# Drainage Report

Project: Land Adjacent to 57 Grimshaw Lane, Manchester, M40 2AX

**Executive Summary**
Date: 14th of September 2025

Report Type: Preliminary Drainage Assessment & Flood Risk Statement

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This preliminary drainage and flood risk assessment has reviewed the site at land adjacent to 57 Grimshaw Lane, Manchester (formerly 55 Grimshaw Lane). The key findings are:

• The site is in Flood Zone 1 (low fluvial/tidal risk).
• Adjacent areas show medium to high surface water flood risk during intense rainfall.
• Ground conditions (boulder clay) mean infiltration drainage is not viable.
• The most feasible drainage solution is restricted discharge to the public sewer in Grimshaw Lane, with on-site attenuation storage (e.g., permeable paving, crates, or oversized pipes).

**Next Steps:**
1. Submit an Asset Location Request to United Utilities to confirm sewer location and capacity.
2. Engage with United Utilities to agree a restricted discharge rate(likely ≤ 5 l/s).
3. Incorporate on-site attenuation into the proposed development design.

## 1.0 Introduction

This report provides a preliminary assessment of the drainage characteristics, flood risk, and potential surface water management strategies for the parcel of land located adjacent to 57 Grimshaw Lane in the Miles Platting area of Manchester. The assessment is based on the principles of sustainable drainage systems (SuDS) as outlined in national planning policy.

Fig1 Sewer plans for 55 Grimshaw Lane M40 2AX (etched in Green)

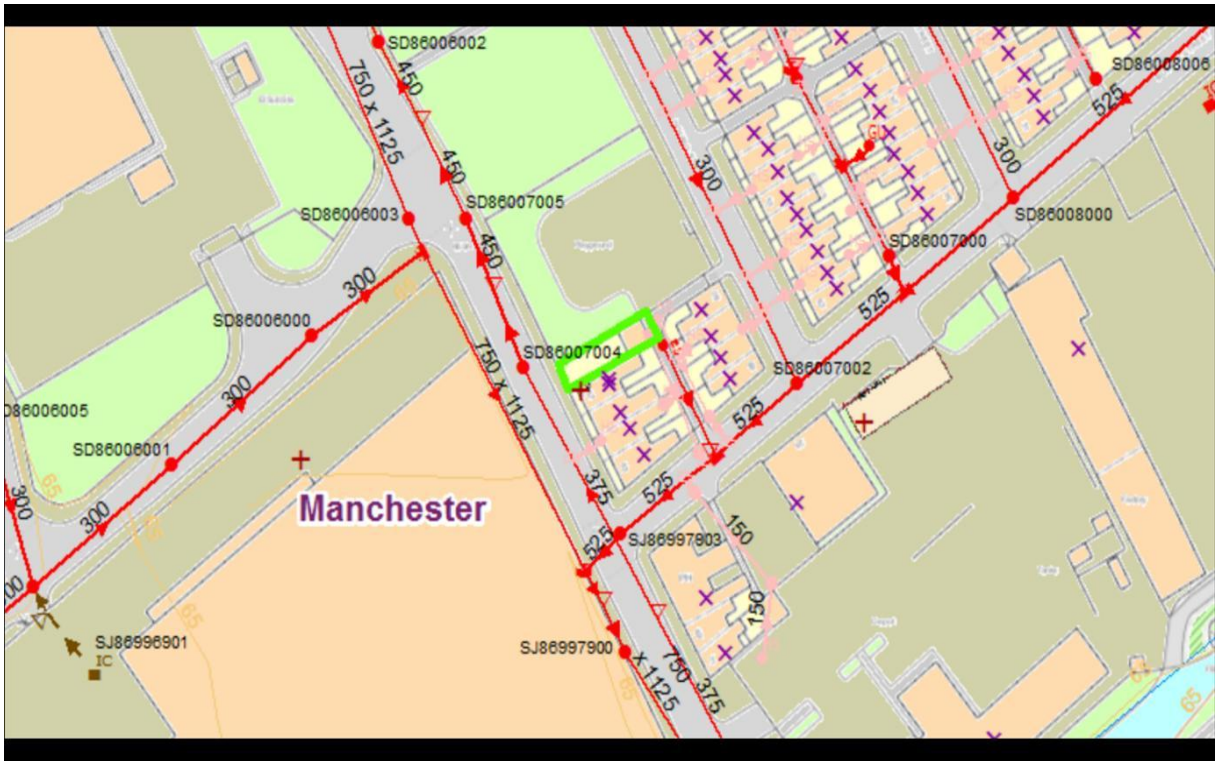


FIG2 Location Plans of development site etched in red




## 2.0 Site Description

• Location: The site is a rectangular parcel of undeveloped, vegetated land situated directly to the north of the residential property at 57 Grimshaw Lane, Manchester, M40 2AX. The vacant site was formally known as 55 Grimshaw lane prior to the removal of the dwelling.

• **Approximate Centroid Coordinates:**

Latitude: 53.5115° N Longitude: 2.1932° W

• Approximate Area: The site area is estimated to be approximately 350 m2 (0.035 Hectares).

• Existing Condition: Based on current aerial imagery, the site is overgrown with grass and does not appear to have any formal drainage systems in place. The surrounding area is predominantly established residential housing.

## 3.0 Geological and Hydrogeological Conditions

The underlying geology is a critical factor in determining the viability of infiltration -based drainage systems (e.g., soakaways).

• Bedrock Geology: The British Geological Survey (BGS) indicates the bedrock geology consists of the Pennine Lower Coal Measures Formation, comprising interbedded mudstone, siltstone, and sandstone.

• Superficial Deposits: The site is shown to be covered by superficial (drift) deposits of Devensian Till. This is a diamicton, commonly known as boulder clay, which is characterised by very low permeability.

• Aquifer Designation: The bedrock is classified as a Secondary A Aquifer, while the overlying superficial till is designated as Unproductive.

• Infiltration Potential: The presence of low -permeability Devensian Till (boulder clay) across the site means that the potential for surface

water infiltration is very low to poor. Infiltration -based SuDS such as conventional soakaways are highly unlikely to be a feasible drainage solution for this location. This would need to be confirmed with on -site percolation tests (as per BRE Digest 365), but initial findings are not favourab le.

**4.0 Hydrology and Flood Risk**

• Fluvial & Tidal Flood Risk (from Rivers & Sea): The Environment Agency's Flood Map for Planning shows the site is located entirely within Flood Zone 1.

**Definition**: Land having a less than 1 in 1,000 annuals probability of river or sea flooding (<0.1%).

Conclusion: The risk of flooding from main rivers or tidal events is Low.

• Surface Water Flood Risk (Pluvial Flooding): The Environment Agency's surface water flood maps indicate a more significant risk.

**Risk Level:** The majority of the site itself is shown to have a Very Low risk of surface water flooding. However, Grimshaw Lane immediately adjacent to the site and areas to the immediate north show pockets of High and Medium risk.

**Implication:** This indicates that during intense rainfall events, surface water is likely to accumulate on the road and surrounding impermeable areas. Any development on the site must not increase this risk and should aim to manage its own surface water effectively.

• Nearby Watercourses: The nearest significant watercourse is the River Irk, located approximately 1.2 km to the northwest of the site. Boggart Hole Brook is also located within Boggart Hole Clough,

approximately 800m to the east. A direct connection to these water courses would be impractical due to distance, topography, and third-party land ownership.

**5.0 Existing Drainage Infrastructure**

• Statutory Undertaker: The water and sewerage undertaker for this region is United Utilities.

• Public Sewers: Formal asset location maps from United Utilities have been obtained for this report. However, given the established urban setting, the public sewers are located within Grimshaw Lane.

**See fig 1 above.**

**These could be:**

• A combined sewer system (carrying both foul sewage and surface water).

• A separate sewer system (with distinct foul and surface water sewers).

• Action Required: A formal asset location search must be undertaken with United Utilities to confirm the exact location, depth, size, and type of any public sewers in the vicinity of the site that could serve as a potential outfall.

**6.0 Proposed Drainage Strategy (Following the SuDS Hierarchy)**

The following drainage hierarchy must be considered for any proposed development:

1. Infiltration: As concluded in Section 3.0, due to the low permeability

clay subsoils, infiltration is highly unlikely to be viable. On -site Percolation testing is recommended to confirm this, but a strategy reliant on soakaways is not advised.

2. Discharge to Watercourse: As noted in Section 4.0, a connection to A local water course is considered not feasible due to the significant distance and intervening land.

3. Discharge to Public Sewer: This is the most likely and viable drainage outfall for the site.

• Connection Point: A connection to the public surface water sewer (if present) or combined sewer in Grimshaw Lane, subject to approval from United Utilities.

• Flow Restriction: Any discharge to a public sewer will be restricted by United Utilities to the greenfield runoff rate, or a similarly low, agreed -upon rate. For a site of this size, this would typically be a maximum of 5 litres per second (5 l/s), but could be lower.

• Attenuation: To accommodate the restricted discharge rate, on-site surface water attenuation will be required. This means storing the runoff from storm events and releasing it slowly into the sewer. This can be achieved through:

- Permeable paving systems with underlying storage subbase.
- Underground geocellular storage tanks (crates).
- Oversized pipes.

## 7.0 Conclusion and Recommendations

• The site is in Flood Zone 1 (Low Risk) for fluvial flooding but is adjacent to areas with a High Risk of surface water flooding.

• The ground conditions (low -permeability clay) make infiltration drainage (soakaways) is highly unlikely to be a workable solution.

• The most feasible drainage strategy is to discharge surface water to the public sewer in Grimshaw Lane.

• This discharge will be subject to a restricted flow rate agreed with United Utilities, necessitating on -site attenuation storage as a key component of any development.

**Next Step Recommended:**

1. Submit an Asset Location Request to United Utilities to confirm the availability, location, and capacity of the local public sewer network.