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TECHNICAL NOTE

Wrexham Industrial Estate

Nutrient Neutrality Appropriate Assessment Note

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Client Name: Elite Onyx Properties (UK) SRL

Client Address: 51 Boulevard Grande-Duchess Charlotte, L-1331, Luxembourg, Grand Duchy of Luxembourg

Site Address: Land at Wrexham Industrial Estate off Bryn Lane, Wrexham

Curtins

Nutrient Neutrality Appropriate Assessment Note

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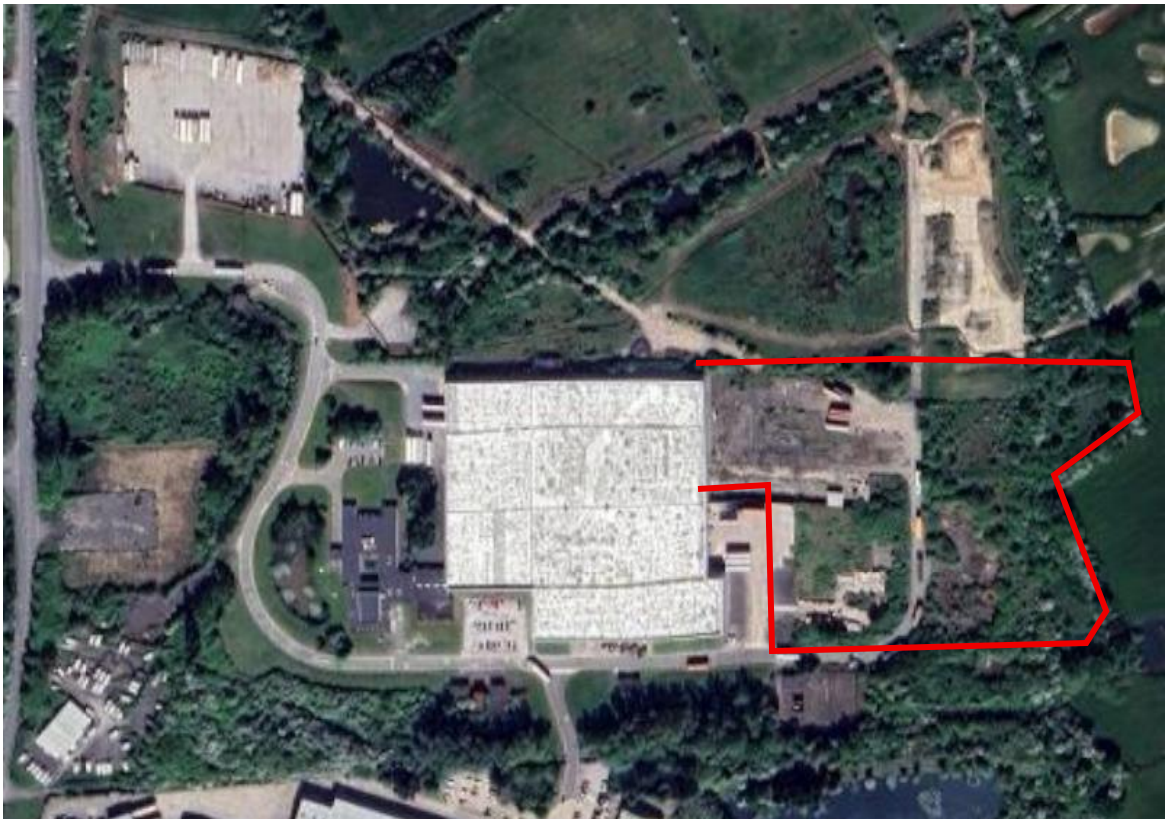
1.0 Introduction

This Technical Note (TN) has been prepared by Curtins to present the information used in the appropriate assessment for nutrient neutrality for the proposed industrial building at Wrexham Industrial Estate. The proposed building is within the River Dee and Bala Lake SAC. The River Dee and Bala Lake SAC has targets for the removal of Phosphates from the watercourse. The proposed site plan is in Figure 1.1 Site Location.

The site proposes to accommodate a 15,000 sq.m warehouse with office space.

This Technical Note (TN) outlines the information used in the Nutrient Neutraility Assessment undertaken.

Figure 1.1 Site Location



2.0 Stage 1 – Additional Nutrient Loading from Wastewater

2.1 Data Requirements

The site is in Wrexham and falls inside the River Dee and Bala Lake SAC

Customer numbers and Water uses. The site will be a business premises with no external customer. Due to restrictions in entering data into the nutrient budget calculator a customer number of 1 has been used.

A 65sq.m per employee assessment of staff numbers has been made for the purpose of this report. This is a central assessment part way between general warehousing (50sq.m per employee) and Large Scale Warehousing (80sq.m per employee). This gives 230 employees based on a 15,000 sq.m warehouse.

Flows and Loads 4 assesses a 50 l per employee loadings for Sewerage Treatment systems. The number taken is for an office / factory without canteen.

Welsh Water have confirmed that the site is served by the Five Fords STW.

3.0 Stage 2 – Neutriuent Loading from Pre Existing Land Uses

3.2 Data Requirements

To date only a stage 1 desk study of the ground conditions has been undertaken. The phase 1 has reviewed local borehole records and has identified that the site is likely to be underlain by clay soils to depths of at least 15m. As clay soils tend to be highly impervious the site is assessed to have ‘impeded drainage’ characteristics.

Based on the existing land coverage, whilst the former site use is a fibreglass factory, it has long since been demolished. The current hardstanding’s have been identified to cover circa 2.1 ha, with scrub covering the remaining 1.8 ha of the 3.9ha total site area.

4.0 Stage 3 – Neutriuent Loading from New Land Uses

4.3 Data Requirements

Based on the proposed land coverage a significant portion of the site will be developed into a commercial / industrial space.. The proposed hardstanding / roof area have been identified to cover circa 2.4 ha, with scrub covering the remaining 1.5 ha of the 3.9ha total site area.

5.0 Stage 3s – Nutrient Load Removed Through SUDS

5.4 Data Requirements

Based on the proposed land coverage a significant portion of the site will be developed into a commercial / industrial space.. The proposed hardstanding / roof area have been identified to cover circa 2.4 ha, there is 1.0ha of greenspace occupied by the swale. The existing scrub will remain covering the remaining 0.5 ha of the 3.9ha total site area.

6.0 Stage 4 – Results

6.5 Data Requirements

Results resulting from the inputs identifies that 1.51 kg Total Phosphorus needs to be mitigated per year.

DCWW have confirmed capacity at the Five Fords WWTW for the proposed development and that the phosphorus loads will be within existing permit limits.

The Chemical and Biological quality of the watercourse the treatment works discharges to are both Grade A.

Based on the above – NRW Advice to Planning Authorities states –

Planning Authorities should then consult with the sewerage undertaker to determine the potential nutrient impacts of new connections on a case-by-case basis. As part of this consultation, Planning Authorities should ask the sewerage undertaker to confirm whether the associated WwTW:

- *has an environmental permit that has been reviewed against the nutrient targets set out in the conservation objectives for the river SAC, and*
- *is operating in compliance with the permit conditions, and*
- *has capacity to receive and treat the additional volume of wastewater within permit limits (meaning flow and nutrient limits with immediate effective dates and for some permits, tighter nutrient limits with future effective dates)*

If the above criteria are met, we consider it may be possible for a Planning Authority to conclude no likely significant effect in the context of phosphorus and ammonia impacts where:

- *the WwTW is discharging into a water body catchment that is meeting water quality targets for phosphorus and all downstream river water bodies are also meeting their phosphorus targets or;*

- *further consultation with NRW and the sewerage undertaker confirms that the final effluent phosphorus limits for the WwTW have been reduced through recent review, the WwTW was previously operating with phosphorus load higher than can be discharged under revised permit limits, and the works will be operating within reduced limits at commencement of occupation.*

The above considerations are considered to be met.

7.0 Summary

1.51 kg/ year Total Phosphorus needs to be mitigated.

Welsh water have confirmed that the Five Fords WWTW has capacity within existing limits for the additional phosphorus load – and the Chemical and Biological quality of the watercourse the treatment works discharges to are both Grade A.

Based on the above this assessment suggests that there is NO LIKLEY SIGNIFICANT EFFECT – based on NRW Advice to planning authorities outlined in Section 4

8.0 Appendices

8.1 Appendix A: Nutrient Budget Calculator (see Excel Spreadsheet)