

Drainage Assessment



PROJECT TITLE

Demolition & Change of use from Factory & Warehouse to Residential Housing Scheme
at Wembley Works, Hemingfield Road, Wombwell, Barnsley S73 0LY

JOB NUMBER

1992

CLIENT

Resource Medical (UK) Ltd

DATE

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Prepared By:

Cadvis3d
Architectural Design Services
237 Wakefield Road
The Towers
Lepton
Huddersfield
West Yorkshire
HD8 0DH

Tel: 01484 937123

Web: www.cadvis3d.co.uk

Email: info@cadvis3d.co.uk

1. Existing site

1.1 Brownfield site comprising of large brick built factory over 3 floors, with warehousing and associated car parking and direct access from Hemingfield Road

1.2 Site and building are currently vacant, after previously being used for various business uses including pharmacy supplies, MOT garage, bespoke vehicle engineers and Food producers. However these have now relocated and the site now un-used.

1.3 Site slopes away from from the highway to the East, down to the rear boundary, towards the existing railway line

1.4 Opposite the site are residential dwellings to the West and small commercial / industrial units to the north. The area is predominantly residential housing on all sides, with only two smaller sites of commercial / industrial land in the area.

1.5 The site is not located in a conservation area, nor is it listed. It is located within the settlement boundary of the town and outside green belt or protected areas as shown on the Barnsley 2019 UDP Maps and part of the urban fabric.

2. Surface Water

2.1 The application is for outline planning permission with all matters reserved and looks to establish whether the scale and nature of the proposed development would be acceptable to the local planning authority, before a fully detailed proposal is put forward.

2.2 The proposal is to provide 17No residential properties of varying styles and sizes, including affordable / first time buyers / help to buy

2.3 The proposals provide a mixture of housing including larger semi detached and smaller 3 storey town houses to reflect local need.

2.4 The existing site consists of large areas of hard standing and the building footprint fills most of the site. This results in a high rate of surface water run-off and minimal areas for ground soak-aways. It is assumed the existing surface water discharges into the existing sewers.

2.5 The change of use to housing will result in large areas of landscaping and gardens, which will reduce surface water run off by approx 70% of surface water and lower the water surge into the

existing sewers network and offering much improvement over the existing situation

2.6 Permeable surfaces will be installed around buildings, with driveways drained into a channels and discharged into the existing sewers.

2.7 Therefore surface water run off will be far lower than it is currently which will result in a reduction of discharge into the existing sewers

2.8 An option to provide soakaways would further reduce the discharge into the existing network, but this would be dependant on location, size and testing of ground suitability accordingly to ascertain viability.

3. Foul Drains

3.1 The new development will increase the foul water discharge into the existing network due to the increase in residential dwellings, with a min 2No toilets each. However since the existing combined sewer is only serving existing properties on the opposite side of the highway the increase should not have any detrimental effect on the existing sewer network.

3.2 Furthermore with the reduction in surface water run off it should result in a balanced discharge into the combined sewer (run off vs foul) and result in a discharge rate not too dissimilar to what it is currently.

4. Flood risk

4.1 In accordance with the PPG25 document and the classification of this particular site as within Flood zone 1, areas with little or no potential risk of flooding (annual probability less than 0.1%), it is recommend that the site is suitable for the proposed residential development in terms of surface water run off and discharge into existing sewers.

4.2 The big reduction in hard surfaces will reduce the amount of surface water run off dramatically and be a big improvement to the current situation.

5. Conclusion

5.1 It is concluded that the change of use to residential should have no adverse impact on the existing sewer network. However should approval be granted it would be expected that detailed drainage design and calculations would be provided via planning condition, attached to the approval notice.

Attached reports to follow include:

**Yorkshire water map
EA Flood risk report**