Affinity Water
Taking care of your water

Welwyn Hatfield Borough Council Offices
Campus East
The Campus
Welwyn Garden City
Hertfordshire
AL8 6AE

Reference Number: 6/2022/1097/OUTLINE

14 June 2022

Dear Madam/Sir

DESCRIPTION: Outline planning permission with all matters reserved except access, for up to 125 dwellings, a care facility for up to 60 bedrooms (Use Class C2), and a scout hut (Use Class F2)

LOCATION: Land to the North of Bradmore Way, Bradmore Way, The Brookmans Estate, Brookmans Park

Thank you for notification of the above planning application. Planning applications are referred to us where our input on issues relating to water quality or quantity may be required.

You should be aware that the proposed development site is located within near an Environment Agency defined groundwater Source Protection Zone 1 (SPZ1) corresponding to our Pumping Station (NORM). This is a public water supply, comprising a number of Chalk abstraction boreholes, operated by Affinity Water Ltd.

The development is within 1.5km of our nearest groundwater abstraction point. The karst geology in this area is highly complex with the presence of a large number of swallow holes and stream sinks which results in run off from all areas of the catchment having a significant impact on water quality at our abstraction. Also of concern is how the Mimmshall Brook, the main river of this catchment area, drains into the large swallow hole network at Water End which impacts water quality at another abstraction outside of this catchment. In addition, during periods of heavy rain the swallow holes at Water End overflow into the source of the River Colne at Colney Heath and can influence water quality at a number of abstractions points we have in the Upper Colne catchment. As such we consider any development within the catchment of the Mimmshall Brook as high risk, particularly during the construction phase, regardless of geographic proximity.

In terms of risk to our abstraction, our initial concerns would be related to the foundation works of the development and associated risks of turbidity, uncontrolled discharges and mobilisation of any existing contaminants. We would need to

understand if there are there any known/unknown areas of contamination (i.e. landfill or contaminated land) in the construction area that foundations works are likely to disturb. Also knowledge of the foundation depths is required for our review and if piling is to be used. Both have the potential to generate or mobilise these forms of contamination which can travel to the abstraction point and once detected, can close down the abstraction for extended periods of time. Further concerns include how the surface water drainage of the site will be dealt with in regards to the karst geology and connections to the public water supply abstraction.

We therefore ask that the following conditions be applied to this development and would have no objections subject to these being applied:

1. Contamination including turbidity

Condition

A) Prior to the commencement of the development, no works involving excavations (e.g. piling or the implementation of a geothermal open/closed loop system) shall be carried until the following has been submitted to and approved in writing by the Local Planning Authority in consultation with Affinity Water:

i) An **Intrusive Ground Investigation** to identify the current state of the site and appropriate techniques to avoid displacing any shallow contamination to a greater depth.
ii) A **Risk Assessment** identifying both the aquifer and the abstraction point(s) as potential receptor(s) of contamination including turbidity.
iii) A **Method Statement** detailing the **depth** and **type** of excavations (e.g. piling) to be undertaken including **mitigation measures** (e.g. turbidity monitoring, appropriate piling design, off site monitoring boreholes etc.) to prevent and/or minimise any potential migration of pollutants including turbidity or existing contaminants such as hydrocarbons to public water supply. Any excavations must be undertaken in accordance with the terms of the approved method statement.

The applicant or developer shall notify Affinity Water of excavation works 15 days before commencement in order to implement enhanced monitoring at the public water supply abstraction and to plan for potential interruption of service with regards to water supply.

Reason: Excavation works such as piling have the potential to cause water quality failures due to elevated concentrations of contaminants through displacement to a greater depths and turbidity generation. Increased concentrations of contaminants, including turbidity, impacts the ability to treat water for public water supply. This can cause critical abstractions to switch off resulting in the immediate need for water to be sourced from another location, which incurs significant costs and risks of loss of supply during periods of high demand.

2. Contamination during construction

Construction works may exacerbate any known or previously unidentified contamination. If any pollution is found at the site, then works should cease immediately and appropriate monitoring and remediation will need to be undertaken to avoid any impact on water quality in the chalk aquifer.

Condition

B) If, during development, contamination not previously identified is found to be present at the site, then no further development 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 in consultation with Affinity Water. The remediation strategy shall be implemented as approved with a robust pre and post monitoring plan to determine its effectiveness.

Reason: To ensure that the development does not contribute to unacceptable concentrations of pollution posing a risk to public water supply from previously unidentified contamination sources at the development site and to prevent deterioration of groundwater and/or surface water.

3. Infiltration

Condition

C) Prior to the commencement of development, details of a Surface Water Drainage Scheme that considers potential ground contamination and public water supply as a receptor of that contamination shall be submitted to and approved in writing by the Local Planning Authority in consultation with Affinity Water.

Reason: The potential presence of contaminated land and the risk for contaminants to remobilise through direct infiltration causing groundwater pollution potentially impacting public water supply.

4. Drainage

Condition

D) Prior to the commencement of development, details of the **Drainage Scheme** that considers risks to the near by public water supply abstraction shall be submitted to and approved in writing by the Local Planning Authority in consultation with Affinity Water.

Reason: To provide confirmation that an oil/water interceptor will be used to prevent oil and hydrocarbons from particular areas of the development being discharged into surface water and/or groundwater.

For further information we refer you to CIRIA Publication C532 "Control of water polluti on from construction - guidance for consultants and contractors".

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Water efficiency
Being within a water stressed area, we expect that the development includes water efficient fixtures and fittings. Measures such as rainwater harvesting and grey water recycling help the environment by reducing pressure for abstractions in chalk stream catchments. They also minimise potable water use by reducing the amount of potable water used for washing, cleaning and watering gardens. This in turn reduces the carbon emissions associated with treating this water to a standard suitable for drinking, and will help in our efforts to get emissions down in the borough.

Infrastructure connections and diversions
There are potentially water mains running through or near to part of proposed development site. If the development goes ahead as proposed, the developer will need to get in contact with our Developer Services Team to discuss asset protection or diversionary measures. This can be done through the My Developments Portal (https://affinitywater.custhelp.com/) or aw_developerservices@custhelp.com.

In this location Affinity Water will supply drinking water to the development. To apply for a new or upgraded connection, please contact our Developer Services Team by going through their My Developments Portal (https://affinitywater.custhelp.com/) or aw_developerservices@custhelp.com. The Team also handle C3 and C4 requests to cost potential water mains diversions. If a water mains plan is required, this can also be obtained by emailing maps@affinitywater.co.uk. Please note that charges may apply.

Thank you for your consideration.

Yours sincerely

Laurence Chalk
Catchment Officer
Catchment Management
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