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Civil engineering design services

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WREXHAM COUNTY BOROUGH COUNCIL

Ref: 1549-NRW-2023-07-24

Your ref: MAE P/2022/002

31 July 2023

Residential Development at Land Off Main Street, Bettisfield Planning reference P/2022/002

Dear Sir

I enclose below my response to the concerns raised by Natural Resources Wales, in their correspondence dated 18 May 2022.

Protected site and phosphate discharge:

I appreciate that, while the site is not within the catchment of the River Dee and Bala Lake Special Area of Conservation (SAC), the N.R.W. have concerns that proposed foul discharge could enter this SAC catchment.

No proposed development is permitted to increase the amount of phosphates within a S.A.C.

Our proposed design utilises cess tanks, to avoid any possibility of phosphate entering the surrounding land, which could happen with a package treatment plant. To avoid issues, we are specifying that the cess tank contents must be taken by tanker to a Waste Water Treatment Plant outside the catchment of the River Dee and Bala SAC. There will be no effect on any SAC.

We have specified Ellesmere-Wharf Meadow STW, at Laurels Close, Wharf Meadow, Ellesmere, Shropshire SY12 0BY. This treatment plant is owned and operated by Severn Trent Water.

As pointed out by the N.R.W, this proposal will not affect the adjacent SAC, namely Fenns-Whixall-Betisfield-Wem-Cadney Mosses.

The proposed cess tanks will meet British Standard BS 6297, and be sealed watertight units, with a level warning device to indicate when emptying is required. While it is appreciated that cess tanks (cesspools) are not encouraged by the N.R.W, there are no foul sewers within about 1.5 miles of this site.

Package treatment plants have also been dismissed, as the fully treated outflow would either be to a drainage field or watercourse, and there is potential that, despite the treatment, phosphates could enter the SAC.

The cess tanks are sized using the criteria of British Waterways Board - Flows and Loading - 4, which is the national standard.

**Drainage and Sewerage design: Viabilities for new sites: Highway and Access Design:
Traffic Analysis: Highway Layouts:**

The above confirms there are no foul drainage issues with the proposals for the above scheme.

Should you require any further information regarding the above, please contact me.

****please respond to ensure receipt****

Thanks

Yours faithfully.

ALAN KANE
I. ENG AMICE (1992)
KANE DESIGN

Company number 08939159

Enc:

1549/01 Drainage Layout drawing P5: A1 size.

1549 Cess Tank Calculation

1549 Cess Tank Manufacturer Specification

1549 Surface Water Storage (preliminary) – for reference only.