

RYEBANK, CHORLTON

FLOOD RISK ASSESSMENT

Project No: 2011-11

May 2026

Rev: P04

RBM-REN-XX-XX-RP-C-00001

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1. INTRODUCTION

1.1 Purpose of this report

This Flood Risk Assessment (FRA) has been prepared by renaissance on behalf of Step Places, Southway Housing Trust and Manchester Metropolitan University ('the Applicants') in support of a full planning application for a residential development on land at Ryebank.

The assessment investigates the potential flood risk impacts of the proposed development in accordance with the National Planning Policy Framework (NPPF) and supporting Planning Practice Guidance.

This FRA is considered proportionate to the degree of flood risk and to the scale, nature and location of the development. This FRA has been prepared in accordance with non-statutory technical standards for sustainable drainage and NPPF climate change allowances.

2. THE SITE

2.1 Site Location

The Ryebank development is located in Chorlton, Manchester. The site is accessed off Ryebank Road and Longford Road.

- Post Code M21 9LU
- OS Reference (X) 381109
- OS Reference (Y) 394584
- National Grid Reference SJ811945

The site location is illustrated in Figure 2.1 below.



Figure 2.1 – Indicative Site Location

2.2 Site Description

The total site is circa 4.61 ha and is situated adjacent to Longford Park, approximately 1.2km east of Stretford, Old Trafford. The site is predominantly grassland with trees and a small area of hardstanding in the south. The majority of the site falls within Manchester City Council's boundary with a small portion within Trafford Council's boundary.

The land use to the north, south and east comprises residential development. To the west lies Longford Park, within which lies the Trafford Athletic Club. To the southeast of the site lies the St Johns RC Primary School.

Access to the site is provided by Ryebank Road. The nearest tram stop (Firswood) – is located approximately 750m to the northeast of the site.

A ditch is known to intersect the centre of the site, which is thought to form part of a linear earthwork stretching across Manchester (9.7 km), known as Nico Ditch

There are no structures present on site, however an area of hardstanding is present to the south-east of the site. A bund surfaced by grass is located adjacent to the area of hard standing. A number of informal pedestrian trails intersect the site. However, the site is privately owned and not publicly accessible at present.

The site is predominantly flat in topography but gradually falls from south to north.

Refer to Appendix A for a topographical survey.

2.3 Existing Site Drainage

Due to the nature of the site, it is assumed that there are no existing private drainage systems. The United Utilities (UU) sewer records have been reviewed and this confirms that a sewer overflow passes beneath the site in a south-westerly direction. It is understood the overflow is 1275mm brick and is circa 5.5m deep. There are also combined water sewers present within Ryebank Road and Longford Road that are 225-375mm in diameter and circa 1.75-3.70m deep.

A CCTV survey has been conducted to verify the asset records.

Refer to Appendix B and C for the UU Sewer asset records and CCTV survey respectively.

2.4 Geology

Made Ground deposits were encountered within all exploratory hole locations from ground level to a maximum proven depth of 13.50m bgl. The underside of Made Ground could not be determined within the majority of locations due to substantial depths of Made Ground and obstructions.

Made ground generally comprised of reworked topsoil from ground level to a maximum proven depth of 0.30m bgl. Underlying the reworked topsoil and asphalt the strata is largely granular comprising of either a black fine to medium gravelly sand or a sandy gravel. Gravel generally comprised of sandstone and mudstone with frequent fragments of asphalt, brick, concrete, plastic, metal and glass with occasional cobbles of brick and concrete.

Strong hydrocarbon odours were noted throughout the site at depths typically from 1.50m bgl.

Drift deposits were typically encountered at the base of infilled clay pits, as shown by historic mapping, at depths between 7.50 m bgl and 13.50 m bgl. Drift deposits were proven to a maximum depth of 17.83 m bgl with the presence of very stiff sandy CLAY.

Natural drift deposits encountered typically comprised of a very stiff very high strength brown sandy CLAY with occasional boulders of sandstone.

Shallower drift deposits were encountered in the south west of the site (located outside of the historically mapped clay pit) from 1.50m bgl, which comprised of a very soft to soft extremely low to very low strength brown sandy gravelly clay, with gravel of sandstone, mudstone and coal.

It is understood from BGS records that the underlying bedrock is of the Wilmslow Sandstone formation, although it was not encountering during the intrusive site investigation.

For further information refer to Phase II Geoenvironmental Site Assessment - 17-403-R1-2 – November 2024 by e3p.

2.5 Hydrogeology & Hydrology

Based on an Environmental setting desk study, a summary of the Environment Agency aquifer designations is presented in the table below:

Stratum	Coverage	Aquifer Designation
Superficial	Full Site	Secondary (Undifferentiated) Aquifer. The classification is assigned where it is not possible to attribute either category A or B to the aquifer. Secondary (A) Aquifer in the northwest. These are permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers.
Bedrock	Full Site	Principal aquifer. This is Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale.

Table 2.1 – Aquifer Designations

The Nico Ditch (referred to as a drain) is intersecting the centre of the site however it is noted to be dry. United Utilities have indicated that the route of the Thirlmere Aqueduct runs across the northern boundary of the site. Longford Brook (culverted) is located circa 210 m west of the site. Longford Brook historically flowed through the site, however, has since been diverted. Further information regarding the Longford Brook has subsequently been provided to the Lead Local Flood Authority as part of post submission correspondence. Refer to Longford Brook Technical Note - RBM-REN-XX-XX-RP-C-90001-P02

The site is not located within a Groundwater Source Protection Zone or a Drinking Water Safeguard Zone.

There are three groundwater abstraction points situated within 1 km of the site which are operated by Trafford Metal Finishers Manchester Ltd utilised as process water. The three abstraction licenses relate to these boreholes.

There are no active licensed discharge consents within 250m.

2.6 Proposed Development

Erection of a residential development comprising 120 units (including a mix of housing types and tenures) together with open spaces, landscaping, sustainable drainage features, access arrangements, cycleway and pedestrian linkages, parking provision and other associated works.

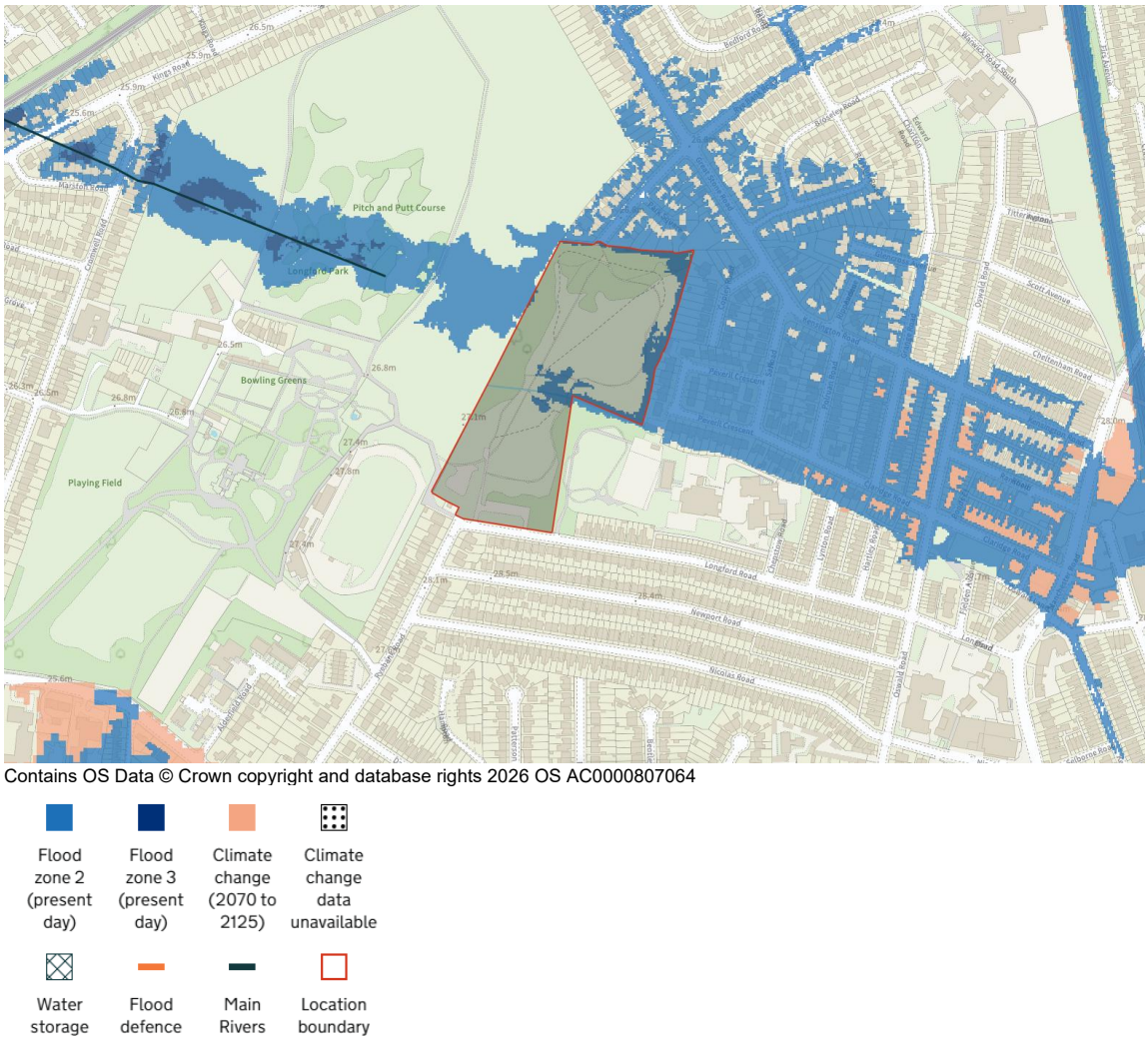
Refer to Appendix D for the proposed development plans.

3. SOURCES OF FLOODING

3.1 Flooding From Rivers and Seas (Fluvial Flooding)

Fluvial flooding occurs when high flows exceed the capacity of the river channel and spill out onto the floodplain, usually after a period of prolonged or heavy rainfall.

The Environmental Agency (EA) Flood Map for planning (rivers and sea) map has been reviewed (Figure 3.1). The periphery of the site falls within Flood Zone 2; land assessed as having between a 0.1% and 1% annual probability of river or sea flooding. As such the site is at a medium risk from fluvial flooding.



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Figure 3.1 – Risk of flooding from Rivers and Seas

Reviewing the EA Product 4 data, presented in Appendix E, the appropriate flood levels are as follows:

Flood Levels (mAOD)				
1% AEP	**1% AEP + 41% Climate Change**	**1% AEP + 53% Climate Change**	**0.1% AEP**	**0.1% AEP+ 53% Climate Change**
N/A	27.240	27.310	27.430	27.600

Table 3.1: EA Product 4 Data

Comparing the above levels to the topographical site levels show that areas of the site are subject to up to 0.87m of flooding in a 1% AEP + 41% Climate Change event and 1.07m in a 0.1% AEP event.

As such flood mitigation measures are required as part of the development. Refer to Section 5.0 for further details.

3.2 *Flooding from Land (Pluvial Flooding)*

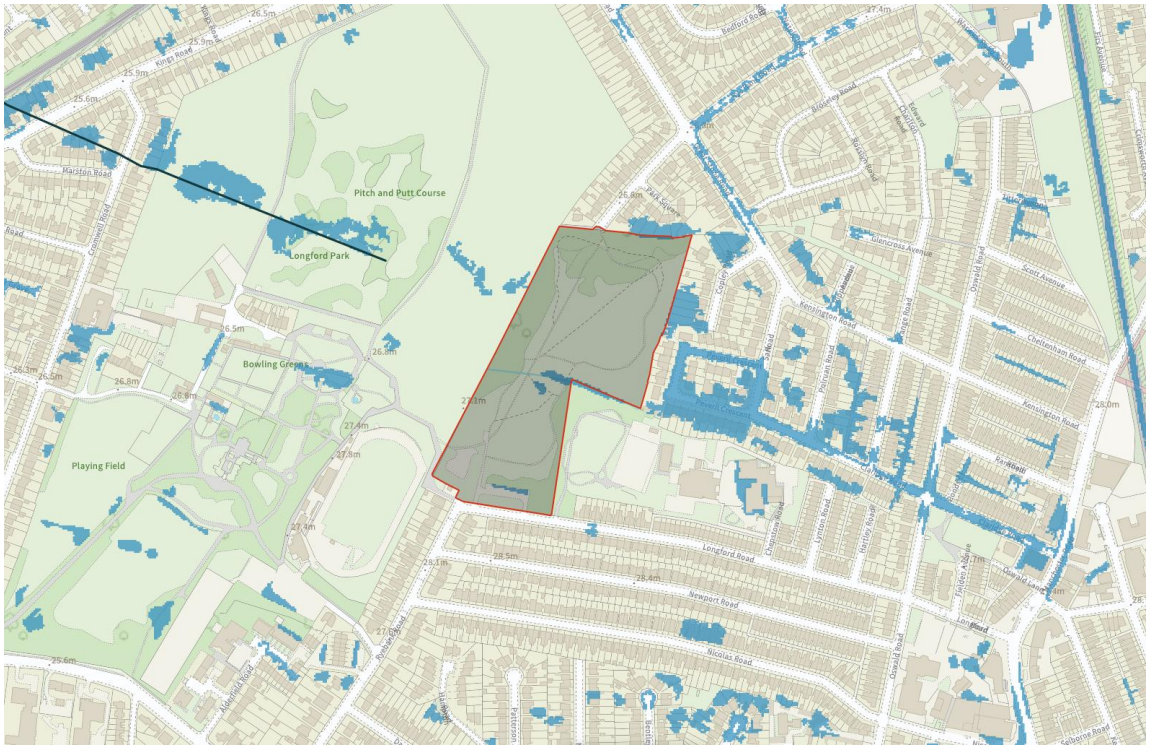
This type of flooding can be difficult to predict, much more so than river or sea flooding as it is hard to forecast exactly where or how much rain will fall in any storm.

The EA flood maps for planning showing the risk of flooding from surface water for the 1 in 100 year and 1 in 1000 year events are presented in Figures 3.2 & 3.3 below.

The site is typically at a very low (<0.1%) risk of surface water flooding; however, small areas of low risk exist along the eastern boundary and in the centre of the site where the topographical levels are lowest.

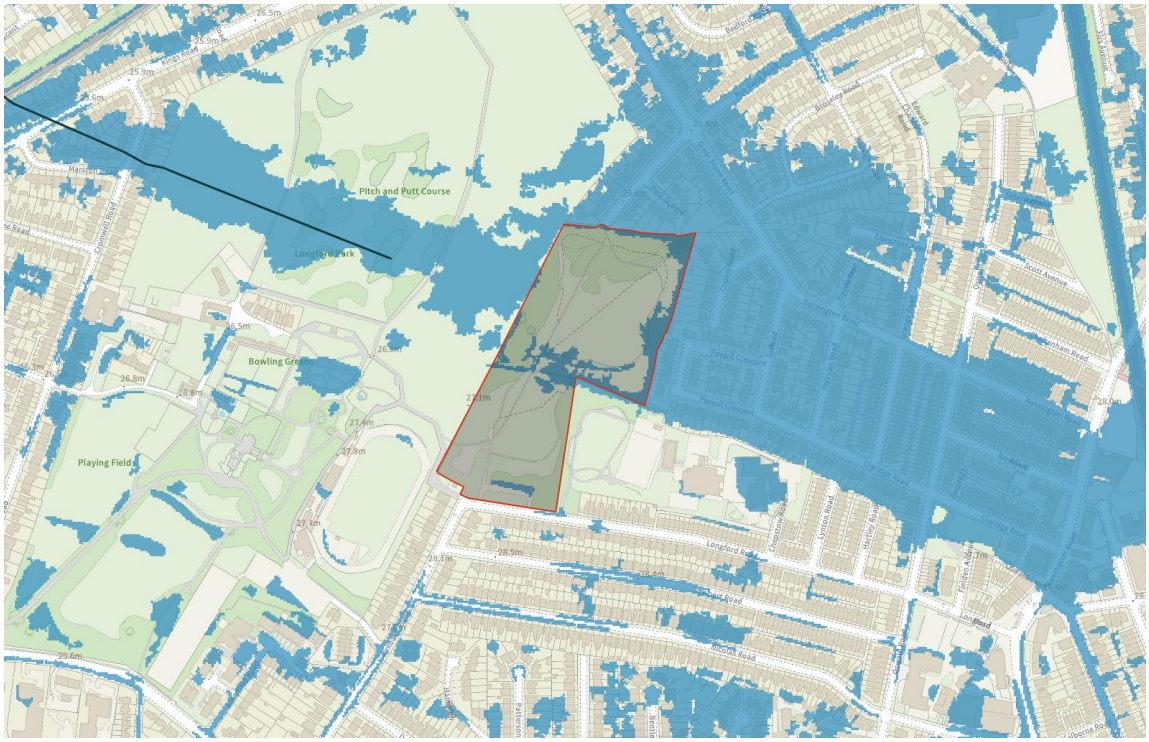
These maps are not definitive and are based on the best information available to the EA, such as ground levels and drainage.

To mitigate any risk associated with surface water flooding, the FFL are to be set above external levels with falls provided away to mitigate any issues. Existing levels along the site boundary are to be retained. As part of the proposed drainage strategy this flooding will be addressed with a new drainage system that will collect the run-off from site and provide a positive outfall.



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Figure 3.2: EA Flood Map for Planning – 1 in 100 Year Surface Water Flood Extent



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Figure 3.2: EA Flood Map for Planning – 1 in 1000 Year Surface Water Flood Extent

3.3 Flooding from Groundwater

Groundwater flooding tends to occur sporadically in both location and time. When groundwater flooding does occur, it tends to mostly affect low-lying areas, below surface infrastructure and buildings (for example, tunnels, basements, and car parks) underlain by permeable rocks (aquifers).

Groundwater flooding is caused by unusually high groundwater levels. It occurs when the water table rises above the ground surface or within underground structures such as basements or cellars. Groundwater flooding tends to exhibit a longer duration than surface water flooding, possibly lasting for weeks or months, and as a result it can cause significant damage to property.

The Manchester City, Salford City and Trafford Councils Level 2 Hybrid SFRA Groundwater flooding map indicates the site is at risk of groundwater rebound. Rebound is phenomenon where groundwater flooding can occur due to the groundwater rising as the amount of local abstraction decreases.

It is understood from the site investigation that the site is underlain by deep clay deposits.

Groundwater strikes were encountered throughout the site investigation. Depths varied from 1.2-13m however were typically around 2.0m. The ingresses were noted to vary from slow to fast.

Groundwater flooding records have been requested from Manchester City council however to date have not been returned.

Based on the above information, the risk from groundwater flooding is considered to be medium.

3.4 Flooding from Sewers

Sewer flooding occurs when urban drainage networks become overwhelmed and maximum capacity is reached. This can occur if there is a blockage in the network causing water to back up behind it or if the sheer volume of water draining into the system is too great to be handled. This type of flooding tends to occur sporadically in both location and time. The majority of sewers are built to the guidelines within Sewers for Adoption. These sewers have a design standard to the 1 in 30-year flood event and therefore it is likely that most sewer systems will surcharge during rainstorm events with a return period greater than 30 years.

The Greater Manchester Combined Authority Level 1 SFRA maps indicate there have been between 2 and 5 sewer flooding incidents in the vicinity of the site on Longford, Newport and Nicolas Road.

As such, the site is not considered to be at risk of flooding from sewers.

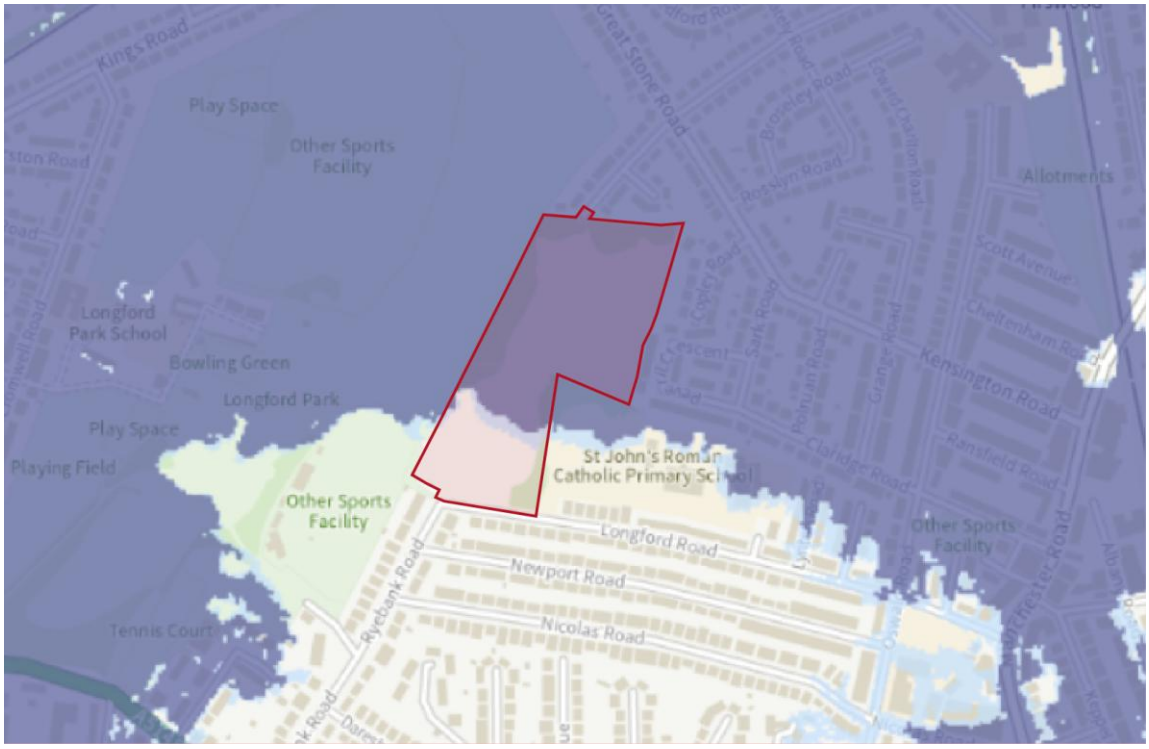
3.5 Flooding from Reservoirs

The Environment Agency Reservoir flood risk map indicates the site to be within the maximum flood extent of a breach to any local reservoir.

As the enforcement authority for the Reservoirs Act 1975 in England, the EA ensure that reservoirs are inspected regularly, and essential safety work is carried out.

Reservoir flooding is extremely unlikely to happen. There has been no loss of life in the UK from reservoir flooding since 1925. All large reservoirs must be inspected and supervised by reservoir panel engineers.

Based on the above, although the site is shown to be in an area which could be affected by flooding from a reservoir failure, the risk of flooding is considered to be Low.



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Figure 3.3 – Risk of Flooding from Reservoirs

3.6 Summary of Flooding Risks

Source	Flood Risk	Comments
Fluvial	Medium	Site is in Flood Zone 2 and flood mitigation measures are to be implemented, refer to Section 5
Pluvial	Low	Typically, at a low risk. Development proposals and installation of drainage system will mitigate residual risk.
Sewers	Low	N/A.
Groundwater	Medium	Risks can be mitigated by ensuring building FFLs are set above external levels.
Reservoirs	Low	Site is within maximum extent of reservoir flood however is extremely unlikely to occur.

Table 3.2 – Flood Risk Summary

4. SUITABILITY

4.1 National Planning Policy

The National Planning Policy Framework (NPPF), (2024, minor update introduced in February 2025), and the accompanying Planning Practice Guidance (PPG) aim to ensure that flood risk is taken into consideration at all stages of the planning process and advocates the use of a risk-based 'Sequential Test' to preferentially locate development in areas with a low risk of flooding. Where development is necessary in high-risk areas, the NPPF aims to ensure that the development is safe without increasing flood risk through the application of the Exception Test.

The PPG, defines the levels of flood risk within England as follows:

- Flood Zone 1 - Low Probability - Land having less than a 1 in 1,000 annual probability of river or sea flooding.
- Flood Zone 2 - Medium Probability - Land having between a 1 in 100 and 1 in 1,000 annual probability of river flooding; or between a 1 in 200 and 1 in 1,000 annual probability of sea flooding.
- Flood Zone 3a - High Probability - Land having a 1 in 100 or greater annual probability of river flooding; or having a 1 in 200 or greater annual probability of sea flooding.
- Flood Zone 3b - Functional Floodplain - Land where water must flow or be stored in times of flood.

The PPG states that a site-specific FRA is required for all new development proposals located in Flood Zones 2 and 3, and for any proposal of 1 hectare or greater regardless of its flood zone classification. The flood zones as described above are shown on the Environment Agency's (EA) Flood Map for Planning, available online.

Annex 3 of the NPPF classifies development types based on their vulnerability to flooding, ranging from 'Essential Infrastructure' which has to be operational in times of flood, through 'Highly Vulnerable' (e.g. emergency service stations), 'More Vulnerable' (e.g. residential dwellings and establishments), 'Less Vulnerable' (e.g. offices/retail), to 'Water Compatible' development (e.g. open space, docks, marinas and wharves).

Table 2 of the PPG indicates which 'vulnerability classes' are acceptable in each of the Flood Zones, and when the Exception Test should be applied. This is reproduced as Table 3.1 below.

4.2 Flood Risk Vulnerability

The Flood Risk Vulnerability Classification has been determined in accordance with Planning Practice Guidance, Flood Risk and Coastal Change. For multi-occupancy sites, the Flood Risk Vulnerability should be based upon the most vulnerable part of the site. The Flood Risk Vulnerability Classification is 'More Vulnerable', which includes Buildings used for dwelling houses, student halls of residence, drinking establishments, nightclubs and hotels'.

4.3 Flood Zone Compatibility

The Flood Zone Compatibility has been reviewed in accordance with Planning Practice Guidance, Flood Risk and Coastal Change, paragraph 079.

Flood Zones	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	×	×	×	✓*

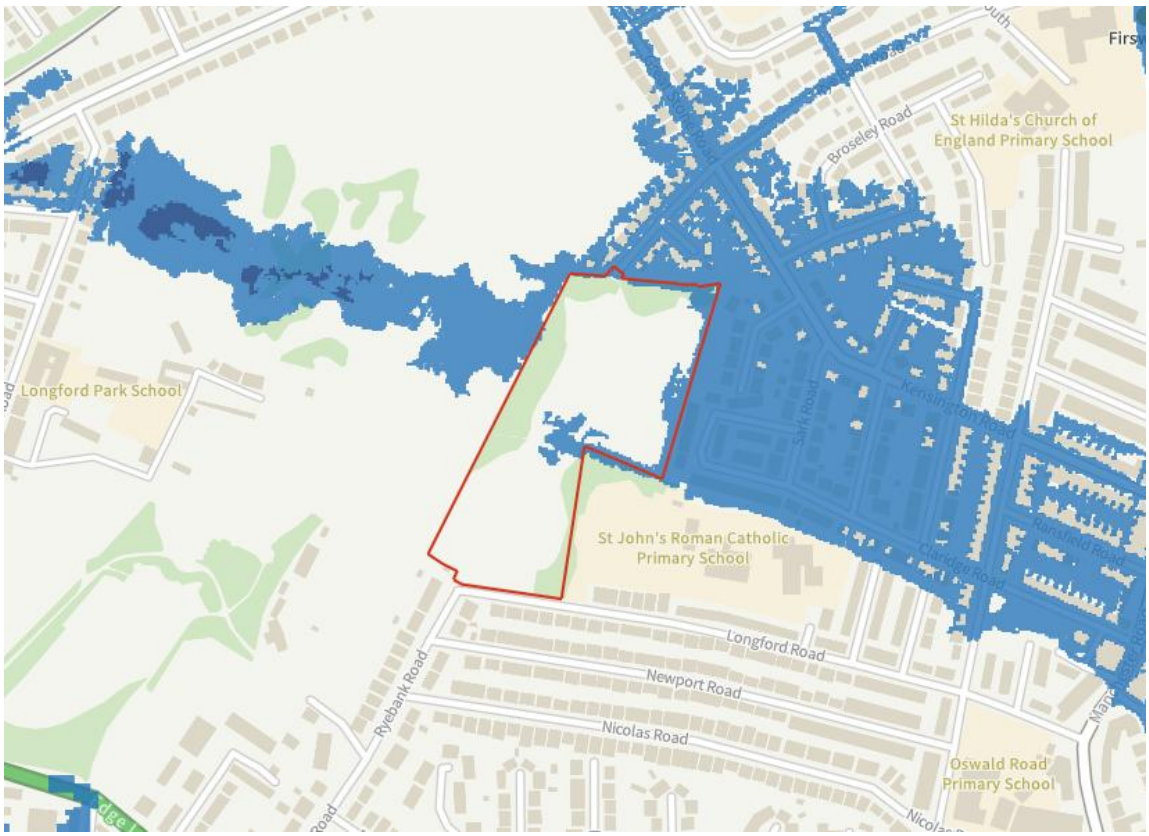
Table 4.1 – Flood Risk Vulnerability and Flood Zone Compatibility Key

Key:

✓ Development is appropriate

✗ Development should not be permitted

According to Environment Agency flood maps, the site is located within Flood Zone 2. The vulnerability classification is '*More vulnerable.'* Therefore, based on the guidance presented in Table 4.1 above, the proposal is considered to be appropriate in accordance with Planning Practice Guidance.



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Flood zone 2 Flood zone 3 Report area

Figure 4.1 – EA Flood Map for planning – Fluvial Flood Risk

4.4 Application of Sequential Test and Exception Test

The Sequential Test, as set out in the NPPF, aims to steer developments to areas with the lowest risk of flooding.

A sequential test is required for major and non-major development if any proposed building, access and escape route, land-raising or other vulnerable element will be:

- in Flood Zone 2 or 3
- in Flood Zone 3b and the development is not incompatible
- within Flood Zone 1 but is at increased risk of flooding from rivers or sea during its lifetime
- within Flood Zone 1 and the site is at risk of flooding from surface water
- in Flood Zone 1 and the LPA's SFRA shows it will be at increased risk of flooding during its lifetime
- subject to sources of flooding other than rivers or sea

The site is located within Flood Zone 2 and therefore a sequential test has been undertaken by Asteer Planning to support the application.

4.5 Strategic Flood Risk Assessment (SFRA)

SFRA's assess the risk associated with all types of flooding and provide the information required to identify the amount of development permitted in an area; how drainage systems in the area should function and also how risks in vulnerable areas can be reduced and/or mitigated. The NPPF states that regional planning bodies (RPB's) or local planning authorities should prepare SFRA's in consultation with the EA.

The Level 1 and Level 2 Strategic Flood Risk Assessments for Manchester, Salford and Trafford Councils were published in March 2010 and March 2011 respectively.

The Level 1 SFRA provides a spatial assessment of flood risk within key urban areas, which expands on the detail included in the Association of Greater Manchester Authorities (AGMA) sub-regional SFRA, which assist in developing Local Development Frameworks (LDFs) and the production of policies and proposals for development within Manchester, Salford and Trafford.

A summary of the relevant elements of the Level 1 SFRA are as follows:

- Flood Zone Maps
- Flood Risk Management Maps
- Climate Change Maps
- Strategic Depth Maps
- A spreadsheet which provides a spatial assessment for proposed development sites against fluvial and pluvial flooding to aid Local Planning Authorities (LPAs) undertaking the Sequential Test
- The main source of flood risk in Manchester is from the Grey Irwell, the Rivers Irk, Medlock and Mersey and Corn Brook. There was flooding from the Mersey in Didsbury and Northenden in 1998 and on the River Medlock in the centre of Manchester in 1991 and 2002. Surface water flooding is also significant and there is residual risk from the Ashton, Rochdale and Bridgewater Canals and several reservoirs.
- The main source of flood risk in Trafford is from the River Mersey and the MSC. There was flooding along the Mersey in Carrington in 1998. Surface water flooding is possible and there is a residual risk from the Bridgewater Canal.
- Concludes by providing recommendations for the Level 2 assessment
    - Fluvial flood risk at strategic development sites along the Irwell, Irk, Medlock, Grey Irwell, Corn Brook and the Manchester Ship Canal (MSC).

- Breach of the defences on the Irwell at Kersal and Lower Broughton and on the Mersey at Carrington.
- Overtopping and breach of embankments along the Rochdale, Ashton and Bridgewater Canals.
- Detailed surface water analysis should be undertaken across the authorities to assess flood risk from this source.

The Level 2 SFRA provides a detailed understanding of flood risk across Manchester, Salford and Trafford from all sources to help support the application of the Sequential Test and provide an assessment of the likelihood of a site passing the Exception Test.

A summary of the relevant elements of the Level 2 SFRA are as follows:

- Considers flood risk from rivers, canals and surface water and sewers and the interactions between different sources of flood risk.
- Provides an understanding of actual risk (taking into account the presence of flood defences) and identifies residual risk. Residual risks are the risks that remain after all risk avoidance, substitution, control and mitigation measures have been taken into account.
- The residual risks in Manchester, Salford and Trafford are therefore related to the occurrence of events of low probability, such as extreme flood events greater than the design capacity of the constrained river system or failure of flood defences or other assets.
- Defines Critical Drainage Areas based on surface water flood risk data. It is noted that these overlap into downstream and upstream local authority areas. This highlights that Manchester City, Salford City and Trafford Councils should work closely with neighbouring authorities to ensure that a consistent approach is taken to cross boundary drainage issues.
- Considerers the cumulative impacts of development on flood risk and highlights the need for floodplain storage when floodplain is lost to development through land raising or raised defences. It also shows that whilst development control policies to reduce surface water discharges from new development could have some benefit locally, development in the wider catchments has an important role to play in reducing flood risk in Manchester, Salford and Trafford. The adoption of the SFRA guidance on surface water drainage and the application of aspirational drainage standards upstream are essential and an AGMA wide drainage policy is required.
- A summary of the key risks in the Manchester council district are as follows:
  - The River Irk, River Medlock, Cornbrook and surface water (including the risk of sewers and culverted “lost” or “hidden” watercourses surcharging) pose the highest risk of more frequent flooding. Surface water drainage from new developments is critical in reducing the risk of localised flooding. The SFRA has identified the Conurbation Core, Manchester and Trafford South, Levenshulme and Fallowfield and Didsbury Critical Drainage Areas within the Manchester District.
  - There is a significant residual risk of flooding from defences overtopping or breaching on the Lower Irwell at Lower Broughton (originating in Salford district) and in extreme flood events from the Grey Irwell. The interactions between different sources of risk is complex, especially between the River Medlock and the Bridgewater Canal. Elsewhere canals are a secondary source of flooding, with the highest potential risk likely to be from a breach on the Ashton Canal.
- A summary of the key risks in the Trafford council district are as follows:
  - Surface water (including the risk of sewers and culverted watercourses surcharging) poses the highest risk of more frequent flooding. Surface water drainage from new developments is critical in reducing the risk of localised flooding. The SFRA has identified the Conurbation Core and Manchester and Trafford South Critical Drainage Areas within the Trafford District.

- Groundwater rebound poses a risk in the Trafford Core area. Pomona Island is at significant risk of flooding from both the Manchester Ship Canal and the Bridgewater Canal. The Bridgewater Canal is a potential source of flood risk, mainly from overtopping as a result of floodwaters from the River Medlock entering the canal. Flood risk from a breach of the canal is a lower secondary source but one that should be considered in any detail site assessment where indicated by the SFRA canal flood maps.
- There could be widespread flooding from the River Mersey in a 1 in 100 year flood event, although this is mostly constrained to the undeveloped floodplain. Flooding is limited from other watercourses, with the exception of the Sinderland Brook. There is a significant residual risk of flooding from the Manchester Ship Canal in the Trafford Core area and at Carrington and Partington Canalside.

4.6 Places for Everyone

In March 2024 Manchester City Council adopted the Places for Everyone development plan. A summary of the main elements and policies relating to flood risk are detailed below:

- Returning rivers to a more natural state, where practicable
- Working with natural processes and adopting a natural flood management approach to slow the speed of water drainage and intercept water pollutants
- Locating and designing development so as to minimise the impacts of current and future flood risk, including retrofitting or relocating existing developments, infrastructure and places to increase resilience to flooding
- Expecting developments to manage surface water run-off through sustainable drainage systems and as close to source as possible. Development should achieve greenfield run-off rates unless it is demonstrated to be impracticable. District local plans should consider setting more detailed surface water drainage policies to reflect local circumstances, including alternative surface water discharge rates, such as in areas with critical drainage issues
- Ensuring that sustainable drainage systems
  - Are designed to provide multifunctional benefits wherever possible, including for water quality, nature conservation and recreation
  - Avoid adverse impacts on water quality and any possibility of discharging hazardous substances to ground
  - Are delivered in a holistic and integrated manner, including on larger sites split into different phases
  - Are managed and maintained appropriately to ensure their proper functioning over the lifetime of the development
- Policy JP-S4: Flood Risk and the Water Environment - An integrated catchment-based approach will be taken to protect the quantity and quality of water bodies with reference to the North West River Basin Management Plan and managing flood risk, by:
  - Returning rivers to a more natural state, where practicable
  - Working with natural processes and adopting a natural flood management approach to slow the speed of water drainage and intercept water pollutants;
  - Locating and designing development so as to minimise the impacts of currentand future flood risk, including retrofitting or relocating existing developments, infrastructure and places to increase resilience to flooding;
  - Expecting developments to manage surface water run-off through sustainable drainage systems and as close to source as possible. Development should achieve greenfield run-off rates unless it is demonstrated to be impracticable. District local plans should consider setting more detailed surface water drainage

policies to reflect local circumstances, including alternative surface water discharge rates, such as in areas with critical drainage issues;
- Ensuring that sustainable drainage systems:
  - Are designed to provide multifunctional benefits wherever possible including for water quality, nature conservation and recreation;
  - Avoid adverse impacts on water quality and any possibility of discharging hazardous substances to ground;
  - Are delivered in a holistic and integrated manner, including on larger sites split into different phases; and
  - Are managed and maintained appropriately to ensure their proper functioning over the lifetime of the development.
- Securing the remediation of contaminated land and the careful design of developments to minimise the potential for urban diffuse pollution to affect the water environment; and
- As a minimum, residential development should meet the mandatory water efficiency standard of 125 litres/person/day as set out in Building Regulations. District local plans may and should consider setting a tighter water efficiency standard of 110 litres/person/day where there is a clear local need with reference to national guidance on housing optional technical standards.

4.7 Manchester City Council Core Strategy

Manchester's Core Strategy was adopted on the 11 July 2012 and is the key document in the Manchester Local Plan. It was updated in March 2024, after the Places for Everyone joint development plan was adopted. It sets out the long term strategic policies for Manchester's future development and will form the framework that planning applications will be assessed against. The policies relating to flood risk are detailed below:

- Policy EN 14 - Flood Risk
  - In line with the risk-based sequential approach contained within PPS25, development should be directed away from sites at the greatest risk of flooding, and towards sites with little or no risk of flooding; this should take account of all sources of flooding identified in the Manchester-Salford-Trafford Strategic Flood Risk Assessment (SFRA).
  - In addition to the requirements for site-specific Flood Risk Assessments (FRAs) set out in PPS25, an appropriate FRA will also be required for all development proposals, including changes of use, on sites greater than 0.5ha within Critical Drainage Areas (CDAs) and Canal Hazard Zones identified in the SFRA.
  - All new development should minimise surface water run-off, including through Sustainable Drainage Systems (SUDS) and the appropriate use of Green Infrastructure. Developers should have regard to the surface water run-off rates in the SFRA User Guide. In CDAs, evidence to justify the surface water run-off approach / rates will be required.
  - The City of Manchester contains many sections of rivers which are culverted or 'hidden'; where these are indicated in the SFRA beneath the proposed development site, further investigation will be required and the development proposal should take this into account; where feasible and appropriate development should seek to open up culverted/hidden rivers to reduce the associated flood risk and danger of collapse, taking advantage of opportunities to enhance biodiversity and Green Infrastructure.

5. MITIGATION MEASURES

5.1 Finished Floor Levels

In accordance with National Planning Policy and as required by The Environment Agency the habitable ground floor levels are to be set above the 1 in 100 year plus a 41% allowance for climate change levels plus an agreed freeboard. This freeboard takes into account any uncertainties in the hydraulic modelling and is typically set at 600mm.

Therefore, all finished floor levels should be set to a minimum of 27.840mAOD.

5.2 Compensation Storage

In order to provide the required freeboards and account for the loss of storage due to the proposed development flood compensation is to be provided for up to the 1%AEP+41% climate change (CC) event. The amount of flood compensation will be limited by retaining existing levels wherever possible.

The EAs product data from the 2024 Chorlton Platt Gore model has been used to overlay the 1%AEP+41% CC flood levels onto the proposed masterplan. An extract is presented in Figure 5.1 below, refer to Appendix F for the original drawing.

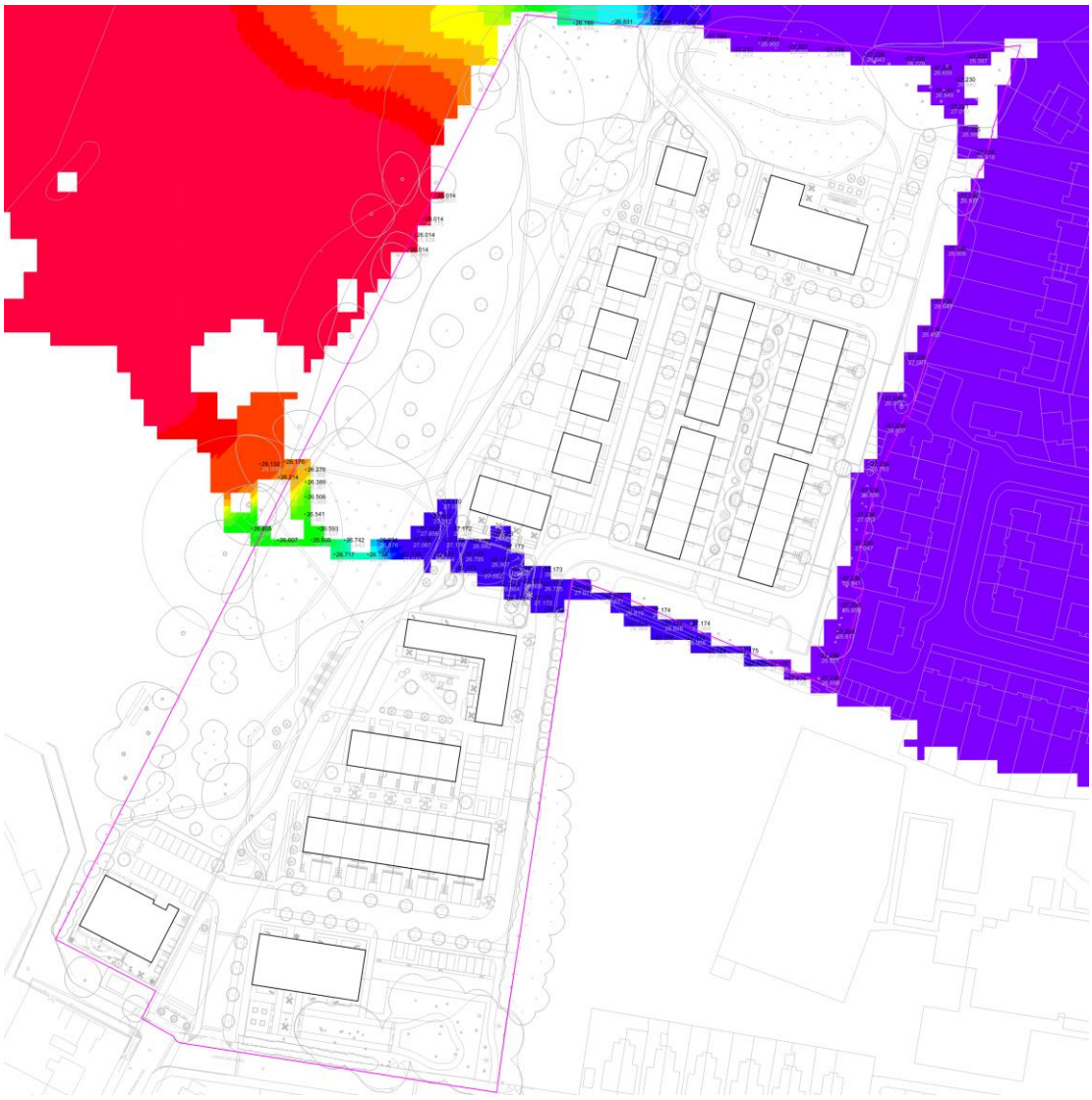


Figure 5.1 – Extract of 1% AEP+41% Flood Level Overlay

The overlay shows that the proposed development is largely outside of the maximum flood extents, which is limited to the eastern boundary and the centre of the site where the topographical levels are lowest.

It has been assessed that the proposed development will impact 128.85m^3 of flood storage for the 1%AEP+41% CC event. This is to be accommodated within the surface water detention basin above the maximum water level which has been defined as 25.770mAOD. Based on a minimum bank level of 27.125mAOD and a surface area of 500m^2 the basin can accommodate up to 675m^3 of flood compensation volume.

The footpath to the west of the basin is to incorporate a weir to enable flood water to overtop the basin and maintain the existing flood flow route.

Refer to Appendix F for the flood compensation assessment drawing.

5.3 Flood Flow Routes

In order to maintain hydraulic connectivity, the levels along the boundaries are to be retained. Where the existing flood flow route crosses the proposed highway, the road is to be elevated, and two 300mm diameter drains are to be provided to beneath to maintain the east-west hydraulic connectivity. Refer to Appendix F for External Works sections.

5.4 Safe Access and Egress

A safe dry route is to be provided to all dwellings for the 1% AEP+41%CC event. This will ensure that occupiers can evacuate the site and emergency services can safety enter the site if required.

The minimum road level is to be set above the flood level of 27.270mAOD.

As shown by the flood overlay the north of the development is impacted by flooding and therefore safe refuge can only be achieved by existing to the south of the development. The majority of the roads are outside the maximum flood extent and therefore provide a safe dry route. The only exception to this is the road as it crosses the existing flood flow route. As set out within Section 5.2 above the road is to be elevated above the flood level in this location to enable safe dry access to the south of the development and beyond.

For the residual 0.1% AEP event the maximum flood depth on the roads would be 0.16m, which has a very low hazard warning for velocities up to 1.5m/s and danger for some for velocities in excess of this.

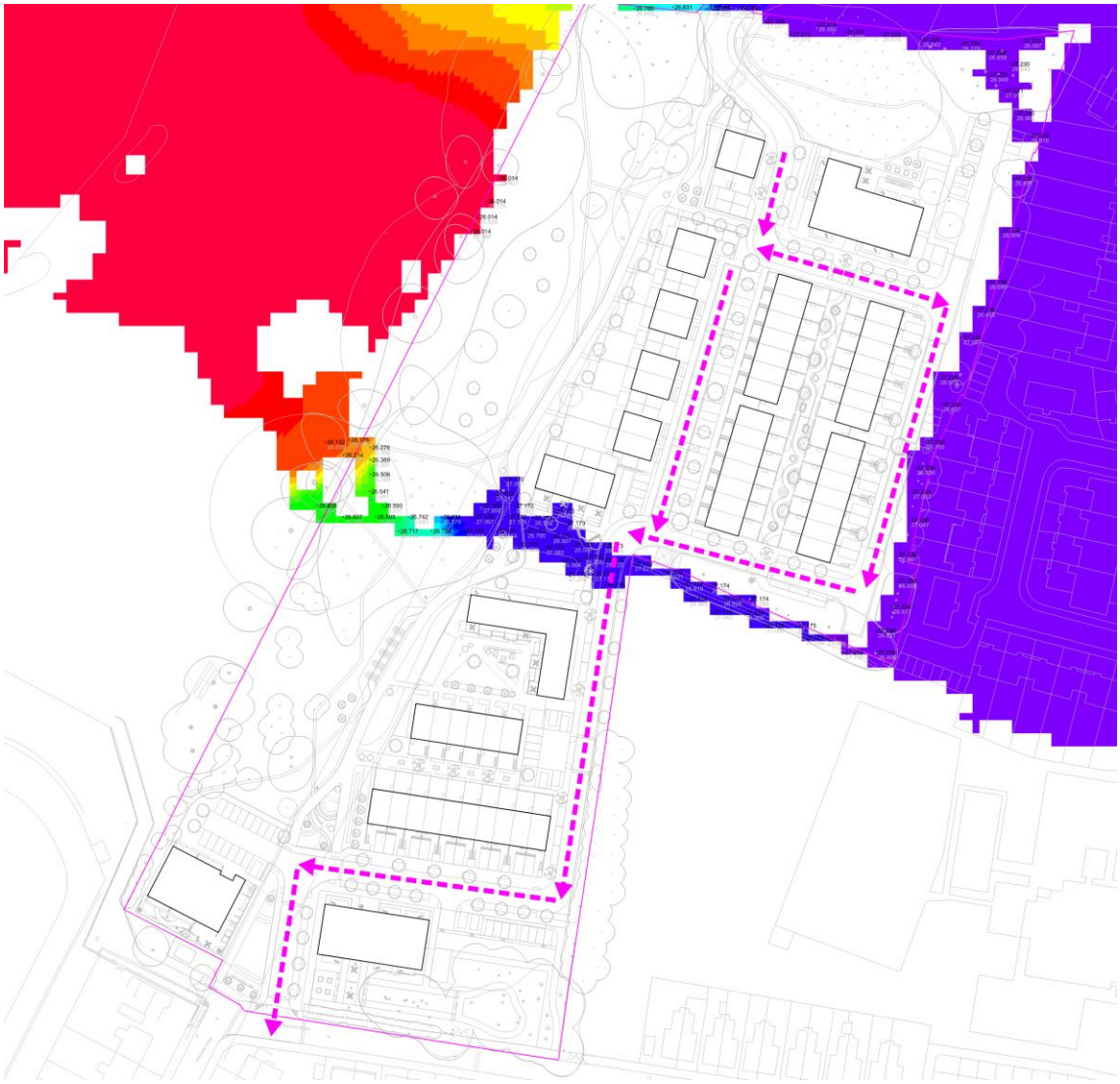


Figure 5.2 – Safe Access & Egress Routes

5.5 Flood Resilient Construction

The substation is to be provided outside the maximum flood extent and is to have a minimum FFL of 27.840mAOD.

The 0.1% AEP flood level of 27.600mAOD is below the proposed minimum FFL of 27.840mAOD.

5.6 Flood Evacuation Strategy

The EA issues warnings to the public, the media, and partner agencies of impending flooding. The Flood Alert and Flood Warning areas are based on the likelihood and timing of different levels of flood threat within a specific community or catchment. Severe Flood Warnings are based on the likelihood and/or impact of flooding.

The EA's flood alerts and warnings are only in relation to fluvial and tidal flooding, and do not cover other sources of flooding, such as surface water or groundwater flooding.

It is noted that the development site falls outside the EA's flood alert and warning areas. It is therefore recommended that residents use other flood warning triggers such as Met Office weather warnings and river monitoring stations.

Residents should make a flood plan that includes the practical steps to be taken in the event of a flood. Refer to Appendix G for guidance and templates produced by The Flood Hub.

6. DRAINAGE STRATEGY

For the detailed Drainage Strategy refer to renaissance Drainage Strategy report, RMB-REN-XX-XX-RP-C-00002. A brief summary of the principles to be adopted is included below.

6.1 Drainage Hierarchy

In accordance with NPPF, runoff from the development shall be discharged to the following final destinations, to the maximum extent practicable, in accordance with the below hierarchy

- priority 1: collected for non-potable use
- priority 2: infiltrated to ground
- priority 3: discharged to an above ground surface water body
- priority 4: discharged to a surface water sewer, or another piped surface water drainage system
- priority 5: discharged to a combined sewer

6.2 Climate Change

The drainage strategy will include increases in the storm intensities of 40% and 45% for the 1 in 30 year and 1 in 100 year events respectively, which is consistent with the effects of climate change for a development with a design life of 100 years, as outlined in NPPF.

7. REFERENCES

National Planning Policy Framework, Ministry of Housing Communities & Local Government (February 2025), https://www.gov.uk/government/publications/national-planning-policy-framework--2

Planning practice guidance – Ministry of Housing Communities & Local Government (February 2024), https://www.gov.uk/government/collections/planning-practice-guidance

Ministry of Housing, Communities and Local Government (September 2025), https://www.gov.uk/guidance/flood-risk-and-coastal-change

Flood risk assessments: climate change allowances – Environment Agency (May 2022), https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

British Geological Survey – Geology of British Viewer http://mapapps.bgs.ac.uk/geologyofbritain/home.html

Long term flood risk information https://flood-warning-information.service.gov.uk/long-term-flood-risk/map

Improving the Flood Performance of New Buildings, Flood Resilient Construction, Department for Communities and Local Government, (May 2007)

Manchester, Salford and Trafford Level 1 Strategic Flood Risk Assessment, JBA Consulting (2010), https://www.manchester.gov.uk/downloads/download/3871/strategic_flood_risk_assessment_sfra

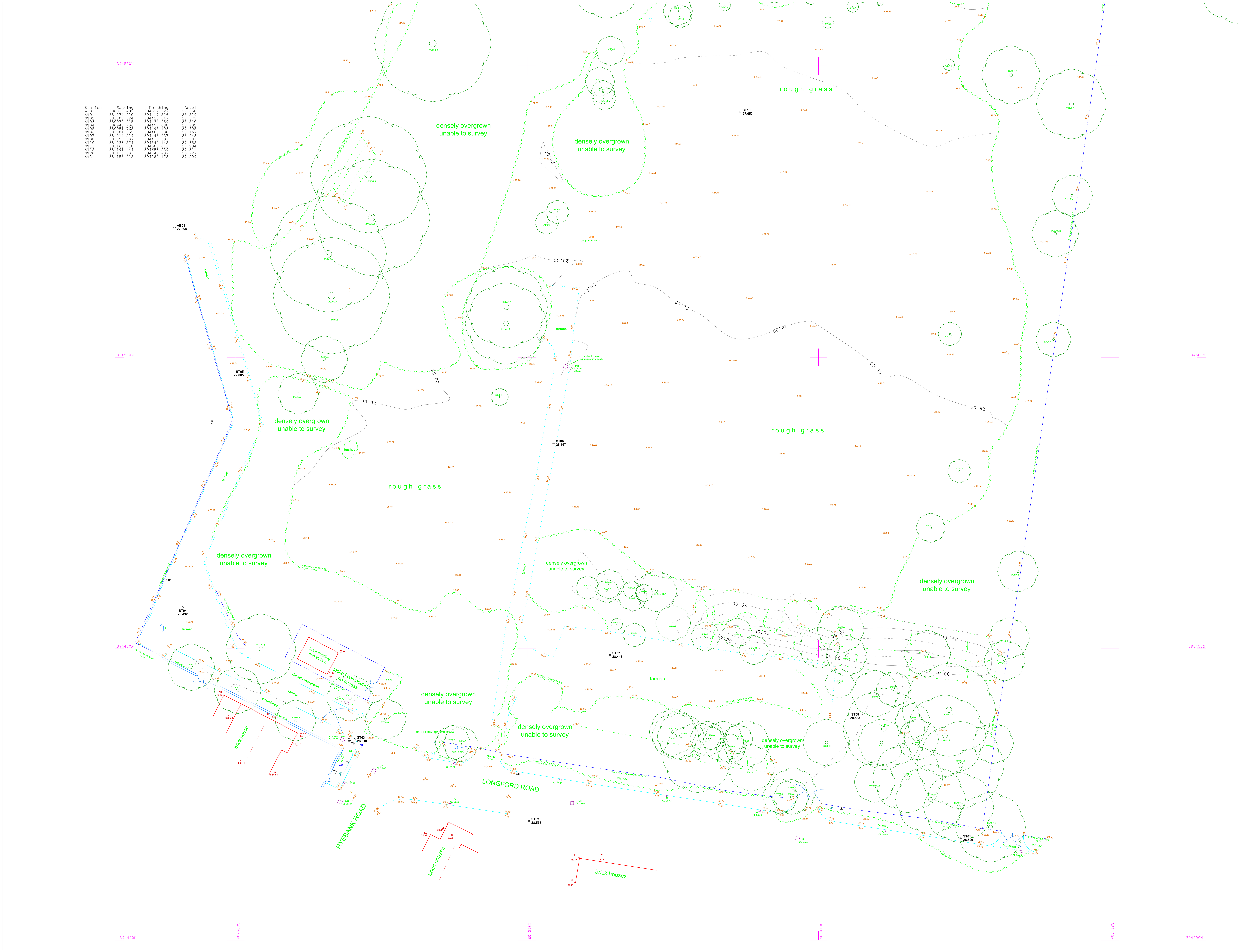
Manchester, Salford and Trafford Level 2 Strategic Flood Risk Assessment, JBA Consulting, (2010), https://www.manchester.gov.uk/downloads/download/3871/strategic_flood_risk_assessment_sfra

Level 1 Strategic Flood Risk Assessment for Greater Manchester, JBA Consulting, (March 2019), https://www.greatermanchester-ca.gov.uk/what-we-do/planning-and-housing/places-for-everyone/pfe-previous-stages/places-for-everyone-2021-regulation-19/supporting-documents-2021?folder=04%20Sustainable%20and%20Resilient%20Places#fList

Places for Everyone Joint Development Plan (October 2024), https://www.greatermanchester-ca.gov.uk/media/3ccbetc4/post-adoption-places-for-everyone-joint-development-plan.pdf

APPENDIX A

TOPOGRAPHICAL SURVEY



Station	Easting	Northing	Level
AB01	380939.492	394522.327	27.558
ST01	381074.420	394417.516	28.529
ST02	381000.324	394420.447	28.575
ST03	380970.415	394434.459	28.510
ST04	380940.906	394457.088	28.432
ST05	380951.768	394498.103	27.805
ST06	381004.552	394485.330	28.167
ST07	381014.219	394448.937	28.448
ST08	381057.507	394438.593	28.583
ST10	381036.574	394542.142	27.652
ST11	381160.918	394600.011	27.294
ST12	381191.144	394653.239	27.311
ST20	381135.303	394740.437	26.927
ST21	381158.912	394780.178	27.209

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ABBREVIATIONS

AR	ASSUMED ROUTE	OSA	OUTSIDE SURVEY AREA
AV	AIR VALVE	P	POST / POLE
B	BOLLARD	RL	RIDGE LEVEL
BH	BOREHOILE	RE	RODDING EYE
BT	BRITISH TELECOM CHAMBER	RS	ROAD SIGN
CATV	CABLE TV	RWP	RAINWATER PIPE
CP	CABLE PIT	S	STAY
CL	COVER LEVEL	SC	STOP COCK
CR	CABLE RISER	ST	STOP TAP
DP	DOWN PIPE	SV	STOP VALVE
EL	EAVES LEVEL	SVP	SOIL VENT PIPE
EP	ELECTRICITY POLE	TC	TRAFFIC CONTROL
ER	EARTH ROD	TCB	TELEPHONE CALL BOX
FH	FIRE HYDRANT	TFR	TAKEN FROM RECORDS
FL	FLOOR LEVEL or FENCE LEVEL	TH	THRESHOLD LEVEL
FR	FLAT ROOF LEVEL	TL	TRAFFIC LIGHTS
G	GULLY	TP	TELEGRAPH POLE
GPR	TRACED BY G.P.R.	UTGA	UNABLE TO GAIN ACCESS
GV	GAS VALVE	UTL	UNABLE TO LOCATE
IC	INSPECTION CHAMBER	UTR	UNABLE TO RAISE
IL	INVERT LEVEL	UTS	UNABLE TO SURVEY
JB	JUNCTION BOX	UTT	UNABLE TO TRACE
KW	KERB WIER	WL	WATER LEVEL or WALL LEVEL
LB	LITTER BIN or LETTER BOX	VP	VENT PIPE
LP	LAMP POST	WM	WATER METER
MH	MANHOLE	WO	WASH OUT VALVE
NL	NOT LOCATED	WP	WATER PIPE
NT	NO TRACE		

b	BEAM HEIGHT
c	CILL HEIGHT
cht	CEILING HEIGHT
dht	DOOR HEIGHT
fcht	FALSE CEILING HEIGHT
+10.26	FLOOR LEVEL
+[10.26]	BEAM/OVERHEAD LEVEL
h	HEAD HEIGHT
p	PURLIN HEIGHT
r	RIDGE BOARD HEIGHT
sp	SPRING POINT
←	STEPS / STAIRS UP

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SURVEY REVISIONS

PREVIOUS DWG NO:	-
REVISION NO:	-
ORIGINAL SURVEY DATE:	-

REVISION NOTES:

LAYOUT VIEWS

CLIENT:
Cushman & Wakefield

PROJECT TITLE:
Land off Ryebank Rd/Langford Rd, Manchester, M21 9WW

DRAWING NUMBER:
4692AB/1

SCALE: 1:200 @ A0	SURVEY DATE: November 2019	
LEVEL DATUM: OSGB by GPS	GRID DATUM: OSGB fixed at ST06	
BENCH MARK USED: Nail at ST06 surveyed by GPS	BM VALUE: 28.167m	SHEET NUMBER: 1 of 5

densely overgrown
unable to survey

densely overgrown
unable to survey

densely overgrown
unable to survey

densely overgrown
unable to survey

r o u g h g r a s s

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ST08	381033.274	394442.593	29.083
ST10	381038.507	394438.132	27.652
ST11	381160.918	394600.011	27.394
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GV	GAS VALVE	UTL	UNABLE TO LOCATE
IC	INSPECTION CHAMBER	UTO	UNABLE TO OPEN
IL	INVERT LEVEL	UTS	UNABLE TO SURVEY
JB	JUNCTION BOX	UTT	UNABLE TO TRACE
KW	KERB WIDR	WL	WATER LEVEL or WALL LEVEL
LB	LITTER BIN or LETTER BOX	VP	VENT PIPE
LP	LAMP POST	WM	WATER METER
MH	MANHOLE	WO	WASH OUT VALVE
NL	NOT LOCATED	WP	WATER PIPE
NT	NO TRACE		

b	BEAM HEIGHT
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dh	DOOR HEIGHT
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+ 10.26	HEIGHT ABOVE
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h	HEAD HEIGHT
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	STEPS / STAIRS UP

FENCE LINETYPES

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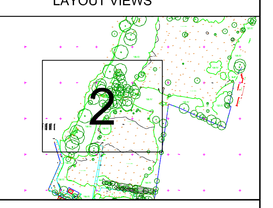
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REVISION NOTES:

LAYOUT VIEWS



CLIENT:

Cushman & Wakefield

PROJECT TITLE:

Land off Ryebank Rd/Langford Rd, Manchester, M21 9WW

DRAWING NUMBER:

4692AB/2

SCALE: 1:200 @ A0	SURVEY DATE: November 2019
LEVEL DATUM: OSGB by GPS	GRID DATUM: OSGB fixed at ST06
BENCH MARK USED: Nail at ST06 surveyed by GPS	BM VALUE: 28.167m
	SHEET NUMBER: 2 of 5

densely overgrown unable to survey

rough grass

densely overgrown unable to survey

densely overgrown unable to survey

densely overgrown unable to survey

rough grass

densely overgrown unable to survey

densely overgrown unable to survey

densely overgrown unable to survey

overgrown

densely overgrown unable to survey

ugh grass

brick houses

brick building

brick houses

brick houses

ST12
27.311

ST11
27.294

394650N

394600N

394550N

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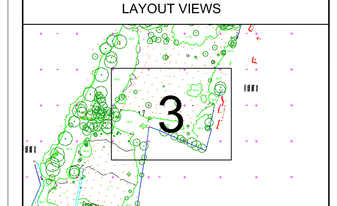
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PREVIOUS DWG NO:	-
REVISION NO:	-
ORIGINAL SURVEY DATE:	-

REVISION NOTES:

LAYOUT VIEWS



CLIENT:

Cushman & Wakefield

PROJECT TITLE:

Land off Ryebank Rd/Langford Rd, Manchester, M21 9WW

DRAWING NUMBER:

4692AB/3

SCALE: 1:200 @ A0		SURVEY DATE: November 2019	
LEVEL DATUM: OSGB by GPS		GRID DATUM: OSGB fixed at ST06	
BENCH MARK USED: Nail at ST06 surveyed by GPS		BM VALUE: 26.167m	SHEET NUMBER: 3 of 5

densely overgrown unable to survey

densely overgrown unable to survey

densely overgrown unable to survey

area of small trees

rough grass

densely overgrown unable to survey

densely overgrown unable to survey

densely overgrown unable to survey

densely overgrown unable to survey

densely overgrown unable to survey

brick houses

brick house

brick house

brick houses

brick houses

brick building

RYEBANK ROAD

tarmac

overgrown

ST20
26.927

ST12
27.311

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IL	INVERT LEVEL	UTS	UNABLE TO SURVEY
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LB	LITTER BIN or LETTER BOX	VP	VENT PIPE
LP	LAMP POST	WM	WATER METER
MH	MANHOLE	WO	WASH OUT VALVE
NL	NOT LOCATED	WP	WATER PIPE
NT	NO TRACE		

b	BEAM HEIGHT
c	CILL HEIGHT
ch	CEILING HEIGHT
dh	DOOR HEIGHT
fch	FALSE CEILING HEIGHT
h	HEAD HEIGHT
h+0.26	BEAM OVERHEAD LEVEL
h	HEAD HEIGHT
p	PURLIN HEIGHT
r	RIDGE BOARD HEIGHT
sp	SPRING POINT
	STEPS / STAIRS UP

FENCE LINETYPES

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CT SURVEYS IS A MEMBER OF:

THE SURVEY ASSOCIATION

constructionline

SURVEY NOTES:

The survey is fitted to National Grid and Datum using GPS, and has been drawn at a scale factor of 1.000.

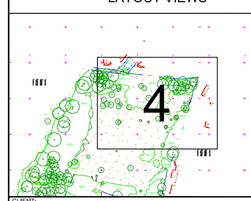
Due to the scale factor any setting out or design works should strictly use the control coordinates as shown on the drawing.

SURVEY REVISIONS

PREVIOUS DWG NO:	-
REVISION NO:	-
ORIGINAL SURVEY DATE:	-

REVISION NOTES:

LAYOUT VIEWS



CLIENT:

Cushman & Wakefield

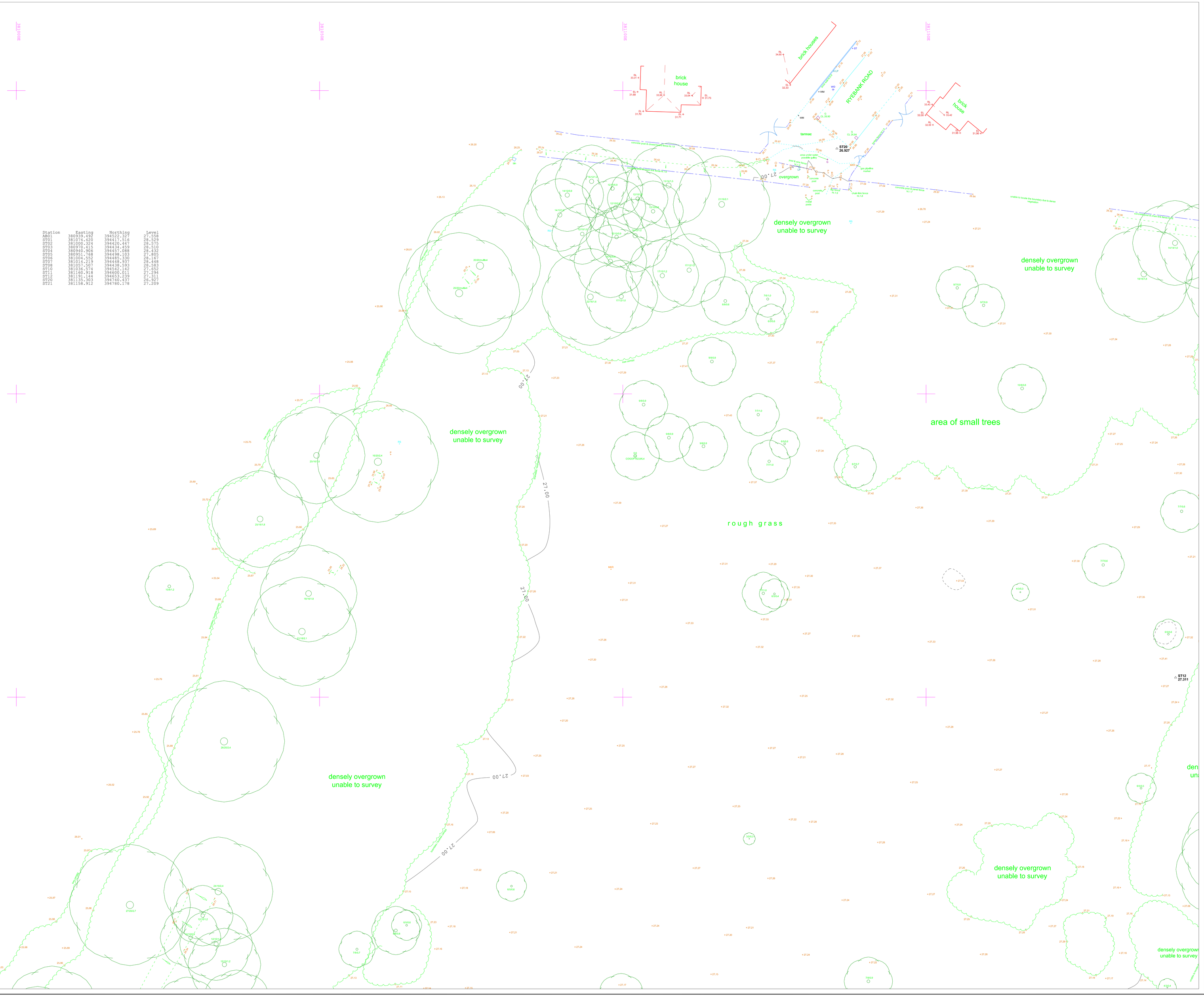
PROJECT TITLE:

Land off Ryebank Rd/Langford Rd, Manchester, M21 9WW

DRAWING NUMBER:

4692AB/4

SCALE:	1:200 @ A0	SURVEY DATE:	November 2019
LEVEL DATUM:	OSGB by GPS	GRID DATUM:	OSGB fixed at ST06
BENCH MARK USED:	Nail at ST06 surveyed by GPS	BM VALUE:	28.167m
		SHEET NUMBER:	4 of 5



Station	Easting	Northing	Level
AB01	380939.492	394522.327	27.558
ST01	381074.420	394417.516	28.529
ST02	381000.324	394420.447	28.575
ST03	380970.415	394434.459	28.510
ST04	380940.906	394457.088	28.432
ST05	380951.768	394498.103	27.805
ST06	381004.552	394485.330	28.167
ST07	381014.219	394448.937	28.448
ST08	381057.507	394438.593	28.583
ST10	381036.574	394542.142	27.652
ST11	381160.918	394600.011	27.294
ST12	381191.144	394653.239	27.311
ST20	381135.303	394740.437	26.927
ST21	381158.912	394780.178	27.209

CT Surveys
Topographic, Building & Laser Scanning Surveys

THE OLD MILL
HIGHFIELD, TINGLEY
WAKEFIELD
WF3 1LA

Tel : 0113 259 7023
Mob : 07949 195764
email : mail@ct-surveys.com
Web Site : www.ct-surveys.com

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ABBREVIATIONS

AR	ASSUMED ROUTE	OSA	OUTSIDE SURVEY AREA
AV	AIR VALVE	PC	POLE CLIMB
BH	BOLLARD	PL	PIPED LEVEL
BT	BRITISH TELECOM CHAMBER	RE	ROODING EYE
CATV	CABLE TV	RS	ROAD SIGN
CP	CABLE PIT	RWP	RAINWATER PIPE
CL	COVER LEVEL	S	STAY
CR	CABLE RISER	SC	STOP COCK
DP	DOWN PIPE	ST	STOP TAP
EP	EAVES PIPE	SV	STOP VALVE
EP	ELECTRICITY POLE	TP	TELEGRAPH POLE
ER	EARTH ROD	TC	TRAFFIC CONTROL
FH	FIRE HYDRANT	TCB	TELEPHONE CALL BOX
FL	FLOOR LEVEL or FENCE LEVEL	TPR	TAKEN FROM RECORDS
FR	FLAT ROOF LEVEL	TH	THRESHOLD LEVEL
G	GULLY	TL	TRAFFIC LIGHTS
GPR	TRACED BY G.P.R.	TP	TELEGRAPH POLE
GV	GAS VALVE	UTGA	UNABLE TO GAIN ACCESS
IC	INSPECTION CHAMBER	UTL	UNABLE TO LOCATE
IL	INVERT LEVEL	UTS	UNABLE TO SURVEY
JB	JUNCTION BOX	UTS	UNABLE TO SURVEY
KW	KERB WIDE	UTT	UNABLE TO TRACE
LB	LITTER BIN or LETTER BOX	WL	WATER LEVEL or WALL LEVEL
LP	LAMP POST	VP	VENT PIPE
MH	MANHOLE	WM	WATER METER
NL	NOT LOCATED	WO	WASH OUT VALVE
NT	NO TRACE	WP	WATER PIPE

b	BEAM HEIGHT
c	CILL HEIGHT
ch	CEILING HEIGHT
dh	DOOR HEIGHT
fch	FALSE CEILING HEIGHT
h	HEAD HEIGHT
h	PURLIN HEIGHT
r	RIDGE BOARD HEIGHT
sp	SPRING POINT
	STEPS / STAIRS UP

FENCE LINETYPES

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CT SURVEYS IS A MEMBER OF:

THE SURVEY ASSOCIATION

constructionline

SURVEY NOTES:

The survey is fitted to National Grid and Datum using GPS, and has been drawn at a scale factor of 1.000

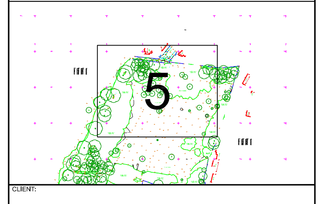
Due to the scale factor any setting out or design works should strictly use the control coordinates as shown on the drawing.

SURVEY REVISIONS

PREVIOUS DWG NO:	-
REVISION NO:	-
ORIGINAL SURVEY DATE:	-

REVISION NOTES:

LAYOUT VIEWS



CLIENT:

Cushman & Wakefield

PROJECT TITLE:

Land off Ryebank Rd/Langford Rd, Manchester, M21 9WW

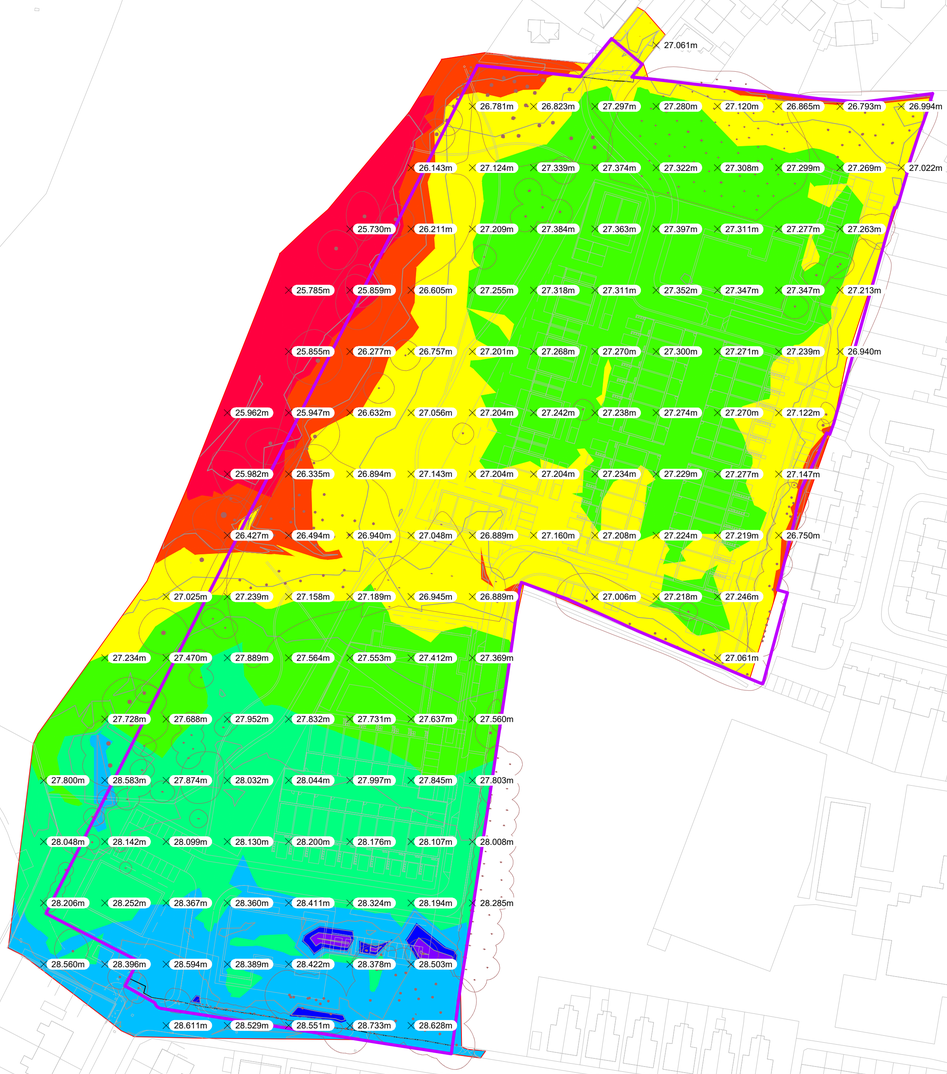
DRAWING NUMBER:

4692AB/5

SCALE:	1:200 @ A0	SURVEY DATE:	November 2019
LEVEL DATUM:	OSGB by GPS	GRID DATUM:	OSGB fixed at ST06
BENCH MARK USED:	Nail at ST06 surveyed by GPS	BM VALUE:	28.167m
		SHEET NUMBER:	5 of 5

NOTES:

1. THE PURPOSE OF THIS DRAWING IS TO INDICATE THE EXISTING STE TOPOGRAPHY.
2. THIS DRAWING HAS BEEN PRODUCED BASED ON THE TOPOGRAPHICAL SURVEY 4692AB-3D PRODUCED BY CT SURVEYS DATED NOVEMBER 2019.
3. DO NOT SCALE FROM THIS DRAWING.
4. ALL LEVELS ARE mAOD.



SURFACE LEVEL DATA

NUMBER	MINIMUM LEVEL	MAXIMUM LEVEL	COLOUR
1	25.50	26.08	
2	26.08	26.65	
3	26.65	27.22	
4	27.22	27.80	
5	27.80	28.38	
6	28.38	28.95	
7	28.95	29.52	
8	29.52	30.10	

Rev:	Description:	Date:	By:	Chkd:
P02	SITE BOUNDARY UPDATED	20.12.24	JB	PW
P01	FOR INFORMATION	09.08.24	JB	PC

renaissance

Renaissance Associates Ltd
Carvers Warehouse
77 Dale Street
Manchester
M1 2HG

Project:

RYEBANK FIELDS
MANCHESTER

Drawing Title:

EXISTING SITE TOPOGRAPHY

Status:

FOR INFORMATION

Size:	Date:	Drawn by:	Designed by:	Checked by:
A1	AUG 24	JB	-	PC

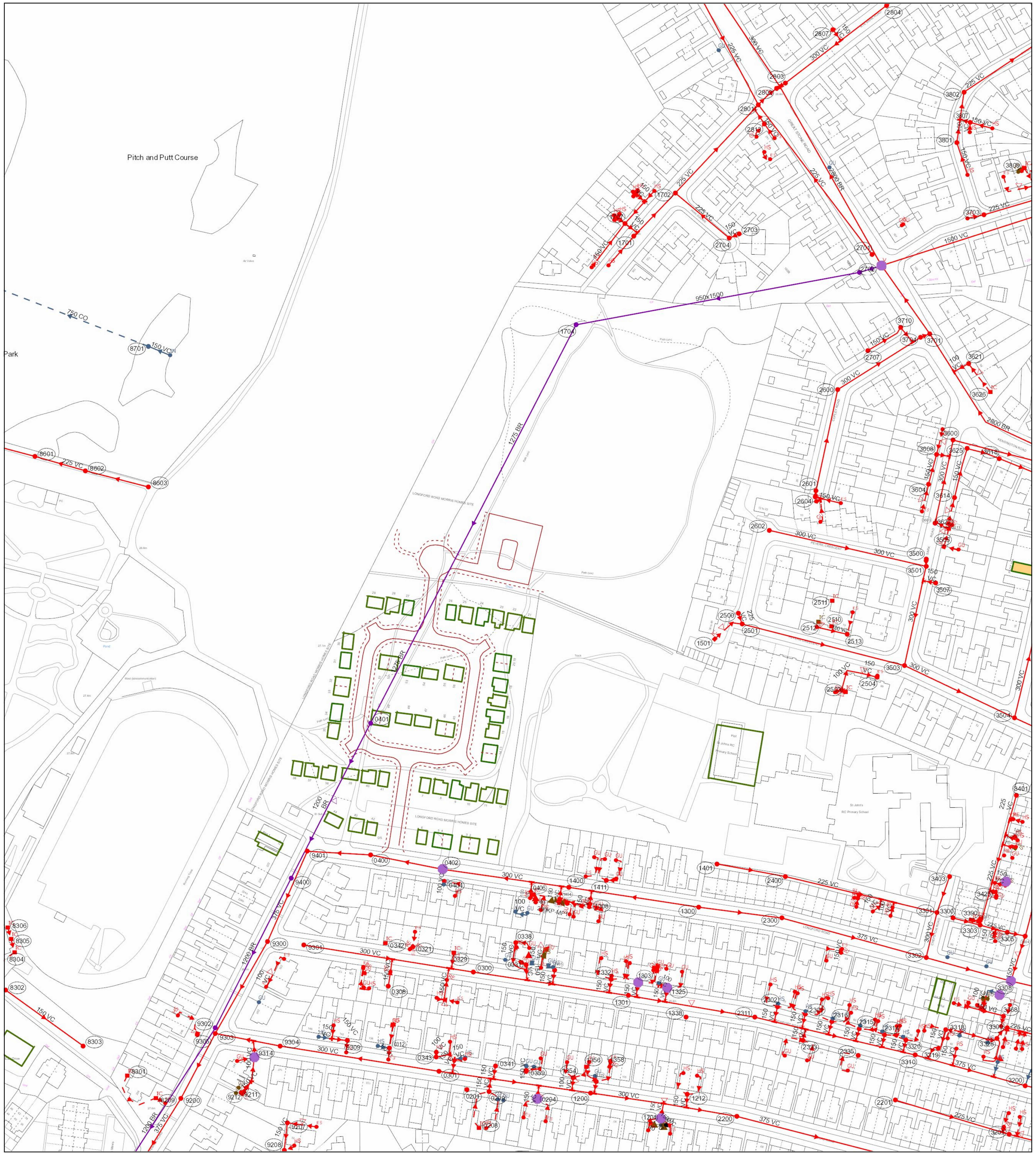
Scale: 1:1000 | Project No: 2106-01

Project – Originator – Volume – Level – Type – Role – Number: RBM-REN-XX-XX-DR-C-00005 | Revision: P02

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APPENDIX B

UNITED UTILITIES SEWER ASSET MAP



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.

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Refno	Cover	Func	Invert	Size x	Size y	Shape	Matl	Length	Grad
8601	26.2	CO	24.87	225			VC	89.98889	
1200	28.14	CO	25.78	300			VC	41.4367	1 in 319
3600	26.81	CO	24.37	300			VC	65	1 in 191
0301	28.08	CO	0	300			VC	89.10667	
8602	26.18	CO	24.87	225			VC	29.12044	
1401	28.45	CO	27.31	225			VC	38.63936	1 in 88
0338		CO		150			VC	19.81876	
2704	26.97	CO	25.37	225			VC	38.98238	1 in 93
2200	28.27	CO	25.51	375			VC	91.92388	1 in 328
2400	28.45	CO	26.85	225			VC	86.34869	1 in 81
8603	26.14	CO	25.35	225			VC	36.13862	1 in 75
9208		CO		150			VC	5.252632	
3807		CO	0	150			VC	5.708568	
2311	28.35	CO	25.67	375			VC	91.44397	1 in 269
0400	28.56	CO	24.98	375			VC	35.05709	1 in 167
1204		CO		150			VC	8.377253	
3703	26.92	CO	25.05	225			VC	78.3147	1 in 230
3608		CO		150			VC	7.332582	
0341		CO		150			VC	7.295718	
3301	28.42	CO	25.71	300			VC	25.70992	1 in 135
3504	26.51	CO	24.23	300			VC	67.91171	1 in 323
3309	28.33	CO	26.15	225			VC	38.07887	1 in 97.6381167
0308		CO	0	150			VC	15.09371	
3500	26.52	CO	24.81	300			VC	4	1 in 400
1701	27.01	CO	25.27	225			VC	33.24154	1 in 104
3304	28.26	CO	25.47	300			VC	12.64911	
3604		CO		150			VC	17.23052	1 in
2300	28.5	CO	25.77	375			VC	82.96987	1 in 332
3603	26.61	CO	24.61	300			VC	47.07441	1 in 214
9401	28.52	CO	24.8	375			VC	54.626	1 in 166
9304	27.99	CO	24.87	300			VC	36.67424	1 in 64
9300	28.33	CO	24.44	375			VC	58.66856	1 in 419
3305	28.17	CO	25.64	225			VC	10.19804	1 in 204
9207		CO		150			VC	15.33975	
1707		CO		150			VC	8.526428	
3704	26.86	CO	23.32	300			VC	5.385165	1 in 2
2803	26.96	CO	22.53	300			VC	5.830952	
9212		CO		150			VC	7.397016	
3621		CO		100			VC	9.319727	
0300	28.47	CO	26.33	300			VC	86.97823	1 in 264
3308	28.4	CO	25.33	375			VC	53.36666	1 in 334
2602	26.43	CO	25.19	300			VC	89.26926	1 in 229
2802	26.99	CO	22.54	300			VC	2.236068	
1300	28.51	CO	25.97	300			VC	72.83543	1 in 197
3403	28.34	CO	25.99	300			VC	21.18962	1 in 81
3302	28.5	CO	25.5	375			VC	48.76474	1 in 325
1223		CO		150			VC	6.726105	
9309		CO		150			VC	6.587931	
3319		CO		150			VC	9.311253	
1300	28.51	CO	25.99	375			VC	46.38965	1 in 232
2501	26.28	CO	25.03	300			VC	92.89241	1 in 186
8701		SW		750			CO	94.33981	
0402	28.52	CO	25.29	375			VC	40.79216	1 in 157
3618		CO		150			VC	26.73102	
2201	28.35	CO	27.14	225			VC	65.80344	1 in 82
9301	28.35	CO	26.96	300			VC	95.18929	1 in 154
3368		CO		150			VC	5.401829	
3501	26.49	CO	24.79	300			VC	56.2943	1 in 217
9314		CO		100			VC	9.127409	
2707		CO		150			VC	22.57265	
1354		CO		100			VC	6.979986	
3710		CO		150			VC	10.72151	
1400	28.5	CO	25.58	300			VC	70.71068	1 in 262
2500	26.31	CO	25.06	225			VC	6.324555	1 in 632
9200	27.68	CO	24.17	375			VC	58.83027	1 in 294
2333		CO		150			VC	6.436327	
3614		CO		150			VC	28.2029	
2600	26.72	CO	24.57	300			VC	54.3783	1 in 139
0312		CO		150			VC	6.286277	
3625		CO		150			VC	18.61763	
9303	27.94	CO	24.28	375			VC	40.70626	1 in 452
3503	26.29	CO	24.51	300			VC	67.54258	1 in 338
1303		CO		150			VC	8.20201	
2804	27.04	CO	22.93	300			VC	70.60453	1 in 186
9211		CO		150			VC	8.697612	
0331		CO		150			VC	8.546508	
1335		CO		150			VC	7.888249	
3300	28.38	CO	26.06	225			VC	15.52417	1 in 62
3507		CO		150			VC	7.307869	
1212		CO		150			VC	7.330797	
3801	27.11	CO	25.31	225			VC	12.94048	
0209		CO		150			VC	7.308389	
1404		CO		150			VC	7.19486	
2807		CO		150			VC	7.459774	
2601	26.49	CO	24.75	300			VC	57.27129	1 in 358
9400	28.4	OV	22.5	1200			BR	93.0215	1 in 1860
3200	28.55	CO	25.03	375			VC	61.39218	1 in 361
1704		OV		1275			BR	248.592	
0301	28.08	CO	26.07	300			VC	84.85281	1 in 314
2604		CO		150			VC	3.615964	
3303	28.34	CO	25.79	225			VC	15.52417	1 in 119
0359		CO		150			VC	0.7611037	
8302		CO		150			VC	53.07223	
2702		OV	0	950			VC	159.7449	
1301	28.37	CO	25.98	300			VC	35.51056	1 in 254
2813		CO		150			VC	9.954823	
2701	26.69	CO	24.53	225			VC	104.2017	1 in 213
0401	27.97	OV	22.54	1275			BR	48.30114	1 in 4830
3201	28.41	CO	26.32	225			VC	61.84756	1 in 76
1702	27.05	CO	24.95	225			VC	67.20863	1 in 73
3310	28.53	CO	25.31	375			VC	63.32456	1 in 243.556003
0204		CO		150			VC	7.553617	
1325		CO		150			VC	7.881699	
3701		CO	20.86	2800			BR	46.26851	
3802	27.25	CO	24.48	225			VC	64.89993	1 in 232
1308		CO		150			VC	7.415011	
3401	27.8	CO	26.41	225			VC	74.72617	1 in 125
3328		CO		0			UN	8.44431	
9302	27.92	OV	22.43	1200			BR	130.9236	1 in 1870
2801	26.99	CO	24.02	225			VC	7.071068	1 in 141
2504		CO		150			VC	0.9679947	
2703		CO		150			VC	5.927334	

Refno	Cover	Func	Invert	Size x	Size y	Shape	Matl	Length	Grad

LEGEND

Abandoned | Foul | Surface Water | Combined

- Public Sewer
- Private Sewer
- Section 104
- Rising Main
- Sludge Main
- Overflow
- Water Course
- Highway Drain

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

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

MANHOLE FUNCTION

FO Foul
SW Surface Water
CO Combined
OV Overflow

SEWER SHAPE

CI Circular | TR Trapezoidal
EG Egg | AR Arch
OV Oval | BA Barrel
FT Flat Top | HO HorseShoe
RE Rectangular | UN Unspecified
SQ Square

SEWER MATERIAL

AC Asbestos Cement
BR Brick
PE Polyethylene
RP Reinforced Plastic Matrix
CO Concrete
CSB Concrete Segment Bolted
CSU Concrete Segment Unbolted
CC Concrete Box Culverted
PSC Plastic / Steel Composite
GRC Glass Reinforecd Plastic
DI Ductile Iron
PVC Polyvinyl Chloride
CI Cast Iron
SI Spun Iron
ST Steel
VC Vitrified Clay
PP Polypropylene
PF Pitch Fibre
MAC Masonry, Coursed
MAR Masonry, Random
U Unspecified

Address or Site Reference:

75 LONGFORD ROAD,
CHORLTON CUM HARDY,
MANCHESTER,
M21 9WW

Scale: 1:1250 **Date:** 23/07/2024

Sheet: 1 of 1

Printed by: Property Searches

SEWER RECORDS

United Utilities
Water for the North West

APPENDIX C
CCTV SURVEY

Layer Surveys Ltd
Head Office: Offices 1-2, The Gatehouse, Lancashire Business Park, Leyland, PR26 6TY
T: 01772 611634

LAYER SURVEYS LTD
SEE THE COMPLETE PICTURE

Layer Surveys Ltd Manhole Survey Card

Card No	4	Map No	
Catchment		MH No	CULVERT 1
Location	RYEBANK FIELDS		
Town	MANCHESTER		

★ PU Status	Syphon	★ S Function	★ MH MH Type	09/10/2024 Date of Survey

COVER DETAILS

Square	Rectangle	Triangle	Dbl Triangle	Circular	Oval	Other	Multiple	Hinged	Lockable

Cover Level ____ m H / M / L Cover Duty ★ H Initials DP

PIPE DETAILS

Incoming Pipes

Clockwise from pipe X

Pipe	Depth from Invert (m)	Upstream / Downstream MH Ref	Shape	Size (mm) Height		Width	Pipe Mat	Lining Mat	Back Drop Dia (mm)	Back Drop Depth (m)
					X					
					X					
					X					
					X					
					X					
					X					

Outgoing Pipes

X	0.30	OUTFALL	C	450	X					
Y					X					

Cover Opening at narrowest	mm	Chamber Dimension	mm	Evidence of Surcharge	
Shaft at narrowest	mm	Shaft Depth (from CL)	mm	OX / H2S / METH Toxic atmosphere	

MANHOLE CONSTRUCTION DETAILS

X Pre Cast Concrete	In Situ Concrete	X Brick	GRP	Arch	Corbel	Taper	Side Entry
Reducing Slab	Segments	No. of Landings		No. of Step Irons		No. of Ladders	
No. of Regulating Brick Courses							

CONDITION INFORMATION (specific in remark)

	Cover	Shaft	Irons / Ladders	Chamber	Benching	Channel
OK	X	X	X	X	X	X
Needs attention						
Urgent attention						

Depth of Flow ____ mm Depth of Silt ____ mm Height of Surcharge from CL ____ mm

REMARKS

REDUNDANT

★ *See Overleaf for Key*

LOCATION SKETCH



PLAN OF MANHOLE



STATUS	PU : Public	PR : Private	WC : Culverted Watercourse	}	Applies to main outlet
	24 : Section 24	HD : Highway Drain			
FUNCTION	F : Foul	C : Combined	S : Surface Water	}	Applies to main outlet
MANHOLE TYPE	IF : Infall	MH : Manhole	CP : Catchpit	CSO	:Consented Sewer Overflow
	LH : Lamphole	RE : Rodding Eye	SO : Storm Overflow	DS	:Dual system Manhole
	GU : Gully	OF : Outfall	SA : Soakaway	PS	:Pumping Station
COVER DUTY	L : Light Duty	M : Medium Duty	H : Heavy Duty		
SHAPE	C : Circular	E : Egg	R : Rectangular		
	S : Square	T : Trapezoidal	A : Arched		
	B : Barrel	H : Horseshoe (Inverted U)	U : U-shaped with flat top		
	X : Other (state in words)				
PIPE (OR LINING) MATERIAL	AK : Alkathene	AC : Asbestos Cement	BR : Brick		
	CI : Cast Iron	SI : Spun (Grey) Iron	CO : Concrete		
	CSB : Concrete Segments (Bolted)	CSU : Concrete Segments (Unbolted)	CC : Concrete Box Culvert		
	DI : Ductile Iron	GRC : Glass Reinforced Concrete	GRP : Glass Reinforced Plastic		
	PSC : Plastic/Steel Composite	PVC : Polyvinyl Chloride	PE : Polyethylene		
	RPM : Reinforced Plastic Matrix	ST : Steel	VC : Vitrified Clay		
	PP : Polypropylene	PF : Pitch Fibre	MAC : Masonry, Coursed		
	MAR : Masonry, Randon Courses	XXX : Other (State in remarks)			
LINING	BL : Bitumen	RL : Resin	IS : Insituform		
	CL : Cement	PI : Plastic			



LAYER SURVEYS LTD

SEE THE COMPLETE PICTURE

LAYER SURVEYS LTD
SEE THE COMPLETE PICTURE

Project Information

Layer Surveys Ltd
Office 1-2, The Gatehouse
Lancashire Business Park
Leyland
PR26 6TY

Job Number	Surveyed by (Operator)	Base Unit	Date
LS5603	**Joe COLLINS**	**DJVV56JNNH**	**09/10/2024**

Client Details:

Renaissance
Carvers Warehouse,
77 Dale Street
Manchester,
M1 2HG

Client Contact Name: Philip Whitesmith
Client Contact Tel: 0161 552 1940

Site Details:

Ryebank Fields,
Manchester,
M21 9WW

Site Contact Name: Andrew McGrath
Site Contact Tel: a.mcgrath@mmu.ac.uk

Contractor Details:

Layer Surveys Ltd
Office 1-2, The Gatehouse
Lancashire Business Park
Leyland
PR26 6TY

Office Contact Number: 01772 611634

Purpose of Survey:

Report Contents

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Page 3 Contents Page

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Page 6 Survey Run Sheet(Survey 2 - MH1 to A)

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CCTV Inspection Report

Surveyed by (Operator)	Job Number	Pipe Length Reference(PLR)	Date	Pre Cleaned
Joe COLLINS	**LS5603**	**B X**	**09/10/2024**	**Not Cleaned**
Weather	Customer Present	Service Grade/Structural Grade	Base Unit	Section Number
3 - Light Rain		**4/0**	**DJVV56JNNH**	**1**

Road **Ryebank Fields,**
Place **Manchester,**
Location **M21 9WW**

Division
District
Location Details

Purpose
Duty **Surface water**
Catchment

Shape/Size **150mm**
Material **Vitrified clay**
Category

Start Node **MH1**
End Node **B**
Total length **15 metres**

Scale **1:0.79**
Direction **Upstream**

Start Node Ref:MH1 | I/L : metres | Depth: 1.79 metres

Position	Code	Description	Photo	Type/Grade
0.00	MH	Start node type, manhole, reference MH1	10485180	Comment / 0
0.00	WL	Water level 5% height/diameter	10485187	Comment / 0
1.38	DER	Settled deposits coarse 25% cross-sectional area loss	10485189	Service / 4
4.52	SA	Survey abandoned - Remark: 75% DER	10485206	Comment / 0



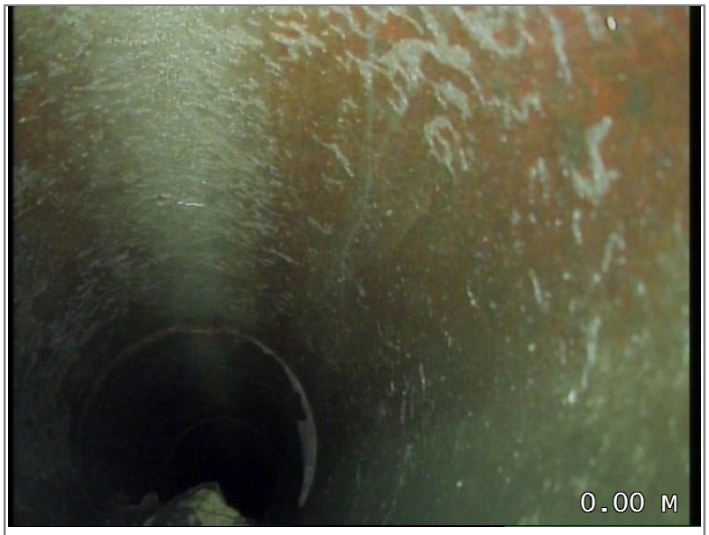
End Node Ref:B | I/L : metres

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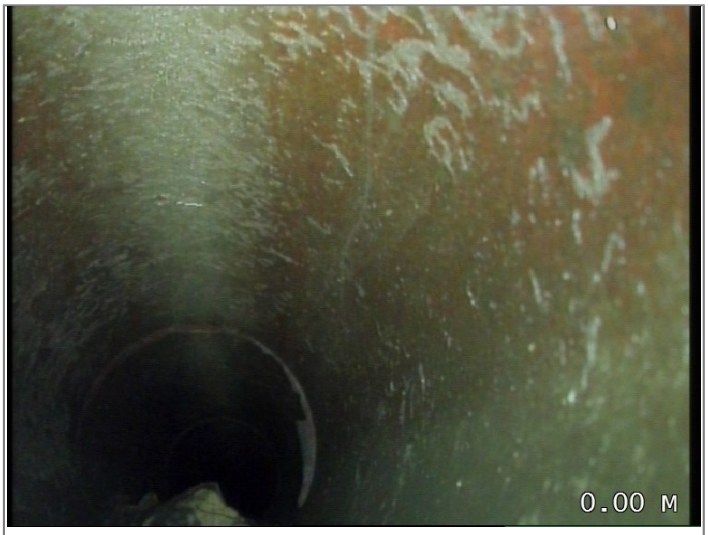
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Job Number	Surveyed by (Operator)	Base Unit	Date
LS5603	**Joe COLLINS**	**DJVV56JNNH**	**09/10/2024**



Start node type, manhole, reference MH1



Water level 5% height/diameter



Settled deposits coarse 25% cross-sectional area loss



Survey abandoned - Remark: 75% DER

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CCTV Inspection Report

Surveyed by (Operator)	Job Number	Pipe Length Reference(PLR)	Date	Pre Cleaned
Joe COLLINS	**LS5603**	**A X**	**09/10/2024**	**Not Cleaned**
Weather	Customer Present	Service Grade/Structural Grade	Base Unit	Section Number
3 - Light Rain		**2/0**	**DJVV56JNNH**	**2**

Road **Ryebank Fields,**
Place **Manchester,**
Location **M21 9WW**

Division
District
Location Details

Purpose
Duty **Surface water**
Catchment

Shape/Size **100mm**
Material **Vitrified clay**
Category

Start Node **MH1**
End Node **A**
Total length **10 metres**

Scale **1:0.52**
Direction **Upstream**

Start Node Ref:MH1 | I/L : metres | Depth: 1.79 metres

Position	Code	Description	Photo	Type/Grade
0.00	MH	Start node type, manhole, reference MH1	10485229	Comment / 0
0.00	WL	Water level 5% height/diameter	10485230	Comment / 0
0.00	RF (S01)	Roots fine, Start	10485231	Service / 2
1.33	RF (F01)	Roots fine, Finished	10485233	Service / 2
1.33	SA	Survey abandoned - Remark: COLLASPED DRAIN	10485237	Comment / 0



End Node Ref:A | I/L : metres

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Job Number	Surveyed by (Operator)	Base Unit	Date
LS5603	**Joe COLLINS**	**DJVV56JNNH**	**09/10/2024**



Start node type, manhole, reference MH1



Water level 5% height/diameter



Roots fine, Start



Roots fine, Finished



Survey abandoned - Remark: COLLASPED DRAIN

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Surveyed by (Operator)	Job Number	Pipe Length Reference(PLR)	Date	Pre Cleaned
Joe COLLINS	**LS5603**	**C X**	**09/10/2024**	**Not Cleaned**
Weather	Customer Present	Service Grade/Structural Grade	Base Unit	Section Number
3 - Light Rain		**4/0**	**DJVV56JNNH**	**3**

Road **Ryebank Fields,**
Place **Manchester,**
Location **M21 9WW**

Division
District
Location Details

Purpose
Duty **Surface water**
Catchment

Shape/Size **100mm**
Material **Vitrified clay**
Category

Start Node **MH1**
End Node **C**
Total length **15 metres**

Scale **1:0.79**
Direction **Upstream**

Start Node Ref:MH1 | I/L : metres | Depth: 1.79 metres

Position	Code	Description	Photo	Type/Grade
0.00	MH	Start node type, manhole, reference MH1	10485309	Comment / 0
0.00	WL	Water level 5% height/diameter	10485310	Comment / 0
0.00	DER	Settled deposits coarse 25% cross-sectional area loss	10485311	Service / 4
0.00	RM	Roots mass 10% cross-sectional area loss	10485318	Service / 3
0.69	SA	Survey abandoned - Remark: UNABLE TO CCTV DUE TO DEBRIS	10485331	Comment / 0



End Node Ref:C | I/L : metres

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Job Number	Surveyed by (Operator)	Base Unit	Date
LS5603	**Joe COLLINS**	**DJVV56JNNH**	**09/10/2024**



Start node type, manhole, reference MH1



Water level 5% height/diameter



Settled deposits coarse 25% cross-sectional area loss



Roots mass 10% cross-sectional area loss



Survey abandoned - Remark: UNABLE TO CCTV DUE TO DEBRIS

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CCTV Inspection Report

Surveyed by (Operator)	Job Number	Pipe Length Reference(PLR)	Date	Pre Cleaned
Joe COLLINS	**LS5603**	**B X**	**09/10/2024**	**Not Cleaned**
Weather	Customer Present	Service Grade/Structural Grade	Base Unit	Section Number
3 - Light Rain		**0/0**	**DJVV56JNNH**	**4**

Road **Ryebank Fields,**
Place **Manchester,**
Location **M21 9WW**

Division
District
Location Details

Purpose
Duty **Combined**
Catchment

Shape/Size **100mm**
Material **Vitrified clay**
Category

Start Node **MH8603**
End Node **B**
Total length **0.24 metres**

Scale **1:0.01**
Direction **Upstream**

Start Node Ref:MH8603 | I/L : metres | Depth: 0.8 metres

Position	Code	Description	Photo	Type/Grade
0.00	MH	Start node type, manhole, reference MH8603	10485526	Comment / 0
0.00	WL	Water level 5% height/diameter	10485527	Comment / 0
0.24	OCF	Finish node type, other special chamber, reference B	10485528	Comment / 0

End Node Ref:B | I/L : metres

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Job Number	Surveyed by (Operator)	Base Unit	Date
LS5603	**Joe COLLINS**	**DJVV56JNNH**	**09/10/2024**



Start node type, manhole, reference MH8603



Water level 5% height/diameter



Finish node type, other special chamber, reference B

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CCTV Inspection Report

Surveyed by (Operator)	Job Number	Pipe Length Reference(PLR)	Date	Pre Cleaned
Joe COLLINS	**LS5603**	**B X**	**09/10/2024**	**Not Cleaned**
Weather	Customer Present	Service Grade/Structural Grade	Base Unit	Section Number
3 - Light Rain		**4/0**	**DJVV56JNNH**	**5**

Road **Ryebank Fields,**
Place **Manchester,**
Location **M21 9WW**

Division
District
Location Details

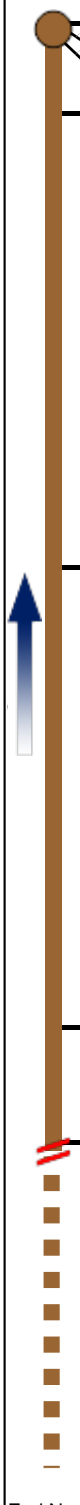
Purpose
Duty **Combined**
Catchment

Shape/Size **100mm**
Material **Vitrified clay**
Category

Start Node **MH8603**
End Node **B**
Total length **14 metres**

Scale **1:0.73**
Direction **Upstream**

Start Node Ref:MH8603 | I/L : metres | Depth: 0.8 metres



Position	Code	Description	Photo	Type/Grade
0.00	MH	Start node type, manhole, reference MH8603	10485547	Comment / 0
0.00	WL	Water level 5% height/diameter	10485548	Comment / 0
0.10	LR	Line of drain/sewer deviates right	10485554	Comment / 0
0.88	DER (S01)	Settled deposits coarse 15% cross-sectional area loss, Start	10485555	Service / 3
5.29	RT	Roots tap	10485562	Service / 4
9.76	DER (F01)	Settled deposits coarse 15% cross-sectional area loss, Finished	10485563	Service / 3
10.88	SA	Survey abandoned - Remark: 60% DER	10485568	Comment / 0

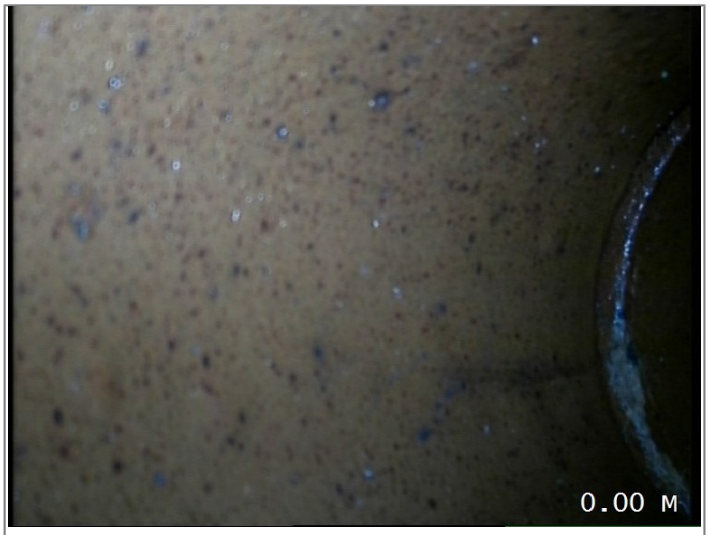
End Node Ref:B | I/L : metres

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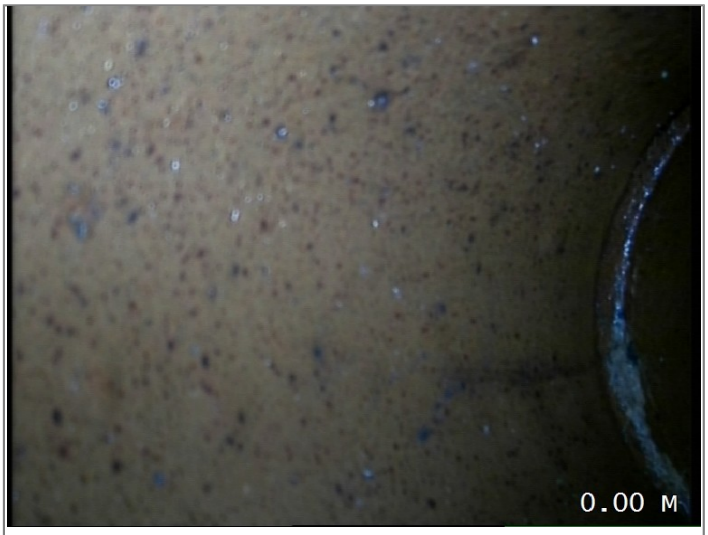
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Job Number	Surveyed by (Operator)	Base Unit	Date
LS5603	**Joe COLLINS**	**DJVV56JNNH**	**09/10/2024**



Start node type, manhole, reference MH8603



Water level 5% height/diameter



Line of drain/sewer deviates right



Settled deposits coarse 15% cross-sectional area loss, Start



Roots tap



Settled deposits coarse 15% cross-sectional area loss, Finished

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Job Number	Surveyed by (Operator)	Base Unit	Date
LS5603	**Joe COLLINS**	**DJVV56JNNH**	**09/10/2024**



Survey abandoned - Remark: 60% DER

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Surveyed by (Operator)	Job Number	Pipe Length Reference(PLR)	Date	Pre Cleaned
Joe COLLINS	**LS5603**	**MH8603 X**	**09/10/2024**	**Not Cleaned**
Weather	Customer Present	Service Grade/Structural Grade	Base Unit	Section Number
1 - Dry		**4/0**	**DJVV56JNNH**	**6**

Road **Ryebank Fields,**
Place **Manchester,**
Location **M21 9WW**

Division
District
Location Details

Purpose
Duty **Combined**
Catchment

Shape/Size **225mm**
Material **Vitrified clay**
Category

Start Node **MH8603**
End Node **MH8602**
Total length **42 metres**

Scale **1:2.20**
Direction **Downstream**

Start Node Ref:MH8603 | I/L : metres | Depth: 0.8 metres



Position	Code	Description	Photo	Type/Grade
0.00	MH	Start node type, manhole, reference MH8603	10485598	Comment / 0
0.00	WL	Water level 5% height/diameter	10485599	Comment / 0
0.36	DER (S01)	Settled deposits coarse 25% cross-sectional area loss, Start	10485600	Service / 4
2.81	JN	Junction at 9 o'clock, diameter 150mm	10485611	Comment / 0
14.55	JN	Junction at 2 o'clock, diameter 100mm	10485614	Comment / 0
17.76	DER (F01)	Settled deposits coarse 25% cross-sectional area loss, Finished	10485615	Service / 4
23.81	JN	Junction at 10 o'clock, diameter 150mm	10485623	Comment / 0
34.40	JN	Junction at 2 o'clock, diameter 100mm	10485626	Comment / 0
35.48	SA	Survey abandoned - Remark: MASSROOTS IN LINE	10485627	Comment / 0

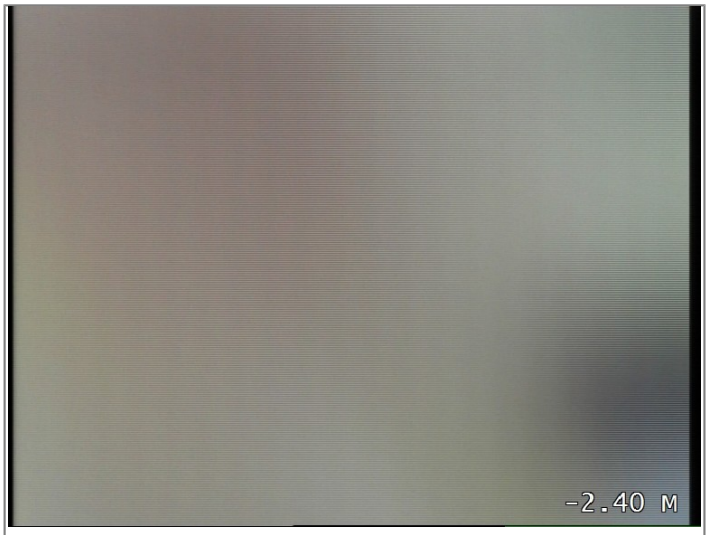
End Node Ref:MH8602 | I/L : metres

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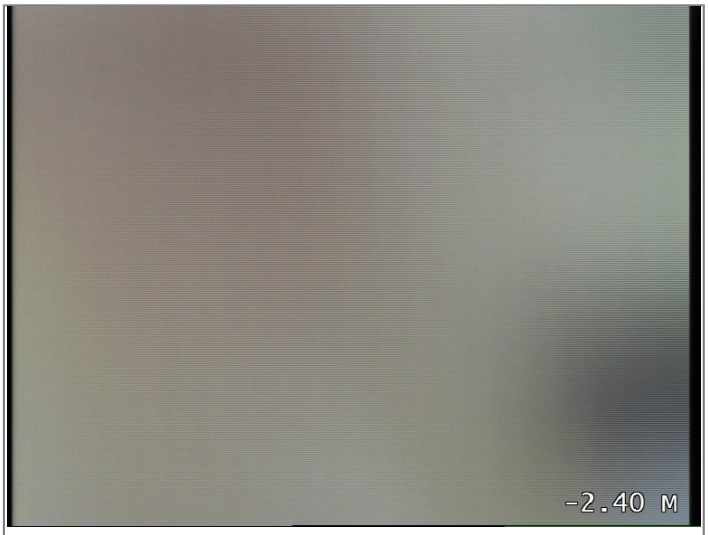
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Job Number	Surveyed by (Operator)	Base Unit	Date
LS5603	**Joe COLLINS**	**DJVV56JNNH**	**09/10/2024**



Start node type, manhole, reference MH8603



Water level 5% height/diameter



Settled deposits coarse 25% cross-sectional area loss, Start



Junction at 9 o'clock, diameter 150mm



Junction at 2 o'clock, diameter 100mm



Settled deposits coarse 25% cross-sectional area loss, Finished

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Job Number	Surveyed by (Operator)	Base Unit	Date
LS5603	**Joe COLLINS**	**DJVV56JNNH**	**09/10/2024**



Junction at 10 o'clock, diameter 150mm



Junction at 2 o'clock, diameter 100mm



Survey abandoned - Remark: MASSROOTS IN LINE

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CCTV Inspection Report

Surveyed by (Operator)	Job Number	Pipe Length Reference(PLR)	Date	Pre Cleaned
Joe COLLINS	**LS5603**	**CULVERT1 X**	**09/10/2024**	**Not Cleaned**
Weather	Customer Present	Service Grade/Structural Grade	Base Unit	Section Number
1 - Dry		**4/0**	**DJVV56JNNH**	**7**

Road **Ryebank Fields,**
Place **Manchester,**
Location **M21 9WW**

Division
District
Location Details

Purpose
Duty **Combined**
Catchment

Shape/Size **450mm**
Material **Vitrified clay**
Category

Start Node **CULVERT1**
End Node **OUTFALL1**
Total length **50 metres**

Scale **1:2.62**
Direction **Downstream**

Start Node Ref:CULVERT1 | I/L : metres | Depth: 0.3 metres

Position	Code	Description	Photo	Type/Grade
0.00	SN	Start node type: Source	10485875	Comment / 0
0.00	WL	Water level 5% height/diameter	10485876	Comment / 0
0.07	DER (S01)	Settled deposits coarse 60% cross-sectional area loss, Start	10485877	Service / 4
7.33	DER (F01)	Settled deposits coarse 60% cross-sectional area loss, Finished	10485882	Service / 4
7.33	SA	Survey abandoned - Remark: 75% FULL DEBRIS AND ROOTS	10485884	Comment / 0



End Node Ref:OUTFALL1 | I/L : metres

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Job Number	Surveyed by (Operator)	Base Unit	Date
LS5603	**Joe COLLINS**	**DJVV56JNNH**	**09/10/2024**



Start node type: Source



Water level 5% height/diameter



Settled deposits coarse 60% cross-sectional area loss, Start



Settled deposits coarse 60% cross-sectional area loss, Finished



Survey abandoned - Remark: 75% FULL DEBRIS AND ROOTS

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CCTV Inspection Report

Surveyed by (Operator)	Job Number	Pipe Length Reference(PLR)	Date	Pre Cleaned
Joe COLLINS	**LS5603**	**A X**	**09/10/2024**	**Not Cleaned**
Weather	Customer Present	Service Grade/Structural Grade	Base Unit	Section Number
1 - Dry		**4/0**	**DJVV56JNNH**	**8**

Road **Ryebank Fields,**
Place **Manchester,**
Location **M21 9WW**

Division
District
Location Details

Purpose
Duty **Combined**
Catchment

Shape/Size **375mm**
Material **Vitrified clay**
Category

Start Node **MH9401**
End Node **A**
Total length **22 metres**

Scale **1:1.15**
Direction **Upstream**

Start Node Ref:MH9401 | I/L : metres | Depth: 3.73 metres



Position	Code	Description	Photo	Type/Grade
0.00	MH	Start node type, manhole, reference MH9401	10486037	Comment / 0
0.00	WL	Water level 5% height/diameter	10486038	Comment / 0
0.27	CN	Connection other than junction at 9 o'clock, diameter 225mm	10486047	Comment / 0
1.69	SC	Dimensions of drain/sewer changes to 150mm	10486049	Comment / 0
4.60	DEE	Attached deposits, encrustation from 12 to 12 o'clock 30% cross-sectional area loss	10486323	Service / 4
4.76	SA	Survey abandoned - Remark: UNABLE TO PASS CUTTER REQUIRED	10486324	Comment / 0

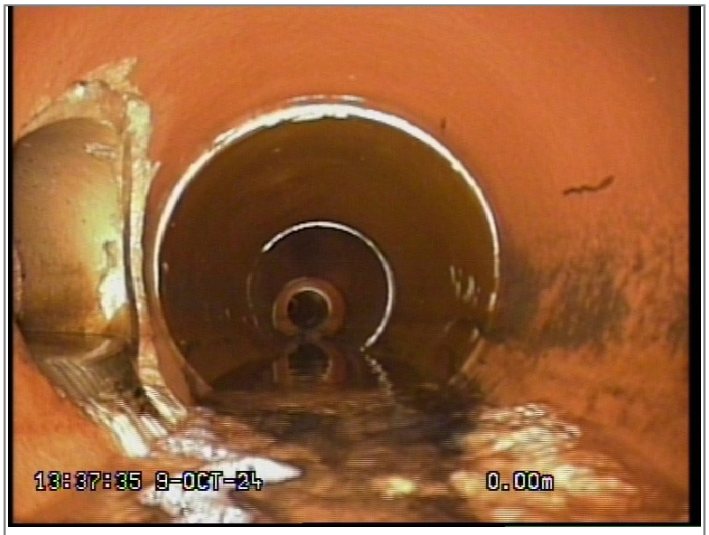
End Node Ref:A | I/L : metres

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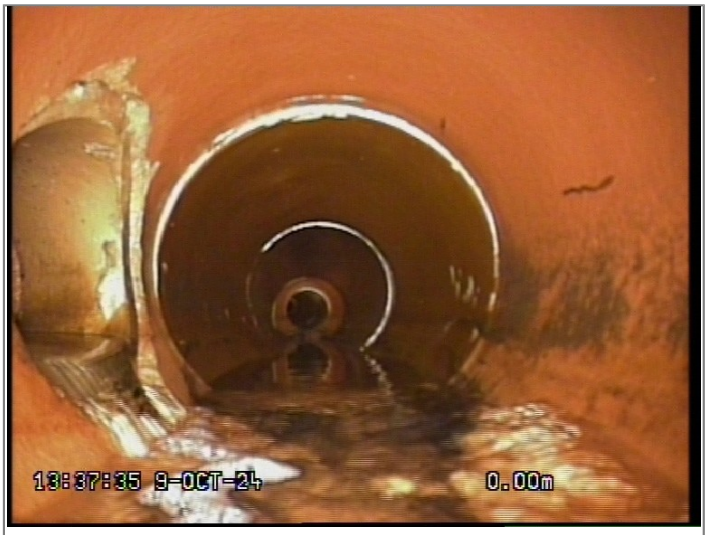
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Job Number	Surveyed by (Operator)	Base Unit	Date
LS5603	**Joe COLLINS**	**DJVV56JNNH**	**09/10/2024**



Start node type, manhole, reference MH9401



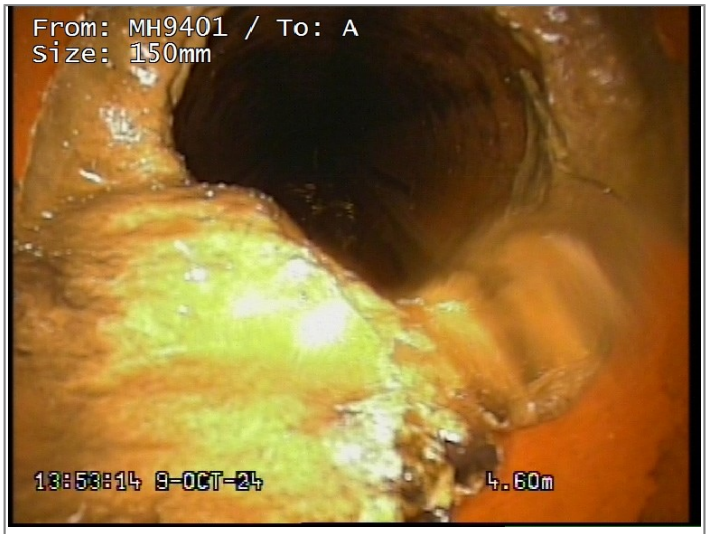
Water level 5% height/diameter



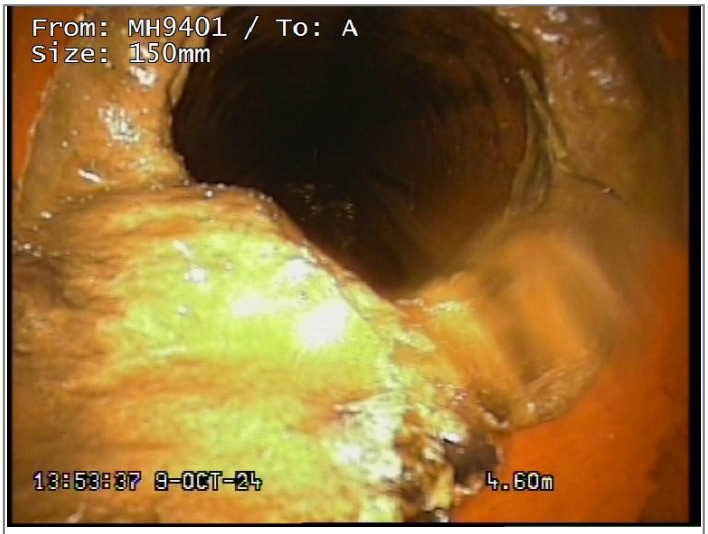
Connection other than junction at 9 o'clock, diameter 225mm



Dimensions of drain/sewer changes to 150mm



Attached deposits, encrustation from 12 to 12 o'clock 30% cross-sectional area loss



Survey abandoned - Remark: UNABLE TO PASS CUTTER REQUIRED

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CCTV Inspection Report

Surveyed by (Operator)	Job Number	Pipe Length Reference(PLR)	Date	Pre Cleaned
Joe COLLINS	**LS5603**	**MH0401 X**	**09/10/2024**	**Flushed through to enable survey**
Weather	Customer Present	Service Grade/Structural Grade	Base Unit	Section Number
1 - Dry		**3/0**	**DJVV56JNNH**	**9**

Road **Ryebank Fields,**
Place **Manchester,**
Location **M21 9WW**

Division
District
Location Details

Purpose
Duty **Surface water**
Catchment

Shape/Size **1200mm**
Material **Brick**
Category

Start Node **MH9400**
End Node **MH0401**
Total length **98 metres**

Scale **1:5.14**
Direction **Upstream**

Start Node Ref:MH9400 | I/L : metres | Depth: 5.90 metres



Position	Code	Description	Photo	Type/Grade
0.00	MH	Start node type, manhole, reference MH9400	10486603	Comment / 0
0.00	WL	Water level 5% height/diameter	10486607	Comment / 0
44.00	DEE (S01)	Attached deposits, encrustation from 7 to 5 o'clock 10% cross-sectional area loss, Start	10486663	Service / 3
61.00	DEE (F01)	Attached deposits, encrustation from 7 to 5 o'clock 10% cross-sectional area loss, Finished	10486675	Service / 3
61.42	SA	Survey abandoned - Remark: CLEANSE REQUIRED	10486690	Comment / 0

End Node Ref:MH0401 | I/L : metres

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Job Number	Surveyed by (Operator)	Base Unit	Date
LS5603	**Joe COLLINS**	**DJVV56JNNH**	**09/10/2024**



Start node type, manhole, reference MH9400



Water level 5% height/diameter



Attached deposits, encrustation from 7 to 5 o'clock 10% cross-sectional area loss, Start



Attached deposits, encrustation from 7 to 5 o'clock 10% cross-sectional area loss, Finished



Survey abandoned - Remark: CLEANSE REQUIRED

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CCTV Inspection Report

Surveyed by (Operator)	Job Number	Pipe Length Reference(PLR)	Date	Pre Cleaned
Joe COLLINS	**LS5603**	**A X**	**10/10/2024**	**Flushed through to enable survey**
Weather	Customer Present	Service Grade/Structural Grade	Base Unit	Section Number
1 - Dry		**4/0**	**DJVV56JNNH**	**10**

Road **Ryebank Fields,**
Place **Manchester,**
Location **M21 9WW**

Division
District
Location Details

Purpose
Duty **Surface water**
Catchment

Shape/Size **1200mm**
Material **Brick**
Category

Start Node **MH0401**
End Node **A**
Total length **90 metres**

Scale **1:4.72**
Direction **Upstream**

Start Node Ref:MH0401 | I/L : metres | Depth: 5.38 metres

Position	Code	Description	Photo	Type/Grade
0.00	MH	Start node type, manhole, reference MH0401	10491488	Comment / 0
0.00	WL	Water level 5% height/diameter	10491489	Comment / 0
0.00	DEE (S01)	Attached deposits, encrustation from 7 to 5 o'clock 20% cross-sectional area loss, Start	10491490	Service / 3
64.22	DEE (F01)	Attached deposits, encrustation from 7 to 5 o'clock 20% cross-sectional area loss, Finished	10491562	Service / 3
64.22	DER	Settled deposits coarse 40% cross-sectional area loss	10491564	Service / 4
64.22	SA	Survey abandoned - Remark: DUE TO DEBRIS IN LINE	10491587	Comment / 0



End Node Ref:A | I/L : metres

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CCTV Inspection Photos

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Job Number	Surveyed by (Operator)	Base Unit	Date
LS5603	**Joe COLLINS**	**DJVV56JNNH**	**09/10/2024**



Start node type, manhole, reference MH0401



Water level 5% height/diameter



Attached deposits, encrustation from 7 to 5 o'clock 20% cross-sectional area loss, Start



Attached deposits, encrustation from 7 to 5 o'clock 20% cross-sectional area loss, Finished



Settled deposits coarse 40% cross-sectional area loss



Survey abandoned - Remark: DUE TO DEBRIS IN LINE

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CCTV Inspection Report

Surveyed by (Operator)	Job Number	Pipe Length Reference(PLR)	Date	Pre Cleaned
Joe COLLINS	**LS5603**	**MH0401 X**	**10/10/2024**	**Flushed through to enable survey**
Weather	Customer Present	Service Grade/Structural Grade	Base Unit	Section Number
1 - Dry		**0/0**	**DJVV56JNNH**	**11**

Road **Ryebank Fields,**
Place **Manchester,**
Location **M21 9WW**

Division
District
Location Details

Purpose
Duty **Surface water**
Catchment

Shape/Size **1200mm**
Material **Brick**
Category

Start Node **MH0401**
End Node **MH9400**
Total length **96 metres**

Scale **1:5.04**
Direction **Downstream**

Start Node Ref:MH0401 | I/L : metres | Depth: 5.38 metres

Position	Code	Description	Photo	Type/Grade
0.00	MH	Start node type, manhole, reference MH0401	10491664	Comment / 0
0.00	WL	Water level 5% height/diameter	10491665	Comment / 0
12.14	SA	Survey abandoned - Remark: CUTTER REQUIRED	10491688	Comment / 0



End Node Ref:MH9400 | I/L : metres | Depth: 5.90 metres

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Leyland
PR26 6TY

Job Number	Surveyed by (Operator)	Base Unit	Date
LS5603	**Joe COLLINS**	**DJVV56JNNH**	**09/10/2024**



Start node type, manhole, reference MH0401



Water level 5% height/diameter



Survey abandoned - Remark: CUTTER REQUIRED

OFFICES NATIONWIDE

North West Office
Office 1-2, The Gatehouse, Lancashire Business Park,
Leyland, PR26 6TY

Midlands Office
Unit 2, 262 Walsall Road, Cannock, WS11 0JL

Southern Office
Grove Park Business Estate Waltham Rd,
White Waltham, Maidenhead SL6 3LW

Phone and Email
01772 611634
info@layersurveys.co.uk

Website
www.layersurveys.co.uk

Layer Surveys Ltd
Head Office: Offices 1-2, The Gatehouse, Lancashire Business Park, Leyland, PR26 6TY
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Layer Surveys Ltd Manhole Survey Card

Card No	1	Map No	
Catchment		MH No	MH1
Location	RYEBANK FIELDS		
Town	MANCHESTER		

★ PU Status	Syphon	★ S Function	★ MH MH Type	09/10/2024 Date of Survey

COVER DETAILS

X Square	Rectangle	Triangle	Dbl Triangle	Circular	Oval	Other	Multiple	Hinged	Lockable

Cover Level	m	H / M / L Cover Duty ★ H	Initials DP

PIPE DETAILS

Incoming Pipes

Clockwise from pipe X

Pipe	Depth from Invert (m)	Upstream / Downstream MH Ref	Shape	Size (mm) Height		Width	Pipe Mat	Lining Mat	Back Drop Dia (mm)	Back Drop Depth (m)
A	0.70	US-A	C	100	X		VC			
B	1.10	US-B	C	150	X		VC			
C	1.10	US-C	C	100	X		VC			
					X					
					X					
					X					

Outgoing Pipes

X	1.79	DS-X	C	150	X		VC			
Y					X					

Cover Opening at narrowest	470X470 mm	Chamber Dimension	700X600 mm	Evidence of Surcharge	
Shaft at narrowest	mm	Shaft Depth (from CL)	mm	OX / H2S / METH Toxic atmosphere	

MANHOLE CONSTRUCTION DETAILS

X Pre Cast Concrete	In Situ Concrete	X Brick	GRP	Arch	Corbel	Taper	Side Entry
Reducing Slab	Segments	No. of Landings	No. of Step Irons	No. of Ladders			
No. of Regulating Brick Courses							

CONDITION INFORMATION (specific in remark)

	Cover	Shaft	Irons / Ladders	Chamber	Benching	Channel
OK	X	X	X	X	X	X
Needs attention						
Urgent attention						

Depth of Flow	mm	Depth of Silt	mm	Height of Surcharge from CL	mm

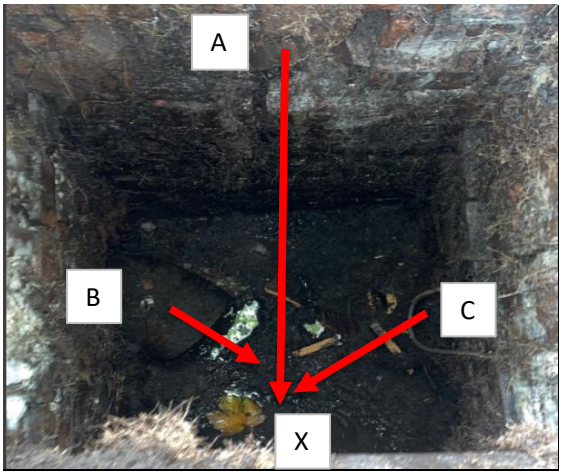
REMARKS

★ *See Overleaf for Key*

LOCATION SKETCH



PLAN OF MANHOLE



STATUS	PU : Public	PR : Private	WC : Culverted Watercourse	} Applies to main outlet	
	24 : Section 24	HD : Highway Drain			
FUNCTION	F : Foul	C : Combined	S : Surface Water	} Applies to main outlet	
MANHOLE TYPE	IF : Infall	MH : Manhole	CP : Catchpit	CSO :Consented Sewer Overflow	
	LH : Lamphole	RE : Rodding Eye	SO : Storm Overflow	DS :Dual system Manhole	
	GU : Gully	OF : Outfall	SA : Soakaway	PS :Pumping Station	
COVER DUTY	L : Light Duty	M : Medium Duty	H : Heavy Duty		
SHAPE	C : Circular	E : Egg	R : Rectangular		
	S : Square	T : Trapezoidal	A : Arched		
	B : Barrel	H : Horseshoe (Inverted U)	U : U-shaped with flat top		
	X : Other (state in words)				
PIPE (OR LINING) MATERIAL	AK : Alkathene	AC : Asbestos Cement	BR : Brick		
	CI : Cast Iron	SI : Spun (Grey) Iron	CO : Concrete		
	CSB : Concrete Segments (Bolted)	CSU : Concrete Segments (Unbolted)	CC : Concrete Box Culvert		
	DI : Ductile Iron	GRC : Glass Reinforced Concrete	GRP : Glass Reinforced Plastic		
	PSC : Plastic/Steel Composite	PVC : Polyvinyl Chloride	PE : Polyethylene		
	RPM : Reinforced Plastic Matrix	ST : Steel	VC : Vitrified Clay		
	PP : Polypropylene	PF : Pitch Fibre	MAC : Masonry, Coursed		
	MAR : Masonry, Randon Courses	XXX : Other (State in remarks)			
LINING	BL : Bitumen	RL : Resin	IS : Insituform		
	CL : Cement	PI : Plastic			

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Layer Surveys Ltd Manhole Survey Card

Card No	8	Map No	
Catchment		MH No	MH0400
Location	RYEBANK FIELDS		
Town	MANCHESTER		

★		★	★		
PU	Status	Syphon	C	Function	MH	MH Type	10/10/2024	Date of Survey

COVER DETAILS

X Square	Rectangle	Triangle	Dbl Triangle	Circular	Oval	Other	Multiple	Hinged	Lockable

			★		
Cover Level	m	H / M / L Cover Duty	H	Initials	DP

PIPE DETAILS

Incoming Pipes

Clockwise from pipe X

Pipe	Depth from Invert (m)	Upstream / Downstream MH Ref	Shape	Size (mm) Height		Width	Pipe Mat	Lining Mat	Back Drop Dia (mm)	Back Drop Depth (m)
A	3.59	US-A	C	375	X		VC			
					X					
					X					
					X					
					X					
					X					

Outgoing Pipes

X	3.60	MH9401	C	375	X		VC			
					X					

Cover Opening at narrowest	470X470 mm	Chamber Dimension	1500X700 mm	Evidence of Surcharge	
Shaft at narrowest	700X850 mm	Shaft Depth (from CL)	2. 00 mm	OX / H2S / METH Toxic atmosphere	

MANHOLE CONSTRUCTION DETAILS

X Pre Cast Concrete	In Situ Concrete	X Brick	GRP	Arch	Corbel	Taper	Side Entry
Reducing Slab	Segments	No. of Landings	8 No. of Step Irons	No. of Ladders			
No. of Regulating Brick Courses							

CONDITION INFORMATION (specific in remark)

	Cover	Shaft	Irons / Ladders	Chamber	Benching	Channel
OK	x	x	x	x	x	x
Needs attention						
Urgent attention						

Depth of Flow	mm	Depth of Silt	mm	Height of Surcharge from CL	mm

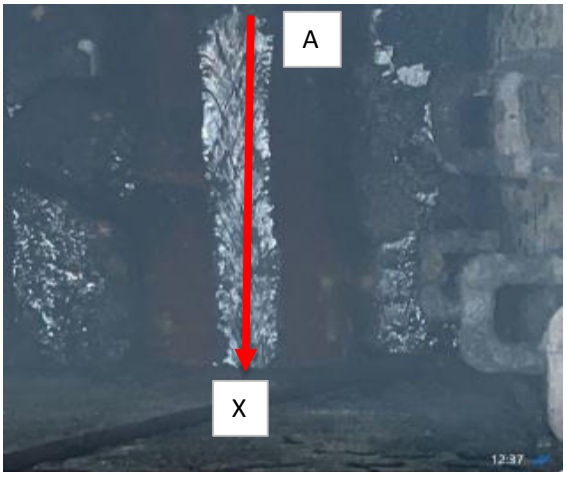
REMARKS

★ *See Overleaf for Key*

LOCATION SKETCH



PLAN OF MANHOLE



STATUS	PU : Public	PR : Private	WC : Culverted Watercourse	}	Applies to main outlet
	24 : Section 24	HD : Highway Drain			
FUNCTION	F : Foul	C : Combined	S : Surface Water	}	Applies to main outlet
MANHOLE TYPE	IF : Infall	MH : Manhole	CP : Catchpit	CSO	:Consented Sewer Overflow
	LH : Lamphole	RE : Rodding Eye	SO : Storm Overflow	DS	:Dual system Manhole
	GU : Gully	OF : Outfall	SA : Soakaway	PS	:Pumping Station
COVER DUTY	L : Light Duty	M : Medium Duty	H : Heavy Duty		
SHAPE	C : Circular	E : Egg	R : Rectangular		
	S : Square	T : Trapezoidal	A : Arched		
	B : Barrel	H : Horseshoe (Inverted U)	U : U-shaped with flat top		
	X : Other (state in words)				
PIPE (OR LINING) MATERIAL	AK : Alkathene	AC : Asbestos Cement	BR : Brick		
	CI : Cast Iron	SI : Spun (Grey) Iron	CO : Concrete		
	CSB : Concrete Segments (Bolted)	CSU : Concrete Segments (Unbolted)	CC : Concrete Box Culvert		
	DI : Ductile Iron	GRC : Glass Reinforced Concrete	GRP : Glass Reinforced Plastic		
	PSC : Plastic/Steel Composite	PVC : Polyvinyl Chloride	PE : Polyethylene		
	RPM : Reinforced Plastic Matrix	ST : Steel	VC : Vitrified Clay		
	PP : Polypropylene	PF : Pitch Fibre	MAC : Masonry, Coursed		
	MAR : Masonry, Randon Courses	XXX : Other (State in remarks)			
LINING	BL : Bitumen	RL : Resin	IS : Insituform		
	CL : Cement	PI : Plastic			

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Layer Surveys Ltd Manhole Survey Card

Card No	7	Map No	
Catchment		MH No	MH0401
Location	RYEBANK FIELDS		
Town	MANCHESTER		

★		★	★		
PU Status	Syphon	C Function	MH MH Type	10/10/2024 Date of Survey	

COVER DETAILS

X Square	Rectangle	Triangle	Dbl Triangle	Circular	Oval	Other	Multiple	Hinged	Lockable

Cover Level ____ m H / M / L Cover Duty ★ H Initials DP

PIPE DETAILS

Incoming Pipes

Clockwise from pipe X

Pipe	Depth from Invert (m)	Upstream / Downstream MH Ref	Shape	Size (mm) Height		Width	Pipe Mat	Lining Mat	Back Drop Dia (mm)	Back Drop Depth (m)
A	5.37	US-A	C	1200	X		BR			
B	5.30	US-B	C	150	X		Cl			
C					X					
					X					
					X					
					X					

Outgoing Pipes

X	5.37	MH9400	C	1200	X		BR			
Y					X					

Cover Opening at narrowest	620X620 mm	Chamber Dimension	1200X1400 mm	Evidence of Surcharge	
Shaft at narrowest	800X1200 mm	Shaft Depth (from CL)	3 mm	OX / H2S / METH Toxic atmosphere	

MANHOLE CONSTRUCTION DETAILS

X Pre Cast Concrete	In Situ Concrete	X Brick	GRP	Arch	Corbel	Taper	Side Entry
Reducing Slab	Segments	No. of Landings	10 No. of Step Irons	No. of Ladders			
No. of Regulating Brick Courses							

CONDITION INFORMATION (specific in remark)

	Cover	Shaft	Irons / Ladders	Chamber	Benching	Channel
OK	x	x	x	x	x	x
Needs attention						
Urgent attention						

Depth of Flow ____ mm Depth of Silt ____ mm Height of Surcharge from CL ____ mm

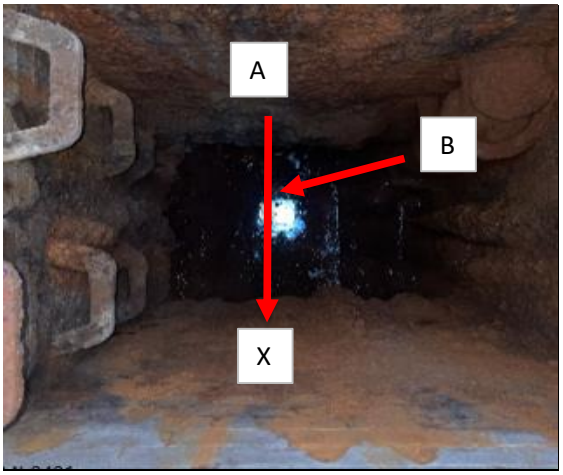
REMARKS

★ *See Overleaf for Key*

LOCATION SKETCH



PLAN OF MANHOLE



STATUS	PU : Public	PR : Private	WC : Culverted Watercourse	}	Applies to main outlet
	24 : Section 24	HD : Highway Drain			
FUNCTION	F : Foul	C : Combined	S : Surface Water	}	Applies to main outlet
MANHOLE TYPE	IF : Infall	MH : Manhole	CP : Catchpit	CSO	:Consented Sewer Overflow
	LH : Lamphole	RE : Rodding Eye	SO : Storm Overflow	DS	:Dual system Manhole
	GU : Gully	OF : Outfall	SA : Soakaway	PS	:Pumping Station
COVER DUTY	L : Light Duty	M : Medium Duty	H : Heavy Duty		
SHAPE	C : Circular	E : Egg	R : Rectangular		
	S : Square	T : Trapezoidal	A : Arched		
	B : Barrel	H : Horseshoe (Inverted U)	U : U-shaped with flat top		
	X : Other (state in words)				
PIPE (OR LINING) MATERIAL	AK : Alkathene	AC : Asbestos Cement	BR : Brick		
	CI : Cast Iron	SI : Spun (Grey) Iron	CO : Concrete		
	CSB : Concrete Segments (Bolted)	CSU : Concrete Segments (Unbolted)	CC : Concrete Box Culvert		
	DI : Ductile Iron	GRC : Glass Reinforced Concrete	GRP : Glass Reinforced Plastic		
	PSC : Plastic/Steel Composite	PVC : Polyvinyl Chloride	PE : Polyethylene		
	RPM : Reinforced Plastic Matrix	ST : Steel	VC : Vitrified Clay		
	PP : Polypropylene	PF : Pitch Fibre	MAC : Masonry, Coursed		
	MAR : Masonry, Randon Courses	XXX : Other (State in remarks)			
LINING	BL : Bitumen	RL : Resin	IS : Insituform		
	CL : Cement	PI : Plastic			

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Layer Surveys Ltd Manhole Survey Card

Card No	3	Map No	
Catchment		MH No	MH8602
Location	RYEBANK FIELDS		
Town	MANCHESTER		

★		★	★		
PU Status	Syphon	S Function	MH MH Type	09/10/2024 Date of Survey	

COVER DETAILS

X Square	Rectangle	Triangle	Dbl Triangle	Circular	Oval	Other	Multiple	Hinged	Lockable

Cover Level ____ m H / M / L Cover Duty ★ H Initials DP

PIPE DETAILS

Incoming Pipes

Clockwise from pipe X

Pipe	Depth from Invert (m)	Upstream / Downstream MH Ref	Shape	Size (mm) Height		Width	Pipe Mat	Lining Mat	Back Drop Dia (mm)	Back Drop Depth (m)
A	1.79	MH8603	C	225	X		VC			
B	1.79	US-B	C	100	X		VC			
C	1.79	US-C	C	100	X		VC			
					X					
					X					
					X					

Outgoing Pipes

X	1.80	DS-X	C	225	X		VC			
Y					X					

Cover Opening at narrowest	470X470 mm	Chamber Dimension	mm	Evidence of Surcharge	
Shaft at narrowest	mm	Shaft Depth (from CL)	mm	OX / H2S / METH Toxic atmosphere	

MANHOLE CONSTRUCTION DETAILS

X Pre Cast Concrete	In Situ Concrete	X Brick	GRP	Arch	Corbel	Taper	Side Entry
Reducing Slab	Segments	No. of Landings	2 No. of Step Irons	No. of Ladders			
No. of Regulating Brick Courses							

CONDITION INFORMATION (specific in remark)

	Cover	Shaft	Irons / Ladders	Chamber	Benching	Channel
OK	x	x	x	x	x	x
Needs attention						
Urgent attention						

Depth of Flow ____ mm Depth of Silt ____ mm Height of Surcharge from CL ____ mm

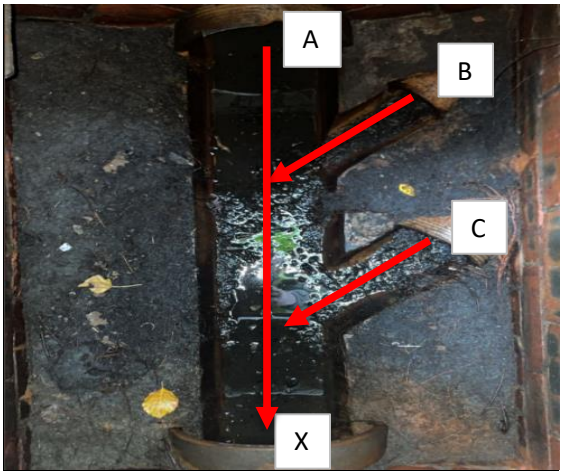
REMARKS

★ *See Overleaf for Key*

LOCATION SKETCH



PLAN OF MANHOLE



STATUS	PU : Public	PR : Private	WC : Culverted Watercourse	}	Applies to main outlet
	24 : Section 24	HD : Highway Drain			
FUNCTION	F : Foul	C : Combined	S : Surface Water	}	Applies to main outlet
MANHOLE TYPE	IF : Infall	MH : Manhole	CP : Catchpit	CSO	:Consented Sewer Overflow
	LH : Lamphole	RE : Rodding Eye	SO : Storm Overflow	DS	:Dual system Manhole
	GU : Gully	OF : Outfall	SA : Soakaway	PS	:Pumping Station
COVER DUTY	L : Light Duty	M : Medium Duty	H : Heavy Duty		
SHAPE	C : Circular	E : Egg	R : Rectangular		
	S : Square	T : Trapezoidal	A : Arched		
	B : Barrel	H : Horseshoe (Inverted U)	U : U-shaped with flat top		
	X : Other (state in words)				
PIPE (OR LINING) MATERIAL	AK : Alkathene	AC : Asbestos Cement	BR : Brick		
	CI : Cast Iron	SI : Spun (Grey) Iron	CO : Concrete		
	CSB : Concrete Segments (Bolted)	CSU : Concrete Segments (Unbolted)	CC : Concrete Box Culvert		
	DI : Ductile Iron	GRC : Glass Reinforced Concrete	GRP : Glass Reinforced Plastic		
	PSC : Plastic/Steel Composite	PVC : Polyvinyl Chloride	PE : Polyethylene		
	RPM : Reinforced Plastic Matrix	ST : Steel	VC : Vitrified Clay		
	PP : Polypropylene	PF : Pitch Fibre	MAC : Masonry, Coursed		
	MAR : Masonry, Randon Courses	XXX : Other (State in remarks)			
LINING	BL : Bitumen	RL : Resin	IS : Insituform		
	CL : Cement	PI : Plastic			

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Layer Surveys Ltd Manhole Survey Card

Card No	2	Map No	
Catchment		MH No	MH8603
Location	RYEBANK FIELDS		
Town	MANCHESTER		

★		★	★		
PU Status	Syphon	S Function	MH MH Type	09/10/2024 Date of Survey	

COVER DETAILS

X Square	Rectangle	Triangle	Dbl Triangle	Circular	Oval	Other	Multiple	Hinged	Lockable

Cover Level ____ m H / M / L Cover Duty ★ H Initials DP

PIPE DETAILS

Incoming Pipes

Clockwise from pipe X

Pipe	Depth from Invert (m)	Upstream / Downstream MH Ref	Shape	Size (mm) Height		Width	Pipe Mat	Lining Mat	Back Drop Dia (mm)	Back Drop Depth (m)
A	0.79	HOR			X					
B	0.78	CAPPED	C	100	X		VC			
C	0.79	US-C	C	100	X		VC			
					X					
					X					
					X					

Outgoing Pipes

X	0.80	MH8602	C	225	X		VC			
Y					X					

Cover Opening at narrowest	470X470 mm	Chamber Dimension	1050X900 mm	Evidence of Surcharge	
Shaft at narrowest	mm	Shaft Depth (from CL)	mm	OX / H2S / METH Toxic atmosphere	

MANHOLE CONSTRUCTION DETAILS

X Pre Cast Concrete	In Situ Concrete	X Brick	GRP	Arch	Corbel	Taper	Side Entry
Reducing Slab	Segments	No. of Landings		No. of Step Irons		No. of Ladders	
No. of Regulating Brick Courses							

CONDITION INFORMATION (specific in remark)

	Cover	Shaft	Irons / Ladders	Chamber	Benching	Channel
OK	X	X	X	X	X	X
Needs attention						
Urgent attention						

Depth of Flow ____ mm Depth of Silt ____ mm Height of Surcharge from CL ____ mm

REMARKS

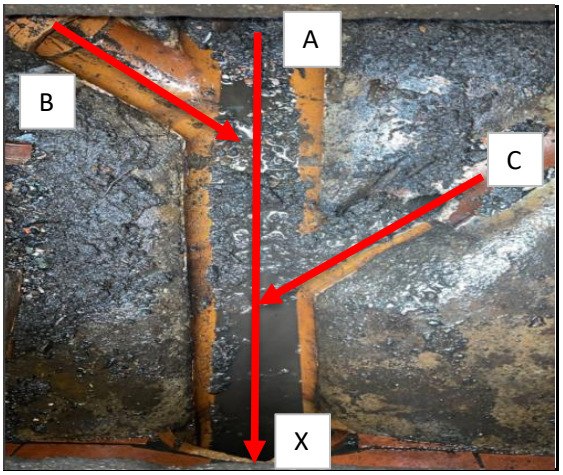
A IS HEAD OF RUN NO PIPE

★ *See Overleaf for Key*

LOCATION SKETCH



PLAN OF MANHOLE



STATUS	PU : Public	PR : Private	WC : Culverted Watercourse	} Applies to main outlet	
	24 : Section 24	HD : Highway Drain			
FUNCTION	F : Foul	C : Combined	S : Surface Water	} Applies to main outlet	
MANHOLE TYPE	IF : Infall	MH : Manhole	CP : Catchpit	CSO :Consented Sewer Overflow	
	LH : Lamphole	RE : Rodding Eye	SO : Storm Overflow	DS :Dual system Manhole	
	GU : Gully	OF : Outfall	SA : Soakaway	PS :Pumping Station	
COVER DUTY	L : Light Duty	M : Medium Duty	H : Heavy Duty		
SHAPE	C : Circular	E : Egg	R : Rectangular		
	S : Square	T : Trapezoidal	A : Arched		
	B : Barrel	H : Horseshoe (Inverted U)	U : U-shaped with flat top		
	X : Other (state in words)				
PIPE (OR LINING) MATERIAL	AK : Alkathene	AC : Asbestos Cement	BR : Brick		
	CI : Cast Iron	SI : Spun (Grey) Iron	CO : Concrete		
	CSB : Concrete Segments (Bolted)	CSU : Concrete Segments (Unbolted)	CC : Concrete Box Culvert		
	DI : Ductile Iron	GRC : Glass Reinforced Concrete	GRP : Glass Reinforced Plastic		
	PSC : Plastic/Steel Composite	PVC : Polyvinyl Chloride	PE : Polyethylene		
	RPM : Reinforced Plastic Matrix	ST : Steel	VC : Vitrified Clay		
	PP : Polypropylene	PF : Pitch Fibre	MAC : Masonry, Coursed		
	MAR : Masonry, Randon Courses	XXX : Other (State in remarks)			
LINING	BL : Bitumen	RL : Resin	IS : Insituform		
	CL : Cement	PI : Plastic			

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Layer Surveys Ltd Manhole Survey Card

Card No	6	Map No	
Catchment		MH No	MH9400
Location	RYEBANK FIELDS		
Town	MANCHESTER		

★		★	★		
PU Status	Syphon	C Function	MH MH Type	10/10/2024 Date of Survey	

COVER DETAILS

X Square	Rectangle	Triangle	Dbl Triangle	Circular	Oval	Other	Multiple	Hinged	Lockable

Cover Level ____ m H / M / L Cover Duty ★ H Initials DP

PIPE DETAILS

Incoming Pipes

Clockwise from pipe X

Pipe	Depth from Invert (m)	Upstream / Downstream MH Ref	Shape	Size (mm) Height		Width	Pipe Mat	Lining Mat	Back Drop Dia (mm)	Back Drop Depth (m)
A	5.89	US-A	C	1200	X		BR			
					X					
					X					
					X					
					X					
					X					

Outgoing Pipes

X	5.90		C	1200	X		BR			
Y					X					

Cover Opening at narrowest	600X600 mm	Chamber Dimension	1400X1100 mm	Evidence of Surcharge	
Shaft at narrowest	800X1100 mm	Shaft Depth (from CL)	4. 00 mm	OX / H2S / METH Toxic atmosphere	

MANHOLE CONSTRUCTION DETAILS

X Pre Cast Concrete	In Situ Concrete	X Brick	GRP	Arch	Corbel	Taper	Side Entry
Reducing Slab	Segments	No. of Landings	13 No. of Step Irons	No. of Ladders			
1 No. of Regulating Brick Courses							

CONDITION INFORMATION (specific in remark)

	Cover	Shaft	Irons / Ladders	Chamber	Benching	Channel
OK	x	x	x	x	x	x
Needs attention						
Urgent attention						

Depth of Flow ____ mm Depth of Silt ____ mm Height of Surcharge from CL ____ mm

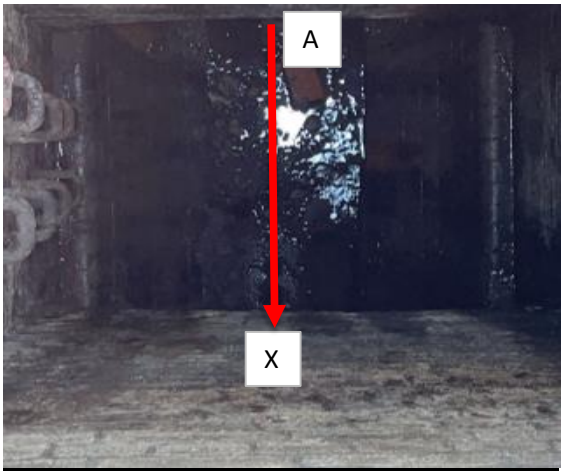
REMARKS

★ *See Overleaf for Key*

LOCATION SKETCH



PLAN OF MANHOLE



STATUS	PU : Public	PR : Private	WC : Culverted Watercourse	} Applies to main outlet	
	24 : Section 24	HD : Highway Drain			
FUNCTION	F : Foul	C : Combined	S : Surface Water	} Applies to main outlet	
MANHOLE TYPE	IF : Infall	MH : Manhole	CP : Catchpit	CSO :Consented Sewer Overflow	
	LH : Lamphole	RE : Rodding Eye	SO : Storm Overflow	DS :Dual system Manhole	
	GU : Gully	OF : Outfall	SA : Soakaway	PS :Pumping Station	
COVER DUTY	L : Light Duty	M : Medium Duty	H : Heavy Duty		
SHAPE	C : Circular	E : Egg	R : Rectangular		
	S : Square	T : Trapezoidal	A : Arched		
	B : Barrel	H : Horseshoe (Inverted U)	U : U-shaped with flat top		
	X : Other (state in words)				
PIPE (OR LINING) MATERIAL	AK : Alkathene	AC : Asbestos Cement	BR : Brick		
	CI : Cast Iron	SI : Spun (Grey) Iron	CO : Concrete		
	CSB : Concrete Segments (Bolted)	CSU : Concrete Segments (Unbolted)	CC : Concrete Box Culvert		
	DI : Ductile Iron	GRC : Glass Reinforced Concrete	GRP : Glass Reinforced Plastic		
	PSC : Plastic/Steel Composite	PVC : Polyvinyl Chloride	PE : Polyethylene		
	RPM : Reinforced Plastic Matrix	ST : Steel	VC : Vitrified Clay		
	PP : Polypropylene	PF : Pitch Fibre	MAC : Masonry, Coursed		
	MAR : Masonry, Randon Courses	XXX : Other (State in remarks)			
LINING	BL : Bitumen	RL : Resin	IS : Insituform		
	CL : Cement	PI : Plastic			

Layer Surveys Ltd
Head Office: Offices 1-2, The Gatehouse, Lancashire Business Park, Leyland, PR26 6TY
T: 01772 611634

LAYER SURVEYS LTD
SEE THE COMPLETE PICTURE

Layer Surveys Ltd Manhole Survey Card

Card No	5	Map No	
Catchment		MH No	MH9401
Location	RYEBANK FIELDS		
Town	MANCHESTER		

★		★	★		
PU Status	Syphon	C Function	MH MH Type	10/10/2024 Date of Survey	

COVER DETAILS

X Square	Rectangle	Triangle	Dbl Triangle	Circular	Oval	Other	Multiple	Hinged	Lockable

		★	
Cover Level	m	H / M / L Cover Duty	H

Initials: DP

PIPE DETAILS

Incoming Pipes

Clockwise from pipe X

Pipe	Depth from Invert (m)	Upstream / Downstream MH Ref	Shape	Size (mm) Height		Width	Pipe Mat	Lining Mat	Back Drop Dia (mm)	Back Drop Depth (m)
A	3.71	US-A	C	375	X		VC			
B	3.71	MH0400 US	C	375	X		VC			
					X					
					X					
					X					
					X					

Outgoing Pipes

X	3.73	DS-X	C	375	X		VC			
Y					X					

Cover Opening at narrowest	600X600 mm	Chamber Dimension	1600X800 mm	Evidence of Surcharge	
Shaft at narrowest	600X600 mm	Shaft Depth (from CL)	2. 00 mm	OX / H2S / METH Toxic atmosphere	

MANHOLE CONSTRUCTION DETAILS

X Pre Cast Concrete	In Situ Concrete	X Brick	GRP	Arch	Corbel	Taper	Side Entry
Reducing Slab	Segments	No. of Landings	7 No. of Step Irons	No. of Ladders			
No. of Regulating Brick Courses							

CONDITION INFORMATION (specific in remark)

	Cover	Shaft	Irons / Ladders	Chamber	Benching	Channel
OK	x	x	x	x	x	x
Needs attention						
Urgent attention						

Depth of Flow	mm	Depth of Silt	mm	Height of Surcharge from CL	mm

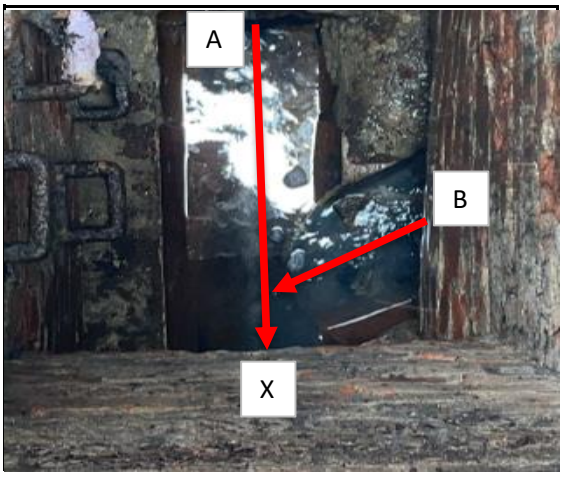
REMARKS

★ *See Overleaf for Key*

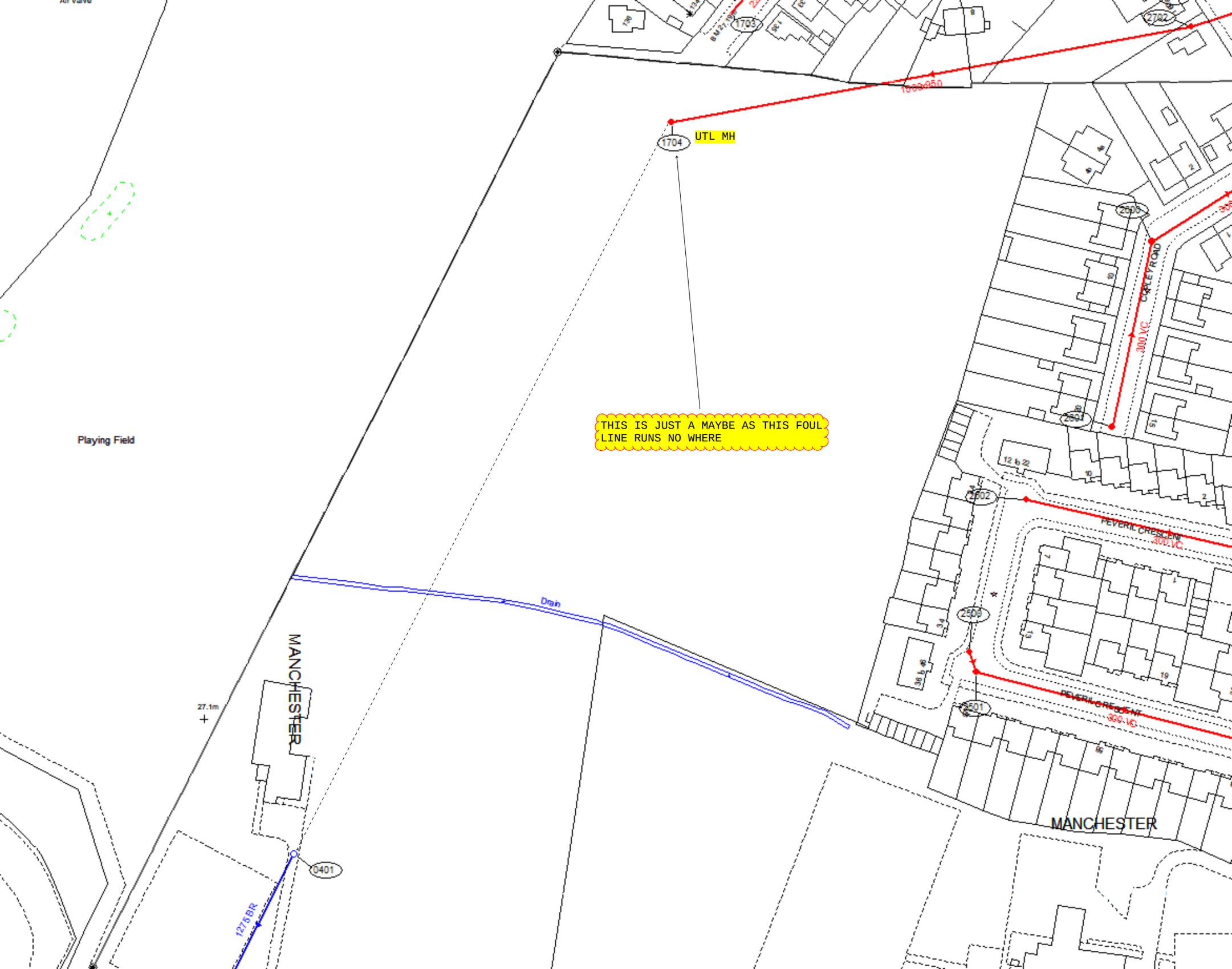
LOCATION SKETCH



PLAN OF MANHOLE



STATUS	PU : Public	PR : Private	WC : Culverted Watercourse	}	Applies to main outlet
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FUNCTION	F : Foul	C : Combined	S : Surface Water	}	Applies to main outlet
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	DI : Ductile Iron	GRC : Glass Reinforced Concrete	GRP : Glass Reinforced Plastic		
	PSC : Plastic/Steel Composite	PVC : Polyvinyl Chloride	PE : Polyethylene		
	RPM : Reinforced Plastic Matrix	ST : Steel	VC : Vitrified Clay		
	PP : Polypropylene	PF : Pitch Fibre	MAC : Masonry, Coursed		
	MAR : Masonry, Randon Courses	XXX : Other (State in remarks)			
LINING	BL : Bitumen	RL : Resin	IS : Insituform		
	CL : Cement	PI : Plastic			


1704
UTL MH
THIS IS JUST A MAYBE AS THIS FOUL LINE RUNS NO WHERE
Playing Field
Drain
MANCHESTER
MANCHESTER
27.1m
0401
1276BR
1703
2702
2503
2601
2602
2503
2501
CORLEY ROAD
300 VC
PEVERIL CRESCENT
300 VC
PEVERIL CRESCENT
300 VC


SA 70% SILT AND ROOTS
MH6692
1 CAPPED
MH6693
2
SA 70% SILT
SA 70% SILT
2
MH1
4 COLLAPSED
1
SA 70% SILT
THIS MH HAS 0.550M DEPTH OF SILT COVING THE OUTFALL
SA 75% DEB
CULVERT1
DONT LOOK LIKE THIS HAS RUN FOR A LONG TIME NO CLEANSE DUE TO CONDITION
THIS IS ASSUMED THE WATER CULVERT MAY HAVE BEEN DIVERTED THIS WAY OR IT COULD BE AN OVERFLOW LINE FROM Mh1704 ON OTHIS PLAN JUST TO SHOW
SA 70% CLN
ON THE CCTV DONT OOK LIKE THE SEWER RUNS MUCH MORE AFTER THIS POINT
MH6691
SA 100% ENCRUSTATION
SA 100% ENCRUSTATION
SA 100% ENCRUSTATION
SA 10% ENCRUSTATION
MH6692
MH6693
MH6694
MH6695
M21 9WW
aps
Legal

APPENDIX D

PROPOSED DEVELOPMENT PLANS

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All contractors must visit the site and be responsible for taking and checking all dimensions relative to their work, 5plus architects are to be advised of any variation between drawings and site conditions.

Electronic data/ drawings issued as 'read only' and should not be interrogated for measurement. All dimensions and levels should be 'read only' from those values stated in text, on the drawings

KEY PLAN:

Area in abeyance.

Revision.

NOTE:

Drawing based on survey information by others.

Drawing to read in conjunction with Landscape (TPM) information and Transport (SK) information .

(Please print in colour)

Key:

01 Age Friendly Affordable Accommodation - South
02 Supported Living For Autistic Adults Accommodation
03 Private Sale Houses - South
04 Cohousing Houses - South
05 Cohousing Apartments - South
06 Private Sale Villas - North
07 Private Sale Houses - North
08 Age Friendly Affordable Accommodation - North
09 Substation
10 Existing site access (Longford Road)
11 Extended site access (Rye bank Road)

LONGFORD ROAD

LONGFORD PARK

ST.JOHN'S SCHOOL

RYE BANK ROAD

Refer to Zone 2 Masterplan:
05476-5PA-Z02-00-DR-A-002200

Refer to Zone 1 Masterplan:
05476-5PA-Z01-00-DR-A-002200

REV:	DATE:	DETAILS:
I	22/04/26	Layout amended to suit updated drainage and flood mitigation design. Resubmitted for planning.
H	13/02/25	Updated Planning Issue
G	08/01/25	Updated Planning Issue
F	19/12/24	Planning Issue
E	05/12/24	Draft Planning Issue
D	25/11/24	Draft Planning Issue
C	12/11/24	Revised layout to incorperate planners comments on the landscaping and highways. Adjustment to Northern Affordable building to reflect change in brief. All external bin/bikes store reviewed and updated.
B	17/09/24	External bike & bin store included within masterplan location adjusted
A	05/09/24	Landscaping layout updated and external bike & bin store included within masterplan

NORTH

5plus

Manchester, 0161 228 0211
Fourth Floor, The Hive, 47 Lever Street, Manchester, M1 1FN

London, 0207 253 7644
The Leather Market, Weston Street, London SE1 3ER

www.5plusarchitects.com

PROJECT:
Ryebank Road
Chorlton

TITLE:
Proposed Site Plan
Proposed Masterplan

SCALE:	ORIGIN DATE:	DRAWN:	CHECKED:
1:500 @ A1	22/08/24	FP	RK

STATUS:
Planning

PROJECT	DRAWING NO:	REV:
05476	5PA-MP-XX-DR-A-000200	I

APPENDIX E

ENVIRONMENT AGENCY FLOOD DATA

Flood risk assessment data

Location of site: 381090 / 394589 (shown as easting and northing coordinates)
Document created on: 9 May 2025
This information was previously known as a product 4.
Customer reference number: BY4R1DX3FNUB

Map showing the location that flood risk assessment data has been requested for.



How to use this information

You can use this information as part of a flood risk assessment for a planning application. To do this, you should include it in the appendix of your flood risk assessment.

> **We recommend that you work with a flood risk consultant to get your flood risk assessment.**

Included in this document

In this document you'll find:

- how to find information about surface water and other sources of flooding
- information on the models used
- definitions for the terminology used throughout
- flood map for planning (rivers and the sea)
- modelled data
- information about strategic flood risk assessments
- information about this data
- information about flood risk activity permits
- help and advice

Information that's unavailable

This document **does not** contain:

- past floods
- flood defences and attributes

We do not have past flooding data for this location.

Please note that:

- flooding may have occurred that we do not have records for
- flooding can come from a range of different sources
- we can only supply flood risk data relating to floodng from rivers or the sea

You can contact your Lead Local Flood Authority or Internal Drainage Board to see if they have other relevant local flood information. Please note that some areas do not have an Internal Drainage Board.

We aren't able to display flood defence locations and attributes as there are no formal flood defences in the area of interest.

Surface water and other sources of flooding

When using the surface water map on the check your long term flood risk service the following considerations apply:

- surface water extents are suitable for use in planning
- surface water climate change scenarios may help to inform risk assessments, but the available data fall short of what is required to assess planned development
- surface water depth information should not be used for planning purposes

To find out about other factors that might affect the flood risk of this location, you should also check:

- reservoir flood risk
- groundwater flood risk - you could use the British Geological Survey groundwater flooding data, groundwater: current status and flood risk and the guide on mining and groundwater constraints for development - further information may be available from the lead local flood authority (LLFA)
- your local planning authority's SFRA, which includes future flood risk

Your Lead Local Flood Authority is Manchester District.

For information about sewer flooding, contact the relevant water company for the area.

About the models used

Model name: Chorlton Platt Gore 2024
Scenario(s): Defended fluvial, defences removed fluvial, defended climate change fluvial, defences removed climate change fluvial
Date: 15 April 2024

These models contain the most relevant data for your area of interest.

Terminology used

Annual exceedance probability (AEP)

This refers to the probability of a flood event occurring in any year. The probability is expressed as a percentage. For example, a large flood which is calculated to have a 1% chance of occuring in any one year, is described as 1% AEP.

Metres above ordnance datum (mAOD)

All flood levels are given in metres above ordnance datum which is defined as the mean sea level at Newlyn, Cornwall.

The flood zones for this location have not been updated with most recent available data.

Please note: The flood zones for this location have not been updated with most recent available data.

The flood zones shown on page 6 of this report should not be considered for planning purposes. However the modelled data below contains the latest information.

Flood map for planning (rivers and the sea)

Your selected location is in flood zone 2.

Flood zone 3 shows the area at risk of flooding for an undefended flood event with a:

- 0.5% or greater probability of occurring in any year for flooding from the sea
- 1% or greater probability of occurring in any year for fluvial (river) flooding

Flood zone 2 shows the area at risk of flooding for an undefended flood event with:

- between a 0.1% and 0.5% probability of occurring in any year for flooding from the sea
- between a 0.1% and 1% probability of occurring in any year for fluvial (river) flooding

It's important to remember that the flood zones on this map:

- refer to the land at risk of flooding and do not refer to individual properties
- refer to the probability of river and sea flooding, ignoring the presence of defences
- do not take into account potential impacts of climate change



Environment Agency

Flood map for planning

Location (easting/northing)
381090/394589

Scale
1:10,000

Created
9 May 2025

- Selected area
- Main river
- Flood defence
- Water storage area

Flood Zones 2 and 3
Rivers and Sea

- Flood Zone 3
- Flood Zone 2

0 100 200 300 400 500
metres

Modelled data

This section provides details of different scenarios we have modelled and includes the following (where available):

- outline maps showing the area at risk from flooding in different modelled scenarios
- map(s) showing the approximate water levels for the return period with the largest flood extent for a scenario and table(s) of sample points providing details of the flood risk for different return periods

Climate change

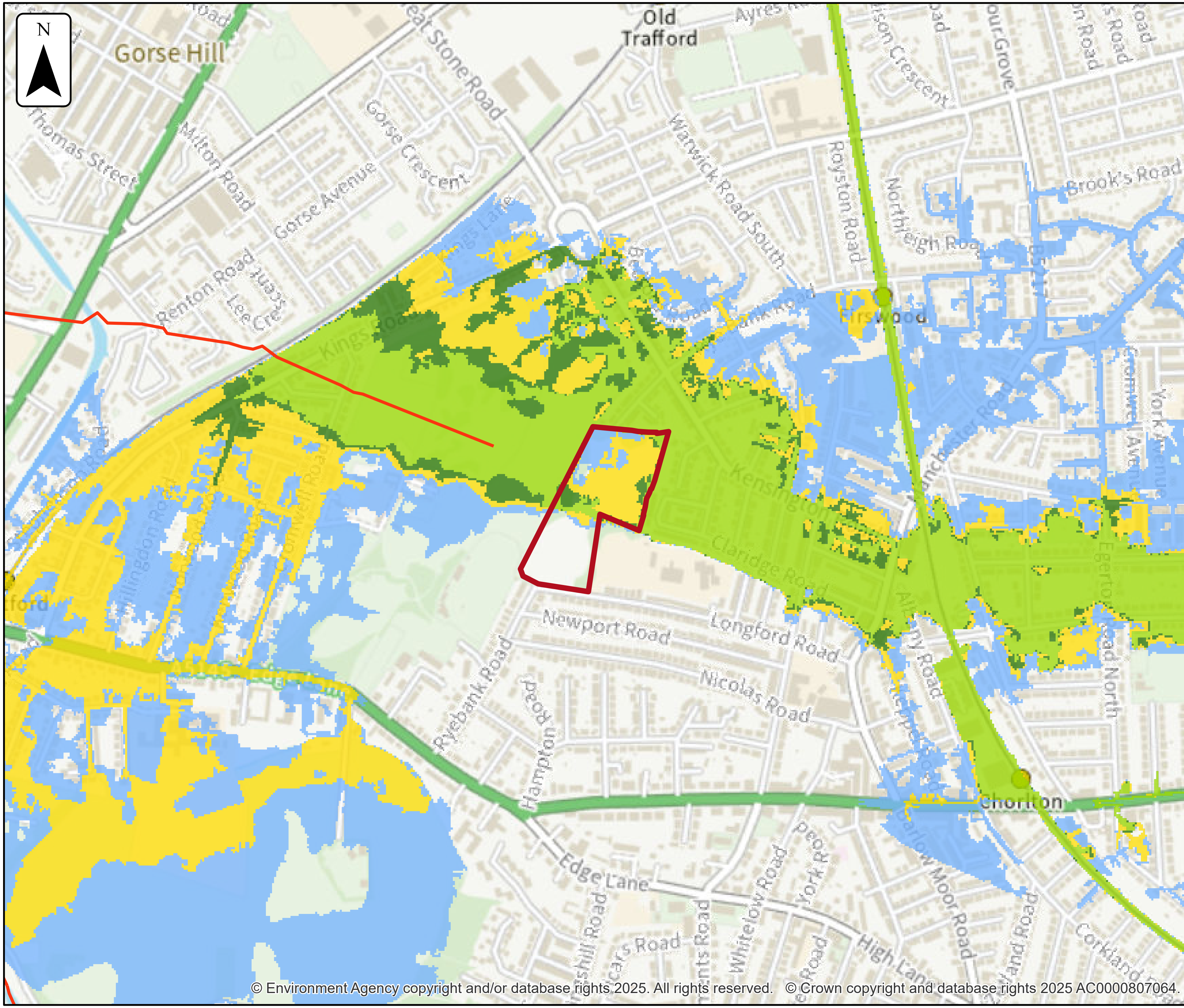
The climate change data included in the models may not include the latest flood risk assessment climate change allowances. Where the new allowances are not available you will need to consider this data and factor in the new allowances to demonstrate the development will be safe from flooding.

The Environment Agency will incorporate the new allowances into future modelling studies. For now, it's your responsibility to demonstrate that new developments will be safe in flood risk terms for their lifetime.

Modelled scenarios

The following scenarios are included:

- Defended modelled fluvial: risk of flooding from rivers where there are flood defences
- Defences removed modelled fluvial: risk of flooding from rivers where flood defences have been removed
- No defences exist modelled fluvial: risk of flooding from rivers where there are no flood defences
- Defended climate change modelled fluvial: risk of flooding from rivers where there are flood defences, including estimated impact of climate change
- Defences removed climate change modelled fluvial: risk of flooding from rivers where flood defences have been removed, including estimated impact of climate change
- No defences exist climate change modelled fluvial: risk of flooding from rivers where there are no flood defences, including estimated impact of climate change



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Environment Agency

Defences removed climate change modelled fluvial extent

Location (easting/northing)
381090/394589

Scale **1:10,000**

Created **9 May 2025**

Model name
Chorlton Platt Gore 2024

Selected area

Main river

Modelled flood extent

1% AEP (+41%)

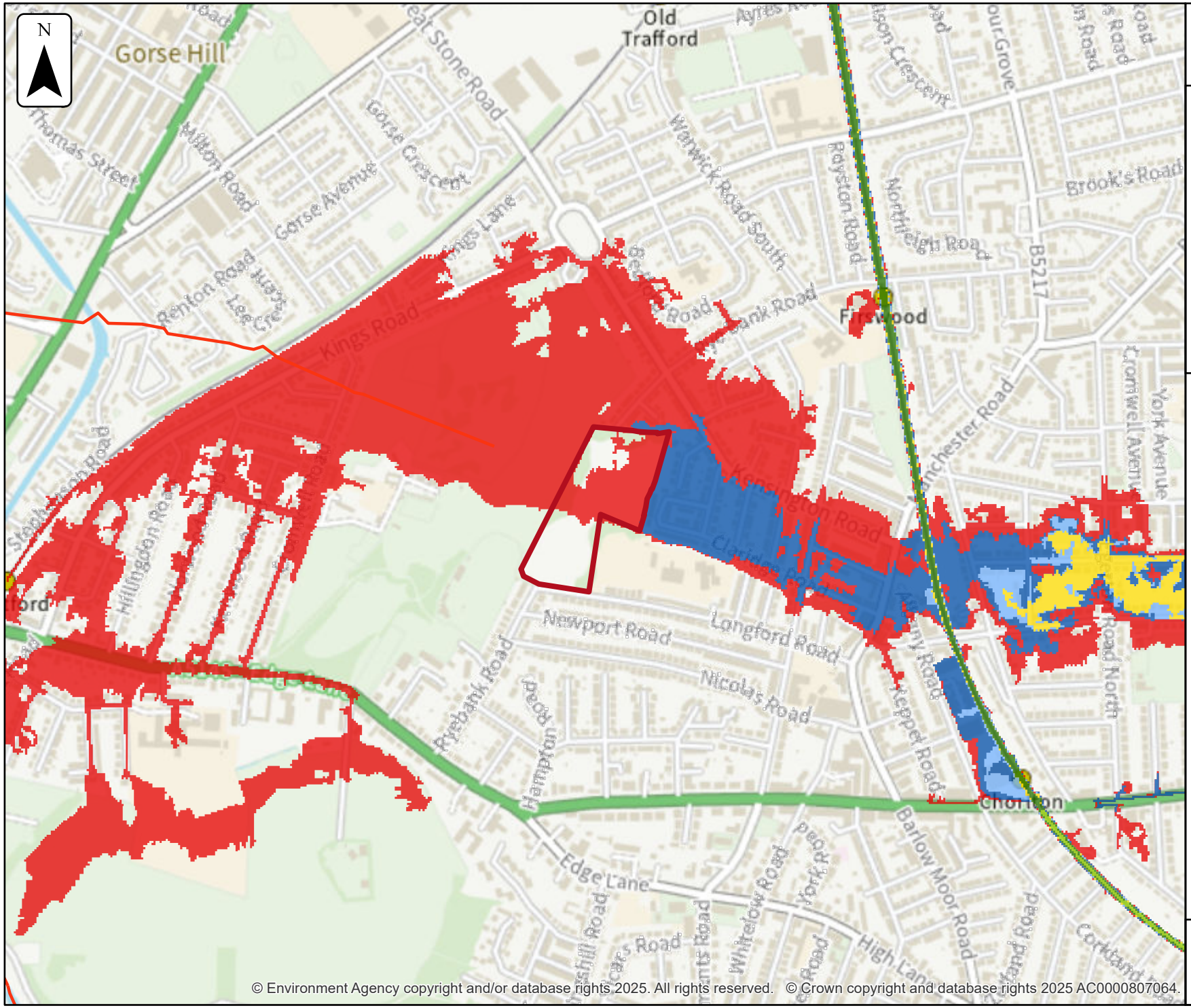
1% AEP (+53%)

1% AEP (+85%)

0.1% AEP (+53%)

Flood extents may not be visible where they overlap other return periods

0 100 200 300 400 500
metres



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Environment Agency

Defences removed modelled fluvial extent

Location (easting/northing)
381090/394589

Scale
1:10,000

Created
9 May 2025

Model name
Chorlton Platt Gore 2024

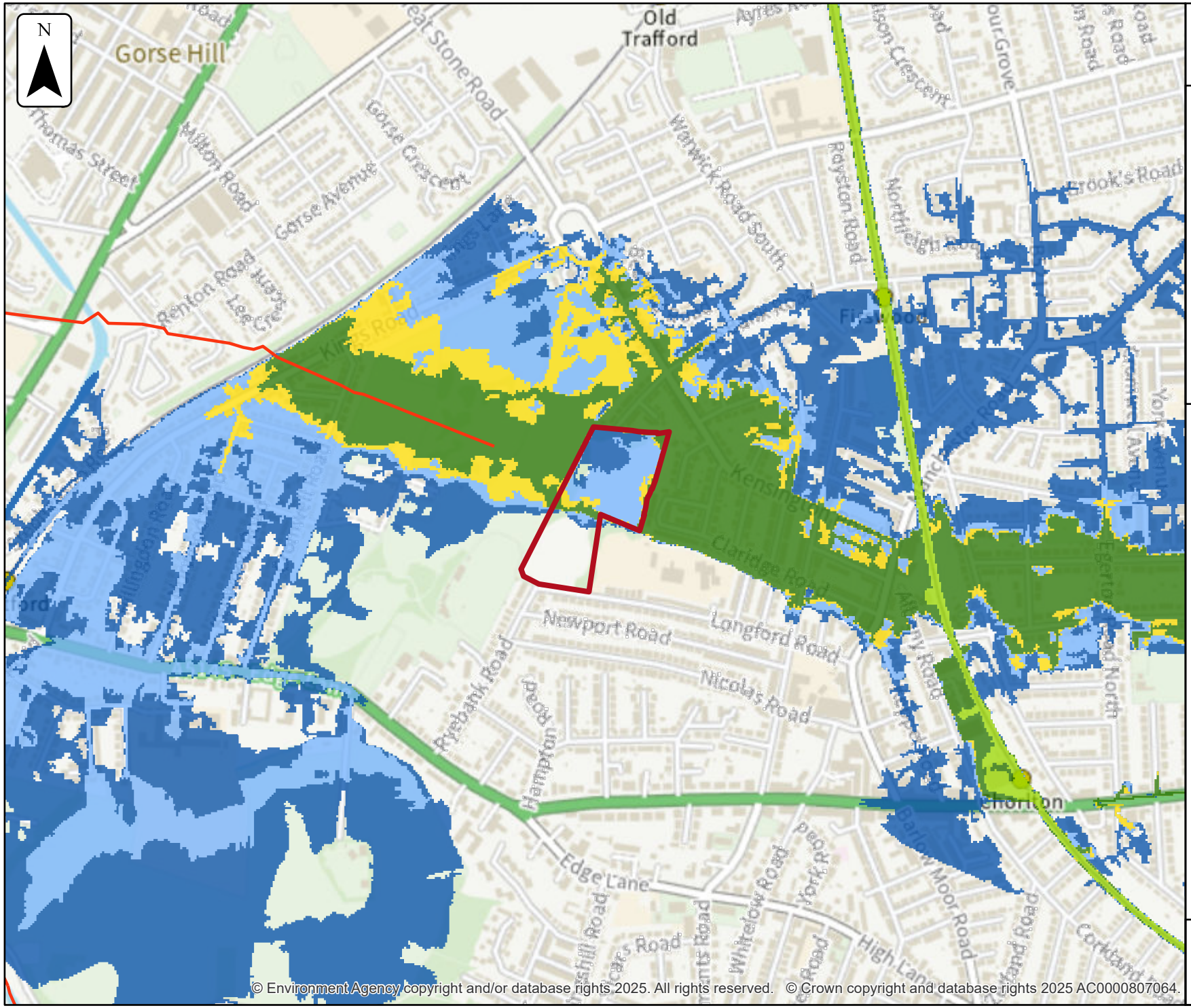
- Selected area
- Main river

Modelled flood extent

- 5% AEP
- 2% AEP
- 1.33% AEP
- 1% AEP
- 0.5% AEP
- 0.1% AEP

Flood extents may not be visible where they overlap other return periods

0 100 200 300 400 500
metres



Environment Agency

Defended climate change modelled fluvial extent

Location (easting/northing)
381090/394589

Scale
1:10,000

Created
9 May 2025

Model name
Chorlton Platt Gore 2024

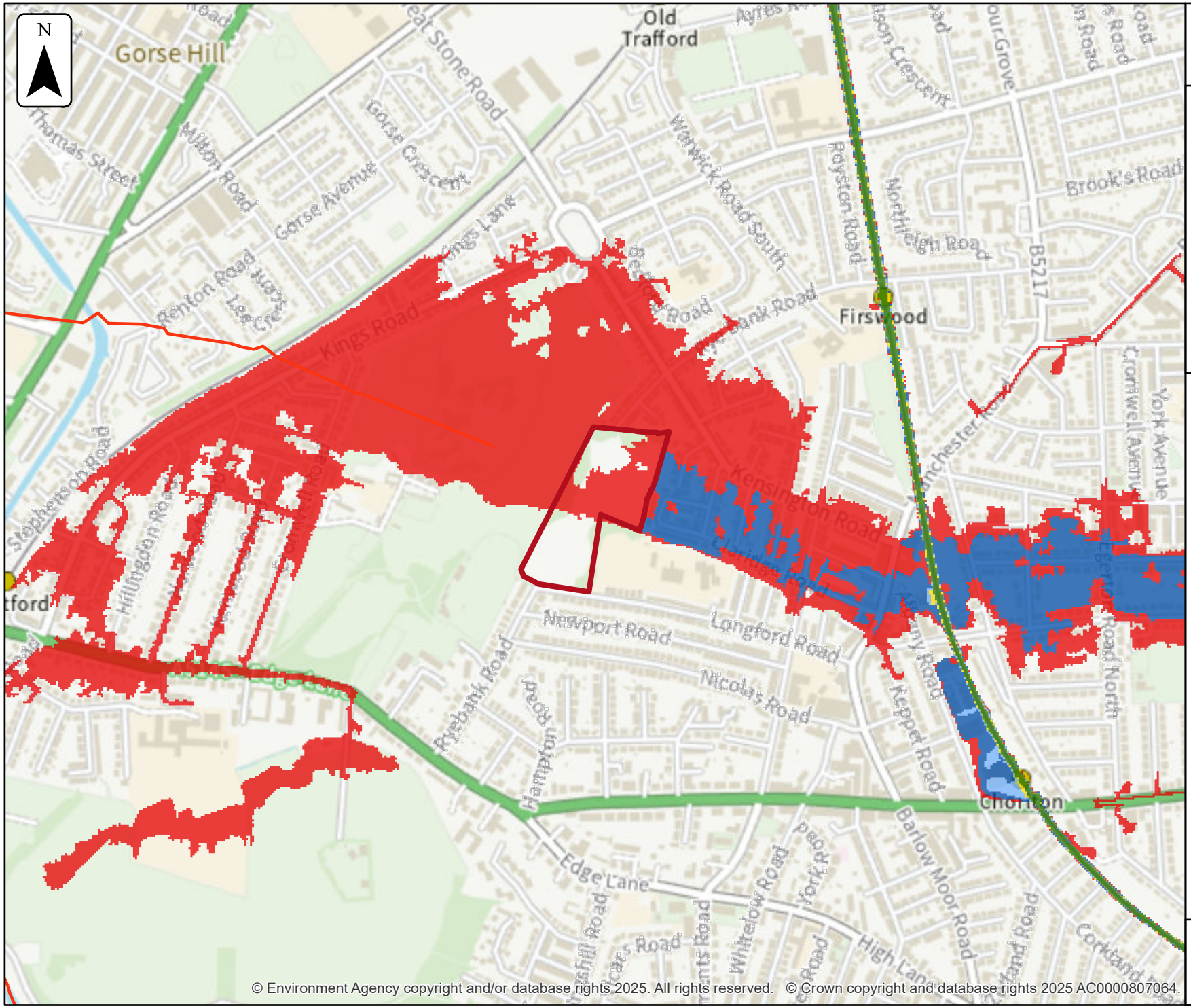
- Selected area
- Main river

Modelled flood extent

- 5% AEP (+53%)
- 1% AEP (+41%)
- 1% AEP (+53%)
- 1% AEP (+85%)
- 0.1% AEP (+53%)

Flood extents may not be visible where they overlap other return periods

0 100 200 300 400 500
metres



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Environment Agency

Defended modelled fluvial extent

Location (easting/northing)
381090/394589

Scale
1:10,000

Created
9 May 2025

Model name
Chorlton Platt Gore 2024

- Selected area
- Main river

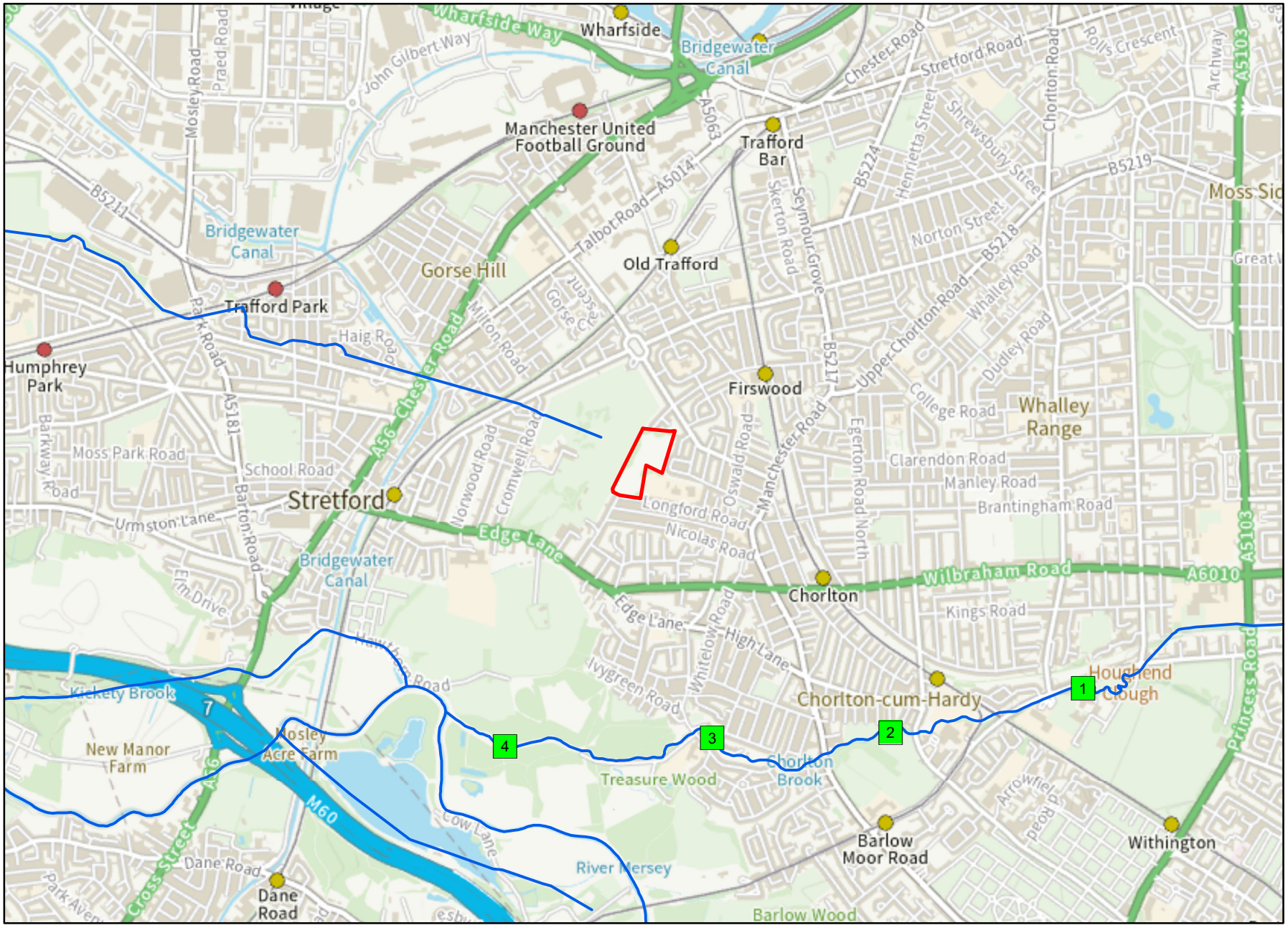
Modelled flood extent

- 2% AEP
- 1.33% AEP
- 1% AEP
- 0.5% AEP
- 0.1% AEP

Flood extents may not be visible where they overlap other return periods

0 100 200 300 400 500
metres

Modelled fluvial node locations



1:25,000

N

Legend

- Site Location
- Model Measurements
- Main River

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					Undefended												Defended											
Map Reference	Model Node Reference	Easting	Northing	Data	50 % AEP (1 in 2 year)	20 % AEP (1 in 5 year)	10 % AEP (1 in 10 year)	5 % AEP (1 in 20 year)	2 % AEP (1 in 50 year)	1.33 % AEP (1 in 75 year)	1 % AEP (1 in 100 year)	0.5 % AEP (1 in 200 year)	0.1 % AEP (1 in 1000 year)	1 % AEP (1 in 100 year) + 41% increase in flow	1 % AEP (1 in 100 year) + 53% increase in flow	1 % AEP (1 in 100 year) + 85% increase in flow	0.1 % AEP (1 in 1000 year) + 59% increase in flow	50 % AEP (1 in 2 year)	20 % AEP (1 in 5 year)	10 % AEP (1 in 10 year)	5 % AEP (1 in 20 year)	2 % AEP (1 in 50 year)	1.33 % AEP (1 in 75 year)	1 % AEP (1 in 100 year)	0.5 % AEP (1 in 200 year)	0.1 % AEP (1 in 1000 year)	1 % AEP (1 in 100 year) + 41% increase in flow	1 % AEP (1 in 100 year) + 53% increase in flow	1 % AEP (1 in 100 year) + 85% increase in flow	0.1 % AEP (1 in 1000 year) + 59% increase in flow
1	ea013_0317_03314	383114	393545	Modelled Water Level (m aodN)	27.19	28.26	28.96	29.51	29.72	29.76	29.78	29.83	30.05	29.88	29.90	29.95	30.17	27.20	28.26	28.96	29.56	29.75	29.78	29.80	29.84	30.05	29.89	29.91	29.96	30.17
				Modelled Flow (cumecs)	14.70	19.25	22.47	24.73	25.56	25.76	25.64	26.13	26.50	26.28	26.35	26.50	32.79	14.73	19.26	22.48	25.14	25.91	26.09	26.19	26.41	26.95	26.53	27.22	26.73	26.59
2	ea013_0317_02345	382228	393341	Modelled Water Level (m aodN)	26.14	26.92	27.45	27.83	27.98	28.01	28.01	28.07	28.27	28.12	28.16	28.25	28.47	26.14	26.92	27.45	27.86	27.99	28.01	28.03	28.08	28.29	28.14	28.18	28.26	28.46
				Modelled Flow (cumecs)	14.47	18.79	21.58	23.82	24.23	24.17	24.29	24.44	24.85	24.51	25.07	24.63	27.05	14.49	18.79	21.58	23.97	24.34	24.31	24.37	24.53	25.06	24.57	33.37	24.66	24.57
3	ea013_0317_01389	381508	393194	Modelled Water Level (m aodN)	23.85	23.84	23.95	24.04	24.10	24.11	24.12	24.15	24.25	24.19	24.21	24.30	24.64	23.85	23.84	23.95	24.06	24.12	24.14	24.15	24.19	24.52	24.31	24.45	24.58	24.85
				Modelled Flow (cumecs)	14.61	18.62	21.06	23.35	24.60	24.99	25.13	25.89	28.27	26.61	23.18	29.09	24.53	14.62	18.62	21.09	23.46	24.75	25.15	25.39	26.08	28.57	27.00	29.01	29.34	33.34
4	ea013_0317_00305	380452	393278	Modelled Water Level (m aodN)	21.75	21.97	22.08	22.14	22.17	22.18	22.18	22.20	22.26	22.22	22.24	22.30	22.54	21.75	21.97	22.12	22.27	22.36	22.39	22.41	22.48	22.69	22.55	22.61	22.75	23.03
				Modelled Flow (cumecs)	14.76	18.79	20.65	21.64	22.12	22.27	22.32	22.61	23.44	22.98	27.44	24.02	27.41	14.78	18.80	21.27	23.63	24.94	25.35	25.61	26.38	28.95	27.33	25.14	29.74	27.67

Model data taken from Chorlton Platt Gore 2024

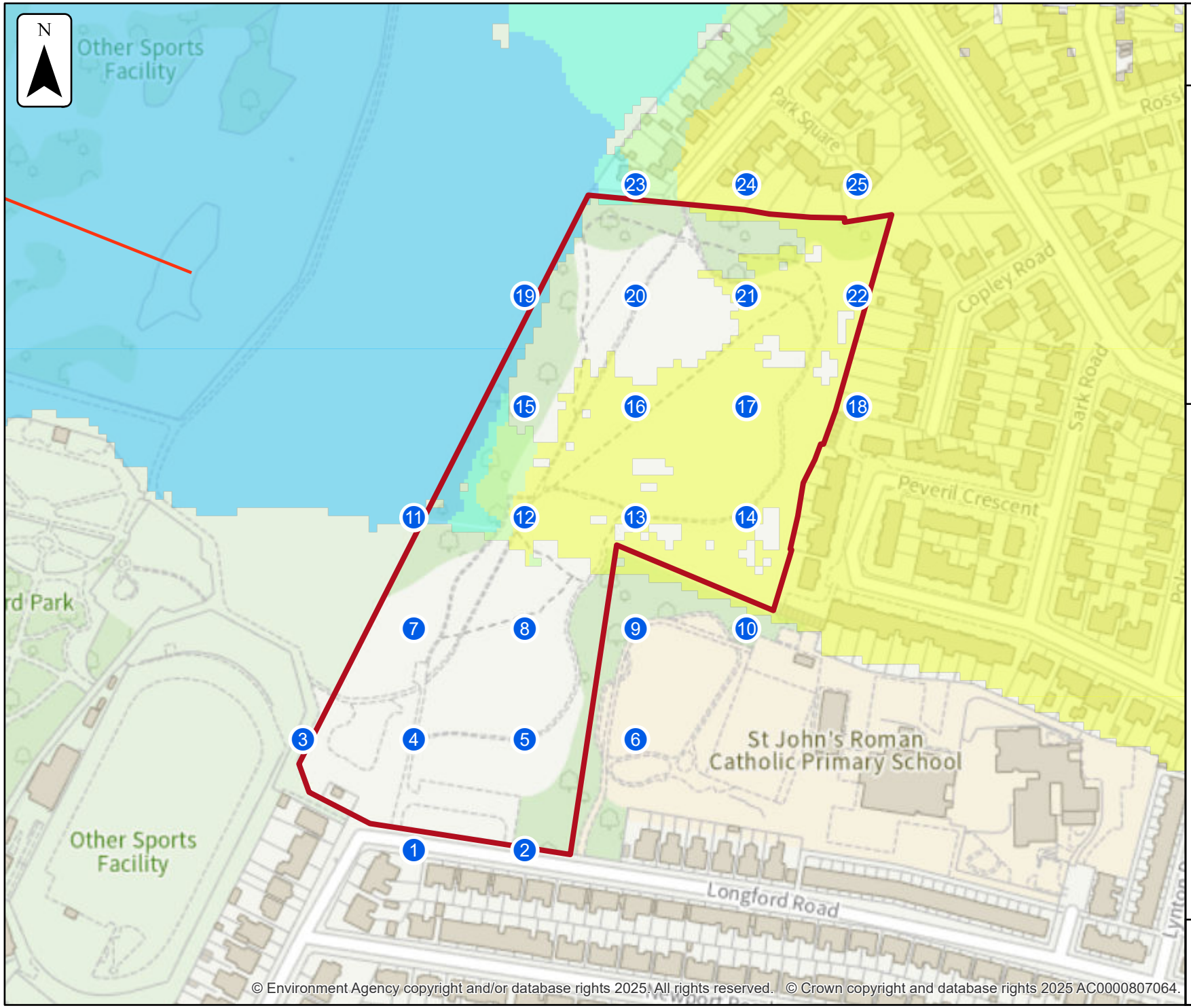
AEP - Annual Exceedence Probability

m aodN - metres above ordnance datum Newlyn

cumecs - cubic metres per second

Notes:

*Climate Change Scenario - 41%, 53% and 85% increases in flow calculated for the 2080's (2070 - 2115). Please see https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances for more information regarding the new climate change guidance. The location of the site and the type (vulnerability) of development determine the climate change allowances to consider in any flood risk assessment.



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Environment Agency

Defended modelled fluvial extent and height

Location (easting/northing)
381090/394589

Scale
1:2,500

Created
9 May 2025

Model name
Chorlton Platt Gore 2024

Selected area

Main river

Modelled 2D grid
Water level in mAOD

- 26 - 26.25
- 26.25 - 26.5
- 26.5 - 26.75
- 26.75 - 27.0
- 27.0 - 27.25
- 27.25 - 27.5
- 27.5 - 27.75
- 27.75 - 28.0
- 28.0 - 28.25

This map shows the 0.1% AEP height data

0 25 50 75 100
metres

Sample point data

Defended

Label	Easting	Northing	3.33% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
			Height	Height	Height	Height	Height	Height
1	381001	394421	NoData	NoData	NoData	NoData	NoData	NoData
2	381055	394421	NoData	NoData	NoData	NoData	NoData	NoData
3	380947	394475	NoData	NoData	NoData	NoData	NoData	NoData
4	381001	394475	NoData	NoData	NoData	NoData	NoData	NoData
5	381055	394475	NoData	NoData	NoData	NoData	NoData	NoData
6	381109	394475	NoData	NoData	NoData	NoData	NoData	NoData
7	381001	394529	NoData	NoData	NoData	NoData	NoData	NoData
8	381055	394529	NoData	NoData	NoData	NoData	NoData	NoData
9	381109	394529	NoData	NoData	NoData	NoData	NoData	NoData
10	381163	394529	NoData	NoData	NoData	NoData	NoData	NoData
11	381001	394583	NoData	NoData	NoData	NoData	NoData	26.70
12	381055	394583	NoData	NoData	NoData	NoData	NoData	27.27

Label	Easting	Northing	3.33% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
			Height	Height	Height	Height	Height	Height
13	381109	394583	NoData	NoData	NoData	NoData	NoData	27.34
14	381163	394583	NoData	NoData	NoData	NoData	NoData	27.40
15	381055	394637	NoData	NoData	NoData	NoData	NoData	NoData
16	381109	394637	NoData	NoData	NoData	NoData	NoData	27.38
17	381163	394637	NoData	NoData	NoData	NoData	NoData	27.42
18	381217	394637	NoData	NoData	NoData	NoData	26.72	27.43
19	381055	394691	NoData	NoData	NoData	NoData	NoData	26.67
20	381109	394691	NoData	NoData	NoData	NoData	NoData	NoData
21	381163	394691	NoData	NoData	NoData	NoData	NoData	27.42
22	381217	394691	NoData	NoData	NoData	NoData	NoData	27.42
23	381109	394745	NoData	NoData	NoData	NoData	NoData	27.00
24	381163	394745	NoData	NoData	NoData	NoData	NoData	27.36

Label	Easting	Northing	3.33% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
			Height	Height	Height	Height	Height	Height
25	381217	394745	NoData	NoData	NoData	NoData	NoData	27.40
Max value in selected area:			NoData	NoData	NoData	NoData	26.72	27.43

Data in this table comes from the Chorlton Platt Gore 2024 model. Height values are shown in mAOD, and depth values are shown in metres.
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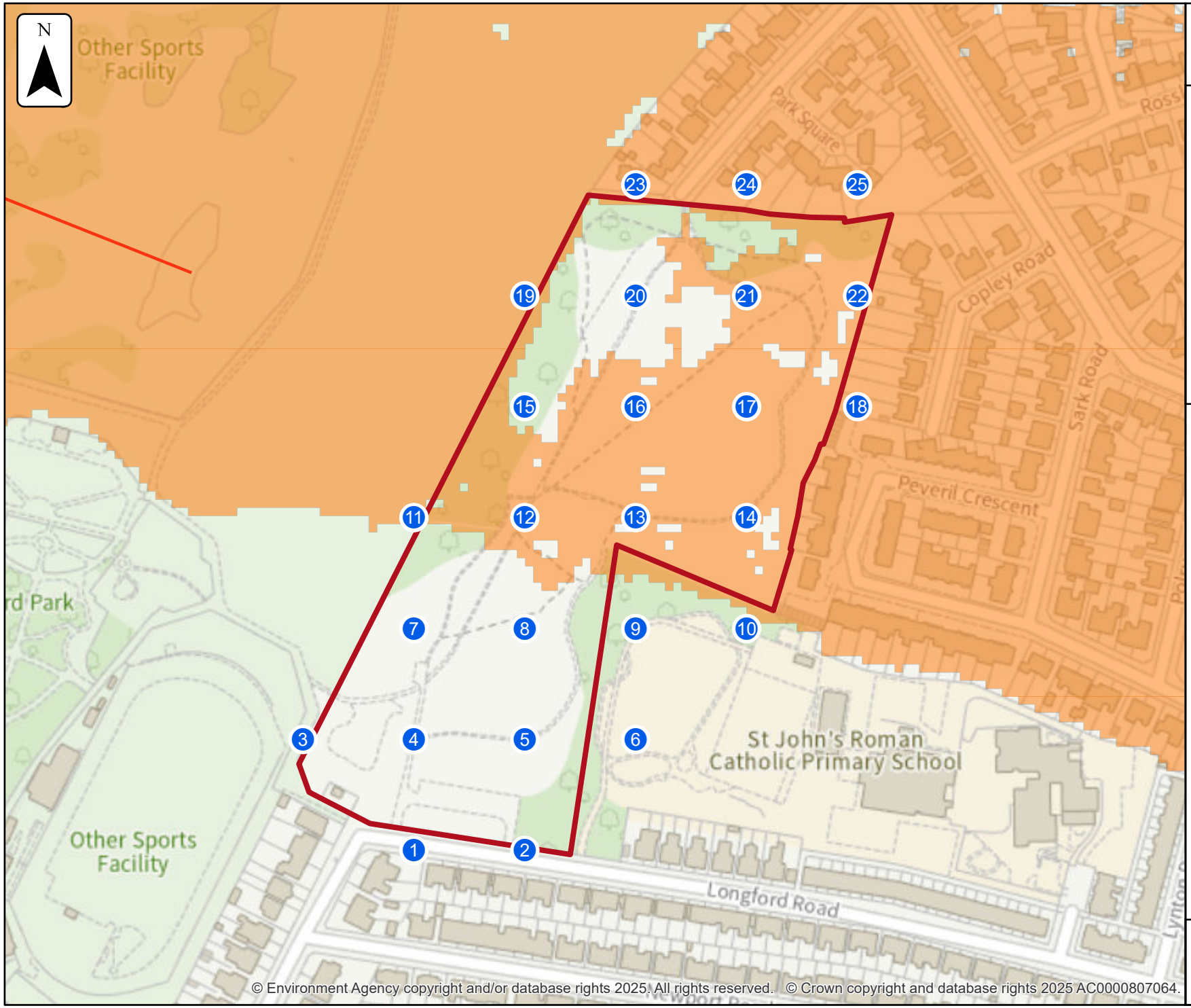
Defended

Label	Easting	Northing	3.33% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
			Depth	Depth	Depth	Depth	Depth	Depth
1	381001	394421	NoData	NoData	NoData	NoData	NoData	NoData
2	381055	394421	NoData	NoData	NoData	NoData	NoData	NoData
3	380947	394475	NoData	NoData	NoData	NoData	NoData	NoData
4	381001	394475	NoData	NoData	NoData	NoData	NoData	NoData
5	381055	394475	NoData	NoData	NoData	NoData	NoData	NoData
6	381109	394475	NoData	NoData	NoData	NoData	NoData	NoData
7	381001	394529	NoData	NoData	NoData	NoData	NoData	NoData
8	381055	394529	NoData	NoData	NoData	NoData	NoData	NoData
9	381109	394529	NoData	NoData	NoData	NoData	NoData	NoData
10	381163	394529	NoData	NoData	NoData	NoData	NoData	NoData
11	381001	394583	NoData	NoData	NoData	NoData	NoData	0.06
12	381055	394583	NoData	NoData	NoData	NoData	NoData	0.16

Label	Easting	Northing	3.33% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
			Depth	Depth	Depth	Depth	Depth	Depth
13	381109	394583	NoData	NoData	NoData	NoData	NoData	0.08
14	381163	394583	NoData	NoData	NoData	NoData	NoData	0.13
15	381055	394637	NoData	NoData	NoData	NoData	NoData	NoData
16	381109	394637	NoData	NoData	NoData	NoData	NoData	0.03
17	381163	394637	NoData	NoData	NoData	NoData	NoData	0.09
18	381217	394637	NoData	NoData	NoData	NoData	0.80	1.51
19	381055	394691	NoData	NoData	NoData	NoData	NoData	0.81
20	381109	394691	NoData	NoData	NoData	NoData	NoData	NoData
21	381163	394691	NoData	NoData	NoData	NoData	NoData	0.03
22	381217	394691	NoData	NoData	NoData	NoData	NoData	0.03
23	381109	394745	NoData	NoData	NoData	NoData	NoData	0.41
24	381163	394745	NoData	NoData	NoData	NoData	NoData	0.56

Label	Easting	Northing	3.33% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
			Depth	Depth	Depth	Depth	Depth	Depth
25	381217	394745	NoData	NoData	NoData	NoData	NoData	0.68
Max value in selected area:			NoData	NoData	NoData	NoData	0.37	1.07

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Environment Agency

Defences removed modelled fluvial extent and height

Location (easting/northing)
381090/394589

Scale
1:2,500

Created
9 May 2025

Model name
Chorlton Platt Gore 2024

Selected area

Main river

Modelled 2D grid
Water level in mAOD

- 0 - 3.5
- 3.5 - 7.0
- 7.0 - 10.5
- 10.5 - 14.0
- 14.0 - 17.5
- 17.5 - 21.0
- 21.0 - 24.5
- 24.5 - 28.0
- 28.0 - 31.5

This map shows the 0.1% AEP height data

0 25 50 75 100
metres

Sample point data

Defences removed

Label	Easting	Northing	5% AEP	3.33% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
			Height	Height	Height	Height	Height	Height	Height
1	381001	394421	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2	381055	394421	NoData	NoData	NoData	NoData	NoData	NoData	NoData
3	380947	394475	NoData	NoData	NoData	NoData	NoData	NoData	NoData
4	381001	394475	NoData	NoData	NoData	NoData	NoData	NoData	NoData
5	381055	394475	NoData	NoData	NoData	NoData	NoData	NoData	NoData
6	381109	394475	NoData	NoData	NoData	NoData	NoData	NoData	NoData
7	381001	394529	NoData	NoData	NoData	NoData	NoData	NoData	NoData
8	381055	394529	NoData	NoData	NoData	NoData	NoData	NoData	NoData
9	381109	394529	NoData	NoData	NoData	NoData	NoData	NoData	NoData
10	381163	394529	NoData	NoData	NoData	NoData	NoData	NoData	NoData
11	381001	394583	NoData	NoData	NoData	NoData	NoData	NoData	26.71
12	381055	394583	NoData	NoData	NoData	NoData	NoData	NoData	27.29

Label	Easting	Northing	5% AEP	3.33% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
			Height	Height	Height	Height	Height	Height	Height
13	381109	394583	NoData	NoData	NoData	NoData	NoData	NoData	27.36
14	381163	394583	NoData	NoData	NoData	NoData	NoData	NoData	27.42
15	381055	394637	NoData	NoData	NoData	NoData	NoData	NoData	NoData
16	381109	394637	NoData	NoData	NoData	NoData	NoData	NoData	27.39
17	381163	394637	NoData	NoData	NoData	NoData	NoData	NoData	27.44
18	381217	394637	NoData	NoData	NoData	NoData	NoData	26.92	27.45
19	381055	394691	NoData	NoData	NoData	NoData	NoData	NoData	26.70
20	381109	394691	NoData	NoData	NoData	NoData	NoData	NoData	NoData
21	381163	394691	NoData	NoData	NoData	NoData	NoData	NoData	27.44
22	381217	394691	NoData	NoData	NoData	NoData	NoData	NoData	27.44
23	381109	394745	NoData	NoData	NoData	NoData	NoData	NoData	27.02
24	381163	394745	NoData	NoData	NoData	NoData	NoData	NoData	27.38

Label	Easting	Northing	5% AEP	3.33% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
			Height	Height	Height	Height	Height	Height	Height
25	381217	394745	NoData	NoData	NoData	NoData	NoData	NoData	27.41
Max value in selected area:			NoData	NoData	NoData	NoData	NoData	26.92	27.45

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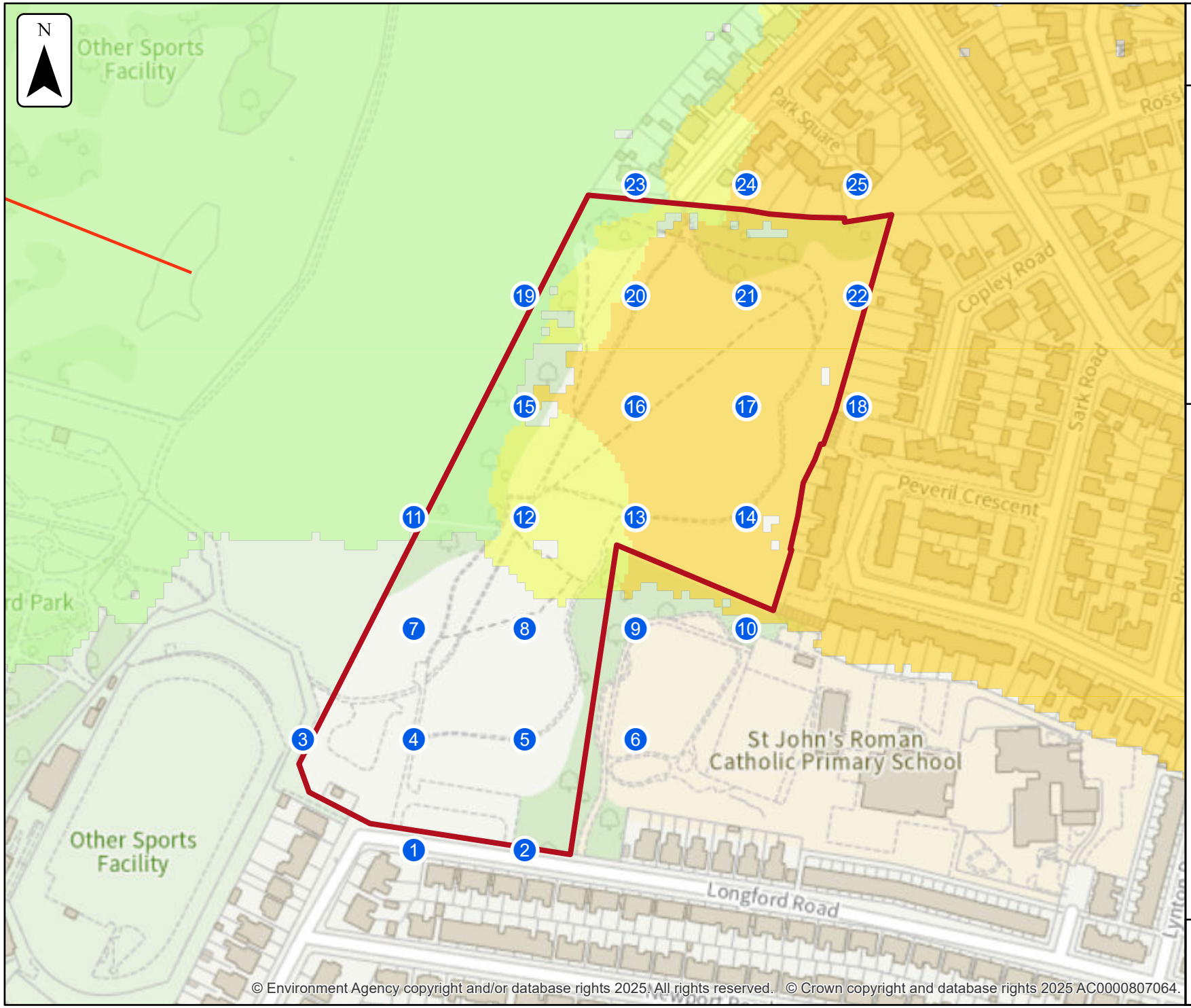
Defences removed

Label	Easting	Northing	5% AEP	3.33% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
			Depth	Depth	Depth	Depth	Depth	Depth	Depth
1	381001	394421	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2	381055	394421	NoData	NoData	NoData	NoData	NoData	NoData	NoData
3	380947	394475	NoData	NoData	NoData	NoData	NoData	NoData	NoData
4	381001	394475	NoData	NoData	NoData	NoData	NoData	NoData	NoData
5	381055	394475	NoData	NoData	NoData	NoData	NoData	NoData	NoData
6	381109	394475	NoData	NoData	NoData	NoData	NoData	NoData	NoData
7	381001	394529	NoData	NoData	NoData	NoData	NoData	NoData	NoData
8	381055	394529	NoData	NoData	NoData	NoData	NoData	NoData	NoData
9	381109	394529	NoData	NoData	NoData	NoData	NoData	NoData	NoData
10	381163	394529	NoData	NoData	NoData	NoData	NoData	NoData	NoData
11	381001	394583	NoData	NoData	NoData	NoData	NoData	NoData	0.07
12	381055	394583	NoData	NoData	NoData	NoData	NoData	NoData	0.18

Label	Easting	Northing	5% AEP	3.33% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
			Depth	Depth	Depth	Depth	Depth	Depth	Depth
13	381109	394583	NoData	NoData	NoData	NoData	NoData	NoData	0.10
14	381163	394583	NoData	NoData	NoData	NoData	NoData	NoData	0.15
15	381055	394637	NoData	NoData	NoData	NoData	NoData	NoData	NoData
16	381109	394637	NoData	NoData	NoData	NoData	NoData	NoData	0.04
17	381163	394637	NoData	NoData	NoData	NoData	NoData	NoData	0.10
18	381217	394637	NoData	NoData	NoData	NoData	NoData	0.99	1.52
19	381055	394691	NoData	NoData	NoData	NoData	NoData	NoData	0.84
20	381109	394691	NoData	NoData	NoData	NoData	NoData	NoData	NoData
21	381163	394691	NoData	NoData	NoData	NoData	NoData	NoData	0.05
22	381217	394691	NoData	NoData	NoData	NoData	NoData	NoData	0.04
23	381109	394745	NoData	NoData	NoData	NoData	NoData	NoData	0.43
24	381163	394745	NoData	NoData	NoData	NoData	NoData	NoData	0.58

Label	Easting	Northing	5% AEP	3.33% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
			Depth	Depth	Depth	Depth	Depth	Depth	Depth
25	381217	394745	NoData	NoData	NoData	NoData	NoData	NoData	0.69
Max value in selected area:			NoData	NoData	NoData	NoData	NoData	0.56	1.08

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Environment Agency

Defended climate change modelled fluvial extent and height

Location (easting/northing)
381090/394589

Scale
1:2,500

Created
9 May 2025

Model name
Chorlton Platt Gore 2024

Selected area

Main river

Modelled 2D grid
Water level in mAOD

- 26 - 26.25
- 26.25 - 26.5
- 26.5 - 26.75
- 26.75 - 27.0
- 27.0 - 27.25
- 27.25 - 27.5
- 27.5 - 27.75
- 27.75 - 28.0
- 28.0 - 28.25

This map shows the 0.1% AEP +53% height data

0 25 50 75 100
metres

Sample point data

Defended climate change

Label	Easting	Northing	5% AEP (+53%)	1% AEP (+41%)	1% AEP (+53%)	0.1% AEP (+53%)
			Height	Height	Height	Height
1	381001	394421	NoData	NoData	NoData	NoData
2	381055	394421	NoData	NoData	NoData	NoData
3	380947	394475	NoData	NoData	NoData	NoData
4	381001	394475	NoData	NoData	NoData	NoData
5	381055	394475	NoData	NoData	NoData	NoData
6	381109	394475	NoData	NoData	NoData	NoData
7	381001	394529	NoData	NoData	NoData	NoData
8	381055	394529	NoData	NoData	NoData	NoData
9	381109	394529	NoData	NoData	NoData	NoData
10	381163	394529	NoData	NoData	NoData	NoData
11	381001	394583	NoData	NoData	NoData	27.05
12	381055	394583	NoData	27.14	27.19	27.42

Label	Easting	Northing	5% AEP (+53%)	1% AEP (+41%)	1% AEP (+53%)	0.1% AEP (+53%)
			Height	Height	Height	Height
13	381109	394583	NoData	NoData	NoData	27.51
14	381163	394583	NoData	NoData	NoData	27.57
15	381055	394637	NoData	NoData	NoData	27.18
16	381109	394637	NoData	NoData	NoData	27.52
17	381163	394637	NoData	NoData	NoData	27.58
18	381217	394637	NoData	27.24	27.31	27.60
19	381055	394691	NoData	26.01	26.33	27.05
20	381109	394691	NoData	NoData	NoData	27.52
21	381163	394691	NoData	NoData	NoData	27.58
22	381217	394691	NoData	NoData	NoData	27.59
23	381109	394745	NoData	26.81	26.90	27.15
24	381163	394745	NoData	27.22	27.27	27.51

Label	Easting	Northing	5% AEP (+53%)	1% AEP (+41%)	1% AEP (+53%)	0.1% AEP (+53%)
			Height	Height	Height	Height
25	381217	394745	NoData	27.23	27.29	27.57
Max value in selected area:			NoData	27.24	27.31	27.60

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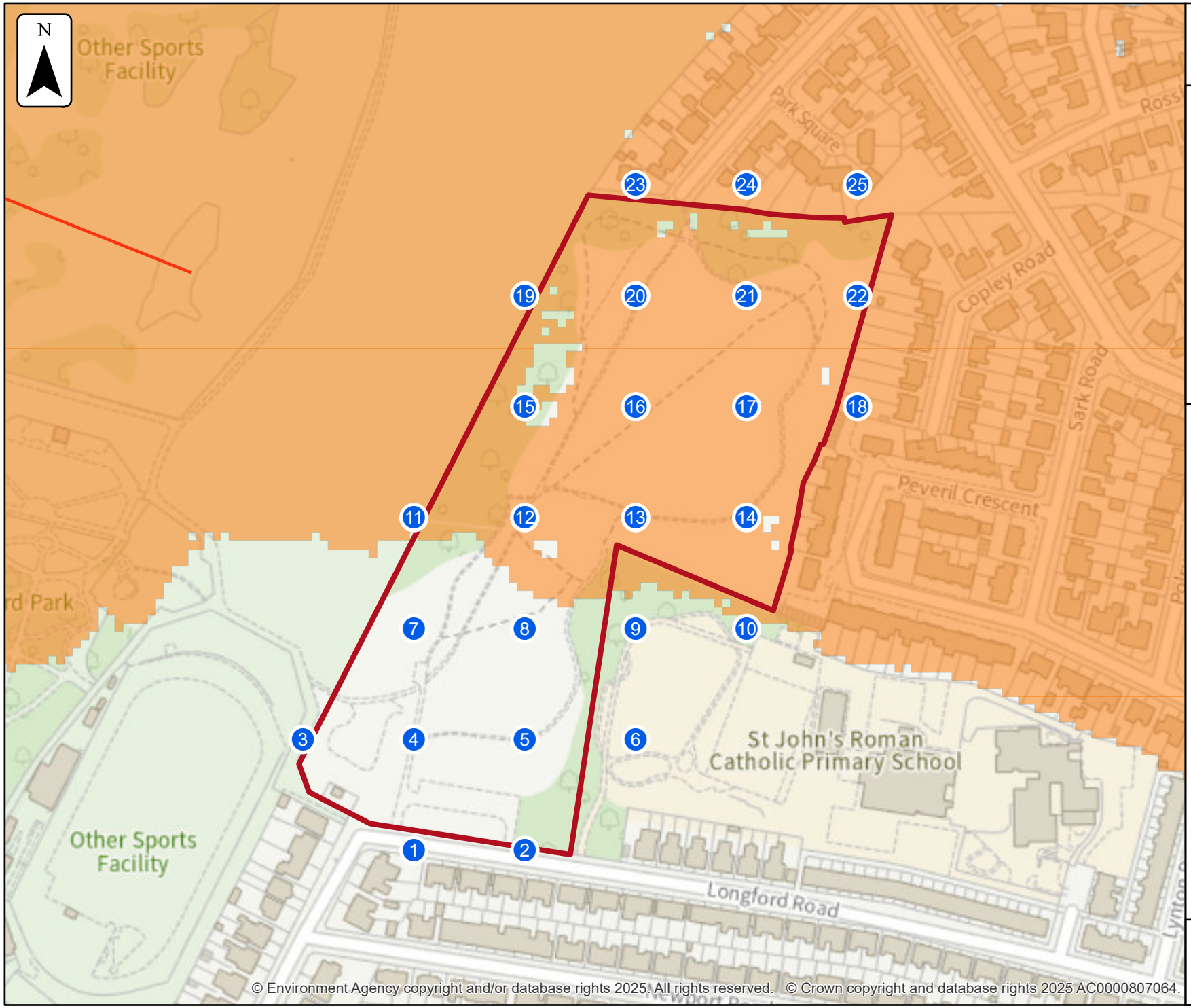
Defended climate change

Label	Easting	Northing	5% AEP (+53%)	1% AEP (+41%)	1% AEP (+53%)	0.1% AEP (+53%)
			Depth	Depth	Depth	Depth
1	381001	394421	NoData	NoData	NoData	NoData
2	381055	394421	NoData	NoData	NoData	NoData
3	380947	394475	NoData	NoData	NoData	NoData
4	381001	394475	NoData	NoData	NoData	NoData
5	381055	394475	NoData	NoData	NoData	NoData
6	381109	394475	NoData	NoData	NoData	NoData
7	381001	394529	NoData	NoData	NoData	NoData
8	381055	394529	NoData	NoData	NoData	NoData
9	381109	394529	NoData	NoData	NoData	NoData
10	381163	394529	NoData	NoData	NoData	NoData
11	381001	394583	NoData	NoData	NoData	0.41
12	381055	394583	NoData	0.04	0.08	0.31

Label	Easting	Northing	5% AEP (+53%)	1% AEP (+41%)	1% AEP (+53%)	0.1% AEP (+53%)
			Depth	Depth	Depth	Depth
13	381109	394583	NoData	NoData	NoData	0.25
14	381163	394583	NoData	NoData	NoData	0.30
15	381055	394637	NoData	NoData	NoData	0.06
16	381109	394637	NoData	NoData	NoData	0.17
17	381163	394637	NoData	NoData	NoData	0.24
18	381217	394637	NoData	1.32	1.39	1.68
19	381055	394691	NoData	0.15	0.47	1.19
20	381109	394691	NoData	NoData	NoData	0.10
21	381163	394691	NoData	NoData	NoData	0.19
22	381217	394691	NoData	NoData	NoData	0.18
23	381109	394745	NoData	0.22	0.30	0.56
24	381163	394745	NoData	0.42	0.47	0.71

Label	Easting	Northing	5% AEP (+53%)	1% AEP (+41%)	1% AEP (+53%)	0.1% AEP (+53%)
			Depth	Depth	Depth	Depth
25	381217	394745	NoData	0.51	0.57	0.85
Max value in selected area:			NoData	0.87	0.95	1.24

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Environment Agency

Defences removed climate change modelled fluvial extent and height

Location (easting/northing)
381090/394589

Scale
1:2,500

Created
9 May 2025

Model name
Chorlton Platt Gore 2024

Selected area

Main river

Modelled 2D grid
Water level in mAOD

- 0 - 3.5
- 3.5 - 7.0
- 7.0 - 10.5
- 10.5 - 14.0
- 14.0 - 17.5
- 17.5 - 21.0
- 21.0 - 24.5
- 24.5 - 28.0
- 28.0 - 31.5

This map shows the 0.1% AEP +53% height data

0 25 50 75 100
metres

Sample point data

Defences removed climate change

Label	Easting	Northing	1% AEP (+41%)	1% AEP (+53%)	1% AEP (+85%)	0.1% AEP (+53%)
			Height	Height	Height	Height
1	381001	394421	NoData	NoData	NoData	NoData
2	381055	394421	NoData	NoData	NoData	NoData
3	380947	394475	NoData	NoData	NoData	NoData
4	381001	394475	NoData	NoData	NoData	NoData
5	381055	394475	NoData	NoData	NoData	NoData
6	381109	394475	NoData	NoData	NoData	NoData
7	381001	394529	NoData	NoData	NoData	NoData
8	381055	394529	NoData	NoData	NoData	NoData
9	381109	394529	NoData	NoData	NoData	NoData
10	381163	394529	NoData	NoData	NoData	NoData
11	381001	394583	NoData	NoData	26.73	27.07
12	381055	394583	27.17	27.20	27.30	27.42

Label	Easting	Northing	1% AEP (+41%)	1% AEP (+53%)	1% AEP (+85%)	0.1% AEP (+53%)
			Height	Height	Height	Height
13	381109	394583	NoData	NoData	27.37	27.52
14	381163	394583	NoData	NoData	27.43	27.58
15	381055	394637	NoData	NoData	NoData	27.19
16	381109	394637	NoData	NoData	27.40	27.53
17	381163	394637	NoData	NoData	27.45	27.58
18	381217	394637	27.26	27.33	27.46	27.61
19	381055	394691	26.12	26.39	26.72	27.07
20	381109	394691	NoData	NoData	27.40	27.53
21	381163	394691	NoData	NoData	27.45	27.58
22	381217	394691	NoData	NoData	27.45	27.60
23	381109	394745	26.84	26.92	27.03	27.16
24	381163	394745	27.24	27.29	27.39	27.52

Label	Easting	Northing	1% AEP (+41%)	1% AEP (+53%)	1% AEP (+85%)	0.1% AEP (+53%)
			Height	Height	Height	Height
25	381217	394745	27.25	27.31	27.42	27.57
Max value in selected area:			27.26	27.33	27.46	27.61

Data in this table comes from the Chorlton Platt Gore 2024 model. Height values are shown in mAOD, and depth values are shown in metres.
Any blank cells show where a particular scenario has not been modelled for this location.
Cells which contain text 'NoData' for a scenario show that return period has been modelled but there is no flood risk for that return period for that location.
'Max value in selected area' is the deepest depth or highest height at any location within your drawn boundary.

Defences removed climate change

Label	Easting	Northing	1% AEP (+41%)	1% AEP (+53%)	1% AEP (+85%)	0.1% AEP (+53%)
			Depth	Depth	Depth	Depth
1	381001	394421	NoData	NoData	NoData	NoData
2	381055	394421	NoData	NoData	NoData	NoData
3	380947	394475	NoData	NoData	NoData	NoData
4	381001	394475	NoData	NoData	NoData	NoData
5	381055	394475	NoData	NoData	NoData	NoData
6	381109	394475	NoData	NoData	NoData	NoData
7	381001	394529	NoData	NoData	NoData	NoData
8	381055	394529	NoData	NoData	NoData	NoData
9	381109	394529	NoData	NoData	NoData	NoData
10	381163	394529	NoData	NoData	NoData	NoData
11	381001	394583	NoData	NoData	0.09	0.43
12	381055	394583	0.06	0.09	0.19	0.32

Label	Easting	Northing	1% AEP (+41%)	1% AEP (+53%)	1% AEP (+85%)	0.1% AEP (+53%)
			Depth	Depth	Depth	Depth
13	381109	394583	NoData	NoData	0.11	0.26
14	381163	394583	NoData	NoData	0.16	0.31
15	381055	394637	NoData	NoData	NoData	0.06
16	381109	394637	NoData	NoData	0.05	0.18
17	381163	394637	NoData	NoData	0.11	0.25
18	381217	394637	1.34	1.41	1.54	1.69
19	381055	394691	0.26	0.53	0.86	1.21
20	381109	394691	NoData	NoData	0.00	0.10
21	381163	394691	NoData	NoData	0.06	0.19
22	381217	394691	NoData	NoData	0.04	0.19
23	381109	394745	0.25	0.32	0.44	0.56
24	381163	394745	0.44	0.49	0.59	0.72

Label	Easting	Northing	1% AEP (+41%)	1% AEP (+53%)	1% AEP (+85%)	0.1% AEP (+53%)
			Depth	Depth	Depth	Depth
25	381217	394745	0.54	0.59	0.71	0.86
Max value in selected area:			0.90	0.97	1.09	1.24

Data in this table comes from the Chorlton Platt Gore 2024 model. Height values are shown in mAOD, and depth values are shown in metres.
Any blank cells show where a particular scenario has not been modelled for this location.
Cells which contain text 'NoData' for a scenario show that return period has been modelled but there is no flood risk for that return period for that location.
'Max value in selected area' is the deepest depth or highest height at any location within your drawn boundary.

Strategic flood risk assessments

We recommend that you check the relevant local authority's strategic flood risk assessment (SFRA) as part of your work to prepare a site specific flood risk assessment.

This should give you information about:

- the potential impacts of climate change in this catchment
- areas defined as functional floodplain
- flooding from other sources, such as surface water, ground water and reservoirs

Your Lead Local Flood Authority is Manchester District.

About this data

This data has been generated by strategic scale flood models and is not intended for use at the individual property scale. If you're intending to use this data as part of a flood risk assessment, please include an appropriate modelling tolerance as part of your assessment. The Environment Agency regularly updates its modelling. We recommend that you check the data provided is the most recent, before submitting your flood risk assessment.

Flood risk activity permits

Under the Environmental Permitting (England and Wales) Regulations 2016 some developments may require an environmental permit for flood risk activities from the Environment Agency. This includes any permanent or temporary works that are in, over, under, or nearby a designated main river or flood defence structure.

Find out more about flood risk activity permits

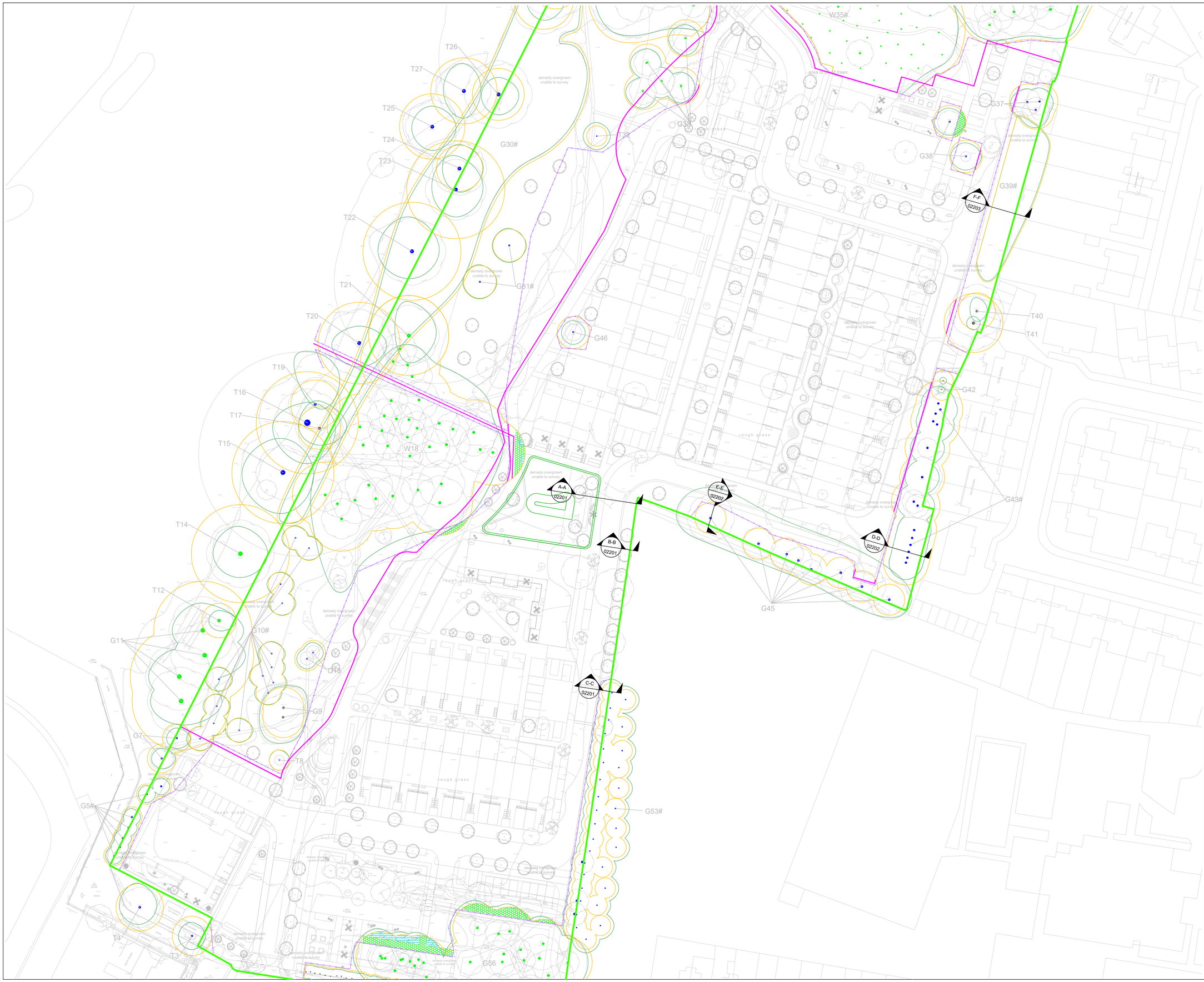
Help and advice

Contact the Greater Manchester Merseyside and Cheshire Environment Agency team at inforequests.gmmc@environment-agency.gov.uk for:

- more information about getting a product 5, 6, 7 or 8
- general help and advice about the site you're requesting data for

APPENDIX F

DRAWINGS



NOTES:

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   - UG_1910_ARB_TPP_01 TREE PROTECTION PLAN BY URBAN GREEN
6. REFER TO DRAWINGS RBM-REN-XX-XX-DR-C-02201 TO C-02202 FOR SECTIONS

Rev:	Description:	Date:	By:	Chkd:
P05	SITE PLAN UPDATED	24.04.26	JB	PC
P04	ISSUED TO LLFA FOR INFORMATION	06.03.26	JB	PC
P03	POND GEOMETRY UPDATED	05.02.26	JB	PC
P02	UPDATED FOLLOWING WORKSHOP	26.01.26	JB	PC
P01	FIRST ISSUE	12.01.26	JB	PC

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Project:

RYEBANK CHORLTON

Drawing Title:

EXTERNAL WORKS GA

Status:

FOR INFORMATION

Size:	Date:	Drawn by:	Designed by:	Checked by:
A1	JAN 26	JB	JB	PC

Scale:	Project No:
1:500	2011-11

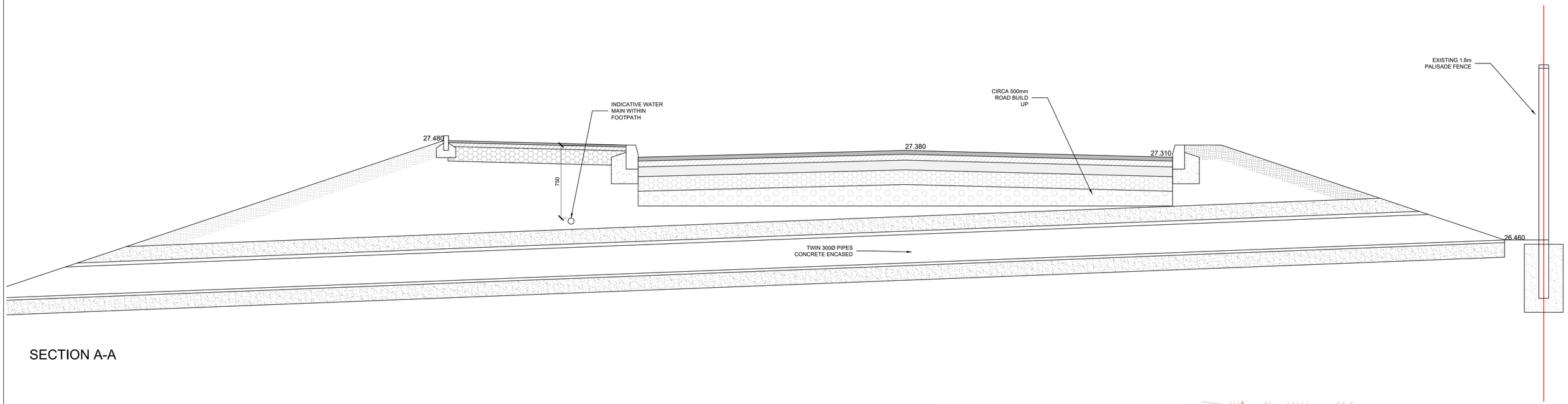
Project – Originator – Volume – Level – Type – Role – Number: RBM-REN-XX-XX-DR-C-01200

Revision: P05

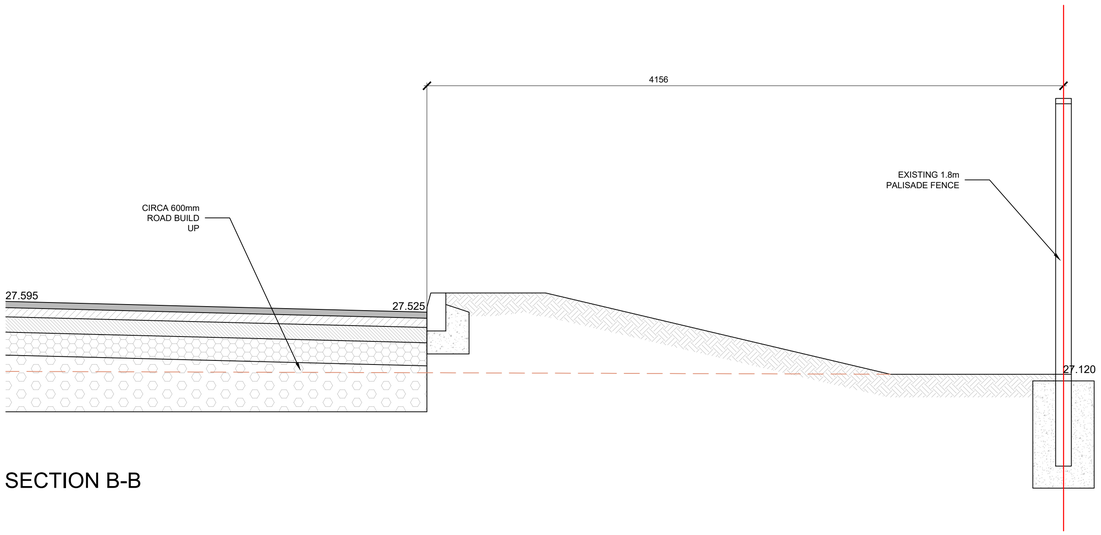
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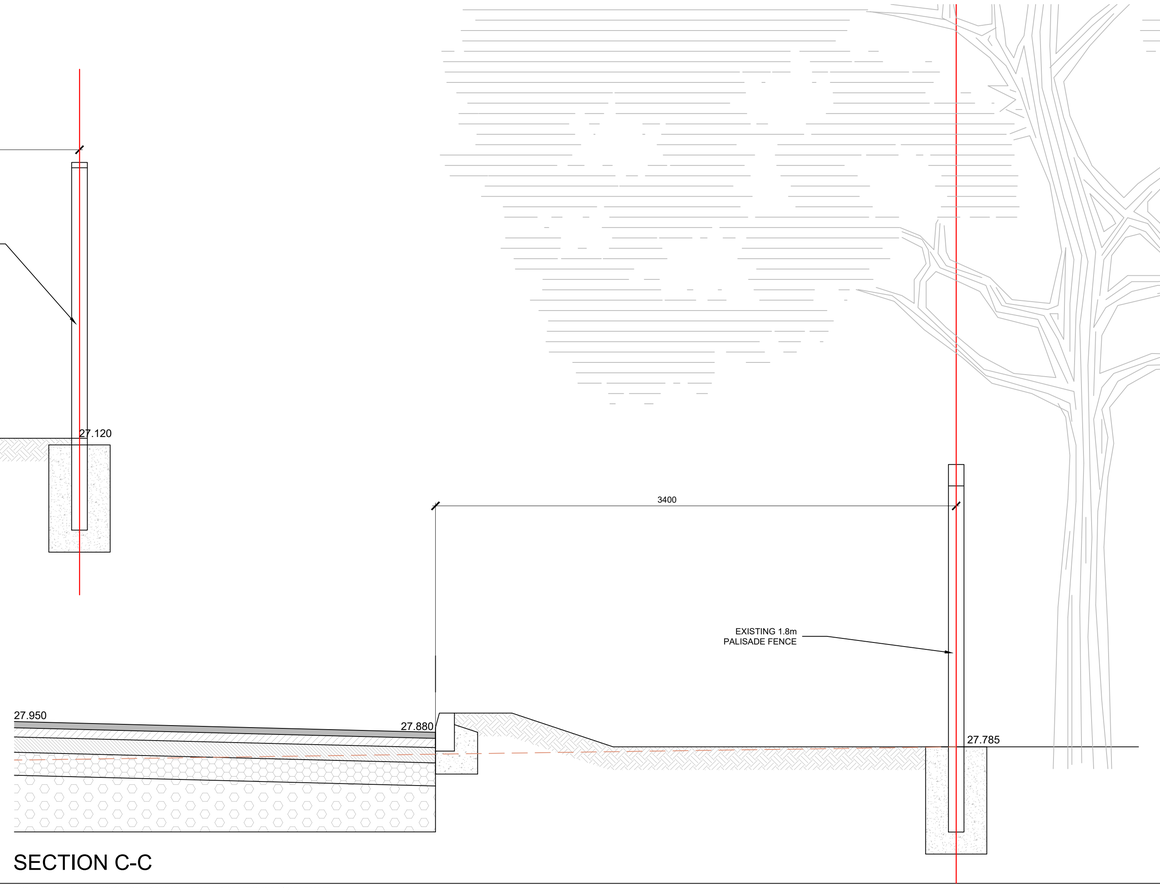
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6. THE LEVELS INDICATED ON THIS DRAWING ARE INDICATIVE AND ARE SUBJECT TO DESIGN DEVELOPMENT WHILST ADHERING TO THE MINIMUM LEVELS REQUIRED BY THE FLOOD RISK ASSESSMENT.



SECTION A-A



SECTION B-B



SECTION C-C

Rev:	Description:	Date:	By:	Chkd:
P03	ISSUED TO LLFA FOR INFORMATION	06.03.26	JB	PC
P02	UPDATED FOLLOWING WORKSHOP	26.01.26	JB	PC
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SECTIONS SHEET 1

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Size:	Date:	Drawn by:	Designed by:	Checked by:
A1	JAN 26	JB	JB	PC

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1:500	2011-11

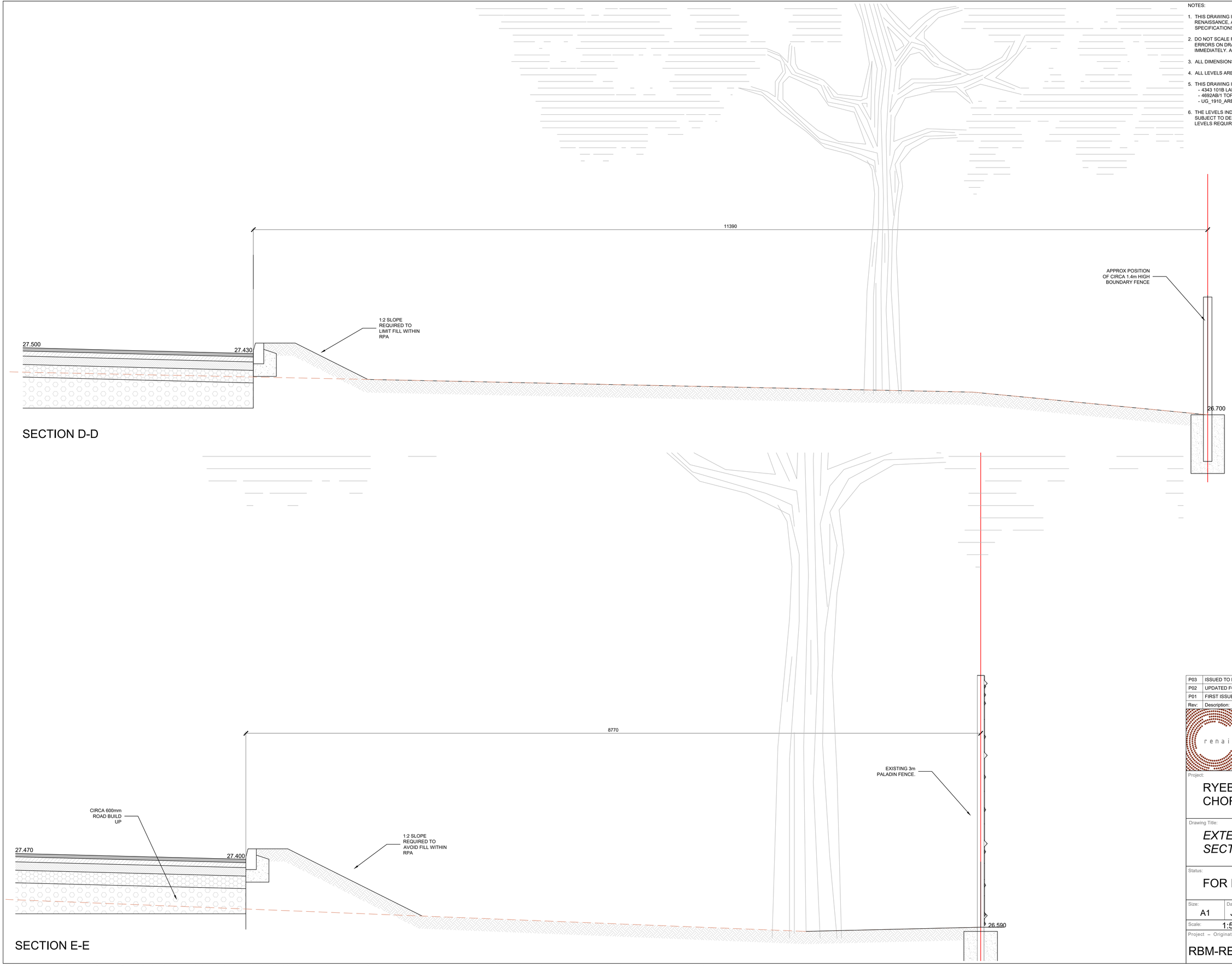
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   - UG_1910_ARB_TPP_01 TREE PROTECTION PLAN BY URBAN GREEN
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SECTION D-D

SECTION E-E

Rev:	Description:	Date:	By:	Chkd:
P03	ISSUED TO LLFA FOR INFORMATION	06.03.26	JB	PC
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P01	FIRST ISSUE	12.01.26	JB	PC

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EXTERNAL WORKS SECTIONS SHEET 2

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SECTION F-F

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   - 4692AB/1 TOPOGRAPHICAL SURVEY BY CTV SURVEYS
   - UG_1910_ARB_TPP_01 TREE PROTECTION PLAN BY URBAN GREEN
6. THE LEVELS INDICATED ON THIS DRAWING ARE INDICATIVE AND ARE SUBJECT TO DESIGN DEVELOPMENT WHILST ADHERING TO THE MINIMUM LEVELS REQUIRED BY THE FLOOD RISK ASSESSMENT.

Rev:	Description:	Date:	By:	Chkd:
P03	ISSUED TO LLFA FOR INFORMATION	06.03.26	JB	PC
P02	UPDATED FOLLOWING WORKSHOP	26.01.26	JB	PC
P01	FIRST ISSUE	12.01.26	JB	PC

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SECTIONS SHEET 3

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Project – Originator – Volume – Level – Type – Role – Number:	Revision:
RBM-REN-XX-XX-DR-C-02203	P03

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NOTES

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3. THIS DRAWING INDICATES THE FLUVIAL FLOOD LEVELS BASED ON THE ENVIRONMENT AGENCY PRODUCT 4, 5, 6 & 7 DATA TAKEN FROM THE 2024 CHORLTON PLATT GORE MODEL.

LEGEND	
REF	DESCRIPTION
	PLANNING BOUNDARY
•XX.XXX XX.XXX	FLOOD LEVEL EXISTING LEVEL

Flood Level (mAOD)

Number	Minimum Elevation	Maximum Elevation	Color
1	26.000	26.062	
2	26.062	26.124	
3	26.124	26.186	
4	26.186	26.248	
5	26.248	26.310	
6	26.310	26.372	
7	26.372	26.434	
8	26.434	26.496	
9	26.496	26.558	
10	26.558	26.621	
11	26.621	26.683	
12	26.683	26.745	
13	26.745	26.807	
14	26.807	26.869	
15	26.869	26.931	
16	26.931	26.993	
17	27.055	27.117	
18	27.117	27.179	
19	27.179	27.242	
20			

Rev	Description:	Date:	By:	Chkd:
P02	SITE PLAN UPDATED	24.04.26	JB	PC
P01	FIRST ISSUE	19.12.25	JB	PC

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Project:
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Drawing Title:
1% AEP +41% CC FLOOD LEVEL OVERLAY

Status:
FOR INFORMATION

Size:	Date:	Drawn by:	Designed by:	Checked by:
A0	DEC 25	JB	JB	PC

Scale: 1:500 | Project No: 2011-11

Project – Originator – Volume – Level – Type – Role – Number: RBM-REN-XX-ZZ-DR-C-00005 | Revision: P02

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LEGEND	
REF	DESCRIPTION
	PLANNING BOUNDARY
+X.XXX	FLOOD DEPTH

Flood Volume (Exg vs 1% AEP+41% CC)

Number	Minimum Elevation	Maximum Elevation	Color	Volume (m3)
1	0.000	0.100		40.55
2	0.100	0.200		33.03
3	0.200	0.300		25.50
4	0.300	0.400		18.00
5	0.400	0.500		9.07
6	0.500	0.600		2.38
7	0.600	0.700		0.32
8	0.700	0.800		0.00

Rev:	Description:	Date:	By:	Chkd:
P01	FOR INFORMATION	24.04.26	JB	PC

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Project:

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Drawing Title:

1% AEP +41% CC
FLOOD VOLUME

Status:

FOR INFORMATION

Size:	Date:	Drawn by:	Designed by:	Checked by:
A0	APR 26	JB	JB	PC

Scale:	Project No:
1:500	2011-11

Project – Originator – Volume – Level – Type – Role – Number: | Revision:

RBM-REN-XX-ZZ-DR-C-00006 | P01

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APPENDIX G

FLOOD PLAN GUIDANCE & TEMPLATES

THE FLOOD HUB

Household Flood Planning Guide



newground
your community is our business

This resource has been produced by Newground who work in partnership with the Environment Agency

Last reviewed: January 2022
For more information visit:
www.thefloodhub.co.uk
Follow us on social media:
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Important Contacts	5
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Flood Warnings and Triggers	7
Evacuation Plan	8
Household Flood Plan Template	9
Alternative Flood Warnings Resource	11
Environment Agency's Check for Flooding resource	12

Introduction

There may be very little warning or no time to prepare for a flood, therefore by creating a flood plan, valuable time can be saved when a flood is expected. Flood plans ensure you have all the relevant and useful information you need in one easily accessible place, providing clear instructions on how to respond.

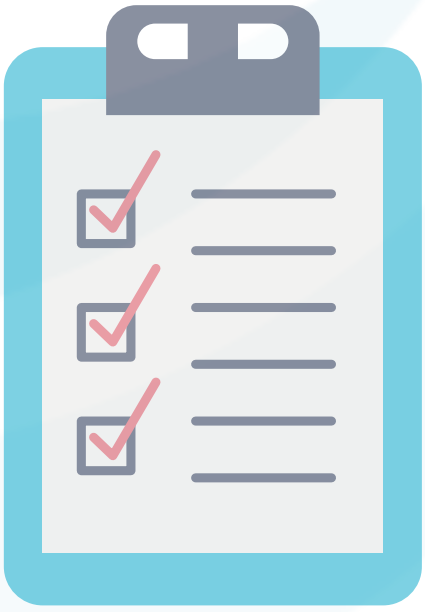
This guide contains all the information a household needs to plan ahead and prepare for a flood. There is also a copy of a household flood plan template towards the end of this document, which is also available to download from the Flood Hub website – www.thefloodhub.co.uk. The template should be filled in and kept in an appropriate, easy to find location, such as the inside of a kitchen cupboard door.

Checklist

The first part of a flood plan contains a checklist with steps to tick off once you've finished creating your plan.

Steps can include:

- Sign up to the Environment Agency's Flood Warning Service and ensure you understand what the alerts and warnings mean and what action you should take if you receive one. If you are ineligible for flood warnings, ensure that you have an alternative trigger to put the flood plan into action.
- Check that your home insurance covers flooding.
- Make a flood kit using the flood kit checklist.
- Place important documents (passports, birth certificates, insurance documents, etc) in a safe place where there is no risk of flood water damage.
- Investigate the different property flood resilience (PFR) measures that could be used on your property. Make sure you consider both flood resistance and resilience methods.
- Make a schedule to keep property flood resilience (PFR) maintained.



Important Contacts

Having a list of important contacts to hand will save you time during an emergency. It should be accessible at all times and should be kept up to date with numbers of friends and family, useful agencies, local councils etc.

Your list of important contacts could be used:

- before a flood to help you prepare;
- during a flood for advice/support and to easily contact friends and family; and
- after a flood, for example to contact your insurance company.

Suggested important contacts:

- Family and friends you would need to contact in an emergency and those who may be able to help you. Preferably these contacts would not be in a flood risk area themselves.
- The Environment Agency's Floodline number **(0345 988 1188)** can be contacted if you are in need of any flooding advice or are unsure of the immediate risk to yourself.
- Your gas, electricity and water utility supplier's contact details are useful in case you are having trouble locating and switching off your supplies.
- Local radio station frequencies - these can provide regular updates on the latest news, weather and travel conditions in your area.



- Local Authorities can provide information about resources available in your area, such as the location of the nearest emergency assistance centre.
- Your insurance company will advise you on what course of action to take to ensure your claim remains valid.
- Contact details for plumbers and electricians. You may need to get wiring and electrical sockets tested and checked in order to provide light or run heaters and fans. The earlier you can remove wet carpets, open windows and start to dry out your property, the better; but speak to your insurance company first!

Gas, Electricity and Water Supply Details

Your flood plan should contain information on your utility supplies such as:

- The location of them in your house;
- Instructions on how to turn them off - this can prevent further damage to your property in the event of a flood and keep you safe, for example, from electrocution;
- Contact details of the supplier; and
- Policy numbers.

If you don't already have these details, you should contact your utility supplier. Having them detailed in your plan enables you to find this information quickly if a flood is imminent and you need to evacuate your property. Likewise, having this information recorded on an easily accessible flood plan would allow a neighbour or relative to take action and prepare the property on your behalf if you are away from home at the time.

It is important to switch your utilities off before flood water enters your property if possible, as there are extra risks that could occur as a result of them being left on. **You must NEVER switch off the electricity whilst standing in water.**

Flood Kit Checklist

Having a flood kit prepared prior to the event of a flood can be very helpful should you need to evacuate. The flood kit checklist should be composed of essential items you will need if you're going to be away from your home for a few days. Having this prepared and ready enables you to evacuate much quicker than trying to accumulate the items in a hurry, especially if a Flood Warning was escalated to a Severe Flood Warning.



Flood Warnings and Triggers



The Environment Agency (EA) Flood Warning Service is a free of charge service that you can sign up to if you live in an area at risk of coastal or river flooding. The alerts and warnings can be received via landline and mobile phone calls, text messages, or email by anyone signed up at a property. It is useful for multiple people in one household to sign up for the warnings, and for several devices to be signed up in case one runs out of battery or stops working.

Sign up for EA flood alerts and warnings at **www.gov.uk/sign-up-for-flood-warnings** or call Floodline on **0345 988 1188** which is a 24 hour service. You will need to provide the address you are registering, a phone number and an email address.

In addition, the **'Check For Flooding' Service**, provided by the Environment Agency, allows users to input their postcode and find out the:

- current flood warnings or alerts
- river, sea, groundwater and rainfall levels
- flood risk in the next 5 days

The page is regularly updated and provides information on the risk of flooding from rivers, the sea and groundwater only. There's information on how to sign up for flood warnings and how to find out your risk of flooding from surface water.

Please remember that you should tailor your flood plan actions to suit the specific needs and circumstances of your household, but the points on the flood plan template suggest some of the main actions you can consider taking at each stage.

When acting on your flood plan, you should always ensure that you and your family are safe before attempting to help out anyone else, including your neighbours.

If you aren't eligible to sign up for the Environment Agency's Flood Warning Service, it is important to ensure that you have an alterative trigger in place for putting your flood plan into action. The following are alternative flood warnings that you could use and are covered in a bit more detail in the '7 alternative flood warning triggers' resource at the end of this guide:

1. Met Office weather warnings
2. River and sea monitoring
3. Social Media
4. Emergency App
5. Local news and radio
6. Tide tables
7. See it for yourself
8. Environment Agency 'Check for Flooding' Service

Evacuation Plan

When putting your flood plan together, it is useful to think about and note down an evacuation plan. It should contain details of where you could go if you and your family needed to evacuate, including the address and contact details. This could be a family member, relative or an emergency assistance centre.

It's important to ensure the safety of yourself and family before helping anyone else.

Steps to consider for your evacuation plan:

- Locate your flood kit if you have one.
- Turn off gas, water and electricity supplies if safe to do so.
- Make your way to the emergency assistance centre. Details of these may be pre-arranged in advance or released at the time of a flood event; so be sure to monitor Local Authority social media channels and local radio broadcasts.

HOUSEHOLD FLOOD PLAN

THE FLOOD HUB

Pre-populated Plan

This pre-populated plan can be used as it is, or as a guide to help you create your own flood plan using one of our blank templates.

Trigger 1


Flood Alert


Met Office Yellow Weather Warning


Community telemetry, e.g river level sensor

What to do at this stage

Flooding is possible. Stay vigilant and make early preparations for a potential flood.

- Monitor the situation through forecasts, the Environment Agency's 'Check for Flooding' service, local radio stations and monitoring stations.
- Locate flood kit, check it is complete and ready if needed.
- Check reverse of sheet is completed and you know what to do if the situation gets worse.
- Ensure that your property flood resilience is in working order and ready to install.

Alert no longer in force → Stand down

Alert still in force/ escalated →

Trigger 2


Flood Warning


Met Office Amber Weather Warning


Community telemetry, e.g river level sensor

What to do at this stage

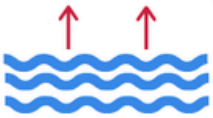
Flooding is expected. Immediate action is required to protect yourself and your property.

- Continue to monitor the situation.
- Move valuables, important documents, electrical equipment and furniture upstairs or to a high place.
- Hang curtains over rails, roll up rugs and carpets and move upstairs.
- Deploy property flood resilience e.g. air brick covers, door barriers.
- Ensure family, neighbours and vulnerable people are alerted and pets moved to safety.
- Move vehicles to high ground out of the flood risk area.

Trigger 3


Severe Flood Warning


Met Office Red Weather Warning


Community telemetry, e.g river level sensor

What to do at this stage

Severe flooding is expected and is likely to cause significant risk to life and destruction of property.

Prepare to evacuate and cooperate with emergency services.

- Check on vulnerable family, friends and neighbours.
- If safe to do so, turn off utility supplies (see reverse of this sheet).
- Continue to monitor the situation using Floodline, local radio stations etc.
- Evacuation is likely. Gather your flood kit and cooperate with the emergency services.
- Ring 999 if you are in immediate danger.

If you live in an area where flash flooding occurs, there can be very little warning. It is best to be as prepared as possible at all times.

HOUSEHOLD FLOOD PLAN

THE FLOOD HUB

Pre-populated Plan

This pre-populated plan can be used as it is, or as a guide to help you create your own flood plan using one of our blank templates.

ADDRESS OF EVACUATION CENTRE

FLOOD PLAN CHECKLIST:

- [ ] Fill in this plan and keep it up to date.
- [ ] Sign up to Environment Agency flood alerts and warnings and understand what they mean.
- [ ] Check your home insurance covers flooding.
- [ ] Investigate Property Flood Resilience (PFR) options (e.g. door barriers, air brick covers).
- [ ] Put important documents in a safe place, out of flood risk (e.g. passports, insurance documents, birth certificates).
- [ ] Make a flood kit using the checklist.

CONTACT LIST	PHONE NUMBERS	ADDITIONAL INFORMATION
Environment Agency Floodline	0345 988 1188	@EnvAgencyNW
Electricity North West	0800 195 4141	@electricityNW
Electricity Helpline	105	
National Grid	0800 111 999	@nationalgriduk
United Utilities (sewer flooding)	0345 672 3723	@unitedutilities
Local Council		
Lead Local Flood Authority (LLFA)		
Insurance Company		
Local Radio Station		
Evacuation Centre		
Gauge Map Monitoring Station		https://www.gaugemap.co.uk/
Flood Warden		

FLOOD KIT CHECKLIST:

- [ ] Torch (check batteries)
- [ ] Food and drinking water
- [ ] Medication and First Aid Kit
- [ ] Toys for children and pets
- [ ] Rubber gloves and wellingtons
- [ ] Mobile phone and phone chargers
- [ ] Battery operated radio
- [ ] Insurance documents
- [ ] Keys e.g. house, car
- [ ] Purse/wallet (cash and cards)

PROPERTY FLOOD RESILIENCE (PFR) AND EQUIPMENT LIST

ITEM:	WHERE IT IS KEPT:	HOW TO INSTALL IT:

WHERE IS THE...?

- Location of electricity cut off:
- Location of water cut off:
- Location of gas cut off:
- Location of flood kit:

Contact your supplier if you are unsure of where or how to turn off your electricity, water or gas supplies. Mark taps and switches with labels to help you remember.

Last reviewed: December 2021
For more information visit:
www.thefloodhub.co.uk
@TheFloodHub

THE FLOOD HUB

ALTERNATIVE FLOOD WARNING TRIGGERS

The Environment Agency's (EA) flood alerts and warnings focus on the risk of flooding from main rivers and the sea, excluding surface water flooding. Below are some alternative warnings you can use as triggers to activate your flood plan.

Met Office weather warnings

- Yellow: Be Aware that the situation may worsen, and prepare for possible disruption to plans.
- Amber: Be Prepared to follow the actions outlined on your flood plan.
- Red: Take action as there is extreme weather expected that may cause risk to life.

Tide tables

Coastal communities can check tide timetables during periods of bad weather. High tides that coincide with strong winds or decreased air pressure may lead to surges or powerful waves, increasing the likelihood of flooding. For tide information, browse the 'Tide Tables' on the BBC Weather site or visit other resources like www.tidetimes.co.uk, which also has an X (previously Twitter) page for updates.

See it for yourself

Visible changes can be observed in watercourses, such as rivers and streams, as well as along the coast. This is particularly useful for small watercourses or those prone to flash flooding. Gauge boards installed on rivers visually represent the current water depth and are beneficial for regular monitoring.

Social Media

To find updates specific to your local area, search social media by typing '#' followed by the name of your area in the search bar. Additionally, consider joining and following local flood groups on Facebook, as well as your Local Authority's social media accounts, for timely updates and important information.

River and sea monitoring

Telemetry Systems

Telemetry systems monitor watercourses to track various data, including water levels, flow rates, rainfall, blockages, and temperature. These systems can be set up by community groups and serve as a trigger for potential flooding.

Gauge Map

Website: www.gaugemap.co.uk

Gauge Map provides information from over 3,000 Environment Agency river and tidal monitoring stations. Each station has a Twitter account that posts updates every 15 minutes during significant movements.

Digital Watercams

Digital Watercams offer live video feeds from water cameras, allowing you to check real-time conditions in your area. The data provided includes graphs of river levels, rainfall, tide times, and an archive of this data.

Local news and radio

Stay updated with news specific to your local area, as this information can provide useful resources such as contact numbers and the locations of evacuation centres.

Emergency App

The British Red Cross offers a free app that provides alerts and information from the Met Office and the Environment Agency. Users can add multiple locations and contacts to monitor, prepare emergency plans, and engage in informative quizzes.

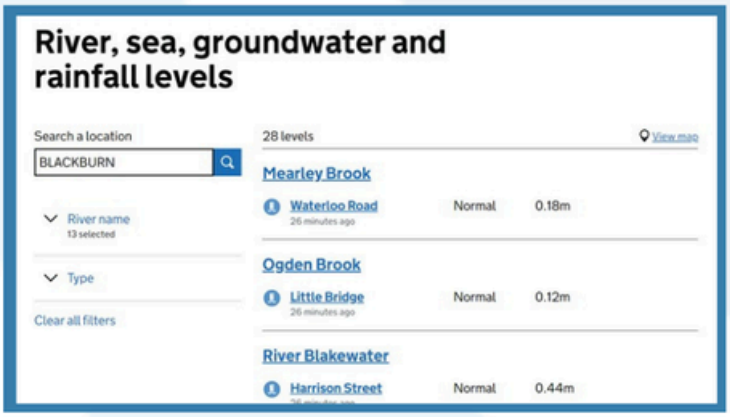
Environment Agency's Check for Flooding Service

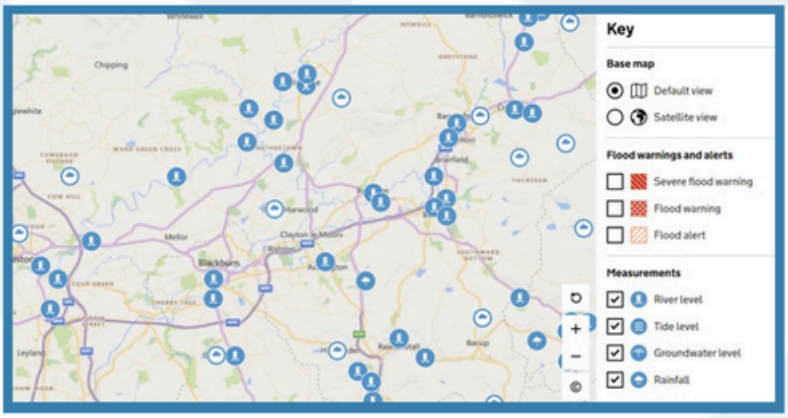
The ‘Check For Flooding’ service, provided by the Environment Agency, can be used as a trigger to activate your flood plan. By entering their postcode, users can access vital information, including current flood warnings or alerts, river, sea, groundwater, and rainfall levels, as well as the flood risk forecast for the next five days.



Visit: www.gov.uk/check-flooding

The page is regularly updated and provides information on the risk of flooding from rivers, the sea, and groundwater only. It also offers guidance on how to sign up for flood warnings.





To find out if you're at risk of surface water flooding, visit: https://www.gov.uk/check-long-term-flood-risk.

Environment Agency's Flood Warning Service

Sign up for free flood warnings to receive alerts if your home or business in England is at risk of flooding from rivers, the sea, or groundwater, depending on your location. This service, provided by the Environment Agency, does not cover surface water (flash) flooding. To sign up, you’ll need to provide the address for which you want flood warnings, an email address, and a way to be contacted at any time via call, text, or email.

To check if you’re eligible, visit **www.gov.uk/sign-up-for-flood-warnings** or call **0345 988 1188**.