

Foul Sewage and Surface Water (Drainage) Report

Site Characteristics

Geologically the site is situated advantageously at the top of a sandstone ridge, which makes it naturally well drained and benefits from being in a low flood risk zone (Zone 1).

The site itself inclines gently to the South/SouthWest, towards Horncastle Care Home.

In keeping with this, drainage of excess surface water would historically have left the property in this direction as well as through an old estate land drain at the edge of the site adjacent to the lane on the west.

Proposed Drainage Scheme

With the incorporation of a basement, the drainage scheme will include an automatic pump (independently powered by the sun).

The pump will be positioned in an existing soak-away 2 meters below the foundation level to which a series of installed french drains already lead.

From this control point any excess water will automatically be taken to storage tanks situated on site, beside the garden studio, as part of the rainwater harvesting system.

This system will, in the first instance, take rainwater from the rooves to the storage tanks further mitigating the excess of surface water.

The pump and storage system will be configured to cope with the 1 in a 100 year storm, calculated by the attached Greenfield Runoff Rates Report, as well as taking into account climate change.

This stored water can serve several purposes, including facilitating the need of the buildings amenities for the artists studio, providing a fresh flow of water to a small wildlife pond, and acting as an emergency back up store of water for the neighbouring locality.

Proposed Sewage Scheme

The North West corner of the property exceeds the minimum requirement of seven meters away from the building making it suitable to install a sewage treatment plant such as the Vortex Eco. This particular treatment plant has the added ability to be adjusted according to its usage, making it particularly suitable for low-use situations, which this proposal would be.

It would be installed below the hard standing and would include a reinforced cover so that a vehicle could still park above.

Overflow of clean treated water from the treatment plant (which is estimated to be very small considering the usage) would have a variety of options including a small dedicated soak-away positioned in the garden part of the site, and/or be directed via land drains to the ditch on Plawhatch lane.

The development is small in scale and has been sustainably and considerately designed and therefore will not have any negative effects on the environment.

