



2024/90548 Former Riverside Works, Holmfirth, HD9 6PW

This statement outlines the design approach and justification for our proposed surface water drainage solution for the brownfield site development off Woodhead Road, Honley.

Our solution, whilst considering the SUDs Hierarchy, is formed from discussions with Martin Stephenson at the Lead Local Flood Authority (LLFA), existing site drainage president, and is formed to address site-specific challenges while prioritising environmental, technical, and regulatory considerations.

### Design Development

The drainage strategy for the site has been developed with consideration of environmental impact, feasibility, and compliance with LLFA guidance. However, due to constraints, we propose directly connecting the surface water drainage to the existing combined sewer within Woodhead Road. Whilst this is the president set by the original sites build, it does conflict with the SUDs Hierarchy which identified the preferred point of discharge would be direct to the adjacent watercourse (River Holme).

Our initial design provided outfall to the adjacent watercourse (River Holme), however from discussion with the arboriculturist, tree officer, and site visits it became apparent that this outfall location would not be suitable.

The obstacles encountered were:

#### Tree and Root Protection Zones

The construction of a watercourse outfall would require extensive excavation within a designated woodland, infringing on Root Protection Areas and potentially requiring the removal of mature trees.

The Arboricultural Impact Assessment highlights the risk of root damage, even with careful hand-dug excavation methods, potentially leading to long-term harm to the ecosystem.

Ongoing maintenance of a cascade outfall system within this protected area could make disturbances worse and impose additional ecological risks.

The tree officer has objected to works within the protected area and so we have reviewed options to overcome this objection.

#### Topographical Constraints / construction risk

The steep embankment, with gradients of roughly 1:1 throughout, pose significant challenges for discharging surface water into the River Holme. Safe construction methods would require temporary benching and substantial slope stabilisation measures, making manual excavation hazardous and impractical. The steep topography restricts access for heavy machinery, further complicating construction efforts, prolonging construction time, and increasing associated risks. Subsequently the working width require for any construction in the zone will increase and cause a greater impact to the tree protection zones.

## Environmental and Maintenance Considerations

An outfall feature with a headwall discharging into the watercourse could potentially face blockages, overgrowth of vegetation, and root interference without consistent and adequate maintenance.

Given the topographical and ecological constraints, regular access for maintenance by the end user would be challenging, effecting the long-term functionality and reliability of this solution.

## Existing Drainage Management

The site's previous use as a Builders' Yard established an existing drainage route. However, during a site visit conducted by JPG to investigate previous outfall locations, it was determined that existing drainage routes and manholes were unidentifiable due to overgrowth of vegetation and the presence of demolition rubble. No definite outfall to the main river was identified.

A review of historical planning applications and a topographical survey of the previous development provided some clarity. The survey indicated various manholes for features such as a petrol interceptor and additional manholes near the front of the previous building, which are understood to have served as the outfall. Based on this, it is suggested that the existing drainage outfall connects to the sewer network within Woodhead Road.

## Conclusions

Following all the above, surface water drainage strategy was revised to suit the previous outfall, to connect to the existing network within the highway to negate the issues with discharge direct to the water course.

The proposed strategy integrates technical feasibility, environmental preferred (given the reduced impact to the root protection zones), and regulatory compliant solution as well as overcoming the objections raised by the local planning authority tree officer.