to be identified so that appropriate remedial action can be taken. We expect reports and Risk Assessments to be prepared in line with our [Approach to Groundwater protection](#) (commonly referred to as GP3) and the updated guide [Land contamination: risk management](#) (LCRM). LCRM is an update to the Model procedures for the management of land contamination (CLR11), which was archived in 2016.

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In order to protect groundwater quality from further deterioration:

- No infiltration based sustainable drainage systems should be constructed on land affected by contamination as contaminants can remobilise and cause groundwater pollution (e.g. soakaways act as preferential pathways for contaminants to migrate to groundwater and cause pollution).
- Piling or any other foundation designs using penetrative methods should not cause preferential pathways for contaminants to migrate to groundwater and cause pollution.

The applicant should refer to the following (non-exhaustive) list of sources of information and advice in dealing with land affected by contamination, especially with respect to protection of the groundwater beneath the site:

1. Follow the risk management framework provided in the updated guide [LCRM](#), when dealing with land affected by contamination.
2. Refer to the [Environment Agency Guiding principles for land contamination](#) for the type of information we require in order to assess risks to controlled waters from the site. The Local Planning 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. The Planning Practice Guidance defines a "Competent Person" (to prepare site investigation information) as: "A person with a recognised relevant qualification, sufficient experience in dealing with the type(s) of pollution or land instability, and membership of a relevant professional organisation." For this definition and more please see [here](#).
4. Refer to the [contaminated land](#) pages on Gov.uk for more information.
5. We expect the site investigations to be carried out in accordance with best practice guidance for site investigations on land affected by contamination e.g. British Standards when investigating potentially contaminated sites and groundwater, and references with these documents and their subsequent updates:
  - BS5930:2015 Code of practice for site investigations;
  - BS 10175:2011+A2:2017 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, BS 6068- 6.11: 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 but more may be required to establish the conceptual site model and groundwater quality. See RTM 2006 and MNA guidance for further details);
  - BS ISO 18512:2007 Soil Quality. Guidance on long-term and short-term storage of soil samples;
  - BS EN ISO 5667:3- 2018. Water quality. Sampling. Preservation and handling of water samples;
  - Use MCERTS accredited methods for testing contaminated soils at the site;
  - Guidance on the design and installation of groundwater quality monitoring points Environment Agency 2006 Science Report SC020093 NB. The screen should be located such that at least part of the screen remains within the saturated zone during the period of monitoring, given the likely annual fluctuation in the water table. In layered aquifer systems, the response zone should be of an appropriate length to prevent connection between different aquifer layers within the system.

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. More guidance on this can be found at: <https://sobra.org.uk/accreditation/register-of-sobra-risk-assesors/>.

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 points to note in relation to DQRAs:

- GP3 version 1.1 August 2013 provided further guidance on setting compliance points in DQRAs. This is now available as online guidance: <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 50 metres.
- For the purposes of our Approach to Groundwater Protection, the following default position applies, unless there is site specific information to the contrary: we will use the more sensitive of the two designations e.g. if secondary drift overlies principal bedrock, we will adopt an overall designation of principal.

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 the risk assessment one should characterise the leaching behaviour of contaminated soils using an appropriate suite of tests. As a minimum these tests should be:

- Up-flow 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;
- 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 should be completed to determine the Remediation Strategy, in accordance with the updated guide [LCRM](#).

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. The verification report should be undertaken in accordance with in our guidance [Verification of Remediation of Land Contamination](#).

We only consider issues relating to controlled waters (groundwater and watercourses). Evaluation of any risks to human health arising from the site should be discussed with the relevant local authority Environmental Health Department.

### **Deep Borehole Soakaways**

Infiltration via deep borehole soakaways are not acceptable, other than when a drainage and hydrogeological risk assessment shows this to be the only viable option and that any risks to groundwater will be adequately mitigated.

In line with position statement G9 in [The Environment Agency's approach to groundwater protection](#) (formerly GP3) we would usually only agree to the use of deep infiltration systems for surface water if you can demonstrate the following:

- There are no other feasible options such as shallow infiltration systems or drainage fields/mounds that can be operated in accordance with the with the appropriate British standard (e.g. discharge to a shallow infiltration system, surface water or sewer);
- The system is no deeper than is required to obtain sufficient soakage;
- Acceptable pollution control measures are in place;
- Risk assessment demonstrates that no unacceptable discharge to groundwater will take place;
- There are sufficient mitigating factors or measures to compensate for the increase risk arising from the use of deep structures.

The above should be read in conjunction with the position statement G1. Please note that we cannot issue an Environmental Permit for the direct discharge of hazardous substances into groundwater.

### **G1 - Direct inputs into groundwater**

The Environment Agency must take all necessary measures to:

- Prevent the input of any hazardous substance to groundwater;
- Limit the input of non-hazardous pollutants to groundwater so as to ensure that such inputs do not cause pollution of groundwater.

The Environment Agency will only agree to the direct input of non-hazardous pollutants into groundwater if all of the following apply:

- It will not result in pollution of groundwater;
- There are clear and overriding reasons why the discharge cannot reasonably be made indirectly;
- There is adequate evidence to show that the increased pollution risk from direct inputs will be mitigated.

Please refer to our [Groundwater Protection](#) webpages for further information.

### **Final comments**

Thank you for contacting us regarding the above application. Our comments are based on our available records and the information submitted to us. Please quote our reference number in any future correspondence. Please provide us with a copy of the decision notice for our records. This would be greatly appreciated.

Should you have any queries regarding this response, please contact me.

Yours sincerely,

**George Goodby**  
**Sustainable Places Planning Advisor**

  
E-mail [HNLsustainablePlaces@environment-agency.gov.uk](mailto:HNLsustainablePlaces@environment-agency.gov.uk)

