

Drainage Resume.

Methodist Chapel, Knolton, Overton, Wrexham

For and on behalf of
Mr & Mrs Davies

By
Woodsyde Developments Ltd

Introduction.

Woodsyde Developments have been commissioned to review the foul water drainage arrangements to the proposed conversion of the former Methodist Chapel at Knolton. The drainage layout plan (MC-DL-400 Appendix A) and drainage resume is in direct response to the latest email from Gwyn Humphreys (Planning Officer) and Natural Resources Wales to Rob Bennett (Agent) dated 22/02/2024.

Proposals

The proposals are for the currently unused Methodist Chapel to be converted into a 2-bedroom residential dwelling. The chapel is owned by the applicants and current residents of Eastwick Manor and Eastwick Plant Centre which are both immediately adjacent to the Methodist Chapel. The Methodist Chapel will however be used as an annex to Eastwick Manor for the applicant's mother-in-law who joined the family because of illness and the applicant's daughter who has special educational and medical needs.

The drainage resume and drainage layout plan (MC-DL-400 Appendix A) have been prepared to confirm that the existing septic tank and drainage field currently serves Eastwick Manor is of sufficient size to accommodate the flows from the conversion of the Methodist Chapel.

Existing Foul Water Drainage

We understand that there is currently no foul water drainage to the existing Methodist Chapel.

Eastwick Manor is a 4 bedroomed property and the foul water drainage outfalls to an existing 3900 litre septic tank located in the rear garden. The original purchase receipt for the septic tank (Appendix B) is attached as proof of size. The treated water thereafter outfalls to an existing drainage field within Eastwick Plant Centre. The applicant has undertaken minor excavations and has confirmed the drainage field is a herringbone arrangement and approximately 54.0m in length in trenches 1.0m deep and 0.9m wide. The existing drainage arrangement are in good working

order and the applicant has the septic tank emptied and maintained via an annual contract with Mayglothing Waste Ltd.

Proposed Foul Water Drainage

The proposals are for the foul water drainage from the Methodist Chapel to outfall to the existing foul water drainage that serves Eastwick Manor.

Within the latest email response from the Planning Officer and Natural Resources Wales the following was stated:-

You may, therefore, wish to propose to keep the existing septic tank system in use by both the existing dwelling and the proposed conversion. In this circumstance, the NRW advice states the following:

"Development proposals resulting in additional waste water being discharged to an existing private treatment system are not likely to have a significant effect if:

- the existing discharge is to ground; and
- the drainage field is located more than 40m from any surface water feature such as a river, stream, ditch or drain and located more than 50m from a SAC boundary; and
- the design of the existing private sewage system (including the drainage field) has the capacity to effectively treat and discharge the additional waste water and increases in effluent discharge to ground can be made where the discharge remains eligible for an existing exemption under the Environmental Permitting Regulations or can operate in compliance with conditions of an extant environmental permit.

Where increases in wastewater to an existing private sewage treatment system are being proposed in association with a development, Planning Authorities are advised to obtain a detailed design of the private drainage system (including on assessment of ground conditions in the drainage field) to demonstrate that it can accommodate increased flow and continue to operate effectively".

Whilst I note the existing discharge is to ground and the drainage field appears to be located in excess of 40 metres from any surface water feature, no information to confirm the existing system has the physical capacity to effectively treat the additional foul flows arising from the development has been submitted. Furthermore, no information has been submitted to demonstrate that the existing system could accommodate the increased flows and continue to operate effectively, in line with the above.

We can confirm the existing discharge is to ground and the existing drainage field is located 40m from any surface water feature and 50m from a SAC boundary.

The existing septic tank is 3900 litres in size and is of sufficient size to accommodate the propose chapel conversion . The existing house is 3 bed with an upstairs office so for the purposes of these calculations we have worked on this being a 4 bedroom property. The proposed conversion of the chapel is to be a 2 bed property.

- 4 bed = 6 person

- 2 bed = 5 person

Total Persons = 11

Sizing of septic tank:-

- 11 persons x 150 litres = 1650 litres

1650 litres + 2000 litres = 3650 litres

The existing septic tank is 3900 litres in size, so it can accommodate the additional flows from the proposed conversion of the Methodist Chapel.

The applicant has now undertaken percolation tests in accordance with the guidance within Building Regulations Part H. These provide a VP of 16.4. These are attached in Appendix C.

The applicant has also undertaken minor excavations and confirmed the existing drainage field is a herringbone arrangement 54m in length in trenches approximately 1.0m deep and 0.9m in width. The existing drainage field is of sufficient size to accommodate the existing house and proposed chapel conversion.

Trench Area: $A = p(11) \times Vp(16.4) \times 0.25 = 45.1 \text{sq.m.}$ Divide by 0.9m based on a 900mm wide drainage trench = 50.111 linear metres required

Summary

The existing septic tank and drainage field is of sufficient size to accommodate the foul water drainage from the Methodist Chapel. The drainage field is located 40m away from any surface water feature and 50m away from a SAC boundary. The proposals will have no significant effect upon the River Dee and Bala Lake SAC.

Appendices'

Appendix A – Drainage Layout Plan – MC-DL-400

Appendix B – Existing Septic Tank Purchase Receipt.

Appendix C – Percolation Results