creating a better place

Environment Agency

Claire Westwood
Three Rivers District Council
Development Control
Three Rivers House
Northway
Rickmansworth
Hertfordshire
WD3 1RL

**Our ref:** NE/2019/130549/01-L01
**Your ref:** 19/1179/FUL

**Date:** 8 August 2019

Dear Claire,

**Employment land to the north of Maple Cross Lodge, Maple Cross, Rickmansworth, WD3 9SE**

**Comprehensive redevelopment to provide 2 No. single storey warehouse class B1C/B2/B8 units comprising a total of 16,590 sqm including 1,986 sqm ancillary B1A office space, access, landscaping and associated works.**

Thank you for consulting us on the above application.

**Environment Agency position**
The proposed development will only be acceptable if the following planning conditions are included on any planning permission granted.

**Condition 1 - Scheme for compensatory habitat creation**
No development shall take place until a scheme for the provision and management of compensatory habitat creation has been submitted to, and agreed in writing by, the local planning authority and implemented as approved. Thereafter, the development shall be implemented in accordance with the approved scheme.

**Reasons:**
Development that encroaches on the marshy grassland habitat associated with the Maple Lodge Farm Ditch (main river) on site and identified in the ecology report may severely affect its ecological value. The National Planning Policy Framework (paragraph 175) states that if significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused.

Cont/d..

**Condition 2 – Site Investigation and Remediation**

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 and proposed uses
   - potential contaminants associated with those uses;
   - a conceptual model of the site indicating sources, pathways and receptors; and
   - 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 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.

**Reasons:**

- To ensure that the development is not put at unacceptable risk from, or adversely affected by, unacceptable levels water pollution in line with paragraph 170 of the National Planning Policy Framework.
- To prevent further deterioration of a water quality element to a lower status class of adjacent surface waterbodies and prevent the recovery of a drinking water protected area in the Mid-Chilterns Chalk groundwater body.

**Condition 3 - Verification report**

Prior to any part of the permitted development being brought into use, 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.

**Reasons:**

- 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.
- To prevent further deterioration of a water quality element to a lower status class of adjacent surface waterbodies and prevent the recovery of a drinking water protected area in the Mid-Chilterns Chalk groundwater body.

**Condition 4 - Long-term monitoring**
The development hereby permitted may 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.

**Reasons:**
- 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.
- To prevent further deterioration of a water quality element to a lower status class of adjacent surface waterbodies and prevent the recovery of a drinking water protected area in the Mid-Chilterns Chalk groundwater body.

**Condition 5 - Previously Unidentified Contamination**
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.

**Reasons:**
- To ensure that the development is not put at unacceptable risk from, or adversely affected by, unacceptable levels water pollution from previously unidentified contamination sources at the development site in line with paragraph 170 of the National Planning Policy Framework.
- To prevent further deterioration of a water quality element to a lower status class of adjacent surface waterbodies and prevent the recovery of a drinking water protected area in the Mid-Chilterns Chalk groundwater body.
- No investigation can completely characterise a site. The condition may be appropriate where some parts of the site are less well characterised than others, or in areas where contamination was not expected and therefore not included in the original remediation proposals.

**Condition 6 - SUDS Infiltration of surface water into ground**
No infiltration of surface water drainage into the ground at this site is permitted other than with the written consent of the Local Planning Authority. The development shall be carried out in accordance with the approved details.

**Reasons:**
- To ensure that the development is not put at unacceptable risk from, or adversely affected by, unacceptable levels water pollution caused by mobilised contaminants in line with paragraph 170 of the National Planning Policy Framework.
- To prevent further deterioration of a water quality element to a lower status class of adjacent surface waterbodies and prevent the recovery of a drinking water protected area in the Mid-Chilterns Chalk groundwater body.

**Condition 7 - Piling / boreholes /tunnel shafts / ground source heating and cooling systems (lack of information – details to be agreed)**
Piling and other deep foundation designs, investigation boreholes and 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.
**Reasons:**

- To ensure that the proposed activities above do not harm groundwater resources in line with paragraph 170 of the National Planning Policy Framework and the Environment Agency's approach to groundwater protection, February 2018 Version 1.2 https://www.gov.uk/government/publications/groundwater-protection-position-statements
- To prevent further deterioration of a water quality element to a lower status class of adjacent surface waterbodies and prevent the recovery of a drinking water protected area in the Mid-Chilterns Chalk groundwater body.

**Condition 8 - Decommission of investigative boreholes**
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.

**Reasons:**

- 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 and The Environment Agency's Approach to Groundwater Protection February 2018 Version 1.2 https://www.gov.uk/government/publications/groundwater-protection-position-statements
- Link to archived EA guidance: https://webarchive.nationalarchives.gov.uk/20140328154120/http://cdn.environment-agency.gov.uk/LIT_6478_8cbe6f.pdf
- To prevent further deterioration of a water quality element to a lower status class of adjacent surface waterbodies and prevent the recovery of a drinking water protected area in the Mid-Chilterns Chalk groundwater body.

---

**Advice to Applicant**

**Compensatory habitat scheme requirements**
The scheme should include compensatory habitat through the provision of marshy grassland/ marsh/ scrape/ pond complex within the 8m (from top of bank) buffer zone of the watercourse. A management plan for these habitats should be included with the designs. The buffer zone and newly created habitat should be managed to develop a natural character, with planting options that may include native trees and shrubs, but planned as such to not cause shading issues or bank instability over time. Grass areas should be left unmown or mown later in the season to enhance their floristic and habitat value. Fencing and structures should be kept minimal and set back beyond the buffer zone.

Fostering the development of a continuous and structurally diverse buffer zone along

the watercourse will ensure this ‘wildlife corridor’ provides a wider and therefore more robust and sustainable range of linked habitats.

To ensure the protection of wildlife and supporting habitat. Also, to secure opportunities for enhancing the site’s nature conservation value in line with national planning policy and adopted policy DM6 Biodiversity, Trees, Woodlands, Watercourses and Landscaping of the Three Rivers Local Plan. This policy identifies that there should be ‘no net loss in biodiversity’ at a development site and that ‘Linked habitats are important in allowing species to adapt and respond to circumstances. Development must not result in fragmentation or isolation of wildlife habitats and should seek opportunities for habitat connectivity with the wider landscape.’ The scheme as it is currently submitted would result in the net loss of marshy grassland and has the potential to fragment the landscape for species that use this habitat.

The NPPF (2018) now identifies that developments should be achieving net gain, in line with the 25 year plan. The provision of a new marshy grassland/ marsh/ scrape/ pond complex would compensate for the loss of habitat at this site and provide connectivity within a fragmented landscape whilst complying with these policies.

**Universal condition for development on land affected by contamination**
Controlled waters are particularly sensitive in this location because the proposed development site

- is within Source Protection Zone 1
- is located upon a Secondary Aquifer in hydraulic continuity with the underlying Principal aquifer.

The documents submitted in support of this planning application provides us with confidence that it will be possible to suitably manage the risk posed to controlled waters by this development. Further detailed information will however be required before built development is undertaken. It is our opinion that it would place an unreasonable burden on the developer to ask for more detailed information prior to the granting of planning permission but respect that this is a decision for the Local Planning Authority.

In light of the above, we have requested conditions in line with paragraph 170 and 178 of the National Planning Policy Framework.

The Planning Practice Guidance defines a "Competent Person (to prepare site investigation information): 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."(http://planningguidance.planningportal.gov.uk/blog/policy/achieving-sustainable-development/annex-2-glossary/)”

In addition, the Thames River Basin Management Plan requires the restoration and enhancement of water bodies to prevent deterioration and promote recovery of water bodies. Without these conditions, the impact of contamination could prevent the recovery of a drinking water protected area in the Mid-Chilterns Chalk groundwater body.

**Model Procedures and good practice**

We recommend that developers should:

- Follow the risk management framework provided in the updated guide is called Land contamination: risk management (LCRM), when dealing with land affected by contamination.
- 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.
- 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. https://www.claire.co.uk/projects-and-initiatives/nqms-sqp-register The Planning Practice Guidance defines a "Competent Person (to prepare site investigation information): 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." (http://planningguidance.planningportal.gov.uk/blog/policy/achieving-sustainable-development/annex-2-glossary/)"

- 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 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

Cont/d..

risk to the water environment. The DQRA report should be prepared by a "Competent person" E.g. a suitably qualified hydrogeologist.
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.

- 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 50m.
- 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 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 updated guide is called Land contamination: risk management (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*** http://publications.environment-agency.gov.uk/pdf/SCHO0210BRXF-e-e.pdf

- 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

- Underground Storage Tanks -The Environment Agency recommends the removal of all underground storage tanks (USTs) that are unlikely to be reused. Once the tanks and associated pipelines have been removed, samples of soil

and groundwater should be taken to check for subsurface contamination. If soil or groundwater contamination is found, additional investigations (possibly including a risk assessment) should be carried out to determine the need for remediation. Refer to 'Pollution Prevention Advice and Guidance on Storing and handling materials and products' https://www.gov.uk/government/publications/underground-storage-tanks-ppg27-prevent-pollution and 'Defra - The Groundwater Protection Code: Petrol stations and other fuel dispensing facilities involving underground storage tanks - for England and Wales' http://archive.defra.gov.uk/environment/quality/water/waterquality/ground/documents/groundwater-petrol.pdf specifically those sections relating to decommissioning redundant underground fuel storage tanks and infrastructure.

NB. The previous site investigations included 3 rounds of groundwater monitoring in 2014, additional information (and more up to date) is required to complete the conceptual site model (CSM) in regard to groundwater flow directions and seasonal variations. The planning application doesn't specify what the final end uses of the commercial property will be and therefore we have concerns about the potential storage of hazardous substances at this location. Please see chapters D and F in our Approach to Groundwater Protection. https://www.gov.uk/government/publications/groundwater-protection-position-statements
The documents also detail the high possibility of solution features underlying the site. Solution features can also act as preferential pathways for contaminants to migrate.

**Flood Proofing and Resilience**
We strongly recommend the use of flood proofing and resilience measures. Physical barriers, raised electrical fittings and special construction materials are just some of the ways you can help reduce flood damage.
To find out which measures will be effective for this development, please contact your building control department. In the meantime, if you'd like to find out more about reducing flood, visit the flood risk and coastal change pages of the planning practice guidance. The following documents may also be useful: *Department for Communities and Local Government: Preparing for floods*
http://www.planningportal.gov.uk/uploads/odpm/4000000009282.pdf
*Department for Communities and Local Government: Improving the flood performance of new buildings:*
http://www.communities.gov.uk/publications/planningandbuilding/improvingflood

**Environmental permit - advice to applicant**
The Environmental Permitting (England and Wales) Regulations 2016 require a permit or exemption to be obtained for any activities which will take place:

- on or within 8 metres of a main river (16 metres if tidal)
- on or within 8 metres of a flood defence structure or culverted main river (16 metres if tidal)
- on or within 16 metres of a sea defence
- involving quarrying or excavation within 16 metres of any main river, flood defence (including a remote defence) or culvert
- in a floodplain more than 8 metres from the river bank, culvert or flood defence structure (16 metres if it's a tidal main river) and you don't already have planning permission

For further guidance please visit https://www.gov.uk/guidance/flood-risk-activities-environmental-permits or contact our National Customer Contact Centre on 03708 506 506 (Monday to Friday, 8am to 6pm) or by emailing enquiries@environment-agency.gov.uk.

Cont/d..

The applicant should not assume that a permit will automatically be forthcoming once planning permission has been granted, and we advise them to consult with us at the earliest opportunity.

**Piling**
Some piling techniques can cause preferential pathways for contaminants to migrate to groundwater and cause pollution. A piling risk assessment and appropriate mitigation measures should be submitted with consideration of the EA guidance.
http://webarchive.nationalarchives.gov.uk/20140328084622/http://cdn.environment-agency.gov.uk/scho0202bisw-e-e.pdf
During piling works (especially if the piles extend to the Chalk within SPZ1 saturated zone) due to the proximity of nearby potable abstractions a weekly groundwater monitoring programme for insitu parameters and turbidity should be considered

**Request for consultation on discharge of condition**
We ask to be consulted on the details submitted for approval to your Authority to discharge this condition and on any subsequent amendments/alterations.
Please provide us with a copy of the decision notice for our records.

Once again, thank you for contacting us. Our comments are based on our available records and the information as submitted to us.

Yours faithfully,

**Richard Burr**
**Sustainable Places Planning Advisor**
Direct dial: 02030256167
Direct e-mail: HNLSustainablePlaces@environment-agency.gov.uk

End