

1290 Oldham Road, Newton Heath,  
Phase 2&3

## Flood Risk Assessment and Drainage Strategy

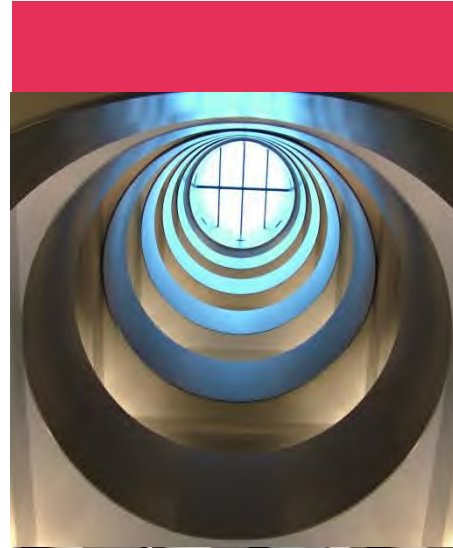
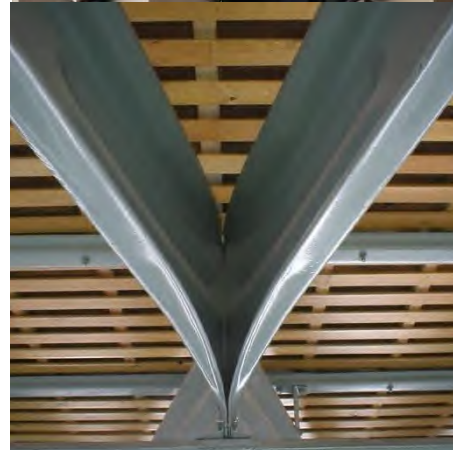
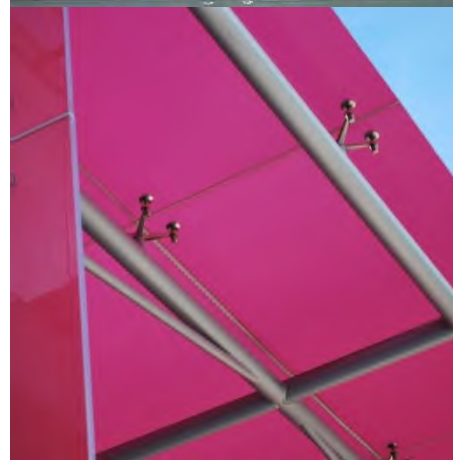
Curtins Ref: 074031-CUR-00-XX-RE-C-92100

Revision: V02

Issue Date: 19 July 2023

Client Name: One Manchester Limited

Site Address: Oldham Road, Newton Heath, Manchester, M40 1EZ



Curtins  
Merchant Exchange  
17-19 Whitworth Street West  
Manchester, M1 5WG  
Tel: 0161 236 2394  
[www.curtins.com](http://www.curtins.com)

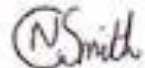
STRUCTURES • TRANSPORT PLANNING • ENVIRONMENTAL • CIVILS & INFRASTRUCTURE • EXPERT ADVICE • SUSTAINABILITY • STAKEHOLDER ENGAGEMENT  
Birmingham • Bristol • Cardiff • Douglas • Dublin • Edinburgh • Glasgow • Kendal • Leeds • Liverpool • London • Manchester • Nottingham



## Control Sheet

| Rev | Description                 | Issued by | Checked | Date       |
|-----|-----------------------------|-----------|---------|------------|
| V01 | DRAFT - Issued for Planning | CS        | CG      | 22/06/2023 |
| V02 | Issued for Planning         | CG        | CG      | 19/07/2023 |

This report has been prepared for the sole benefit, use, and information for the client. The liability of Curtins with respect to the information contained in the report will not extend to any third party.

| Author                                                      | Signature                                                                          | Date         |
|-------------------------------------------------------------|------------------------------------------------------------------------------------|--------------|
| <b>Charlie Smith</b><br>MEng (Hons) GMICE<br>Civil Engineer |  | 19 July 2023 |

| Reviewed                                                  | Signature                                                                            | Date         |
|-----------------------------------------------------------|--------------------------------------------------------------------------------------|--------------|
| <b>Chloe Grimsley</b><br>BSc (Hons)<br>Principal Engineer |  | 19 July 2023 |

| Authorised                                                | Signature                                                                            | Date         |
|-----------------------------------------------------------|--------------------------------------------------------------------------------------|--------------|
| <b>Chloé Grimsley</b><br>BSc (Hons)<br>Principal Engineer |  | 19 July 2023 |

# Table of contents

1.0 Introduction ..... 1

1.1 Project Background ..... 1

1.2 Scope of Assessment ..... 1

1.3 Proposed Development..... 2

2.0 Existing Site Details..... 3

2.1 History and Current Use..... 3

2.2 Existing Watercourses and Other Waterbodies ..... 3

2.3 Existing Drainage ..... 4

2.4 Topography ..... 5

2.5 Geology ..... 6

3.0 Development and Flood Risk ..... 7

3.1 National Planning Policy Framework (NPPF) and Planning Practice Guidance ..... 7

3.2 Site Specific NPPF Flood Risk Categorisation ..... 11

3.3 Site Specific Flood Zone Compatibility ..... 11

3.4 Sequential Test ..... 11

4.0 Hydrological Assessment ..... 12

4.1 Sources of Flood Risk ..... 12

4.2 Fluvial Flooding (Rivers and Streams) ..... 12

4.3 Tidal Flooding (Coastal or Estuarine)..... 13

4.4 Reservoir Flooding ..... 13

4.5 Canal Flooding ..... 14

4.6 Groundwater Flooding..... 14

4.7 Public Sewers or Highway Drainage Flooding (Infrastructure Failure) ..... 14

4.8 Surface Water Flooding to the site ..... 15

4.9 Surface Water Flooding from the site..... 16

4.10 Historical Flooding..... 16

4.11 Summary of Flood Risk..... 16



5.0 Mitigation ..... 17

5.1 Groundwater Flood Mitigation ..... 17

5.2 Surface Water Flooding to the site Mitigation ..... 17

5.3 Surface Water Flooding from the site Mitigation ..... 18

6.0 Drainage Strategy..... 20

6.1 Existing Drainage ..... 20

6.2 Proposed Foul Water Drainage..... 21

6.3 Proposed Surface Water Drainage ..... 22

## Appendices

### **Appendix A**

Proposed Site Layout

### **Appendix B**

United Utilities Public Sewer Records

### **Appendix C**

Topographical Survey

### **Appendix D**

Environment Agency Flood Map for Planning

### **Appendix E**

Lead Local Flood Authority Correspondence

United Utilities Correspondence

### **Appendix F**

Proposed Drainage Strategy Layout

## 1.0 Introduction

### 1.1 Project Background

- 1.1.1 Curtins was appointed by One Manchester to provide a Flood Risk Assessment (FRA) and Drainage Strategy for a proposed residential development adjacent to Oldham Road, Newton Heath. The proposals cover Phase 2 and 3 of the development.
- 1.1.2 The report provides information on the nature of flood risk at the site and follows Government guidance regarding development and flood risk.
- 1.1.3 The report is based on currently available information and preliminary discussions.
- 1.1.4 Proposals contained or forming part of this report represent the design intent and may be subject to alteration or adjustment in completing the detailed design for this project. Where such adjustments are undertaken as part of the detailed design and are deemed a material deviation from the intent contained in this document, prior approval shall be obtained from the relevant authority in advance of commencing such works.
- 1.1.5 Where the proposed works to which this report refers are undertaken more than twelve months following the issue of this report, Curtins shall reserve the right to re-validate the findings and conclusions by undertaking appropriate further investigations at no cost to Curtins.

### 1.2 Scope of Assessment

- 1.2.1 The assessment is to be undertaken in accordance with the standing advice and requirements of the Environment Agency (EA) for Flood Risk Assessments as outlined in the Communities and Local Governments Planning Policy Guidance to the National Planning Policy Framework (NPPF).
- 1.2.2 The assessment will:
  - Investigate all potential risks of flooding to the site,
  - Consider the impact the development may have elsewhere with regards to flooding,
  - Consider design proposals to mitigate any potential risk of flooding determined to be present; and
  - Consider foul & surface water drainage proposals for the proposed development.
- 1.2.3 The total site area is approximately 0.87 hectares and following scrutiny of the Environment Agency flood maps it has been identified that site lies within Flood Zone 1. According to local council Strategic Flood Risk Assessment the site lies within a critical drainage area. A Flood Risk Assessment is therefore required to support a planning application.

1.2.4 In April 2015, the Government made changes to the National Planning Policy Framework which made Sustainable Urban Drainage Systems (SuDS) a material consideration in the determination of planning applications for 'major' developments.

1.2.5 A Drainage Strategy will therefore be required as part of the Full Planning Application for the development, as the development is considered to be 'major' development by the Town and Country Planning (Development Management Procedure) (England) Order 2015.

1.2.6 This Flood Risk Assessment and Drainage Strategy reviews the following information:

- Environment Agency flood maps for rivers and sea flooding.
- UK Government Flood Warning Information Service maps for surface water flooding and reservoir flooding.
- Manchester City, Salford City and Trafford Councils Level 1 Hybrid Strategic Flood Risk Assessment (SFRA) published in March 2010.
- Manchester City, Salford City and Trafford Councils Level 2 Hybrid SFRA, User Guide, Final, dated May 2010.
- Manchester City, Salford City and Trafford Councils Level 2 Hybrid Strategic Flood Risk Assessment (SFRA) published in March 2011.
- Preliminary Flood Risk Assessment (PFRA) for Manchester County Council dated May 2011.
- Manchester City Council SuDS Requirements for New Developments.
- United Utilities Public Sewer Records Extract dated November 2019.
- Topographical Survey by SEP dated November 2019 (covering Phase 2).
- Topographical Survey/Utility Survey by Layer Surveys dated April 202 (covering Phase 3).
- Curtins Phase 1 PRA 074031-CUR-00-XX-RP-GE-001-V01 dated November 2019 and 079193-CUR-XX-XX-RP-GE-00001-P01 DATD June 2021.
- Curtins Ground Investigation 074031-CUR-00-XX-RP-GE-002 dated January 2023 and 079193-CUR-XX-XX-T-GE-00003-P01 dated February 2022.

### **1.3 Proposed Development**

1.3.1 The development is expected to comprise the following:

- Construction of 28 Houses and 6 apartments under Phase 2 and 75 Apartments under Phase 3;
- Construction of associated accesses, on-site hard and soft landscaping, and parking.

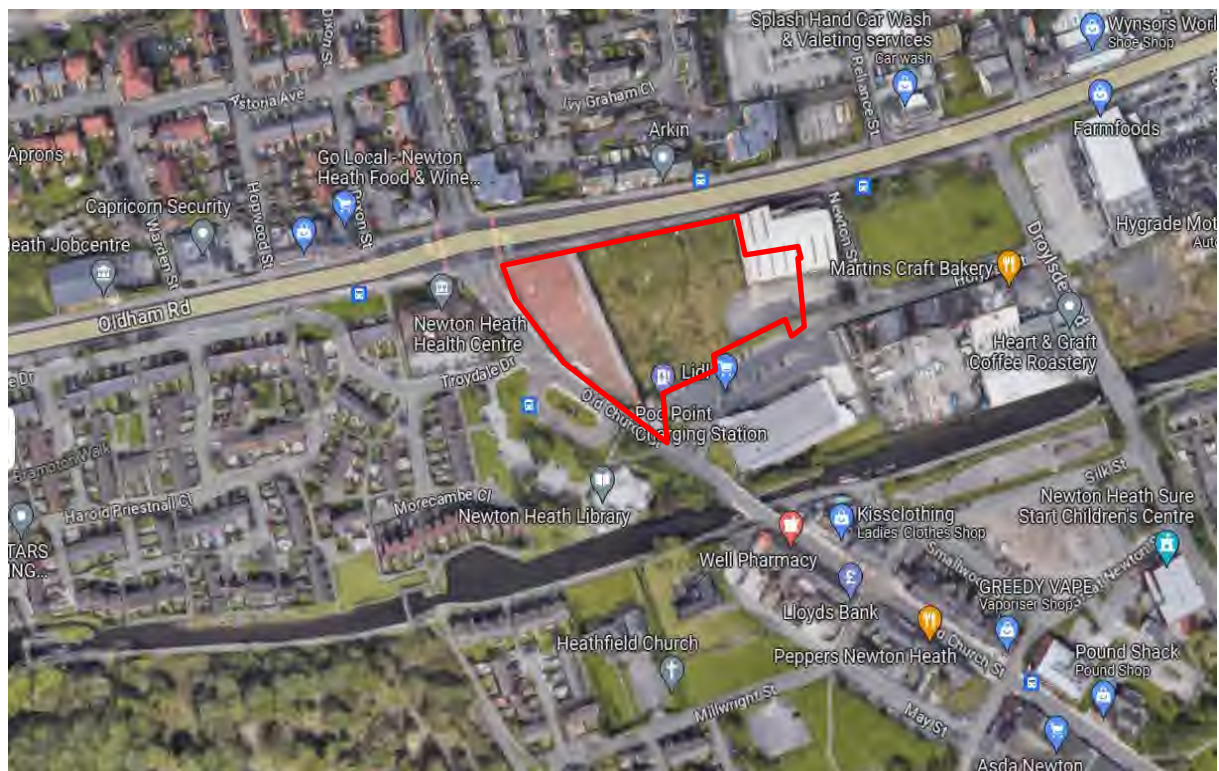
1.3.2 The Proposed Site Layout is enclosed in *Appendix A*.

## 2.0 Existing Site Details

### 2.1 History and Current Use

- 2.1.1 The site is located approximately 4km to the north-east of Manchester City Centre, in the Newton Heath area of Manchester.
- 2.1.2 The site is bound by Oldham Road to the north, Phase 1 of the wider development to the east, Lidl Car Park to the south and Old Church Street to the west. Dulverton Street currently runs through the site at the Phase 2 and 3 boundary line.
- 2.1.3 The wider area consists of retail uses directly to the east and south of the site and residential uses to the north and west (see Figure 1).
- 2.1.4 The site is unoccupied following recent demolition of existing buildings.

**Figure 1: Aerial Photograph (© Google 2023) (Indicative Site Boundary)**



### 2.2 Existing Watercourses and Other Waterbodies

- 2.2.1 No above ground watercourses have been identified within the proposed site or immediately adjacent to the site.

2.2.2 The Rochdale Canal is approximately 50m to the South of the site.

## 2.3 Existing Drainage

2.3.1 The public sewer records have been obtained for the development site, and are enclosed in *Appendix B*. An extract of the sewer records is shown in Figure 2.

**Figure 2: United Utilities Public Sewer Extract 2019**



2.3.2 The public sewer records indicate that the following public sewers are located within the development site:

- There is a 300mm diameter combined sewer located within Dulverton Street which flows from South to North and connects into the combined sewer within Oldham Road.

2.3.3 The following sewers are recorded within the vicinity of the site:

- There is a 750x525mm diameter combined sewer situated on Oldham Road, which flows from east to west.
- A 450mm diameter combined water sewer within Old Church Street and flows from South-East to North-West.

- 2.3.4 Following correspondence with United Utilities, they have also provided additional records which shows further sewers of relevance to the west of the site within Troydale Drive. Refer to Figure 3.

**Figure 3: United Utilities Public Sewer Extract 2023**



- 2.3.5 The following sewers are recorded within the vicinity of the site:
- There is a 225mm diameter surface water sewer situated on Troydale Drive, which flows from east to west.
- 2.3.6 There are further public sewers identified on the public sewer records within the wider vicinity of the site, but these are not considered relevant to the scheme.
- 2.3.7 A CCTV Drainage Survey has been completed to confirm the location, route, size, depth, condition, inflows and outflows of all accessible drainage within the development site boundary.
- 2.3.8 Further surveys may be necessary within the recently confirmed sewers within Troydale Drive. This will be completed at detailed design stage where necessary.

## 2.4 Topography

- 2.4.1 Topographical surveys have been carried out on the proposed site, and are enclosed in *Appendix C*. It is noted that the Phase 2 development area was surveyed under the original survey covering the wider

Masterplan (Phase 1) completed in 2019 and the Phase 3 development area is surveyed under the additional survey completed in 2023.

- 2.4.2 The existing ground levels generally fall from the East to the West of the site, with localised low areas within the centre of the Phase 3 development area. The approximate highest point along the Eastern boundary around 86.8m and the lowest point along the western boundary at 85.1m. The localised low point on the Phase 3 area is approximately 84.28m.

## **2.5 Geology**

- 2.5.1 The Phase 2 Site Investigation Study (*ref: 074031-CUR-00-XX-RP-GE-002 -V01*) indicates that generally the geology of the site is made ground/topsoil, with superficial deposits comprising of Glacial Till.
- 2.5.2 The site is not located within a Groundwater Source Protection Zone.

### 3.0 Development and Flood Risk

#### 3.1 National Planning Policy Framework (NPPF) and Planning Practice Guidance

- 3.1.1 In July 2021, the Department of Communities and Local Government published the National Planning Policy Framework document (NPPF), and the Planning Practice Guidance was published in March 2014 and updated in August 2021, which provides guidance on how flood risk should be assessed during the planning and development process.
- 3.1.2 Tables 1 to 3 show the reference tables taken from the NPPF to determine the vulnerability and test requirements for the Proposed Development. Section 3.2 and 3.3 assess the site-specific categorisation and compatibility based on the flood zone and references the tables where applicable.

**Table 1: (Extract from Planning Practice Guidance) Flood Zone Classifications**

These Flood Zones refer to the probability of river and sea flooding, ignoring the presence of defences. They are shown on the Environment Agency's Flood Map for Planning (River and Sea 0), available on the Environment Agency's web site, as indicated in the table below.

| Flood Zone                                 | Definition                                                                                                                                                                                                                                                                                                                                              |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Zone 1<br>Low<br>Probability               | Land having a less than 1 in 1,000 annual probability of river or sea flooding.<br>(Shown as 'clear' on the Flood Map - all land outside Zones 2 and 3)                                                                                                                                                                                                 |
| Zone 2<br>Medium<br>Probability            | Land having between a 1 in 100 and 1 in 1,000 annual probability of river flooding; or<br>Land having between a 1 in 200 and 1 in 1,000 annual probability of sea flooding.<br>(Land shown in light blue on the Flood Map)                                                                                                                              |
| Zone 3a<br>High<br>Probability             | Land having a 1 in 100 or greater annual probability of river flooding; or<br>Land having a 1 in 200 or greater annual probability of sea flooding.<br>(Land shown in dark blue on the Flood Map)                                                                                                                                                       |
| Zone 3b<br>The<br>Functional<br>Floodplain | <b>This zone comprises land where water has to flow or be stored in times of flood.</b><br>Local planning authorities should identify in their Strategic Flood Risk Assessments areas of functional floodplain and its boundaries accordingly in agreement with the Environment Agency.<br>(Not separately distinguished from Zone 3a on the Flood Map) |

**Table 2: (Extract from Planning Practice Guidance) Flood Risk Vulnerability Classification**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Essential Infrastructure</b></p> <ul style="list-style-type: none"> <li>• Essential transport infrastructure (including mass evacuation routes) which has to cross the area at risk.</li> <li>• Essential utility infrastructure which has to be located in a flood risk area for operational reasons, including electricity generating power stations and grid and primary substations, and water treatment works that need to remain operational in times of flood.</li> <li>• Wind turbines.</li> </ul> <p><b>Highly Vulnerable</b></p> <ul style="list-style-type: none"> <li>• Police and ambulance stations, fire stations and command centres, telecommunications installations required to be operational during flooding.</li> <li>• Emergency dispersal points.</li> <li>• Basement dwellings.</li> <li>• Caravans, mobile homes and park homes intended for permanent residential use.</li> <li>• Installations requiring hazardous substances (unless, where there is a demonstrable need to locate such installations for bulk storage of materials with port or other similar facilities, or such installations with energy infrastructure or carbon capture and storage installations, that require coastal or waterside locations, or need to be located in other high flood risk areas, in these instances the facilities should be classified as 'Essential Infrastructure').</li> </ul> <p><b>More Vulnerable</b></p> <ul style="list-style-type: none"> <li>• Hospitals.</li> <li>• Residential institutions such as residential care homes, children's homes, social services homes, prisons and hospitals.</li> <li>• Buildings used for dwelling houses (unless built in residence, drinking establishments, nightclubs and hotels).</li> <li>• Non-residential uses for health services, nurseries and educational establishments.</li> <li>• Landfill and sites used for waste management facilities for hazardous waste.</li> <li>• Sites used for holiday or short-let caravans and camping, subject to a specific warning and evacuation plan.</li> </ul> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

#### **Less Vulnerable**

- Police, ambulance and fire stations which are **not** required to be operational during flooding.
- Buildings used for shops; financial, professional and other services; restaurants, cafes and hot food takeaways; offices; general industry, storage and distribution; non-residential institutions not included in the 'More Vulnerable' class; and assembly and leisure.
- Land and buildings used for agriculture and forestry.
- Waste treatment (except landfill\* and hazardous waste facilities).
- Minerals working and processing (except for sand and gravel working).
- Water treatment works which do not need to remain operational during times of flood.
- Sewage treatment works, if adequate measures to control pollution and manage sewage during flooding events are in place.

#### **Water-Compatible Development**

- Flood control infrastructure.
- Water transmission infrastructure and pumping stations.
- Sewage transmission infrastructure and pumping stations.
- Sand and gravel working.
- Docks, marinas and wharves.
- Navigation facilities.
- Ministry of Defence defence installations.
- Ship building, repairing and dismantling, dockside fish processing and refrigeration and compatible activities requiring a waterside location.
- Water-based recreation (excluding sleeping accommodation).
- Lifeguard and coastguard stations.
- Amenity open space, nature conservation and biodiversity, outdoor sports and recreation and essential facilities such as changing rooms.
- Essential ancillary sleeping or residential accommodation for staff required by uses in this category, subject to a specific warning and evacuation plan.

**Table 3: (Extract from Planning Practice Guidance) Flood Risk Vulnerability and Flood Zone Compatibility**

| Flood Zone | Flood Risk Vulnerability Classification |                         |                         |                 |                  |
|------------|-----------------------------------------|-------------------------|-------------------------|-----------------|------------------|
|            | Essential infrastructure                | Highly vulnerable       | More vulnerable         | Less vulnerable | Water compatible |
| Zone 1     | ✓                                       | ✓                       | ✓                       | ✓               | ✓                |
| Zone 2     | ✓                                       | Exception Test required | ✓                       | ✓               | ✓                |
| Zone 3a †  | Exception Test required †               | ✓                       | Exception Test required | ✓               | ✓                |
| Zone 3b ‡  | Exception Test required ‡               | ✓                       | ✓                       | ✓               | ✓                |

**Key:**

- ✓ Development is appropriate
- ✗ Development should not be permitted

**Notes to Table 3:**

- This table does not show the application of the Sequential Test which should be applied first to guide development to Flood Zone 1, then Zone 2, and then Zone 3, nor does it reflect the need to avoid flood risk from sources other than rivers and the sea.
- The Sequential and Exception Tests do not need to be applied to minor developments and changes of use, except for a change of use that involves ramming or ratchet site, or to a mobile home or park home site.
- Some developments may contain different elements of vulnerability and the highest vulnerability category should be used, unless the development is considered in its component parts.

† In Flood Zone 3a essential infrastructure should be designed and constructed to remain operational and safe in times of flood.

‡ In Flood Zone 3b functional floodplain essential infrastructure that has to be there and has passed the Exception Test, and water compatible uses, should be designed and constructed to:

- remain operational and safe for users in times of flood;
- result in no net loss of floodplain storage;
- not impede water flows and not increase flood risk elsewhere.

### **3.2 Site Specific NPPF Flood Risk Categorisation**

- 3.2.1 To assess the NPPF flood risk classification for the site, the first step was to inspect the UK Government web based 'Flood Map for Planning' which is used to inform planning of a site's Flood Zone(s) and the probability of flooding from rivers or sea (not taking into account the presence of flood defences or climate change). However, the web based 'Long Term Flood Risk Assessment for Locations in England' should also be used to identify the long-term flood risks from rivers and seas, surface water and reservoirs.
- 3.2.2 The Flood Map for Planning report is enclosed in *Appendix D*, and it can be seen that whole site is classified as Flood Zone 1.
- 3.2.3 Further site-specific review of the flood risk to the site is provided in section 4.

### **3.3 Site Specific Flood Zone Compatibility**

- 3.3.1 The proposals for the development site are likely to fall within the following category:
- Buildings used for dwellings
- 3.3.2 Buildings used for dwellings are classed as 'More Vulnerable' development in the Flood Risk Vulnerability Classification (Table 2).
- 3.3.3 The site is located within Flood Zone 1 for which 'More Vulnerable' development is deemed to be appropriate. Therefore, the development passes the sequential test and an exception test is not required (refer to the Flood Zone compatibility table in the NPPF technical guidance).

### **3.4 Sequential Test**

- 3.4.1 The site is categorised as a 'More Vulnerable' development (shown in table 2) and is within Flood Zone 1 therefore the sequential test is not required to be applied (see table 3).

## 4.0 Hydrological Assessment

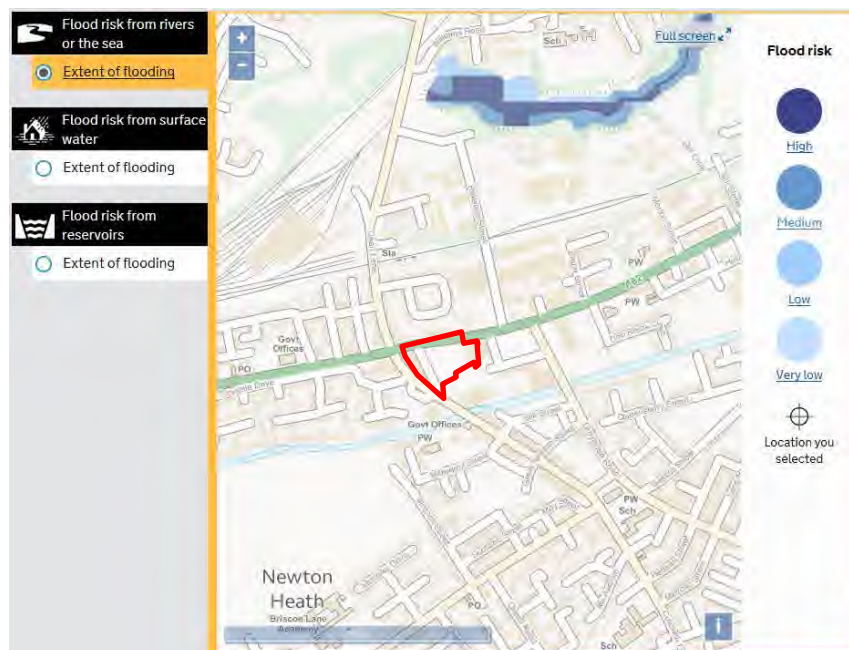
### 4.1 Sources of Flood Risk

- 4.1.1 This study assesses the risk from different types of flooding to the development and the risk of flooding from the development, taking into consideration climate change, as well as how flood risks should be managed. The approach to assessing flood risk at the development site was informed by the requirements of NPPF in conjunction with the client and Environment Agency requirements.

### 4.2 Fluvial Flooding (Rivers and Streams)

- 4.2.1 Flooding to the site from rivers and sea is indicated below in Figure 4, taken from the UK Government's Long-Term Flood Risk Information.

**Figure 4: Long Term Flood Risk Assessment Map – Flood Risk from Rivers or Sea (© Crown Copyright)**



- 4.2.2 It can be seen that the entire area of the site is at a 'Very Low' risk of fluvial flooding. The site is not shown to be in an area which benefits from flood defences. The site has less than a 0.1% chance of fluvial flooding each year. Therefore, the proposed site is considered to be at a very low residual risk from fluvial flooding.

**Figure 5: Long Term Flood Risk Assessment (Detailed Information) – Flood Risk from Rivers or Sea (© Crown Copyright)**

### Flood risk from rivers or the sea

**Very low risk** means that each year this area has a chance of flooding of less than 0.1%. This takes into account the effect of any flood defences in the area. These defences reduce but do not completely stop the chance of flooding as they can be overtopped, or fail.

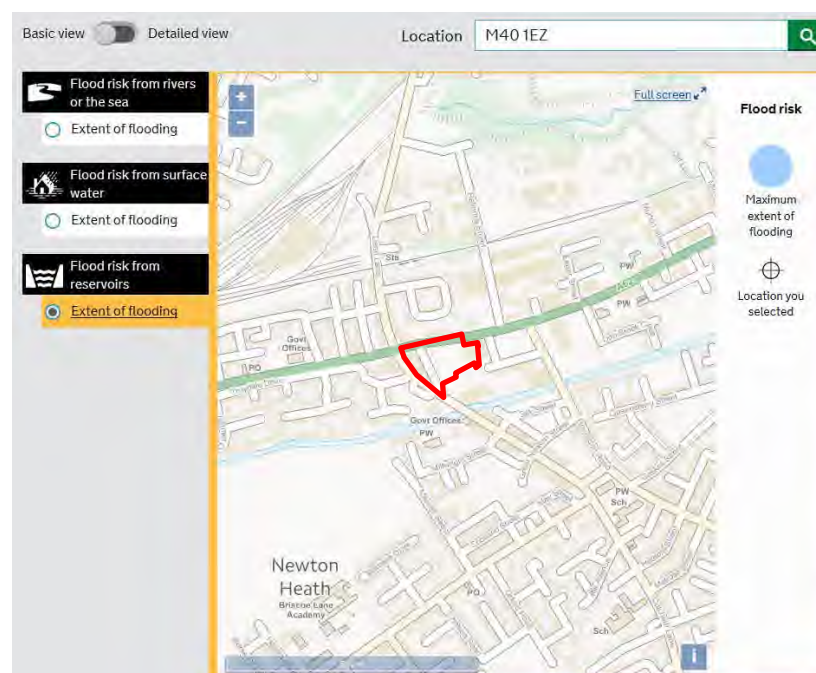
## 4.3 Tidal Flooding (Coastal or Estuarine)

- 4.3.1 There is currently no flood risk identified on the Environment Agency flood maps for the site and it is therefore regarded to be at low risk from tidal flooding.

## 4.4 Reservoir Flooding

- 4.4.1 Reservoir flooding is extremely unlikely to happen and there has been no loss of life in the UK from reservoir flooding since 1925. The Environment Agency is the enforcement authority and ensures that reservoirs are inspected regularly, and essential safety work is carried out.
- 4.4.2 The Long-Term Flood Risk Assessment (Flood Risk from Reservoirs) map shows the largest area that might be flooded if a reservoir were to fail and release the water it holds (see Figure 6).

**Figure 6: Long Term Flood Risk Assessment Map – Flood Risk from Reservoirs (© Crown Copyright)**



- 4.4.3 The site is located within an area that is not affected by reservoir flooding; and therefore, regarding to be at very low risk of reservoir flooding.

#### **4.5 Canal Flooding**

- 4.5.1 The nearest canal to the site is the Rochdale Canal which is located approximately 50m south of the site.
- 4.5.2 The canals are identified in the SFRA as not generally posing a direct flood risk as they are a controlled water body. Therefore, the residual risk of canal flooding is usually associated with lower probability events such as overtopping and/or the breaching of embankments.
- 4.5.3 Given the above information, it is considered that there is low risk of canal flooding to the site.

#### **4.6 Groundwater Flooding**

- 4.6.1 The Site Investigation covering the Phase 2 development area confirms that groundwater was encountered between 0.2-0.6m below ground level however this is likely to be perched water in the made ground.
- 4.6.2 The Site Investigation covering the Phase 3 development area confirm that groundwater was encountered during trial pits at a level of 2.2m or otherwise dry. The groundwater encountered is likely to be perched water.
- 4.6.3 Borehole monitoring indicated that groundwater was encountered between 2.2-8.15m and likely represents the natural water level.
- 4.6.4 Based on the above, groundwater flooding s a potential risk and therefore is considered under the mitigation section 5.

#### **4.7 Public Sewers or Highway Drainage Flooding (Infrastructure Failure)**

- 4.7.1 There are no highway drains recorded within the site.
- 4.7.2 There is a public sewer recorded within the development site and several public sewers in the vicinity of the site.
- 4.7.3 United Utilities and Manchester City Council have not provided any records of flooding to the site or the vicinity.
- 4.7.4 Providing United Utilities and Manchester City Council maintain their drainage assets within and in the vicinity of the site, the risk of flooding to the proposed development site from public sewers or highway drainage is considered as low.

## 4.8 Surface Water Flooding to the site

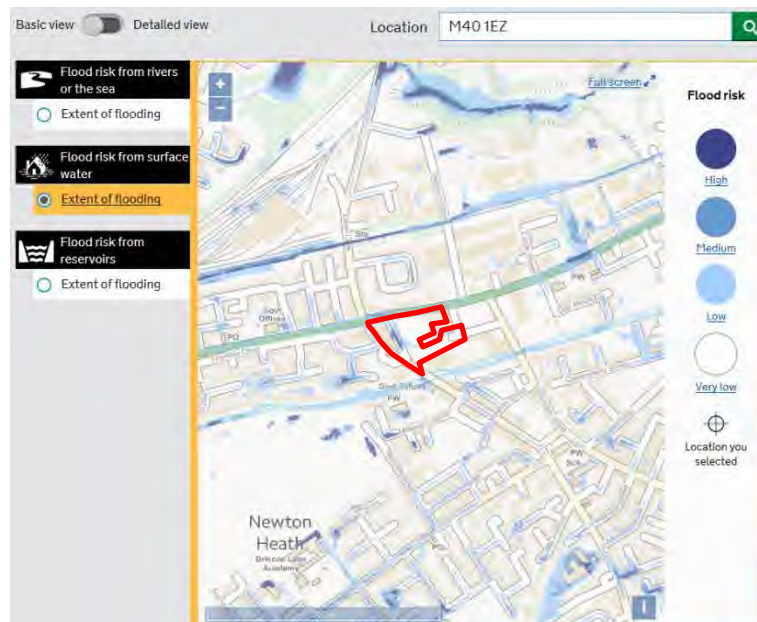
4.8.1 Surface water flooding can be caused when rainwater during extreme rainfall events does not drain away through the normal drainage system or soak into the ground with flooding occurring, principally from manholes and gullies. Surcharging sewers can result in overland flows which if originating at a higher elevation than a development site can potentially pose a flood risk.

4.8.2 From the UK Government's Flood Risk from Surface Water (extent of flooding) map;

- Where a site is located in a dark blue shaded zone, this indicates that the site is at high risk of flooding, where flooding occurs as a result of rainfall with a greater than 1 in 30 (3.3%) chance in any given year.
- Where a site is located in a mid-blue shaded zone, this indicates that the site is at medium risk of flooding, where flooding occurs as a result of rainfall of between 1 in 100 (1%) and 1 in 30 (3.3%) chance in any given year.
- Where a site is located in a light blue shaded zone, this indicates that the site is at low risk of flooding, where flooding occurs as a result of rainfall of between 1 in 1000 (0.1%) and 1 in 100 (1%) chance in any given year.
- Where a site is located in a clear (unshaded) area; this indicates that the site is at very low risk of flooding, where flooding occurs as a result of rainfall with less than 1 in 1000 (0.1%) chance in any given year.

4.8.3 The extent of flooding to the site from surface water is indicated in Figure 7 and it can be seen that the majority of the site is identified as being at a 'very low' risk of flooding from surface water. However, there is a small area considered as medium risk, adjacent to the site on Dulverton St.

**Figure 7: Risk of Flooding from Surface Water - Extent of Flooding**



- 4.8.4 Considering the above information, the risk of surface water flooding to the site is generally considered very low, with a localised region considered to be at medium risk. As such, mitigation measures are proposed in Section 5 in order to account for the low risk of surface water flooding to the site and to ensure that the 'low' risk can be maintained through development.

#### **4.9 Surface Water Flooding from the site**

- 4.9.1 Developers are responsible for ensuring that new development does not increase the flood risk elsewhere. Where new development is proposed, the proposed surface water drainage network shall be designed to not flood for the critical 1 in 30-year storm event and flood water generated up to the critical 1 in 100-year plus climate change storm event shall be constrained within areas on site so as not to cause damage to buildings, essential services or adjoining developments and services.
- 4.9.2 The development has the potential to increase flood risk where additional run-off from proposed roads, paved areas and building roofs are discharged freely into the downstream drainage network. It is therefore encouraged to propose permeable areas, landscaping areas and incorporate sustainable drainage features utilising infiltration or attenuation where possible.
- 4.9.3 An assessment of the proposed surface flows is carried out within the drainage strategy within section 6 of this report.

#### **4.10 Historical Flooding**

- 4.10.1 United Utilities and Manchester City Council have not provided any records of flooding to the site or the vicinity.

#### **4.11 Summary of Flood Risk**

- 4.11.1 From the evidence collated and subsequent negotiations the main types of flooding that may apply to the proposed development site are as follows:
- Groundwater flooding (potential)
  - Surface water flooding to the site
  - Surface water flooding from the site

## 5.0 Mitigation

### 5.1 Groundwater Flood Mitigation

- 5.1.1 Groundwater flooding tends to be more persistent than other sources of flooding, typically lasting for weeks or months rather than hours or days. Groundwater flooding does not generally pose a significant risk to life due to the slow rate at which the water level rises; however, it can cause significant risk to property.
- 5.1.2 Generally, the site has a potential for groundwater flooding for properties set below the groundwater level.
- 5.1.3 Section 4 confirms that shallow groundwater is likely to be perched water and the natural groundwater is likely to be around 2.2m below ground level.
- 5.1.4 The proposed development does not include any below ground basement areas and it is recommended floor levels are at or above existing ground levels therefore the risk of groundwater flooding to the area is considered low.
- 5.1.5 External ground levels across the site should fall away from the proposed buildings and ensure that the creation of low points is avoided (other than those used intentionally for drainage features) in order that in the unlikely event of groundwater flooding, the flood water is safely routed away from the buildings on site.
- 5.1.6 Providing the above mitigation measures were imposed, the risk from groundwater flooding would therefore be considered low post development.

### 5.2 Surface Water Flooding to the site Mitigation

- 5.2.1 The UK Government Long Term Flood Risk Assessment surface water flood maps indicate that the site is at very low to low risk of surface water flooding. However, the site topography is likely to be partially reprofiled as part of the development proposals. Therefore, measures outlined in this section are recommended in order to ensure that the risk of surface water flooding to the post-development site shall not be increased and shall be reduced where possible.
- 5.2.2 The surface water flood maps suggest that there is localised flood risk on site within Dulverton Street. The topographical survey highlights that this is due to this area of the site being lower than the surrounding levels causing surface water collection. There is limited existing drainage known on site. The proposed development will be actively drained by creating of strategic low points with drainage provision at low points.
- 5.2.3 Furthermore, it is recommended that proposed external ground levels across the site should fall away from the proposed buildings in a manner which does not create low points where water might collect

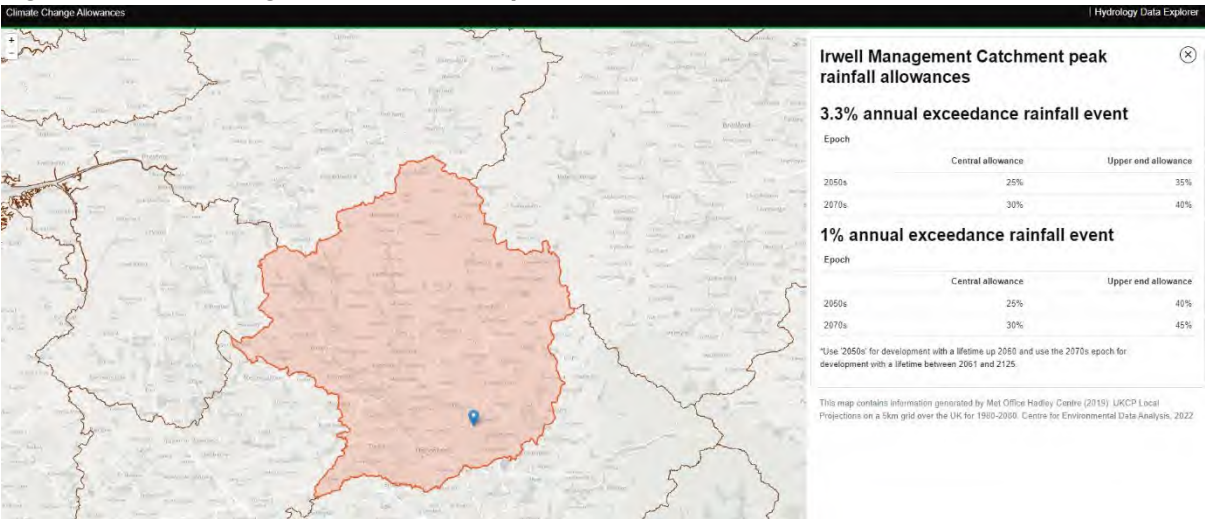
unintentionally. This will ensure that any surface water will not flow towards the proposed buildings. The proposed surface water drainage network shall be designed to accommodate flows generated from within the site.

- 5.2.4 It is assumed that the surface water drainage outside of the site boundary will be subject to the relevant landowner's regular drainage maintenance schedule.
- 5.2.5 Providing the above measures are implemented the flooding risk to the development site from surface water is therefore considered low post development.
- 5.2.6 A detailed assessment of the proposed surface flows is carried out within the drainage strategy within section 6 of this report.

5.3 Surface Water Flooding from the site Mitigation

- 5.3.1 Any new development site drainage should be designed in accordance with current best practice to provide adequate capacity not to flood for the critical 1 in 30-year storm event and flood water generated from up to the critical 1 in 100-year plus climate change storm event shall be constrained within the areas on site so not to cause damage to buildings, essential services or adjoining developments & services.
- 5.3.2 In May 2022, the Environment Agency released updated climate change allowances by Management Catchment for peak rainfall intensities which should be applied to new Developments. Figure 8 demonstrates the climate change allowances with central and upper end allowances being considered.
- 5.3.3 Based on the nature of the Development, a lifespan of 100 years is anticipated (as defined by the current requirement for residential Development). Therefore, the potential climate change allowance in the Irwell Management Catchment for the 2070s Epoch; 2061-2115 is 45% for the upper end allowance. Proposed design calculations will therefore need to consider +45% climate change allowances.

Figure 8: Irwell Management Catchment peak rainfall allowances



- 5.3.4 In following the standard hierarchy of drainage solutions, consideration should firstly be given to the discharge of surface water runoff by sustainable methods such as infiltration.
- 5.3.5 Section 6 reviews the surface water discharge options, and it is proposed (in accordance with United Utilities Pre-Development Enquiry response) that the surface water will outfall into the surrounding public sewers at restricted discharge rates.
- 5.3.6 To minimise localised flooding within the site, the drainage design should ensure that gullies, drainage channels and drains are all suitably sized to accommodate peak storm flows. Also, all inlet features should have suitably sized sumps to catch silts and should be subject to a documented routine maintenance and cleansing regime.
- 5.3.7 Flood water exceedance routes should be identified, both on and off site.
- 5.3.8 For any sustainable drainage systems employed in the development, an appropriate management and maintenance plan for the sustainable drainage system for the lifetime of the development should be submitted which should include:
- Any arrangements for adoption by an appropriate public body or statutory undertaker, management and maintenance by a Residents' Management Company
  - Arrangements concerning appropriate funding mechanisms for its on-going maintenance of all elements of the sustainable drainage system (i.e. inspections, regular maintenance)
  - Means of access for maintenance and easements where applicable
- 5.3.9 Assuming that the proposed drainage system is designed to provide adequate capacity, and that the private and adopted sewers will be maintained by their adopted authority, it can be assumed risk of flood from blockage or overloading is minimal.
- 5.3.10 The final design of the drainage networks shall be in accordance with the legislation set by the Environment Agency, Manchester City Council and United Utilities.

## 6.0 Drainage Strategy

### 6.1 Existing Drainage

6.1.1 The public sewer records have been obtained for the development site. The public sewer records indicate that the following public sewers are located within the development site:

- There is a 300mm diameter combined sewer located within Dulverton Street which flows from South to North and connects into the combined sewer within Oldham Road.

6.1.2 The following sewers are recorded within the vicinity of the site:

- There is a 750x525mm diameter combined sewer situated on Oldham Road, which flows from east to west.
- 450mm diameter combined water sewer within Old Church Street and flows from South-East to North-West.
- There is a 225mm diameter surface water sewer situated on Troydale Drive, which flows from east to west.

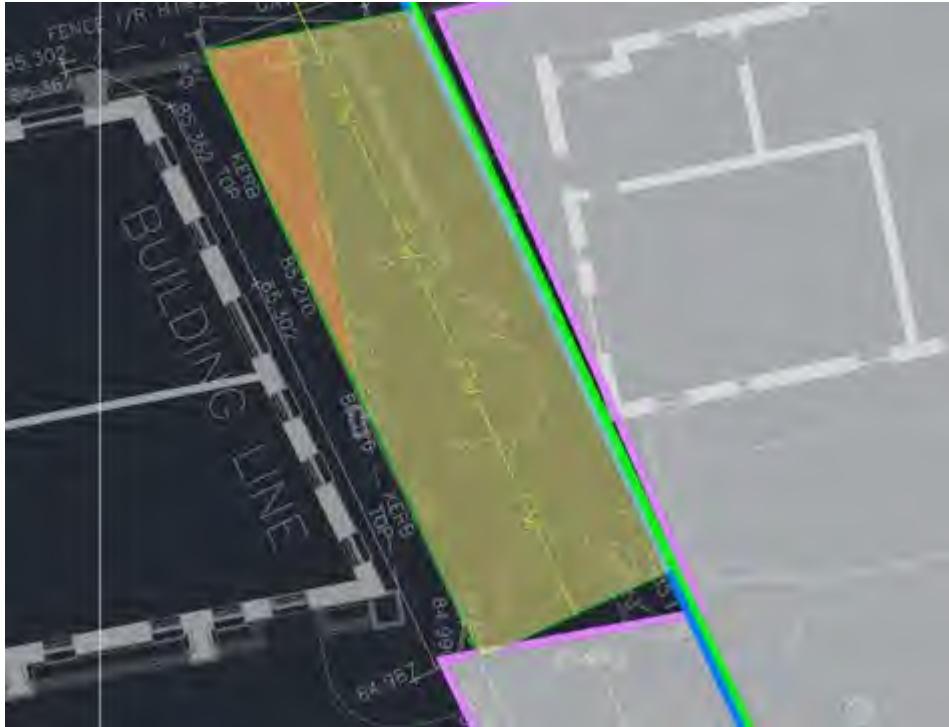
6.1.3 There are further public sewers identified on the public sewer records within the wider vicinity of the site, but these are not considered relevant to the scheme.

6.1.4 A CCTV Drainage Survey has been completed to confirm the location, route, size, depth, condition, inflows and outflows of all accessible drainage within the development site boundary.

6.1.5 Further surveys may be necessary within the recently confirmed sewers within Troydale Drive. This will be completed at detailed design stage where necessary.

6.1.6 Following overlay of the surveyed 300mm combined sewer on site with the proposed site arrangement, the proposed apartment building within the Phase 3 development area encroaches the existing easement of the sewer. Refer to Figure 9.

**Figure 9: Existing Sewer with Building Overlay**



- 6.1.7 It will therefore be necessary to partially divert the sewer within the site to maintain a 6m easement, 3m from either side of the centre line. During a meeting with United Utilities and subsequent correspondence, United Utilities confirmed that the diversion route will need to form a new connection into Oldham Road as necessary to ensure that minimum 3m offsets are maintained. The United Utilities Correspondence is enclosed in *Appendix E*.
- 6.1.8 The proposed drainage strategy drawing enclosed in *Appendix F* details the indicative diversion route into Oldham Road and the diversion will need to be agreed with United Utilities under a Section 185 Diversion Agreement.

## **6.2 Proposed Foul Water Drainage**

- 6.2.1 A separate foul and surface water system is proposed.
- 6.2.2 The proposed foul drainage is to be collected by gravity and outfall into the existing combined public sewer located on Dulverton St. There will be a connection from Phase 2 and a connection from Phase 3.
- 6.2.3 The peak flow rate for the development has been calculated based on the Design and Construction Guidance for Sewers assuming 4000 l/d/d (litres per dwelling per day). The peak foul discharge is therefore estimated as 5 l/s based on 34 dwellings for phase 2 discharging 1.57 l/s and 75 dwellings for

Phase 3 discharging 3.47 l/s. United Utilities have confirmed in their pre-development enquiry response that foul water flows from the development can be accommodated within the public combined sewer at an unrestricted rate. Refer to the United Utilities correspondence enclosed in *Appendix E*.

- 6.2.4 If required, where sewers are offered for adoption by United Utilities, they will be subject to a Section 104 Agreement with United Utilities. Approval to connect are likely to be agreed under the Section 104 Agreement.
- 6.2.5 Where sewers remain private, connection to the public sewer network will be subject to a Section 106 Agreement with United Utilities.
- 6.2.6 Based on the nature of the development, it is likely that all sewers will remain private.
- 6.2.7 The proposed drainage strategy is enclosed in *Appendix F*.

### **6.3 Proposed Surface Water Drainage**

- 6.3.1 Any new development site drainage should be designed in accordance with current best practice to provide adequate capacity not to flood for the critical 1 in 30-year storm event and flood water generated for up to the critical 1 in 100-year plus 45% climate change storm event shall be constrained within the areas on site so not to cause damage to buildings, essential services or adjoining developments and services.
- 6.3.2 In following the standard hierarchy of drainage solutions, consideration should firstly be given to the discharge of surface water runoff by sustainable methods such as infiltration.

#### ***Infiltration***

- 6.3.3 The Phase 2 Site Investigation report indicates that generally the geology of the site is made ground/topsoil, with superficial deposits comprising of Glacial Till.
- 6.3.4 The Site Investigation works highlight that the underlying ground largely consists of made ground and includes contaminants such as heavy metals and hydrocarbons.
- 6.3.5 Draining the site via infiltration may result in contamination to the underlying aquifer.
- 6.3.6 The Site Investigation Study includes groundwater records at several locations across the site. The records show that the groundwater levels on the site vary from 2.2-8m bgl.
- 6.3.7 Draining the site via infiltration may result in the raising of the groundwater table, which could lead to localised groundwater flooding on site.
- 6.3.8 Based on this evidence it is recommended that the site should not drain via infiltration.

***Watercourse***

- 6.3.9 The Rochdale Canal is located approximately 50m south of site. No further watercourses are recorded in the vicinity of the site.
- 6.3.10 To drain to this watercourse would not be feasible due to the distance from the site and the requirement to cross third party land.

***Surface Water Sewer***

- 6.3.11 There is a 225mm diameter surface water sewer situated on Troydale Drive, which flows from east to west.
- 6.3.12 As the Phase 2 area of the development was previously designed under the wider Phase 1 development proposals, at this stage in the project we were unaware of surface water sewers in the vicinity of the site and connection was agreed with United Utilities to connect to the 300mm combined sewer on site.
- 6.3.13 Subsequent discussions with United Utilities confirmed the 300mm surface water sewer was present in Troydale Drive and potentially a suitable connection for the Phase 3 development area.
- 6.3.14 The invert level of the surface water sewer in Troydale Drive has been confirmed by visual inspection as 2.75m deep indicating an invert level of 82.28m therefore connection from the Phase 3 area should be viable subject to further detailed design and surveys. Where insufficient depth is confirmed, we would seek to discharge to the combined sewer on site.
- 6.3.15 United Utilities have confirmed a 5 l/s discharge should be achieved from the Phase 3 area.

***Combined Water sewer***

- 6.3.16 There is a 300mm diameter combined sewer located within Dulverton Street which flows from South to North and connects into the combined sewer within Oldham Road and there is a 750x525mm diameter combined sewer situated on Oldham Road, which flows from east to west.
- 6.3.17 Based on previous agreements to discharge Phase 1 (which included the current Phase 2 boundary) proposals for Phase 2 are to connect to the Combined sewer network on site in accordance with the overall flow United Utilities have confirmed this is acceptable based on the overall flows agreed under the Phase 1 development.
- 6.3.18 Figure 10 illustrates the overall flow rates from the development. Phase 1 is shown for reference for the wider agreement of flows only and does not form part of this strategy.
- 6.3.19 United Utilities have confirmed this is acceptable and the correspondence is enclosed in Appendix E.

**Figure 10: Phased Development Surface Water Flows**



#### 6.3.20 Phase 2 Area

- 1 in 1 year: 5.6 l/s (based on Phase 1 overall 15.3 l/s – 9.7 l/s)
- 1 in 30 year: 18.8 l/s (based on Phase 1 overall 42.2 l/s – 13.8 l/s)
- 1 in 100 + 45% climate change: 20.5 l/s (based on Phase 1 overall 52.4 l/s – 15.4 l/s)

6.3.21 The proposed flows have been calculated based on a 50% reduction of existing flows from the site to the public sewer. As agreed under the Phase 1 Strategy Planning Application 125990/2020.

#### 6.3.22 Phase 3 Area

- 1 in 1 year: 5 l/s
- 1 in 30 year: 5 l/s
- 1 in 100 + 45% climate change: 5 l/s

6.3.23 It is recommended that sustainable methods of attenuation are implemented where possible. The majority of attenuation is provided within attenuation tanks, one serving the Phase 2 area providing approximately 132m<sup>3</sup> and one serving the Phase 3 area providing approximately 138m<sup>3</sup>. The tanks will act as additional storage required up to the 1 in 100-year event plus 45% climate change.

- 6.3.24 There is also proposal to introduce permeable paving within the car parking areas, which follows the same principals as the Phase 1 wider development works.
- 6.3.25 The preliminary surface water model has been carried out to estimate the required volume for both options. The required attenuation has been shown on the drawing (074031- CUR-00-XX-DR-92600).
- 6.3.26 Surface water run-off from hard paved areas at risk of contamination should receive water quality treatment. Access roads and residential car parks are considered as a low hazard in terms of contamination. Figure 11 illustrates the pollution hazard indices for different land use classifications from The CIRIA SuDS Manual C753 (2015).

**Figure 11: Pollution Hazard indices for land use classification (Table 26.2 the CIRIA SuDS manual 2015)**

| Land use                                                                                                                                                                                                                                                                                                               | Pollution hazard level | Total suspended solids (TSS) | Metals                                                                     | Hydrocarbons     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|------------------------------|----------------------------------------------------------------------------|------------------|
| Residential roofs                                                                                                                                                                                                                                                                                                      | Very low               | 0.1                          | 0.2                                                                        | 0.05             |
| Other roofs (typically commercial/ industrial roofs)                                                                                                                                                                                                                                                                   | Low                    | 0.3                          | 0.2 (up to 0.8 where there is potential for metals to leach from the roof) | 0.05             |
| Individual property driveways, residential car parks, low traffic roads (eg cul-de sacs, homezones and general access roads) and non-residential car parking with infrequent change (eg schools, offices) ie < 300 traffic movements/day                                                                               | Low                    | 0.6                          | 0.4                                                                        | 0.4              |
| Commercial yard and delivery areas, non-residential car parking with frequent change (eg hospitals, retail), all roads except low traffic roads and trunk roads/motorways <sup>1</sup>                                                                                                                                 | Medium                 | 0.7                          | 0.6                                                                        | 0.7              |
| Sites with heavy pollution (eg haulage yards, lorry parks, highly frequented lorry approaches to industrial estates, waste sites), sites where chemicals and fuels (other than domestic fuel oil) are to be delivered, handled, stored, used or manufactured, industrial sites, trunk roads and motorways <sup>1</sup> | High                   | 0.8 <sup>2</sup>             | 0.8 <sup>2</sup>                                                           | 0.8 <sup>2</sup> |

- 6.3.27 Figure 12 illustrates the SuDS Component mitigation indices from The CIRIA SuDS Manual C753 (2015).

**Figure 12: Indicative SuDS mitigation indices (Table 26.3 the CIRIA SuDS manual 2015)**

| TABLE 26.3 Indicative SuDS mitigation indices for discharges to surface waters |                                                                                                                                                                                                                                                    |        |              |
|--------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------------|
| Type of SuDS component                                                         | Mitigation indices <sup>1</sup>                                                                                                                                                                                                                    |        |              |
|                                                                                | TSS                                                                                                                                                                                                                                                | Metals | Hydrocarbons |
| Filter strip                                                                   | 0.4                                                                                                                                                                                                                                                | 0.4    | 0.5          |
| Filter drain                                                                   | 0.4                                                                                                                                                                                                                                                | 0.4    | 0.4          |
| Swale                                                                          | 0.5                                                                                                                                                                                                                                                | 0.6    | 0.6          |
| Bioswale system                                                                | 0.6                                                                                                                                                                                                                                                | 0.6    | 0.6          |
| Permeable pavement                                                             | 0.7                                                                                                                                                                                                                                                | 0.6    | 0.7          |
| Retention basin                                                                | 0.6                                                                                                                                                                                                                                                | 0.6    | 0.6          |
| Pond <sup>2</sup>                                                              | 0.7 <sup>3</sup>                                                                                                                                                                                                                                   | 0.7    | 0.5          |
| Wetland                                                                        | 0.8 <sup>4</sup>                                                                                                                                                                                                                                   | 0.8    | 0.8          |
| Proprietary treatment systems <sup>5,6</sup>                                   | These must demonstrate that they can address each of the contaminant types to acceptable levels for frequent events up to approximately the 1 in 1 year return period event, for inflow concentrations relevant to the contributing drainage area. |        |              |

**Notes:**

- 1 SuDS components only deliver these indices if they follow design guidance with respect to hydraulics and treatment set out in the relevant technical component chapters.
- 2 Filter drains can remove coarse sediments, but their use for this purpose will have significant implications with respect to maintenance requirements, and this should be taken into account in the design and Maintenance Plan.
- 3 Ponds and wetlands can remove coarse sediments, but their use for this purpose will have significant implications with respect to the maintenance requirements and amenity value of the system. Sediment should normally be removed upstream, unless they are specifically designed to retain sediment in a separate part of the component, where it cannot easily migrate to the main body of water.
- 4 Where a wetland is not specifically designed to provide significantly enhanced treatment, it should be considered as having the same mitigation indices as a pond.
- 5 See CIRIA 141 for approaches to demonstrate product performance. A British Water/Environment Agency assessment code of practice is currently under development that will allow manufacturers to complete an agreed test protocol for systems intended to treat contaminated surface water runoff. Full details can be found at: <http://tinyurl.com/qf7yur7>
- 6 BEPA only considers proprietary treatment systems as appropriate in exceptional circumstances where other types of SuDS component are not practicable. Proprietary treatment systems may also be considered appropriate for existing sites that are causing pollution where there is a requirement to retrofit treatment. BEPA (2014) also provides a flowchart with a summary of checks on suitability of a proprietary system.

- 6.3.28 The selection of treatment should ensure that the SuDS mitigation component index (Figure 12) exceeds the pollution hazard index (Figure 10).
- 6.3.29 Potential options for the use of permeable paving have been identified within parking bays which would offer a level of treatment. Should this not be considered viable, a petrol interceptor may be required to treat the surface water run-off from the residential car parking.
- 6.3.30 The proposals for pollution protection should be agreed with The Environment Agency and Manchester City Council.
- 6.3.31 Where sewers are offered for adoption by United Utilities, they will be subject to a Section 104 Agreement with United Utilities. Approval to connect are likely to be agreed under the Section 104 Agreement.
- 6.3.32 Where sewers remain private, connection to the public sewer network will be subject to a Section 106 Agreement with United Utilities.

6.3.33 Based on the nature of the development, it is likely that all sewers will remain private.

6.3.34 The proposed drainage strategy is enclosed in *Appendix F*.

6.3.35 The final design of the drainage networks shall be in accordance with the legislation set by the Environment Agency, Manchester City Council and United Utilities.

**Appendix A**

Proposed Site Layout



## **Appendix B**

United Utilities Public Sewer Records

**Wilkinson Cowan Partnership**

**15  
Ladybridge Road,  
Cheadle Hulme,  
sk8 5bl**

**FAO:**

**How to contact us:**

**United Utilities Water Limited  
Property Searches  
Haweswater House  
Lingley Mere Business Park  
Great Sankey  
Warrington  
WA5 3LP**

**Telephone: 0370 7510101**

**E-mail: [propertysearches@uuplc.co.uk](mailto:propertysearches@uuplc.co.uk)**

**Your Ref: 3815 - Newton & Dulverton Street  
Our Ref: UUPS-ORD-122012  
Date: 06/09/2019**

**Dear Sirs**

**Location: YES GROUP LTD 1290 OLDHAM ROAD, MANCHESTER, M40 1EZ**

I acknowledge with thanks your request dated 04/09/2019 for information on the location of our services.

Please find enclosed plans showing the approximate position of United Utilities' apparatus known to be in the vicinity of this site.

The enclosed plans are being provided to you subject to the United Utilities terms and conditions for both the wastewater and water distribution plans which are shown attached.

If you are planning works anywhere in the North West, please read United Utilities' access statement before you start work to check how it will affect our network. <http://www.unitedutilities.com/work-near-asset.aspx>.

I trust the above meets with your requirements and look forward to hearing from you should you need anything further.

If you have any queries regarding this matter please [contact us](#).

Yours Faithfully,



Karen McCormack  
Property Searches Manager



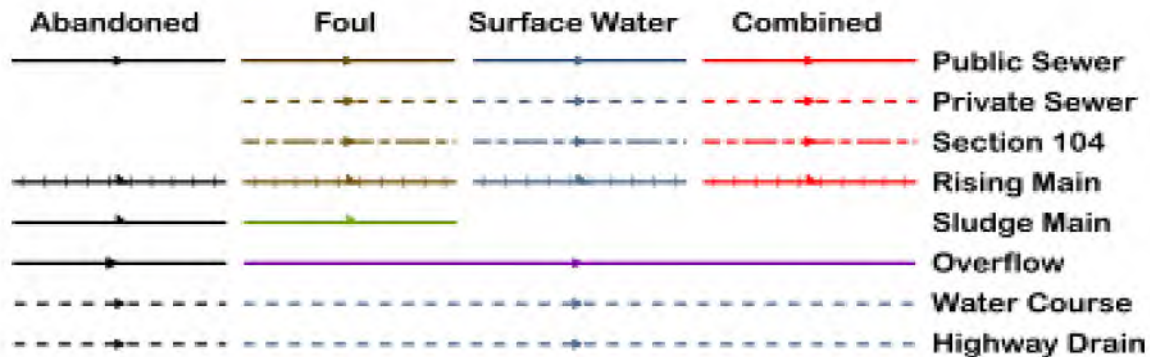
## TERMS AND CONDITIONS - WASTEWATER AND WATER DISTRIBUTION PLANS

These provisions apply to the public sewerage, water distribution and telemetry systems (including sewers which are the subject of an agreement under Section 104 of the Water Industry Act 1991 and mains installed in accordance with the agreement for the self construction of water mains) (UUWL apparatus) of United Utilities Water Limited "(UUWL)".

### TERMS AND CONDITIONS:

- This Map and any information supplied with it is issued subject to the provisions contained below, to the exclusion of all others and no party relies upon any representation, warranty, collateral contract or other assurance of any person (whether party to this agreement or not) that is not set out in this agreement or the documents referred to in it.
- This Map and any information supplied with it is provided for general guidance only and no representation, undertaking or warranty as to its accuracy, completeness or being up to date is given or implied.
- In particular, the position and depth of any UUWL apparatus shown on the Map are approximate only. UUWL strongly recommends that a comprehensive survey is undertaken in addition to reviewing this Map to determine and ensure the precise location of any UUWL apparatus. The exact location, positions and depths should be obtained by excavation trial holes.
- The location and position of private drains, private sewers and service pipes to properties are not normally shown on this Map but their presence must be anticipated and accounted for and you are strongly advised to carry out your own further enquiries and investigations in order to locate the same.
- The position and depth of UUWL apparatus is subject to change and therefore this Map is issued subject to any removal or change in location of the same. The onus is entirely upon you to confirm whether any changes to the Map have been made subsequent to issue and prior to any works being carried out.
- This Map and any information shown on it or provided with it must not be relied upon in the event of any development, construction or other works (including but not limited to any excavations) in the vicinity of UUWL apparatus or for the purpose of determining the suitability of a point of connection to the sewerage or other distribution systems.
- No person or legal entity, including any company shall be relieved from any liability howsoever and whensoever arising for any damage caused to UUWL apparatus by reason of the actual position and/or depths of UUWL apparatus being different from those shown on the Map and any information supplied with it.
- If any provision contained herein is or becomes legally invalid or unenforceable, it will be taken to be severed from the remaining provisions which shall be unaffected and continue in full force and affect.
- This agreement shall be governed by English law and all parties submit to the exclusive jurisdiction of the English courts, save that nothing will prevent UUWL from bringing proceedings in any other competent jurisdiction, whether concurrently or otherwise.

## Wastewater Symbolology



All point assets follow the standard colour convention: red – combined brown - foul  
blue – surface water purple - overflow

|                  |                          |
|------------------|--------------------------|
| Manhole          | Side Entry Manhole       |
| Head of System   | Outfall                  |
| Extent of Survey | Screen Chamber           |
| Rodding Eye      | Inspection Chamber       |
| Inlet            | Bifurcation Chamber      |
| Discharge Point  | Lamp Hole                |
| Vortex           | T Junction / Saddle      |
| Penstock         | Catchpit                 |
| Washout Chamber  | Valve Chamber            |
| Valve            | Vent Column              |
| Air Valve        | Vortex Chamber           |
| Non Return Valve | Penstock Chamber         |
| Soakaway         | Network Storage Tank     |
| Gully            | Sewer Overflow           |
| Cascade          | Ww Treatment Works       |
| Flow Meter       | Ww Pumping Station       |
| Hatch Box        | Septic Tank              |
| Oil Interceptor  | Control Kiosk            |
| Summit           |                          |
| Drop Shaft       | Change of Characteristic |
| Orifice Plate    |                          |



Scale: 1:1414  
Date: 06/09/2019

## SEWER RECORDS

**Address or Site Reference:** YES GROUP LTD 1290 OLDHAM ROAD,  
MANCHESTER, M40 1EZ

**Printed by:** Property Searches

The position of the underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available. United Utilities Water will not accept liability for any loss or damage caused by the actual position being different from those shown.

Crown copyright and database rights 2017 Ordnance Survey 100022432. Unauthorised reproduction will infringe these copyrights.

# Clean Water Symbolology

| Proposed | Abandoned | Live |                           |
|----------|-----------|------|---------------------------|
|          |           |      | Distribution Main         |
|          |           |      | Trunk Main                |
|          |           |      | Comms Pipe                |
|          |           |      | Private Pipe              |
|          |           |      | Concessionary Service     |
|          |           |      | Raw Water                 |
|          |           |      | LDTM Raw Water            |
|          |           |      | LDTM Treated Water        |
|          |           |      | Air Valve                 |
|          |           |      | AC Valve, open            |
|          |           |      | AC Valve, closed          |
|          |           |      | CC Valve, open            |
|          |           |      | CC Valve, closed          |
|          |           |      | Non Return Valve          |
|          |           |      | Pressure Management Valve |
|          |           |      | OMS Valve                 |
|          |           |      | Stop Tap                  |
|          |           |      | Flow Meter                |
|          |           |      | Domestic Meter            |
|          |           |      | Commercial Meter          |
|          |           |      | Pump                      |
|          |           |      | Hydrant                   |
|          |           |      | Fire Hydrant              |
|          |           |      | Anode                     |
|          |           |      | Chlorination Point        |
|          |           |      | De-chlorination Point     |
|          |           |      | Strainer Point            |
|          |           |      | Access Point              |
|          |           |      | Hatch Box                 |
|          |           |      | IP Point                  |
|          |           |      | Sampling Station          |
|          |           |      | Logger Box                |
|          |           |      | Bore Hole                 |
|          |           |      | Inlet Point               |
|          |           |      | Bulk Supply Point         |
|          |           |      | End Cap                   |
|          |           |      | Site Termination          |
|          |           |      | Change of Characteristic  |
|          |           |      | Condition Report          |
|          |           |      | <u>Property Types</u>     |
|          |           |      | Water Tower               |
|          |           |      | Valve House               |
|          |           |      | Booster Pumping Station   |
|          |           |      | Intake Pumping Station    |
|          |           |      | Water Treatment Works     |
|          |           |      | Supply Reservoir          |
|          |           |      | Service Reservoir         |
|          |           |      | Impounding Reservoir      |
|          |           |      | Pipe Bridge               |

Symbology for proposed assets is the same as above, but shown in **green**  
 Symbology for abandoned assets is the same as above, but shown in **black**



Scale: 1:1414  
Date: 06/09/2019

## WATER MAINS RECORDS

**Address or Site Reference:** YES GROUP LTD 1290 OLDHAM ROAD,  
MANCHESTER, M40 1EZ

**Printed by:** Property Searches

The position of the underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available. United Utilities Water will not accept liability for any loss or damage caused by the actual position being different from those shown.

Crown copyright and database rights 2017 Ordnance Survey 100022432. Unauthorised reproduction will infringe these copyrights.

## **Appendix C**

### Topographical Survey





## **Appendix D**

Environment Agency Flood Map for Planning

# Flood map for planning

Your reference  
**074031 - Oldh**

Location (easting/northing)  
**388059/400662**

Created  
**16 Jan 2020 14:14**

**Your selected location is in flood zone 1, an area with a low probability of flooding.**

## This means:

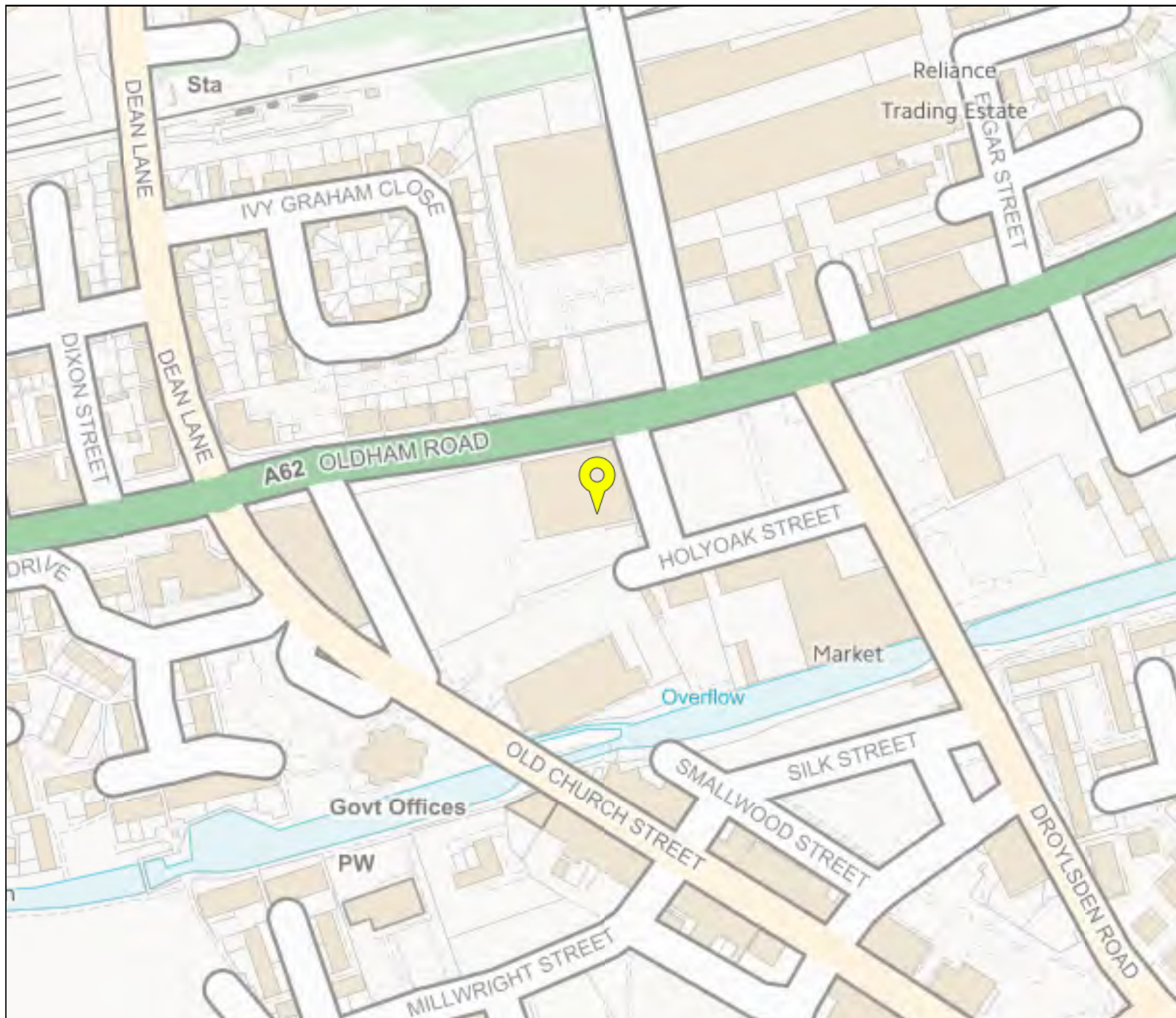
- you don't need to do a flood risk assessment if your development is smaller than 1 hectare and not affected by other sources of flooding
- you may need to do a flood risk assessment if your development is larger than 1 hectare or affected by other sources of flooding or in an area with critical drainage problems

## Notes

The flood map for planning shows river and sea flooding data only. It doesn't include other sources of flooding. It is for use in development planning and flood risk assessments.

This information relates to the selected location and is not specific to any property within it. The map is updated regularly and is correct at the time of printing.

The Open Government Licence sets out the terms and conditions for using government data.  
<https://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/>



## Flood map for planning

Your reference  
**074031 - Oldh**

Location (easting/northing)  
**388059/400662**

Scale  
**1:2500**

Created  
**16 Jan 2020 14:14**

-  Selected point
-  Flood zone 3
-  Flood zone 3: areas benefitting from flood defences
-  Flood zone 2
-  Flood zone 1
-  Flood defence
-  Main river
-  Flood storage area

0 20 40 60m

**Appendix E**

Lead Local Flood Authority Correspondence

United Utilities Correspondence

## Chloé Grimsley

---

**From:** Chloé Grimsley  
**Sent:** 05 May 2023 10:34  
**To:** Charlie Smith; Marta Wolska; Andy Rain  
**Subject:** FW: Pre-Planning Advice

FYI

**Chloé Grimsley** Principal Civil Engineer  
**Curtins**  
T. 0161 236 2394 | [chloe.grimsley@curtins.com](mailto:chloe.grimsley@curtins.com)

---

**From:** Laura Peacock <Laura.Peacock@manchester.gov.uk>  
**Sent:** 05 May 2023 09:36  
**To:** Chloé Grimsley <Chloe.Grimmsley@curtins.com>; Talha Esmail <Talha.Esmail@manchester.gov.uk>  
**Subject:** RE: Pre-Planning Advice

Good Morning Chloé,

Thank you for your emails, I hope you're well and apologies for the delay in response.

This inbox is still the correct address. Unfortunately we have had to suspend pre-app consultations at the moment, unless there is specific direction from the MCC planning officer that something is required. This is due to the volume of live planning applications currently allocated to us.

This should now be in the auto-response generated by the inbox, but it may not have been there when you sent your earlier enquiry.

Apologies for the inconvenience at this time,

Kind Regards,  
Laura

Laura Peacock  
Flood Risk Engineer – LLFA

Highways Service,  
Growth and Neighbourhoods Directorate  
Manchester City Council  
PO Box 532  
Town Hall  
Manchester  
M60 2LA  
Web: <http://www.manchester.gov.uk>

\*\*\*\*\*

This email and any files transmitted with it are confidential and intended solely for the use of the individual or entity to whom they are addressed.

If you have received this email in error, please notify the system manager.

The full text of the Council's email disclaimer is available at [www.manchester.gov.uk/emaildisclaimer](http://www.manchester.gov.uk/emaildisclaimer).

Your personal data is very important to us. Please refer to our privacy notice at [www.manchester.gov.uk/privacy](http://www.manchester.gov.uk/privacy) for further information.

This footnote also confirms that this email message has been swept for the presence of computer viruses.

\*\*\*\*\*

---

**From:** Chloé Grimsley <[Chloe.Grimmsley@curtins.com](mailto:Chloe.Grimmsley@curtins.com)>

**Sent:** 05 May 2023 08:50

**To:** Laura Peacock <[Laura.Peacock@manchester.gov.uk](mailto:Laura.Peacock@manchester.gov.uk)>; Talha Esmail <[Talha.Esmail@manchester.gov.uk](mailto:Talha.Esmail@manchester.gov.uk)>

**Cc:** Flood Risk Management <[floodriskmanagement@manchester.gov.uk](mailto:floodriskmanagement@manchester.gov.uk)>

**Subject:** RE: Pre-Planning Advice

Some people who received this message don't often get email from [chloe.grimsley@curtins.com](mailto:chloe.grimsley@curtins.com). [Learn why this is important](#)

Good Morning Laura/Talha,

Please could you confirm my queries in the email below.

I'm looking to submit an enquiry next week for site at Sparkle Street/Store Street, Manchester City Centre and there is a culverted watercourse in the adjacent highway (Store Street) so we would need consultation advice if we can connect surface water to the culvert. I just want to make sure we are sending through enquiries correctly.

Kind Regards,  
Chloé

**Chloé Grimsley** Principal Civil Engineer

**Curtins**

T. 0161 236 2394 | [chloe.grimsley@curtins.com](mailto:chloe.grimsley@curtins.com)

---

**From:** Chloé Grimsley

**Sent:** 17 April 2023 12:49

**To:** [laura.peacock@manchester.gov.uk](mailto:laura.peacock@manchester.gov.uk); [talha.esmail@manchester.gov.uk](mailto:talha.esmail@manchester.gov.uk)

**Cc:** [floodriskmanagement@manchester.gov.uk](mailto:floodriskmanagement@manchester.gov.uk)

**Subject:** Pre-Planning Advice

Good Afternoon Laura/Talha,

I hope you are both well?

I'm just enquiring in general regarding pre-planning advice and if we are still approaching for advice correctly.

I have issued an enquiry on a site at Granby Row a couple of weeks back but didn't receive any responses so wondered if the process may have changed.

We are currently looking at a new site at Sparkle Street, Manchester so would like to get our pre-application requests in soon so it would be good to understand if the process has changed?

We are currently issuing email requests to [floodriskmanagement@manchester.gov.uk](mailto:floodriskmanagement@manchester.gov.uk)

Kind Regards,  
Chloé

---

**Chloé Grimsley**

Principal Civil Engineer

T. 0161 236 2394

[chloe.grimsley@curtins.com](mailto:chloe.grimsley@curtins.com)

Merchant Exchange  
17-19 Whitworth Street West  
Manchester M1 5WG



**INVESTORS IN PEOPLE**  
We invest in people

CIVILS & STRUCTURES • TRANSPORT PLANNING • ENVIRONMENTAL • INFRASTRUCTURE • GEOTECHNICAL • CONSERVATION & HERITAGE • PRINCIPAL DESIGNERS  
Birmingham • Bristol • Cambridge • Cardiff • Douglas • Dublin • Edinburgh • Glasgow • Kendal • Leeds • Liverpool • London • Manchester • Nottingham

\*\*\*\*\*

This email and any files transmitted with it are confidential and intended solely for the use of the individual or entity to whom they are addressed.  
If you have received this email in error, please notify the system manager.

The full text of the Council's email disclaimer is available at: [www.manchester.gov.uk/emaildisclaimer](http://www.manchester.gov.uk/emaildisclaimer).

Your personal data is very important to us. Please refer to our privacy notice at: [www.manchester.gov.uk/privacy](http://www.manchester.gov.uk/privacy) for further information.

This footnote also confirms that this email message has been swept for the presence of computer viruses.

\*\*\*\*\*

## Chloé Grimsley

---

**From:** seweradoptions@uuplc.co.uk  
**Sent:** 09 June 2023 15:59  
**To:** Chloé Grimsley  
**Cc:** Charlie Smith  
**Subject:** RE: 03746142 - Oldham Road, M40 3AY

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Good afternoon Chloé and Charlie,

Please note these are indicative only.

Below I have put the details of the surface water sewer in question.

Chamber depth 2.84mm, Upstream Pipe depth 2.84mm, Downstream Pipe depth 3.02mm.

The combined water manhole details are:

Chamber Depth 5.04mm, Upstream Pipe depth 4.57mm and unfortunately I do not have any information on the downstream pipe depth.

Hope this is helpful.

Kind regards



**Ashleigh Bellerby**  
Assistant Developer Engineer  
Developer Services & Metering  
Customer Services  
T: 07826891650  
[unitedutilities.com](https://unitedutilities.com)

**If you have received a great service today why not tell us?**

**Visit:** [unitedutilities.com/wow](https://unitedutilities.com/wow)

----- Original Message -----

**From:** Chloé Grimsley [chloe.grimsley@curtins.com]  
**Sent:** 02/06/2023 16:39  
**To:** seweradoptions@uuplc.co.uk  
**Cc:** ashleigh.bellerby@uuplc.co.uk; charlie.smith@curtins.com  
**Subject:** RE: 03746142 - Oldham Road, M40 3AY

Hi Ashleigh,

Further to my email below, please could you cc Charlie Smith to your response as I am on annual leave next week.

Kind Regards,

Chloé

**Chloé Grimsley** Principal Civil Engineer  
**Curtins**  
T. 0161 236 2394 | [chloe.grimsley@curtins.com](mailto:chloe.grimsley@curtins.com)

---

**From:** Chloé Grimsley  
**Sent:** Friday, May 26, 2023 8:36 AM  
**To:** seweradoptions@uuplc.co.uk  
**Cc:** ashleigh.bellerby@uuplc.co.uk  
**Subject:** RE: 03746142 - Oldham Road, M40 3AY  
**Importance:** High

Hi Ashleigh,

Thank you for your quick response.

Based on the below, we will develop the strategy based on the total agreed flows for phase 2, we will limit phase 3 to 5 l/s for all events up to 100 year +cc.

With regards to the surface water sewer in Troydale Drive, we were not aware of this sewer as our records do not cover as far (as attached) which is why we haven't previously investigated this sewer. However, on first review, it looks quite difficult to achieve a connection based on crossing Church Street and the services currently within the road.

The proposed building fronts along the Church Street elevation meaning we would likely require drainage under the building which would increase the risk of flooding to the building. The area we would need to come through with the outfall is undercroft parking, so attenuation would either need to be positioned outside of the building on the east side, or around column foundations within the undercroft.

The surface water manhole in Troydale Drive is also head of system so I'm not sure whether there would be sufficient depth to connect by gravity so may need to be pumped.

Please could you confirm the invert level for manholes SW 9603 and CW 9600 – our current survey covers only Church Street but the manholes couldn't be lifted – see attached survey.

Kind Regards,

Chloé

**Chloé Grimsley** Principal Civil Engineer  
**Curtins**  
T. 0161 236 2394 | [chloe.grimsley@curtins.com](mailto:chloe.grimsley@curtins.com)

---

**From:** [seweradoptions@uuplc.co.uk](mailto:seweradoptions@uuplc.co.uk) <[seweradoptions@uuplc.co.uk](mailto:seweradoptions@uuplc.co.uk)>  
**Sent:** Wednesday, May 24, 2023 3:29 PM  
**To:** Chloé Grimsley <[Chloe.Grimley@curtins.com](mailto:Chloe.Grimley@curtins.com)>  
**Subject:** 03746142 - Oldham Road, M40 3AY

Good afternoon Chloe,

Thank you for taking the time to go into detail in your plans.

As phase 1 and 2 are agreed at planning please conform with the approved discharge rates and strategy. Any changes will need to be discussed with Jo Wong directly via planning.

Phase 3 to be 5 l/s. However, I note there is a surface water sewer adjacent to phase 3 - I have inserted a screen grab below. We would request that the surface water from phase 3 is discharged to the 225mm surface water sewer at 5 l/s. If this is not possible we would require evidence discounting this as an option.



In regards to the diversion, I have completed a high level assessment with a Diversion engineer and they have confirmed option 2 to be the most acceptable proposal.

This would need to be formally assessed via a section 185, I have linked below the application form and some further guidance.

Option 1 would not be acceptable to United Utilities due to the easement being encroached.

Application form- <https://www.unitedutilities.com/globalassets/documents/builders--developers-docs/9910-wwp-s185-application-for-diversion-jan2023-web-acc.pdf>

Construction details- [https://www.unitedutilities.com/globalassets/documents/pdf/developer-services-construction-details\\_acc16.pdf](https://www.unitedutilities.com/globalassets/documents/pdf/developer-services-construction-details_acc16.pdf)

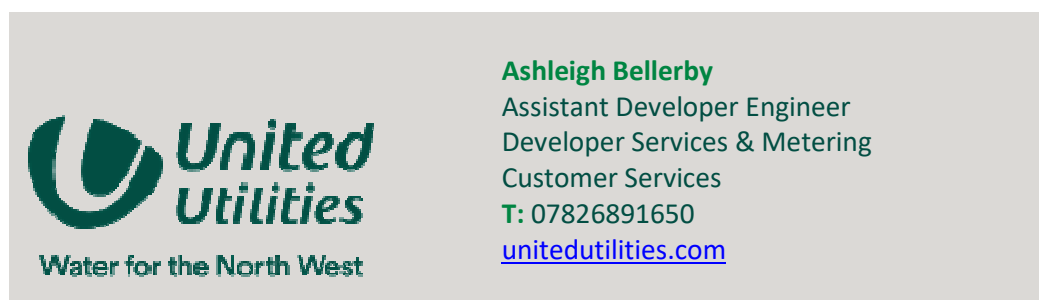
Web page- <https://www.unitedutilities.com/builders-developers/your-development/large-developers/diversions/>

Guidance for S185- <https://www.unitedutilities.com/globalassets/documents/builders--developers-docs/9910-wwk-s185-guide-to-sewer-diversions-jan2023-web-acc.pdf>

Request to work on a public asset- <https://www.unitedutilities.com/globalassets/documents/builders--developers-docs/9768i-s106-request-for-permission-to-work-on-a-public-sewer-part-2---202....pdf>

If I can be of any further assistance please do get in touch.

Kind regards



**If you have received a great service today why not tell us?**

**Visit:** [unitedutilities.com/wow](https://www.unitedutilities.com/wow)

----- Original Message -----

**From:** Chloé Grimsley [chloe.grimsley@curtins.com]

**Sent:** 24/05/2023 11:52

**To:** [seweradoptions@uuplc.co.uk](mailto:seweradoptions@uuplc.co.uk)

**Cc:** [ashleigh.bellerby@uuplc.co.uk](mailto:ashleigh.bellerby@uuplc.co.uk)

**Subject:** RE: 03746142 - Oldham Road, M40 3AY

Hi Ashleigh,

Thanks for your time this morning, it was really useful.

As discussed, I have attached the following:

1. Phased flows arrangement
2. Sewer Diversion Options

With regards to the flows, if you could review and advise if Phase 2 could maintain the overall agreed flows under planning application PA125990/2020, it would be appreciated.

Phase 3 will be as 5 l/s.

As discussed, Dulverton Street will be stopped up so a 6m easement will be required in the private land.

As noted, the current proposed arrangement encroaches the easement with an overhang at first floor level and we understand this will not be acceptable and a diversion will be required .

I have attached the two options we discussed; we would like to minimise the works in Oldham Road so Option 1 is preferred.

Please could you advise if this would be acceptable in principle.

Please could you also advise if the diversion works would fall under a critical asset or if the diversion could be undertaken by our contractor under the s185.

Kind Regards,

Chloé

**Chloé Grimsley** Principal Civil Engineer  
**Curtins**  
T. 0161 236 2394 | [chloe.grimsley@curtins.com](mailto:chloe.grimsley@curtins.com)

---

**From:** [seweradoptions@uuplc.co.uk](mailto:seweradoptions@uuplc.co.uk) <[seweradoptions@uuplc.co.uk](mailto:seweradoptions@uuplc.co.uk)>  
**Sent:** Monday, May 22, 2023 3:04 PM  
**To:** Chloé Grimsley <[Chloe.Grimmsley@curtins.com](mailto:Chloe.Grimmsley@curtins.com)>  
**Cc:** [ashleigh.bellerby@uuplc.co.uk](mailto:ashleigh.bellerby@uuplc.co.uk)  
**Subject:** RE: 03746142 - Oldham Road, M40 3AY

Good afternoon Chloe,

Does Wednesday 10-11am work for you?

Kind regards



**Ashleigh Bellerby**  
Assistant Developer Engineer  
Developer Services & Metering  
Customer Services  
T: 07826891650  
[unitedutilities.com](https://unitedutilities.com)

**If you have received a great service today why not tell us?**

**Visit:** [unitedutilities.com/wow](https://unitedutilities.com/wow)

----- Original Message -----

**From:** [seweradoptions@uuplc.co.uk](mailto:seweradoptions@uuplc.co.uk) [seweradoptions@uuplc.co.uk]

**Sent:** 19/05/2023 10:47

**To:** [chloe.grimsley@curtins.com](mailto:chloe.grimsley@curtins.com)

**Cc:** [ashleigh.bellerby@uuplc.co.uk](mailto:ashleigh.bellerby@uuplc.co.uk)

**Subject:** RE: 03746142 - Oldham Road, M40 3AY

Good Morning Chloe

Your request has been logged with Ashleigh and she will respond to you by 22.05.2023 her contact number is 07826 891 650.

Kind Regards Lucie



**Lucie Gaskell**  
Customer Advisor Advanced  
Developer Services & Metering  
Customer Services  
**Direct Tel:** 01925 429037  
**Tel:** 0345 072 6067  
[unitedutilities.com](https://unitedutilities.com)

**If you have received a great service today why not tell us?**

**Visit:** [unitedutilities.com/wow](https://unitedutilities.com/wow)

Did you know we now have a live chat facility available to you Mon to Friday 8 -5pm. You just click on the orange live chat box on our webpage and one of our advisors will be ready to chat to you and help you with your enquiry <https://www.unitedutilities.com/builders-developers/> or you can email us at [WastewaterDeveloperServices@uuplc.co.uk](mailto:WastewaterDeveloperServices@uuplc.co.uk)

----- Original Message -----

**From:** Chloé Grimsley [chloe.grimsley@curtins.com]

**Sent:** 17/05/2023 18:26

**To:** [seweradoptions@uuplc.co.uk](mailto:seweradoptions@uuplc.co.uk)

**Cc:** [ashleigh.bellerby@uuplc.co.uk](mailto:ashleigh.bellerby@uuplc.co.uk)

**Subject:** RE: 03746142 - Oldham Road, M40 3AY

Hi Ashleigh,

I'm on site all day on Tuesday, I have listed my availability below:

Friday 19<sup>th</sup> 9-4pm

Monday 22<sup>nd</sup> 1-4pm

Wednesday 24<sup>th</sup> 9-1pm

Friday 26<sup>th</sup> 9-4pm

If you could let me know if any suit you and I setup will a team meet.

Thanks

**Chloé Grimsley** Principal Civil Engineer

**Curtins**

T. 0161 236 2394 | [chloe.grimsley@curtins.com](mailto:chloe.grimsley@curtins.com)

---

**From:** [seweradoptions@uuplc.co.uk](mailto:seweradoptions@uuplc.co.uk) <[seweradoptions@uuplc.co.uk](mailto:seweradoptions@uuplc.co.uk)>

**Sent:** Wednesday, May 17, 2023 3:26 PM

**To:** Chloé Grimsley <[Chloe.Grimmsley@curtins.com](mailto:Chloe.Grimmsley@curtins.com)>

**Subject:** RE: 03746142 - Oldham Road, M40 3AY

Good afternoon Chloe ,

I am available for a teams call on Tuesday 23rd May?

Does this work for you?

Kind regards



**Ashleigh Bellerby**  
Assistant Developer Engineer  
Developer Services & Metering  
Customer Services  
T: 07826891650  
[unitedutilities.com](http://unitedutilities.com)

**If you have received a great service today why not tell us?**

**Visit:** [unitedutilities.com/wow](http://unitedutilities.com/wow)

----- Original Message -----

**From:** [seweradoptions@uuplc.co.uk](mailto:seweradoptions@uuplc.co.uk) [seweradoptions@uuplc.co.uk]

**Sent:** 17/05/2023 11:17

**To:** [chloe.grimsley@curtins.com](mailto:chloe.grimsley@curtins.com)

**Subject:** 03746142 - Oldham Road, M40 3AY

Good Morning

Your enquiry has been logged and sent to our an engineer Ashleigh Bellerby. Her contact number is 07826891650. Our service Level agreement is to respond to you on or before 18 May 2023.

Many thanks



**Jayne Guest**  
Customer Advisor Advanced  
Developer Services & Metering  
Customer Services  
Tel: 0345 072 6067  
[unitedutilities.com](http://unitedutilities.com)

**If you have received a great service today  
why not tell us?**

**Visit:** [unitedutilities.com/wow](http://unitedutilities.com/wow)

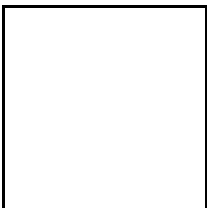
Did you know we now have a live chat facility available to you Mon to Friday 8 -5pm. You just click on the orange live chat box on our webpage and one of our advisors will be ready to chat to you and help you with your enquiry <https://www.unitedutilities.com/builders-developers/> or you can email us at [WastewaterDeveloperServices@uuplc.co.uk](mailto:WastewaterDeveloperServices@uuplc.co.uk)



The information contained in this e-mail is intended only for the individual to whom it is addressed. It may contain legally privileged or confidential information or otherwise be exempt from disclosure. If you have received this Message in error or there are any problems, please notify the sender immediately and delete the message from your computer. You must not use, disclose, copy or alter this message for any unauthorised purpose. Neither United Utilities Group PLC nor any of its subsidiaries will be liable for any direct, special, indirect or consequential damages as a result of any virus being passed on, or arising from the alteration of the contents of this message by a third party.

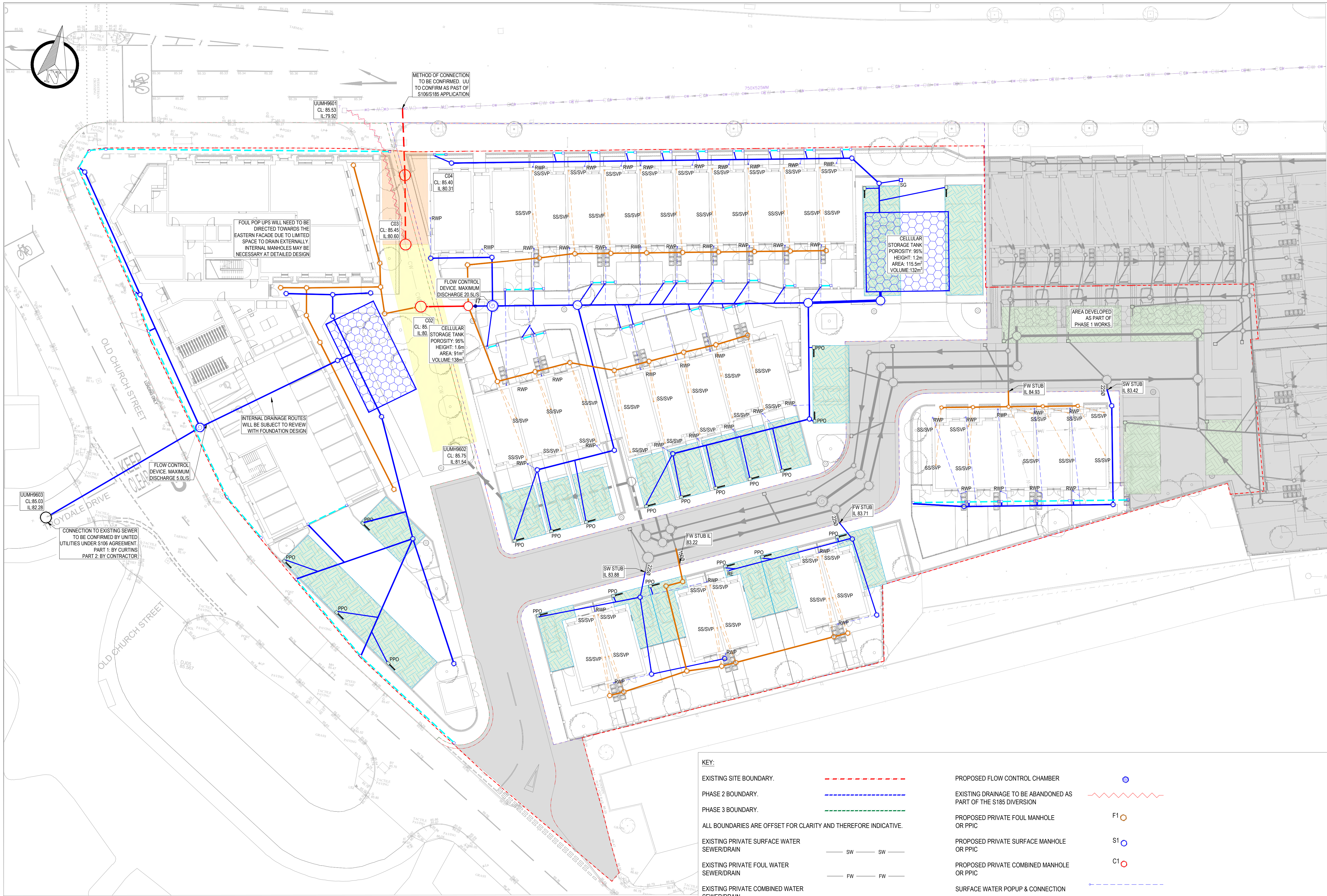
United Utilities Group PLC, Haweswater House, Lingley Mere  
Business Park, Lingley Green Avenue, Great Sankey,  
Warrington, WA5 3LP  
Registered in England and Wales. Registered No 6559020

[www.unitedutilities.com](http://www.unitedutilities.com)  
[//www.unitedutilities.com/subsidiaries](http://www.unitedutilities.com/subsidiaries)



## **Appendix F**

### Proposed Drainage Strategy Layout



**PHASE 2 NORTH DESIGN PHILOSOPHY**

**SURFACE WATER DESIGN**  
THE DESIGN PROVIDES CAPACITY UP TO THE 100 YEAR 40% CLIMATE CHANGE EVENT.  
SW FLOW RATE: 20.5L/S  
APPROXIMATE STORAGE REQUIREMENT: 127m<sup>3</sup>  
OUTFALL: VIA A NEW MANHOLE ON THE EXISTING SEWER WITHIN DULVERTON STREET (TO BE AGREED WITH UNITED UTILITIES)  
LEVELS INDICATE THAT PUMPING WILL NOT BE REQUIRED. INFILTRATION IS NOT CONSIDERED APPROPRIATE FOR THIS SCHEME. TESTING TO BRE DIGEST 365 ARE REQUIRED TO CONFIRM INFILTRATION RATES FOR DESIGN.

**FOUL WATER DESIGN**  
FW PEAK FLOW RATE: TBC  
OUTFALL: VIA A NEW MANHOLE ON THE EXISTING SEWER WITHIN (TO BE AGREED WITH UNITED UTILITIES)  
LEVELS INDICATE THAT PUMPING WILL NOT BE REQUIRED. TBC FOLLOWING FURTHER DESIGN AND SURVEY WORK.

**PHASE 2 SOUTH DESIGN PHILOSOPHY**

**SURFACE WATER DESIGN**  
THE PROPOSAL IS FOR THE AREA TO DRAIN VIA PHASE 1 SITE 1. STORAGE IS PROVIDED IN THE PHASE 1 WORKS FOR THE SITE.  
OUTFALL: VIA STUB CONNECTIONS INTO PHASE 1 DRAINAGE.

**FOUL WATER DESIGN**  
FW PEAK FLOW RATE: TBC  
OUTFALL: VIA STUB CONNECTIONS INTO PHASE 1 DRAINAGE.  
LEVELS INDICATE THAT PUMPING WILL NOT BE REQUIRED. TBC FOLLOWING FURTHER DESIGN AND SURVEY WORK.

**PHASE 3 DESIGN PHILOSOPHY**

**SURFACE WATER DESIGN**  
THE DESIGN PROVIDES CAPACITY UP TO THE 100 YEAR 40% CLIMATE CHANGE EVENT.  
SW FLOW RATE: 5.0L/S  
APPROXIMATE STORAGE REQUIREMENT: 136m<sup>3</sup>  
OUTFALL OPTION: VIA AN EXISTING UU SURFACE WATER MANHOLE WITHIN TROYDALE DRIVE.  
LEVELS INDICATE THAT PUMPING WILL NOT BE REQUIRED. TBC FOLLOWING FURTHER DESIGN AND SURVEY WORK. WHERE PUMPING WOULD BE REQUIRED AS A RESULT OF DETAILED DESIGN COORDINATION, AN ALTERNATIVE OUTFALL TO THE COMBINED PUBLIC SEWER WOULD BE REVIEWED WITH UU.  
INFILTRATION IS NOT CONSIDERED APPROPRIATE FOR THIS SCHEME. TESTING TO BRE DIGEST 365 ARE REQUIRED TO CONFIRM INFILTRATION RATES FOR DESIGN.

**FOUL WATER DESIGN**  
FW PEAK FLOW RATE: TBC  
OUTFALL: VIA A NEW MANHOLE ON THE EXISTING SEWER WITHIN DULVERTON STREET (TO BE AGREED WITH UNITED UTILITIES)  
LEVELS INDICATE THAT PUMPING WILL NOT BE REQUIRED. TBC FOLLOWING FURTHER DESIGN AND SURVEY WORK.

**KEY:**

EXISTING SITE BOUNDARY. ---

PHASE 2 BOUNDARY. ---

PHASE 3 BOUNDARY. ---

ALL BOUNDARIES ARE OFFSET FOR CLARITY AND THEREFORE INDICATIVE.

EXISTING PRIVATE SURFACE WATER SEWER/DRAIN --- SW --- SW

EXISTING PRIVATE FOUL WATER SEWER/DRAIN --- FW --- FW

EXISTING PRIVATE COMBINED WATER SEWER/DRAIN --- CW --- CW

EXISTING COMBINED PUBLIC SEWER AND MANHOLE ---

PROPOSED PUBLIC COMBINED SEWER ---

PROPOSED PRIVATE COMBINED DRAIN ---

PROPOSED PRIVATE FOUL DRAIN ---

PROPOSED PRIVATE SURFACE DRAIN ---

PROPOSED ATTENUATION SYSTEM (TYPE TO BE CONFIRMED) ---

PROPOSED FLOW CONTROL CHAMBER ---

EXISTING DRAINAGE TO BE ABANDONED AS PART OF THE S185 DIVERSION ---

PROPOSED PRIVATE FOUL MANHOLE OR PPIC ---

PROPOSED PRIVATE SURFACE MANHOLE OR PPIC ---

PROPOSED PRIVATE COMBINED MANHOLE OR PPIC ---

SURFACE WATER POPUP & CONNECTION ---

FOUL WATER POPUP & CONNECTION ---

PROPOSED LINEAR DRAINAGE WITH ASSOCIATED ACCESS/OUTLET BOXES GATIC CASTSLOT TREADSAFE 100 OR SIMILAR APPROVED ---

FOUL GULLY ---

ROAD GULLY ---

PERMEABLE PAVING OUTLET ---

INTERCEPTOR TRAP ---

BACKDROP ---

EXISTING UU 3M SEWER EASEMENT ---

PROPOSED UU 3M SEWER EASEMENT AS PART OF S185 DIVERSION ---

FG ---

SG ---

PPQ ---

IT ---

AB ---

OB ---

**GENERAL NOTES:**

- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
- DESIGN BASED ON TOPOGRAPHICAL SURVEY AND CCTV SURVEY INFORMATION AVAILABLE AT THE TIME OF DESIGN.
- ALL EXISTING SEWERS, CONNECTIONS, PIPE SIZES AND INVERT LEVELS TO BE CONFIRMED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS TO ENSURE CONNECTIVITY. ANY VARIANCE FROM THE INFORMATION SHOWN SHOULD BE REPORTED TO THE ENGINEER FOR REVIEW.
- DO NOT SCALE THIS DRAWING. ANY AMBIGUITIES, OMISSIONS AND ERRORS ON DRAWINGS SHALL BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY. ALL DIMENSIONS MUST BE CHECKED / VERIFIED ON SITE.
- ALL DIMENSIONS ARE IN METRES AND LEVELS IN METRES ABOVE ORDNANCE DATUM UNLESS OTHERWISE NOTED.
- WHERE EXISTING DRAINAGE IS BEING USED, ALLOWANCES SHOULD BE MADE TO REMEDIATE THIS DRAINAGE IN LINE WITH AVAILABLE CCTV SURVEY INFORMATION. IF NO SURVEY IS AVAILABLE, IT IS ADVISED TO OBTAIN ONE PRIOR TO COMMENCEMENT OF WORKS.
- ALL EXISTING SERVICES TO BE LOCATED PRIOR TO COMMENCEMENT OF ANY DRAINAGE WORKS, AND WHERE NECESSARY PROTECTION OR DIVERSIONS TO BE UNDERTAKEN TO AVOID CONFLICT WITH THE PROPOSED WORK.
- ALL RAINWATER AND FOUL POP UPS LOCATIONS AND SIZES INDICATIVE ONLY AND TO BE CONFIRMED BY THE ARCHITECT AND M&E ENGINEER.
- GULLY POSITIONS, AND BUILDINGS LOCATION ARE APPROXIMATE AND SHALL BE CONFIRMED BY ARCHITECT/ LANDSCAPE ARCHITECT.
- OUTFALL CONNECTION(S) SUBJECT TO S106 AGREEMENT WITH UNITED UTILITIES.
- PUBLIC SEWER DIVERSION WILL BE SUBJECT TO S185 AGREEMENT WITH UNITED UTILITIES.

**DRAWING BASED ON:**

**TOPOGRAPHICAL SURVEY**

- BY: SEP. SEP11190L, DATED NOVEMBER 2019.
- BY: LAYER SURVEYS LTD 1631 DATED APRIL 2023

**CCTV SURVEY**

- CCTV SURVEY BY: LAYER SURVEYS, LAY0243, DATED NOVEMBER 2019.

**UU RECORDS**

- UUPS-ORD-122012, DATED 06.09.19.

**SITE LAYOUTS**

- ARCHITECT SITE LAYOUT: T8170D0020P2. RECEIVED 13/06/23.

**REQUIRED INFORMATION**

- GROUND LEVELS
- POP-UP LOCATIONS
- BUILDING FOUNDATIONS

|      |              |          |     |       |
|------|--------------|----------|-----|-------|
| P01  | DRAFT ISSUE  | 19.06.23 | CS  | CG    |
| Rev: | Description: | Date:    | By: | Chkd: |

**curtins**

Merchant Exchange, 17-19 Whitworth Street West, Manchester, M1 5WG  
0161 235 2334  
manchester@curtins.com  
www.curtins.com

Civils & Structures • Transport Planning • Environmental • Infrastructure • Geotechnical • Conservation & Heritage • Principal Designer  
Birmingham • Bristol • Cambridge • Cardiff • Douglas • Dublin • Edinburgh • Glasgow • Leeds • Liverpool • London • Manchester • Nottingham

Status: **FOR PLANNING**

Project: **OLDHAM ROAD, NEWTON HEATH**

Orig Title: **DRAINAGE LAYOUT  
PHASE 2 & 3**

|       |          |           |              |             |
|-------|----------|-----------|--------------|-------------|
| Size: | Date:    | Drawn By: | Designed By: | Checked By: |
| A1    | 15/05/23 | CS        | CS           | CG          |

Scale: 1:250

|             |             |         |        |       |       |                    |      |
|-------------|-------------|---------|--------|-------|-------|--------------------|------|
| Project No: | Originator: | Volume: | Level: | Type: | Role: | Category / Number: | Rev: |
| 074031      | CUR         | 00      | XX     | DR    | C     | 92600              | P01  |

# Our Locations

## **Birmingham**

2 The Wharf  
Bridge Street  
Birmingham  
B1 2JS  
T. 0121 643 4694  
birmingham@curtins.com

## **Kendal**

28 Lowther Street  
Kendal  
Cumbria  
LA9 4DH  
T. 01539 724 823  
kendal@curtins.com

## **Bristol**

Quayside  
40-58 Hotwell Road  
Bristol  
BS8 4UQ  
T. 0117 302 7560  
bristol@curtins.com

## **Leeds**

Rose Wharf  
Ground Floor  
Leeds  
L29 8EE  
T. 0113 274 8509  
leeds@curtins.com

## **Cardiff**

3 Cwrt-y-Parc  
Earlswood Road  
Cardiff  
CF14 5GH  
T. 029 2068 0900  
cardiff@curtins.com

## **Liverpool**

Curtin House  
Columbus Quay  
Riverside Drive  
Liverpool  
L3 4DB  
T. 0151 726 2000  
liverpool@curtins.com

## **Douglas**

Varley House  
29-31 Duke Street  
Douglas  
Isle of Man  
IM1 2AZ  
T. 01624 624 585  
douglas@curtins.com

## **London**

40 Compton Street  
London  
EC1V 0BD  
T. 020 7324 2240  
london@curtins.com

## **Dublin**

39 Fitzwilliam Square  
Dublin 2  
Ireland  
T. 00353 1 507 9447  
dublin@curtins.com

## **Manchester**

Merchant Exchange  
17-19 Whitworth Street West  
Manchester  
M1 5WG  
T. 0161 236 2394  
manchester@curtins.com

## **Edinburgh**

1a Belford Road  
Edinburgh  
EH4 3BL  
T. 0131 225 2175  
edinburgh@curtins.com

## **Nottingham**

56 The Ropewalk  
Nottingham  
NG1 5DW  
T. 0115 941 5551  
nottingham@curtins.com

## **Glasgow**

Queens House  
29 St Vincent Place  
Glasgow  
G1 2DT  
T. 0141 319 8777  
glasgow@curtins.com