

WOMBWELL HIGH SCHOOL, LAND OFF LUNDHILL ROAD
WOMBWELL, BARNSELEY (6 dwellings)
DRAINAGE STRATEGY
MAY 2024



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DEVELOPMENT AT WOMBWELL HIGH SCHOOL, WOMBWELL

DRAINAGE STRATEGY

THE SITE:

The site is located off Lundhill Road, Wombwell and is situated within the boundaries of the Wombwell High School re-development. The site area is approximately 0.17 hectares.

The site is bounded by new/proposed residential development and associated infrastructure. Land immediately to the west has been earmarked for a proposed school.

A location plan is shown in Appendix A

The site generally falls west to east with a 3m high bank to the western boundary.

A topographical survey is shown in Appendix B.

PROPOSED DEVELOPMENT:

Planning permission is sought to develop the site with 6 residential properties. The proposed layout is shown in Appendix C.

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 watercourses within vicinity of the site and therefore there is no potential for fluvial flooding.

DRAINAGE CONSIDERATIONS:

The site is part of the former Wombwell High School re-development. The drainage infrastructure for the site has been constructed by Miller Homes under a separate planning approval.

The new drainage infrastructure is covered by a Section 104 agreement with IWNL.

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:

Infiltration testing was carried out on the full Wombwell High School development area by Eastwood and Partners. Please refer to Appendix D for copies of the percolation tests.

Watercourses: There are no known watercourses within the immediate vicinity of the site.

Surface water sewer: There are private surface water sewers in the frontage roads (covered by a Section 104 agreement). Please refer to Appendix E for a copy of the Section 104 agreement drawing.

FOUL WATER

There are private foul sewers in the frontage roads (covered by a Section 104 agreement).

Please refer to Appendix E for a copy of the Section 104 agreement drawing.

DRAINAGE PROPOSALS:

SURFACE WATER

It is proposed to utilise a communal cellular soakaway to the rear of plot 6. The soakaway will be sized to cater for 683m² of impermeable area. With an infiltration rate of 1.8×10^{-5} m/s the soakaway would need to be 5.0 x 5.0 x 1.2m to cater for the 1 in 30 year storm event. Please refer to Appendix F for calculations and Appendix G for the proposed soakaway position.

FOUL

A connection to the Section 104 foul sewer in the site frontage is proposed.