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To: Dean Watson, Development Management

From: Environmental Protection Team

Your Ref: PA/2025/254

Our Ref: PLU 008890

Subject: Hybrid planning permission comprising of outline, with all matters reserved for up to 550 dwellings, a local centre (use Class E), associated landscaping, drainage and other infrastructure works. Full Planning permission for the construction of a new vehicular access off the M181/A1077(M) roundabout, a pedestrian and cycle link to Scotter road, a pumping station, earthworks and off-plot drainage, ecological and associated landscaping and infrastructure works

Location: Land East of M181/A1077(M), Burringham, Scunthorpe, DN17 1US

Date: 27 March 2025

Thank you for your email requesting this departments comments on the above application.

Contaminated Land

This department has received and reviewed the following reports:

- BWB Consulting, Phase 1 Geo-Environmental Assessment. Planning Application at Lincolnshire Lakes (North) Scunthorpe. Dated January 2025 Reference LLP1-BWB-XX-XX-T-G-0001_Ph1.

- BWB Consulting, Phase 2 Geo-Environmental Assessment. Planning Application at Lincolnshire Lakes (North) Scunthorpe. Dated January 2025 Reference LLP1-BWB-XX-XX-T-G-0002_Ph2.

Preliminary Investigation

The proposed hybrid application comprises of the construction of a new vehicular access off the M181/A1077(M) roundabout, a pedestrian and cycle link to Scotter Road, a foul pumping station, earthworks and 'off-plot' drainage, ecological and associated landscaping and infrastructure works. Outline planning application, with all matters reserved, for the development of up to 550 residential dwellings, a local centre

(Use Class E) and associated 'on-plot' landscaping, drainage and other infrastructure works.

The site comprises of two irregular shaped parcels of land and is approximately 56.51ha which at present is used for agricultural purposes, comprising several fields.

The surrounding land use is bound to the east by agricultural land, with the Scunthorpe urban area beyond. To the south of the site is agricultural land and to the west is the A1077(M), with agricultural land and a fishing lodge with a lake beyond. To the north, there is a warping drain with woodland and a further lake beyond. To the south-west of the site there is a caravan park.

A site walkover was conducted on the 17th July 2023 and photographic evidence has been provided.

The preliminary conceptual site model (CSM) identified several potential sources of contamination and recommended that an intrusive investigation and assessment were necessary regarding the risk to human health and controlled waters.

Site Investigation

A site investigation was undertaken between 14 and 25 August 2023, which consisted of the drilling of twelve window sample boreholes to a maximum depth of 5.45m bgl, two of the boreholes were converted to gas and groundwater monitoring wells, and thirty-three machine excavated trial pits to a maximum depth of 3.00m bgl. Sample locations were chosen to provide a spatial coverage of the site as limited potential sources of contamination had been identified in the CSM.

Soil samples were collected from selected locations and sent for a range of chemical analysis. The following chemical analytical testing was undertaken:

- *"Twenty-seven soil samples tested for a soil suite (BWB Standard Suite) comprising arsenic, barium, beryllium, water soluble boron, cadmium, chromium, hexavalent chromium, copper, lead, mercury, nickel, selenium, vanadium, zinc, water soluble sulphate (2:1 extract), total phenols, total cyanide, free cyanide, complex cyanide, fraction of organic carbon, pH, Polycyclic Aromatic Hydrocarbons (PAHs) (United States Environment Protection Agency priority 16 compounds) and Total Petroleum Hydrocarbons (TPH) C6-C40;*
- *Nine soil samples for asbestos screening;*
- *Six soil samples for pesticides and herbicides; and*
- *Eight soil samples tested for a suite of common leachable contaminants, namely arsenic, barium, beryllium, water soluble boron, cadmium, chromium, copper, lead, mercury, nickel, selenium, vanadium, zinc, water soluble sulphate (2:1 extract), sulphate, total cyanide and pH".*

The results have been compared to the Land Quality Management Suitable for Use Levels (LQM S4UL) residential end use with home grown produce. Although a small proportion of the development will be classed as commercial use, the report has confirmed that all of the results have been compared to the residential screening criteria.

None of the samples exceeded the residential end use GACs, no asbestos was identified in any of the soil samples screened, all the pesticide and herbicide concentrations were recorded below the level of detection.

Gas sampling

Gas sampling was carried out in accordance with the guidance document CIRIA C665 for a site with low-moderate gas generation potential and a high sensitivity development (residential). This consisted of a monitoring programme which comprised six visits over a three month period.

Gas sampling was undertaken from the following boreholes BH04, BH05, BH06, BH22 and BH23. BH12 and BH13 were originally converted during construction for gas and groundwater, and BH22 was only monitored on one visit as they were either damaged or obscured by farming.

No methane was record, the maximum carbon dioxide level was 3.8 %v/v with a <0.1 steady flow. Carbon Monoxide concentrations were recorded at concentrations of up to 21ppm in borehole location BH23 on two visits (24/08/2023 and 12/09/2023). Hydrogen sulphide concentrations were not recorded above the limit of detection of the equipment during the monitoring visits.

The gas screening value (GSV) has been calculated based on the maximum gas screening values of 0.0038, giving a classification of CS1. Therefore, no specific ground gas protection measures are required.

However, the report has concluded that the gas assessment is not considered a true reflection of the site. Section 8.14 states:-

> *"However, given that only one borehole was monitored as per the prescribed monitoring programme within the northern parcel of land, (where the residential and commercial development is proposed), and due to the organic rich nature of the peat found further north of the borehole location, the gas assessment is not considered to have captured the true gassing scenario to the north*
>
> *Furthermore, it is understood that the Site is likely to be surcharged due to the poor ground conditions and the need to raise site levels out of flood risk zones. The gas regime. will need to be re-assessed following surcharging once final development levels are established, with boreholes specifically targeting the proposed area of development."*

Groundwater sampling

During the monitoring, groundwater was present in all boreholes monitored, with groundwater levels ranging between 0.94m and 1.62m. Three water samples were selected for chemical analysis which included metals, conductivity, soluble sulphate, ammoniacal nitrogen, total phenols, total cyanide, pH, total organic carbon, PAHs, and a pesticide suite. Eight soil samples were also analysed for the leachability of contaminants.

The results confirm when compared to the Drinking Water Standards (DWS), there was one exceedance from TP01 for Chromium III, which was recorded at 5.80ug/l against a screening criterion of 4.7ug/l.

When compared to the Environmental Quality Standards (EQS), four metals (Chromium III, Copper, Lead and Zinc) were elevated above the EQS.

The three groundwater samples confirm there are no exceedances above the DWS.

However, when compared to the EQS, Copper, Nickle and Ammonia (NH_3 as N) exceeded the EQS.

The report concludes:

> *"Marginal leachate exceedances of Chromium III, copper, lead and zinc have been identified. However, it is considered unlikely that the leachate concentrations from soil samples would migrate towards the underlying aquifers or surface water features at elevated concentrations. Furthermore, the test results relate to samples of natural ground; it is therefore considered that these concentrations are reflective of natural background concentrations in the local area and not a result of contaminative land uses.".*

With regards to the elevated levels of ammonia within the ground water, Section 10.15 states:

> *"Exceedances of the Ammonia screening criteria within groundwater have been recorded in the south of the Site only, within the field adjacent to the historical Scotter Road Landfill site, previously identified as a potential contamination source. The inferred groundwater flow direction has indicated the flow to be in a westerly direction, supporting the theory that the historical landfill may be leaching contaminants into groundwater, then laterally migrating onto site".*

The revised conceptual site model has identified two risks which still need further investigation: -

1. Landfill Gas: Only one borehole was monitored, the report has recommended that the gas regime will need to be re-assessed following surcharging once the final development levels are established.

2. Controlled Waters: Further groundwater sampling and analysis is required in order to establish the risk to controlled waters. Groundwater monitoring wells targeting the southern boundary of the proposed area of development and areas earmarked for surcharging should be undertaken.

Given the above, this department recommends the following condition should the application be approved:

> Unless otherwise agreed by the Local Planning Authority, development other than that required to be carried out as part of an approved scheme of remediation must not commence until parts 1 to 4 below have been complied with. If unexpected contamination is found after development has begun,

development must be halted on that part of the site affected by the unexpected contamination to the extent specified by the Local Planning authority in writing until part 4 has been complied with in relation to that contamination.

Part 1: Site Characteristics

An investigation and risk assessment, in addition to any assessment provided with the planning application, must be completed in accordance with a scheme to assess the nature and extent of any contamination on the site, whether or not it originates on the site. The contents of the scheme are subject to the approval in writing of the Local Planning Authority. The investigation and risk assessment must be undertaken by competent persons and a written report of the findings must be produced. The written report is subject to the approval in writing of the Local Planning Authority. The report of the findings must include:

i. a survey of the extent, scale, and nature of contamination.
ii. an assessment of the potential risks to: human health, property (existing or proposed) including buildings, crops, livestock, pets, woodland and service lines and pipes, adjoining land, groundwaters and surface waters, ecological systems, archaeological sites and ancient monuments.
iii. an appraisal of remedial options, and a proposal of the preferred option(s).

This must be conducted in accordance with Environment Agency's Land Contamination Risk Management (LCRM) guidance July 2023.

Part 2: Submission of Remediation Scheme

A detailed remediation scheme to bring the site to a condition suitable for the intended use by removing unacceptable risks to human health, buildings and other property and the natural and historical environment must be prepared and is subject to the approval in writing of the Local Planning Authority. The scheme must include all works to be undertaken, proposed remediation objectives and remediation criteria, timetable of works and site management procedures. The scheme must ensure that the site will not qualify as contaminated land under Part 2A of the Environmental Protection Act 1990 in relation to the intended use of the land after remediation.

Part 3: Implementation of Approved Remediation Scheme

The approved remediation scheme must be carried out in accordance with its terms prior to the commencement of development other than that required to carry out remediation, unless otherwise agreed in writing by the Local Planning Authority. The Local Planning Authority must be given two weeks written notification of commencement of the remediation scheme works.
Following completion of measures identified in the approved remediation scheme, a verification report (referred to in PPS23 as a validation report) that demonstrates the effectiveness of the remediation carried out must be produced and is subject to the approval in writing of the Local Planning Authority.

Part 4: Reporting of Unexpected Contamination

In the event that contamination is found at any time when carrying out the approved development that was not previously identified it must be reported in writing immediately to the Local Planning Authority. An investigation and risk assessment must be undertaken in accordance with the requirements of Part 1, and where remediation is necessary a remediation scheme must be prepared in accordance with the requirements of Part 2, which is subject to the approval in writing of the Local Planning Authority. Following completion of measures identified in the approved remediation scheme a verification report must be prepared, which is subject to the approval in writing of the Local Planning Authority in accordance with Part 3.

Reason: To ensure the site is safe for future users and construction workers.

Noise

The following noise assessment has been submitted with this application:

- BWB Consulting, Noise Impact Assessment, Hargreaves Land Ltd, Planning Application 1 at Lincolnshire Lakes (North) Scunthorpe, Document Reference BWB/221638_003 Dated January 2025

A baseline noise survey was undertaken at the site in November 2024 to determine the prevailing noise climate.

Noise measurements were undertaken at Monitoring Location 1 (ML1) over a 24-hour period commencing at 15:45 on Wednesday 6 November 2024. The equipment was installed at the western boundary of the closest residential parcel to the A1077M. The location was considered representative of the worst affected residential dwellings by road traffic on the development site.

The daytime noise level at ML1 was 50 dB LAeq,16h. Therefore, noise levels at the worst affected dwellings would be expected to be 50 dB LAeq,16h. In accordance with BS 8233 external noise levels of 50 dB LAeq,16h are desirable for outdoor amenity spaces.

An assessment of noise at the site determined that suitable external and internal noise levels can be achieved at the worst affected residential development parcels, without the need for additional mitigation.

This department has the following comments to make:

- The raw data has not been included to allow this department to fully review the assessment report.

- Calibration certificates for the monitoring equipment have not been included within the report.

- No mention has been made of attended or unattended periods of monitoring.

- Minimal monitoring has been undertaken for a 24 hour period during November 2024. No justification for the time period chosen has been provided. Considering the sensitivity of the development, this department considers that additional monitoring should be undertaken over a longer period, which also includes the weekend.

Once the above information is received, this department will be in a better position to recommend conditions on any permission granted.

Air Quality

The following report has been received and reviewed:

- Hargreaves Land Limited. Planning Application 1 at Lincolnshire Lakes (North) Scunthorpe. Air Quality Assessment. Dated January 2025. Reference 221638_AQA

The assessment considers construction phase dust impacts and operational phase road traffic emissions as well as a determination of the site suitability considering existing air pollutant concentrations.

Site Suitability

The principal air pollution sources in the vicinity of the site are likely to comprise road traffic emissions from the M181/A1077(M).

Pollutant concentrations were predicted across the site using available data from DEFRA background maps and local authority monitoring where appropriate. Concentrations of NO2, PM10 and PM2.5 were all predicted to be below the relevant air quality objectives and therefore the site is considered to be suitable for the proposed residential end use.

This department agrees with the above conclusion.

Construction Phase

In accordance with the IAQM guidance, a detailed assessment is required if human receptors are located within 250m of the boundary of the site or 50m of routes used by construction vehicles on the public highways or up to 250m from the site entrances. As this criteria is fulfilled, a detailed assessment was undertaken.

The assessment concludes that:

> *"In accordance with IAQM guidance, with the implementation of the mitigation measures detailed in Step 3, the residual impacts from the construction phase are considered to be '**not significant**'."*

This department agrees with the above conclusions and recommend the inclusion of the following conditions to secure this requirement:

1. **Working hours condition:**

   Construction, demolition and site clearance operations shall be limited to the following days and hours:

   - 08:00 to 18:00hrs Monday to Friday.
   - 08:00 to 13:00hrs Saturday.
   - No construction, demolition or site clearance operations on Sundays or public holidays.
   - HGV movements shall not be permitted outside these hours during the construction phase without prior written approval from the Local Planning Authority.
   - Installation of equipment on site shall not be permitted outside these hours without prior written approval from the Local Planning Authority.

2. Construction Environmental Management Plan

No stage of the development hereby permitted shall commence until a Construction Environmental Management Plan (CEMP) has been submitted to and approved in writing by the Local Planning Authority. The CEMP shall include the following:-

Noise and vibration: The CEMP shall set out the particulars of –

a) the works, and the method by which they are to be carried out;

b) the noise and vibration attenuation measures to be taken to minimise noise and vibration resulting from the works, including any noise limits; and

c) a scheme for monitoring the noise and vibration during the works to ensure compliance with the noise limits and the effectiveness of the attenuation measures

Light: The CEMP shall set out the particulars of –

a) Specified locations for contractors' compounds and materials storage areas,

b) Areas where lighting will be required for health and safety purposes,

c) Location of potential temporary floodlights,

d) Identification of sensitive receptors likely to be impacted upon by light nuisance,

e) Proposed methods of mitigation against potential light nuisance, including potential glare and light spill, on sensitive receptors.

Dust: The CEMP shall set out the particulars of –

a) Site dust monitoring, recording and complaint investigation procedures

b) Identification of receptors and the related risk of dust impact at all phases of the development, including when buildings and properties start to be occupied

c) Provision of water to the site

d) Dust mitigation techniques at all stages of development

e) Prevention of dust trackout

f) Communication with residents and other receptors

g) A commitment to cease the relevant operation if dust emissions are identified either by regular site monitoring or by the local authority

h) A no burning of waste policy

Reason: To protect residential amenity

Operational Phase

A detailed operational phase road traffic emissions assessment was undertaken to consider the impact of development-generated traffic on local air quality and predict pollutant concentrations at the site. The dispersion model ADMS-Roads was used to model concentrations of oxides of nitrogen (NOx) and particulate matter (PM10 and PM2.5) at identified existing receptor locations for both without and with development scenarios. The change in pollutant concentrations as a result of development-generated traffic was then calculated.

Annual mean NO2, PM10 and PM2.5 concentrations are predicted to be below the current annual mean air quality objectives at all modelled receptor locations from the proposed development. In addition, short term air quality objectives for NO2 and PM10 are not predicted to be exceeded.

The assessment has also included a sensitivity analysis which takes into consideration the committed 2500 dwelling development (PA/2015/0396) located to the south of the site and forms part of the wider Lincolnshire Lakes development. This analysis is contained within Appendix G and the following matters are raised in relation to this:

- Further detail is required in relation to the data used within this analysis and where this has been sourced from

Once this matter has been addressed, this department will be able to comment further.

Light

The following report has been received and reviewed:

- Hargreaves Land, Planning Application 1 at Lincolnshire Lakes (North) Scunthorpe. Lighting Strategy. January 2025, LLP1-BWB-ZZ-XX-RP-E-0001.

The report lists the relevant guidance and design parameters that must be followed during the production of a future detailed lighting design. This includes details of luminaires, mounting heights, light direction and example luminaires.

The future proposed external lighting design must not exceed the recommended levels for obtrusive light for an Environmental Zone E2 (rural) given in the ILP GN01/21 guidance.

With the above in mind, this department recommends the following condition should planning permission be granted:

> **"No external lighting shall be installed until an assessment of the potential for light impact has been undertaken, submitted to and approved in writing by the Local Planning Authority. The assessment shall include:**
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> - **Identification of sensitive receptors likely to be impacted upon by light nuisance, with a determination of the proposed scheme's compliance with the design guidance in the Institution of Lighting Professionals Document: Guidance Notes for the Reduction of Obtrusive Light. https://www.theilp.org.uk/documents/obtrusive-light/**
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> - **A lighting scheme which proposes methods of mitigation against potential light nuisance, including potential glare and light spill, on sensitive receptors.**
>
> **Once approved the agreed lighting scheme shall be implemented and permanently retained. Any deviation from the agreed lighting scheme shall require approval in writing by the Local Planning Authority."**
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> *Reason: To protect residential amenity*