

## Drainage Assessment

LAND SOUTH OF LONGSIGHT ROAD, LANGHO

HALLAM LAND MANAGEMENT LTD

26/02/2025



**DRAINAGE ASSESSMENT**  
**LAND SOUTH OF LONGSIGHT ROAD, LANGHO**  
**FOR**  
**HALLAM LAND MANAGEMENT LTD**



**49343-ECE-XX-XX-RP-C-0002**

**26 February 2025**

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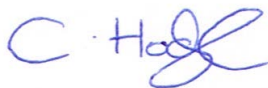
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*Issue 1: 03 December 2024*

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*Issue 3: 26 February 2025*

*Updated with new layout, drainage strategy and associated text changes.*

*Updated with new layout, location plan and minor text changes.*

## EXECUTIVE SUMMARY

Surface water disposal is considered in accordance with the drainage hierarchy in Building Regulations Part H 2015 and Planning Practice Guidance 'Reducing the causes and impacts of flooding', paragraph 080 reference ID 7-080-20150323.

Infiltration type SuDS such as soakaways will not be viable due to the impermeable ground conditions (clay and silt) on the site. Soakaway testing was conducted by Lithos Consulting (Ref: 008/5200/REG/dw). Infiltration rates could not be calculated as the water level did not fall to the 25% effective depth.

Surface water disposal will likely be via gravity to attenuation basins in the northern portions of the site before discharging via gravity to the central watercourse. This is subject to approval from the Lead Local Flood Authority and ordinary watercourse consent will also likely be required.

Surface water discharge will likely be restricted to the greenfield runoff rate of the developable catchment area of the central watercourse. The greenfield runoff rate has been proportionally split for the proposed west and east development areas to determine the proposed discharge rates, equating to 33.7 l/s and 18.3 l/s, subject to approval from the Lead Local Flood Authority.

Attenuation storage will be provided for rainfall events up to the return period of 1 in 100 year plus 50% climate change. The total estimated storage volume is approximately 2820 m<sup>3</sup> and 2040 m<sup>3</sup> for the central and eastern drainage networks respectively, subject to detailed design.

Source control SuDS features such as permeable paving (Type C) may be suitable (subject to site conditions) to incorporate into the site to provide source control water treatment and attenuation.

Foul effluent should discharge via gravity to the site low point before being pumped to the 300 mm public foul water sewer within the southern boundary of the site, subject to approval from United Utilities.

Maintenance of the drainage system will be in accordance with the recommendations provided by suppliers and product specifications. Maintenance of the potential SuDS systems for this site will also be in accordance with the recommendations within The SuDS Manual.

Method statements will be provided prior to construction. These will include details on how contaminated water, erosion and sediment control will be dealt with during the construction phase.

Both the surface and foul water drainage systems will be offered for adoption to United Utilities or a NAV (New Appointments and Variations).

## **1.0 THE DEVELOPMENT**

### **1.1 Introduction**

This Drainage Assessment has been prepared on the instruction of Hallam Land Management Ltd. This Drainage Assessment is to be read in conjunction with the Flood Risk Assessment (Ref: 49343-ECE-XX-XX-RP-C-0001).

The project comprises the proposed development of a 20.01 hectare greenfield site for residential.

### **1.2 Site Location and Description**

The site is located north of Langho, to the north of Blackburn, and is centred on Grid Reference 370282E, 434509N (Appendix 1).

The site is bounded by Longsight Road to the north, woodland and residential properties to the east, a railway line to the south, Whitehalgh Lane along the western border and a farm on the north-west boundary.

The site is currently occupied by grassed farmland boarded by mature trees, hedgerows and wooden fences. An unnamed watercourse lines the woodland on the north-eastern border with a second passing through the south-north centreline of the site. There is also a public right of way crossing the eastern portion of the site.

The area east of the central watercourse falls from approximately 98.80 mAOD in the south to 77.00 mAOD in the north-west at an average gradient of 1 in 16. The area west of the central watercourse falls from approximately 102.33 mAOD in the south to 78.60 mAOD in the north at an average gradient of 1 in 17 (Appendix 2).

Proposals are for the development of approximately 300 household properties with access from Longsight Road in the north (Appendix 3).

## **2.0 DRAINAGE STRATEGY**

### **2.1 Existing Drainage**

The United Utilities sewer map (Appendix 4) records a 225 mm and a 300 mm surface water sewer south of the site connecting into a 1300 mm x 1550 mm surface water culvert, located beneath the railway embankment on the southern boundary of the site, which ultimately outfalls into the watercourse that crosses the centre of the site from south to north. There is also a 225 mm – 300 mm public foul sewer within the southern border of the site that connects into a 300 mm public combined sewer in the south-eastern corner of the site.

### **2.2 Consultation with Statutory Bodies**

#### **2.2.1 Lead Local Flood Authority**

The Lancashire County Council Sustainable Drainage System (SuDS) Pro-forma Guidance (Appendix 5) states that surface water runoff to any highway drain, sewer or surface water body from development of greenfield sites, for in the 1 in 100 year 6 hour rainfall event, should never exceed the greenfield runoff volume for the same event.

The Lead Local Flood Authority at Lancashire County Council have been contacted to determine their restrictions and requirements for surface water discharge to an ordinary watercourse. The LLFA's response, dated 04.11.24, is summarised below (Appendix 5):

- Depending on how you plan to connect to the existing watercourse you may require a watercourse consent form from the LLFA;
- Discharge to watercourse is usually by a surface water outfall. Depending on the bank profile and proposed design, the outfall may or may not require consent;
- An application should be submitted with the minimal required documentation for an assessment to be made;
- We can get back to you regarding the need for consent and a fee will only be charged if a consent is required.

## 2.2.2 United Utilities

Pre-planning advice has been received from United Utilities; their reference 06544237 dated 6<sup>th</sup> November 2024. The main points of the advice are summarised below.

Foul water:

- Foul flow from the site will be allowed to drain to the public foul water/ combined sewer system.
- The preferred point of discharge would be to the 300 mm public foul water sewer crossing the site.

Surface water:

- Surface water discharge should be in line with the drainage hierarchy. Outlined in Paragraph 80 of the National Planning Practice Guidance.
- It is recommended that the multi-functional sustainable drainage systems are prioritised.
- The LLFA has responsibility for all surface water drainage concerns and their input to the proposal is critical.

Existing assets:

- There are public sewers located within the site boundary. Unrestricted access to the sewer for maintenance purposes will be required. A minimum clearance of 6 m (3 m from the centre line) should be maintained, unless there is a formal easement agreement in place.
- If the minimum clearance cannot be achieved, there should be consideration to diverting or abandoning the public sewer.