

LAITHES LANE, ATHERSLEY, BARNSELY
FLOOD RISK ASSESMENT & DRAINAGE STRATEGY
NPS GROUP
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Rev A – Amended following consultation with BMBC and YW 22-10-20



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DEVELOPMENT AT LAITHES LANE, ATHERSLEY, BARNSELY

DRAINAGE STRATEGY

THE SITE:

The site is located off Laithes Lane, Athersley South and occupies an area of approximately 0.13 hectares. The site is currently grass verge and falls from the west (76.20m AOD) to the east (74.70m AOD.) The site is bounded by Laithes Lane to the north and Laithes Close to the south, east and west.

A location plan is shown in Appendix A

A copy of the topographical survey is shown in Appendix B

PROPOSED DEVELOPMENT:

Barnsley MBC are seeking to develop the site with 8 residential properties and associated infrastructure.

A site layout plan is shown in Appendix C

FLOOD ZONE LOCATION:

The Environment Agency flood map shows the site lies within flood zone 1. The site has therefore a “low probability” of flooding, where the annual risk of fluvial flooding is less than 0.1%.

A copy of the Environment Agency flood zone information can be seen in Appendix D.

OTHER SOURCES OF FLOODING:

Reservoirs – There are no reservoirs within the vicinity of the site.

Surface Water – There is a medium risk of surface water flooding to the surrounding roads as shown on the Environment Agency surface water plan (see Appendix D). It is recommended that the finished floor levels of proposed dwellings are set a minimum of 100mm above the adjacent road channel level.

Public Sewers – There are no known flooding issues with public sewers within the vicinity of the site.

DRAINAGE CONSIDERATIONS:

A copy of the public sewer record is included within Appendix E

Onsite drainage will 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 has yet to be carried out on this site but the initial ground investigation works suggest infiltration may be possible. A 5m stand off distance is required from a soakaway to buildings and roads and therefore the proposed layout for this development does not lend itself to the use of soakaways.

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

Public Sewer: Yorkshire Water have confirmed in their pre development response that if all other methods of surface water disposal have been ruled out then a connection to a public surface water sewer located to the north can be made. The flows should be restricted to 3.5l/s.

A copy of the Pre development response can be seen in Appendix F.

FOUL WATER

Yorkshire Water have confirmed that foul water from the development can discharge to the 375mm public combined sewer to the south of the site.

DRAINAGE PROPOSALS:

SURFACE WATER

It is proposed to discharge surface water to the public surface water sewer at a rate of 3.5l/s.

A private attenuation tank and flow control manhole will be provided to cater for the 1:100+30% climate change event. Attenuation calculations can be seen in Appendix H.

Future maintenance of the surface water drainage system will be by Barnsley MBC.

FOUL

A foul connection to the 375mm diameter public combined sewer crossing the public footpath between 215 and 217 Laithes Close is proposed.

Yorkshire Water have confirmed the connection will need to be covered by a Section 104 agreement.

Onsite foul drainage will be maintained by Barnsley MBC.

A drainage strategy drawing can be found in Appendix G.