

LIDGETT LANE, THURNSCOE, ROTHERHAM
DRAINAGE STRATEGY
APRIL 2024



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DEVELOPMENT AT LIDGETT LANE, THURNSCOE

DRAINAGE STRATEGY

THE SITE:

The site is located off Lidgett Lane, Thurnscoe and occupies an area of approximately 0.2 hectares. The site is currently vacant.

A topographical survey hasn't been carried out to date but a visual inspection suggests the site has been plateaued with banking's to the perimeter.

The site is bounded by Industrial buildings to the north and east, housing and a tyre garage to the west and Lidgett Lane to the south.

A location plan is shown in Appendix A

PROPOSED DEVELOPMENT:

Outline planning permission is sought to develop the site with Industrial units and associated infrastructure.

FLOOD ZONE LOCATION:

The Environment Agency flood map shows the site lies within flood zone 1. The site is therefore "low probability" where the annual risk of fluvial flooding is less than 0.1%. There are no known open watercourse's within the vicinity of the site and therefore there is no potential for fluvial flooding.

DRAINAGE CONSIDERATIONS:

A copy of the public sewer record and Yorkshire Water pre-development assessment is included within Appendix B.

Onsite drainage should be designed with separate systems for foul and surface water.

SURFACE WATER

Current best practise requires that a hierarchical approach to surface water disposal is undertaken. These being in order of preference:-

1. Infiltration based systems
2. Watercourses
3. Public sewer

Infiltration based systems:

The strata within the local area tends to be cohesive so infiltration methods of drainage are unlikely to be effective. An Infiltration test should be carried out to confirm this.

Watercourses: The nearest watercourse is approx 50m to the east on the south side of Lidgett Lane.

Public Sewer: There is a 525mm diameter public sewer within Lidgett Lane directly outside the site.

FOUL / COMBINED WATER

There are public combined sewers crossing through the front of the site. The sewers should be accurately located and the layout checked to ensure no buildings are to be constructed within 3m of the sewers.

DRAINAGE PROPOSALS:

SURFACE WATER

Infiltration tests haven't been carried out on the site. It is unlikely that infiltration methods of drainage will be an option but testing should be carried out to confirm this.

If infiltration methods are not viable, Yorkshire Water has confirmed a restricted discharge of 3.5l/s would be allowed to the 525mm diameter surface water sewer in Lidgett Lane. Please refer to Appendix C.

The surface water system should be designed to cater for a 1:100 year +40% storm event. Assuming the finished site will be 100% impermeable the Initial calculations suggest attenuation requirements would be in the region of 114m³. A suitably sized attenuation tank should be provided along with a flow control manhole.

Please refer to Appendix D to view the attenuation calculations.

The current planning application is for outline permission only and therefore a detailed site layout is not available. If the parking areas are greater than 800m² or 50 spaces then an oil interceptor should be installed prior to discharging to the public surface water sewer.

The future maintenance of the constructed drainage system would remain in private ownership.

FOUL

A foul connection can be made to the existing 225/300mm public combined sewer to the front of the site.

To make the physical connections, a Section 106 application to Yorkshire Water will be required for both foul and surface water.