



DRAINAGE STATEMENT

Change of use of land to
Traveller site to four pitches
Land at Stryt y Bydden,
New Broughton, Wrexham
Planning Ref: P/2023/0865

Summary of Compliance with Circular 008/2018

Information has been submitted to Wrexham Planning Department to demonstrate that a drainage connection to the public foul sewer network is not feasible. The proposed foul drainage arrangements therefore do not conflict para 6.6.21 of PPW 11 and the guidance in Circular 008/2018.

- a. An asset plan was obtained from Welsh Water showing the foul drainage network within the vicinity of the site which includes the locations of the nearest foul sewer connection (Appendix 1).
- b. A 225mm dia VC Pipe is located in Berse Road (B5101), 125m Northeast of the site over private land. To connect to the public sewer the development foul drainage arrangement would involve the installation of a pumping station and a rising main. The land and sewer levels will not permit a gravity connection. The rising main would need to cross a private land which has a current planning application for housing development.
- c. Also, a sewer is located Northwest in Bersham Road some 350m from the site. Again, to connect would involve the installation of a Pumping Station and rising main and pumped system to adoptable standards. The land and sewer levels will not permit a gravity connection.
- d. A Welsh Water Development Officer confirmed with a verbal enquiry that with reference to a sewer requisition, I was informed this is normal for a large development but in this case, it would not be financially viable for the water company or my client for development of this small site to requisition a sewer connection.
- e. An informal enquiry was also made to the proposed developer of the field on land outside my client's ownership who said they would object to such a requisition.
- f. The above consultations have been carried out in accordance with Para 2.2 of the Circular 008/2018
- g. A thorough assessment of both the Bio Disc market and the private wastewater treatment plant has been carried out by our drainage consultant relative to final effluent discharge and the ability to meet near neutral phosphate discharge. The original Bio-Disc specification has now been changed to a Clenviro Matrix – Topas Plus

sewage treatment plant achieving discharge qualities of 1mg/litre designed and recognised by British Water. The LDP identifies the need to provide a high-quality sustainable design to comply with Policy DM1 and NE6 to meet the latest standards of the regulating authorities throughout Wales.

The purchase price of the Matrix Topas-Plus is £17,000.00 + VAT with an additional installation estimate of £24,000.00.

In comparison a pumping station with rising main purchase and installation in accordance with the stringent Welsh Water document 'Sewers for Adoption' would be in excess of £85,000.00 which is outside my client's remit.

The proposed system with a near neutral phosphate discharge of treated effluent from the Matrix Topas-Plus to the drainage field with its phosphorous reduction technology will have no adverse effect on any water services or breach any statutory regulations.

The disposal of sludge will be via a registered waste carrier on contract together with general maintenance contract with Clenviro the manufacturers and suppliers of the unit. The final effluent treatment contained within the drainage field irrigation system will be constructed in accordance with the Building Regulations 2010 Approved Document (H2) and its installation supervised by the Councils own Building Control Team. In all, fully in compliance with Welsh Government Circular 008/2018 and the Councils LDP Policy NE6.

Full details of the proposal are available for Wrexham Council to carry out their required Screening Assessment.

Ecology and the River Dee SAC

The Ecology Consultant, Edwin Lomas of Camlad Ecology Ltd has prepared a summary of his initial report and findings relative to the use of the private sewage treatment arrangement as required by the Council's LDP Policy NE1 and NE6, in particular those relative to the River Dee (SAC). The assessment is contained within his initial submitted report.

Proposed Development

The site is a small development of 4 no. family pitches with a maximum discharge to the Matrix system of 600 litres/day where the Clenviro Matrix Topas-Plus system will treat the wastewater quality discharge removing phosphates to near neutral content and proven drainage field as recognised within the Building Regulations ref H2.

The proposed drainage arrangement will attenuate phosphates from the effluent by decreasing the volume of wastewater produced from the site occupants without increasing the concentration of phosphates. The discharge will be less than 2 cu.m / day. It is recognised Gypsy and Travellers from a traditional and cultural background will rarely use toilet facilities inside their homes - there are strict rules of cleanliness which require Travellers to adhere to codes of sanitary standards and practices within the home and therefore the Amenity Blocks / Dayrooms are used solely for this purpose. The Clenviro system works for holiday parks and traveller sites with little maintenance and will operate when the sites have been periodically vacant.

The Pump Chamber

The pump chamber is a concrete, fiberglass or polyethylene container that collects the septic tank effluent. The chamber contains a pump with control floats and a high-water alarm float. The pump action can be controlled either by the use of control floats or by timer controls. Control floats are set to turn the pump “on” and “off” at levels for pumping a specific volume of effluent per does. Timer controls are set to produce both the length of the dose and the interval or rest period between doses.

The high-water alarm float starts an alarm to warn you of any pump malfunction. If pump timer controls are used, the alarm also will warn you of excessive water use in the caravan / dayroom leaks into the system. The float is set to start when the effluent in the pump chamber rises above the “on/off” float. The alarm will consist of a buzzer and an easily visible light. It will have a union and valve for easy removal of the pump. A piece of nylon rope or other non-corrosive material will be attached to the pump for taking the pump in and out of the chamber.

Arrangement of Private Sewerage

As previously referenced full consideration has been given to the financial implications relative to the installation of a pumping station and rising main to Welsh Water standards for adoption (should that have been feasible) against the installation of a Clenviro Matrix System with a final effluent treatment drainage field constructed in accordance with the current Building Regulations, Approved Document H2 and Circular 008/2018.

A thorough assessment of the private sewage treatment plant market was carried out by our drainage consultant relative to the final effluent discharge and the ability to meet near neutral phosphate discharge. The original specification of the unit has now been changed to a Clenviro 'Matrix – Topas Plus sewage treatment plant achieving discharge qualities of 1mg/litre designed to meet the latest standards of the regulating authorities throughout Britain. The purchase price of the unit is £17,000.00 + VAT with an installation estimate of £24,000.00 to total £41,000.00 + VAT.

In comparison a pumping station with rising main purchase and installation in accordance with the stringent water authority bible "Sewers for Adoption" would be in excess of £85,000.00 + VAT.

Surface Water – Sustainable Drainage System (SUDs)

The sustainable drainage system is designed to manage the storm water on site primarily from the Dayrooms and static caravans to mimic roof natural drainage by draining to the gravel surface away from the Foul Drainage Treatment Plant.

Conclusion

The proposed system with a near neutral phosphate discharge of effluent with its phosphorous reduction technology by the Clenviro Matrix System will have no adverse effect on any water services or breach any statutory regulations and conforms to BS6297:2007+AI2008 and Circular 008/2018.

The disposal of sludge will be collected via a registered waste carrier on contract together with general maintenance contract with Clenviro the manufacturers and suppliers of the unit.

The final effluent treatment the drainage field will be constructed in accordance with the Building Regulations 2010 Approved Document H2 and its installation supervised by the Councils own Building Control Team.

In all fully in compliance with Welsh Government Circular 008/2018.

It is therefore considered full details of the proposal have been submitted to Wrexham Council to carry out the required Screening Assessment.

It is considered the proposed development and Matrix Topas-Plus sewage treatment plant with secondary treatment will not affect NRW's compliance assessment to reach its target against Phosphorous Targets and complies with the requirements outlined.

Appendices

Appendix 1 – Welsh Water Drainage Network Plan