RoC CONSULTING

Flood Risk Assessment

Walshaw Garden Neighbourhood, Bury

for

VHW Land Partnership (Walshaw) Limited, incl Bury Council

17/01/2020

COMPLEX CHALLENGES ...
MADE SIMPLE

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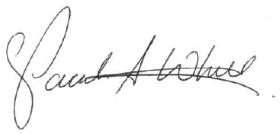
Operations Director	PAUL WHITE		**17/01/20**
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1.0 Introduction

1.1 Appointment

RoC Consulting has been commissioned by VHW Land Partnership (Walshaw) Limited, including the land controlled by Bury Council, to provide a site specific Flood Risk Assessment to support the allocation of the site through the GMSF for a new Residential Development and new single form entry school off Walshaw Lane, Bury and is to be read in conjunction with the Barton Willmore Walshaw Garden Neighbourhood, Bury – Development Framework Report November 2019.

1.2 Report Structure

This report has been written to comply with the national and local planning and guidance policies described in section 2.0. The existing site context is described in terms of topography, geology, hydrogeology, hydrology and existing factual and historical information in section 3.0 of this report.

A description of the development proposal is provided in section 4.0. Section 5.0 records the assessment of relevant flood risk and management measures; off-site impacts and residual risks are then discussed in section 6.0. Section 7.0 details the summary for the FRA.

1.3 Proposed Development

This Flood Risk Assessment relates to the Barton Willmore Walshaw Garden Neighbourhood, Bury – Development Framework Report November 2019 and the part of the draft housing allocation which is controlled by VHW Land Partnership (Walshaw) Limited referenced within the RoC Consulting Executive Technical Summary Ref:4072/ETS and Masterplan Drainage Strategy Report Ref:4072/MDS.

The Walshaw Garden Neighbourhood, Bury is located approx. 2.5km of Bury Town Centre and 15km of Manchester City Centre and sits within the land allocation referred to as Walshaw, Bury (GM 9) for housing in the emerging Greater Manchester Spatial Framework 2019 (GMSF). The Local Planning Authority (LPA) for this area is Bury Council, who are also the Lead Local Flood Authority (LLFA).

The Walshaw Garden Neighbourhood site is in an area comprising greenfield and brownfield land, loosely bounded by the urban areas of Tottington to the north, Woolfold and Elton to the east, Lowercroft to the south and Walshaw to the west.

The site description and the sites boundaries are set out in the Barton Willmore Walshaw Garden Neighbourhood, Bury – Development Framework Report November 2019.

In summary the site is circa 64 hectares (ha), split roughly between 37.5ha residential land and 26.5ha green infrastructure and expected to deliver 1,250 residential dwellings, a new single entry form school, infrastructure works e.g. roads and footpaths etc and green open space.

The site is currently controlled and being brought forward to support the allocation of the site through the GMSF by 3 developers/land promotors; being Redrow Homes (circa 20.80ha), HIMOR (circa 11.83ha) and VHW Land Partnerships (Walshaw) Limited (circa 28.5ha) and a small site area of land controlled by Bury Council (circa 2.90ha), refer to Appendix A for the Barton Willmore Site Location and Land Ownership Plan.

The land under VHW Land Partnership control/ownership has a gross area of circa 28.5ha which is available for development. However, the net developable area would be circa 18.98ha. It is anticipated that this area could accommodate circa 657 residential units based on a density of 34.6 properties/ha.

This report also includes the land under control of Bury Council which has a gross area of circa 2.90ha, development area assumed to be of circa 2.13ha and a net developable area of circa 1.28ha for the provision of a new single form entry school.

1.4 Aim of the Report

The aim of this report is to undertake a Flood Risk Assessment in accordance with the National Planning Policy Framework (NPPF) and current to support the allocation of the site through the GMSF, specifically for the land under VHW Land Partnership (Walshaw) Limited control/ownership, including the land controlled by Bury Council.

The detail and complexity of a Flood Risk Assessment should reflect the level of risk to the site. The NPPF is the official document and together with local planning standards regulates the assessment of flood risks and their appropriate mitigations to the planning process.

This report assesses flood risk to the site and any impact on flood risk to the local neighbourhood as a result of the development proposals.

This report is intended to provide information and present proposals relating to the following:

- The existing topography, geology and hydrogeology across the development
- The existing surface and foul water drainage systems within the vicinity of the site
- Identify existing overland flow paths
- Assess the risk of flooding due to fluvial, tidal, groundwater, surface water, flows from surcharged sewers and risks for other possible sources

In accordance with the NPPF, the Masterplan Drainage Strategy Report Ref:4072/MDS will provide information and present the outline foul and surface water drainage strategies for the development site, including climate change over the longer term of the development and gives priority to the use of sustainable drainage systems.

As part of the development of this FRA, information has been obtained from United Utilities (UU). A review has been carried out of the online Environment Agency (GOV.UK) mapping information.

The flood mapping information contained within this report has been obtained from the Environment Agency online flood maps and JBA Consulting flood maps via Envirocheck.

1.5 Limitations

This report has been prepared for exclusive use by VHW Land Partnership (Walshaw) Limited, including the land controlled by Bury Council for the purpose of assisting them in evaluating the potential risk of flooding associated with the site in support of the allocation of the land at Walshaw Bury (GM 9) for housing.

A separate masterplan drainage strategy for the masterplan area has been developed by RoC Consulting Ref:4072/MDS to support the allocation of the site through the GMSF. A further site-specific drainage strategy for the VHW Land Partnership (Walshaw) Limited, including the land controlled by Bury Council will be required to support future detailed/reserved matters applications.

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RoC Consulting has endeavoured to assess all information provided to them during this appraisal. The report summarises from several external sources and cannot offer any guarantees or warranties for the completeness or accuracy of information relied upon.

The Flood Risk Assessment addresses the flood risk posed to and from the proposed development, the extent of which is shown on the Barton Wilmore Concept Masterplan within Appendix B and outlined in section 4.0. This report has been undertaken with the assumption that the site will be developed in accordance with the above proposals without significant change. The conclusions resulting from this study are not necessarily indicative of future conditions or operating practices at or adjacent to the site.

Hydraulic modelling of the existing ordinary watercourses, or any intrusive investigation works (Soakaway testing) have not been completed for the site and it is therefore recommended that these are carried out prior to detailed design stage. It is also recommended that a drainage investigation survey is commissioned when the drainage proposals have been developed further to establish the precise alignment, level and condition of any existing land drainage/culverts that may be affected by the development proposal.

2.0 Policy & Guidance

In carrying out our assessment and preparing this report, regard has been taken of the provisions of the development plans and a range of other material considerations. However, it is the Governments National Planning Policy Framework, Bury's Strategic and Preliminary Flood Risk Assessments (PFRA/ SFRA), CIRIA Guidance and the Non-Statutory Technical Standards for SUDS which provides the most up to date and specific guidance on the scope of Flood Risk Assessments.

2.1 National Planning Policy Framework

The National Planning Policy Framework (NPPF) was published in England in March 2012, updated in July 2018 and most recently revised in February 2019.

The key aim of the NPPF is to ensure sustainable development through the planning process, taking into account the risks from climate change, flood risk and coastal change to avoid inappropriate development in areas at risk and directing development away from areas of high risk.

It advises that where development is necessary in areas of high risk, it should be safe, and that flood resilience should also be incorporated into the design. It also advises of the fact that new developments should not increase flood risk elsewhere and new developments should aid in mitigating flood risk to the wider area.

The NPPF's advice on climate change, flood and coastal change is set out in section 14 paragraphs 148-169, with the approach to planning for flood risk between paragraphs 155-165.

A Technical Guidance document was published in March 2012 to support the NPPF, which provided guidance on how flood risk should be assessed during the planning and development process. This document has been replaced online at www.gov.uk by the Planning Practice Guidance.

2.2 Planning Practice Guidance – Climate Change, Flood Risk & Coastal Change

Guidance for climate change was updated in March 2019 and flood risk and coastal change in March 2014.

The guidance is split into categories including 'climate change' and 'flood risk and coastal change'. Within these categories the requirements are identified.

The document gives guidance on how climate change should be assessed and accounted for within the context of the development:

- River basin district
- Allowance Category: A factor dependent upon the usage of the development
- The likely development life span

For further guidance, it is recommended that the Environment Agency (EA) be contacted with regards to the 'main river' and areas with critical drainage problem catchments and the Lead Local Flood Authority in all other locations.

The document gives guidance on how flood risk should be assessed and accounted for within the context of the development:

- Flood zones - Table 1
- Flood risk vulnerability classification - Table 2
- Flood risk vulnerability and flood zone compatibility - Table 3
- The sequential test - if required
- The exception test - if required

2.3 Flood and Water Management Act 2010

This Flood Risk Assessment and Preliminary Drainage Strategy has been prepared in consultation with regulatory bodies and third parties. The views, advice and recommendations provided by the regulatory bodies and third parties represent their current standards and procedures.

The Flood and Water Management Act 2010 received Royal Assent on the 8th April 2010. This Act provides duties on the Environment Agency, Local Authorities, developers and other bodies to manage flood risks. The Act has significant planning and design implications for developers.

The main areas affecting developers are:

- The LLFA became responsible for developing, maintaining and applying local flood risk strategy, which must be consistent with national strategy and have input from the designated 'Flood Management Authorities' (FMA), which in addition to the council/unitary authority normally include the EA and local water company

- The LLFA is required to approve and may adopt sustainable urban drainage systems (SUDS). The LLFA may be either a Unitary or County Council

- Non-statutory technical standards have been produced by Defra for England and the Welsh government for Wales. There is a requirement that SUDS will be designed and constructed in accordance with these which are consistent with the SUDS Manual. A practice guidance document was produced by the LASOO advisory group in support of the Non-Statutory

technical standards. In August 2019, LASOO was replaced by the Association of SUDS Authorities (ASA), the 'standards' remain current.

A number of local authorities have also produced their own policy and guidance:

- The SUDS approval process is with the LLFA and the planning authority as part of the planning application. It should be noted that not all planning authorities are the LLFA and as such approval would be required from both authorities.

2.4 Bury, Rochdale & Oldham Strategic Flood Risk Assessment 2009

Local Planning Authorities are required to produce Local Development Frameworks (LDF), which are a portfolio of local development documents that collectively deliver the spatial planning strategy for the authority area.

The LDF's undergo a Sustainability Appraisal which assists Planning Authorities in ensuring their policies fulfil the principles of sustainability. Strategic Flood Risk Assessments (SFRA) are one of the documents to be used as the evidence base for planning decisions and are a component of the sustainability appraisal process. Therefore, SFRAs should be used in the review or production of LDF's.

SFRA's assess the risk associated with all types of flooding and provides the information required to identify the amount of development permitted in an area; how the drainage systems in the area should function and how the risks in vulnerable areas can be reduced and/or mitigated. The National Planning Policy Framework states that Regional Planning Bodies (RPB's) or Local Planning Authorities should prepare SFRA's in consultation with the Environment Agency.

Bury, Rochdale and Oldham Councils in partnership with JBA Consulting, produced the Level 1 and Level 2 SFRA across four separate report volumes in 2009.

The SFRA indicates that the site is not located within Flood Zones 2 or 3 and there are no specific risks to the site area indicated within the SFRA.

2.5 Bury Preliminary Flood Risk Assessment 2011

The Flood Risk Regulations (the Regulations), which came into force on the 10th December 2009, and the Flood & Water Management Act (FWMA) which gained Royal Assent on the 8th April 2010 require all unitary authorities (such as Bury Council) as designated Lead Local Flood Authorities to prepare a number of key documents including a Preliminary Flood Risk Assessment (PFRA) which focuses on local flood risk from surface water, groundwater, ordinary watercourses and canals.

The table below shows the elements of work required under the regulations.

Stage	Assessment of Plan	Description
1.0	Prepare a preliminary assessment report	The PFRA should focus on local flood risk from surface water, groundwater, ordinary watercourses and canals
2.0	Determination and identification of flood risk areas	Flood risk areas are of significant risk identified on the basis of the findings of the PFRA, national criteria set by the UK Government secretary of state and guidance provided by the Environment Agency
3.0	Prepare flood hazard maps and flood risk maps in relation to each relevant flood risk area	The hazard and risk maps will show the likely extent depth, direction, speed of flow and probability of possible floods and their consequences
4.0	Prepare a flood risk management plan in relation to each relevant flood risk area	The flood risk management plans will set out what the risk management objectives are, the measures proposed to achieve those objectives and how the measures are to be implemented

The PFRA completes the first two stages in the process. The identification of flood risk areas will establish where the final two stages of preparing hazard and risk maps and flood risk management plans are required.

The PFRA, maps and plans form part of the local Flood Risk Management Strategy that Bury Council as acting LLFA are required to prepare under the Flood and Water Management Act. This strategy sets out how the LLFA will manage local flood risk in their area and will cover areas not identified as being significant flood risk under the regulations.

2.6 Greater Manchester Surface Water Management Plan 2012

The Greater Manchester Surface Water Management Plan (SWMP), 2012, assessed surface water flood risk across the sub-region.

The initial work undertaken indicated that there were 37 hotspots in Bury, which represent 8% of the Greater Manchester total. Hotspots help to identify the areas at risk, focussing on the receptors rather than where the flood water has come from.

In Bury, three key hotspot areas were identified as requiring further investigation:

- Water Street, Radcliffe
- Gypsy Brook, Bury
- Ramsbottom

None of the above are within close vicinity to the proposed site.

2.7 Bury Local Flood Risk Management Strategy 2018

As Lead Local Flood Authority, Bury Council has a duty to develop, maintain, apply and monitor a strategy for local flood risk management. The local strategy will complement and support the National Flood and Coastal Risk Management Strategy, published by the Environment Agency (2011) and updated in August 2019.

The Bury Local Flood Risk Management Strategy (2018) updates the previous 2014 strategy and focuses on local flood risk from surface water, groundwater and ordinary watercourses but also considers flooding from rivers. It identifies responsibilities for flooding within the Borough and the action plan identifies flood management actions designed to address flood risk.

The objectives of the strategy are to:

- Gain a strategic understanding of flood risk from all sources in Bury;
- Manage the likelihood of flooding within the Borough;
- Help Bury residents to manage their own risk;
- Ensure that new development in Bury reduces rather than increases flood risk;
- Take a sustainable approach to flood risk management within the Borough, which balances economic, environmental and social benefits with flood risk policies and programmes;
- Improve flood preparation, warning and post flood recovery;
- Endeavour to direct flood risk funding to areas most at need or where solutions will be most effective

2.8 CIRIA Guidance

2.8.1 C624 Development & Flood Risk

The CIRIA Guidance publication “C624 Development and Flood Risk – Guidance for the Construction Industry” defines 3 levels of FRA which can be undertaken:

- Level 1 – Screening Study
- Level 2 – Scoping Study
- Level 3 – Detailed Study

For this proposed development, a Level 2 Scoping Study Flood Risk Assessment combined with an overarching drainage statement is considered appropriate because of the size of the development.

For all references to SUDS documents and National Standards guidance relating to SUDS refer to the Masterplan Drainage Strategy Report Ref:4072/MDS which informs the surface water drainage strategy.

3.0 Site Context

The site is located to the north and south of Walshaw Road in the Walshaw area of Bury, approximately 2.5km to the northwest of the town centre.

The site is centred around NGR: SD 77840 11469 with an approximate nearest postcode of BL8 3AP. The total VHW Land Partnership (Walshaw) Limited red line site application boundary is 28.5ha. The Bury Council red line site application boundary is 2.90ha.

A Barton Willmore Site Location and Land Ownership Plan can be located in Appendix A

3.1 Site Characterisation / Land Use

Land at Walshaw Bury Development Area and FRA requirement		Area schedule: The VHW gross site area is 28.50ha with a net site area of 18.98ha, which will provide approx. 657 dwellings, including primary and secondary roads, pedestrian routes and open green spaces. The Bury Council site gross site area is 2.90ha with an assumed net site area of 1.28ha, which will provide a new single form entry school.
Existing Surfacing and Current Use		The site is currently greenfield undeveloped land in the form of fields separated by hedgerows and ditches and is designated as Green Belt. The only areas of hardstanding areas are where the site is bisected by Walshaw Road which crosses the site west to east, approximately in the upper third. There are also Ordinary Watercourses, Issues and Sinks present across the site.
Boundaries	North	Walshaw Brook
	South	Dow Lane, greenfield land and further south Elton Brook
	East	Existing greenfield land. Residential Properties, Elton Brook Reservoir
	West	High Bank Farm, The Priory High Bank Centre, Walshaw Road, Christ Church, Residential development and greenfield land off Church Street
Access	Vehicles	There are no formal vehicular access points into the development site. However, there are a number of existing field gates at various locations.
	Pedestrians/Cycles	There are public rights of way within the site.

A Barton Willmore Concept Masterplan for the site can be located in Appendix B.

3.2 Topography

A topographic survey of the development site has not been undertaken. However, Ordnance Survey Contour data has been obtained. This information has been used to identify the existing falls and overland flow routes within the development site and is included on RoC Sketch 4072/SK103 and can be located in Appendix C.

The topography of the site generally slopes in a north easterly and south easterly direction about a high point which is located around the middle of the site on the western boundary at Christ Church Walshaw.

The high point splits the site into two distinct areas just south of Walshaw Road with the northern area falling to the north east to Walshaw Brook and the southern area falling south easterly towards Elton Brook and its tributaries.

Levels range from approx. 140.0m AOD at Christ Church Walshaw to 116.0m AOD on the north east corner by Walshaw Brook and 110.0m AOD in the south east corner, north of Elton Reservoir.

3.3 Geology

Reference to the online British Geological Survey (BGS) map for the site indicates the following ground model:

Bedrock Geology: Pennine Lower Coal Measures – Mudstone, Siltstone, and Sandstone. Interbedded with Cannel Rock (South Lancashire) – Sandstone. Sedimentary bedrock formed approximately 319 million years ago in the Carboniferous Period

Superficial Deposits: Predominantly Devensian – Diamicton Till, with a small area of Glaciofluvial Deposits, Devensian – Sand and Gravel in the Western area of the site that encompasses the Eastern most pond/lake. Superficial Deposits formed up to 2 million years ago in the Quaternary Period

Soilscape England describes the soils as ‘slowly permeable, seasonally wet acid loamy and clayey with impeded drainage.

3.4 Hydrogeology

Reference to the DEFRA ‘Magic Map’ online Aquifer Designation Map indicates that the underlying Superficial deposits are classed as Secondary (undifferentiated).

Reference to the DEFRA ‘Magic Map’ online Aquifer Designation Map indicates that the underlying Bedrock Geology is described as a Secondary A aquifer.

Secondary A aquifers 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. These are generally aquifers formerly classified as minor aquifers.

Secondary Undifferentiated has been assigned in cases where it has not been possible to attribute category A or B to a rock type. In most cases, this means that the layer in question has previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type.

3.5 Ground Water Protection Zones

The Environment Agency have defined Source Protection Zones (SPZs) for 2,000 groundwater sources such as wells, boreholes and springs used for public drinking water supply. These zones show the risk of contamination from any activities that might cause pollution in the area. The closer the activity, the greater the risk. The maps show three main zones (inner, outer and total catchment) and a fourth zone of special interest, which the Environment Agency occasionally applies, to a groundwater source.

The proposed development site is not identified by the Environment Agency as being located within a source protection zone.

Within the SPZs the Environment Agency seek to restrict certain potentially polluting activities, with the most onerous restrictions applied to Zone 1.

The development of the site would be undertaken in a manner to ensure that no contamination of groundwater occurred.

3.6 Watercourses, Land Drainage and other Waterbodies

There are several surface water features present within or in close proximity to the site.

Walshaw Brook runs adjacent to the site's northern boundary flowing in a south easterly direction. Walshaw Brook is depicted on google maps, the flood screening report (refer to Appendix E) and Environment Agency flood mapping as having connectivity with the two Western most pond/lake features present outside the site north west of the site.

Walshaw Brook is an ordinary watercourse and there is currently no modelled flood data available.

Elton Brook is present just outside the southern development site boundary. This generally flows in an easterly direction with a number of tributaries present within the site connecting at various points. One of the main tributaries commences within the site and crosses a number of the development parcels.

Outside the south east boundary, north of Elton Vale Sports Club, are three large water features which are understood to be the Elton Brook Reservoir. Further information on these reservoirs are discussed in section 5.7 Artificial Source – Reservoir Flood Risk.

3.7 Existing Flood Defences and other Structures

There are no flood defences within close proximity to the proposed development site.

3.8 Existing Public Sewers

United Utilities Sewer Records show that the highways surrounding the development site are well served by a network of existing sewers (refer to Appendix D), these include:

- 375mm diameter Combined Sewer in Church Street
- 375mm diameter Combined Sewers in Walshaw Road
- 300mm diameter Surface Water Sewer in Lowercroft Road
- 300mm diameter Combined Sewer in Bank Street
- 150mm diameter combined Sewer in Walshaw Lane

Two 450mm diameter surface water sewers are also shown to connect to the south of Elton Brook and the site, conveying run-off from existing residential areas.

In addition to the sewers outside the site's boundary, there is a 300/375mm diameter combined sewer dog legging in a generally south easterly direction across the southern section of the site from Surden Street. The sewer leaves the site adjacent to Dow Lane where it joins with another 375mm diameter combined sewer from the west, increasing in size to a 525mm diameter combined sewer. The sewer then crosses Elton Brook and continues to flow in an easterly direction to the south of Elton Brook.

3.9 Existing Private Sewers

No information relating to any private drainage was available for review at the time of writing this report. It is considered likely that there will be private drainage not identified on the public sewer records, however whether this extends into the site boundary at any point is unknown.

There are no records of land drainage to review, although these may exist to drain the fields to the local ditch/watercourse network.

Further investigation work will be required prior to detailed design stage to establish the alignment, level and condition of all existing drainage within the site boundary.

3.10 Historical Flood Records

Internet based research would appear to suggest that Scobell Street, to the north of the site, has suffered from flooding in the past. This area has also been identified as suffering from both surface water and surcharged sewer flooding in the Bury Local Flood Risk Management Strategy.

In addition, Walshaw Road has also been identified as suffering from historic flooding. This is believed to have been associated with a blocked culvert running under Elton Primary School's playing fields which is some distance away from the development site.

The Bury Local Flood Risk Management Strategy notes that during the 2015 Boxing Day floods which occurred in Bury Scobell Street to the north of the site and the area around Elton High School to the south of the site were identified as being within the flood extents.

No other historic flooding incidents have been identified in the vicinity of the site.

3.11 Flood Mapping

3.11.1 EA Flood Zone Map

The Environment Agency Flood Map indicates that the proposed development is located in Flood Zone 1 (low risk).

This is land designated as having a less than 0.1% annual probability of flooding from rivers or the sea in any year (less than a 1 in 1000 annual probability of flooding).

Flood zone designations ignore the presence of any flood defences and only considers flooding from fluvial and tidal sources.

However, the maps do not take into account flood risk from such small watercourses where the catchment size is less than 3km².

Walshaw Brook at Walshaw Road from the UK Centre for Ecology and Hydrology FEH Web Service indicates the catchment to be 2.15km² and as such no modelling by the EA will have been undertaken.

Also, Elton Brook at Dow Lane from the UK Centre for Ecology and Hydrology FEH Web Service indicates the catchment to be 1.72km² and as such no modelling by the EA will have been undertaken.

3.11.2 British Geological Survey

The British Geological Survey flood data indicates that the site contains no inland geological indicators of flooding. However, there are areas identified which have potential for groundwater flooding to occur at the surface.

3.11.3 EA/NRW Surface Water Mapping

The JBA flood mapping data indicates that the site has areas that are potentially susceptible to pluvial flooding in the 30, 100 and 1000 year return periods. However, these are generally limited to the alignment of existing water features e.g. Walshaw Brook, Elton Brook and their tributaries.

4.0 Development Proposals

4.1 Nature of the Development

The total site area boundary under the control/ownership of VHW Land Partnership (Walshaw) Limited is circa 28.5ha of which 18.98ha is gross developable site area. The Bury Council Land is circa 2.90ha of which 2.13ha is assumed to be gross developable site area

The gross developable site area comprises mainly greenfield and is located centrally to the south of the masterplan site. A Barton Willmore concept masterplan for the site can be found in Appendix B which illustrates the location and land ownerships.

The proposed VHW Land Partnership (Walshaw) Limited development comprises the construction of circa 657 residential units spread across an approximate total development area of 18.98ha, an assumed density of approximately 34.6 dwellings per hectare (dph).

The proposal for the Bury Council land is to provide a new single form entry school.

For the purposes of this report and based upon the areas provided in the Barton Wilmore masterplan, it has been assumed that 60% of the net development area will be impermeable (roof, paved areas, roads and footpaths etc) including a 10% allowance for urban creep resulting in 20.34 hectares of positively drained area from the VHW Land Partnership (Walshaw) Limited development and 1.28 hectares of positively drained area from the Bury Council land. The proposed use of SUDS techniques outlined in the RoC Consulting Masterplan Drainage Strategy Report Ref:4072/MDS, are to be further developed at detailed design stage and to meet any reserved planning matters that will allow for flexibility in the percentage.

4.2 Proposed Levels

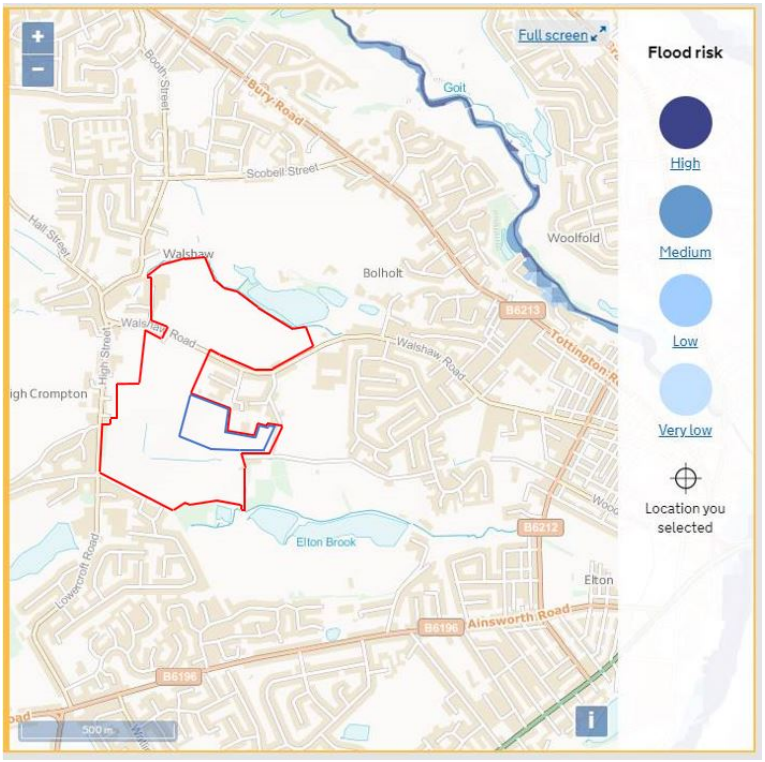
At the time of writing, a site levels strategy was not available for the proposed development. However, it is anticipated that there will be no major changes in the existing site topography and therefore finished levels will remain broadly as existing with some levelling out of peaks and troughs as required to facilitate construction and minimise bulk earthworks movements.

Refer to Appendix C for a copy of the RoC Sketch 4072/SK103 ‘Existing Topography’ which indicates current contour levels based on the existing O.S Data.

5.0 Sources of Flood Risk

5.1 Fluvial Flood Risk

Information relating to fluvial flood risk at the site has been obtained via JBA flood mapping (details of which can be found in Appendix E) and Environment Agency online flood mapping.



Examination of the Environment Agency online flood map above and JBA flood maps indicates that the site is located within Flood Zone 1. Flood Zone 1 is defined within the NPPF as a site to have less than a 1 in 1000 (<0.1%) probability of river or coastal flooding in any one year.

As discussed in section 3.6 there are several surface water features located within close proximity to the development site.

Walshaw Brook is present to the north boundary of site area. This generally flows in a south easterly direction with a number of tributaries also present which connect in at various points. Just outside of the northern site boundary and north of Walshaw Brook there are a number of existing ponds/lakes within the Best Western Hotel site. As referenced in section 3.11.1 no hydraulic modelling will have been undertaken due to the catchment size being less than 3km² and the watercourse not falling under Environment Agency jurisdiction.

Elton Brook is present just outside the southern development site boundary. This generally flows in an easterly direction with a number of tributaries present within the site connecting at various points. One of the main tributaries commences within the site and crosses a number of the development parcels. Outside the south east boundary, north of Elton Vale sports Club, are three large water features which are understood to be Elton the Brook Reservoir. As referenced in section 3.11.1 no hydraulic modelling will have been undertaken due to the catchment size being less than 3km² and the watercourse not falling under Environment Agency jurisdiction.

The pluvial flood maps can be used as a reasonable proxy to determine the potential risk of fluvial flooding from small watercourses and their tributaries, the Landmark data indicates that there may be a risk of flooding with an overland pathway present across the northern and southern portion of the site.

It is recommended that in order to accurately quantify the flood risk at the site, hydraulic modelling of Walshaw Brook and Elton Brooks should be undertaken which will help inform the development proposals. This is not perceived to be a significant constraint on the site.

These features are all ordinary watercourses and fall under the jurisdiction of the Lead Local Flood Authority (LLFA) Bury Council.

Given the topography of the site and the level of these water features it is considered that the risk of flooding to the proposed development from these are low. The tributaries within the development site appear to be located at existing field boundaries and are therefore expected to be land drainage ditches which will become redundant as the land parcels are developed.

Any existing watercourse or ditches that are to be retained will be provided with appropriate stand off distances to ensure that development is kept clear of any potential flooding and access is provided for maintenance.

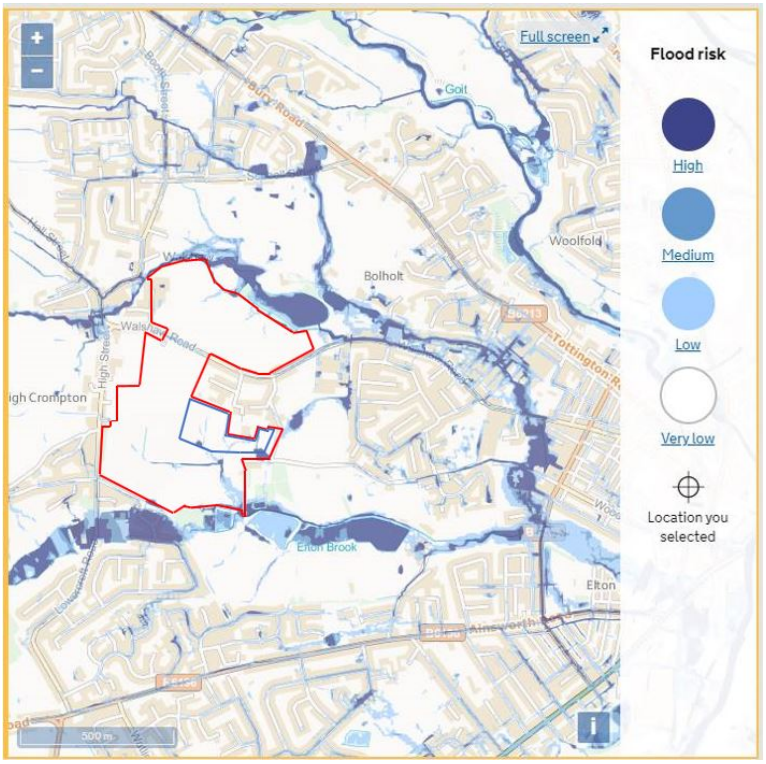
There are no identified existing fluvial flooding issues with either Walshaw Brook or Elton Brook within the site boundary.

Subject to the recommended hydraulic modelling being undertaken and based on the currently available online information the risk of fluvial flooding is assessed as **Low.**

5.2 Pluvial Flood Risk

Pluvial flooding is defined as flooding resulting from rainfall generated overland flow before run-off enters any watercourse or sewer.

It is usually associated with high intensity rainfall events but can also occur with low intensity rainfall or melting snow where ground is saturated, frozen, developed or otherwise has low permeability resulting in overland flow and ponding in depressions in the topography. Large catchment areas are particularly prone to this type of flooding.



The Environment Agency pluvial flood map above and JBA pluvial flood maps in Appendix E indicate that areas of the site are potentially susceptible to pluvial flooding. However, these are generally limited to the alignment of existing water features e.g. Walshaw Brook, Elton Brook and their tributaries.

A number of existing noteworthy surface water overland flow flood routes have been identified from this data.

- The first of these flow paths is to the northern boundary of the site and appear to originate from the alignment of Walshaw Brook and around the western most pond/lake features

- The second of these flow paths is to the south easterly boundary of the site and appear to originate from the alignment of Elton Brook and its tributaries

Localised pluvial flooding is also identified in sections of the local highway network adjacent to and bisecting the site. This, however, appears to be contained with the highway boundaries and is considered to be a low risk to the development site.

The data used in this flood mapping will be based on coarse level data and can be considered indicative only.

The topography generally drains towards Walshaw Brook and Elton Brook and provision for existing overland flow routes will be made at the detailed design stage.

As mentioned in section 3.1, no hydraulic modelling has been undertaken for Walshaw Brook or Elton Brook as their catchments are both less than 3km^2. It is recommended that in order to accurately quantify the flood risk at the site, survey works including hydraulic modelling of Walshaw Brook and Elton Brook should be undertaken which will help confirm the flood risk which may be fluvial and inform any mitigation requirements that may be required for the site development proposals.

Consideration will also be given at detail design stage for the introduction of additional cut-off ditches or trenches to reduce the impact of potential overland flows from off-site on the development. The only flows that are therefore likely to be present on site are from direct rainfall on proposed areas of hardstanding.

The surface water drainage strategy for this site is explored in detail and can be referenced as part of the RoC Consulting Masterplan Drainage Strategy Report Ref:4072/MDS, which informs that the proposed new development will be served by a new surface water drainage network and underground/surface attenuation which will be designed to accommodate surface water flows within the site for up to and including the 100 year plus 40% climate change storm event.

The recommended mitigation measures that are to be put in place should reduce this risk to either low or medium. Overland flow paths for off-site pluvial flows and exceedance events on-site should be catered for within the detailed design/levels strategy. This in conjunction with a new drainage system would be sufficient to mitigate the risk to an acceptable **Low** level.

5.3 Tidal Flood Risk

The site is not considered to be at risk of tidal flooding due to its inland location.

5.4 Groundwater Flood Risk

In general terms, groundwater flooding can occur from three main sources, raised water tables, seepage and percolation, and groundwater recovery or rebound.

If groundwater levels are naturally close to the surface, then this can present a flood risk during intense rainfall. Having reviewed groundwater flood maps from the British Geological Survey (refer to Appendix E) they indicate that the site contains no inland geological indicators of flooding and that some areas of the site have potential for groundwater flooding to occur at the surface and of property situated below ground level.

The Bury Local Flood Risk Management Strategy identifies that the land in general is shown to be at varying risk from >=25%<50% and >75% risk of groundwater flooding.

An intrusive investigation should be undertaken at detailed design stage to establish exact ground water levels and how they fluctuate seasonally. If required, measures would need to be introduced into the drainage scheme to deal with high groundwater to ensure that flooding to property does not occur. Given the proposed development is primarily residential, it is unlikely that any basements will be provided and therefore there will be no property located below ground level.

It is considered that any groundwater issues can be mitigated as required, subject to further investigation, at the detailed drainage design stage. The risk to the site from groundwater flooding is therefore considered **Low**.

5.5 Artificial Source – Canal Flood Risk

Generally, canals are owned and operated by the Canals & Rivers Trust (CRT). Water levels are regulated between normal and statutory levels by means of weirs and sluice gates and whilst a breach or overtopping of the structure is unlikely, the possible flood risk needs to be assessed.

The nearest canal to the site is the Manchester, Bolton and Bury canal which is circa 2.25km to the south east.

The risk of flooding from canals is considered **Low**.

5.6 Artificial Source – Sewer Flood Risk

United Utilities have responded to the pre-development enquiry made for the site, which can be found in Appendix C together with a copy of the sewer record maps.

With reference to section 3.10 and section 5.2 above, given the topography of the site and the surrounding area it is possible that flooding from surcharged public sewers would impact on the proposed development site as any excess flow would follow the existing site topography. However, as described above in section 5.2 suitable mitigation measures at detail design stage would ensure that the properties in the new development would not be at risk.

As referenced within the RoC Consulting Masterplan Drainage Strategy Report Ref:4072/MDS, the new development proposed site surface water drainage system will be designed to maintain surface water flows below ground for up to and including the 1 in 30 year return period as a minimum. Flows above this and up to 100 year plus 40% allowance for climate change will be retained safely within the site.

Taking the above into consideration and the response received from United Utilities, it is considered that the risk of flooding to the site from surcharged sewers can be managed and therefore be considered as **Low.**

5.7 Artificial Source – Reservoir Flood Risk

Risk of flooding from reservoirs can occur when a structure is overtopped, or its dam fails.

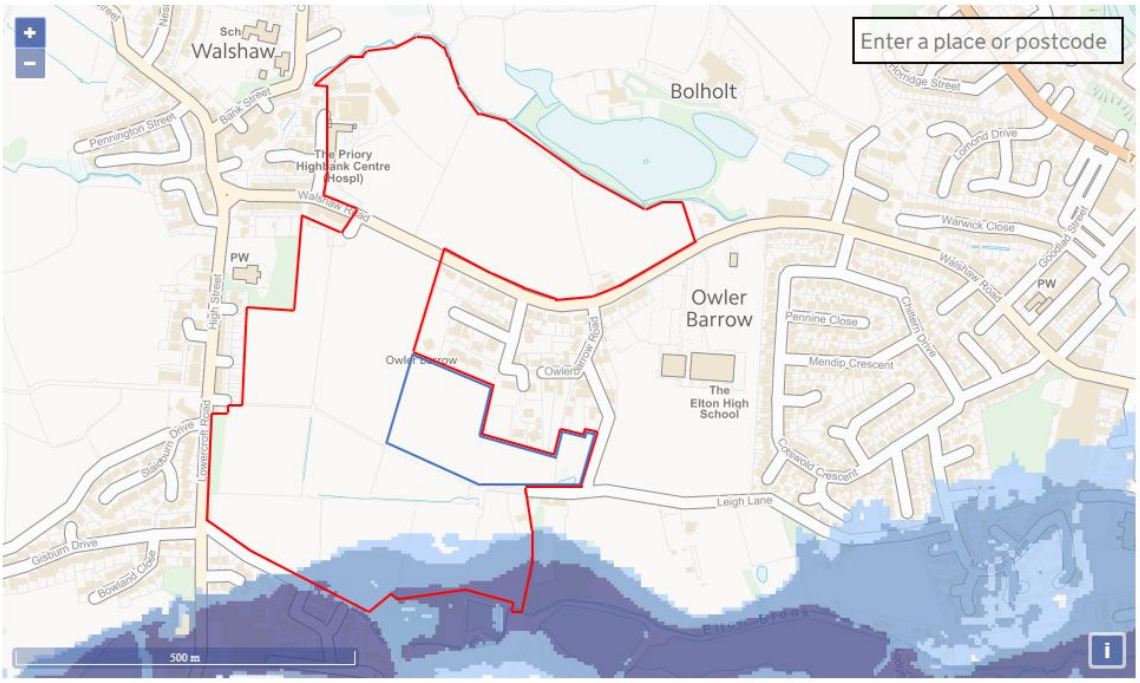
As identified in earlier sections of this report, a number of ponds/lakes/reservoirs are located towards the site's northern and southern boundaries.

The Bury Local Flood Risk Management Strategy (LFRMS), identifies Elton Reservoir is the largest reservoir, comprising of the Elton and Elton Vale Lower Reservoirs within the Borough and confirms that this is listed by the Environment Agency in their Public Register of Large Raised Reservoirs, details of which can be reviewed in Table 1 of the LFRMS. The report confirms that the reservoirs are in operation and their construction is defined as 'Earthfill'.

Also listed are the Lowercroft Reservoirs, to the south west of the site, comprising the lower, middle and upper reservoirs also in operation and of 'Earthfill' construction. All reservoirs being constructed during the 1800's.

The LFRMS Report confirms that the reservoirs are operated and maintained by United Utilities for water storage and are topped up from the water mains. United Utilities has a programme of pro-active reduction which is reducing the risk of reservoir failure even further, on a year by year basis.

A review of the below Environment Agency reservoir flood map indicates that a small portion of the southern site at its boundary is at risk of reservoir flooding from both the Elton and Lowercroft Reservoirs. The predicted depth ranging from below 0.3m to between 0.3m-2.0m in depth with flood speeds from below 0.5m/s to between 0.5 and 2 m/s.



Reservoir flood risk: flood water depth

Over 2m | Between 0.3 and 2m | Below 0.3m

As identified in the LFRMS Report 'The chance of failure is very unlikely as reservoirs are regularly inspected and there is an extremely good safety record in the UK with no loss of life due to reservoir failure since 1925'.

Although the risk from reservoir flooding is unlikely, consideration may be taken into account of the impact of the flood risk zone during the further development of the masterplan layout and detail design. As such, the risk of flooding from reservoirs can be considered as **Low.**

5.8 Flood Risk Overview

Source	Likelihood and Compatibility
Fluvial	Low
Coastal: Sea and Estuarine	N/A
Pluvial / Surface Water	Low – Detailed design/levels strategy mitigation to reduce flooding from ordinary watercourses, Walshaw Brook, Elton Brook and associated tributaries from high to low risk
Groundwater	Low – Further investigation and development Masterplan to reduce from medium to low risk.
Artificial Sources (Canal/Reservoir)	Low – Coordination of Masterplan Layout from high to low risk
Sewer Flooding	Low risk
Historic Flooding	Low risk

5.9 Flood Risk Vulnerability Classification

The proposed development is primarily residential and can be considered as 'More Vulnerable' within Table 2: Flood Risk Vulnerability Classification in the NPPF. This type of development would be wholly appropriate for Flood Zone 1.

Flood risk vulnerability classification (see table 2)		Essential infrastructure	Water compatible	Highly vulnerable	More vulnerable	Less vulnerable
Flood zone (see table 1)	Zone 1	✓	✓	✓	✓	✓
	Zone 2	✓	✓	Exception Test required	✓	✓
	Zone 3a	Exception Test required	✓	×	Exception Test required	✓
	Zone 3b functional floodplain	Exception Test required	✓	×	×	×

Key: ✓ Development is appropriate.
× Development should not be permitted.

Table 3: Flood risk Vulnerability and flood zone 'compatibility'
'Technical Guidance to the National Planning Policy Framework (NPPF)'

6.0 Residual Risks and Impacts

6.1 Flood Risk Management Measures

The surface water drainage strategy for the new development site within the RoC Consulting Masterplan Drainage Strategy Report Ref:4072/MDS ensures that surface water run-off from the proposed development would not exceed the existing greenfield scenario and a betterment would be provided for larger return periods.

As a result of these restricted flow rates and increase in impermeable area proposed in the form of source and site control measures, any new private drainage system will be designed in accordance with current design guidance and standards and attenuation will be provided below ground and on the surface for up to the 100 year return period storm event with a 40% allowance for climate change.

The use of SUDS control measures, with the proposed controlled release of surface water to Walshaw Brook and Elton Brook will help to minimise the flood risk impact on the downstream watercourse network.

Finished site levels will be engineered to provide positive drainage where required and prevent ponding. The accumulation of standing water will therefore not occur and thus not pose a risk.

Gradients of the hardstanding areas, where possible, will be designed to fall away from buildings such that any overland flow resulting from extreme events would be channelled away from entrances.

As the site and surrounding areas are located within Flood Zone 1, it is considered that access and egress should not be affected during flooding.

6.2 Off Site Impacts

To ensure that the proposed development will not increase flood risk elsewhere, surface water drainage discharge rates will be restricted. This restricted discharge in conjunction with surface water attenuation on site will mitigate against flood risk to other land.

By reducing the post development peak run-off to greenfield rates prior to its point of discharge into Walshaw Brook and Elton Brook, this will reduce the potential for surface water flooding on the downstream network.

6.3 Residual Risks

The development and its drainage system will be designed to cope with the intense storm events up to and including the 100-year return period rainfall event with a 40% allowance for climate change. If an extreme rainfall event exceeds the design criteria for the drainage network, it is likely that there will be some overland flows which are unable to enter the system and existing overland flows which we are aware of.

Any overland flows generated by the proposed development would be directed away from the adjacent existing properties surrounding the site and towards the highway network where it can follow natural flow paths.

The predicted pluvial flood risk from Walshaw Brook, Elton Brook and their tributaries cannot be defined at this stage. However, as recommended, further investigation and hydraulic modelling of the Brook and the tributaries at detailed design stage will inform what if any mitigation works are required to manage any potential fluvial/pluvial flood risk.

6.4 Pollution Control

As proposed, surface water discharge from the site is to ground/watercourse, suitable pollution control measures are required to safeguard the local environment.

The SUDS Manual provides guidance on the requirements of the number and types of treatment 'trains' required to provide suitable water quality prior to discharge to watercourses.

Depending on the type of SUDS provided, the drainage strategy will provide appropriate levels of treatment to protect the local environment in line with the SUDS guidance.

Surface water run-off from roof and pavement areas is classified as low hazard and requires little treatment other than consideration for the interception of airborne detritus.

Run-off from large car parking areas, heavily trafficked roads and service yards etc, is classified as medium hazard and requires one or two types of treatment such as:

- Sump outlets to road gullies and linear drainage channels
- Suitably specified separators to BS and EA PPG Guidelines
- Catchpit manholes
- Combinations of various SUDS Techniques
- Approved proprietary treatment systems

The proposed surface water discharge from the proposed development will be low to medium hazard.

Suitable maintenance of the drainage systems is also required to ensure that the systems operate efficiently and reduce the risk of pollution.

7.0 Summary

It is anticipated that the site (part of GM Allocation 9) could accommodate up to 657 residential properties, access roads, footpaths and landscaping on a net area of 20.34 Hectares and a single form entry school.

Information has been sourced from the online GOV.UK Long Term Flood Risk Information, Envirocheck ProMap, United Utilities Asset Management and the Bury Council SFRA and Maps Report, Bury Local Flood Risk Management Strategy.

The site is in an area identified as having a 'low' probability of fluvial flooding on the Environment Agency Flood Map in section 5.1 and is located in Flood Zone 1.

The NPPF requires planning applications accompanied by a Flood Risk Assessment for developments of 1 hectare or greater and/or more than 10 properties in Flood Zone 1.

The Flood Risk Assessment has reviewed all sources of flood risk to both the proposed development and to existing adjacent properties as a result of the development proposals, including fluvial, tidal, pluvial, groundwater, sewers and flooding from artificial sources.

Flood Risk Overview:

- Fluvial – Low subject to hydraulic modelling
- Pluvial/Surface Water – Low with development masterplan mitigation
- Groundwater – Low with further investigation and development masterplan mitigation
- Artificial Sources (Reservoirs & Canals) – Low with development masterplan layout
- Sewers – Low

A review of the known historic flood events suggests that the development site is not at risk from pluvial flooding.

United Utilities have been consulted via a pre-development application, the response on points of connection and discharge and a copy of the sewer record maps are located in Appendix D.

The RoC Consulting Masterplan Drainage Strategy Report Ref:4072/MDS confirms that proposed development will be served using a separate system of foul and surface water drainage. The surface water system will meet the requirements of the National and Local Standards for the drainage 'hierarchy' and will not increase flood risk to the development site and local neighbourhood. The foul water system will discharge to the public sewerage system and location points agreed with United Utilities.

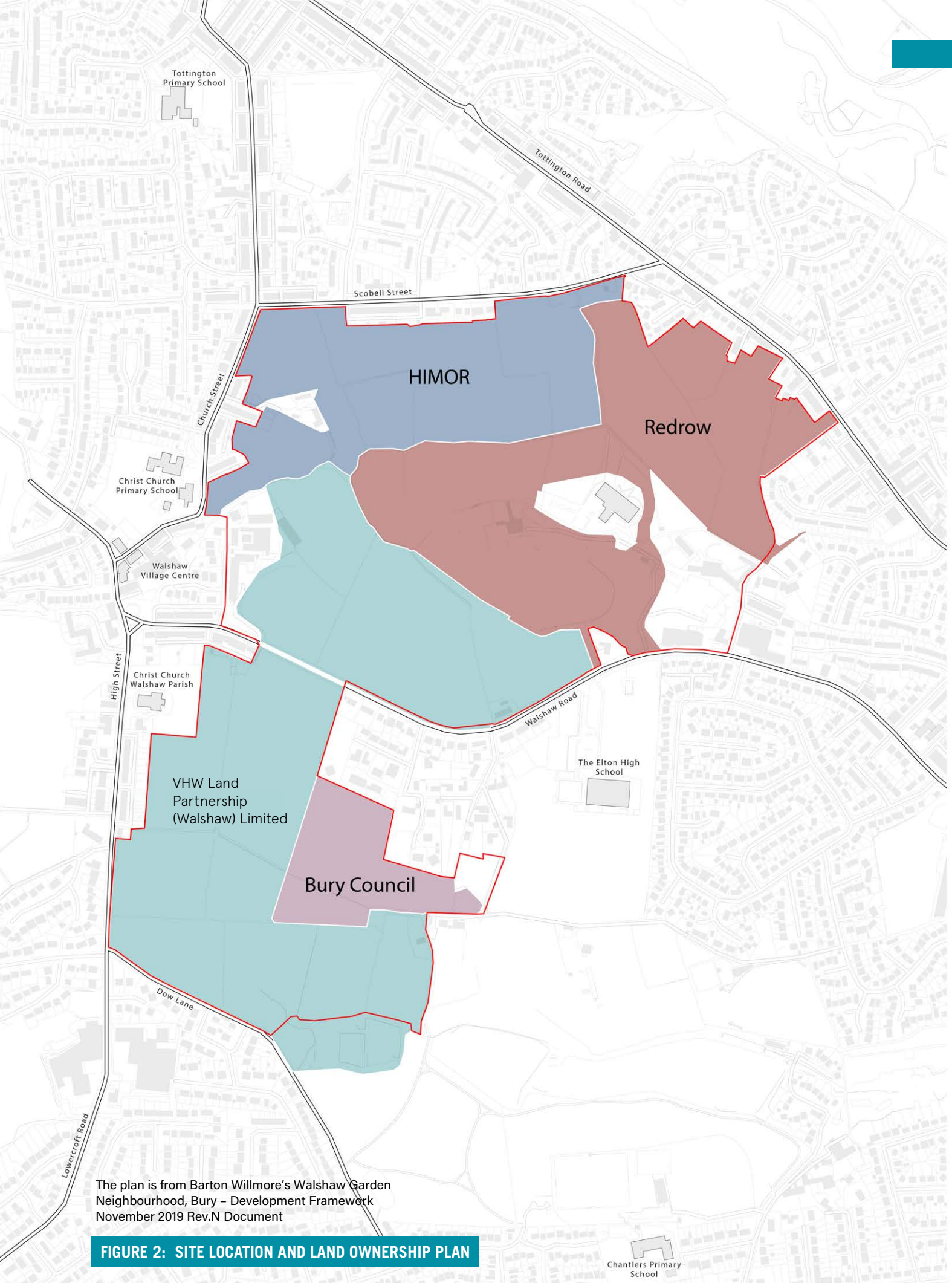
The Flood Risk Assessment is considered to be commensurate with the development proposals and in summary, the development can be considered appropriate for Flood Zone 1 in accordance with the NPPF.

The development will be accessible for emergency access and egress during times of extreme flooding events as the site is developed through the master planning and design development stages. Consideration of layout and levels will be required to take into account to mitigate the existing flood risk from pluvial flooding and the flood risk from the Elton and Lowercroft Reservoirs.

Subject to the implementation of the recommendations as set out above and within the RoC Consulting Masterplan Drainage Strategy Report Ref:4072/MDS, the development should not be precluded on flood risk grounds.

COMPLEX CHALLENGES ...
MADE SIMPLE

APPENDIX A – SITE LOCATION & LAND OWNERSHIP PLAN



The plan is from Barton Willmore's Walshaw Garden Neighbourhood, Bury – Development Framework November 2019 Rev.N Document

FIGURE 2: SITE LOCATION AND LAND OWNERSHIP PLAN

APPENDIX B – CONCEPT MASTERPLAN

The plan is from Barton Willmore's Walshaw Garden Neighbourhood, Bury – Development Framework November 2019 Rev.N Document

FIGURE 10: CONCEPT MASTERPLAN

APPENDIX C – EXISTING TOPOGRAPHY PLAN

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NOTES

1. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
2. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE ROC FLOOD RISK ASSESSMENT REPORT AND MASTERPLAN DRAINAGE STRATEGY REPORT.
3. THE INFORMATION SHOWN ON THIS DRAWING IS INDICATIVE ONLY AND SUBJECT TO FURTHER CONSULTATION AND DETAILED DESIGN.
4. CONTOURS ARE BASED ON OS INFORMATION PROVIDED BY BARTON WILLMORE.

KEY

- 5m CONTOUR LINE
- 1m CONTOUR LINE
- OVERLAND FLOW ROUTE
- OFFSITE OVERLAND FLOW ROUTE
- RED LINE BOUNDARY
- LAND OWNERSHIP BOUNDARY
- BURY COUNCIL LAND

REV.	DATE	DETAILS	DRN.	CHK.
01	17/01/20	FIRST ISSUE	RM	DAE

DRAWING STATUS

INFORMATION

RIBA STAGE

PLANNING

RoC CONSULTING
Commercial Wharf
6 Commercial Street
Manchester M15 4PZ
T 0161 214 5390
W rocconsulting.com

DRAWN RM	DATE 17.01.20	SCALES 1:2,000
CHECKED DAE	DATE 17.01.20	THE ABOVE SCALES APPLY WHEN PLOTTED AT A1 SIZE --DO NOT SCALE--
APPRVD. PAW	DATE 17.01.20	EMAIL FOR DRAWINGS info@rocconsulting.com

CLIENT

VHW Land Partnership (WALSHAW) Limited

PROJECT TITLE

WALSHAW GARDEN NEIGHBOURHOOD
BURY

DRAWING TITLE

EXISTING TOPOGRAPHY & OVERLAND FLOW ROUTES
SHEET 3 OF 3

PROJECT No.	DRAWING No.	REV.
4072	SK103	01

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APPENDIX D – UNITED UTILITIES INFORMATION

Wastewater pre-development enquiry

United Utilities
helping life flow smoothly

This form is for all first time enquiries you may have when planning your development.

If your enquiry relates to advice on **connection points and discharge rates**, please complete all sections, providing as much information as you have available. You will notice some fields are marked as optional, all other fields are mandatory.

For **all other enquiries**, please complete Sections 1, 2, 7 and 8.

When answering the yes/no questions please mark an 'x' in the appropriate box.

All enquiries must be accompanied by a site location plan, clearly identifying the site boundary.

Once completed, please return this form by email to **WastewaterDeveloperServices@uuplc.co.uk** or post to United Utilities Developer Services, Grasmere House, Second Floor, Lingley Mere Business Park, Lingley Green Avenue, Great Sankey, Warrington WA5 3LP.

We aim to respond to enquiries within 15 working days from receipt of your completed enquiry form.

Section 1: About you		
	Applicant	**Agent (if applicable)**
Name		Reece McGuinness
Company's name		ROC Consulting
Home or company address *(including postcode)*		Commercial Wharf 6 Commercial Street Manchester - M15 4PZ
Contact telephone number *(a mobile number is fine)*		0161 214 5390
Email		reece.mcguinness@rocconsulting.com
What is your enquiry	Surface and foul water discharge limitations + connections	
Who should we send the enquiry response to?	Applicant ☐ Agent ☑ Both ☐	

Section 2: About your site							
Site name	Land at Walshaw Bury (Bury Council)						
Site Address *(or nearest main road)*	Address (near): Leigh Lane, Elton, Bury, Greater Manchester. BL8 1PQ (Nearest postcode).						
Site grid reference *(mid point)*	X:	377977		Y:	411299		
Approx. number of dwellings	1 School						
Total site area *(hectares)*	2.609						
Site name	Land at Walshaw Bury (Bury Council)						
Development area *(hectares)* *(Optional)*	2.13						
Estimated onsite date *(Optional)*							
Estimated first occupation *(Optional)*							
Does the site have planning permission	Full	Yes ☐ No ☑	Application submitted	☐	Planning ref (if applicable)		
	Outline	Yes ☐ No ☑	Application submitted	☐	Planning ref (if applicable)		
Have you approached us about this site previously?	Yes ☐ No ☑		If yes, please provide Ref No. and/or contact details				

Section 3: Your site drainage strategy		
Type of site	GREENFIELD *(Go to Q 3.1)* ☑	BROWNFIELD *(Go to Q 3.2)* ☐
3.1 Greenfield site *(Optional)*		Confirmed attachment:
Please provide full calculations to show existing greenfield run off rates		Yes ☐ No ☑
3.2 Brownfield site *(Optional)*		Confirmed attachment:
Please provide a plan showing existing foul water drainage from this site to the public sewer network (including location of existing drains, pipe sizes and points of connection)		Yes ☐ No ☑
Please provide a plan showing the existing surface water drainage from this site to the public sewer network, including location of existing drains, pipe sizes and points of connection		Yes ☐ No ☑
Will this development produce trade effluent?		Yes ☐ No ☑
Separate approval must be obtained for the discharge to the public sewer of any trade effluent from a factory, manufacturing or commercial process. You can apply for consent through a retailer of wastewater services who will apply to us on your behalf. A list of retailers can be found via the Market Operator here: **www.mosl.co.uk/members/member-list** A copy of the consent will be needed for you to make a sewer connection application.		Yes ☐ No ☑
If yes, to which sewer?		
Section 4: Foul water connection		
Are you proposing to use an existing connection to the public sewer?		Yes ☐ No ☑
If **Yes**, please provide manhole number or grid reference number If **no**, please provide the proposed flow rate and connection points (litres per second)		3.7l/s at a point TBC.
Is the foul water discharge to be pumped?		Yes ☐ No ☑
Section 5: Surface water connection **If you are proposing to connect surface water to a public sewer, please attach evidence that all options for Sustainable Urban Drainage Systems (SUDs) have been explored in accordance with part H of the Building Regulations 2010.** **Details of SUDs can be found at http://www.ciria.com/sudsdesign_guidance.htm**		
How do you propose to drain surface water from the site?	SUDs *(Go to Section 6)* ☑	Discharge to public sewer *(Go to Q5.1)* ☐
5.1 Does the site have existing surface water connections to the public sewer?		Yes *(Go to Q5.2)* ☐ No *(Go to Q5.3)* ☐
5.2 Proposed surface water discharging to public sewer via **existing connection**		
Are you proposing to use an existing connection?		Yes ☐ No *(Go to Q5.3)* ☐
If **yes**, please provide manhole number or grid reference number & proposed flow rates		
5.3 Proposed surface water discharging to public sewer via a **new connection**		
Have you completed a flood risk assessment in support of your planning application?		Yes ☐ No ☑
Is the surface water to be controlled? *(Optional)*		Yes ☑ No ☐
Is the surface water to be pumped?*(Optional)*		Yes ☐ No ☑
Section 6: Development details (Optional)		
Is the development part of a larger site that will be developed in phases or will be subject to separate planning applications? If **yes**, please provide details below.		Yes ☐ No ☑

Phase number		1	2	3	4	5	6	7
Start date on site								
Anticipated date of first occupation								
Anticipated completion date								
No. of dwellings								
Sustainability code for dwellings								
Public houses and/or restaurants	No. of seats							
	Floor space (m^2)							
Hotels: Total No. of beds								
Schools: Total No. of pupils								
Hospitals: Total No. of beds								
Retail units: Total No. of units								
Office space: Total No. of units								
Industrial / manufacturing: Total No. of units								
Other: Foul water *(litres per second)*								

Section 7: Supporting information Please confirm you have included all supporting information in relation to your enquiry	
Site location plan	☑ Yes ☐ No
Site boundary	☑ Yes ☐ No
Proposed drainage layout plan *(optional)*	☐ Yes ☑ No
Indicative layout plan *(optional)*	☐ Yes ☑ No
Calculations in support of proposed flow rates or run off rates *(optional)*	☐ Yes ☑ No
Flood risk assessment *(if appropriate)*	☐ Yes ☑ No

Section 8: Declaration

I understand that the submission of this form is to be treated as a preliminary enquiry and the information may be subject to change. In particular, I understand that the information United Utilities Water Limited provides in response is valid only in conjunction with the information provided in relation to this enquiry, any changes to regulation or development layout will invalidate our response.

Name	Reece McGuinness	Signature	R.McG
Company	ROC Consulting	Date	02 01 2020

UU use only

Date received		UUW Ref No	\

United Utilities
helping life flow smoothly

About us

United Utilities is the North West's water company. We keep the taps flowing and toilets flushing for seven million customers every day. From Crewe to Carlisle, we work hard behind the scenes to help your life flow smoothly.

United Utilities Water Limited, Haweswater House, Lingley Mere Business Park, Lingley Green Avenue, Warrington WA5 3LP.
Registered in England and Wales. Registered Number 2366678.

Reece McGuinness

From: Wastewater Developer Services <WastewaterDeveloperServices@uuplc.co.uk>
Sent: 06 January 2020 14:57
To: Reece McGuinness; Wastewater Developer Services
Subject: RE: File Transfer: 4072 - Land at Walshaw Bury Pre-Development Enquiry (Bury Council) - 4200029697

Dear Customer

We have carried out an assessment of your application which is based on the information provided; this pre development advice will be valid for 12 months

Foul will be allowed to drain to the public combined sewer network at an unrestricted rate. The connection(s) to the public sewer can be at a point(s) convenient to yourself

Surface water from this site should drain to either soak away/infiltration system or directly to watercourse. Discharge rates and consents must be discussed and agreed with all interested parties.

If you require any further guidance please follow http://www.unitedutilities.com/builders-developers.aspx

If you need a make further enquiry relating to this matter please send your enquiry to WastewaterDeveloperServices@uuplc.co.uk Please quote your DEXXXX/42XXXXXXX/GEXXXX reference number

Please Note:- enquiries sent to any other United Utilities e-mail address will be deleted.

Connection Application

Although we may discuss and agree discharge points & rates in principle, please be aware that you will have to apply for a formal sewer connection. This is so that we can assess the method of construction, Health & Safety requirements and to ultimatley inspect the connection when it is made. Details of the application process and the form itself can be obtained from our website by following the link below

http://www.unitedutilities.com/connecting-public-sewer.aspx

Please be aware that on site drainage must be designed in accordance with Building Regulations, National Planning Policy, Planning Conditions and local flood authority guidelines, we would recommend that you laise and make suitable agreements with the relevant statutory bodies.

Neil O'Brien
Wastewater Pre-Development Engineer
Great Manchester Area
Developer Services & Metering
Customer Services
T: 01925 679410
unitedutilities.com

From: Reece McGuinness [mailto:reece.mcguinness@rocconsulting.com]
Sent: 02 January 2020 10:49
To: Wastewater Developer Services <WastewaterDeveloperServices@uuplc.co.uk>
Subject: File Transfer: 4072 - Land at Walshaw Bury Pre-Development Enquiry (Bury Council) - Land at Walshaw, Bury

IMPORTANT: Click a link below to access files associated with this transmittal that came in through the RoC Consulting Info Exchange web site.
Download all associated files

Additional links:

Reply to All

Project Name:	Land at Walshaw, Bury
Project Number:	4072
From:	Reece McGuinness
To:	WastewaterDeveloperServices@uuplc.co.uk
CC:	David Eato; Paul White (RoC Consulting)
Subject:	4072 - Land at Walshaw Bury Pre-Development Enquiry (Bury Council)
Sent via:	Info Exchange
Expiration Date:	2/1/2020
Remarks:	Dear Sir/Madam, Please find attached pre development enquiry for the above site. Also attached is a plan indicating layout and an ownership plan. This pre-development enquiry relates to the Bury Council land.

Transferred Files

NAME	TYPE	DATE	TIME	SIZE
Transmittal - 00004.pdf	PDF File	1/2/2020	10:52 AM	65 KB
30860-MR-M-02I-Block Layout-A1_PT_1.2500-01-01.jpg	JPEG Image	12/24/2019	12:05 PM	6,446 KB
30860-MR-M-04-Land Ownership Plan-A1_PT_1.2500-01.jpg	JPEG Image	12/24/2019	12:06 PM	12,405 KB
Bury Council Pre Development Enquiry.pdf	PDF File	1/2/2020	10:49 AM	1,457 KB

To share and learn more about Newforma Info Exchange visit: Newforma Community Site

Kind regards
Reece McGuinness
Strategic Land Graduate Engineer

T 0161 214 5390
www.rocconsulting.com

EMGateway3.uuplc.co.uk made the following annotations

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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
5111	148.78	SW	146.92	225			VC	57.72348	1 in 21
5107	148.72	CO	146.87	225			VC	52.63079	1 in 16
5115		CO		100			VC	7.270682	
6452	140.83	SW	139.1	150			VC	34	1 in 56
6402	140.82	CO	139.15	150			VC	31	1 in 38
5505	145.53	SW	143.9	150			VC	46.09772	1 in 13
5305	143.67	SW	142.04	150			VC	55.44366	1 in 43
5308		SW		100			VC	15.69961	
5312		SW		100			VC	11.91512	
5303	146.9	CO	144.57	150			VC	67.47592	1 in 17
5301	146.84	SW	144.78	150			VC	35.22783	1 in 17
5304	142.85	CO	140.6	150			VC	89.00562	1 in 19
5303	143.67	SW	140.98	225			VC	89.00562	1 in 19
5209	147.56	SW	146.22	150			VC	31.257	1 in 71
5207	147.54	CO	145.55	150			VC	17.02932	1 in 61
5201	147.57	CO	145.22	150			VC	76.41989	1 in 21
5208	147.51	SW	145.77	150			VC	16.03122	1 in 38
5202	147.54	SW	145.24	150			VC	72.44308	1 in 22
5212		SW		100			VC	9.532553	
5211		CO		100			VC	9.218862	
5101	149.43	SW	147.76	225			VC	46.01087	1 in 16
5104	146.77	SW	144.59	300			VC	49.72927	1 in 49
5102	148.5	CO	146.61	225			VC	6	1 in 19
5103	148.15	SW	146.26	225			VC	20.02498	1 in 12
5105	146.8	CO	144.58	225			VC	53.16014	1 in 55
5117		CO		150			VC	17.68896	
4351		SW	0	450			VC	26.07681	
5403	142.69	CO	140.83	150			VC	17.02939	1 in 14
5402	146.45	SW	143.57	150			VC	60.00833	1 in 22
5404	142.59	CO	140.73	225			VC	34.1321	1 in 14
5401	146.54	CO	143.64	225			VC	60.03076	1 in 22
5008		SW		100			VC	11.68991	
5009		SW		100			VC	11.68991	
5009		SW		100			VC	8.425817	
5009		SW		100			VC	8.425817	
5003	146.12	SW	144.63	300			VC	61	1 in 3050
5003	146.12	SW	144.63	300			VC	61	1 in 3050
5001	150.47	SW	148.6	225			VC	47	1 in 12
5001	150.47	SW	148.6	225			VC	47	1 in 12
5004	147.65	CO	146.18	225			VC	61	1 in 39
5004	147.65	CO	146.18	225			VC	61	1 in 39
4202	149.58	SW	147.92	150			VC	37.01351	1 in 17
4311		CO		100			VC	20.26013	
4902	152.71	CO	151.25	225			VC	36.68787	1 in 10
4902	152.71	CO	151.25	225			VC	36.68787	1 in 10
4302	148.1	CO	146.3	150			VC	22.24903	1 in 19
4301	148.11	SW	146.56	150			VC	34	1 in 19
4320		FO		150			VC	19.07128	
5952	147.64	SW	146.02	300			VC	43.2218	1 in 180
5952	147.64	SW	146.02	300			VC	43.2218	1 in 180
5903	147.64	CO	146.06	225			VC	41.41967	1 in 153
5903	147.64	CO	146.06	225			VC	41.41967	1 in 153
4202		CO		100			VC	8.634017	
5907		CO		100			VC	8.634017	
5901	147.9	CO	146.28	225			VC	32.6757	1 in 149
5901	147.9	CO	146.28	225			VC	32.6757	1 in 149
5951	147.89	SW	146.31	225			VC	31.75702	1 in 110
5951	147.89	SW	146.31	225			VC	31.75702	1 in 110
4509		CO		150			VC	4.029942	
4453	148.67	SW	147.07	450			VC	19	
4452	151.2	SW	148.15	225			VC	21.84033	1 in 29
4403	148.51	CO	146.17	225			VC	13.0384	1 in 5
4402	151.25	CO	149.7	225			VC	23.34524	1 in 7
4102		CO		150			VC	18.58792	
7501	132.95	CO	130.95	225			VC	98.60745	1 in 58
9503	129.65	CO	128.75	225			VC	78.60026	1 in 167
6502	142.08	SW	140.29	150			VC	156.4238	1 in 26
6509		CO		100			PVC	11.71412	
6506		CO		225			VC	11.99336	
6504		CO	0	225			VC	13.6805	
6453	140.56	SW	138.31	225			VC	54.14795	1 in 27
6403	140.49	CO	138.24	225			VC	46.50773	1 in 24
6404	137.62	CO	136.17	225			VC	45.1885	1 in 21
6401	137.73	CO	136.91	150			VC	44.18144	1 in 67
6451	137.83	SW	136.95	150			VC	49.0408	1 in 75
6454	137.68	SW	136.18	225			VC	27.313	1 in 9
6507		SW	0	225			VC	13.80739	
6506		CO	0	225			VC	12.94215	
7452	134.86	SW	133.42	375			VC	17.88854	1 in 19
7402		CO		100			VC	9.133412	
8401	131.87	CO	129.06	300			VC	51.0098	1 in 131
8402	131.51	CO	129.42	300			VC	48.01041	1 in 141
0511		CO		100			VC	6.949281	
0511		CO		100			VC	6.949281	
0509		CO		100			VC	6.789247	
0509		CO		100			VC	6.789247	
0508		CO		100			VC	6.808056	
0508		CO		100			VC	6.808056	
0404		CO		150			VC	2.481385	
0404		CO		150			VC	2.481385	
8502	131.94	CO	128.62	300			VC	85	1 in 193
9505		CO		100			VC	14.87616	
9401	127.4	SW	125.89	225			VC	63.78872	1 in 114
9401	127.4	SW	125.89	225			VC	63.78872	1 in 114
9402	127.49	SW	124.88	150			VC	62.96825	1 in 89
9402	127.49	SW	124.88	150			VC	62.96825	1 in 89
9502	129.64	CO	128.77	150			VC	40	1 in 9
9502	129.64	CO	128.77	150			VC	40	1 in 9
9514		CO		150			VC	13.25243	
9514		CO		150			VC	13.25243	
9512		CO		150			VC	4.193076	
9512		CO		150			VC	4.193076	
6302	138.16	CO	135.84	150			VC	43.41659	1 in 21
6352	138.07	SW	136.05	225			VC	43.28972	1 in 34
6405	135.27	CO	134.03	225			VC	47.26521	1 in 169
7304	136.26	SW	134.68	375			VC	52.03845	1 in 42
6203	139.82	SW	137.92	225			VC	56.22277	1 in 30
6201	141.21	SW	140.28	225			VC	28.16026	1 in 12
7302	136.35	CO	133.74	225			VC	87.20665	1 in 349
7251	137.39	SW	135.91	300			VC	88.27797	1 in 74
8306		CO		100			VC	7.795478	
8302		CO		100			VC	7.22372	
8311		CO		100			VC	10.22824	
8204		FO	0	150			VC	25.3705	
8210		SW	0	1200			CO	25.59933	
9301	126.55	SW	124.75	300			VC	79.09594	1 in 68
9301	126.55	SW	124.75	300			VC	79.09594	1 in 68
9404	126.54	SW	125.3	225			VC	31.14482	1 in 59
9404	126.54	SW	125.3	225			VC	31.14482	1 in 59
0302	125.89	CO	123.57	225			VC	28.28427	1 in 141
0302	125.89	CO	123.57	225			VC	28.28427	1 in 141
7401	132.29	CO	130.9	225			VC	35.22783	1 in 24
8301	131.36	CO	128.3	300			VC	23.02173	1 in 85
5204	143.58	SW	141.9	225			VC	24.35159	1 in 59
5203	143.6	CO	141.62	150			VC	13	1 in 108
5206	143.07	SW	141.48	225			VC	31.14482	1 in 26
5205	143.06	CO	141.21	150			VC	29.06888	1 in 23
6205	138.43	SW	137.38	150			VC	34.20526	1 in 19
7201	137.35	CO	133.48	225			VC	23.19483	1 in 331
6209		FO		100			VC	6.159784	
6202	141.14	CO	139.93	150			VC	30.06659	1 in 13
6204	139.78	CO	137.59	150			VC	50.35872	1 in 26
9101	128.33	CO	124.49	375			VC	84.24303	
9205		FO	0	150			VC	25.32687	
9207		FO	0	150			VC	62.99191	
9206		FO	0	150			VC	13.61131	
9104		FO	0	150			VC	30.94014	
9103	125.68	SW	123.43	225			VC	58.69412	
9103	125.68	SW	123.43	225			VC	58.69412	
9102	125.39	SW	123.7	225			VC	80.09994	1 in 30
9102	125.39	SW	123.7	225			VC	80.09994	1 in 30
9203	125.2	SW	123.57	300			VC	51.0098	1 in 116
9203	125.2	SW	123.57	300			VC	51.0098	1 in 116
9105		FO	0	150			VC	8.769351	
9105		FO	0	150			VC	8.769351	
9212		CO		100			VC	28.92301	
9212		CO		100			VC	28.92301	
7106	134.96	CO	133.25	300			VC	41.54111	1 in 23
7254	134.73	SW	133.02	225			VC	25.01999	1 in 19
7204	134.64	CO	132.55	225			VC	34.23449	1 in 17
7255	132.99	SW	131.72	225			VC	18.43909	132.99
7210		CO		100			VC	46.62286	
7108	133.36	CO	131.45	300			VC	16.05292	1 in 13
7205	132.57	CO	130.48	225			VC	29.15476	1 in 29
7110		SW	0	225			VC	21.37756	
8213		SW	0	225			VC	11.40112	
8208		FO	0	150			VC	9.870977	
8214		SW	0	225			VC	11.63949	
8207		FO	0	150			VC	10.14789	
8205		FO	0	150			VC	14.64333	
8211		SW	0	1200			CO	10.42294	
8206		FO	0	150			VC	27.52164	
8215		SW	0	1200			CO	29.1768	
9204		FO	0	150			VC	15.54262	
9208		SW	0	150			VC	8.339096	
8201	131.75	CO	127.84	300			VC	49.0102	1 in 189
8202	131.99	CO	127.55	300			VC	52.03845	1 in 186
8101	132.35	CO	127.19	375			VC	87.0919	1 in 32
8212		SW	0	225			VC	22.66748	
8209		FO	0	150			VC	15.32173	
5106	145.69	CO	143.6	225			VC	46.17358	1 in 19
5108	145.66	SW	143.56	300			VC	42.42641	1 in 24
6105	142.97	SW	141.53	225			VC	33.54102	1 in 96
6104	142.95	CO	141.5	225			VC	33.37664	1 in 88
6103	143.15	CO	141.1	225			VC	24.18677	1 in 18
6108	137.75	SW	136.15	300			VC	30.80584	1 in 62
6107	137.78	CO	136.17	300			VC	29.20616	1 in 56
6102	143.19	SW	141.15	300			VC	52.04938	1 in 19
6109	140.03	SW	137.58	300			VC	32.01562	1 in 23
6106	140.02	CO	137.5	300			VC	34.05877	1 in 26
9106		CO	0	375			VC	73.83726	
9106		CO	0	375			VC	73.83726	
0205	124.92	SW	123.43	225			VC	61.61169	1 in 36
0205	124.92	SW	123.43	225			VC	61.61169	1 in 36
7206		CO		100			VC	27.4881	
7202	137.01	CO	133.41	225			VC	40.22437	1 in 161
7252	136.99	SW	135.46	150			VC	35.51056	1 in 34
7253	136.28	SW	134.38	150			VC	30.8707	1 in 23
7203	136.24	CO	133.15	225			VC	30.08322	1 in 56
7107	135.01	SW	133.35	300			VC	39.05125	1 in 24
7105	137.07	SW	134.96	150			VC	8	1 in 10
8152	132.12	SW	130.66	300			VC	42.10701	1 in 16
7103	137.65	CO	135.62	300			VC	38.0526	1 in 17
7109	133.49	SW	131.48	300			VC	41.7732	1 in 52
6101	142.77	CO	141.77	150			VC	41.04875	1 in 61
6001	143.15	CO	141.1	150			VC	13	1 in 16
6001	143.15	CO	141.1	150			VC	13	1 in 16
5120		CO		100			VC	11.5146	
5126		CO		100			VC	1.46813	
7003	134.31	CO	127.82	375			VC	12.64911	
7003	134.31	CO	127.82	375			VC	12.64911	

Refno	Cover	Func	Invert	Size x	Size y	Shape	Matl	Length	Grad
7002	134.41	CO	0	375			VC	15.23155	
7116		CO		100			VC	8.611727	
7102	138.82	SW	136.76	300			VC	38.01316	1 in 34
7052	138.69	SW	137.67	225			VC	41.01219	1 in 73
7052	138.69	SW	137.67	225			VC	41.01219	1 in 73
7104	137.72	SW	135.63	300			VC	11.04536	1 in 28
7051	138.8	SW	137.11	225			VC	11	1 in 73
7101	138.8	CO	136.71	300			VC	44.01136	1 in 70
7001	138.75	CO	137.12	225			VC	12	1 in 52
7004	138.69	CO	137.67	225			VC	14	
7004	138.69	CO	137.67	225			VC	14	
6003	142.71	SW	141.81	150			VC	46.09772	1 in 39
6003	142.71	SW	141.81	150			VC	46.09772	1 in 39
6011		CO		150			VC	15.45388	
6011		CO		150			VC	15.45388	
5011		CO		100			VC	6.109969	
5011		CO		100			VC	6.109969	
5012		CO		100			VC	7.33593	
5012		CO		100			VC	7.33593	
5013		CO		100			VC	5.333201	
5013		CO		100			VC	5.333201	
5010		SW		100			VC	10.36825	
5010		SW		100			VC	10.36825	
5014		CO		100			VC	5.018884	
5014		CO		100			VC	5.018884	
6017		CO		150			VC	5.374222	
6017		CO		150			VC	5.374222	
6002	142.03	CO	139.61	225			VC	35	
6002	142.03	CO	139.61	225			VC	35	
7902	134.56	CO	132.2	225			VC	25.07987	
7902	134.56	CO	132.2	225			VC	25.07987	
7901	134.66	CO	128.28	375			VC	96.38464	1 in 219
7901	134.66	CO	128.28	375			VC	96.38464	1 in 219
8003		CO		100			VC	7.527914	
8003		CO		100			VC	7.527914	
8002		CO	0	0			UN	35.34637	
8002		CO	0	0			UN	35.34637	
6902	140.45	CO	0	225			VC	86.12201	
6902	140.45	CO	0	225			VC	86.12201	
6901	142.65	CO	140.62	150			VC	33.52611	
6901	142.65	CO	140.62	150			VC	33.52611	
5912		CO		100			VC	6.036177	
5912		CO		100			VC	6.036177	
6012		CO		100			VC	14.06792	
6012		CO		100			VC	14.06792	
7901	130.56	CO	129.09	375			VC	125.4831	1 in 155
8005		CO		150			VC	27.56483	
8005		CO		150			VC	27.56483	
5021		CO		100			VC	16.50526	
5021		CO		100			VC	16.50526	
5020		CO		100			VC	8.621748	
5002	149.63	CO	147.6	225			VC	28.95601	1 in 20
5002	149.63	CO	147.6	225			VC	28.95601	1 in 20

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
- 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 Reinforced 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:

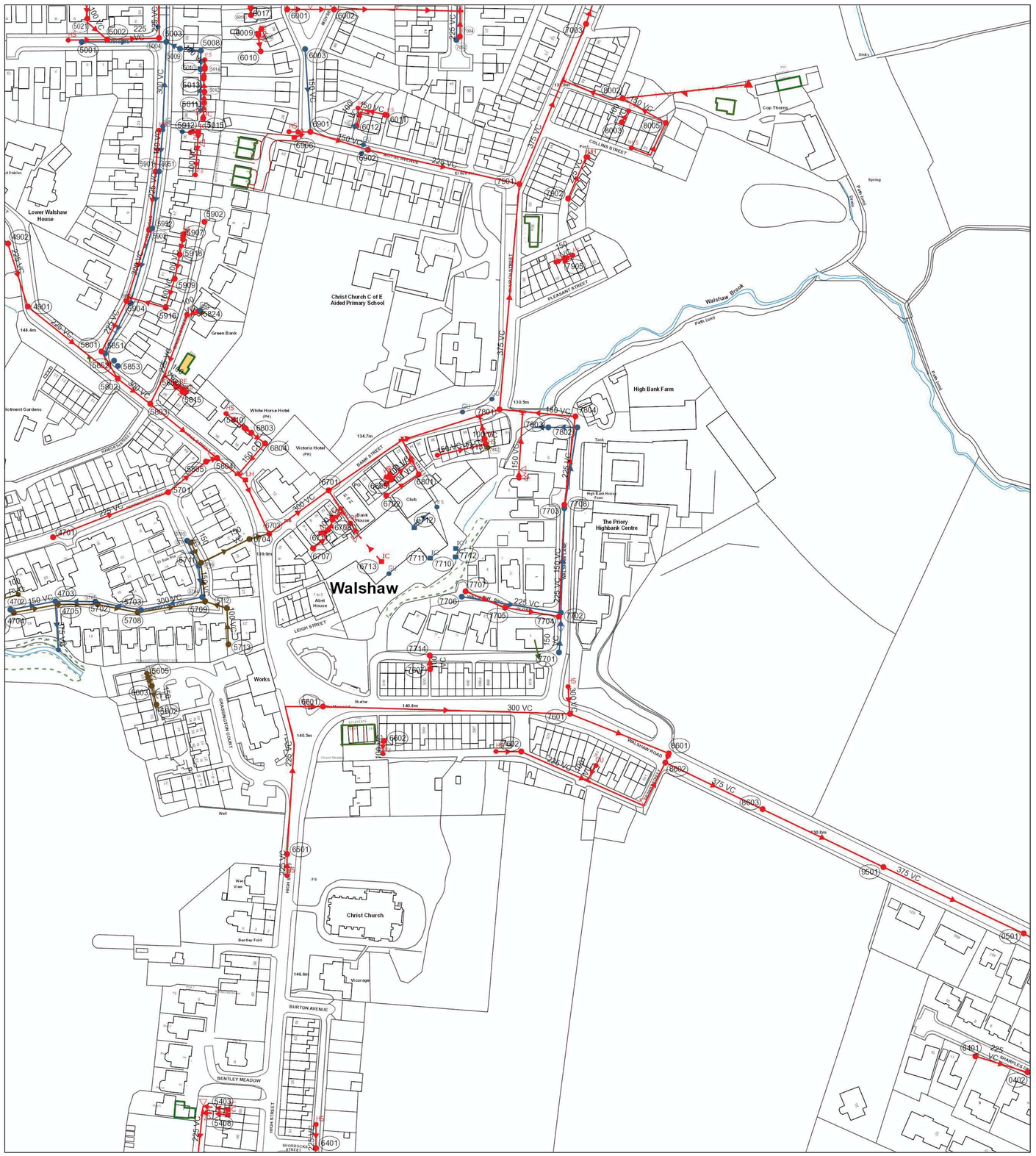
467 WALSHAW ROAD,
BURY,
BL8 3AA

OS sheet Number: SD7712SE
Scale: 1:1250 **Date:** 19/04/2018
Nodes: 254
Sheet: 1 of 8

Printed by: Property Searches

SEWER RECORDS

United Utilities — helping life flow smoothly



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
5008		SW		100			VC	11.68991	
5008		SW		100			VC	11.68991	
5009		SW		100			VC	8.425817	
5009		SW		100			VC	8.425817	
5003	146.12	SW	144.63	300			VC	61	1 in 3050
5003	146.12	SW	144.63	300			VC	61	1 in 3050
5001	150.47	SW	148.6	225			VC	47	1 in 12
5001	150.47	SW	148.6	225			VC	47	1 in 12
5004	147.65	CO	146.18	225			VC	61	1 in 39
5004	147.65	CO	146.18	225			VC	61	1 in 39
6401	146.42	CO	143.53	225			VC	56.22277	
6401	146.42	CO	143.53	225			VC	56.22277	
4703		SW	0	375			VC	27.01545	
4704		FO	0	150			VC	25.11486	
5707		FO	0	150			VC	22.70248	
5703		SW	0	300			VC	25.82755	
4702		SW	0	150			VC	25.4234	
4705		FO	0	150			VC	21.92	
5702		SW	0	300			VC	22.34151	
4701	145.94	CO	144.39	225			VC	68.70953	1 in 27
5801	146.79	CO	145.29	300			VC	17.49286	1 in 15
4901	149.28	CO	147.64	225			VC	64.03124	1 in 16
5953	147.29	SW	145.78	300			VC	31.30495	1 in 98
5851	146.82	SW	145.46	300			VC	2.236068	1 in 13
5904	147.29	CO	145.79	225			VC	31.30495	1 in 63
4902	152.71	CO	151.25	225			VC	36.68787	1 in 10
4902	152.71	CO	151.25	225			VC	36.68787	1 in 10
5952	147.64	SW	146.02	300			VC	43.2218	1 in 180
5952	147.64	SW	146.02	300			VC	43.2218	1 in 180
5903	147.64	CO	146.06	225			VC	41.41967	1 in 153
5903	147.64	CO	146.06	225			VC	41.41967	1 in 153
5918		CO		100			VC	13.77841	
5907		CO		100			VC	8.634017	
5907		CO		100			VC	8.634017	
5901	147.9	CO	146.28	225			VC	32.6757	1 in 149
5901	147.9	CO	146.28	225			VC	32.6757	1 in 149
5951	147.89	SW	146.31	225			VC	31.75702	1 in 110
5951	147.89	SW	146.31	225			VC	31.75702	1 in 110
6101	142.77	CO	141.77	150			VC	41.04875	1 in 61
6001	143.15	CO	141.1	150			VC	13	1 in 16
6001	143.15	CO	141.1	150			VC	13	1 in 16
7003	134.31	CO	127.82	375			VC	12.64911	
7003	134.31	CO	127.82	375			VC	12.64911	
7052	138.69	SW	137.67	225			VC	41.01219	1 in 73
7052	138.69	SW	137.67	225			VC	41.01219	1 in 73
7004	138.69	CO	137.67	225			VC	14	
7004	138.69	CO	137.67	225			VC	14	
6003	142.71	SW	141.81	150			VC	46.09772	1 in 39
6003	142.71	SW	141.81	150			VC	46.09772	1 in 39
6011		CO		150			VC	15.45388	
6011		CO		150			VC	15.45388	
5011		CO		100			VC	6.109969	
5011		CO		100			VC	6.109969	
5012		CO		100			VC	7.33593	
5012		CO		100			VC	7.33593	
5013		CO		100			VC	5.333201	
5013		CO		100			VC	5.333201	
5010		SW		100			VC	10.36825	
5010		SW		100			VC	10.36825	
5014		CO		100			VC	5.018884	
5014		CO		100			VC	5.018884	
6017		CO		150			VC	5.374222	
6017		CO		150			VC	5.374222	
6002	142.03	CO	139.61	225			VC	35	
6002	142.03	CO	139.61	225			VC	35	
7905		CO		150			VC	5.015236	
7902	134.56	CO	132.2	225			VC	25.07987	
7902	134.56	CO	132.2	225			VC	25.07987	
7901	134.66	CO	128.28	375			VC	96.38464	1 in 219
7901	134.66	CO	128.28	375			VC	96.38464	1 in 219
8003		CO		100			VC	7.527914	
8003		CO		100			VC	7.527914	
8002		CO		0			UN	35.34637	
8002		CO		0			UN	35.34637	
6902	140.45	CO	0	225			VC	86.12201	
6902	140.45	CO	0	225			VC	86.12201	
6901	142.65	CO	140.62	150			VC	33.52611	
6901	142.65	CO	140.62	150			VC	33.52611	
5912		CO		100			VC	6.036177	
5912		CO		100			VC	6.036177	
6012		CO		100			VC	14.06792	
6012		CO		100			VC	14.06792	
5701	144.21	CO	141.87	225			VC	27.01851	1 in 17
6804		CO	0	150			CO	22.96299	
5805	142.31	CO	140.27	225			VC	3.162278	1 in 4
6803		CO	0	150			CO	9.616122	
5810		CO	0	150			CO	4.742204	
5815		CO		100			VC	1.249111	
5817		CO		100			VC	1.468934	
5916		CO		100			VC	21.76227	
5909		CO		100			VC	16.76423	
5706		SW	0	150			VC	17.34454	
5705		SW	0	150			VC	15.37948	
5711		FO	0	150			VC	29.92419	
5710		FO	0	150			VC	12.46	
6707		CO		100			VC	14.35133	
6704		FO	0	150			VC	11.40439	
5804	142.28	CO	138.81	300			VC	52.31526	1 in 14
6703	138.89	CO	135.13	300			VC	40.80441	1 in 38
6711		CO		100			VC	6.140095	
6708		CO		100			VC	7.307223	
7705	138.77	CO	137.14	150			VC	30.41381	1 in 25
7704	137.53	CO	135.86	150			VC	62.07254	1 in 26
7702	137.58	SW	135.57	225			VC	58.03447	1 in 28
7706	139.04	SW	137.07	225			VC	55.7315	1 in 38
7707	138.94	CO	137.4	150			VC	23.76973	1 in 99
7703	135.97	SW	133.36	225			VC	45.54119	
7708	135.98	CO	133.39	150			VC	49.36598	
7812		CO		150			VC	2.864057	
7802		SW	0	225			VC	16	
7803		SW	0	225			VC	8	
7804		CO	0	150			VC	42.19004	
7801	130.56	CO	129.09	375			VC	125.4831	1 in 155
6601	139.94	CO	134.38	300			VC	137.0584	1 in 70
6701	137.34	CO	133.09	300			VC	106.2615	1 in 27
6702	136.08	CO	134.84	100			VC	21.63331	1 in 8
6805		CO		100			VC	15.67945	
6801	134.01	CO	131.98	100			VC	21.0238	
6501	144.32	CO	143.68	225			VC	93.71804	
5603		FO		150			VC	10.75062	
5713		FO		100			VC	20.2518	
5708		FO	0	150			VC	37.98947	
5704		SW	0	300			VC	34.63587	
5712		FO		100			VC	12.55988	
5709		FO	0	150			VC	21.61366	
9501	129.11	CO	125.75	375			VC	86.33076	1 in 81
0401	128.32	CO	126.14	225			VC	30.36445	1 in 43
0401	128.32	CO	126.14	225			VC	30.36445	1 in 43
0401	128.32	CO	126.14	225			VC	30.36445	1 in 43
0401	128.32	CO	126.14	225			VC	30.36445	1 in 43
0501	126.95	CO	124.22	375			VC	51.88449	1 in 89
0501	126.95	CO	124.22	375			VC	51.88449	1 in 89
0501	126.95	CO	124.22	375			VC	51.88449	1 in 89
0402	127.8	CO	125.43	225			VC	22.80351	1 in 17
0402	127.8	CO	125.43	225			VC	22.80351	1 in 17
0402	127.8	CO	125.43	225			VC	22.80351	1 in 17
0402	127.8	CO	125.43	225			VC	22.80351	1 in 17
7602	139.29	CO	137.36	225			VC	74.32362	
7701	138.05	SW	136.18	150			VC	11.04536	1 in 38
7601	137.54	CO	132.43	300			VC	59.23681	1 in 67
8601	134.49	CO	131.5	300			VC	5.385165	
8602	134.49	CO	130.59	375			VC	59.9333	1 in 71
8603	131.9	CO	128	375			VC	74.24958	1 in 62
8005		CO		150			VC	27.56483	
8005		CO		150			VC	27.56483	
6602		CO		100			VC	7.140544	
5808		CO		100			VC	12.75175	
5020		CO		100			VC	8.621748	
5824		CO		100			VC	6.678972	
5021		CO		100			VC	16.50526	
5021		CO		100			VC	16.50526	
5802	145.85	CO	142.66	300			VC	22.80351	1 in 18
5803	144.68	CO	141.38	300			VC	47.63402	1 in 19
5002	149.63	CO	147.6	225			VC	28.95601	1 in 20
5002	149.63	CO	147.6	225			VC	28.95601	1 in 20

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
- 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 Reinforced 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:

467 WALSHAW ROAD,
BURY,
BL8 3AA

OS sheet Number: SD7711NE
Scale: 1:1250 **Date:** 19/04/2018
Nodes: 156
Sheet: 2 of 8

Printed by: Property Searches

SEWER RECORDS

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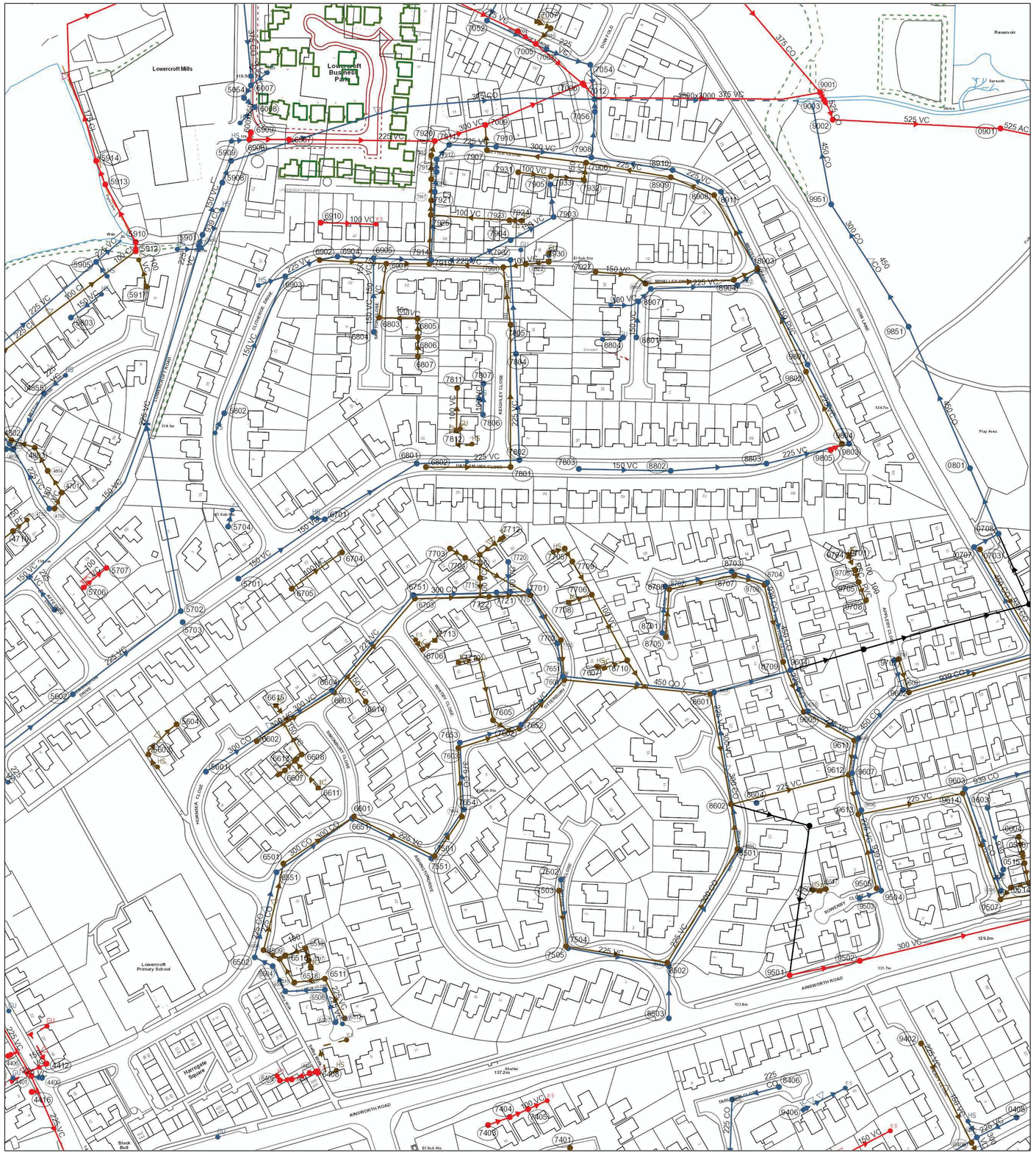

Refno	Cover	Func	Invert	Size x	Size y	Shape	Matl	Length	Grad
7403	136.91	FO	134.28	225			VC	47.01064	1 in 51
7403		CO		100			VC	12.70256	
7404		CO		100			VC	11.13654	
6405		CO		150			VC	2.927649	
6406		CO		100			VC	6.599826	
6407		CO		100			VC	10.55865	
6408		CO		100			VC	4.098691	
6507		SW	0	225			VC	18.97367	
6512		FO	0	225			VC	24.59675	
5913	125.96	CO	125.41	175			CI	13.92839	1 in 116
5913	125.96	CO	125.41	175			CI	13.92839	1 in 116
5910	126.8	CO	125.76	175			CI	36.23534	1 in 104
5910	126.8	CO	125.76	175			CI	36.23534	1 in 104
9402	130.26	FO	128.7	225			VC	30.41381	1 in 19
9402	130.26	FO	128.7	225			VC	30.41381	1 in 19
9502	132.58	CO	131.18	300			VC	119.3315	1 in 17
0407	127.91	SW	125.24	300			VC	22.84732	1 in 99
0407	127.91	SW	125.24	300			VC	22.84732	1 in 99
0406	127.94	FO	125.6	225			VC	8.062258	1 in 50
0406	127.94	FO	125.6	225			VC	8.062258	1 in 50
0408	126.97	SW	125.44	225			VC	24.59675	1 in 224
0408	126.97	SW	125.44	225			VC	24.59675	1 in 224
8405	134.62	SW	132.25	225			CO	57.03508	1 in 124
8406	134	SW	132.65	225			CO	26.92582	1 in 67
9501		CO	0	300			VC	39.81206	
7053	118.71	SW	116.68	225			VC	13	1 in 65
7053	118.71	SW	116.68	225			VC	13	1 in 65
7052	118.91	SW	117.01	225			VC	36.67424	1 in 115
7052	118.91	SW	117.01	225			VC	36.67424	1 in 115
7010		FO		100			VC	12.07382	
7010		FO		100			VC	12.07382	
7004	119	CO	117.29	225			VC	12.20656	
7004	119	CO	117.29	225			VC	12.20656	
7003		CO	0	225			VC	41.14608	
7051		SW	0	225			VC	8.944272	
8909	119.71	FO	118.4	225			VC	47.67599	1 in 101
8909	119.71	FO	118.4	225			VC	47.67599	1 in 101
7906	119.4	FO	117.92	225			VC	55.44366	1 in 154
7906	119.4	FO	117.92	225			VC	55.44366	1 in 154
7910	119.87	SW	118.05	300			VC	53.33854	1 in 56
7910	119.87	SW	118.05	300			VC	53.33854	1 in 56
7908	119.54	SW	117.06	300			VC	25.523777	1 in 41
7908	119.54	SW	117.06	300			VC	25.52377	1 in 41
7907	119.65	FO	117.53	225			VC	14.03567	
7907	119.65	FO	117.53	225			VC	14.03567	
7009		CO	0	225			VC	58.69412	
7009		CO	0	225			VC	58.69412	
7056	119.18	SW	116.42	300			VC	6.819517	
7056	119.18	SW	116.42	300			VC	6.819517	
7054	118.81	SW	116.36	300			VC	19.2521	
7054	118.81	SW	116.36	300			VC	19.2521	
7006	119.11	CO	116.41	225			VC	4.921517	1 in 3
7006	119.11	CO	116.41	225			VC	4.921517	1 in 3
7005		CO	0	225			VC	34.05877	
7005		CO	0	225			VC	34.05877	
5906	123.89	SW	122.89	150			VC	31.01612	1 in 12
5906	123.89	SW	122.89	150			VC	31.01612	1 in 12
7919	125.01	FO	123.1	225			VC	7.990388	
7917	125.41	FO	123.1	225			VC	12	1 in 22
7917	125.41	FO	123.1	225			VC	12	1 in 22
7921	125.19	SW	122.57	225			VC	11.04536	1 in 14
7921	125.19	SW	122.57	225			VC	11.04536	1 in 14
5908	121.54	SW	120.19	150			VC	13	1 in 13
5908	121.54	SW	120.19	150			VC	13	1 in 13
7916	123.66	FO	120.15	225			VC	13	1 in 11
7916	123.66	FO	120.15	225			VC	13	1 in 11
7913	122.97	SW	120.39	225			VC	7	1 in 12
7913	122.97	SW	120.39	225			VC	7	1 in 12
5909	120.41	SW	119.13	150			VC	85.07056	
5909	120.41	SW	119.13	150			VC	85.07056	
7912	120.77	SW	118.97	225			VC	10.63015	1 in 17
7912	120.77	SW	118.97	225			VC	10.63015	1 in 17
7915	120.05	FO	118.93	225			VC	8.246211	1 in 3
7915	120.05	FO	118.93	225			VC	8.246211	1 in 3
7911	120.06	SW	118.32	225			VC	26.01922	1 in 113
7911	120.06	SW	118.32	225			VC	26.01922	1 in 113
6907	120	CO	116.94	225			VC	81.00617	1 in 62
6907	120	CO	116.94	225			VC	81.00617	1 in 62
7920	119.8	CO	115.61	300			VC	29.41088	
7920	119.8	CO	115.61	300			VC	29.41088	
6909		CO	0	150			VC	4.123106	
6909		CO	0	150			VC	4.123106	
6908	119.79	CO	117.04	225			VC	22	1 in 220
6908	119.79	CO	117.04	225			VC	22	1 in 220
5054	119.24	SW	116.53	600			CO	7.81025	
5054	119.24	SW	116.53	600			CO	7.81025	
6007	119.17	SW	117.57	375			CO	8.062258	1 in 8
6007	119.17	SW	117.57	375			CO	8.062258	1 in 8
5051	121.84	SW	119.9	375			CO	47.19004	1 in 23
8910	119.72	SW	118.6	225			VC	45.54119	1 in 31
8910	119.72	SW	118.6	225			VC	45.54119	1 in 31
7012		SW		1800				113.1991	
7012		SW		1800				113.1991	
8908	120.49	FO	119.11	225			VC	26	1 in 37
8908	120.49	FO	119.11	225			VC	26	1 in 37
8911	120.51	SW	119.43	225			VC	29.54657	1 in 36
8911	120.51	SW	119.43	225			VC	29.54657	1 in 36
8803	123.82	CO	122.23	225			VC	47.50789	1 in 15
7922		FO		100			VC	12.70196	
7930		FO		100			VC	12.71219	
7902	128.53	SW	127.12	225			VC	22	
7904	124.77	SW	123.96	150			VC	27.29469	
7904	124.77	SW	123.96	150			VC	27.29469	
7903	126.76	SW	125.78	150			VC	18.11077	1 in 3
7903	126.76	SW	125.78	150			VC	18.11077	1 in 3
7932		FO		150			VC	9.673963	
7932		FO		150			VC	9.673963	
7933		FO		100			VC	18.59845	
7933		FO		100			VC	18.59845	
7931		FO		100			VC	18.33444	
7931		FO		100			VC	18.33444	
6806		FO		100			VC	10.47647	
6804	131.18	SW	129.6	150			VC	41	1 in 21
6805		FO		100			VC	21.47455	
6803	131.59	SW	129.92	150			VC	30.28549	1 in 11
6903	131.18	SW	129.6	225			VC	31.40091	1 in 19
6902	129.8	FO	127.74	150			VC	37.05402	1 in 51
6901	129.28	FO	127.27	225			VC	24	1 in 28
6905	129.26	SW	127.65	225			VC	32.01562	1 in 36
6904	129.57	SW	127.97	225			VC	20.02498	1 in 65
6910		CO		100			VC	30.70697	
6910		CO		100			VC	30.70697	
8803	127.9	SW	126.11	225			VC	47.29694	1 in 49
8803	122.02	FO	120.39	225			VC	44.72136	
9802	126.27	FO	122.9	150			PVC	63.07139	1 in 115
9801	126.28	SW	122.69	225			VC	59.05929	1 in 69
8902	124.76	SW	122.27	225			VC	13.60147	1 in 45
8904	124.64	FO	123.07	150			VC	14.31782	1 in 20
8901	123.8	SW	121.86	225			VC	48.33218	1 in 20
9951	118.23	SW	113.75	450			CO	54.91812	
9951	118.23	SW	113.75	450			CO	54.91812	
9003	113.94	CO	112.64	375			VC	5.830952	1 in 5
9003	113.94	CO	112.64	375			VC	5.830952	1 in 5
9001	113.64	CO	110.82	525			CO	2.230068	
9001	113.64	CO	110.82	525			CO	2.230068	
8102	121.6	CO	113.92	375			CO	114.2147	1 in 38
7927		FO		150			VC	29.27374	
8801	128.78	SW	127.48	150			VC	20.02498	1 in 19
8907	127.85	SW	126.42	150			VC	9.899495	1 in 15
8905	127.13	FO	124.99	150			VC	49.0408	1 in 26
8906	127.16	SW	125.65	225			VC	48.04165	1 in 14
7806				100			VC	17.31094	
7805	131.8	FO	129.16	225			VC	32.24903	1 in 14
7801	132.37	FO	130.86	225			VC	79	1 in 48
7804	131.84	SW	129.22	225			VC	52.08647	1 in 25
7802	132.38	SW	130.59	225			VC	59.03389	1 in 44
4857	134.53	SW	131.84	225			VC	51.3057	1 in 40
4856	134.52	SW	132.04	225			VC	45.25483	1 in 24
4802	134.36	FO	131.8	225			VC	41.86884	1 in 24
4858	134.76	SW	132.06	225			VC	4	1 in 40
4752	137.6	SW	136.38	225			VC	42.19004	1 in 13
4803	135.58	FO	133.44	225			VC	13.60147	1 in 8
4855	133.59	SW	132.4	225			VC	35.35534	1 in 110
4804	136.02	FO	133.99	225			VC	14.76482	1 in 27
7803	131.11	SW	129.46	150			VC	51.0098	1 in 30
8802	129.38	SW	127.68	225			VC	53.15073	1 in 35
6801	133.82	SW	131.93	225			VC	57.03508	1 in 46
6802	133.7	FO	132.05	225			VC	47	1 in 41
7919	129.01	FO	126.83	225			VC	27.0239	
7901	128.56	SW	126.83	225			VC	41.04875	1 in 98
7923		FO		100			VC	43.83807	
7923		FO		100			VC	43.83807	
7914	128.95	SW	126.73	225			VC	38.0526	1 in 16
5704		SW		100			VC	9.424415	
6701	135.3	SW	133.6	225			VC	59.6825	1 in 37
5802	135.48	SW	133.65	150			VC	83.25864	1 in 20
6807		SW		100			VC	10.5365	
0707	124.95	SW	121.46	450			CO	15.40469	
0707	124.95	SW	121.46	450			CO	15.40469	
0708		SW	0	450			CO	39.6066	
0708		SW	0	450			CO	39.6066	
0801	125.29	SW	120.19	450			CO	85.69222	
0801	125.29	SW	120.19	450			CO	85.69222	
9804	127.02	SW	125.11	225			VC	49.64877	1 in 21
9851		SW	0	450			CO	39.96248	
9851		SW	0	450			CO	39.96248	
0901	113.34	CO	109.9	525			AC	99.0404	1 in 165
0901	113.34	CO	109.9	525			AC	99.0404	1 in 165
0901	113.34	CO	109.9	525			AC	99.0404	1 in 165
0901	113.34	CO	109.9	525			AC	99.0404	1 in 165
9002	113.42	CO	110.56	525			VC	93.13431	1 in 141
9002	113.42	CO	110.56	525			VC	93.13431	1 in 141
4701	137.08	FO	134.83	225			VC	14.4222	1 in 17
4702	137.62	FO	136.24	150			VC	9.848858	1 in 7
5905	130.82	SW	126.83	225			VC	18.43909	
5912	129.67	CO	126.64	175			CI	5	1 in 16
5917		FO		100			VC	15.54444	
5702	137.88	SW	137.04	225			VC	206.9636	
5901	124.88	SW	123.3	150			VC	6.324555	1 in 16
5901	124.88	SW	123.3	150			VC	6.324555	1 in 16
9705		FO		100			PVC	10.74888	
9703	128.14	SW	123.9	450			CO	17.28319	1 in 20
9702	128.16	FO	126.34	939			CO	19.17345	1 in 60
9609	127.74	SW	123.02	450			CO	76.72817	1 in 183
9602	127.78	FO	126.02	939			CO	76.23384	1 in 22
9602	127.78	FO	126.02	939			CO	76.23384	1 in 22
0706	125.06	SW	122.6	450			CO	68.03698	1 in 60
0703	124.89	FO	123.03	939			CO	67.76073	1 in 151
0703	124.89	FO	123.03	939			CO	67.76073	1 in 151
7651	132.53	SW	128.46	450			CO	84.48077	1 in 39

Refno	Cover	Func	Invert	Size x	Size y	Shape	Matl	Length	Grad
7601		FO		225			VC	81.3941	
7706		FO		100			VC	41.37611	
8710		FO		100			VC	18.09166	
8701	130.72	SW	128.97	450			CO	25.88181	1 in 144
8702	130.42	SW	128.79	450			CO	37.60959	1 in 85
8705	130.82	FO	128.97	939			CO	26.58193	1 in 47
8706	130.39	FO	128.41	939			CO	37.04357	1 in 100
8709	129.87	FO	127.51	225			CO	30.04278	1 in 107
9604	129.83	SW	125.23	450			CO	24.85618	1 in 56
8651	131.38	SW	126.26	450			CO	44.11641	
8704	129.86	SW	128.15	450			CO	50.53435	1 in 17
8708	129.89	FO	127.86	939			CO	43.95326	1 in 126
8707	130.06	FO	128.04	939			CO	17.41156	1 in 97
8703	130.09	SW	128.35	450			CO	20.64111	1 in 103
5701	136.81	SW	135.23	150			VC	58.24946	1 in 36
6705		FO		100			VC	34.40716	
6914		FO		150			VC	17.09214	
5602	140.66	SW	139.49	225			VC	75.60423	1 in 31
4753	139.68	SW	138.36	225			VC	22.80351	
4710		FO		150			PF	9.876245	
7652	133.11	SW	130.08	375			CO	35.4683	1 in 68
7752	132.3	SW	128.68	300			CO	18.24829	1 in 130
7702	132.28	FO	129.63	225			VC	22.09072	
7705		FO		100			VC	8.426228	
7705		FO		100			VC	21.25406	
6604	136	SW	133.93	225			VC	69.52697	1 in 18
6603	135.01	FO	132.48	225			VC	68.76772	1 in 38
7703		FO		100			VC	9.781967	
9614	128.72	FO	126.33	225			VC	62.5551	1 in 95
9614	128.72	FO	126.33	225			VC	62.5551	1 in 95
0505	128.76	SW	127.05	939			CO	59.81812	1 in 162
0505	128.76	SW	127.05	939			CO	59.81812	1 in 162
0603		SW		0			VC	35.44939	
0603		SW		0			VC	35.44939	
9612	129.5	FO	126.88	225			VC	22.68798	1 in 151
9613	129.99	FO	126.73	225			VC	59.07065	1 in 148
9606	129.02	SW	126.26	450			CO	21.0802	1 in 43
9603	128.65	SW	126.68	939			CO	60.94535	1 in 27
9603	128.65	SW	126.68	939			CO	60.94535	1 in 27
9611	129.05	FO	127	225			VC	19.34231	1 in 161
9607	129.49	SW	127.77	450			CO	19.64998	1 in 6
9610	129.66	FO	127.25	225			VC	9.323336	1 in 140
9605	129.69	SW	124.79	450			CO	31.6363	1 in 66
9608	128.98	SW	124.31	450			CO	36.36266	1 in 28
5601	138.74	SW	136.61	300			CO	41.88078	1 in 30
6602	137.48	FO	135.01	300			VC	50.77402	1 in 20
6608		FO		150			VC	19.65233	
6607		FO		150			VC	7.769871	
0507	128.64	FO	125.67	225			CO	42.45197	1 in 38
0507	128.64	FO	125.67	225			CO	42.45197	1 in 38
0514		FO		100			VC	10.18797	
0514		FO		100			VC	10.18797	
0604		FO		100			VC	9.323336	
0604		FO		100			VC	9.323336	
0516		FO		100			VC	5.787055	
0516		FO		100			VC	5.787055	
0515		FO		100			VC	11.16586	
0515		FO		100			VC	11.16586	
7603	133.85	FO	131.26	225			VC	35.73514	1 in 143
7653	133.83	SW	130.38	375			CO	35.44009	1 in 111
7605		FO		0			VC	11.28121	
7602	133.09	FO	131	225			VC	36.79674	
0511		FO		100			VC	8.575326	
0511		FO		100			VC	8.575326	
9503	131.34	SW	129.81	939			CO	12.93917	1 in 26
9504	131.02	SW	129.31	939			CO	46.08453	1 in 44
9505	130.97	FO	129.01	225			VC	42.3201	1 in 19
0512		SW		0			VC	6.908939	
0512		SW		0			VC	6.908939	
6551	137.83	SW	134.94	300			CO	51.61395	1 in 29
6501	137.7	FO	135.11	300			CO	46.87217	1 in 33
6607		FO		150			VC	5.141829	
6651	136.51	FO	132.91	300			CO	49.1935	1 in 33
6601	136.52	FO	133.64	225			VC	50.08992	1 in 30
7551	135.3	SW	131.36	300			CO	32.44996	1 in 54
7501	135.29	SW	131.8	225			CO	26.62705	1 in 89
7604	134.58	FO	131.33	225			VC	38.0526	1 in 951
7654	134.51	SW	130.74	375			CO	37.05402	1 in 247
8502	133.91	FO	131.02	225			VC	74.09454	1 in 77
8552	133.92	SW	130.94	300			CO	75.54935	1 in 85
8601	131.11	FO	129.01	225			VC	62.19009	1 in 259
8551	131.89	SW	130.05	300			CO	43.78757	1 in 33
8602	131.66	FO	128.94	225			VC	67.41157	1 in 33
8501	131.91	FO	130.06	225			VC	25.12753	1 in 19
6505		SW	0	225			VC	15.65248	
6506		SW	0	225			VC	22.02271	
6511		FO	0	225			VC	17.11724	
6504		SW	0	225			VC	11.18034	
6502		SW	0	225			CO	24.73863	
6508		FO	0	225			CO	24.73863	
7405		CO		100			VC	11.51569	
8503	134.77	SW	133.23	225			VC	29	1 in 39
7505	134.67	SW	132.02	225			VC	56.88585	1 in 58
7504	134.68	FO	131.33	225			VC	56.71861	1 in 210
7502	133.91	SW	132.33	225			VC	38.20995	1 in 136
7503	134.09	FO	131.33	225			VC	31.257	
4406		CO		100			UN	5.514241	
4412		CO		150			VC	10.83996	
4400	146.92	SW	145.13	225			VC	6.082763	
4401	146.78	CO	144.14	225			VC	64.60784	
4416		CO		150			VC	3.492679	
5914	125.84	CO	125.29	175			CI	49.40789	
5914	125.84	CO	125.29	175			CI	49.40789	
4402		CO		150			VC	12.86955	
4403		CO		300			VC	17.71227	
6710	133.63	FO	130.62	225			VC	41.23771	
7751	132.1	SW	129.05	300			CO	33.12099	1 in 107
7720		SW		100			VC	16.78276	
7715		FO		100			VC	10.39799	
6516		FO		100			VC	3.693306	
7722		FO		225			VC	22.79353	
6517		FO		100			VC	6.981816	
6509		FO	0	225			VC	10.29563	
6751	133.64	SW	130.04	300			CO	46.31897	
7701	132.07	FO	129.72	225			VC	30.23243	1 in 432
7704		FO		100			VC	41.64567	
6510		FO	0	225			VC	15.26434	
6519		FO		100			VC	11.70322	

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
- 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 Reinforced 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:

467 WALSHAW ROAD,
BURY,
BL8 3AA

OS sheet Number: SD7710NE
Scale: 1:1250 **Date:** 19/04/2018
Nodes: 319
Sheet: 3 of 8

Printed by: Property Searches

SEWER RECORDS

United Utilities — helping life flow smoothly

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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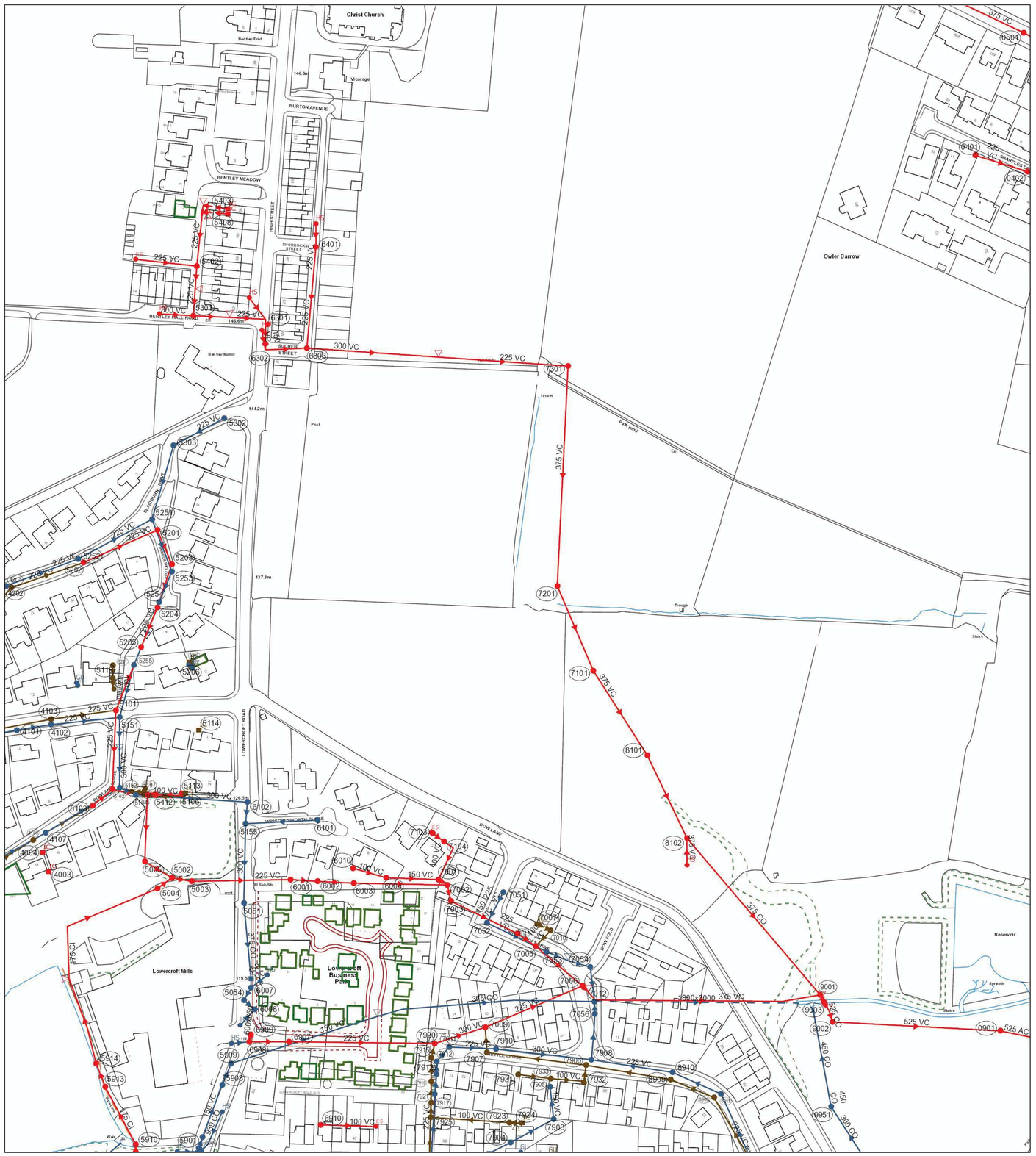

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Refno	Cover	Func	Invert	Size x	Size y	Shape	Matl	Length	Grad
4108	132.45	FO	130.12	225			VC	38.07887	1 in 127
4107	132.44	SW	130.13	300			VC	48.02083	1 in 107
4102	138.4	SW	134.39	225			VC	38.20995	1 in 49
4103	138.33	FO	134.3	225			VC	36.34556	1 in 58
5103	132.61	CO	129.8	225			VC	14.21267	1 in 102
5913	125.96	CO	125.41	175			CI	13.92839	1 in 116
5913	125.96	CO	125.41	175			CI	13.92839	1 in 116
5910	126.8	CO	125.76	175			CI	36.23534	1 in 104
5910	126.8	CO	125.76	175			CI	36.23534	1 in 104
5102	132.82	CO	129.42	225			VC	19.83834	
5101	135.87	CO	131.48	225			VC	44.04543	1 in 22
5152	132.83	SW	129.42	300			VC	9.848858	1 in 7.80169344
5255	140.81	SW	136.73	225			VC	30.08322	1 in 8
5151	135.82	SW	131.48	225			VC	19	1 in 19
5104		CO	0	225			VC	37.09184	
5112		CO		100			VC	4.360823	
5205	140.78	CO	135.98	225			VC	37.69616	1 in 14
5254	141.18	SW	138.98	225			VC	37.69616	1 in 17
5204	141.23	CO	138	225			VC	23.76973	1 in 12
5203	142.69	CO	140.59	225			VC	25.29822	1 in 16
5253	142.62	SW	140.49	225			VC	18.38478	1 in 12
4204	147.81	FO	144.98	225			VC	42.37924	1 in 43
4202	147.79	SW	145	225			VC	42.72002	1 in 53
5201	144.71	CO	142.26	225			VC	20.61553	1 in 12
5202	146.47	CO	143.97	225			VC	44.77723	1 in 34
5251	144.72	SW	141.92	225			VC	31.01612	1 in 22
5252	146.65	SW	144.16	225			VC	46.52956	1 in 21
5303	146.22	SW	143.09	225			VC	42.72002	1 in 75
5302	145.12	SW	143.5	225			VC	31.76476	1 in 88
6303	145.51	CO	0	300			VC	73.17104	
6302	145.88	CO	142.1	300			VC	23.02173	
6301	146.42	CO	142.42	300			VC	17	1 in 61
6401	146.42	CO	143.53	225			VC	56.22277	
6401	146.42	CO	143.53	225			VC	56.22277	
5301	148.32	CO	145.22	300			VC	20.02498	1 in 14
4101		SW	0	225			VC	19.23538	
9501	129.11	CO	125.75	375			VC	86.33076	1 in 81
0401	128.32	CO	126.14	225			VC	30.36445	1 in 43
0401	128.32	CO	126.14	225			VC	30.36445	1 in 43
0401	128.32	CO	126.14	225			VC	30.36445	1 in 43
0401	128.32	CO	126.14	225			VC	30.36445	1 in 43
0501	126.95	CO	124.22	375			VC	51.88449	1 in 89
0501	126.95	CO	124.22	375			VC	51.88449	1 in 89
0501	126.95	CO	124.22	375			VC	51.88449	1 in 89
0501	126.95	CO	124.22	375			VC	51.88449	1 in 89
0402	127.8	CO	125.43	225			VC	22.80351	1 in 17
0402	127.8	CO	125.43	225			VC	22.80351	1 in 17
0402	127.8	CO	125.43	225			VC	22.80351	1 in 17
0402	127.8	CO	125.43	225			VC	22.80351	1 in 17
5402		CO		225			VC	12.51991	
5155	125.61	SW	0	300			VC	44.01136	
7001	121.33	CO	118.43	150			VC	5.830952	1 in 7
6002	122.42	CO	119.98	225			VC	20.02498	1 in 154
5002	125.56	CO	123.71	225			VC	11.18034	1 in 102
6001	122.74	CO	120.24	225			VC	15.0333	1 in 58
5003	124.68	CO	123.6	225			VC	55.00909	1 in 16
7104		CO		100			VC	25.66818	
6004	121.13	CO	119.11	150			VC	29.01724	1 in 44
6010		CO		100			VC	19.2215	
5005		CO	0	225			VC	17.49286	
6102	127.12	SW	124.57	300			VC	12.04159	
6101		SW	0	225			VC	40.04997	
5153	132.02	SW	128.83	300			VC	62.1289	1 in 0.49203213
5113		CO		100			VC	14.93359	
7053	118.71	SW	116.68	225			VC	13	1 in 65
7053	118.71	SW	116.68	225			VC	13	1 in 65
7052	118.91	SW	117.01	225			VC	36.67424	1 in 115
7052	118.91	SW	117.01	225			VC	36.67424	1 in 115
7010		FO		100			VC	12.07382	
7010		FO		100			VC	12.07382	
7004	119	CO	117.29	225			VC	12.20656	
7004	119	CO	117.29	225			VC	12.20656	
7003		CO	0	225			VC	41.14608	
7051		SW	0	225			VC	8.944272	
6101	124.47	CO	119.68	375			VC	50.9902	1 in 12
7101	124.82	CO	122.02	375			VC	55.75841	
7201	129.88	CO	124.59	375			VC	51.07837	1 in 31
7301	133.86	CO	128.5	375			VC	122.1475	1 in 99
8909	119.71	FO	118.4	225			VC	47.67599	1 in 101
8909	119.71	FO	118.4	225			VC	47.67599	1 in 101
7906	119.4	FO	117.92	225			VC	55.44366	1 in 154
7906	119.4	FO	117.92	225			VC	55.44366	1 in 154
7910	119.87	SW	118.05	300			VC	53.33854	1 in 56
7910	119.87	SW	118.05	300			VC	53.33854	1 in 56
7908	119.54	SW	117.06	300			VC	25.52377	1 in 41
7908	119.54	SW	117.06	300			VC	25.52377	1 in 41
7907	119.65	FO	117.53	225			VC	14.03567	
7907	119.65	FO	117.53	225			VC	14.03567	
7009		CO	0	225			VC	58.69412	
7009		CO	0	225			VC	58.69412	
7056	119.18	SW	116.42	300			VC	6.819517	
7056	119.18	SW	116.42	300			VC	6.819517	
7054	118.81	SW	116.36	300			VC	19.2521	
7054	118.81	SW	116.36	300			VC	19.2521	
7006	119.11	CO	116.41	225			VC	4.921517	1 in 3
7006	119.11	CO	116.41	225			VC	4.921517	1 in 3
7005		CO	0	225			VC	34.05877	
7005		CO	0	225			VC	34.05877	
5906	123.89	SW	122.89	150			VC	31.01612	1 in 12
5906	123.89	SW	122.89	150			VC	31.01612	1 in 12
7919	129.01	FO	126.4	225			VC	7.990388	
7917	125.41	FO	123.1	225			VC	12	1 in 22
7917	125.41	FO	123.1	225			VC	12	1 in 22
7921	125.19	SW	122.57	225			VC	11.04536	1 in 14
7921	125.19	SW	122.57	225			VC	11.04536	1 in 14
5908	121.54	SW	120.19	150			VC	13	1 in 13
5908	121.54	SW	120.19	150			VC	13	1 in 13
7916	123.66	FO	120.15	225			VC	13	1 in 11
7916	123.66	FO	120.15	225			VC	13	1 in 11
7913	122.97	SW	120.39	225			VC	7	1 in 12
7913	122.97	SW	120.39	225			VC	7	1 in 12
5909	120.41	SW	119.13	150			VC	85.07056	
5909	120.41	SW	119.13	150			VC	85.07056	
7912	120.77	SW	118.97	225			VC	10.63015	1 in 17
7912	120.77	SW	118.97	225			VC	10.63015	1 in 17
7915	120.05	FO	118.93	225			VC	8.246211	1 in 3
7915	120.05	FO	118.93	225			VC	8.246211	1 in 3
7911	120.06	SW	118.32	225			VC	26.01922	1 in 113
7911	120.06	SW	118.32	225			VC	26.01922	1 in 113
6907	120	CO	116.94	225			VC	81.00617	1 in 62
6907	120	CO	116.94	225			VC	81.00617	1 in 62
7920	119.8	CO	115.61	300			VC	29.41088	
7920	119.8	CO	115.61	300			VC	29.41088	
6909		CO	0	150			VC	4.123106	
6909		CO	0	150			VC	4.123106	
6908	119.79	CO	117.04	225			VC	22	1 in 220
6908	119.79	CO	117.04	225			VC	22	1 in 220
5054	119.24	SW	116.53	600			CO	7.81025	
5054	119.24	SW	116.53	600			CO	7.81025	
6007	119.17	SW	117.57	375			CO	8.062258	1 in 8
6007	119.17	SW	117.57	375			CO	8.062258	1 in 8
5051	121.84	SW	119.9	375			CO	47.19004	1 in 23
7002	119.37	CO	117.56	225			VC	9.219544	
5004	125.57	CO	123.78	175			CI	10	1 in 143
6003	122	CO	119.85	225			VC	52.00961	1 in 23
8910	119.72	SW	118.6	225			VC	45.54119	1 in 31
8910	119.72	SW	118.6	225			VC	45.54119	1 in 31
7012		SW		1800				113.1991	
7012		SW		1800				113.1991	
8908	120.49	FO	119.11	225			VC	26	1 in 37
8908	120.49	FO	119.11	225			VC	26	1 in 37
8911	120.51	SW	119.43	225			VC	29.54657	1 in 36
8911	120.51	SW	119.43	225			VC	29.54657	1 in 36
8903	123.82	FO	122.23	225			VC	47.50789	1 in 15
7904	124.77	SW	123.96	150			VC	27.29469	
7904	124.77	SW	123.96	150			VC	27.29469	
7903	126.76	SW	125.78	150			VC	18.11077	1 in 3
7903	126.76	SW	125.78	150			VC	18.11077	1 in 3
7932		FO		150			VC	9.673963	
7932		FO		150			VC	9.673963	
7933		FO		100			VC	18.59845	
7933		FO		100			VC	18.59845	
7931		FO		100			VC	18.33444	
7931		FO		100			VC	18.33444	
6910		CO		100			VC	30.70697	
6910		CO		100			VC	30.70697	
8901	123.8	SW	121.86	225			VC	48.33218	1 in 20
9951	118.23	SW	113.75	450			CO	54.91812	
9951	118.23	SW	113.75	450			CO	54.91812	
9003	113.94	CO	112.64	375			VC	5.830952	1 in 5
9003	113.94	CO	112.64	375			VC	5.830952	1 in 5
9001	113.64	CO	110.82	525			CO	2.236068	
9001	113.64	CO	110.82	525			CO	2.236068	
8102	121.6	CO	113.92	375			CO	114.2147	1 in 38
7919	129.01	FO		225			VC	27.0239	
7923		FO		100			VC	43.83807	
7923		FO		100			VC	43.83807	
7914	128.95	SW	126.73	225			VC	38.0526	1 in 16
0901	113.34	CO	109.9	525			AC	99.0404	1 in 165
0901	113.34	CO	109.9	525			AC	99.0404	1 in 165
0901	113.34	CO	109.9	525			AC	99.0404	1 in 165
0901	113.34	CO	109.9	525			AC	99.0404	1 in 165
9002	113.42	CO	110.56	525			VC	93.13431	1 in 141
9002	113.42	CO	110.56	525			VC	93.13431	1 in 141
5905	130.82	SW	126.83	225			VC	18.43909	
5912	129.67	CO	126.64	175			CI	5	1 in 16
5702	137.88	SW	137.04	225			VC	206.9636	
5901	124.88	SW	123.3	150			VC	6.324555	1 in 16
5901	124.88	SW	123.3	150			VC	6.324555	1 in 16
5914	125.84	CO	125.29	175			CI	49.40789	
5914	125.84	CO	125.29	175			CI	49.40789	
5206		SW		100			VC	2.64441	
5207		FO		100			VC	3.419007	
5211		FO		100			VC	7.093125	
5118		FO		100			VC	6.544968	

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
- 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 Reinforced 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:

467 WALSHAW ROAD,
BURY,
BL8 3AA

OS sheet Number: SD7711SE
Scale: 1:1250 **Date:** 19/04/2018
Nodes: 185
Sheet: 4 of 8

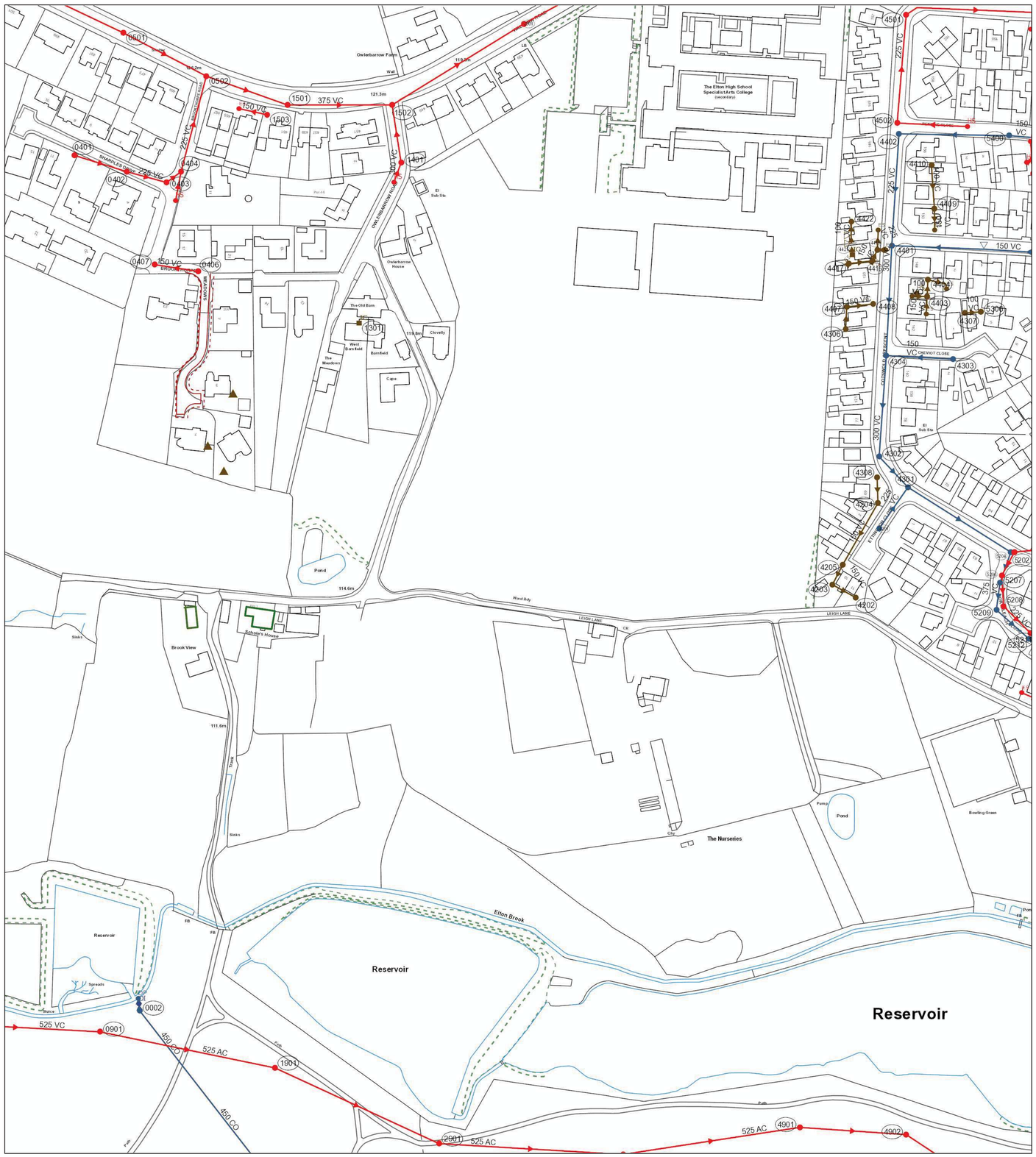
Printed by: Property Searches

SEWER RECORDS

United Utilities — helping life flow smoothly

Refno	Cover	Func	Invert	Size x	Size y	Shape	Matl	Length	Grad
3501	125.51	FO	123.48	150			CO	55.44241	1 in 15
3410	121.68	SW	119.45	300			CO	71.31841	1 in 17
3502	125.49	SW	123.92	150			CO	53.05423	1 in 16
3401	122.04	CO	118.41	600			CO	15.53446	
3402	122.46	CO	0	600			CO	50.2609	
3411	123.74	SW	122.1	150			CO	23.98211	1 in 48
3408	123.65	FO	121.53	150			CO	20.60849	1 in 61
4410	123.3	SW	119.57	150			CO	28.01653	1 in 11
4409	123.26	SW	121.6	150			CO	18.9314	1 in 9
4403	123.27	FO	121.19	150			CO	20.44138	1 in 11
4404	123.29	FO	119.26	150			CO	24.60179	1 in 4
4405	121.96	SW	116.97	150			CO	17.50477	1 in 10
4406	120.03	SW	115.23	150			CO	14.9256	1 in 32
4402	117.84	CO	114.61	825			CO	59.09315	1 in 52
4401	121.95	CO	113.75	825			CO	44.78347	
5404	117.83	CO	113.47	900			CO	16.40122	
5403		CO	0	900			CO	62.68174	
2504	125.12	FO	123.15	150			CO	25.54655	1 in 9
2507	125.28	SW	123.7	150			CO	28.78914	1 in 11
2410	121.55	CO	118.74	600			CO	58.95068	1 in 184
2413	121.43	SW	119.9	300			CO	58.78921	1 in 131
2407		SW	0	150			VC	18.82653	
3404		SW	0	900			CO	22.65708	
3406	122.34	FO	119.66	150			CO	12.90614	1 in 10
3407	121.71	CO	118.42	600			CO	10.20073	1 in 1020
3409	122.42	SW	120.58	150			CO	15.29454	1 in 14
4407	117.89	SW	115.23	939			CO	28.55718	
2201	117.55	CO	115.07	450			VC	54.38112	
2306		FO		100			PVC	31.26718	
2303		CO		100			VC	4.383643	
2304		CO		100			VC	9.630923	
2201	117.55	CO		450			VC	1.312103	
3303	121.44	SW	114.29	525			VC	27.22215	1 in 97
3302	121.15	CO	114.01	600			VC	63.07193	1 in 1577
3310		CO		100			PVC	2.70083	
3311		CO		150			PVC	43.55569	
3301	116.88	SW	114.01	600			VC	31.19753	
3307		SW	0	1200			CO	12.28105	
3306		SW	0	900			CO	16.38696	
3308		SW	0	150			VC	4.709405	
3309		SW	0	150			VC	13.89602	
3206	119.63	SW	117.49	300			PVC	6.507165	1 in 108
2214	121.96	FO	119.03	150			VC	9.549798	1 in 68
2211	122.45	SW	120.55	150			VC	14.27273	1 in 26
2210	122	SW	120.13	225			VC	7.729482	1 in 64
2213	122.23	FO	119.16	150			VC	10.53399	1 in 81
2209	122.26	SW	120.24	225			VC	9.555045	1 in 87
2208	122.17	SW	120.56	225			VC	17.68954	1 in 55
2205	122.19	FO	119.35	150			VC	17.00632	1 in 90
2207	123.04	SW	121.48	150			VC	16.22087	1 in 18
2204	123.06	FO	120.42	150			VC	13.53197	1 in 13
2203	124.56	FO	121.73	150			VC	26.4061	1 in 20
2206	124.73	SW	123.14	150			VC	29.74626	1 in 18
3201	120.79	CO	117.94	225			VC	55.08337	
4201	121.01	CO	119.82	225			VC	24.73863	
3212		CO		100			VC	8.560339	
3213		CO		150			VC	15.57697	
4101	123.71	FO	121.2	225			VC	95.95419	
4217		CO		150			VC	15.95258	
4214		CO		100			VC	35.96318	
4208		CO		100			VC	4.520051	
5100	122.15	FO	119.54	375			VC	63.24555	1 in 30
2503	126.4	CO	125.17	150			VC	56.64804	1 in 94
2517		CO		100			VC	14.14791	
1551	127.47	SW	124.66	225			VC	68.8186	1 in 156
2411	123.04	SW	121.77	225			CO	37.09344	1 in 100
2408	123.22	FO	121.11	150			CO	36.10463	
2508	124.47	SW	121.08	300			CO	25.30915	1 in 211
2505	124.53	SW	120.44	150			CO	25.25582	1 in 87
1503	125.44	SW	123.84	225			CO	39.09339	1 in 16
1502	125.48	FO	123.45	150			CO	35.67051	1 in 26
2506	125.08	SW	121.4	300			CO	55.87791	1 in 175
2501	125.09	FO	121.69	150			CO	56.01735	1 in 45
0401	127.8	CO	123.49	525			VC	149.8065	
0503	128.01	CO	123.9	225			VC	13.0384	1 in 652
1501	127.56	SW	124.17	225			VC	34.05877	1 in 131
1402	125.87	SW	124.56	225			CO	40.68954	1 in 57
1401	125.82	FO	123.9	150			CO	40.7949	1 in 91
2406		SW	0	150			VC	22.53142	
2402	122.22	CO	118.85	675			CO	41.36455	1 in 259
2405		SW	0	150			VC	16.61417	
2412	123.08	SW	120.96	300			CO	30.02278	1 in 28
2409	123.16	FO	120.15	150			CO	28.85642	1 in 20
2401	121.51	CO	118.74	600			CO	4.656627	
0511		CO		100			VC	6.949281	
0511		CO		100			VC	6.949281	
0509		CO		100			VC	6.789247	
0509		CO		100			VC	6.789247	
0508		CO		100			VC	6.808056	
0508		CO		100			VC	6.808056	
0404		CO		150			VC	2.481385	
0404		CO		150			VC	2.481385	
0403

Reservoir
Elton Brook
Reservoir
525 VC
450 CO
525 AC
450 CO
450 CO
Play Area
Football Pitch
Elton Vale Sports Club
Tennis Courts
Chantlers Primary School
939 CO
939 CO
939 CO



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
5209	109.89	SW	107.38	375			VC	24.08319	1 in 127
5208	109.87	CO	107.93	225			VC	21.2132	1 in 118
5212	109.6	SW	107.18	375			VC	23.34524	1 in 1167
5211	109.58	CO	107.74	225			VC	25.45584	1 in 283
5400	116.79	SW	115.07	225			VC	61.0082	1 in 24
5400	116.79	SW	115.07	225			VC	61.0082	1 in 24
4307		FO		100			VC	8.913309	
4302	112.41	SW	110.15	300			VC	23.34524	1 in 60
4304	113.14	SW	111.16	300			VC	56.14267	1 in 56
4502	114.18	CO	112.29	225			VC	60.20797	1 in 97
4502	114.18	CO	112.29	225			VC	60.20797	1 in 97
4501	114.56	CO	111.64	225			VC	80.27272	1 in 96
4501	114.56	CO	111.64	225			VC	80.27272	1 in 96
4407		FO		150			VC	14.71017	
4417		FO		100			VC	13.04198	
4416		FO		150			VC	6.59352	
4415		FO		225			VC	11.03855	
4415		FO		225			VC	11.03855	
4401	113.45	SW	111.75	300			VC	61.07373	1 in 107
4401	113.45	SW	111.75	300			VC	61.07373	1 in 107
4303	114.96	SW	113.43	150			VC	37.05402	1 in 17
4402	114.15	SW	112.55	225			VC	62.1289	1 in 80
4402	114.15	SW	112.55	225			VC	62.1289	1 in 80
4403		FO		150			VC	9.255542	
4404		FO		150			VC	12.92023	
4410		FO		100			VC	24.20906	
4410		FO		100			VC	24.20906	
4409		FO		150			VC	11.75707	
4409		FO		150			VC	11.75707	
4201	111.71	SW	110.37	225			VC	28.01785	1 in 46
4301	111.55	SW	109.76	300			VC	67.41662	1 in 32
5207	110.25	SW	107.35	375			VC	15.13275	
5204	110.42	SW	107.5	375			VC	18.02776	1 in 164
5206	110.07	CO	108.09	225			VC	17.02939	1 in 122
5202	110.04	CO	108.19	225			VC	14.76482	1 in 148
3901	109.69	CO	108.12	525			AC	99.14131	1 in 198
4901	110.18	CO	107.62	525			AC	59.13544	1 in 219
4901	110.18	CO	107.62	525			AC	59.13544	1 in 219
4902	110.88	CO	107.35	525			AC	59.90826	1 in 182
4902	110.88	CO	107.35	525			AC	59.90826	1 in 182
9501	129.11	CO	125.75	375			VC	86.33076	1 in 81
0401	128.32	CO	126.14	225			VC	30.36445	1 in 43
0401	128.32	CO	126.14	225			VC	30.36445	1 in 43
0401	128.32	CO	126.14	225			VC	30.36445	1 in 43
0401	128.32	CO	126.14	225			VC	30.36445	1 in 43
0501	126.95	CO	124.22	375			VC	51.88449	1 in 89
0501	126.95	CO	124.22	375			VC	51.88449	1 in 89
0501	126.95	CO	124.22	375			VC	51.88449	1 in 89
0501	126.95	CO	124.22	375			VC	51.88449	1 in 89
0402	127.8	CO	125.43	225			VC	22.80351	1 in 17
0402	127.8	CO	125.43	225			VC	22.80351	1 in 17
0402	127.8	CO	125.43	225			VC	22.80351	1 in 17
0402	127.8	CO	125.43	225			VC	22.80351	1 in 17
0406		CO		150			VC	24.42898	
0403	127.14	CO	124.11	225			VC	10	1 in 14
0403	127.14	CO	124.11	225			VC	10	1 in 14
0404	126.91	CO	123.22	225			VC	54.81788	1 in 322
0404	126.91	CO	123.22	225			VC	54.81788	1 in 322
0502	125.85	CO	122.62	375			VC	47.75982	1 in 87
0502	125.85	CO	122.62	375			VC	47.75982	1 in 87
1503		CO		150			VC	15.83225	
1503		CO		150			VC	15.83225	
1501	124.13	CO	120.03	375			VC	58	1 in 57
1501	124.13	CO	120.03	375			VC	58	1 in 57
1502	121.27	CO	116.95	375			VC	85.75546	1 in 74
1502	121.27	CO	116.95	375			VC	85.75546	1 in 74
1401	122.4	CO	117.52	300			VC	32.38827	1 in 95
1401	122.4	CO	117.52	300			VC	32.38827	1 in 95
2501	117.64	CO	114.51	375			VC	55.9464	
2501	117.64	CO	114.51	375			VC	55.9464	
4308		FO		150			VC	12.38667	
2709	119.12	SW	114.32	450			CO	308.0742	1 in 90
1901	111.27	CO	109.3	525			AC	100.2247	1 in 154
1901	111.27	CO	109.3	525			AC	100.2247	1 in 154
0901	113.34	CO	109.9	525			AC	99.0404	1 in 165
0901	113.34	CO	109.9	525			AC	99.0404	1 in 165
0901	113.34	CO	109.9	525			AC	99.0404	1 in 165
0901	113.34	CO	109.9	525			AC	99.0404	1 in 165
9002	113.42	CO	110.56	525			VC	93.13431	1 in 141
9002	113.42	CO	110.56	525			VC	93.13431	1 in 141
0002	112	SW	114.32	450			CO	3.664265	1 in 1
0002	112	SW	114.32	450			CO	3.664265	1 in 1
2901	110.87	CO	108.65	525			AC	102.1763	1 in 193
2901	110.87	CO	108.65	525			AC	102.1763	1 in 193
4205		FO		150			VC	12.27284	
4204		FO		150			VC	39.58903	
4308		FO		150			VC	14.1418	
4203		FO		150			VC	14.7361	

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- 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
- 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:

467 WALSHAW ROAD,
BURY,
BL8 3AA

OS sheet Number: SD7811SW

Scale: 1:1250 **Date:** 19/04/2018

Nodes: 88

Sheet: 7 of 8

Printed by: Property Searches

SEWER RECORDS

United Utilities — helping life flow smoothly

Refno	Cover	Func	Invert	Size x	Size y	Shape	Matl	Length	Grad
5400	116.79	SW	115.07	225			VC	61.0082	1 in 24
5400	116.79	SW	115.07	225			VC	61.0082	1 in 24
4502	114.18	CO	112.29	225			VC	60.20797	1 in 97
4502	114.18	CO	112.29	225			VC	60.20797	1 in 97
4501	114.56	CO	111.64	225			VC	80.27272	1 in 96
4501	114.56	CO	111.64	225			VC	80.27272	1 in 96
4603	112.92	CO	109.34	375			CO	105.0994	1 in 84
5601	111.63	CO	109.42	375			CO	20.17738	
4601	112.17	CO	110.03	375			VC	65.49046	1 in 107
4416		FO		150			VC	6.59352	
4415		FO		225			VC	11.03855	
4415		FO		225			VC	11.03855	
4401	113.45	SW	111.75	300			VC	61.07373	1 in 107
4401	113.45	SW	111.75	300			VC	61.07373	1 in 107
4402	114.15	SW	112.55	225			VC	62.1289	1 in 80
4402	114.15	SW	112.55	225			VC	62.1289	1 in 80
4410		FO		100			VC	24.20906	
4410		FO		100			VC	24.20906	
4409		FO		150			VC	11.75707	
4409		FO		150			VC	11.75707	
9501	129.11	CO	125.75	375			VC	86.33076	1 in 81
0401	128.32	CO	126.14	225			VC	30.36445	1 in 43
0401	128.32	CO	126.14	225			VC	30.36445	1 in 43
0401	128.32	CO	126.14	225			VC	30.36445	1 in 43
0401	128.32	CO	126.14	225			VC	30.36445	1 in 43
0501	126.95	CO	124.22	375			VC	51.88449	1 in 89
0501	126.95	CO	124.22	375			VC	51.88449	1 in 89
0501	126.95	CO	124.22	375			VC	51.88449	1 in 89
0501	126.95	CO	124.22	375			VC	51.88449	1 in 89
0402	127.8	CO	125.43	225			VC	22.80351	1 in 17
0402	127.8	CO	125.43	225			VC	22.80351	1 in 17
0402	127.8	CO	125.43	225			VC	22.80351	1 in 17
0402	127.8	CO	125.43	225			VC	22.80351	1 in 17
0403	127.14	CO	124.11	225			VC	10	1 in 14
0403	127.14	CO	124.11	225			VC	10	1 in 14
0404	126.91	CO	123.22	225			VC	54.81788	1 in 322
0404	126.91	CO	123.22	225			VC	54.81788	1 in 322
0502	125.85	CO	122.62	375			VC	47.75982	1 in 87
0502	125.85	CO	122.62	375			VC	47.75982	1 in 87
1503		CO		150			VC	15.83225	
1503		CO		150			VC	15.83225	
1501	124.13	CO	120.03	375			VC	58	1 in 57
1501	124.13	CO	120.03	375			VC	58	1 in 57
1502	121.27	CO	116.95	375			VC	85.75546	1 in 74
1502	121.27	CO	116.95	375			VC	85.75546	1 in 74
1401	122.4	CO	117.52	300			VC	32.38827	1 in 95
1401	122.4	CO	117.52	300			VC	32.38827	1 in 95
2501	117.64	CO	114.51	375			VC	55.9464	
2501	117.64	CO	114.51	375			VC	55.9464	
3501		CO	0	375			VC	62.76942	
3601		CO	0	375			VC	61.76581	

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
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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:

467 WALSHAW ROAD,
BURY,
BL8 3AA

OS sheet Number: SD7811NW

Scale: 1:1250 **Date:** 19/04/2018

Nodes: 51

Sheet: 8 of 8

Printed by: Property Searches

SEWER RECORDS

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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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Reece McGuinness

From: O'Brien, Neil <Neil.O'Brien@uuplc.co.uk>
Sent: 06 January 2020 11:04
To: Reece McGuinness; Wastewater Developer Services
Subject: RE: File Transfer: 4072 - Land at Walshaw Bury Pre-Development Enquiry (Vernon & Co) - Land at Walshaw, Bury - 4200029692

Dear Customer

We have carried out an assessment of your application which is based on the information provided; this pre development advice will be valid for 12 months

Foul will be allowed to drain to the public combined sewer network at an unrestricted rate. The connection(s) to the public sewer can be at a point(s) convenient to yourself

Surface water from this site should drain to either soak away/infiltration system or directly to watercourse. Discharge rates and consents must be discussed and agreed with all interested parties.

If you require any further guidance please follow http://www.unitedutilities.com/builders-developers.aspx

If you need a make further enquiry relating to this matter please send your enquiry to WastewaterDeveloperServices@uuplc.co.uk Please quote your DEXXXX/42XXXXXXX/GEXXXX reference number

Please Note:- enquiries sent to any other United Utilities e-mail address will be deleted.

Connection Application

Although we may discuss and agree discharge points & rates in principle, please be aware that you will have to apply for a formal sewer connection. This is so that we can assess the method of construction, Health & Safety requirements and to ultimatley inspect the connection when it is made. Details of the application process and the form itself can be obtained from our website by following the link below

http://www.unitedutilities.com/connecting-public-sewer.aspx

Please be aware that on site drainage must be designed in accordance with Building Regulations, National Planning Policy, Planning Conditions and local flood authority guidelines, we would recommend that you laise and make suitable agreements with the relevant statutory bodies.

From: Reece McGuinness [mailto:reece.mcguinness@rocconsulting.com]
Sent: 24 December 2019 12:35
To: Wastewater Developer Services <WastewaterDeveloperServices@uuplc.co.uk>
Subject: File Transfer: 4072 - Land at Walshaw Bury Pre-Development Enquiry (Vernon & Co) - Land at Walshaw, Bury

IMPORTANT: Click a link below to access files associated with this transmittal that came in through the RoC Consulting Info Exchange web site.
Download all associated files

Additional links:

Reply to All

Project Name: Land at Walshaw, Bury

Project Number: 4072

From: Reece McGuinness

To: WastewaterDeveloperServices@uuplc.co.uk

CC: David Eato; Paul White (RoC Consulting)

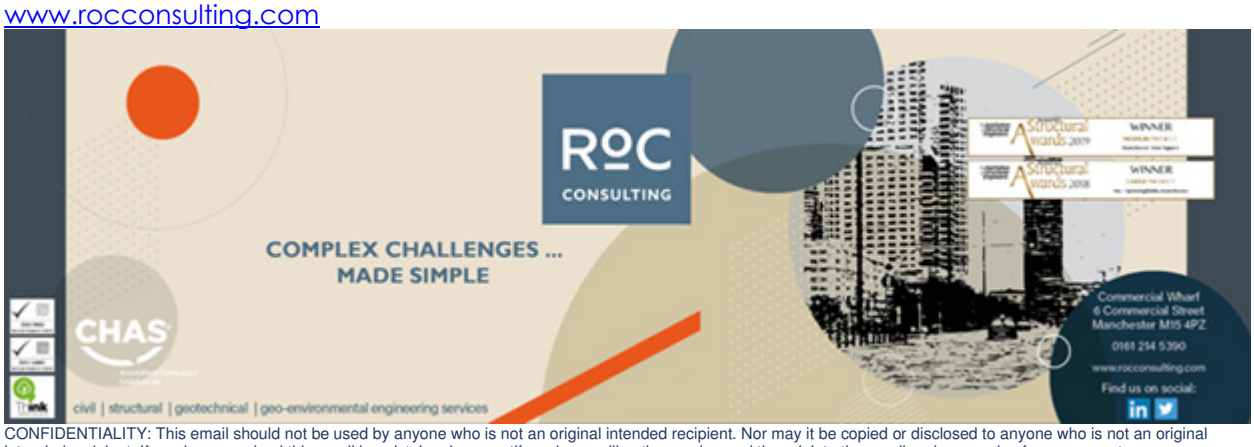
Subject: 4072 - Land at Walshaw Bury Pre-Development Enquiry (Vernon & Co)

Sent via: Info Exchange

Expiration Date: 1/23/2020

Remarks: Dear Sir/Madam,
Please find attached pre-development enquiry for the above site.
Also attached is a plan indicating layout and an ownership plan. This pre-development enquiry relates to the Vernon & Co land.

Kind regards
Reece McGuinness
Strategic Land Graduate Engineer
T 0161 214 5390
www.rocconsulting.com



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Registered Address: RoC Consulting, Commercial Wharf, 6 Commercial Street, Manchester M15 4PZ. Company Registration No: 3126673

Transferred Files

NAME	TYPE	DATE	TIME	SIZE
Transmittal - 00002.pdf	PDF File	12/24/2019	12:38 PM	190 KB
30860-MR-M-02I-Block Layout-A1_PT_1.2500-01-01.jpg	JPEG Image	12/24/2019	12:05 PM	6,446 KB
30860-MR-M-04-Land Ownership Plan-A1_PT_1.2500-01.jpg	JPEG Image	12/24/2019	12:06 PM	12,405 KB
Vernon Pre Development Enquiry.pdf	PDF File	12/24/2019	12:10 PM	1,447 KB

To share and learn more about Newforma Info Exchange visit: Newforma Community Site

Kind regards
Reece McGuinness
Strategic Land Graduate Engineer
T 0161 214 5390
www.rocconsulting.com

EMGateway3.uuplc.co.uk made the following annotations

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

www.unitedutilities.com
www.unitedutilities.com/subsidiaries

Wastewater pre-development enquiry

United Utilities
helping life flow smoothly

This form is for all first time enquiries you may have when planning your development.

If your enquiry relates to advice on **connection points and discharge rates**, please complete all sections, providing as much information as you have available. You will notice some fields are marked as optional, all other fields are mandatory.

For **all other enquiries**, please complete Sections 1, 2, 7 and 8.

When answering the yes/no questions please mark an 'x' in the appropriate box.

All enquiries must be accompanied by a site location plan, clearly identifying the site boundary.

Once completed, please return this form by email to **WastewaterDeveloperServices@uuplc.co.uk** or post to United Utilities Developer Services, Grasmere House, Second Floor, Lingley Mere Business Park, Lingley Green Avenue, Great Sankey, Warrington WA5 3LP.

We aim to respond to enquiries within 15 working days from receipt of your completed enquiry form.

Section 1: About you		
	Applicant	**Agent (if applicable)**
Name		Reece McGuinness
Company's name		ROC Consulting
Home or company address *(including postcode)*		Commercial Wharf 6 Commercial Street Manchester
Contact telephone number *(a mobile number is fine)*		0161 214 5390
Email		reece.mcguinness@rocconsulting.com
What is your enquiry	Surface and foul water discharge limitations + connections	
Who should we send the enquiry response to?	Applicant ☐ Agent ☑ Both ☐	

Section 2: About your site						
Site name	Land at Walshaw Bury (VHW Land Partnership)					
Site Address *(or nearest main road)*	Walshaw Road / Lowercroft Road/ Dow Lane, Bury Greater Manchester					
Site grid reference *(mid point)*	X:	377843		Y:	411493	
Approx. number of dwellings	671					
Total site area *(hectares)*	28.5					
Site name	Land at Walshaw Bury (VHW Land Partnership)					
Development area *(hectares)* *(Optional)*	20.34					
Estimated onsite date *(Optional)*						
Estimated first occupation *(Optional)*						
Does the site have planning permission	Full	Yes ☐ No ☑	Application submitted	☐	Planning ref (if applicable)	
	Outline	Yes ☐ No ☑	Application submitted	☐	Planning ref (if applicable)	
Have you approached us about this site previously?	Yes ☐ No ☑		If yes, please provide Ref No. and/or contact details			

Section 3: Your site drainage strategy		
Type of site	GREENFIELD *(Go to Q 3.1)* ☑	BROWNFIELD *(Go to Q 3.2)* ☐
3.1 Greenfield site *(Optional)*		Confirmed attachment:
Please provide full calculations to show existing greenfield run off rates		Yes ☐ No ☑
3.2 Brownfield site *(Optional)*		Confirmed attachment:
Please provide a plan showing existing foul water drainage from this site to the public sewer network (including location of existing drains, pipe sizes and points of connection)		Yes ☐ No ☐
Please provide a plan showing the existing surface water drainage from this site to the public sewer network, including location of existing drains, pipe sizes and points of connection		Yes ☐ No ☐
Will this development produce trade effluent?		Yes ☐ No ☐
Separate approval must be obtained for the discharge to the public sewer of any trade effluent from a factory, manufacturing or commercial process. You can apply for consent through a retailer of wastewater services who will apply to us on your behalf. A list of retailers can be found via the Market Operator here: **www.mosl.co.uk/members/member-list** A copy of the consent will be needed for you to make a sewer connection application.		Yes ☐ No ☐
If yes, to which sewer?		
Section 4: Foul water connection		
Are you proposing to use an existing connection to the public sewer?		Yes ☐ No ☑
If **Yes**, please provide manhole number or grid reference number If **no**, please provide the proposed flow rate and connection points (litres per second)		31.1 l/s Split over a number of outfall TBC.
Is the foul water discharge to be pumped?		Yes ☐ No ☑
Section 5: Surface water connection **If you are proposing to connect surface water to a public sewer, please attach evidence that all options for Sustainable Urban Drainage Systems (SUDs) have been explored in accordance with part H of the Building Regulations 2010.** **Details of SUDs can be found at http://www.ciria.com/sudsdesign_guidance.htm**		
How do you propose to drain surface water from the site?	SUDs *(Go to Section 6)* ☑	Discharge to public sewer *(Go to Q5.1)* ☐
5.1 Does the site have existing surface water connections to the public sewer?		Yes *(Go to Q5.2)* ☐ No *(Go to Q5.3)* ☑
5.2 Proposed surface water discharging to public sewer via **existing connection**		
Are you proposing to use an existing connection?		Yes ☐ No *(Go to Q5.3)* ☑
If **yes**, please provide manhole number or grid reference number & proposed flow rates		
5.3 Proposed surface water discharging to public sewer via a **new connection**		
Have you completed a flood risk assessment in support of your planning application?		Yes ☐ No ☑
Is the surface water to be controlled? *(Optional)*		Yes ☑ No ☐
Is the surface water to be pumped?*(Optional)*		Yes ☐ No ☑
Section 6: Development details (Optional)		
Is the development part of a larger site that will be developed in phases or will be subject to separate planning applications? If **yes**, please provide details below.		Yes ☐ No ☑

Phase number		1	2	3	4	5	6	7
Start date on site								
Anticipated date of first occupation								
Anticipated completion date								
No. of dwellings								
Sustainability code for dwellings								
Public houses and/or restaurants	No. of seats							
	Floor space (m²)							
Hotels: Total No. of beds								
Schools: Total No. of pupils								
Hospitals: Total No. of beds								
Retail units: Total No. of units								
Office space: Total No. of units								
Industrial / manufacturing: Total No. of units								
Other: Foul water *(litres per second)*								

Section 7: Supporting information Please confirm you have included all supporting information in relation to your enquiry	
Site location plan	☑ Yes ☐ No
Site boundary	☑ Yes ☐ No
Proposed drainage layout plan *(optional)*	☐ Yes ☑ No
Indicative layout plan *(optional)*	☐ Yes ☑ No
Calculations in support of proposed flow rates or run off rates *(optional)*	☐ Yes ☑ No
Flood risk assessment *(if appropriate)*	☐ Yes ☑ No

Section 8: Declaration

I understand that the submission of this form is to be treated as a preliminary enquiry and the information may be subject to change. In particular, I understand that the information United Utilities Water Limited provides in response is valid only in conjunction with the information provided in relation to this enquiry, any changes to regulation or development layout will invalidate our response.

Name	Reece McGuinness	Signature	R. Mc
Company	ROC Consulting	Date	02 01 2020

UU use only

Date received		UUW Ref No	\

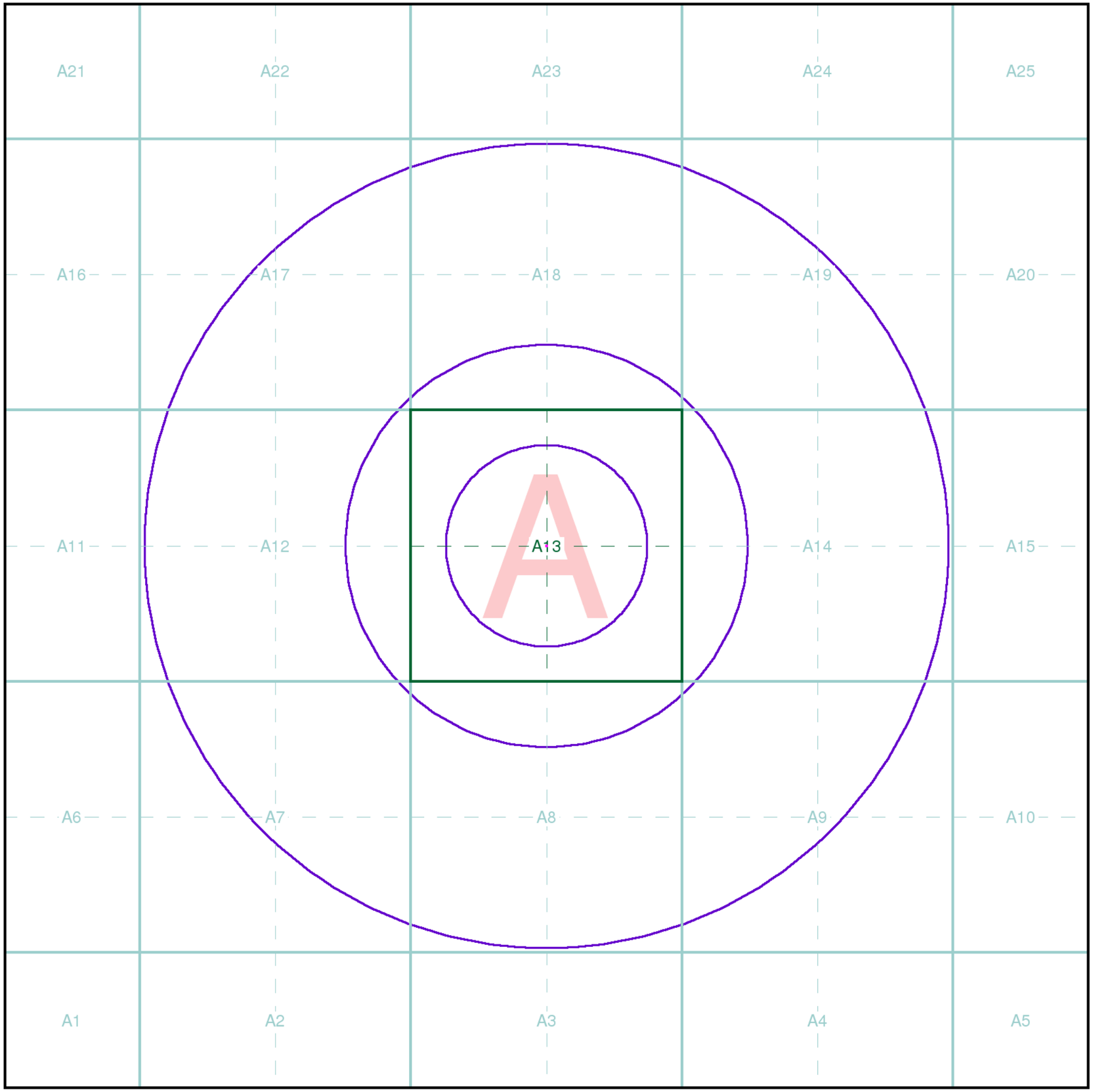
United Utilities
helping life flow smoothly

About us

United Utilities is the North West's water company. We keep the taps flowing and toilets flushing for seven million customers every day. From Crewe to Carlisle, we work hard behind the scenes to help your life flow smoothly.

United Utilities Water Limited, Haweswater House, Lingley Mere Business Park, Lingley Green Avenue, Warrington WA5 3LP.
Registered in England and Wales. Registered Number 2366678.

APPENDIX E – FLOOD SCREENING REPORT



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Index Map

For ease of identification, your site and buffer have been split into Slices, Segments and Quadrants. These are illustrated on the Index Map opposite and explained further below.

Slice
Each slice represents a 1:10,000 plot area (2.7km x 2.7km) for your site and buffer. A large site and buffer may be made up of several slices (represented by a red outline), that are referenced by letters of the alphabet, starting from the bottom left corner of the slice "grid". This grid does not relate to National Grid lines but is designed to give best fit over the site and buffer.

Segment
A segment represents a 1:2,500 plot area. Segments that have plot files associated with them are shown in dark green, others in light blue. These are numbered from the bottom left hand corner within each slice.

Quadrant
A quadrant is a quarter of a segment. These are labelled as NW, NE, SW, SE and are referenced in the datasheet to allow features to be quickly located on plots. Therefore a feature that has a quadrant reference of A7NW will be in Slice A, Segment 7 and the NW Quadrant.

A selection of organisations who provide data within this report:

Map data

British Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL

Environment Agency

NATURAL ENGLAND

Envirocheck reports are compiled from 136 different sources of data.

Prepared For

RoC Consulting
Commercial Wharf
Manchester

Client Details

Mr A James, TYPETHREE DESIGN, Warrington Business Centre, 67 Bewsey Street, Warrington, Cheshire, WA2 7JQ

Order Details

Order Number:	163324975_1_1
Customer Ref:	180418
National Grid Reference:	378090, 411530
Site Area (Ha):	0.01
Search Buffer (m):	1000

Site Details

Walshaw Road, Bury, BL8 3AA

Full Terms and Conditions can be found on the following link:
http://www.landmarkinfo.co.uk/Terms/Show/515

Landmark® INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

Envirocheck® Report:

Flood Screening Report Datasheet

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163324975_1_1

Customer Reference:
180418

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378090, 411530

Slice:
A

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Mr A James
TYPETHREE DESIGN
Warrington Business Centre
67 Bewsey Street
Warrington
Cheshire
WA2 7JQ

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Contents

Report Section and Details	Page Number
Summary	-
The Summary section provides an overview of the data contained within the report, detailing the number of data set features or the existence of a data set in relation to the buffer(s) selected. For ease of reference, the report is broken down into seven sections of data.	
EA / NRW / CEH Flood Data	-
This section details data from the Environment Agency/Natural Resources Wales and the Centre for Ecology and Hydrology. The EA/NRW data is reported to a distance of 250m from the edge of the site polygon and details both Zone 2 (extreme) and Zone 3 flood extents, as well as flood defences, flood water storage areas and areas benefiting from flood defences. The CEH data is reported to a distance of 250m from the edge of the site polygon and covers flood data for Scotland, divided into levels based on the frequency and magnitude of a predicted 100 year term. All data sets within this section are plotted and feature on the EA / NRW / CEH Flood Data (1:10,000) map. For added value, OS Contour data is also plotted, detailing contours, spot heights and land water boundaries.	
JBA Flood Data	1
This section contains the Comprehensive Flood Map ("CFM") data from JBA Risk Management Limited. The data is based upon the likelihood of a flood occurrence for up to 4 flood return periods depending on the type of flooding; these being 75 years, 100 years, 200 years and 1000 years. Each layer being modelled at a 5m cell resolution. Each return period is depicted on a separate 1:10,000 scale map and reports features to a distance of 250m in the datasheet from the edge of the site polygon. For each return period the following three sources of flooding are identified, surface water or pluvial flooding, undefended river flooding or fluvial flooding and undefended coastal flooding. In each case the extent of the flooding source is displayed with the associated depth range. In addition, a 1:10,000 scale map depicting flooding from a Canal Failure and a coverage check for this dataset is included. Where coverage exists, information is reported in the datasheet where the site could be affected by flooding that results from a dam breach. For added value, OS Contour data is also plotted, detailing contours, spot heights and land water boundaries.	
BGS Flood Data	6
This section contains two BGS data sets; namely Geological Indicators of Flooding and Groundwater Flooding Susceptibility, both of which report features out to a possible 1000m, with coverage in England, Wales and Scotland. Each data set is plotted on a seperate BGS Flood Data (1:50,000) map.	
GeoSmart Information Groundwater Flood Data	12
This section contains data provided by GeoSmart Information who, building on their expertise, have developed algorithms and calibrated predictions of the risk of groundwater flooding occurring in Great Britain. The resulting map, classifies groundwater flood risk for each 5m x 5m into four categories, negligible, low, moderate and high. These classifications are based on the level of risk, combining severity and uncertainty that a site will suffer groundwater flooding within a return period of about 200 years.	
OS Water Network Data	15
This section details the MasterMap Water Network data sourced from the Ordnance Survey. The OS MasterMap Water Network data details a network representing the watercourse within Great Britain. The OS Water Network Lines data set details the approximate central alignment of a watercourse, including rivers, lakes and canals. The OS Water Network Nodes data set details features that represent a river's source, end, a junction where three of more links meet, and places where the real world related attribution changes; for example a watercourse becoming tidal. The data sets within this section are plotted and feature on the OS Water Network Map (1:10,000) . For added value, OS Contour data is also plotted, detailing contours, spot heights and land water boundaries.	

Contents

EA/NRW Historic Flood Events Data	**-**

This section details Historic Flood data sourced from the Environment Agency/Natural Resources Wales and from data held by Landmark. The EA/NRW Historic Flood Events data is reported to a distance of 1000m from the edge of the site polygon and details recorded historic flood events from 1703 to October 2008. The data also contains information on the source and cause of the flood, and how the flood outline was established.

Also included in this section is Landmark's Historical Flood Liabilities data set, which identifies areas that are liable to flood based on systematic analysis of historical mapping dating back to the mid 19th century.

Both data sets within this section are plotted and feature on the EA/NRW Historical Flood (1:10,000) map. For added value, OS Contour data is also plotted, detailing contours, spot heights and land water boundaries.

EA/NRW RoFRS Data	**29**

This section details the Risk of Flooding from Rivers and Sea (RoFRS) data sourced from the Environment Agency/Natural Resources Wales and is reported to a distance of 1000m from the edge of the site polygon. The RoFRS data provides an indication of areas of land at risk of flooding from rivers and the sea. These areas of land, called impacted cells, are represented as 50 metre squares, or smaller areas where a square is intersected by a river or coastline.

The average height information of the impacted cell, modelled river and sea levels and information about over 200,000 flood defences are used as inputs to a computer flood model run by the Environment Agency/Natural Resources Wales. The model compares the probability that the flood defences will overtop or breach and the distance of the impact cell from the river or the sea for 40 scenarios for probabilities of between 100% to 0.1%.

The results are then consolidated to calculate a single probability category for each impacted cell. These results have been validated by local staff using their local knowledge and expertise. RoFRS is a national flood risk assessment and does not contain information about property thresholds. Due to variations in the input data and the performance of the computer flood model at particular locations, the resulting category of an impacted cell should only be used at a specific study scale. In certain areas it would only be appropriate to compare risks between towns and counties whereas in other areas they would be more suitable for understanding risk at a street level. The level of suitability for a particular cell is indicated by the cell's suitability scale.

The data within this section is plotted and feature on the EA/NRW RoFRS Data (1:50,000) map. This dataset is not available in Scotland.

Flood Insurance Risk Data	**30**

This section contains flood risk data from Crawford and Company. This dataset is not plotted on any of the associated Flood maps.

Crawford & Co have generated an Insurance Claims rating for Flood Risk. The risk is determined by comparing the number of flood insurance claims made to the number of properties in the postcode sector. The data will also include flood claims from domestic accidents or blocked drains, as well as flooding from river or tidal events. Flood insurance claim ratings are reported for the site only.

Data Currency	**31**
Data Suppliers	**34**
Useful Contacts	**35**

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Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m
EA / NRW / CEH Flood Data					
Extreme Flooding from Rivers or Sea without Defences				n/a	n/a
Flooding from Rivers or Sea without Defences				n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
JBA Flood Data					
JBA 75 Year Return (undefended) - Pluvial	pg 1		29	n/a	n/a
JBA 75 Year Return (undefended) - Fluvial				n/a	n/a
JBA 75 Year Return (undefended) - Coastal				n/a	n/a
JBA 100 Year Return (undefended) - Fluvial				n/a	n/a
JBA 100 Year Return (undefended) - Coastal				n/a	n/a
JBA 200 Year Return (undefended) - Pluvial	pg 2		32	n/a	n/a
JBA 200 Year Return (undefended) - Fluvial				n/a	n/a
JBA 200 Year Return (undefended) - Coastal				n/a	n/a
JBA 1000 Year Return (undefended) - Pluvial	pg 3		30	n/a	n/a
JBA 1000 Year Return (undefended) - Fluvial				n/a	n/a
JBA 1000 Year Return (undefended) - Coastal				n/a	n/a
JBA Canal Failure					
JBA Dam Break	pg 5			1	1
BGS Flood Data					
BGS Geological Indicators of Flooding					
BGS Groundwater Flooding Susceptibility	pg 6	1	24	15	90
GeoSmart Information Groundwater Flood					
GeoSmart Information Groundwater Flood Risk	pg 12	1	2	3	35
OS Water Network Data					
OS Water Network Lines	pg 15		4	21	63
OS Water Network Nodes	pg 24		2	18	63
EA/NRW Historic Flood Events Data					
Historic Flood Events					
Historical Flood Liabilities					
EA/NRW RoFRS Data					
RoFRS - Risk of Flooding from Rivers and Sea	pg 29				6
Flood Insurance Risk Data					
Postcode Sector Flood Insurance Claim Ratings	pg 30	1	n/a	n/a	n/a

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JBA Flood Data

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	JBA 75 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.3m and Less than or equal to 1.0m	A13SE (S)	196	2	378086 411330
	JBA 75 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13SE (S)	196	2	378095 411330
	JBA 75 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13SE (S)	200	2	378125 411330
	JBA 75 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13SE (S)	201	2	378100 411325
	JBA 75 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13SE (S)	202	2	378135 411330
	JBA 75 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13SE (SE)	206	2	378240 411390
	JBA 75 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13SE (S)	211	2	378086 411315
	JBA 75 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13SE (S)	211	2	378095 411315
	JBA 75 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.3m and Less than or equal to 1.0m	A13SE (S)	219	2	378125 411310
	JBA 75 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (NE)	223	2	378230 411695
	JBA 75 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.3m and Less than or equal to 1.0m	A13NE (NE)	223	2	378240 411685
	JBA 75 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (NE)	223	2	378245 411680
	JBA 75 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (NE)	224	2	378225 411700
	JBA 75 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (NE)	226	2	378200 411720
	JBA 75 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (NE)	226	2	378180 411730
	JBA 75 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (NE)	226	2	378190 411725
	JBA 75 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (N)	227	2	378170 411735
	JBA 75 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (NE)	227	2	378210 411715
	JBA 75 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (NE)	227	2	378255 411675
	JBA 75 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (N)	228	2	378160 411740
	JBA 75 Year Return (undefended) - Pluvial Flood Depth: Greater than 1.0m	A13NE (NE)	233	2	378250 411690
	JBA 75 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (N)	235	2	378130 411755

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	JBA 75 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.3m and Less than or equal to 1.0m	A13NE (N)	240	2	378135 411760
	JBA 75 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (N)	241	2	378140 411760
	JBA 75 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.3m and Less than or equal to 1.0m	A13NE (N)	244	2	378130 411765
	JBA 75 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (N)	245	2	378135 411765
	JBA 75 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.3m and Less than or equal to 1.0m	A13NE (NE)	245	2	378275 411680
	JBA 75 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13SE (S)	248	2	378115 411280
	JBA 75 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.3m and Less than or equal to 1.0m	A13SE (S)	249	2	378125 411280
	JBA 75 Year Return (undefended) - Fluvial None				
	JBA 75 Year Return (undefended) - Coastal None				
	JBA 100 Year Return (undefended) - Fluvial None				
	JBA 100 Year Return (undefended) - Coastal None				
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13SE (S)	191	2	378130 411340
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13SE (S)	195	2	378125 411335
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.3m and Less than or equal to 1.0m	A13SE (S)	196	2	378086 411330
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13SE (S)	196	2	378095 411330
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13SE (S)	201	2	378100 411325
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13SE (S)	202	2	378135 411330
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13SE (SE)	205	2	378225 411375
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13SE (SE)	206	2	378240 411390
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13SE (S)	211	2	378086 411315
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13SE (S)	211	2	378095 411315
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (NE)	219	2	378235 411685
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.3m and Less than or equal to 1.0m	A13SE (S)	219	2	378125 411310

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (NE)	220	2	378230 411690
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.3m and Less than or equal to 1.0m	A13NE (NE)	223	2	378245 411680
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (NE)	223	2	378250 411675
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13SE (SE)	224	2	378280 411415
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (NE)	224	2	378195 411720
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (NE)	224	2	378225 411700
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (NE)	225	2	378205 411715
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (NE)	225	2	378220 411705
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (N)	225	2	378165 411735
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (NE)	226	2	378215 411710
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (NE)	226	2	378190 411725
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (N)	228	2	378145 411745
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13SE (SE)	228	2	378290 411425
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13SE (SE)	231	2	378295 411430
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 1.0m	A13NE (NE)	233	2	378250 411690
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (N)	235	2	378130 411755
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (N)	238	2	378120 411760
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (N)	242	2	378115 411765
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (N)	246	2	378110 411770
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.3m and Less than or equal to 1.0m	A13SE (S)	248	2	378115 411280
	JBA 200 Year Return (undefended) - Fluvial None				
	JBA 200 Year Return (undefended) - Coastal None				
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13SE (S)	191	2	378090 411335

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13SE (S)	191	2	378130 411340
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.3m and Less than or equal to 1.0m	A13SE (S)	196	2	378086 411330
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13SE (S)	196	2	378095 411330
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13SE (S)	201	2	378100 411325
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13SE (SE)	202	2	378225 411380
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13SE (S)	202	2	378135 411330
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13SE (S)	211	2	378095 411315
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13SE (S)	211	2	378086 411315
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.3m and Less than or equal to 1.0m	A13SE (S)	214	2	378125 411315
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (NE)	219	2	378240 411680
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.3m and Less than or equal to 1.0m	A13NE (NE)	219	2	378235 411685
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (N)	220	2	378165 411730
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (NE)	220	2	378195 411715
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (NE)	220	2	378205 411710
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (NE)	221	2	378190 411720
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (NE)	221	2	378220 411700
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (NE)	222	2	378215 411705
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (N)	223	2	378160 411735
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.3m and Less than or equal to 1.0m	A13NE (NE)	223	2	378245 411680
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13SE (S)	223	2	378120 411305
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.3m and Less than or equal to 1.0m	A13SE (SE)	224	2	378255 411380
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (NE)	224	2	378185 411725

JBA Flood Data

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (N)	225	2	378150 411740
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 1.0m	A13NE (NE)	226	2	378245 411685
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (NE)	234	2	378265 411675
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (N)	237	2	378115 411760
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13SE (S)	238	2	378120 411290
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (N)	246	2	378100 411770
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.3m and Less than or equal to 1.0m	A13SE (S)	248	2	378115 411280
	JBA 1000 Year Return (undefended) - Fluvial None				
	JBA 1000 Year Return (undefended) - Coastal None				
	JBA Canal Failure Coverage Coverage: This area has not been mapped for risk of flooding from canal or aqueduct failure or breach.	A13NE (NE)	0	2	378086 411525
	JBA Canal Failure None				
	JBA Dam Break Coverage Coverage: This area has been mapped for flooding from dam or reservoir embankment failure or breach.	A13NE (NE)	0	2	378086 411525
	JBA Dam Break Assessment: This area is regarded as being at some risk of flooding in the event of an instantaneous catastrophic breach of dam or reservoir embankment. Flooded Area Size: 500475m2	A8NW (S)	342	2	378055 411185
	JBA Dam Break Assessment: This area is regarded as being at some risk of flooding in the event of an instantaneous catastrophic breach of dam or reservoir embankment. Flooded Area Size: 245250m2	A9NW (SE)	767	2	378630 410985

BGS Flood Data

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (NE)	0	3	378086 411525
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (E)	15	3	378100 411525
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (E)	65	3	378150 411525
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (E)	70	3	378150 411500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (NW)	83	3	378050 411600
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (W)	86	3	378000 411525
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (SE)	100	3	378150 411450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (SW)	114	3	378000 411450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (E)	118	3	378200 411500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (N)	125	3	378086 411650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (S)	126	3	378086 411400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (N)	130	3	378050 411650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (NE)	137	3	378200 411600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (SE)	137	3	378200 411450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (NE)	141	3	378150 411650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (SW)	152	3	378000 411400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13NE (E)	165	3	378250 411525
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (E)	167	3	378250 411500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13NE (NE)	170	3	378200 411650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (N)	176	3	378100 411700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13NE (N)	187	3	378150 411700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13SW (SW)	196	3	378000 411350

BGS Flood Data

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (NE)	207	3	378250 411650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13SE (SE)	207	3	378250 411400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13NE (N)	226	3	378100 411750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (SW)	256	3	377900 411350
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (W)	336	3	377750 411525
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (W)	344	3	377750 411600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14NW (E)	365	3	378450 411525
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SW (SW)	379	3	377750 411350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (NE)	387	3	378400 411750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (SE)	390	3	378300 411200
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (W)	393	3	377700 411600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (SW)	405	3	377750 411300
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12NE (NW)	447	3	377700 411750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A14SW (SE)	457	3	378450 411250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14SW (E)	466	3	378550 411500
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12SE (W)	470	3	377650 411350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SE (N)	475	3	378100 412000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (W)	492	3	377600 411600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (SE)	501	3	378350 411100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SW (NW)	512	3	377800 411950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (SE)	522	3	378300 411050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A19SW (NE)	523	3	378450 411900

BGS Flood Data

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14NW (NE)	527	3	378500 411850
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A14SW (SE)	540	3	378550 411250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NW (S)	543	3	377950 411000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (S)	551	3	378250 411000
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A19SW (NE)	559	3	378500 411900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14NW (NE)	567	3	378550 411850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A8NE (S)	568	3	378300 411000
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A7NE (SW)	575	3	377700 411100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (S)	576	3	378086 410950
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NE (S)	579	3	378150 410950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SE (NE)	588	3	378350 412050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NW (S)	592	3	377950 410950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A12NE (W)	599	3	377500 411650
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A19SW (NE)	599	3	378450 412000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (S)	599	3	378250 410950
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A14SW (E)	608	3	378650 411300
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A18SE (NE)	612	3	378400 412050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (SE)	613	3	378400 411000
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NW (S)	622	3	377850 410950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (S)	626	3	378086 410900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NE (S)	626	3	378100 410900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A19SW (NE)	639	3	378450 412050

BGS Flood Data

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NW (S)	640	3	377950 410900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7NE (SW)	646	3	377600 411100
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A18SE (N)	647	3	378250 412150
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SE (NE)	656	3	378400 412100
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NW (S)	669	3	377850 410900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A14NW (NE)	674	3	378700 411800
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A7NE (SW)	684	3	377550 411100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NW (W)	697	3	377400 411650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A9NW (SE)	702	3	378550 411000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A19SW (NE)	707	3	378650 411950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A17SE (NW)	716	3	377550 412000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A19SW (NE)	720	3	378700 411900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18NE (N)	725	3	378100 412250
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A18NE (N)	728	3	378150 412250
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A7NE (SW)	739	3	377450 411150
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A12NW (W)	757	3	377350 411700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NW (NW)	759	3	377400 411850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7NE (SW)	765	3	377450 411100
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12NW (W)	770	3	377350 411750
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A19SW (NE)	772	3	378600 412100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A9NW (SE)	772	3	378650 411000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18NE (N)	775	3	378086 412300

BGS Flood Data

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A17SW (NW)	782	3	377400 411900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A7NW (SW)	782	3	377400 411150
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7NE (SW)	786	3	377550 410950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7NE (SW)	794	3	377450 411050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NW (W)	796	3	377300 411650
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A7NW (SW)	807	3	377400 411100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7NE (SW)	821	3	377500 410950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14NE (E)	824	3	378900 411650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14NE (NE)	831	3	378850 411850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A17NE (NW)	846	3	377650 412250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A9NW (SE)	847	3	378750 411000
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A7NE (SW)	857	3	377500 410900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14NE (E)	860	3	378900 411800
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A18NW (N)	876	3	378050 412400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7NW (SW)	876	3	377350 411050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A9NE (SE)	887	3	378800 411000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7NE (SW)	892	3	377450 410900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A17SW (NW)	894	3	377300 411950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A17SW (NW)	895	3	377400 412100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NW (W)	903	3	377200 411700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7NW (SW)	904	3	377350 411000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A12NW (W)	914	3	377200 411750

BGS Flood Data

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A19SE (NE)	919	3	378900 411950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A14NE (E)	924	3	378950 411850
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A7SE (SW)	928	3	377450 410850
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A19SE (NE)	928	3	378850 412050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14NE (E)	942	3	379000 411750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A19SE (NE)	943	3	378950 411900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A17NE (NW)	956	3	377700 412400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NW (W)	963	3	377150 411750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7SW (SW)	963	3	377400 410850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A19SE (NE)	969	3	378900 412050
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A9NE (SE)	970	3	378900 411000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A9SW (SE)	973	3	378600 410700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18NE (N)	975	3	378100 412500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A12NW (W)	976	3	377150 411800
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A18NE (N)	982	3	378200 412500
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A17SW (NW)	983	3	377200 411950
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A18NE (N)	989	3	378250 412500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14NE (E)	991	3	379050 411750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A9SW (SE)	991	3	378550 410650
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A19SE (NE)	997	3	378900 412100

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	GeoSmart Information Groundwater Flood Data Risk: Negligible Risk Risk Details: There is a negligible risk of groundwater flooding in this area and any groundwater flooding incidence has a chance of less than 1 in 100 (<1%) probability of occurrence.	A13NE (NE)	0	2	378086 411525
	GeoSmart Information Groundwater Flood Data Risk: Moderate Risk Risk Details: There is a moderate risk of groundwater flooding in this area with a chance of greater than 1 in 100 (>1%) probability of occurrence.	A13NE (N)	246	2	378110 411770
	GeoSmart Information Groundwater Flood Data Risk: Low Risk Risk Details: There is a low risk of groundwater flooding in this area with a chance of greater than 1 in 100 (>1%) probability of occurrence.	A13NE (N)	250	2	378095 411775
	GeoSmart Information Groundwater Flood Data Risk: Low Risk Risk Details: There is a low risk of groundwater flooding in this area with a chance of greater than 1 in 100 (>1%) probability of occurrence.	A13NE (N)	261	2	378100 411785
	GeoSmart Information Groundwater Flood Data Risk: Low Risk Risk Details: There is a low risk of groundwater flooding in this area with a chance of greater than 1 in 100 (>1%) probability of occurrence.	A13NE (N)	266	2	378105 411790
	GeoSmart Information Groundwater Flood Data Risk: Low Risk Risk Details: There is a low risk of groundwater flooding in this area with a chance of greater than 1 in 100 (>1%) probability of occurrence.	A13NE (N)	271	2	378110 411795
	GeoSmart Information Groundwater Flood Data Risk: Negligible Risk Risk Details: There is a negligible risk of groundwater flooding in this area and any groundwater flooding incidence has a chance of less than 1 in 100 (<1%) probability of occurrence.	A14SW (SE)	724	2	378749 411236
	GeoSmart Information Groundwater Flood Data Risk: Low Risk Risk Details: There is a low risk of groundwater flooding in this area with a chance of greater than 1 in 100 (>1%) probability of occurrence.	A9NW (SE)	767	2	378630 410985
	GeoSmart Information Groundwater Flood Data Risk: Low Risk Risk Details: There is a low risk of groundwater flooding in this area with a chance of greater than 1 in 100 (>1%) probability of occurrence.	A9NW (SE)	768	2	378625 410980
	GeoSmart Information Groundwater Flood Data Risk: Moderate Risk Risk Details: There is a moderate risk of groundwater flooding in this area with a chance of greater than 1 in 100 (>1%) probability of occurrence.	A9NW (SE)	771	2	378630 410980
	GeoSmart Information Groundwater Flood Data Risk: Low Risk Risk Details: There is a low risk of groundwater flooding in this area with a chance of greater than 1 in 100 (>1%) probability of occurrence.	A9NW (SE)	782	2	378645 410980
	GeoSmart Information Groundwater Flood Data Risk: Low Risk Risk Details: There is a low risk of groundwater flooding in this area with a chance of greater than 1 in 100 (>1%) probability of occurrence.	A9NW (SE)	811	2	378680 410975
	GeoSmart Information Groundwater Flood Data Risk: Low Risk Risk Details: There is a low risk of groundwater flooding in this area with a chance of greater than 1 in 100 (>1%) probability of occurrence.	A9NW (SE)	814	2	378675 410965
	GeoSmart Information Groundwater Flood Data Risk: Low Risk Risk Details: There is a low risk of groundwater flooding in this area with a chance of greater than 1 in 100 (>1%) probability of occurrence.	A9NW (SE)	817	2	378650 410935
	GeoSmart Information Groundwater Flood Data Risk: Moderate Risk Risk Details: There is a moderate risk of groundwater flooding in this area with a chance of greater than 1 in 100 (>1%) probability of occurrence.	A9NW (SE)	832	2	378700 410965
	GeoSmart Information Groundwater Flood Data Risk: Low Risk Risk Details: There is a low risk of groundwater flooding in this area with a chance of greater than 1 in 100 (>1%) probability of occurrence.	A9NW (SE)	839	2	378710 410965

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	GeoSmart Information Groundwater Flood Data Risk: Low Risk Risk Details: There is a low risk of groundwater flooding in this area with a chance of greater than 1 in 100 (>1%) probability of occurrence.	A9NW (SE)	868	2	378730 410945
	GeoSmart Information Groundwater Flood Data Risk: Low Risk Risk Details: There is a low risk of groundwater flooding in this area with a chance of greater than 1 in 100 (>1%) probability of occurrence.	A9NW (SE)	876	2	378750 410955
	GeoSmart Information Groundwater Flood Data Risk: Low Risk Risk Details: There is a low risk of groundwater flooding in this area with a chance of greater than 1 in 100 (>1%) probability of occurrence.	A9NW (SE)	879	2	378745 410945
	GeoSmart Information Groundwater Flood Data Risk: Low Risk Risk Details: There is a low risk of groundwater flooding in this area with a chance of greater than 1 in 100 (>1%) probability of occurrence.	A9NW (SE)	890	2	378760 410945
	GeoSmart Information Groundwater Flood Data Risk: Low Risk Risk Details: There is a low risk of groundwater flooding in this area with a chance of greater than 1 in 100 (>1%) probability of occurrence.	A19SE (NE)	935	2	378930 411925
	GeoSmart Information Groundwater Flood Data Risk: Low Risk Risk Details: There is a low risk of groundwater flooding in this area with a chance of greater than 1 in 100 (>1%) probability of occurrence.	A19NW (NE)	945	2	378455 412395
	GeoSmart Information Groundwater Flood Data Risk: Low Risk Risk Details: There is a low risk of groundwater flooding in this area with a chance of greater than 1 in 100 (>1%) probability of occurrence.	A19NW (N)	946	2	378445 412400
	GeoSmart Information Groundwater Flood Data Risk: Low Risk Risk Details: There is a low risk of groundwater flooding in this area with a chance of greater than 1 in 100 (>1%) probability of occurrence.	A14NE (E)	965	2	378990 411860
	GeoSmart Information Groundwater Flood Data Risk: Moderate Risk Risk Details: There is a moderate risk of groundwater flooding in this area with a chance of greater than 1 in 100 (>1%) probability of occurrence.	A19SE (NE)	966	2	378955 411945
	GeoSmart Information Groundwater Flood Data Risk: Moderate Risk Risk Details: There is a moderate risk of groundwater flooding in this area with a chance of greater than 1 in 100 (>1%) probability of occurrence.	A19NW (NE)	971	2	378505 412400
	GeoSmart Information Groundwater Flood Data Risk: Low Risk Risk Details: There is a low risk of groundwater flooding in this area with a chance of greater than 1 in 100 (>1%) probability of occurrence.	A14NE (E)	973	2	379000 411855
	GeoSmart Information Groundwater Flood Data Risk: Low Risk Risk Details: There is a low risk of groundwater flooding in this area with a chance of greater than 1 in 100 (>1%) probability of occurrence.	A14NE (E)	975	2	379010 411835
	GeoSmart Information Groundwater Flood Data Risk: Low Risk Risk Details: There is a low risk of groundwater flooding in this area with a chance of greater than 1 in 100 (>1%) probability of occurrence.	A19NW (NE)	977	2	378520 412400
	GeoSmart Information Groundwater Flood Data Risk: Low Risk Risk Details: There is a low risk of groundwater flooding in this area with a chance of greater than 1 in 100 (>1%) probability of occurrence.	A19NW (NE)	979	2	378515 412405
	GeoSmart Information Groundwater Flood Data Risk: Low Risk Risk Details: There is a low risk of groundwater flooding in this area with a chance of greater than 1 in 100 (>1%) probability of occurrence.	A14NE (E)	980	2	379010 411850
	GeoSmart Information Groundwater Flood Data Risk: Moderate Risk Risk Details: There is a moderate risk of groundwater flooding in this area with a chance of greater than 1 in 100 (>1%) probability of occurrence.	A14NE (E)	982	2	379010 411855

GeoSmart Information Groundwater Flood Da

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	GeoSmart Information Groundwater Flood Data Risk: Moderate Risk Risk Details: There is a moderate risk of groundwater flooding in this area with a chance of greater than 1 in 100 (>1%) probability of occurrence.	A19NW (NE)	982	2	378520 412405
	GeoSmart Information Groundwater Flood Data Risk: Low Risk Risk Details: There is a low risk of groundwater flooding in this area with a chance of greater than 1 in 100 (>1%) probability of occurrence.	A14NE (E)	982	2	379015 411840
	GeoSmart Information Groundwater Flood Data Risk: Low Risk Risk Details: There is a low risk of groundwater flooding in this area with a chance of greater than 1 in 100 (>1%) probability of occurrence.	A19NW (NE)	984	2	378525 412405
	GeoSmart Information Groundwater Flood Data Risk: Low Risk Risk Details: There is a low risk of groundwater flooding in this area with a chance of greater than 1 in 100 (>1%) probability of occurrence.	A14NE (E)	987	2	379025 411825
	GeoSmart Information Groundwater Flood Data Risk: Moderate Risk Risk Details: There is a moderate risk of groundwater flooding in this area with a chance of greater than 1 in 100 (>1%) probability of occurrence.	A19SE (E)	992	2	379005 411895
	GeoSmart Information Groundwater Flood Data Risk: Low Risk Risk Details: There is a low risk of groundwater flooding in this area with a chance of greater than 1 in 100 (>1%) probability of occurrence.	A19SE (E)	993	2	379005 411900
	GeoSmart Information Groundwater Flood Data Risk: Low Risk Risk Details: There is a low risk of groundwater flooding in this area with a chance of greater than 1 in 100 (>1%) probability of occurrence.	A19NW (NE)	993	2	378525 412415
	GeoSmart Information Groundwater Flood Data Risk: Low Risk Risk Details: There is a low risk of groundwater flooding in this area with a chance of greater than 1 in 100 (>1%) probability of occurrence.	A19NW (NE)	997	2	378535 412415
	GeoSmart Information Groundwater Flood Data Risk: Low Risk Risk Details: There is a low risk of groundwater flooding in this area with a chance of greater than 1 in 100 (>1%) probability of occurrence.	A19NW (NE)	1000	2	378530 412420

OS Water Network Data

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	**OS Water Network Lines** Watercourse Name: Walshaw Brook Watercourse Form: Inland river Watercourse Length: 237.0 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A13NE (NE)	204	4	378187 411701
2	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 8.3 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A13NE (NE)	222	4	378256 411666
3	**OS Water Network Lines** Watercourse Name: Walshaw Brook Watercourse Form: Inland river Watercourse Length: 75.8 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A13NE (NE)	222	4	378259 411664
4	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Lake Watercourse Length: 105.6 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A13NE (NE)	223	4	378254 411671
5	**OS Water Network Lines** Watercourse Name: Walshaw Brook Watercourse Form: Inland river Watercourse Length: 213.2 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A13NW (N)	267	4	378060 411791
6	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 63.4 Watercourse Level: On ground surface Primacy: 2 Permanent: True Catchment Name: Mersey	A13NW (N)	267	4	378060 411791
7	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 2.3 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A13NE (NE)	289	4	378333 411674
8	**OS Water Network Lines** Watercourse Name: Walshaw Brook Watercourse Form: Inland river Watercourse Length: 85.2 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A13NE (NE)	289	4	378333 411674
9	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 381.0 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A13SW (S)	305	4	378010 411231

OS Water Network Data

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
10	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 111.8 Watercourse Level: Not Supplied Primacy: 1 Permanent: True Catchment Name: Mersey	A13SW (S)	315	4	378008 411220
11	**OS Water Network Lines** Watercourse Name: Walshaw Brook Watercourse Form: Inland river Watercourse Length: 337.9 Watercourse Level: Not Supplied Primacy: 1 Permanent: True Catchment Name: Mersey	A13NE (E)	346	4	378407 411651
12	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 37.2 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A8NE (S)	384	4	378088 411142
13	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 50.3 Watercourse Level: Not Supplied Primacy: 1 Permanent: True Catchment Name: Mersey	A8NE (S)	417	4	378087 411108
14	**OS Water Network Lines** Watercourse Name: Walshaw Brook Watercourse Form: Inland river Watercourse Length: 274.7 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A18SW (NW)	424	4	377902 411907
15	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 58.4 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A18SW (NW)	428	4	377918 411919
16	**OS Water Network Lines** Watercourse Name: Walshaw Brook Watercourse Form: Inland river Watercourse Length: 223.0 Watercourse Level: Not Supplied Primacy: 1 Permanent: True Catchment Name: Mersey	A12NE (NW)	444	4	377718 411773
17	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 25.8 Watercourse Level: Underground Primacy: 1 Permanent: True Catchment Name: Mersey	A12NE (NW)	444	4	377718 411773
18	**OS Water Network Lines** Watercourse Name: Elton Brook Watercourse Form: Inland river Watercourse Length: 558.9 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A8NE (S)	449	4	378134 411080

OS Water Network Data

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
19	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Lake Watercourse Length: 60.7 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A8NW (S)	455	4	378003 411078
20	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 59.2 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A8NW (S)	458	4	378059 411069
21	**OS Water Network Lines** Watercourse Name: Elton Brook Watercourse Form: Inland river Watercourse Length: 25.8 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A8NW (S)	458	4	378059 411069
22	**OS Water Network Lines** Watercourse Name: Elton Brook Watercourse Form: Inland river Watercourse Length: 4.0 Watercourse Level: Not Supplied Primacy: 1 Permanent: True Catchment Name: Mersey	A8NW (S)	467	4	378083 411059
23	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 250.6 Watercourse Level: Underground Primacy: 1 Permanent: True Catchment Name: Mersey	A12NE (NW)	468	4	377693 411780
24	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 244.7 Watercourse Level: Underground Primacy: 1 Permanent: True Catchment Name: Mersey	A12NE (NW)	468	4	377693 411780
25	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 72.0 Watercourse Level: Not Supplied Primacy: 1 Permanent: True Catchment Name: Mersey	A18SW (N)	472	4	377929 411970
26	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 9.1 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A8NW (S)	503	4	378034 411026
27	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 14.6 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A8NW (S)	509	4	378016 411021

OS Water Network Data

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
28	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 41.3 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A8NW (S)	511	4	378037 411017
29	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 16.0 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A8NW (S)	511	4	378003 411021
30	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 84.3 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A8NW (S)	525	4	377997 411009
31	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 149.8 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A18SW (N)	534	4	377947 412040
32	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 2.7 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A8NW (S)	539	4	377913 411015
33	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 7.4 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A8NW (S)	539	4	377913 411015
34	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 377.9 Watercourse Level: Not Supplied Primacy: 1 Permanent: True Catchment Name: Mersey	A8NW (S)	542	4	377906 411015
35	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 116.6 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A12NE (W)	603	4	377508 411697
36	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Lake Watercourse Length: 144.2 Watercourse Level: Not Supplied Primacy: 1 Permanent: True Catchment Name: Mersey	A9NW (SE)	655	4	378487 411008

OS Water Network Data

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
37	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 24.8 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A18SE (N)	661	4	378157 412182
38	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 855.2 Watercourse Level: Not Supplied Primacy: 1 Permanent: True Catchment Name: Mersey	A18SE (N)	661	4	378157 412182
39	**OS Water Network Lines** Watercourse Name: Walshaw Brook Watercourse Form: Inland river Watercourse Length: 8.8 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A14NW (E)	661	4	378741 411604
40	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 37.7 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A18SE (N)	663	4	378125 412187
41	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 56.7 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A18SE (N)	668	4	378096 412193
42	**OS Water Network Lines** Watercourse Name: Walshaw Brook Watercourse Form: Inland river Watercourse Length: 6.9 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A14NW (E)	670	4	378750 411604
43	**OS Water Network Lines** Watercourse Name: Walshaw Brook Watercourse Form: Inland river Watercourse Length: 39.2 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A14NW (E)	677	4	378757 411604
44	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 10.8 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A18NW (N)	688	4	378044 412211
45	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 386.6 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A18NW (N)	695	4	378036 412218

OS Water Network Data

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
46	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 48.6 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A12NW (W)	706	4	377405 411709
47	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 36.8 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A12NE (NW)	706	4	377458 411848
48	**OS Water Network Lines** Watercourse Name: Walshaw Brook Watercourse Form: Inland river Watercourse Length: 167.3 Watercourse Level: Not Supplied Primacy: 1 Permanent: True Catchment Name: Mersey	A14NE (E)	715	4	378796 411600
49	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 178.2 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A17SE (NW)	718	4	377472 411897
50	**OS Water Network Lines** Watercourse Name: Elton Brook Watercourse Form: Inland river Watercourse Length: 3.9 Watercourse Level: Not Supplied Primacy: 1 Permanent: True Catchment Name: Mersey	A9NW (SE)	731	4	378619 411027
51	**OS Water Network Lines** Watercourse Name: Elton Brook Watercourse Form: Inland river Watercourse Length: 4.9 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A9NW (SE)	734	4	378623 411025
52	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Lake Watercourse Length: 9.9 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A12NE (NW)	737	4	377423 411848
53	**OS Water Network Lines** Watercourse Name: Elton Brook Watercourse Form: Inland river Watercourse Length: 206.3 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A9NW (SE)	739	4	378627 411023
54	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 5.0 Watercourse Level: Not Supplied Primacy: 1 Permanent: True Catchment Name: Mersey	A9NW (SE)	739	4	378624 411020

OS Water Network Data

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
55	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 134.7 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A12NE (NW)	747	4	377416 411854
56	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 91.6 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A14SE (SE)	748	4	378775 411236
57	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 8.3 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A12NW (W)	752	4	377361 411722
58	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 42.2 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A12NW (W)	760	4	377352 411723
59	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 11.4 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A12NW (W)	790	4	377319 411714
60	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 32.0 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A12NW (W)	800	4	377310 411720
61	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Reservoir Watercourse Length: 328.3 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A7NE (SW)	806	4	377536 410936
62	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 75.7 Watercourse Level: Not Supplied Primacy: 1 Permanent: True Catchment Name: Mersey	A12NW (W)	828	4	377286 411738
63	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 54.5 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A12NW (W)	828	4	377286 411738

OS Water Network Data

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
64	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 46.5 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A9NW (SE)	855	4	378715 410947
65	**OS Water Network Lines** Watercourse Name: Walshaw Brook Watercourse Form: Inland river Watercourse Length: 34.5 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A14NE (E)	864	4	378949 411531
66	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 111.4 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A12NW (W)	870	4	377254 411779
67	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Lake Watercourse Length: 28.5 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A9NE (SE)	882	4	378764 410962
68	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 675.2 Watercourse Level: Underground Primacy: 1 Permanent: True Catchment Name: Mersey	A14SE (E)	883	4	378968 411502
69	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 56.3 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A9NE (SE)	891	4	378779 410966
70	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 4.1 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A12NW (W)	902	4	377210 411739
71	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 119.6 Watercourse Level: Not Supplied Primacy: 1 Permanent: True Catchment Name: Mersey	A12NW (W)	906	4	377206 411739
72	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 12.4 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A12NW (W)	906	4	377206 411739

OS Water Network Data

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
73	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 217.1 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A12NW (W)	913	4	377197 411732
74	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 144.5 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A12NW (W)	913	4	377197 411732
75	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 123.9 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A18NE (N)	915	4	378343 412402
76	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 6.7 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A9NE (SE)	916	4	378822 410981
77	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 195.7 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A9NE (SE)	922	4	378828 410980
78	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 57.6 Watercourse Level: Not Supplied Primacy: 1 Permanent: True Catchment Name: Mersey	A18NE (N)	925	4	378389 412399
79	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 101.6 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A19NW (NE)	952	4	378465 412398
80	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 67.5 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A12NW (W)	954	4	377173 411803
81	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 17.6 Watercourse Level: Not Supplied Primacy: 1 Permanent: True Catchment Name: Mersey	A17NE (N)	960	4	377734 412418

OS Water Network Data

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
82	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Lake Watercourse Length: 8.8 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A17SW (NW)	963	4	377262 412025
83	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 14.7 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A17SW (NW)	969	4	377261 412033
84	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 233.8 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A17NE (NW)	974	4	377643 412392
85	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Lake Watercourse Length: 74.5 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A19SE (NE)	989	4	378957 411991
86	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Lake Watercourse Length: 5.7 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A19SE (NE)	992	4	378993 411926
87	**OS Water Network Lines** Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 14.9 Watercourse Level: Not Supplied Primacy: 1 Permanent: True Catchment Name: Mersey	A19SE (NE)	996	4	378998 411923
88	**OS Water Network Lines** Watercourse Name: Goit Watercourse Form: Inland river Watercourse Length: 262.5 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Mersey	A19SE (NE)	997	4	378981 411961
89	**OS Water Network Nodes** Hydronode Category: Junction	A13NE (NE)	222	4	378259 411664
90	**OS Water Network Nodes** Hydronode Category: Pseudo	A13NE (NE)	223	4	378254 411671
91	**OS Water Network Nodes** Hydronode Category: Junction	A13NW (N)	267	4	378060 411791
92	**OS Water Network Nodes** Hydronode Category: Junction	A13NE (NE)	289	4	378333 411674
93	**OS Water Network Nodes** Hydronode Category: Source	A13NE (NE)	290	4	378332 411676

OS Water Network Data

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
94	**OS Water Network Nodes** Hydronode Category: Source	A13NE (NE)	299	4	378247 411776
95	**OS Water Network Nodes** Hydronode Category: Outlet	A13NE (N)	309	4	378106 411833
96	**OS Water Network Nodes** Hydronode Category: Pseudo	A13SW (S)	315	4	378008 411220
97	**OS Water Network Nodes** Hydronode Category: Pseudo	A13NE (E)	346	4	378407 411651
98	**OS Water Network Nodes** Hydronode Category: Source	A13SW (SW)	368	4	377762 411351
99	**OS Water Network Nodes** Hydronode Category: Pseudo	A8NE (S)	384	4	378088 411142
100	**OS Water Network Nodes** Hydronode Category: Pseudo	A8NE (S)	417	4	378087 411108
101	**OS Water Network Nodes** Hydronode Category: Junction	A18SW (NW)	428	4	377918 411919
102	**OS Water Network Nodes** Hydronode Category: Junction	A12NE (NW)	444	4	377718 411773
103	**OS Water Network Nodes** Hydronode Category: Source	A8NW (S)	455	4	378003 411078
104	**OS Water Network Nodes** Hydronode Category: Pseudo	A8NW (S)	458	4	378059 411069
105	**OS Water Network Nodes** Hydronode Category: Pseudo	A8NW (S)	467	4	378083 411059
106	**OS Water Network Nodes** Hydronode Category: Junction	A8NE (S)	468	4	378086 411058
107	**OS Water Network Nodes** Hydronode Category: Junction	A12NE (NW)	468	4	377693 411780
108	**OS Water Network Nodes** Hydronode Category: Pseudo	A18SW (N)	472	4	377929 411970
109	**OS Water Network Nodes** Hydronode Category: Pseudo	A8NW (S)	503	4	378034 411026
110	**OS Water Network Nodes** Hydronode Category: Junction	A8NW (S)	511	4	378037 411017
111	**OS Water Network Nodes** Hydronode Category: Source	A8NW (S)	511	4	378017 411020
112	**OS Water Network Nodes** Hydronode Category: Pseudo	A8NW (S)	511	4	378003 411021
113	**OS Water Network Nodes** Hydronode Category: Junction	A8NW (S)	525	4	377997 411009

OS Water Network Data

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
114	**OS Water Network Nodes** Hydronode Category: Pseudo	A18SW (N)	534	4	377947 412040
115	**OS Water Network Nodes** Hydronode Category: Junction	A8NW (S)	539	4	377913 411015
116	**OS Water Network Nodes** Hydronode Category: Source	A8NW (S)	542	4	377913 411012
117	**OS Water Network Nodes** Hydronode Category: Pseudo	A8NW (S)	542	4	377906 411015
118	**OS Water Network Nodes** Hydronode Category: Pseudo	A12NE (W)	603	4	377508 411697
119	**OS Water Network Nodes** Hydronode Category: Source	A9NW (SE)	655	4	378487 411008
120	**OS Water Network Nodes** Hydronode Category: Pseudo	A14NW (E)	661	4	378741 411604
121	**OS Water Network Nodes** Hydronode Category: Pseudo	A18SE (N)	661	4	378157 412182
122	**OS Water Network Nodes** Hydronode Category: Pseudo	A18SE (N)	663	4	378133 412186
123	**OS Water Network Nodes** Hydronode Category: Source	A18SW (N)	666	4	377874 412156
124	**OS Water Network Nodes** Hydronode Category: Pseudo	A18SE (N)	668	4	378096 412193
125	**OS Water Network Nodes** Hydronode Category: Pseudo	A14NW (E)	670	4	378750 411604
126	**OS Water Network Nodes** Hydronode Category: Pseudo	A14NW (E)	677	4	378757 411604
127	**OS Water Network Nodes** Hydronode Category: Pseudo	A18NW (N)	688	4	378044 412211
128	**OS Water Network Nodes** Hydronode Category: Pseudo	A18NW (N)	695	4	378036 412218
129	**OS Water Network Nodes** Hydronode Category: Pseudo	A12NW (W)	706	4	377405 411709
130	**OS Water Network Nodes** Hydronode Category: Pseudo	A12NE (NW)	706	4	377458 411848
131	**OS Water Network Nodes** Hydronode Category: Pseudo	A14NE (E)	715	4	378796 411600
132	**OS Water Network Nodes** Hydronode Category: Pseudo	A17SE (NW)	718	4	377472 411897
133	**OS Water Network Nodes** Hydronode Category: Pseudo	A9NW (SE)	731	4	378619 411027

OS Water Network Data

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
134	**OS Water Network Nodes** Hydronode Category: Pseudo	A9NW (SE)	734	4	378623 411025
135	**OS Water Network Nodes** Hydronode Category: Pseudo	A12NE (NW)	737	4	377423 411848
136	**OS Water Network Nodes** Hydronode Category: Pseudo	A9NW (SE)	739	4	378624 411020
137	**OS Water Network Nodes** Hydronode Category: Junction	A9NW (SE)	739	4	378627 411023
138	**OS Water Network Nodes** Hydronode Category: Pseudo	A12NE (NW)	747	4	377416 411854
139	**OS Water Network Nodes** Hydronode Category: Source	A14SE (SE)	748	4	378775 411236
140	**OS Water Network Nodes** Hydronode Category: Pseudo	A12NW (W)	752	4	377361 411722
141	**OS Water Network Nodes** Hydronode Category: Pseudo	A12NW (W)	760	4	377352 411723
142	**OS Water Network Nodes** Hydronode Category: Pseudo	A12NW (W)	790	4	377319 411714
143	**OS Water Network Nodes** Hydronode Category: Pseudo	A12NW (W)	800	4	377310 411720
144	**OS Water Network Nodes** Hydronode Category: Pseudo	A7NE (SW)	806	4	377536 410936
145	**OS Water Network Nodes** Hydronode Category: Outlet	A14SE (E)	811	4	378842 411235
146	**OS Water Network Nodes** Hydronode Category: Junction	A12NW (W)	828	4	377286 411738
147	**OS Water Network Nodes** Hydronode Category: Source	A9NW (SE)	855	4	378715 410947
148	**OS Water Network Nodes** Hydronode Category: Pseudo	A14NE (E)	864	4	378949 411531
149	**OS Water Network Nodes** Hydronode Category: Pseudo	A12NW (W)	870	4	377254 411779
150	**OS Water Network Nodes** Hydronode Category: Source	A17SW (NW)	877	4	377311 411936
151	**OS Water Network Nodes** Hydronode Category: Pseudo	A14SE (E)	883	4	378968 411502
152	**OS Water Network Nodes** Hydronode Category: Pseudo	A9NW (SE)	885	4	378758 410951
153	**OS Water Network Nodes** Hydronode Category: Pseudo	A9NE (SE)	891	4	378779 410966

OS Water Network Data

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
154	**OS Water Network Nodes** Hydronode Category: Source	A17SW (NW)	895	4	377323 411992
155	**OS Water Network Nodes** Hydronode Category: Pseudo	A12NW (W)	902	4	377210 411739
156	**OS Water Network Nodes** Hydronode Category: Junction	A12NW (W)	906	4	377206 411739
157	**OS Water Network Nodes** Hydronode Category: Junction	A12NW (W)	913	4	377197 411732
158	**OS Water Network Nodes** Hydronode Category: Pseudo	A9NE (SE)	916	4	378822 410981
159	**OS Water Network Nodes** Hydronode Category: Junction	A9NE (SE)	922	4	378828 410980
160	**OS Water Network Nodes** Hydronode Category: Pseudo	A18NE (N)	925	4	378389 412399
161	**OS Water Network Nodes** Hydronode Category: Source	A18NE (N)	938	4	378281 412442
162	**OS Water Network Nodes** Hydronode Category: Pseudo	A19NW (N)	952	4	378446 412406
163	**OS Water Network Nodes** Hydronode Category: Pseudo	A12NW (W)	954	4	377173 411803
164	**OS Water Network Nodes** Hydronode Category: Pseudo	A17NE (N)	960	4	377734 412418
165	**OS Water Network Nodes** Hydronode Category: Outlet	A17SW (NW)	963	4	377262 412025
166	**OS Water Network Nodes** Hydronode Category: Pseudo	A17SW (NW)	969	4	377261 412033
167	**OS Water Network Nodes** Hydronode Category: Pseudo	A17NE (N)	975	4	377721 412430
168	**OS Water Network Nodes** Hydronode Category: Source	A17SW (NW)	982	4	377249 412039
169	**OS Water Network Nodes** Hydronode Category: Source	A19SE (NE)	989	4	378957 411991
170	**OS Water Network Nodes** Hydronode Category: Pseudo	A19SE (NE)	992	4	378993 411926
171	**OS Water Network Nodes** Hydronode Category: Pseudo	A19SE (NE)	996	4	378998 411923

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Risk of Flooding from Rivers and Sea (RoFRS) Flood Risk Assessment: Low - Less than 1 in 100 (1%) but greater than or equal to 1 in 1,000 (0.1%) chance in any given year Suitability Scale: County to Town Source: Environment Agency, Head Office	A19SE (NE)	966	1	378955 411945
	Risk of Flooding from Rivers and Sea (RoFRS) Flood Risk Assessment: Low - Less than 1 in 100 (1%) but greater than or equal to 1 in 1,000 (0.1%) chance in any given year Suitability Scale: National to County Source: Environment Agency, Head Office	A19SE (NE)	966	1	378953 411950
	Risk of Flooding from Rivers and Sea (RoFRS) Flood Risk Assessment: Low - Less than 1 in 100 (1%) but greater than or equal to 1 in 1,000 (0.1%) chance in any given year Suitability Scale: County to Town Source: Environment Agency, Head Office	A14NE (E)	969	1	379003 411834
	Risk of Flooding from Rivers and Sea (RoFRS) Flood Risk Assessment: Medium - Less than 1 in 30 (3.3%) but greater than or equal to 1 in 100 (1%) chance in any given year Suitability Scale: National to County Source: Environment Agency, Head Office	A19SE (NE)	993	1	378957 412000
	Risk of Flooding from Rivers and Sea (RoFRS) Flood Risk Assessment: Medium - Less than 1 in 30 (3.3%) but greater than or equal to 1 in 100 (1%) chance in any given year Suitability Scale: National to County Source: Environment Agency, Head Office	A19SE (NE)	994	1	379000 411914
	Risk of Flooding from Rivers and Sea (RoFRS) Flood Risk Assessment: High - Greater than or equal to 1 in 30 (3.3%) chance in any given year Suitability Scale: County to Town Source: Environment Agency, Head Office	A19SE (NE)	995	1	378976 411967

Flood Insurance Risk Data

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Postcode Sector Flood Insurance Claim Ratings Insurance Rating: Low Flood Insurance Claim Rating Postcode Sector: BL8 1	A13NE (NE)	0	2	378086 411525

EA / NRW / CEH Flood Data	Version	Update Cycle
Extreme Flooding from Rivers or Sea without Defences Environment Agency - Head Office	February 2018	Quarterly
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	February 2018	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	February 2018	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	February 2018	Quarterly
Flood Defences Environment Agency - Head Office	February 2018	Quarterly
EA / NRW Surface Water Flood Data	**Version**	**Update Cycle**
Surface Water 1 in 30 year Flood Depth Environment Agency - Head Office	October 2013	As notified
Surface Water 1 in 100 year Flood Depth Environment Agency - Head Office	October 2013	As notified
Surface Water 1 in 1000 year Flood Depth Environment Agency - Head Office	October 2013	As notified
Surface Water 1 in 30 year Flood Velocity Environment Agency - Head Office	October 2013	As notified
Surface Water 1 in 100 year Flood Velocity Environment Agency - Head Office	October 2013	As notified
Surface Water 1 in 1000 year Flood Velocity Environment Agency - Head Office	October 2013	As notified
Surface Water 1 in 30 year Flood Flow Direction 25m Environment Agency - Head Office	October 2013	As notified
Surface Water 1 in 100 year Flood Flow Direction 25m Environment Agency - Head Office	October 2013	As notified
Surface Water 1 in 1000 year Flood Flow Direction 25m Environment Agency - Head Office	October 2013	As notified
Surface Water 1 in 30 year Flood Hazard Environment Agency - Head Office	October 2013	As notified
Surface Water 1 in 100 year Flood Hazard Environment Agency - Head Office	October 2013	As notified
Surface Water 1 in 1000 year Flood Hazard Environment Agency - Head Office	October 2013	As notified
Surface Water Suitability Environment Agency - Head Office	October 2013	As notified

JBA Flood Data	Version	Update Cycle
JBA 75 Year Return (undefended) - Pluvial JBA Risk Management Limited	December 2017	Annually
JBA 75 Year Return (undefended) - Fluvial JBA Risk Management Limited	December 2017	Annually
JBA 75 Year Return (undefended) - Coastal JBA Risk Management Limited	December 2017	Annually
JBA 100 Year Return (undefended) - Fluvial JBA Risk Management Limited	December 2017	Annually
JBA 100 Year Return (undefended) - Coastal JBA Risk Management Limited	December 2017	Annually
JBA 200 Year Return (undefended) - Pluvial JBA Risk Management Limited	December 2017	Annually
JBA 200 Year Return (undefended) - Fluvial JBA Risk Management Limited	December 2017	Annually
JBA 200 Year Return (undefended) - Coastal JBA Risk Management Limited	December 2017	Annually
JBA 1000 Year Return (undefended) - Pluvial JBA Risk Management Limited	December 2017	Annually
JBA 1000 Year Return (undefended) - Fluvial JBA Risk Management Limited	December 2017	Annually
JBA 1000 Year Return (undefended) - Coastal JBA Risk Management Limited	December 2017	Annually
JBA Canal Failure JBA Risk Management Limited	October 2017	Annually
JBA Dam Break JBA Risk Management Limited	October 2017	Annually
BGS Flood Data	**Version**	**Update Cycle**
BGS Geological Indicators of Flooding British Geological Survey - National Geoscience Information Service	February 2011	As notified
BGS Groundwater Flooding Susceptibility British Geological Survey - National Geoscience Information Service	May 2013	As notified
GeoSmart Information Groundwater Flooding Data	**Version**	**Update Cycle**
GeoSmart Information Groundwater Flood Risk GeoSmart Information Ltd	November 2017	Bi-Annually
OS Water Network Data	**Version**	**Update Cycle**
OS Water Network Lines Ordnance Survey	January 2018	Quarterly
OS Water Network Nodes Ordnance Survey	January 2018	Quarterly
EA/NRW Historic Flood Events Data	**Version**	**Update Cycle**
Historic Flood Events Environment Agency - Head Office	November 2017	Quarterly
Historical Flood Liabilities Landmark Information Group Limited	December 1999	Not Applicable

EA/NRW Risk of Flooding from Rivers and Sea (RoFRS)	Version	Update Cycle
RoFRS - Risk of Flooding from Rivers and Sea Environment Agency - Head Office	March 2017	Annually
Flood Insurance Risk Data	**Version**	**Update Cycle**
Postcode Sector Flood Insurance Claim Ratings Crawford and Company	January 2018	Quarterly

Data Suppliers

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	Map data
Environment Agency	Environment Agency
Natural Resources Wales	Cyfoeth Naturiol Cymru Natural Resources Wales
Centre for Ecology and Hydrology	CEH Centre for Ecology & Hydrology NATURAL ENVIRONMENT RESEARCH COUNCIL
British Geological Survey	BGS 1835 British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL
GeoSmart Information	GeoSmart Information
JBA Risk Management	JBA risk management

Useful Contacts

Contact	Name and Address	Contact Details
1	**Environment Agency - National Customer Contact Centre (NCCC)** PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 03708 506 506 Email: enquiries@environment-agency.gov.uk
2	**Landmark Information Group Limited** Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9966 Fax: 0844 844 9951 Email: helpdesk@landmark.co.uk Website: www.landmark.co.uk
3	**British Geological Survey - Enquiry Service** British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
4	**Ordnance Survey** Adanac Drive, Southampton, Hampshire, SO16 0AS	Telephone: 03456 05 05 05 Email: customerservices@ordnancesurvey.co.uk Website: www.ordnancesurvey.gov.uk
5	**Environment Agency - Head Office** Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, Avon, BS32 4UD	Telephone: 01454 624400 Fax: 01454 624409

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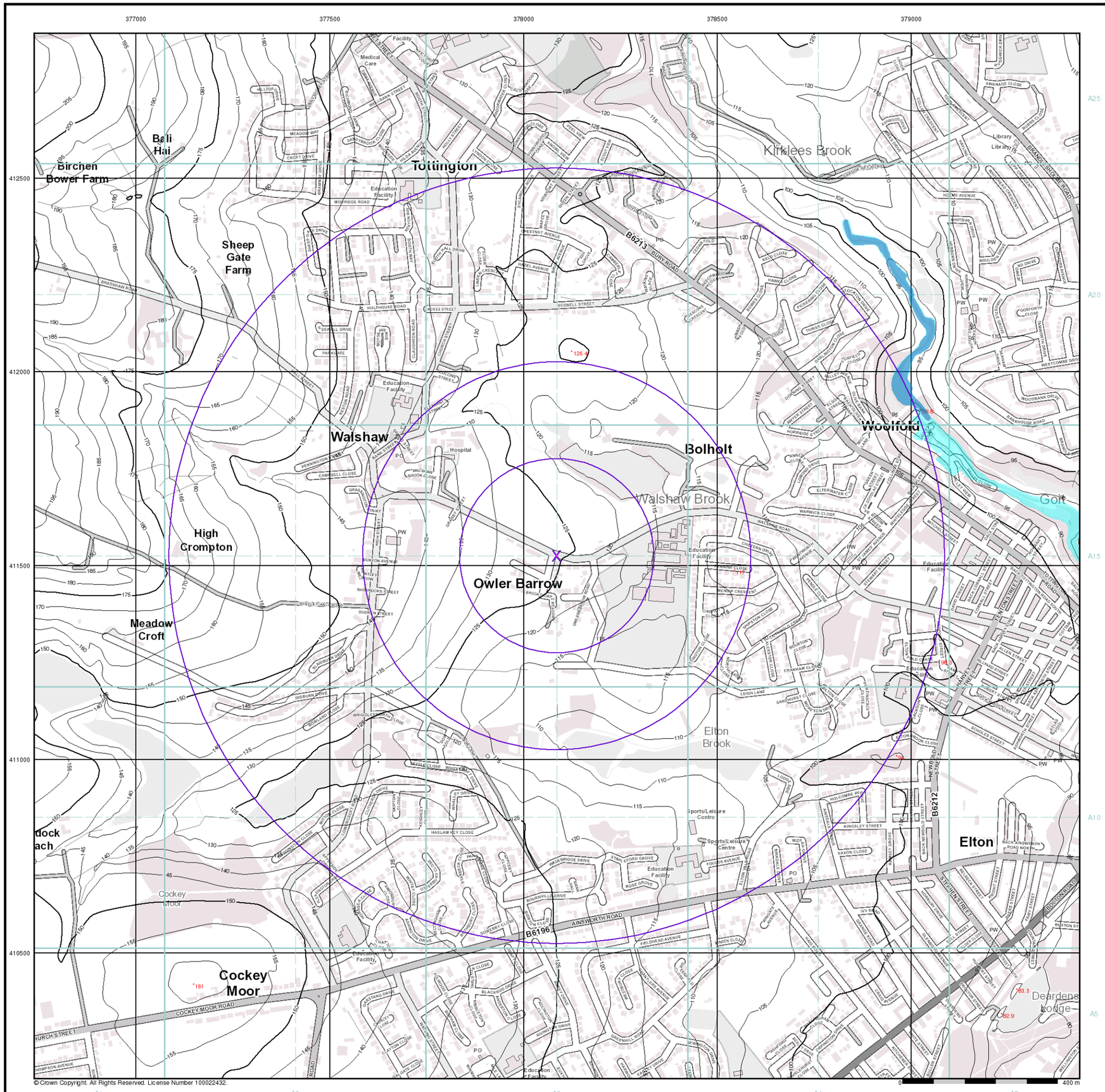

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EA/NRW Flood Data Map (1:10,000)

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

Flood Data

- Extreme Flooding from Rivers or Sea without Defences (Zone 2)
- Flooding from Rivers or Sea without Defences (Zone 3)
- Area Benefiting from Flood Defence
- Flood Water Storage Areas
- Flood Defence

Contours (height in metres)

Standard Contour 105

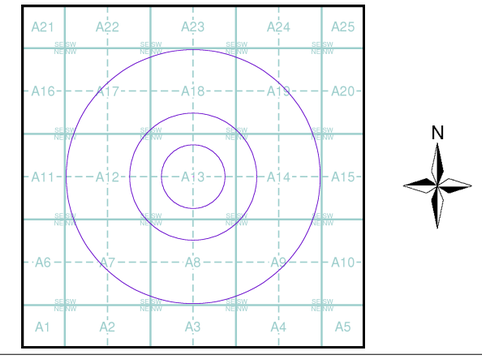
Master Contour 100 95

Spot Height *167.8

MLW Mean Low Water

MHW Mean High Water

EA/NRW Flood Data Map - Slice A



Order Details

Order Number:	163324975_1_1
Customer Ref:	180418
National Grid Reference:	378090, 411530
Slice:	A
Site Area (Ha):	0.01
Search Buffer (m):	1000

Site Details

Walshaw Road, Bury, BL8 3AA

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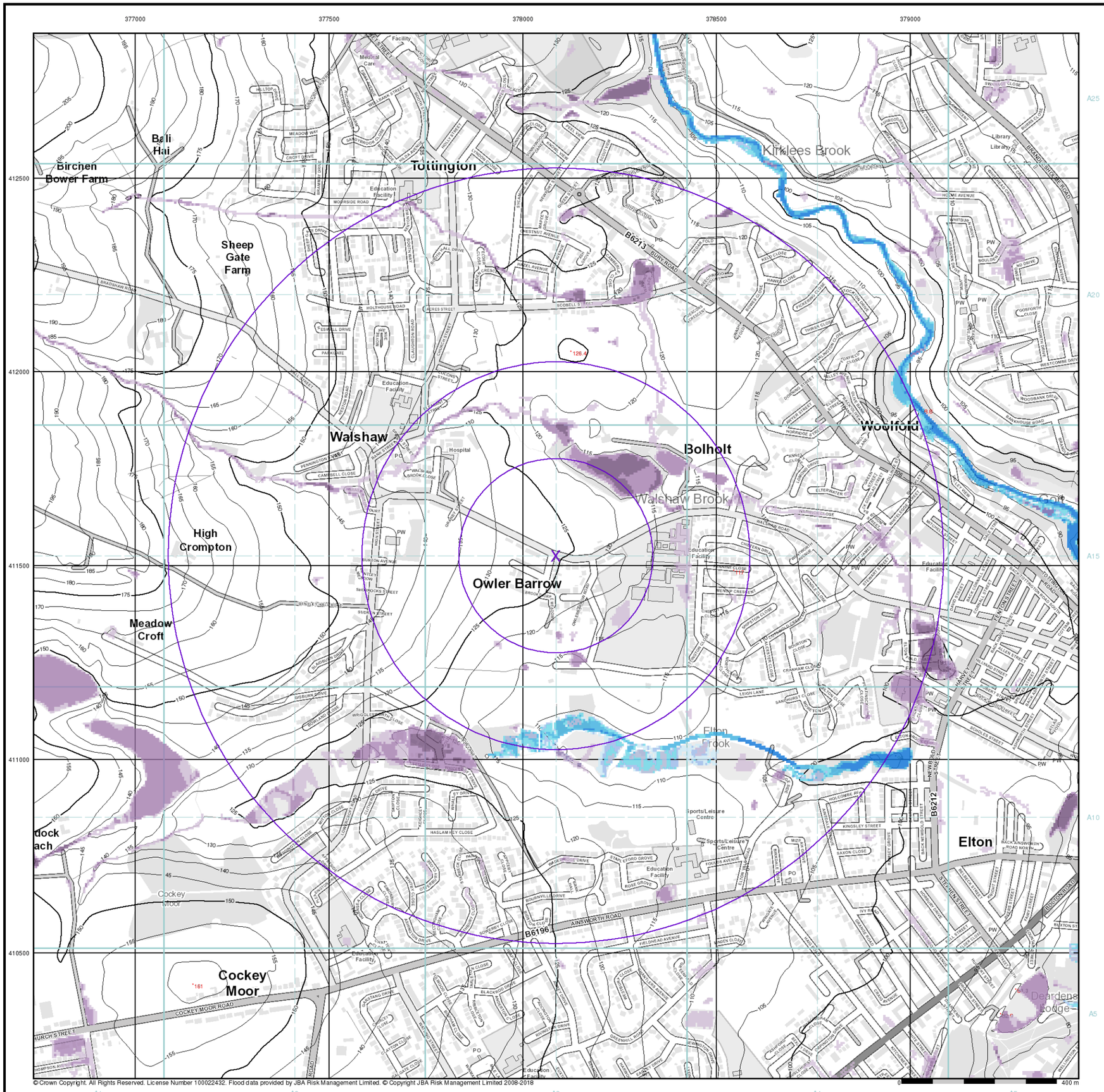
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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JBA 75 Year Return Flood Map (Undefended) (1:10,000)

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

Modelled Flood Depth

Pluvial Depth	Fluvial Depth	Coastal Depth
0.1m	0.01m - 0.05m	0.01m - 0.05m
0.1m - 0.3m	0.05m - 0.1m	0.05m - 0.1m
0.3m - 1m	0.1m - 0.3m	0.1m - 0.3m
>1m	0.3m - 1m	0.3m - 1m
	>1m	>1m

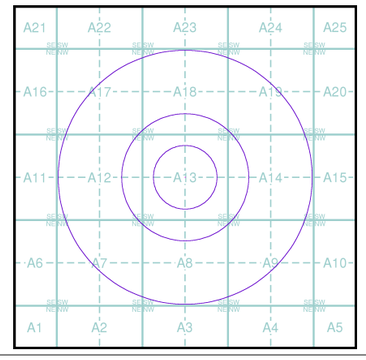
Contours (height in metres)

Standard Contour 105 100 95 — MLW Mean Low Water

Master Contour — MHW Mean High Water

Spot Height 157.8

JBA 75 Year Return Flood Map (Undefended) - Slice A



Order Details

Order Number:	163324975_1_1
Customer Ref:	180418
National Grid Reference:	378090, 411530
Slice:	A
Site Area (Ha):	0.01
Search Buffer (m):	1000

Site Details

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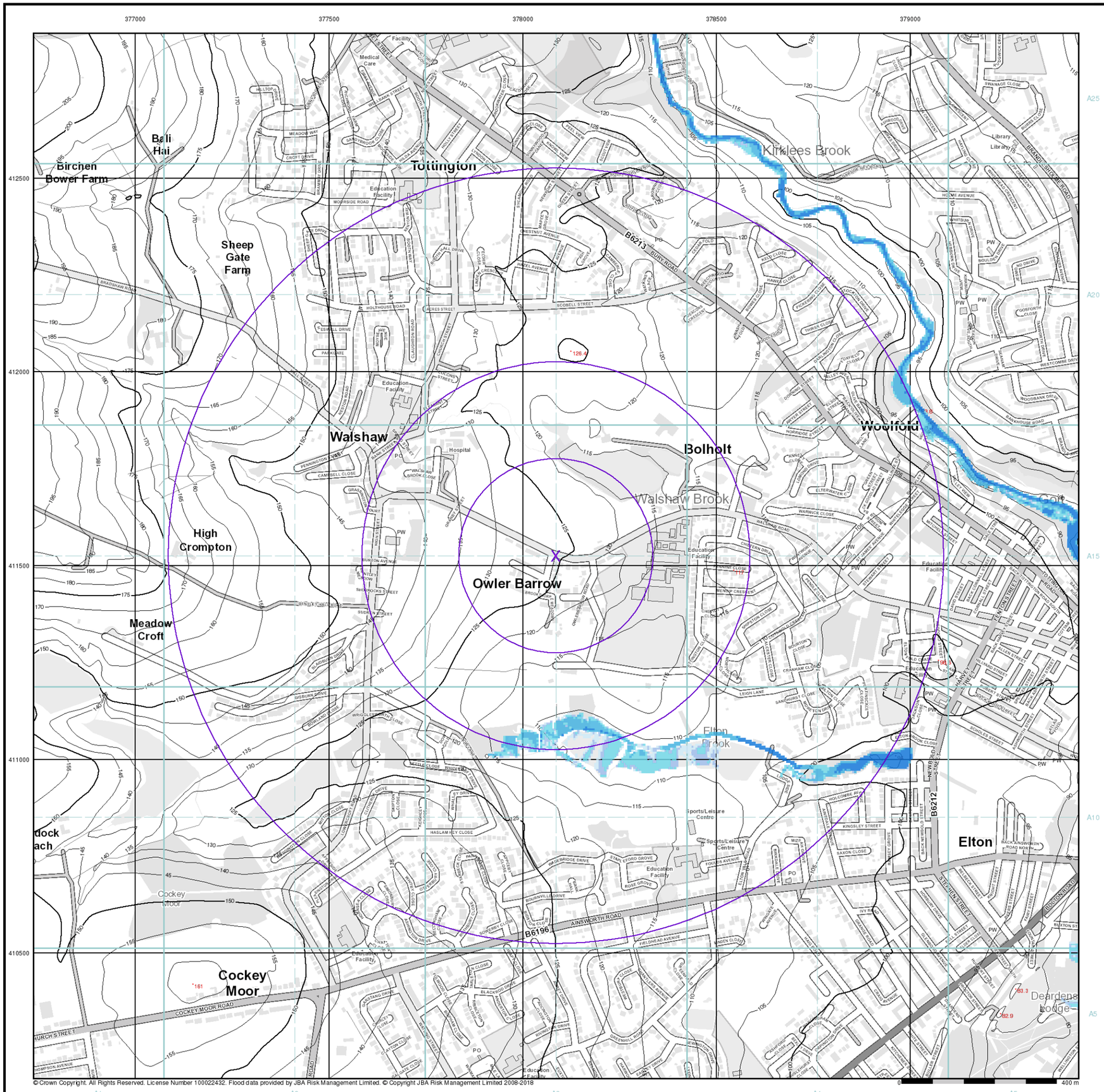

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JBA 100 Year Return Flood Map (Undefended) (1:10,000)

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

Modelled Flood Depth

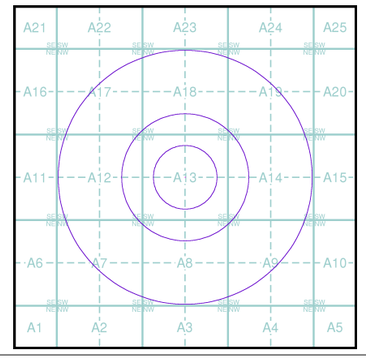
Fluvial Depth	Coastal Depth
0.01m - 0.05m	0.01m - 0.05m
0.05m - 0.1m	0.05m - 0.1m
0.1m - 0.3m	0.1m - 0.3m
0.3m - 1m	0.3m - 1m
>1m	>1m

Contours (height in metres)

Standard Contour 105
Master Contour 100 95
Spot Height 167.8

MLW Mean Low Water
MHW Mean High Water

JBA 100 Year Return Flood Map (Undefended) - Slice A



Order Details

Order Number:	163324975_1_1
Customer Ref:	180418
National Grid Reference:	378090, 411530
Slice:	A
Site Area (Ha):	0.01
Search Buffer (m):	1000

Site Details

Walshaw Road, Bury, BL8 3AA

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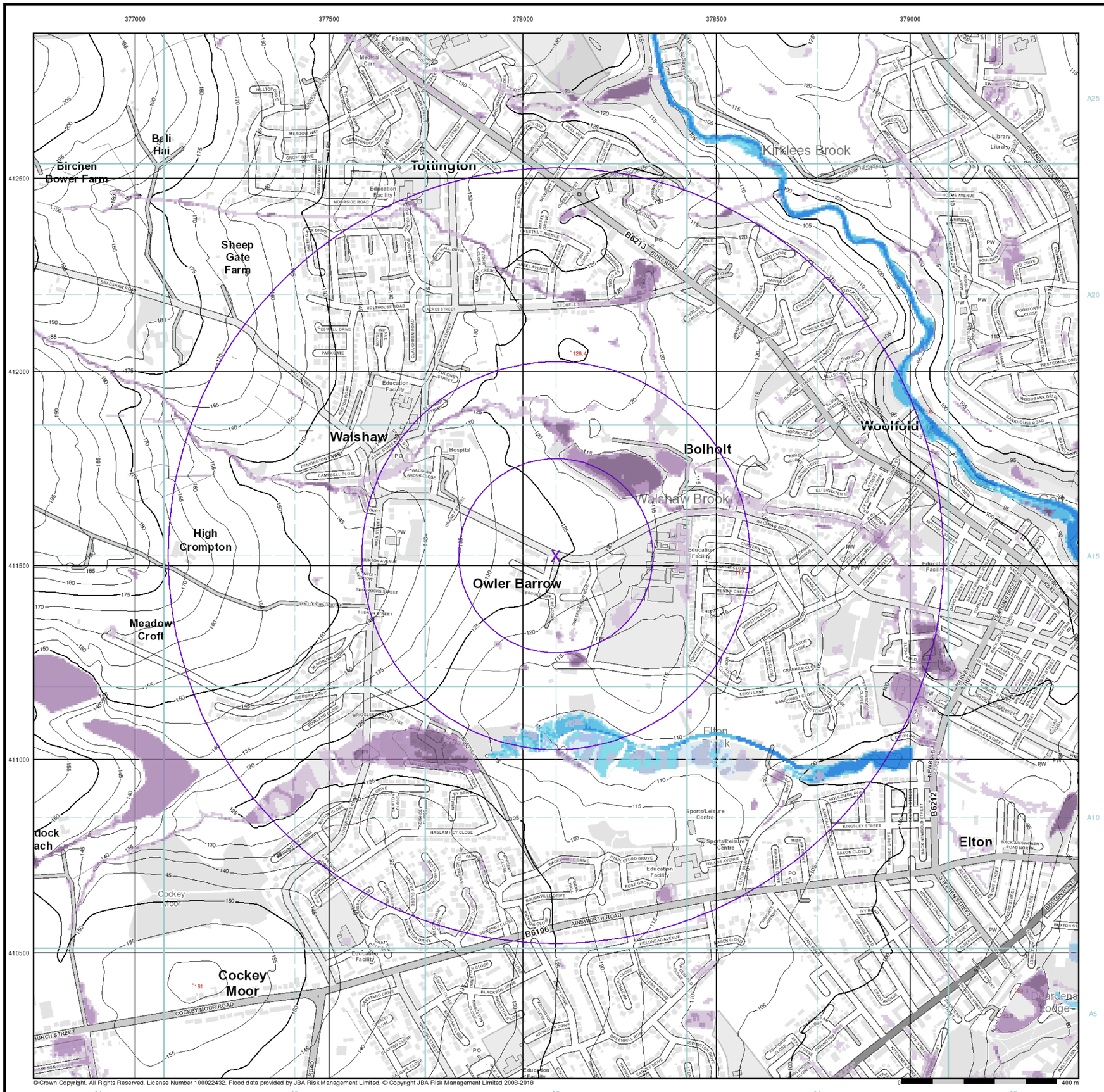

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JBA 200 Year Return Flood Map (Undefended) (1:10,000)

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

Modelled Flood Depth

Pluvial Depth	Fluvial Depth	Coastal Depth
0.1m	0.01m - 0.05m	0.01m - 0.05m
0.1m - 0.3m	0.05m - 0.1m	0.05m - 0.1m
0.3m - 1m	0.1m - 0.3m	0.1m - 0.3m
>1m	0.3m - 1m	0.3m - 1m
	>1m	>1m

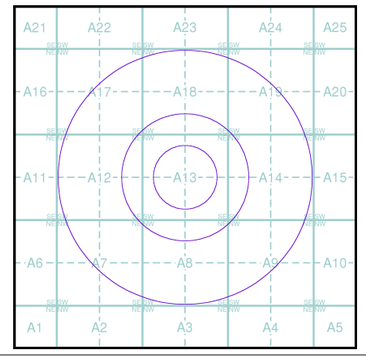
Contours (height in metres)

Standard Contour 105 100 95 — MLW Mean Low Water

Master Contour — MHW Mean High Water

Spot Height 157.8

JBA 200 Year Return Flood Map (Undefended) - Slice A



Order Details

Order Number:	163324975_1_1
Customer Ref:	180418
National Grid Reference:	378090, 411530
Slice:	A
Site Area (Ha):	0.01
Search Buffer (m):	1000

Site Details

Walshaw Road, Bury, BL8 3AA

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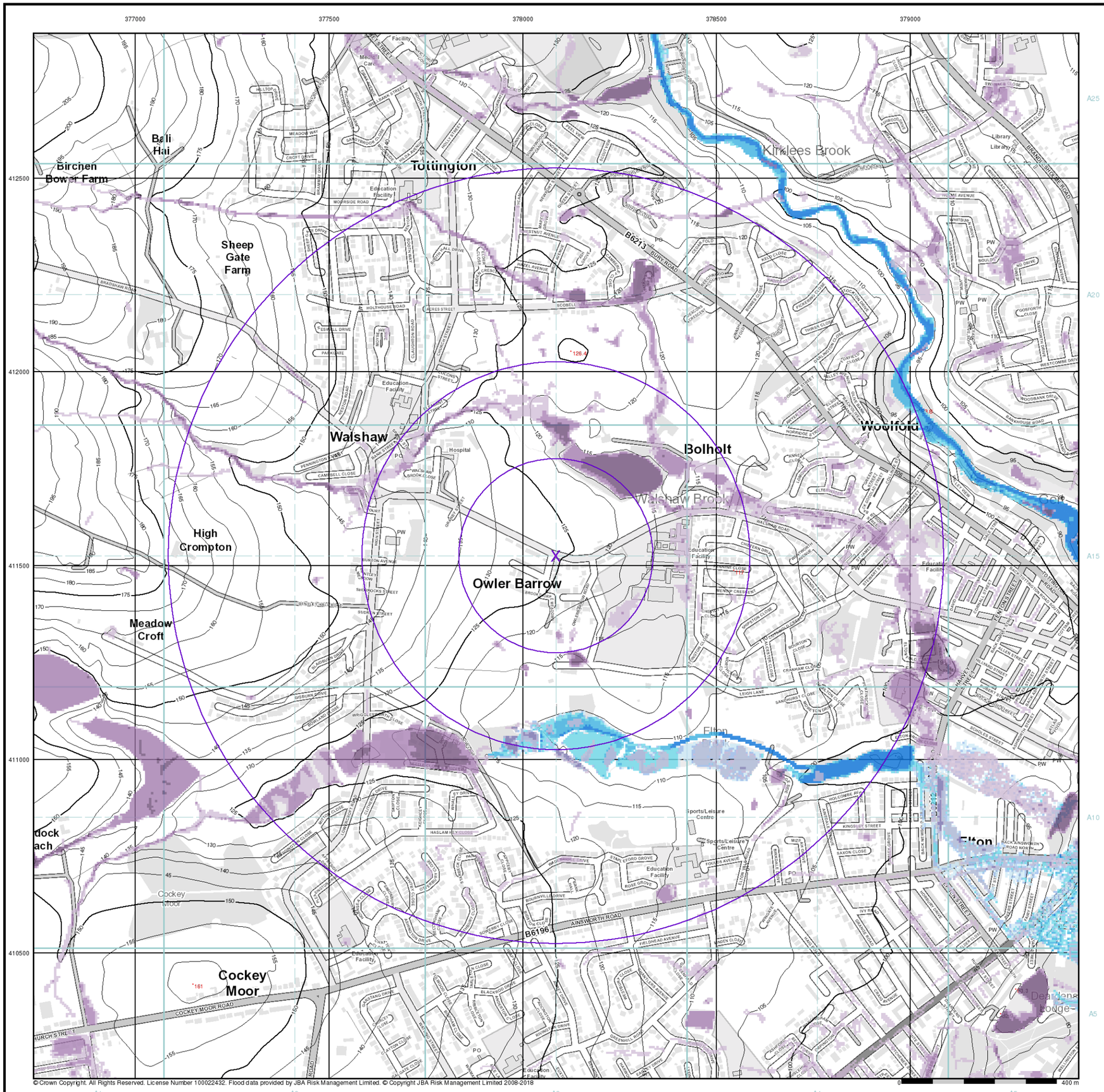

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JBA 1000 Year Return Flood Map (Undefended) (1:10,000)

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

Modelled Flood Depth

Pluvial Depth	Fluvial Depth	Coastal Depth
0.1m	0.01m - 0.05m	0.01m - 0.05m
0.1m - 0.3m	0.05m - 0.1m	0.05m - 0.1m
0.3m - 1m	0.1m - 0.3m	0.1m - 0.3m
>1m	0.3m - 1m	0.3m - 1m
	>1m	>1m

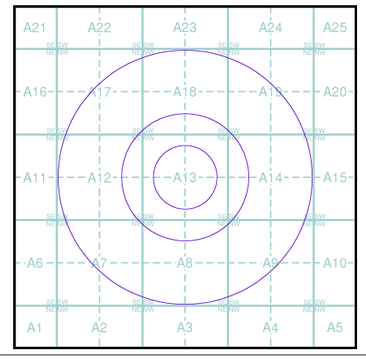
Contours (height in metres)

Standard Contour 105 100 95 — MLW Mean Low Water

Master Contour — MHW Mean High Water

Spot Height 157.8

JBA 1000 Year Return Flood Map (Undefended) - Slice A



Order Details

Order Number:	163324975_1_1
Customer Ref:	180418
National Grid Reference:	378090, 411530
Slice:	A
Site Area (Ha):	0.01
Search Buffer (m):	1000

Site Details

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JBA Canal Failure Map (1:10,000)

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

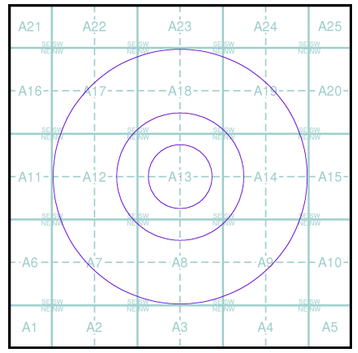
Flood Data

- Canal Failure
- Coverage

Contours (height in metres)

- Standard Contour
- Master Contour
- Spot Height
- MLW — Mean Low Water
- MHW — Mean High Water

JBA Canal Failure Flood Map - Slice A



Order Details

Order Number:	163324975_1_1
Customer Ref:	180418
National Grid Reference:	378090, 411530
Slice:	A
Site Area (Ha):	0.01
Search Buffer (m):	1000

Site Details

Walshaw Road, Bury, BL8 3AA

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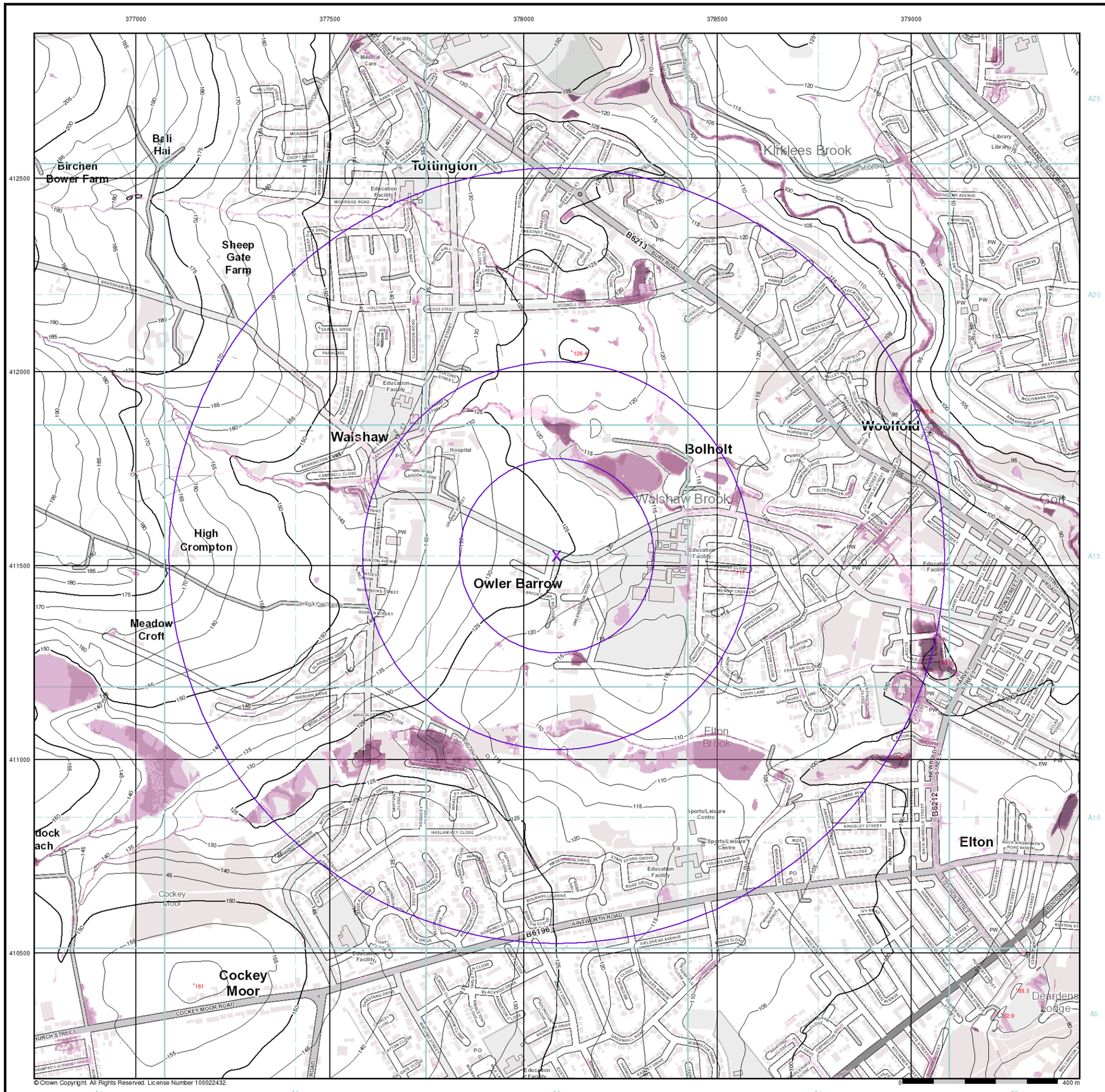

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EA/NRW Surface Water 30 Year Return Depth Map (1:10,000)

General

Specified Site | Specified Buffer(s) | X Bearing Reference Point

Surface Water Depth

- 0 - 0.15m
- 0.15 - 0.30m
- 0.30 - 0.60m
- 0.60 - 0.90m
- 0.90 - 1.20m
- > 1.20m

Contours (height in metres)

Standard Contour | Master Contour | Spot Height *167.8

MLW Mean Low Water

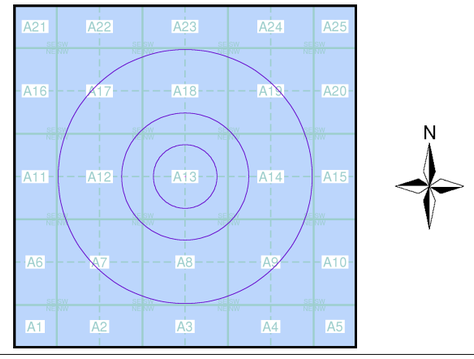
MHW Mean High Water

Suitability

See the suitability map below

- National to county
- County to town
- Town to street
- Street to parcels of land
- Property

EA/NRW Suitability Map - Slice A



Order Details

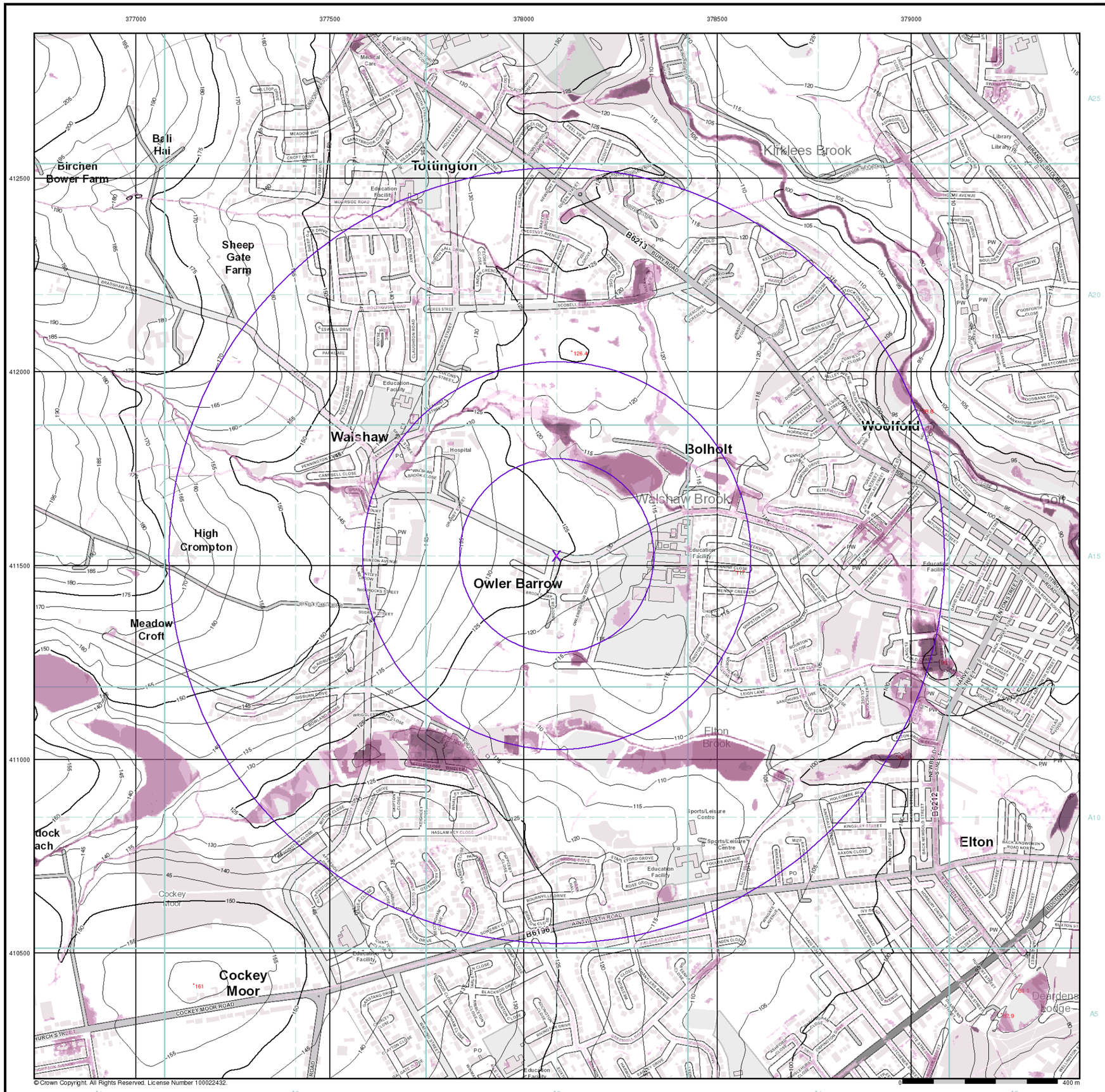
Order Number:	163324975_1_1
Customer Ref:	180418
National Grid Reference:	378090, 411530
Slice:	A
Site Area (Ha):	0.01
Search Buffer (m):	1000

Site Details

Walshaw Road, Bury, BL8 3AA

Landmark INFORMATION GROUP

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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EA/NRW Surface Water 100 Year Return Depth Map

General

Specified Site | Specified Buffer(s) | X Bearing Reference Point

Surface Water Depth

- 0 - 0.15m
- 0.15 - 0.30m
- 0.30 - 0.60m
- 0.60 - 0.90m
- 0.90 - 1.20m
- > 1.20m

Contours (height in metres)

Standard Contour 105 | Master Contour 100 95 | Spot Height *167.8

MLW Mean Low Water

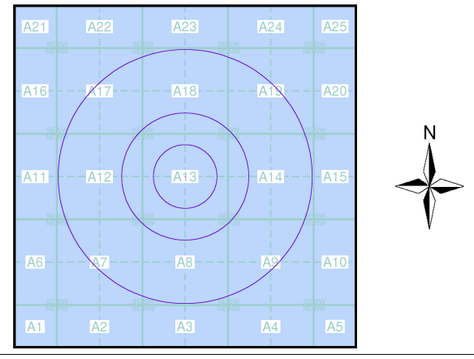
MHW Mean High Water

Suitability

See the suitability map below

- National to county
- County to town
- Town to street
- Street to parcels of land
- Property

EA/NRW Suitability Map - Slice A



Order Details

Order Number:	163324975_1_1
Customer Ref:	180418
National Grid Reference:	378090, 411530
Slice:	A
Site Area (Ha):	0.01
Search Buffer (m):	1000

Site Details

Walshaw Road, Bury, BL8 3AA

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Tel: 0844 844 9952
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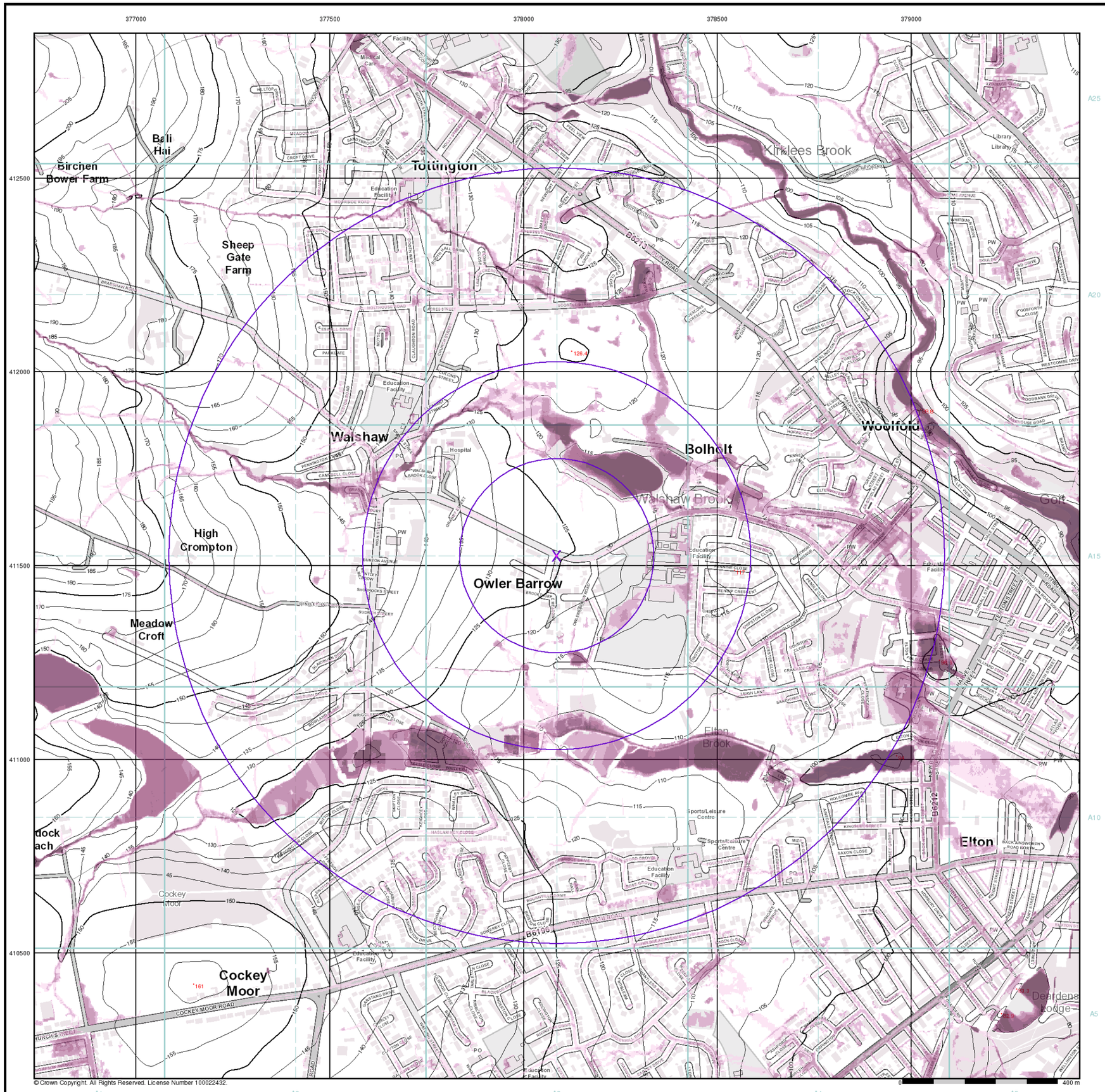

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EA/NRW Surface Water 1000 Year Return Depth Map (1:10,000)

General

Specified Site | Specified Buffer(s) | X Bearing Reference Point

Surface Water Depth

- 0 - 0.15m
- 0.15 - 0.30m
- 0.30 - 0.60m
- 0.60 - 0.90m
- 0.90 - 1.20m
- > 1.20m

Contours (height in metres)

Standard Contour 105 | Master Contour 100 95 | Spot Height *167.8

MLW Mean Low Water

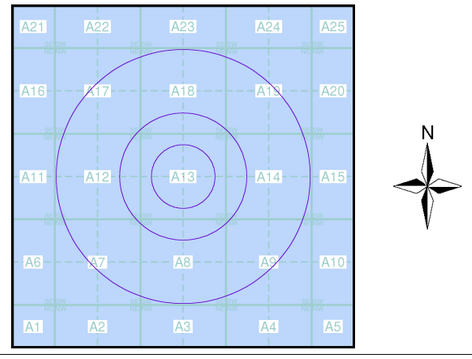
MHW Mean High Water

Suitability

See the suitability map below

- National to county
- County to town
- Town to street
- Street to parcels of land
- Property

EA/NRW Suitability Map - Slice A



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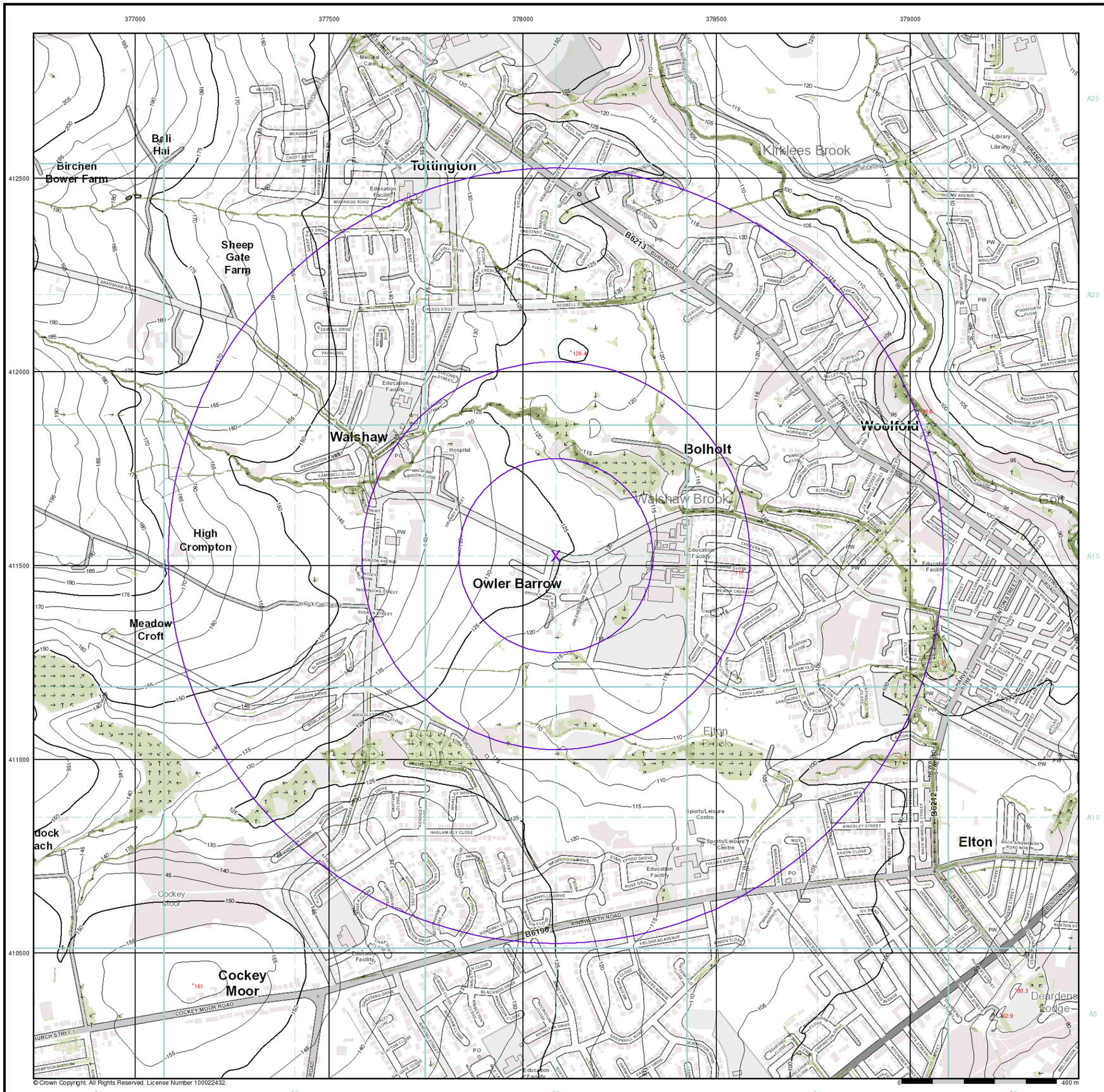

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EA/NRW Surface Water 30 Year Return Velocity and Flow Direction Map (1:10,000)

General

Specified Site | Specified Buffer(s) | X Bearing Reference Point

Surface Water Velocity and Direction

- 0.00 - 0.25m/s
- 0.25 - 0.50m/s
- 0.50 - 1.00m/s
- 1.00 - 2.00m/s
- > 2.00m/s

Flow Direction at maximum velocity

Contours (height in metres)

Standard Contour 105
Master Contour 100
Spot Height *167.8

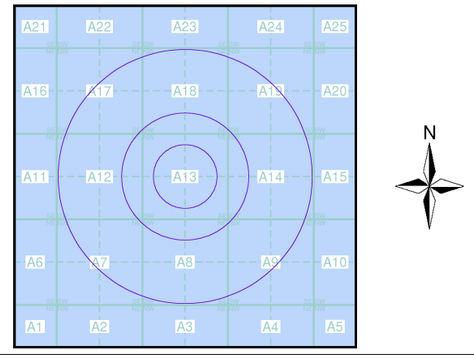
MLW Mean Low Water
MHW Mean High Water

Suitability

See the suitability map below

- National to county
- County to town
- Town to street
- Street to parcels of land
- Property

EA/NRW Suitability Map - Slice A



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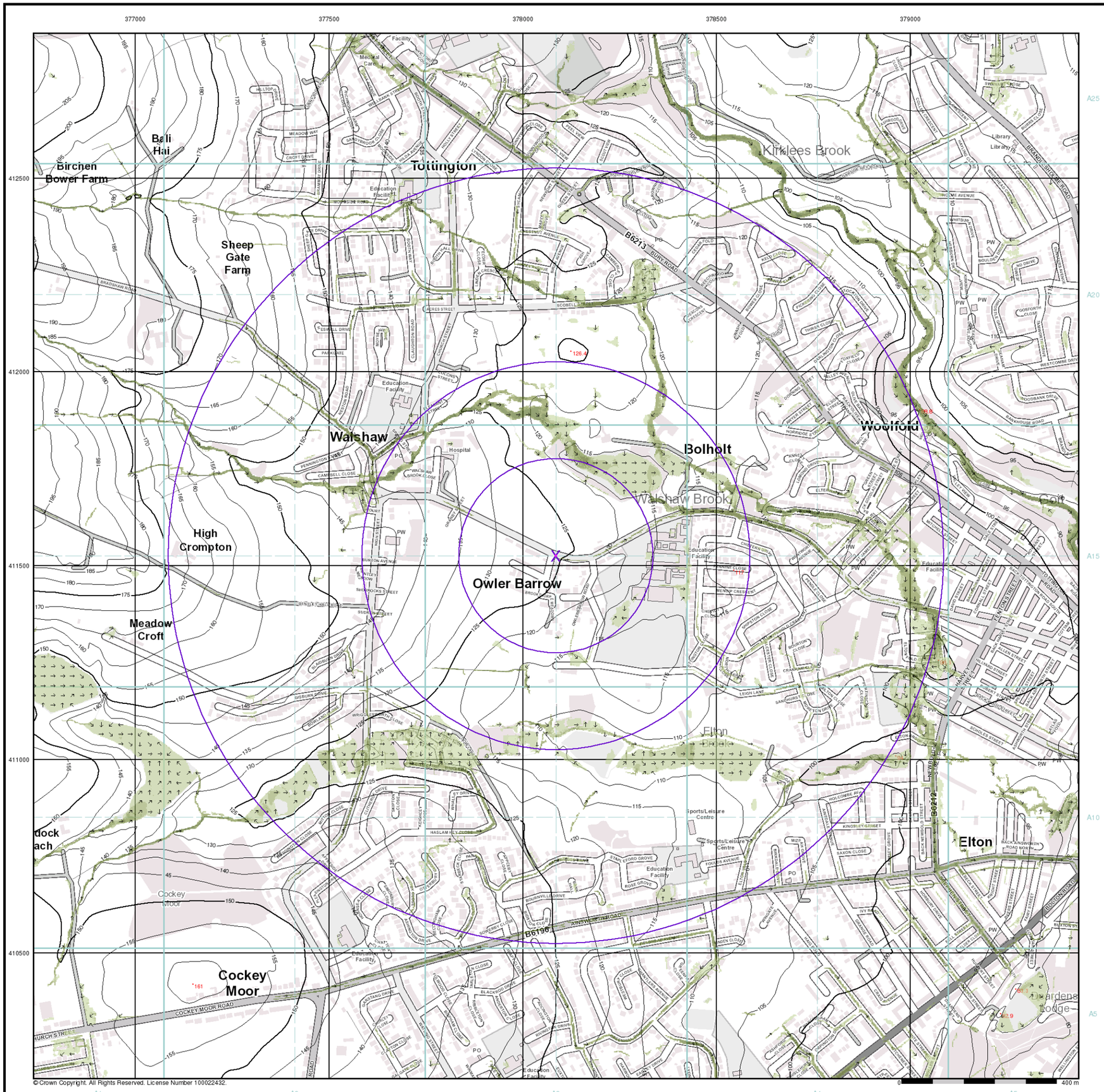

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EA/NRW Surface Water 100 Year Return Velocity and Flow Direction Map (1:10,000)

General

Specified Site | Specified Buffer(s) | X Bearing Reference Point

Surface Water Velocity and Direction

- 0.00 - 0.25m/s
- 0.25 - 0.50m/s
- 0.50 - 1.00m/s
- 1.00 - 2.00m/s
- > 2.00m/s

Flow Direction at maximum velocity

Contours (height in metres)

Standard Contour 105 | Master Contour 100 | 95

Spot Height *167.8

MLW Mean Low Water

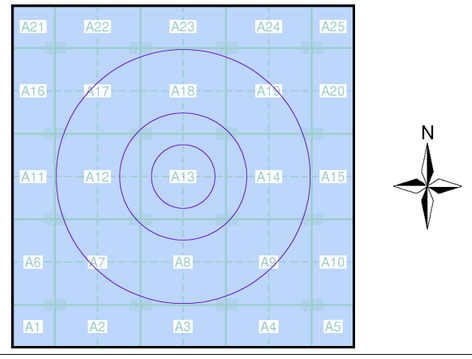
MHW Mean High Water

Suitability

See the suitability map below

- National to county
- County to town
- Town to street
- Street to parcels of land
- Property

EA/NRW Suitability Map - Slice A



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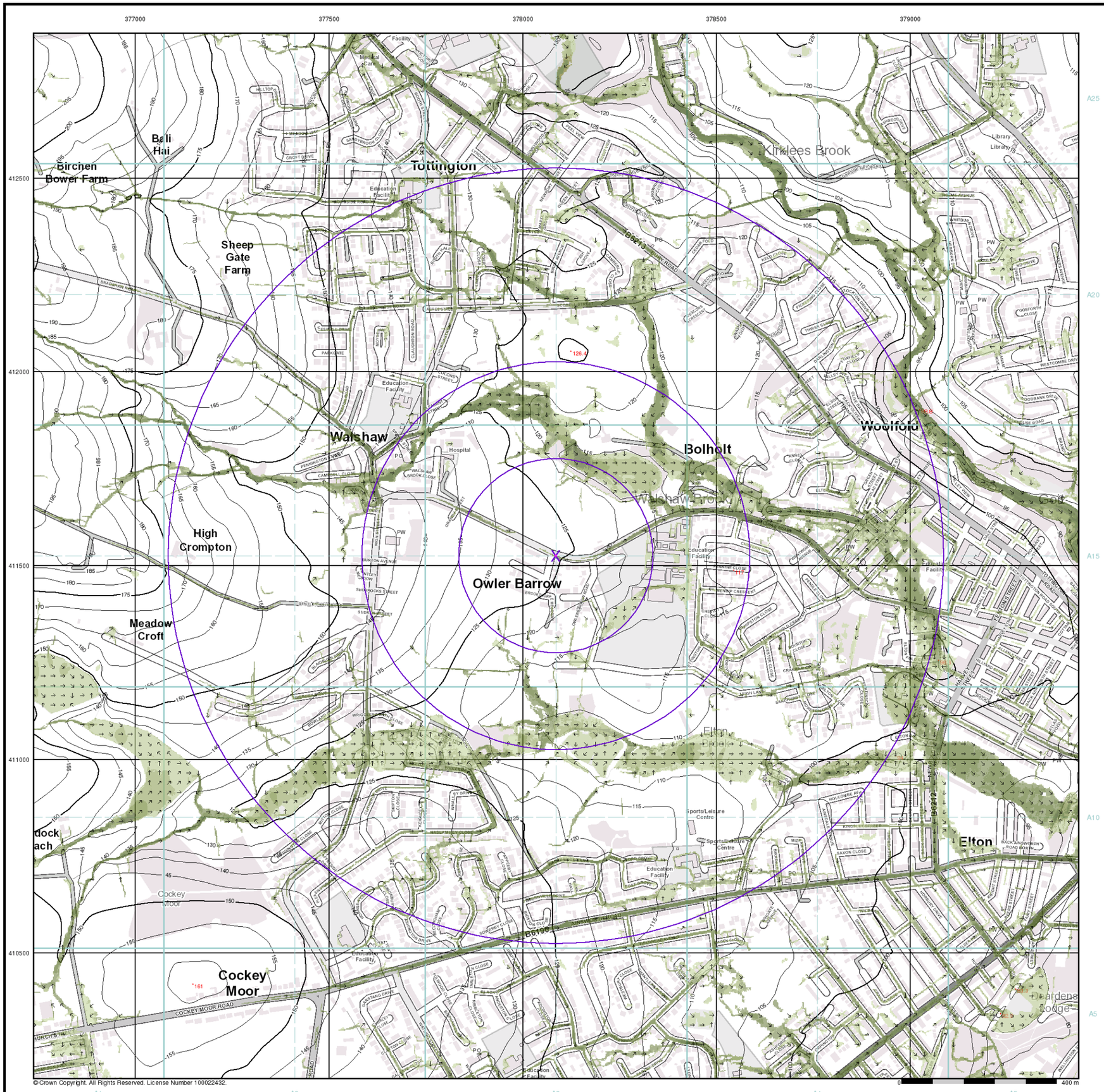

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EA/NRW Surface Water 1000 Year Return Velocity and Flow Direction Map (1:10,000)

General

Specified Site | Specified Buffer(s) | X Bearing Reference Point

Surface Water Velocity and Direction

- 0.00 - 0.25m/s
- 0.25 - 0.50m/s
- 0.50 - 1.00m/s
- 1.00 - 2.00m/s
- > 2.00m/s

Flow Direction at maximum velocity

Contours (height in metres)

Standard Contour 105
Master Contour 100 95
Spot Height *167.8

MLW Mean Low Water
MHW Mean High Water

Suitability

See the suitability map below

- National to county
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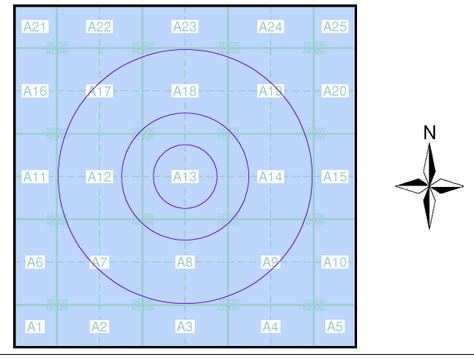
EA/NRW Suitability Map - Slice A



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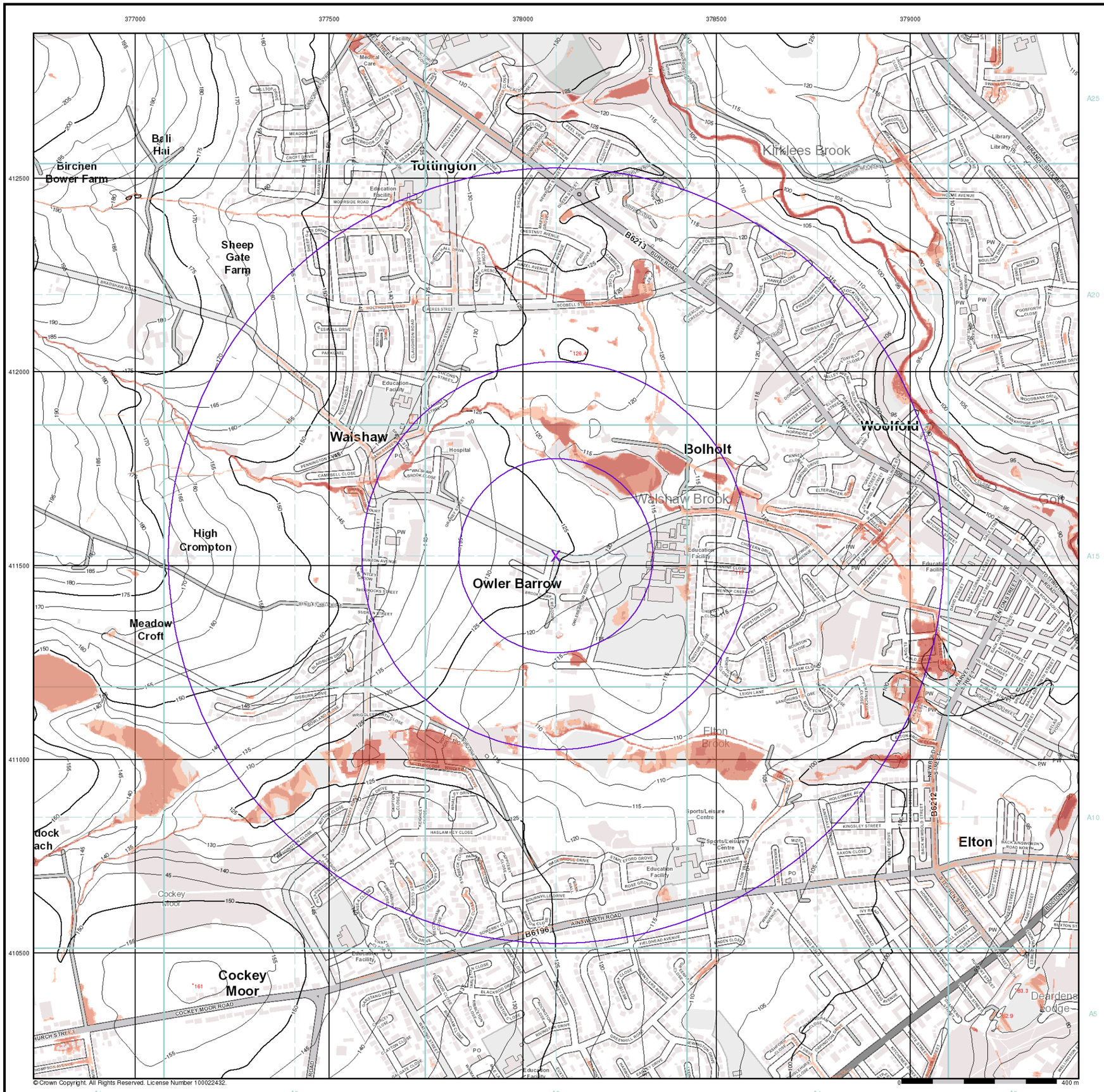

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EA/NRW Surface Water 30 Year Return Hazard Rating Map (1:10,000)

General

Specified Site | Specified Buffer(s) | X Bearing Reference Point

Surface Water Hazard Rating

- Low (0.5 – 0.75)
- Moderate (0.75 – 1.25)
- Significant (1.25 – 2.0)
- Extreme (>2.0)

Contours (height in metres)

Standard Contour | Master Contour | Spot Height *167.8

MLW Mean Low Water

MHW Mean High Water

Suitability

See the suitability map below

- National to county
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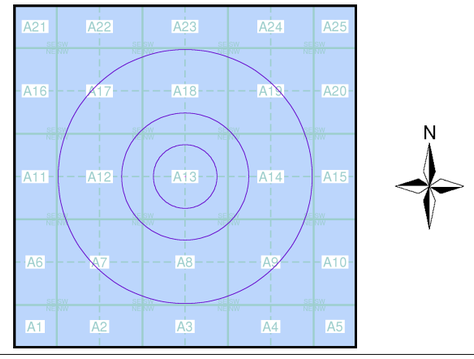
EA/NRW Suitability Map - Slice A



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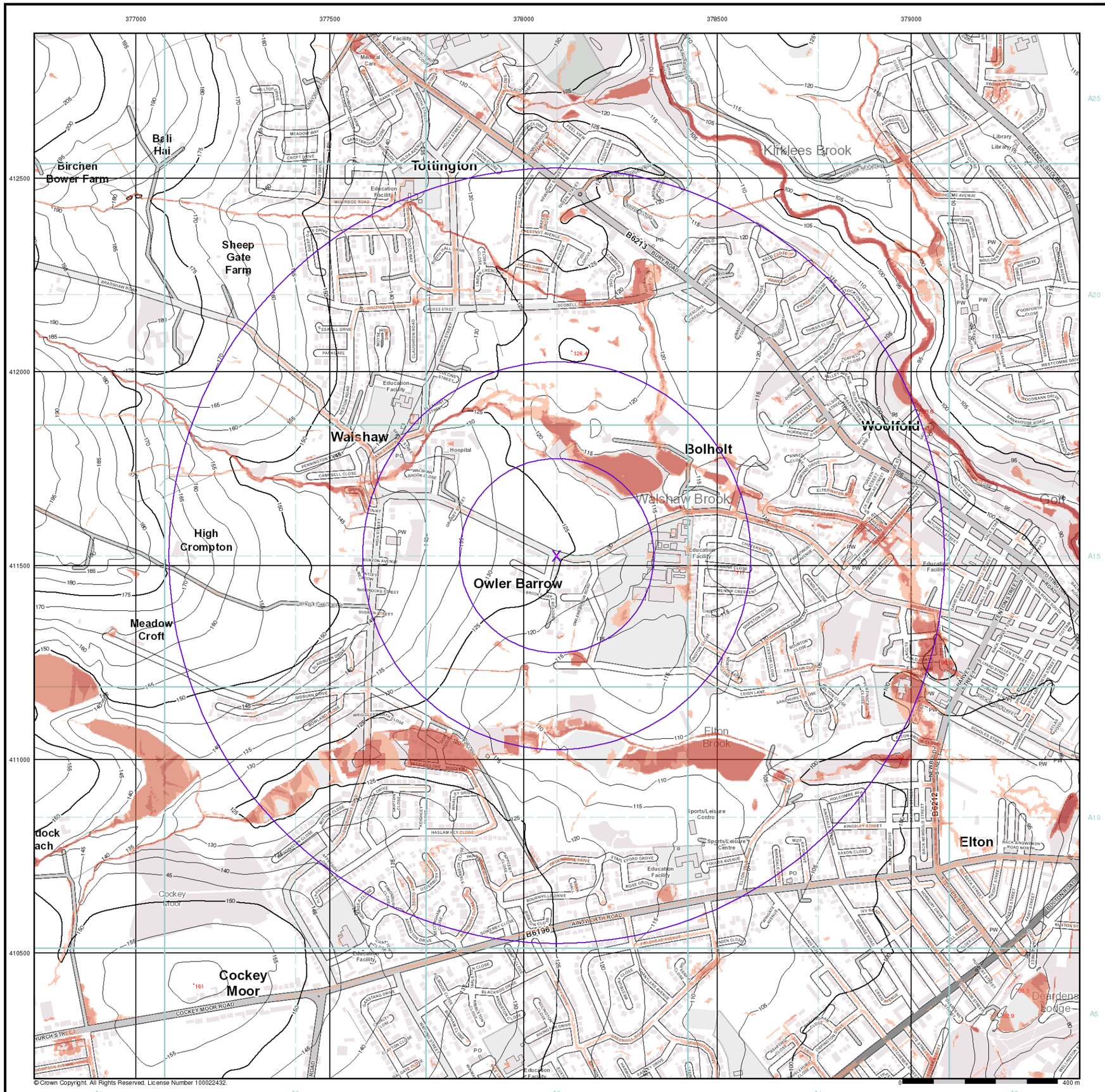

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EA/NRW Surface Water 100 Year Return Hazard Rating Map (1:10,000)

General

Specified Site | Specified Buffer(s) | X Bearing Reference Point

Surface Water Hazard Rating

- Low (0.5 – 0.75)
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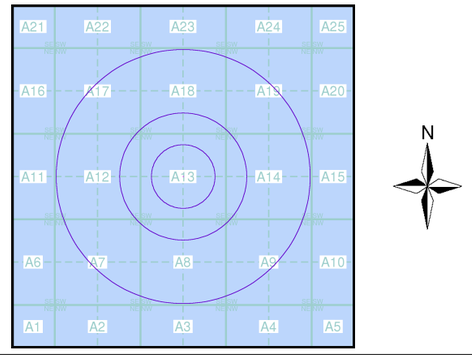

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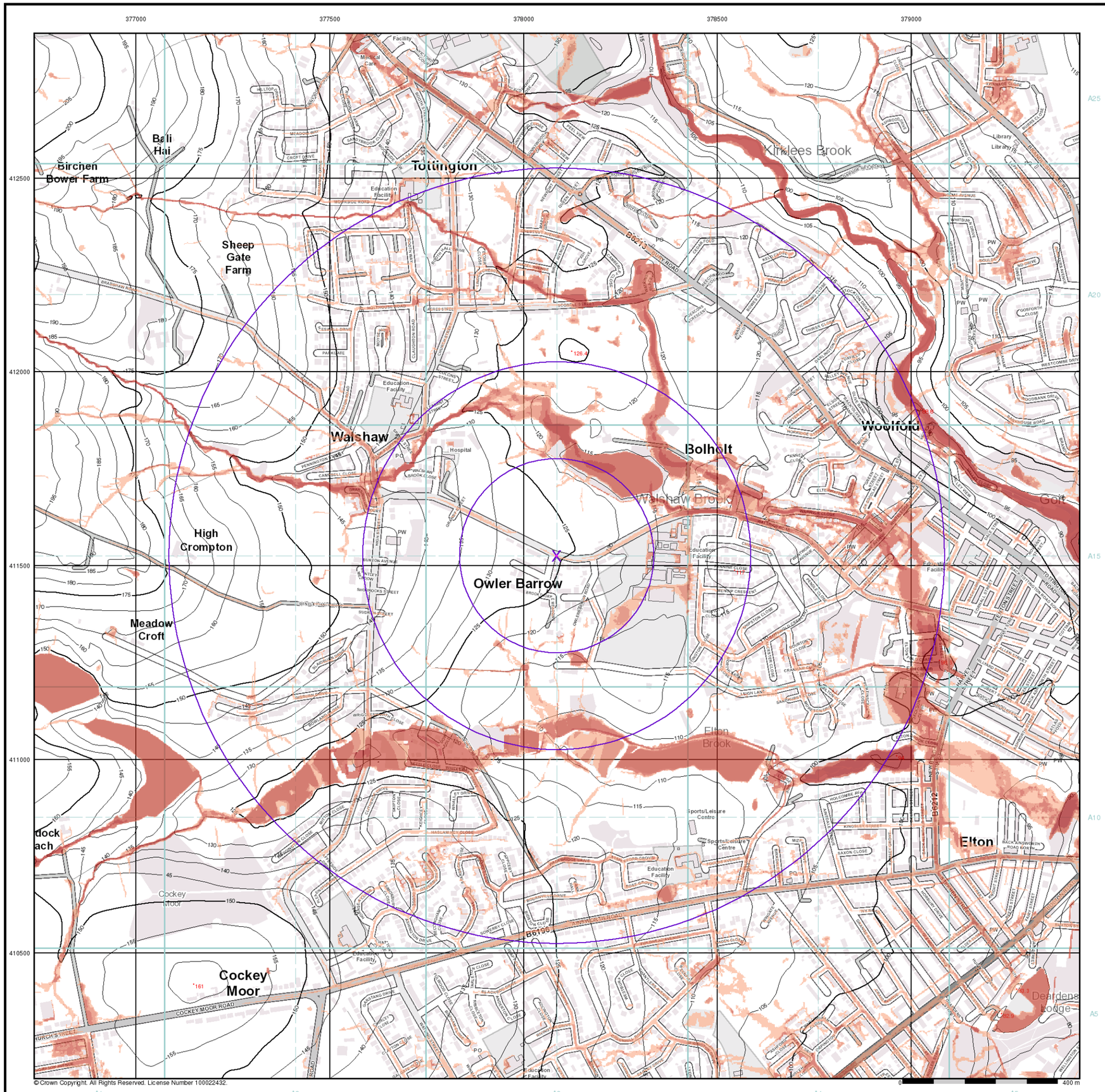

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Surface Water Hazard Rating

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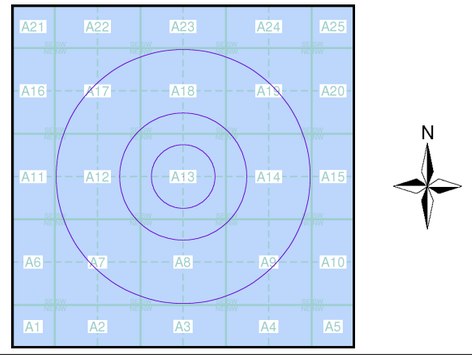

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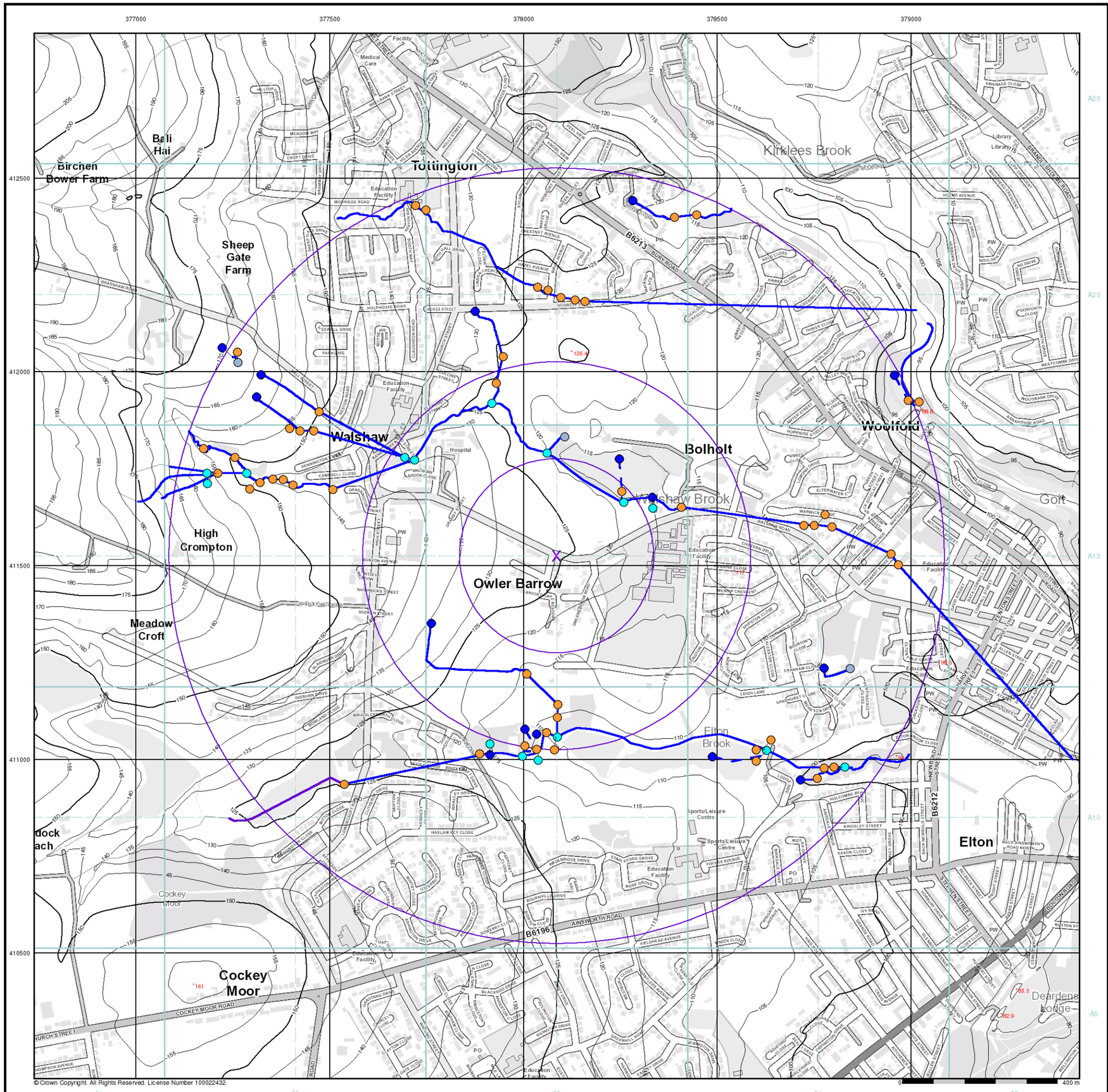

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OS Water Network Lines Map (1:10,000)

General

- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point

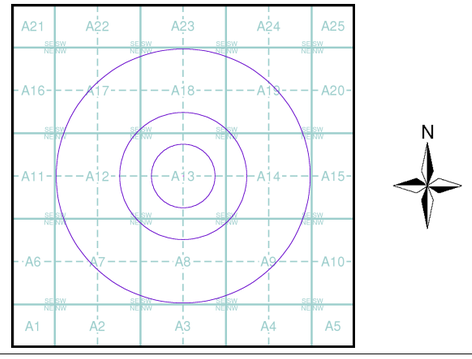
OS Water Network Data

- Canal
- Reservoir
- Foreshore
- Marsh
- Tidal River
- Inland River
- Drain
- Other
- Lake
- Transfer
- Lock Or Flight Of Locks
- Sea
- Junction
- Outlet
- Pseudo
- Source
- Other

Contours (height in meters)

- Standard Contour 105
- Master Contour 100
- Spot Height *167.3
- MLW Mean Low Water
- MHW Mean High Water

OS Water Network Map - Slice A



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EA/NRW Historic Flood Map (1:10,000)

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID

Historic Flood Events Data

- Channel Capacity Exceeded (no raised defences)
- Channel Capacity Exceeded /Surface Water
- Groundwater/High Water Table
- Local Drainage/Surface Water
- Mechanical Failure
- Obstruction/Blockage - Bridge
- Obstruction/Blockage - Channel
- Historical Flood Liabilities
- Obstruction/Blockage - Culvert
- Obstruction/Blockage - Debris Screen
- Operational Failure/ Breach of Defence
- Other
- Overtopping of Defences
- Surface Water
- Unknown

Contours (height in metres)

Standard Contour 105 100 95

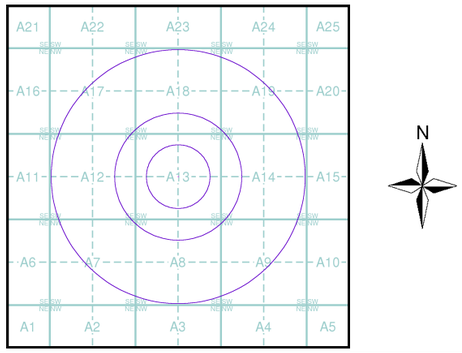
Master Contour

Spot Height *167.8

MLW Mean Low Water

MHW Mean High Water

EA/NRW Historic Flood Map - Slice A



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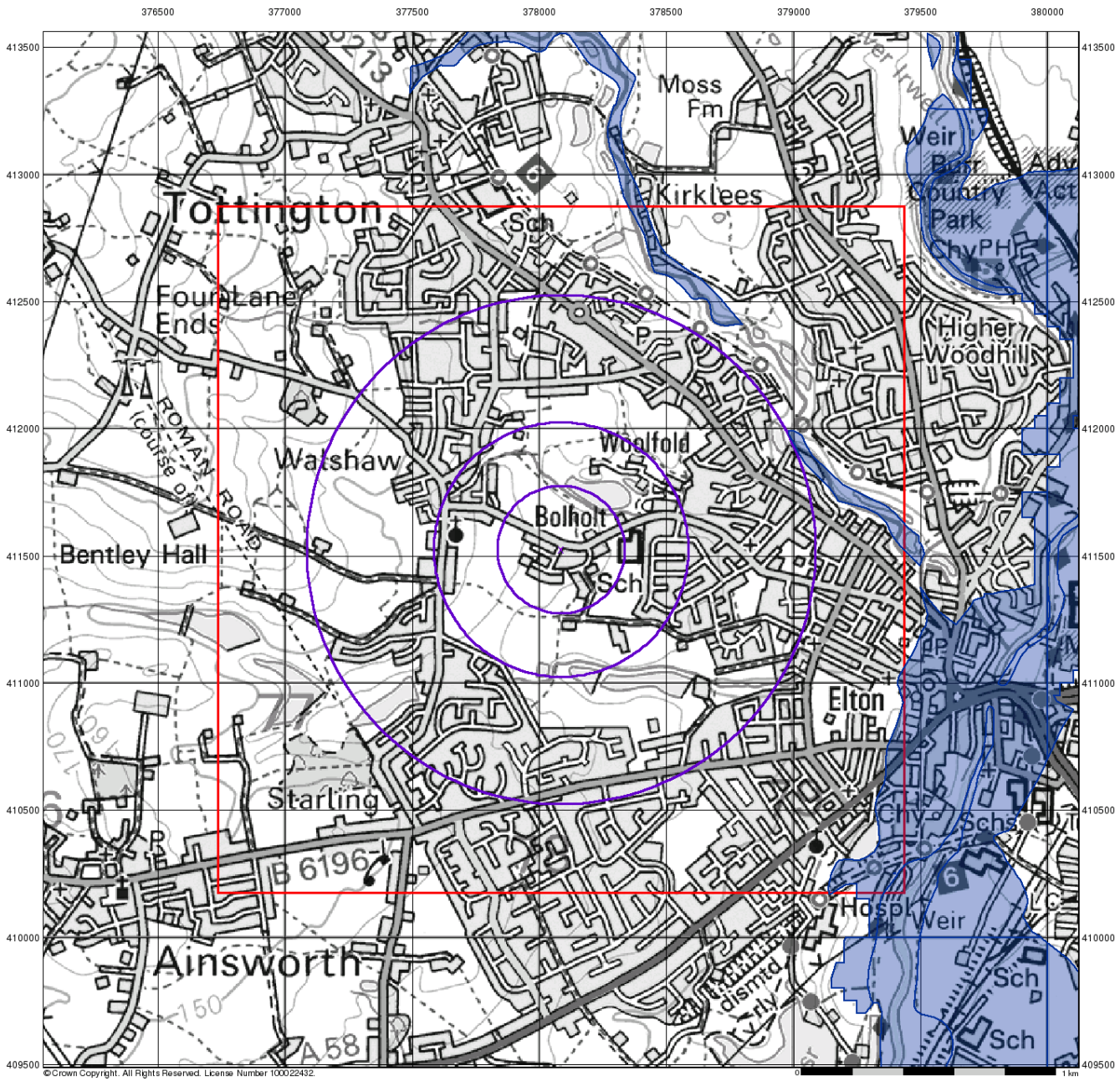

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BGS Flood Data (1:50,000)

General

Specified Site | Specified Buffer(s) | Bearing Reference Point

Slice | Map ID

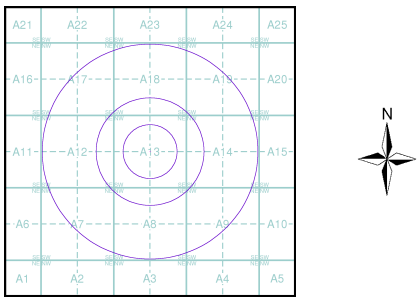
BGS Geological Indicators of Flooding

Coastal

Inland

Bodies of Water

BGS Flood Data Map - Slice A



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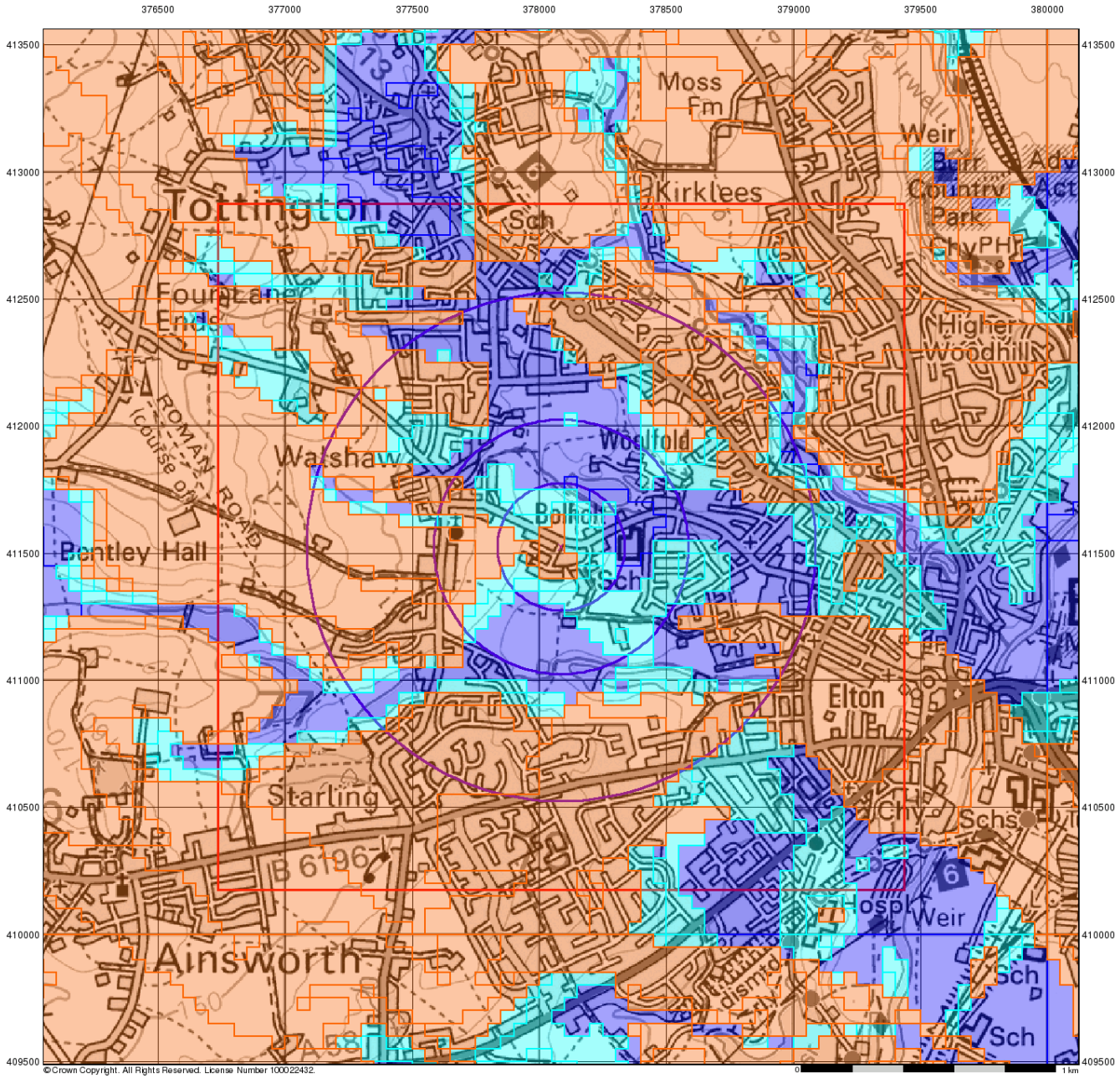

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BGS Flood Data (1:50,000)

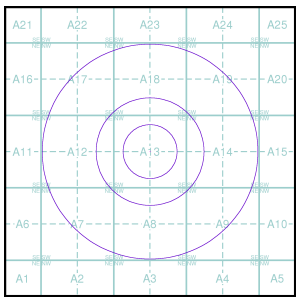
General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

BGS Groundwater Flooding Susceptibility

- Potential for Groundwater Flooding to Occur at Surface
- Potential for Groundwater Flooding of Property Situated Below Ground Level
- Limited Potential for Groundwater Flooding to Occur

BGS Flood Data Map - Slice A



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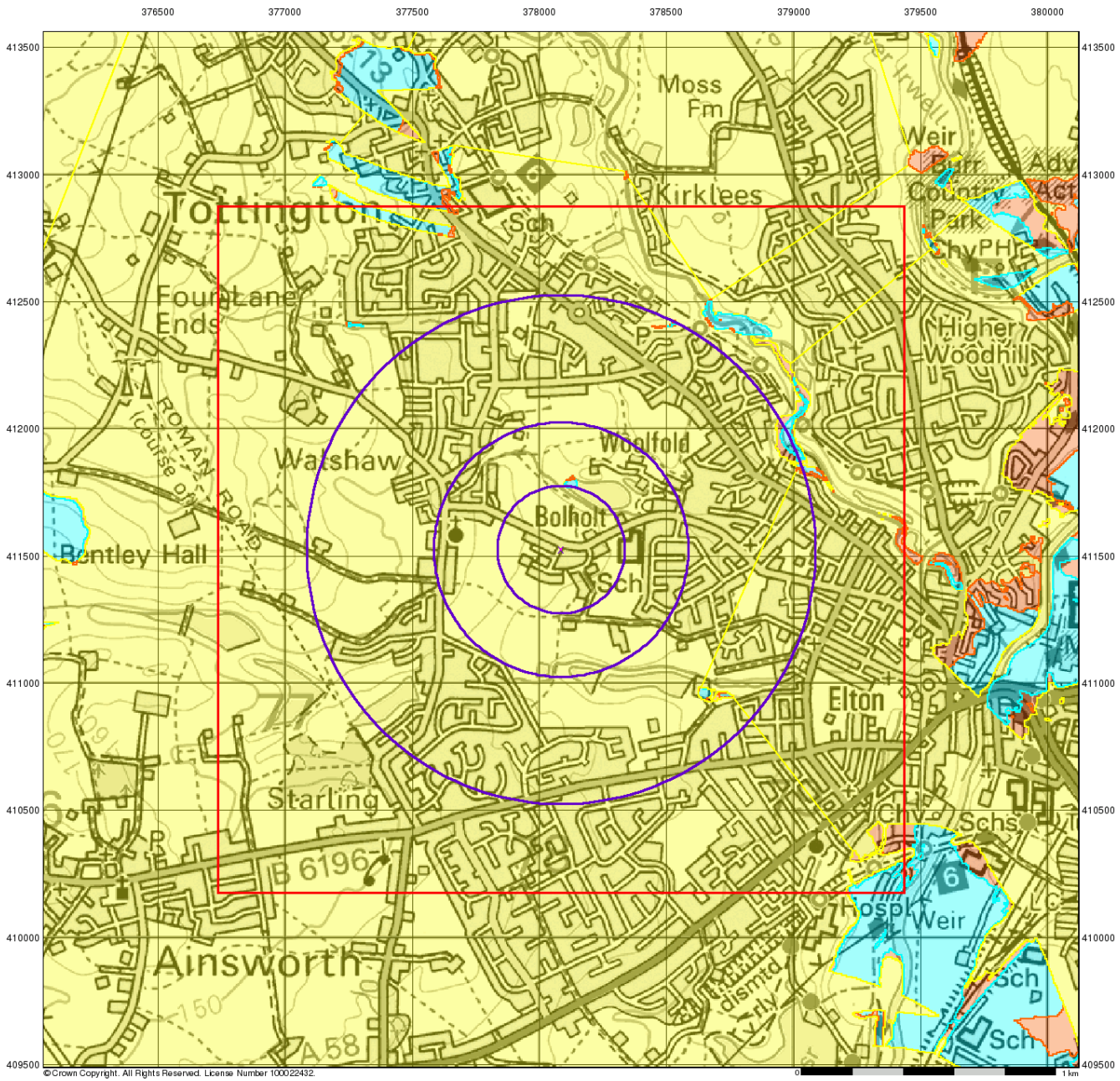

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GeoSmart Information Groundwater Flood Map (1:50,000)

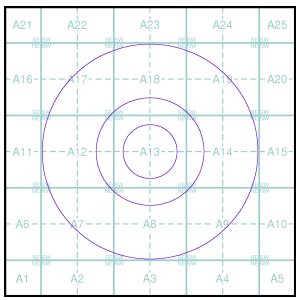
General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice

GeoSmart Information Groundwater Flooding Risk

- High Risk
- Moderate Risk
- Low Risk
- Negligible Risk

GeoSmart Information Groundwater Flood Map - Slice A



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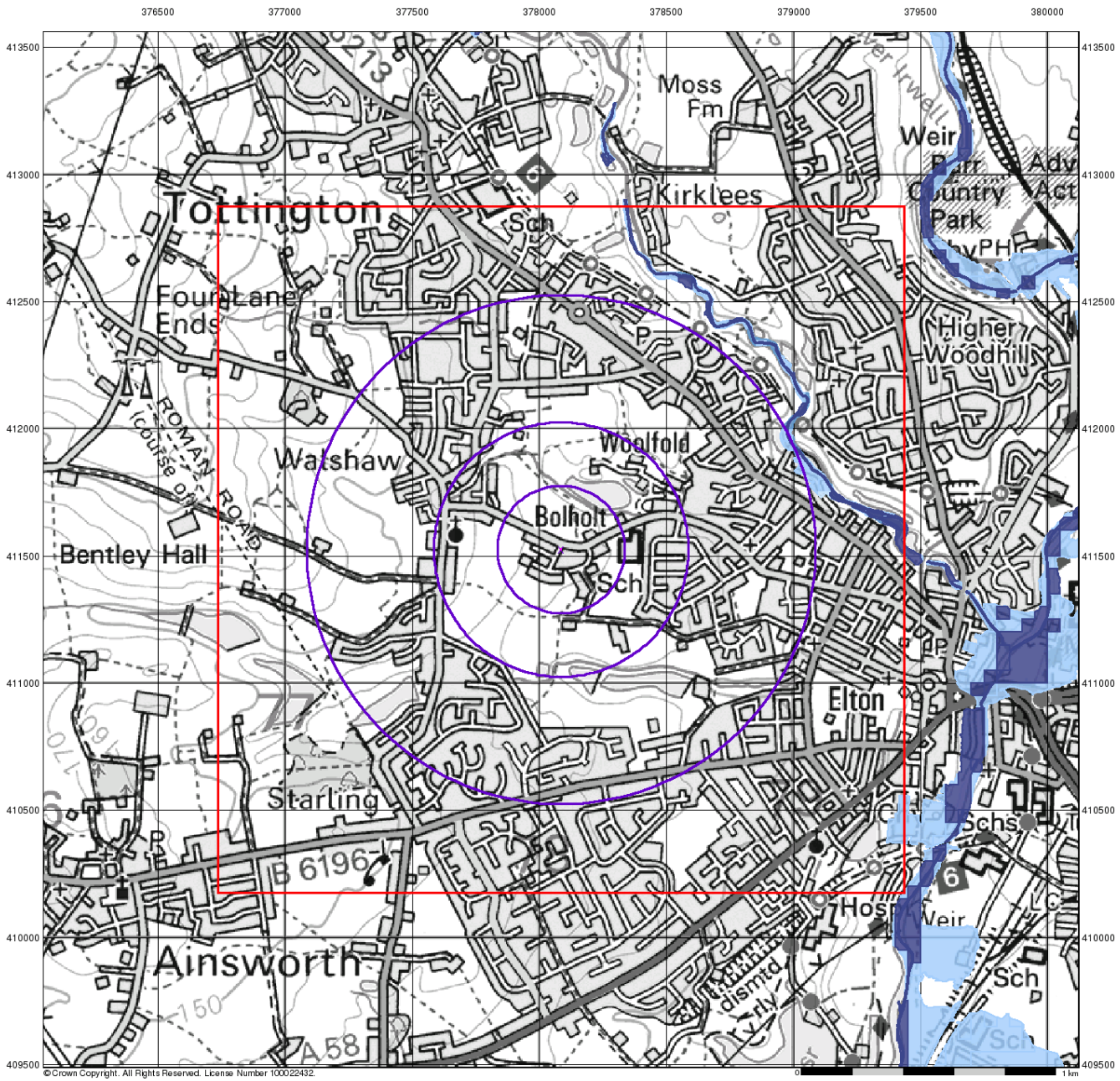

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EA/NRW RoFRS Data (1:50,000)

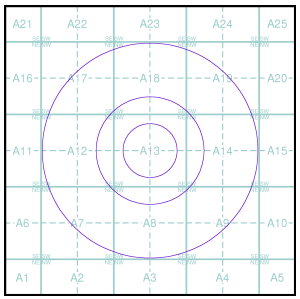
General

Specified Site | Specified Buffer(s) | Bearing Reference Point
Slice | Map ID

Risk of Flooding from Rivers and Sea (RoFRS)

- High Risk
- Medium Risk
- Low Risk
- Very Low Risk

EA/NRW RoFRS Data Map - Slice A



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