Flood Risk Assessment

Walshaw Garden Neighbourhood, Bury

for

Redrow Homes

17/01/2020

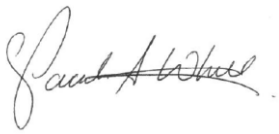
COMPLEX CHALLENGES ...
MADE SIMPLE

Flood Risk Assessment

Walshaw Garden Neighbourhood, Bury

for

Redrow Homes

TITLE	NAME	SIGNATURE	DATE
Report Author	DAVID EATO		**17/01/20**
Operations Director	PAUL WHITE		**17/01/20**
Revision A	REVISION A GENERAL REVISIONS		**17/04/20**
Report Reference	4072 /REDROW/ FRA/DAE/PAW/17042020		
Report Status	**FINAL**		

COMPLEX CHALLENGES ...
MADE SIMPLE

Contents

1.0 Introduction

1.1 Appointment

RoC Consulting has been commissioned by Redrow to provide a site specific Flood Risk Assessment to support the allocation of the site through the GMSF for a new Residential Development 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 HIMOR referenced within the 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.

A site description and boundaries are described within 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 primary 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 Redrow Homes control/ownership is a gross area of circa 15ha is available for development. However, the net developable area would be circa 9.6ha. It is anticipated that this area could accommodate circa 332 residential units based on a density of 34.6 properties/ha.

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 guidance to support the allocation of the site through the GMSF, specifically for the land under Redrow Homes control/ownership.

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 Redrow Homes 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 Redrow Homes will be required to support future detailed/reserved matters applications.

RoC Consulting accepts no liability for any use of this document other than by the client (or its representatives acting on behalf of the client) and only for the purposes, stated in the document, for which it was prepared and provided. No person other than the client may copy (in whole or in part) use or rely on the contents of this document, without the prior written permission of RoC Consulting. Any advice, opinions or recommendations within this document should be read and relied upon only in the context of the document as a whole.

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), CIRA 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 and 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 with 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, which are a 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 south of Scobell Street and north 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 78412 11996 with an approximate nearest postcode of BL8 3DW. The total red line site application boundary is 15ha.

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 gross site area is 15ha with a net site area of 9.6ha, which will provide approx. 332 dwellings at 34.6 (dph), including primary and secondary roads, pedestrian routes and open green spaces.
Existing Surfacing and Current Use		The majority of the site is currently greenfield undeveloped land in the form of fields separated by hedgerows. The only area of hard standing is a relatively small area (possibly temporary overspill car parking) associated with the Stables Country Club. Several existing reservoir/pond/lake features are present in the southern area of the site.
Boundaries	North	Greenfield land, residential development, Scobell Street and the B6213 (Bury Road/Tottington Road).
	South	Greenfield land, Walshaw Brook, Walshaw Road, existing residential development and industrial development.
	East	Existing residential development.
	West	Greenfield land and Walshaw Brook.
Access	Vehicles	Vehicular access to the site is provided from Walshaw Road. This access also serves the stables Country Club, the Best Western Hotel and two existing dwellings.
	Pedestrians/Cycles	There are a number of 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/SK101 which can be located in Appendix C.

The topography of the site generally slopes in a southern direction. With levels ranging from circa 120m AOD in the North to circa 115m AOD in the south.

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 Groundwater Source 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 southern 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 towards the south of the site.

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

To the north of Scobell Street, in close proximity to the site's northern boundary an unnamed watercourse is present which flows through the existing residential area from west to east before becoming culverted approximately 50m to the west of Camberley Close. United Utilities records identify the culvert turning and flowing in a north easterly direction. There is no evidence to suggest that it enters the proposed development site.

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 & 450mm diameter Combined Sewer in Scobell Street
- 225mm diameter Surface Water Sewer in Scobell Street

- 375mm diameter Combined Sewer in Walshaw Road
- 375mm diameter Combined Sewer in Church Street
- 450/525mm diameter Combined Sewer in Tottington/Bury Road (B6213)

There are no recorded public sewers located within the site boundary.

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 Maps

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 for 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.

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 from Scobell Street to the north, that flows in a southerly direction across the site to the lakes/ponds and 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 Redrow Homes is circa 20.80ha of which 15ha is gross developable site area.

The gross developable site area comprises mainly of greenfield and is located to the north east 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 development comprises the construction of circa 332 residential units spread across an approximate total development area of 9.6 hectares, an assumed density of approximately 34.6 dwellings per hectare (dph).

For the purposes of this report and based upon the areas provided by Barton Willmore 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 5.58 hectares of positively drained area. 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 the RoC Consulting Sketch 4072/SK101 ‘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 presently an open watercourse adjacent to the site's southern boundary flowing in a south easterly direction before being culverted to pass beneath the junction of Walshaw Road and the private access road serving the Country Club / Hotel etc north of Elton High School. It is believed that Walshaw Brook has connectivity with the two western most pond / lake features towards the site's southern boundary. 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 the Landmark data indicates that there may be a risk of flooding with an overland pathway present across the western portion of the site.

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

Immediately north of the site adjacent to Scobell Street an unnamed watercourse is present which flows through the existing residential area from west to east becoming culverted prior to Camberley Close. United Utilities sewer records indicate the culvert heading in a north easterly direction.

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 is 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 within the site that are to be retained will be provided with appropriate standoff distances to ensure that development is kept clear of any potential flooding and access is provided for maintenance.

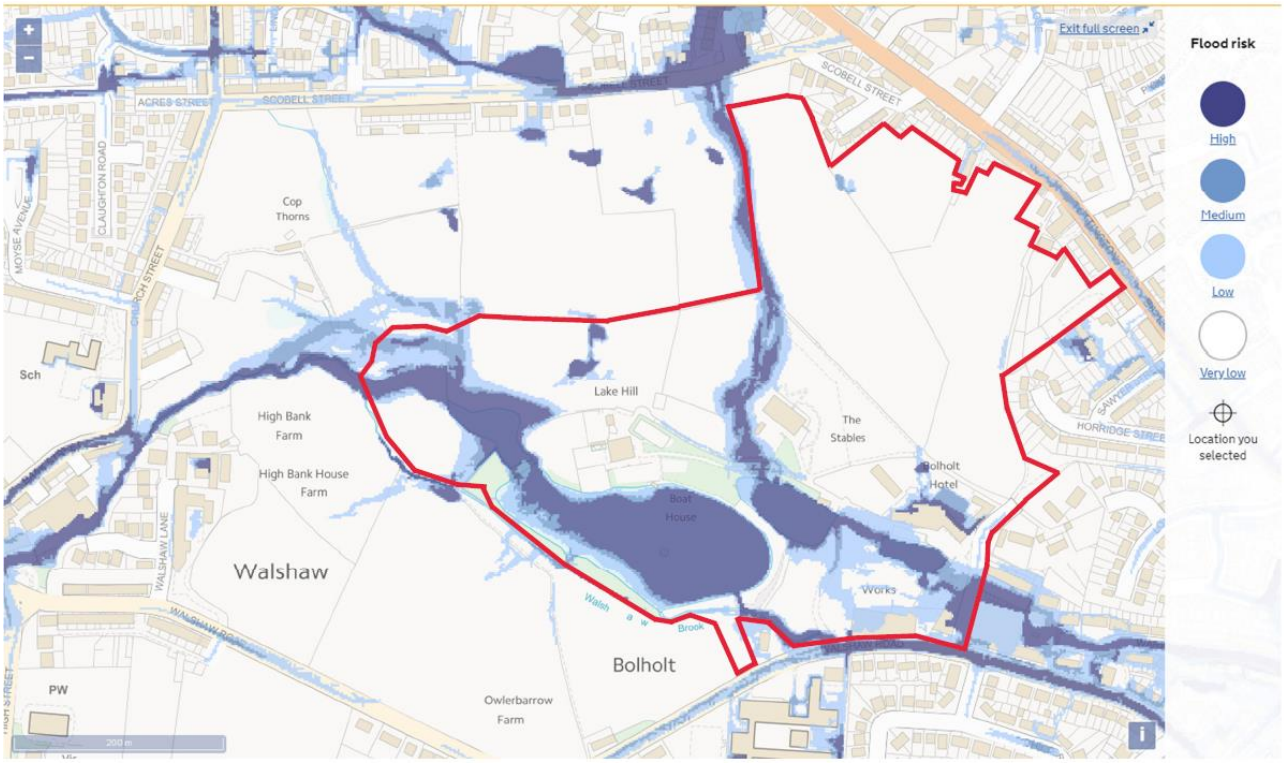
There are no identified existing fluvial flooding issues with Walshaw Brook within the site boundary.

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, and the existing lake / pond features.

Two existing noteworthy surface water overland flow routes have been identified from this data.

- The first originates to the north of the site and appears to be associated with a low point in Scobell Street which is prone to pluvial flooding. Pluvial flooding from this area appears to flow from Scobell Street through the site in a southern direction through the pond/lake/reservoir to the south of the Best Western Hotel. Other factors including flooding from sewers is further discussed in section 5.6
- The second of these two flow paths are located in the western area of the site that wraps around the western most pond/lake feature. The flow appears to originate from the alignment of Walshaw Brook to the west of the site boundary and flows into the westernmost pond/lake feature.

The data used in this flood mapping will be based on coarse level data and can be considered indicative only. Although, there appears to be ‘issues’ visible on the EA’s flood maps and the Scobell Street flooding is highlighted in the SFRA, this is further discussed in section 5.6.

The topography generally drains towards Walshaw 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 as its catchment is 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 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.

The response from United Utilities has not mentioned the historic flooding issues north of Scobell Street. However, we have had discussions with United Utilities and they have advised, that they think the flooding is down to a number of issues, including a lack of maintenance of the existing culverts to the brook running alongside Scobell Street, in addition to the drainage connected from a development to the north and highway drainage into the sewer, when both should have been installed to discharge to the watercourse.

It is understood that some maintenance has been undertaken e.g. gully cleaning etc, but as yet we have not received confirmation from United Utilities on what proposals or timescales are being investigated and/or being put forward to address the flooding issues. This section will be updated as information becomes available.

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

As identified in earlier sections of this report, a number of ponds/lakes/reservoirs are located towards the site's southern boundary. At the time of writing this report no known flooding is understood to have occurred which is directly attributable to these features and, given the surrounding topography, any flooding would flow away from the site and not impact on the proposed development.

Review of the below Environment Agency reservoir flood map indicates that the site is not at risk of reservoir flooding.

The risk of flooding from reservoirs is considered **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 watercourse north of Scobell Street, Walshaw 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
Sewer Flooding	Low - Detailed design/levels strategy mitigation to reduce potential flooding from surcharged sewers north of Scobell Street to low risk
Historic Flooding	Detailed design/levels strategy mitigation to reduce flooding from ordinary watercourse north of Scobell Street from high/medium to low risk

5.9 Flood Risk Vulnerability & Flood Zone 'Compatibility'

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 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 lands.

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

6.3 Residual Risk

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 existing flood risk to the development site from the overland flows from identified pluvial and sewer flooding north of Scobell Street remains a risk until, United Utilities and Bury Council have agreed on measures to resolve these current issues. Until then, mitigation measures are required to be brought forward at detail design stage to maintain current flood paths and minimise flood risk to properties within the development site.

The predicted pluvial flood risk from Walshaw Brook and its 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 332 residential properties, access roads, footpaths and landscaping on a net area of 9.6 Hectares.

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
- Sewers – Low

A review of the known historic flood events suggests that the development site is at risk from pluvial flooding from the unnamed watercourse and sewers to the north of Scobell Street, which due to existing topography directs overland flows north south through the site towards Walshaw Road to the south.

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.

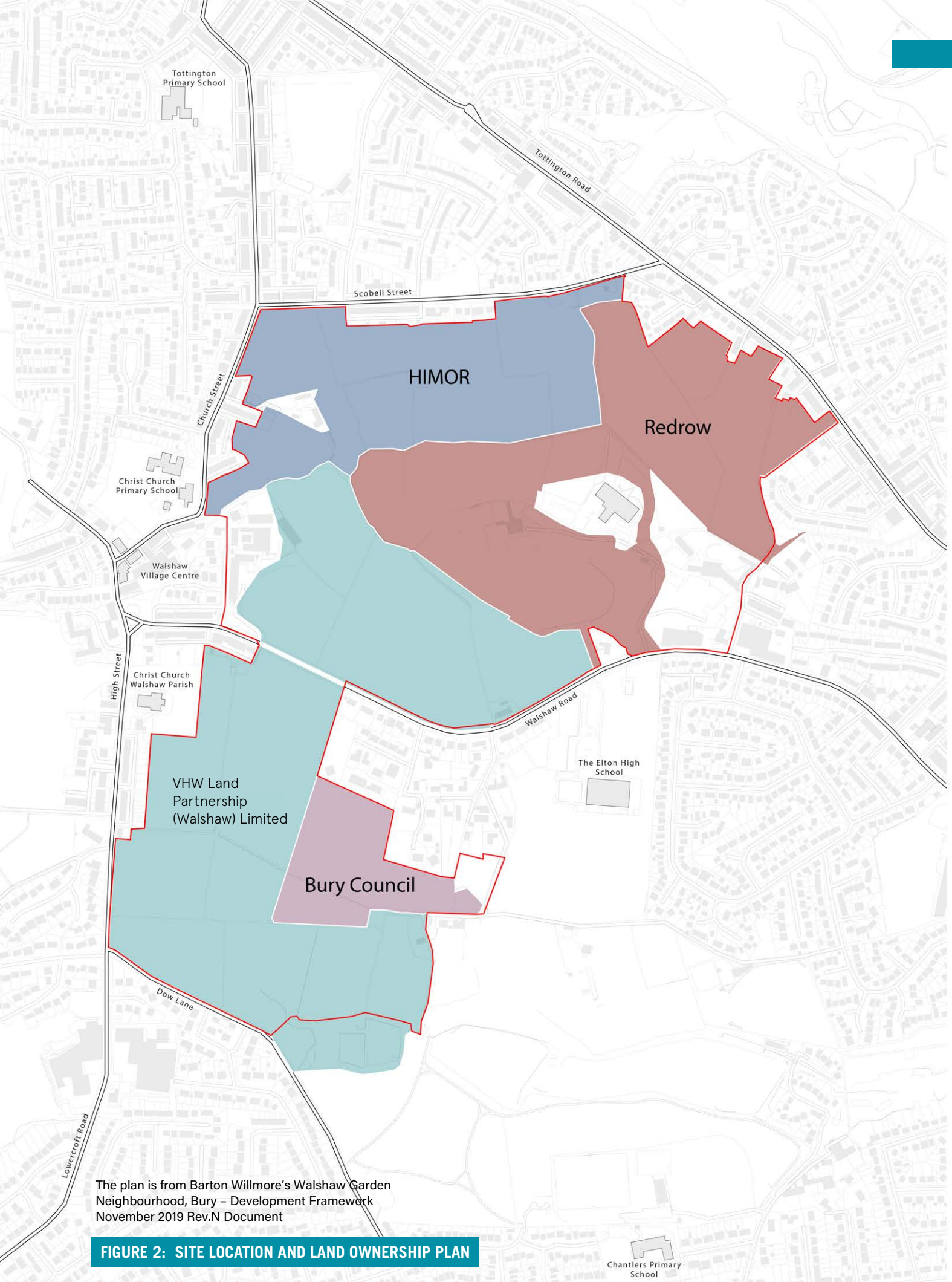
The RoC Consulting Masterplan Drainage Strategy Report Ref:4072/MDS confirms that proposed development will be served using a separate system of foul and surface water drainage. The surface water system will meet the requirements of the National and Local Standards for the drainage 'hierarchy' and will 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 guidelines.

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 pluvial flooding issues associated with off-site flows entering the site via Scobell Street.

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.

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

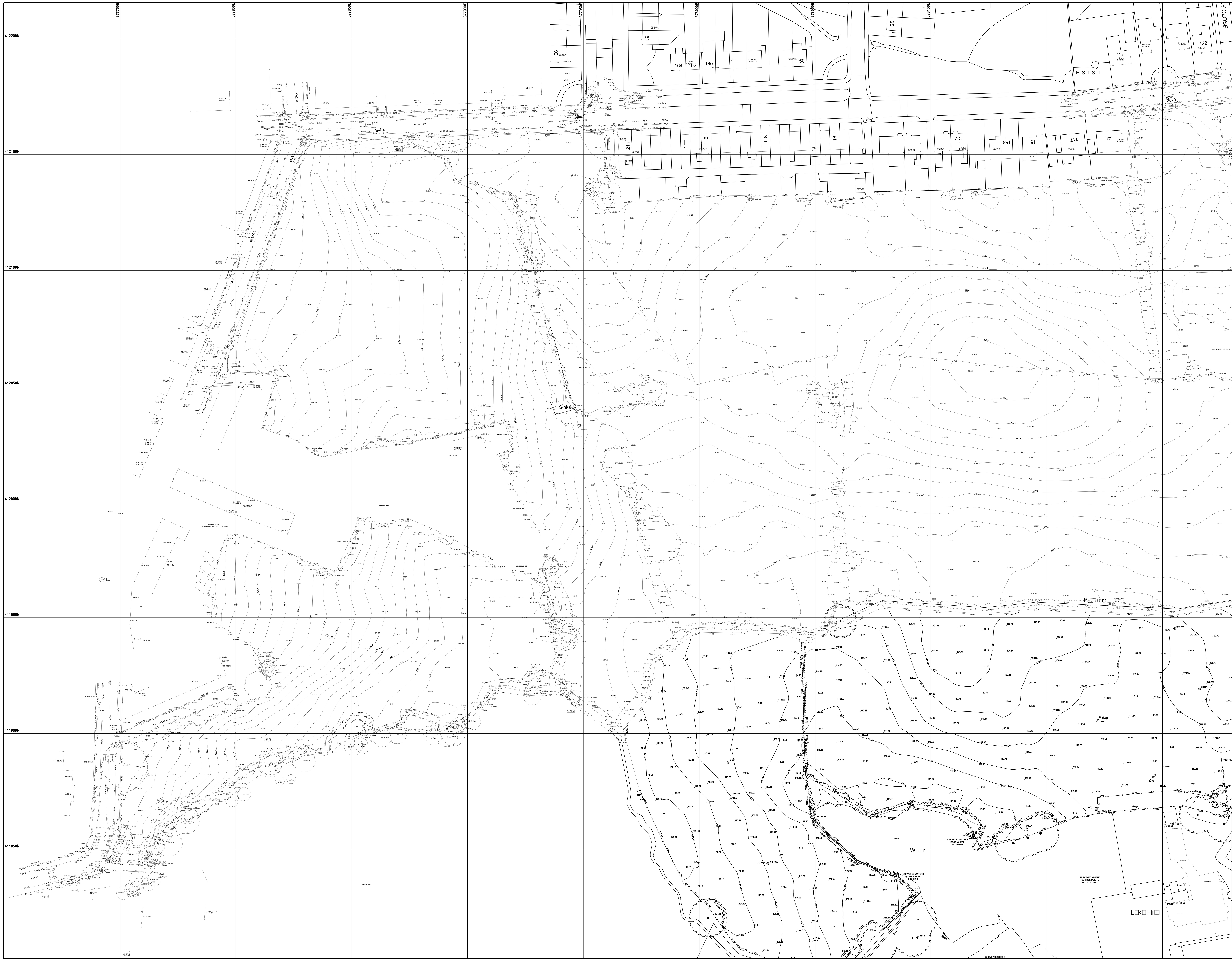
FIGURE 2: SITE LOCATION AND LAND OWNERSHIP PLAN

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



N

SURVEY ORIENTATED TO REAL TIME GPS

0m 10m 20m 30m 40m

SCALE BAR 1:500

NOTES AND AMENDMENTS

ONLY MANHOLES AND SERVICES VISIBLE AT TIME OF SURVEY SHOWN

DRAINAGE INFORMATION MUST BE CHECKED AND VERIFIED WITH LOCAL AUTHORITY RECORDS PRIOR TO WORK COMMENCING

Levels defining edge of carriageway are observed at channel (bottom of kerb). Unless otherwise stated.

TREE SPREADS ARE SYMBOLIC ONLY AND ARE REPRESENTATIVE OF THE THE AVERAGE SPREAD.

THE DRIP LINE LAYER DENOTES THE TREES EXTREMITY

REVISIONS

REV.	DESCRIPTION	DRAWN	CHKD.	DATE

Topographical Survey Legend

Bin	Li□□r □in	TL	Ti□ □in□
BH	B□r□ H□□□	TP	T□□□□r p□p□□□
Bol	B□□□rd	TPS	T□□□□ p□□in□s □□□s
BS	B□s s□p	TS	Tr□□□ si□n □□□□□□□
BT	Bri□s□ □□□□□m i□	TV	T□□□□□isi□n □□□□r
CPS	C□n□r□□ p□in□s □□□s	VP	V□n□ pip□
DR	Dr□in	WM	W□□□r m□□□r
Elec	E□□□ri□□i□	WO	W□s□ O□□□
EP	E□□□ p□□□	UTL	Un□□□□ □□ i□□
ER	E□r□r□d		F□n□□ □nn□□□i□n
FH	Fir□ H□dr□n□	B/W	B□r□□d □ir□
FP	F□□□p□□□	C/B	C□□s□d □□□rd□d
FT	F□□d i□□□□	C/I	C□rr□□□□□d ir□n
G	G□□□	C/L	C□□in link
GP	G□□□ p□s□	C/P	C□n□r□□□ p□n□□
GV	G□s □□□□□	H/R	H□nd r□i□
IC	Insp□□□i□n □□□□r	I/R	Ir□n r□i□in□s
JB	J□n□□i□n □□□	O/B	Op□n □□□□rd□d
KO	K□r□ □□□□□	P/C	P□s□& □□□in
LB	L□□□r □□□	P/R	P□s□& r□i□
LP	L□mp p□s□	P/W	P□s□& □ir□
Mkr	U□i□□ m□rk□r	W/M	Wir□ m□s□
MP	Mi□□ p□s□		L□□□□pr□□i□□ d□s□rip□i□ns
MW	M□ni□□rin□ W□□□	AL	Ar□□ □□□□□
NP	N□m□ p□□□□	BL	B□d □□□□□
P	P□s□	CL	C□□□r □□□□□
PM	P□rkin□ m□□□r	EH	E□□□s □□□□□
RE	R□ddin□ □□□	FL	F□□r □□□□□
RS	R□□d si□n	IL	In□□r□□□□□□
rwp	R□in □□□□r pip□	PL	P□r□p□□□□□□□
SP	Si□n p□s□	RH	R□□□□rid□□ □□□□□
ST	S□□p □□p	SL	S□□□□□□□□□
SB	S□r□□□ B□□	Spr	Ar□□ sprin□in□ □□□□□
SV	S□□p □□□□□	Top	T□p □□pip□/□□□□r□
TCB	T□□□p□□n□ □□□□□□□	WH	W□□□□i□□□□
TH	Tri□□H□□□	WL	W□□□r □□□□□

BENCH MARK INFORMATION

A□□□□□s r□□□□ □□ OSBM N□□ □n

D□□□m G□n□r□□□d □□ VRS GPS

SURVEY STATIONS			
J1	377948.249	412161.097	126.902
J1A	377876.459	412158.288	130.149
J1B	377829.559	412155.790	132.459
J1C	377799.100	412074.597	134.004
J1D	377742.183	411966.554	134.664
J1E	377748.771	411894.864	131.768
J1F	377745.100	411846.091	130.661
J2	378073.328	412165.020	122.431
J3	378205.599	412171.466	119.876
J4	378301.830	412193.428	118.816
J5	378377.715	412215.720	120.893
SE13	378705.709	411984.362	112.959
JLP1	378421.576	411630.574	113.185

JLP S□r□□□in□

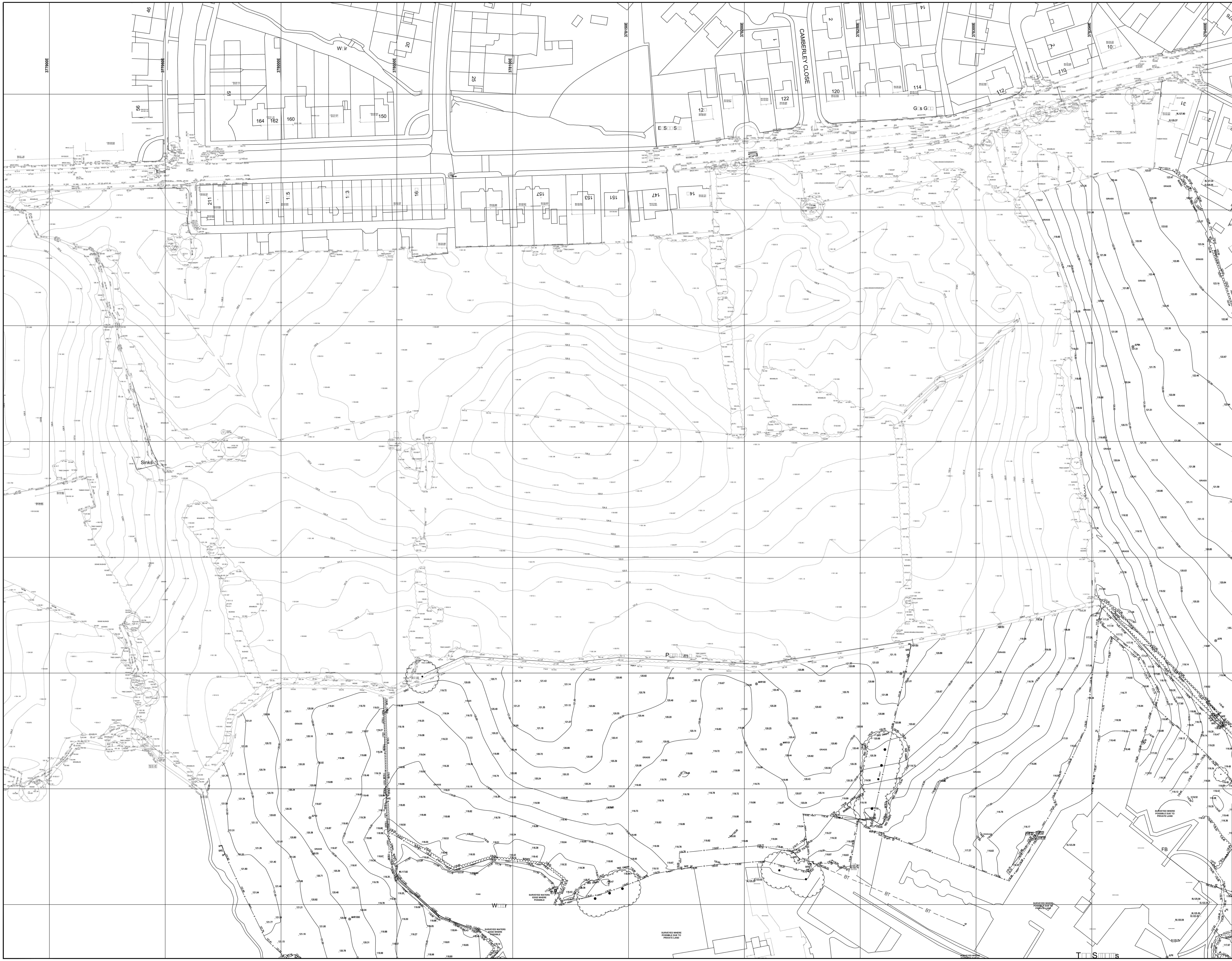
JLP Surveying Consultants Ltd,
Suite 45 Rodney House,
King Street,
Wigan
WN1 1BT
Tel - 01942 243313
Fax - 01942 492230
Mobile - 07710 428498
EMAIL:- peterhouston@jlpsurveys.com

PROJECT
S□□□□□□S□r□□□
B□r□

DRAWING TITLE
T□p□□r□p□i□□□L□nd S□r□□□

SCALE	SHEET SIZE	No. of SHEETS	DATE	REVISION
1:500	A0	2	03.12.201□	

DRAWING NUMBER
S1□□1210□1



N

SURVEY ORIENTATED TO REAL TIME GPS

0m 10m 20m 30m 40m

SCALE BAR 1:500

NOTES AND AMENDMENTS

ONLY MANHOLES AND SERVICES VISIBLE AT TIME OF SURVEY SHOWN

DRAINAGE INFORMATION MUST BE CHECKED AND VERIFIED WITH LOCAL AUTHORITY RECORDS PRIOR TO WORK COMMENCING

Levels defining edge of carriageway are observed at channel (bottom of kerb). Unless otherwise stated.

TREE SPREADS ARE SYMBOLIC ONLY AND ARE REPRESENTATIVE OF THE THE AVERAGE SPREAD.

THE DRIP LINE LAYER DENOTES THE TREES EXTREMITY

REVISIONS

REV.	DESCRIPTION	DRAWN	CHKD.	DATE

Topographical Survey Legend

Bin	Li□□r □in	TL	Ti□ □in□
BH	B□r□ H□□□	TP	T□□□r□p□p□□
Bol	B□□□rd	TPS	T□□□□ p□□in□s □□□s
BS	B□s s□□p	TS	Tr□□□□c si□n□ □□i□□□
BT	Bri□s□ □□□□□□m i□	TV	T□□□□isi□n □□□□r
CPS	C□n□r□□□ p□□in□s □□□s	VP	V□n□pip□
DR	Dr□in	WM	W□□r m□□r
Elec	E□□□ri□□□i□	WO	W□s□ O□□
EP	E□□□ p□□□	UTL	Un□□□□ □□ i□□
ER	E□r□□□rd		F□n□□ □nn□□□i□n
FH	Fir□ H□dr□n□	B/W	B□r□□d □ir□
FP	F□□□p□□□	C/B	C□□s□d □□□rd□d
FT	F□□□di□□□□	C/I	C□rr□□□□□d ir□n
G	G□□□	C/L	C□□□in □ink
GP	G□□□ p□s□	C/P	C□n□r□□□ p□n□□
GV	G□s □□□□□	H/R	H□nd r□i□
IC	Insp□□□i□n □□□□r	I/R	Ir□n r□i□in□s
JB	J□n□□i□n □□□	O/B	Op□n □□□rd□d
KO	K□r□ □□□□□□	P/C	P□s□& □□□in
LB	L□□□r □□□	P/R	P□s□& r□i□
LP	L□mp p□s□	P/W	P□s□& □ir□
Mkr	U□i□□ m□rk□r	W/M	Wir□ m□s□
MP	Mi□□ p□s□		L□□□□pr□□i□ d□s□rip□i□ns
MW	M□ni□□rin□ W□□□	AL	Ar□□ □□□□□
NP	N□m□ p□□□□	BL	B□d □□□□□
P	P□s□	CL	C□□□r □□□□□
PM	P□rkin□ m□□□r	EH	E□□□s □□□□□
RE	R□ddin□ □□□	FL	F□□r □□□□□
RS	R□□d si□n	IL	In□□r□□□□□□
rwp	R□in □□□□r pip□	PL	P□r□p□□□□□□□
SP	Si□n p□s□	RH	R□□□□rid□□ □□□□□
ST	S□□p □□p	SL	S□□□□□□□□□
SB	S□r□□□□ B□□	Spr	Ar□□ sprin□in□ □□□□□
SV	S□□p □□□□□	Top	T□p □□pip□/□□□□r□
TCB	T□□□p□□n□ □□□□□□□□	WH	W□□□□□i□□□
TH	Tri□□ H□□□	WL	W□□□r □□□□□

BENCH MARK INFORMATION

A□□□□□s r□□□□□ □□ OSBM N□□ □n
D□□□m G□n□r□□□d □□ VRS GPS

SURVEY STATIONS

J1	377948.249	412161.097	126.902
J1A	377876.459	412158.288	130.149
J1B	377829.559	412155.790	132.459
J1C	377799.100	412074.597	134.004
J1D	377742.183	411966.554	134.664
J1E	377748.771	411894.864	131.768
J1F	377745.100	411846.091	130.661
J2	378073.328	412165.020	122.431
J3	378205.599	412171.466	119.876
J4	378301.830	412193.428	118.816
J5	378377.715	412215.720	120.893
SE13	378705.709	411984.362	112.959
JLP1	378421.576	411630.574	113.185

JLP S□r□□□in□

JLP Surveying Consultants Ltd,
Suite 45 Rodney House,
King Street,
Wigan
WN1 1BT
Tel - 01942 243313
Fax - 01942 492230
Mobile - 07710 428498
EMAIL:- peterhouston@jlpsurveys.com

PROJECT
S□□□□□□S□r□□□
B□r□

DRAWING TITLE
T□p□□r□p□i□□□L□nd S□r□□□

SCALE	SHEET SIZE	No. of SHEETS	DATE	REVISION
1:500	A0	2	03.12.201□	

DRAWING NUMBER
S1□□1210□2

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

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

CLIENT
HIMOR

PROJECT TITLE
WALSHAW GARDEN NEIGHBOURHOOD
BURY

DRAWING TITLE
EXISTING TOPOGRAPHY & OVERLAND FLOW ROUTES
SHEET 2 OF 3

PROJECT No.	DRAWING No.	REV.
4072	SK102	01

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
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 (Himor Land)					
Site Address *(or nearest main road)*	Nearest Main Road: Scobell Street / Church Street					
Site grid reference *(mid point)*	X:	378066	Y:	412063		
Approx. number of dwellings	263					
Total site area *(hectares)*	11.73					
Site name	Land at Walshaw Bury (Himor Land)					
Development area *(hectares)* *(Optional)*	7.98					
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)		12.2l/s MH2101
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		Split between SUDS & sewer not yet known (MH2101)
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	0 2 0 1 2 0 2 0

UU use only

Date received		UUW Ref No	\

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.

Refno	Cover	Func	Invert	Size x	Size y	Shape	Matl	Length	Grad
5111	146.78	SW	146.92	225			VC	57.72346	1 in 21
5107	146.72	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	37.3	1 in 58
5505	145.53	SW	143.9	150			VC	46.09772	1 in 13
5305	143.67	SW	142.04	150			VC	56.44366	1 in 43
5308		SW		100			VC	15.69961	
5312		SW		100			VC	11.81512	
5302	146.9	CO	144.57	150			VC	67.47582	1 in 17
5301	146.84	CO	144.78	150			VC	35.22783	1 in 76
5304	142.85	CO	140.6	150			VC	89.00562	1 in 19
5303	142.78	SW	140.69	225			VC	89.00562	1 in 19
5209	147.56	SW	145.22	150			VC	31.257	1 in 71
5207	147.54	SW	145.55	150			VC	17.02939	1 in 51
5201	147.57	CO	145.22	150			VC	76.41989	1 in 21
5206	147.51	SW	145.77	150			VC	16.03122	1 in 38
5202	147.54	SW	145.24	150			VC	72.44304	1 in 22
5212		CO		100			VC	9.532503	
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	46.72627	1 in 49
5102	148.5	CO	146.41	225			VC	6	1 in 19
5103	148.15	CO	146.26	225			VC	20.02498	1 in 12
5105	146.8	CO	144.58	225			VC	53.16014	1 in 55
5117		CO		100			VC	17.68496	
4351		SW	0	450			VC	26.07681	
5403	142.69	SW	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	65.03676	1 in 22
5008		SW		100			VC	11.68991	
5006		SW		100			VC	11.68991	
5009		SW		100			VC	8.425617	
5009		SW		100			VC	8.425617	
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	145.18	225			VC	61	1 in 39
5004	147.65	CO	144.18	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	32.24903	1 in 18
4301	148.11	SW	146.56	150			VC	34	1 in 19
4320		CO		150			FO	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
5907		CO		150			VC	6.634017	
5907		CO		100			VC	6.634017	
5901	147.9	CO	146.26	225			VC	32.6757	1 in 149
5901	147.9	CO	146.26	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
4508		CO		150			VC	4.029942	
4453	148.67	SW	147.07	450			CO	19	
4452	151.2	SW	148.15	225			VC	21.64033	1 in 29
4403	148.51	CO	146.17	225			VC	13.0364	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	96.60745	1 in 58
9503	129.66	CO	128.75	225			VC	78.60026	1 in 167
9502	142.08	CO	140.29	150			VC	156.4238	1 in 26
6508		CO		100			PVC	11.71412	
6506		CO		225			VC	11.99336	
6504		CO	0	225			VC	13.6405	
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
6451	137.73	SW	135.91	150			VC	44.18144	1 in 67
6451	137.83	SW	136.95	150			VC	49.0458	1 in 75
6454	137.66	SW	135.16	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	46.01041	1 in 141
0511		CO		100			VC	6.949281	
0511		CO		100			VC	6.949281	
9509		CO		100			VC	6.789247	
9509		CO		100			VC	6.789247	
9508		CO		100			VC	6.808056	
9508		CO		100			VC	6.808056	
9404		CO		150			VC	2.461385	
9404		CO		150			VC	2.461385	
9502	131.94	CO	128.62	300			VC	65	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
6303	138.07	SW	135.46	150			VC	43.29972	1 in 34
6405	135.27	CO	134.03	225			VC	47.20521	1 in 169
7304	139.36	SW	134.68	375			VC	52.03845	1 in 42
6203	139.82	SW	137.92	225			VC	56.22277	1 in 30
7201	141.21	SW	140.28	225			VC	26.19026	1 in 12
7302	136.35	CO	133.74	225			VC	87.20665	1 in 349
7251	137.39	SW	135.91	300			VC	68.27797	1 in 74
8306		CO		100			VC	7.764478	
8302		CO		100			VC	7.23372	
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	79.05694	1 in 68
9301	126.55	SW	124.75	300			VC	79.05694	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
9302	125.69	CO	123.57	225			VC	28.28427	1 in 141
9302	125.69	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
8304	143.58	SW	141.8	225			VC	24.35159	1 in 59
5203	143.8	CO	141.82	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	28.06588	1 in 23
5205	138.43	SW	137.38	150			VC	34.20525	1 in 19
7201	137.35	CO	133.48	225			VC	23.19483	1 in 331
6209		FO		100			VC	6.159784	
8202	141.14	CO	139.53	150			VC	30.09659	1 in 13
8204	139.78	CO	137.59	150			VC	50.35872	1 in 26
9101	126.33	CO	124.49	375			VC	84.24303	
9206		FO	0	150			VC	25.32687	
9207		FO	0	150			VC	62.99181	
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	126.39	SW	123.7	225			VC	60.09994	1 in 30
9102	125.39	SW	123.7	225			VC	60.09994	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	28.82301	
9212		CO		100			VC	28.82301	
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
7254	134.64	SW	132.55	225			VC	34.23449	1 in 17
7255	132.99	SW	131.72	225			VC	16.43909	
7210		CO		300			VC	46.62286	
7108	133.36	CO	131.45	300			VC	16.05292	1 in 13
7206	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	
8206		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	29.1764	
8204		FO	0	150			VC	15.54262	
8204		SW	0	150			VC	8.339096	
8201	131.75	CO	127.84	300			VC	49.0102	1 in 189
8202	131.99	CO	127.58	300			VC	52.03845	1 in 184
8101	132.35	CO	127.19	375			VC	87.0918	1 in 32
8212		SW	0	225			VC	22.68748	
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	33.37644	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	137.76	CO	136.17	300			VC	29.20616	1 in 56
6102	143.19	SW	141.15	300			VC	50.24634	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	
9205	124.92	SW	123.43	225			VC	61.61169	1 in 36
9205	124.92	SW	123.43	225			VC	61.61169	1 in 36
7206		CO		100			VC	27.4661	
7202	137.01	CO	133.41	225			VC	45.22437	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	41.1732	1 in 52
6101	142.77	CO	141.27	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	11.5145	
5126		CO		100			VC	1.46613	
7003	134.31	CO	127.82	375			VC	12.64911	
7063	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							VC	8.511727	
7102	138.82	SW	136.76	300			VC	34.03316	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	136.75	CO	137.12	225			VC	12	1 in 82
7004	138.69	CO	137.67	225			VC	14	
7004	138.69	CO	137.67	225			VC	14	
6011		CO		150			VC	46.09772	1 in 39
6011		CO		150			VC	46.09772	1 in 39
5011		CO		100			VC	15.45388	
5011		CO		100			VC	15.45388	
5012		CO		100			VC	6.109969	
5012		CO		100			VC	6.109969	
5013		CO		100			VC	7.33593	
5013		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	5.518884	
5014		CO		100			VC	5.518884	
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	96.36464	1 in 219
7901	134.66	CO	128.28	375			VC	96.36464	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		150			VC	6.036177	
5912		CO		100			VC	6.036177	
6012		CO		100			VC	14.09792	
6012		CO		150			VC	14.09792	
7601	130.56	CO	129.09	375			VC	125.4631	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

FC	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
S	Spun Iron
ST	Steel
VC	Vitrified Clay
PP	Polypropylene
PF	Pitch Fibre
MAC	Masonry: Coursed
MAR	Masonry: Random
U	Unspecified

Address or Site Reference:

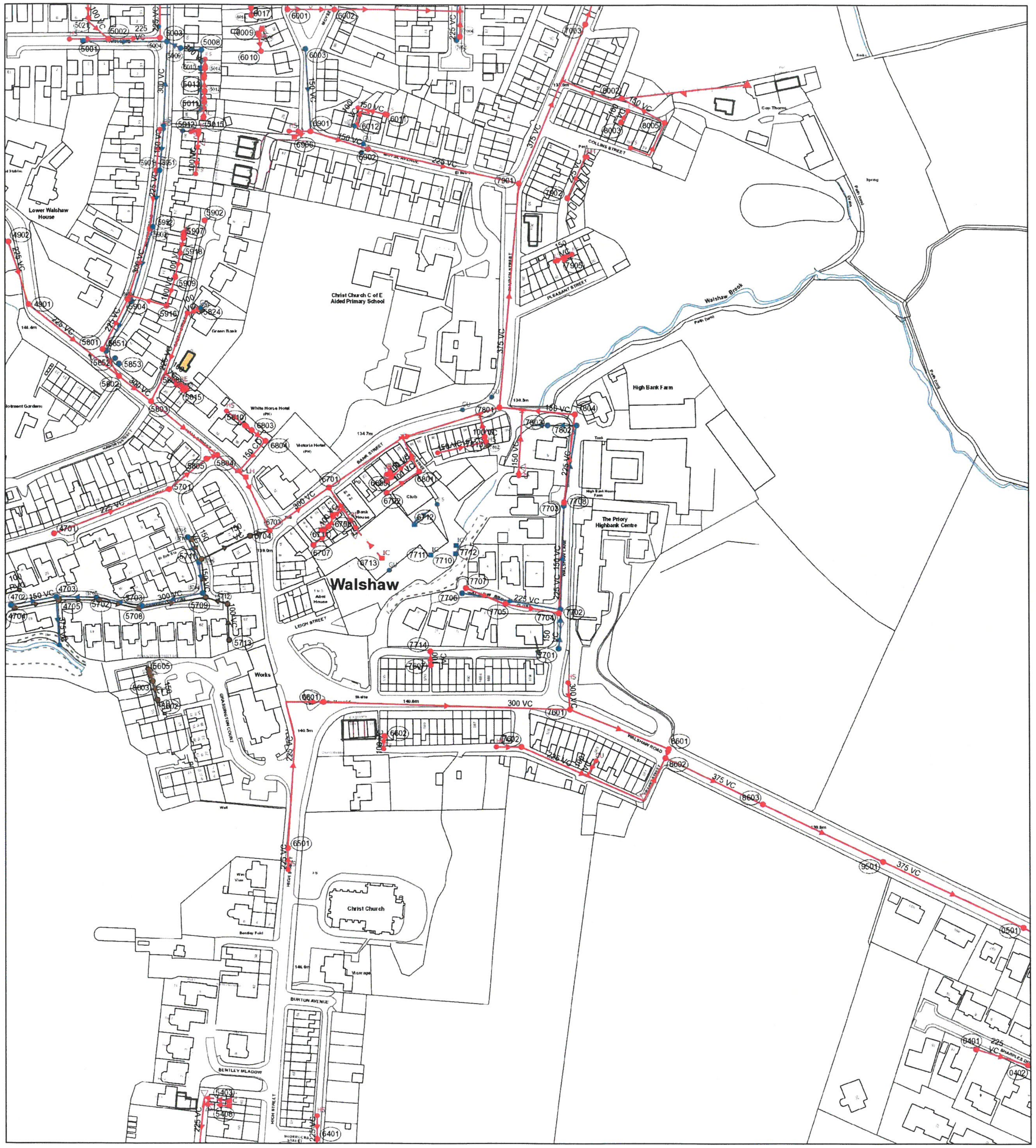
467 WALSHAW ROAD,
BURY,
BL8 3AA

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



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
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

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.

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	CO	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	CO	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	CO	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	CO	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	FO	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	CO	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		CO		100			VC	31.28467	
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	
1353	126.07	SW	123.62	225			VC	62.64982	1 in 99
1303	125.99	CO	123.38	225			VC	37.12142	1 in 52
1301	125.66	CO	122.66	225			VC	18.68154	1 in 89
0304	125.63	CO	122.81	225			VC	24.04163	1 in 65
0353	125.74	SW	123.49	225			VC	44.92215	1 in 90
1304	121.25	FO	0	525			VC	27.20294	
0306		CO		100			VC	13.65297	
0352	125.79	SW	123.79	150			VC	17.46425	1 in 65
0303	125.79	CO	123.36	225			VC	40.26164	1 in 84
0301	125.59	CO	123.71	150			VC	20.22375	1 in 81
0351	125.54	SW	124.1	150			VC	21.37756	1 in 97
9301	126.55	SW	124.75	300			VC	79.05694	1 in 68
9301	126.55	SW	124.75	300			VC	79.05694	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
1352	125.54	SW	122.96	300			VC	94.02127	1 in 78
1302	125.69	CO	122.38	225			VC	77.62087	1 in 80
2105	119.72	FO	116.89	150			VC	13.536	1 in 47
2106	119.26	CO	116.6	450			VC	61.78039	1 in 76.2720833
3101	119.26	CO	116.62	225			VC	37.43061	1 in 44
2101	118.59	CO	115.71	450			VC	82.24214	1 in 135
2102	119.87	SW	118.18	225			VC	5.265672	
2217	120.88	FO	118.67	150			VC	24.72985	1 in 14
2104	119.03	SW	114.92	1500			CO	75.45509	1 in 443.853498
2212	122.65	SW	120.01	225			VC	42.60234	1 in 23
3203	119.43	FO	117.2	150			PVC	23.77831	1 in 47
3204	119.28	SW	117.85	225			PVC	28.25806	1 in 105
2215	121.65	FO	118.89	150			VC	18.74032	1 in 85
9101	128.33	CO	124.49	375			VC	84.24303	
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	
0102	121.87	CO	118.41	450			VC	129.4144	1 in 71
0103	122.48	CO	119.17	375			VC	26.99811	1 in 36
0153	122.21	SW	120.16	225			VC	16.40122	1 in 117
0101	121.52	CO	119.19	300			VC	13.92839	1 in 41
0209		FO		150			VC	6.427929	
2216	122.35	FO	119.45	150			VC	8.843946	1 in 16
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
0152	122.62	SW	121	225			VC	17.02939	
0203	124.06	CO	121.65	225			VC	21.2132	1 in 106
0151	122.07	SW	120.18	300			VC	10.04988	
0201	122.4	CO	120.6	225			VC	19.92486	1 in 16
0202	123.99	CO	121.41	225			VC	56.32051	1 in 73
0204	123.75	SW	121.72	300			VC	34	1 in 46
4207	121.12	FO	118.65	300			VC	11.68171	1 in 83
4305	121.34	FO	119.38	150			VC	12.07767	1 in 93
4304	121.32	SW	119.07	750			CO	13.08836	1 in 436
4206	121.17	SW		225			VC	0.3112202	
1406		CO		100			VC	12.503	
4306	121.29	SW	118.89	900			CO	34.8793	1 in 436
4308	121.1	SW	118.81	900			CO	24.9724	1 in 357
5301	121.4	SW	119.22	750			CO	27.19953	1 in 194
4309	121.23	FO	118.99	300			VC	29.9487	1 in 136
4303	121.16	FO	119.41	150			VC	26.51647	1 in 884
5303	121.36	FO	119.58	150			VC	18.86913	1 in 111
4205	121.66	FO	118.77	300			VC	20.71889	1 in 173
4302	121.16	SW	119.13	750			CO	23.67344	1 in 395
3207	121.06	CO	118.51	225			VC	80.39213	1 in 149
4307	121.3	FO	119.25	150			VC	38.29487	1 in 147
4204	121.69	SW	118.74	900			CO	29.29535	1 in 419

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

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

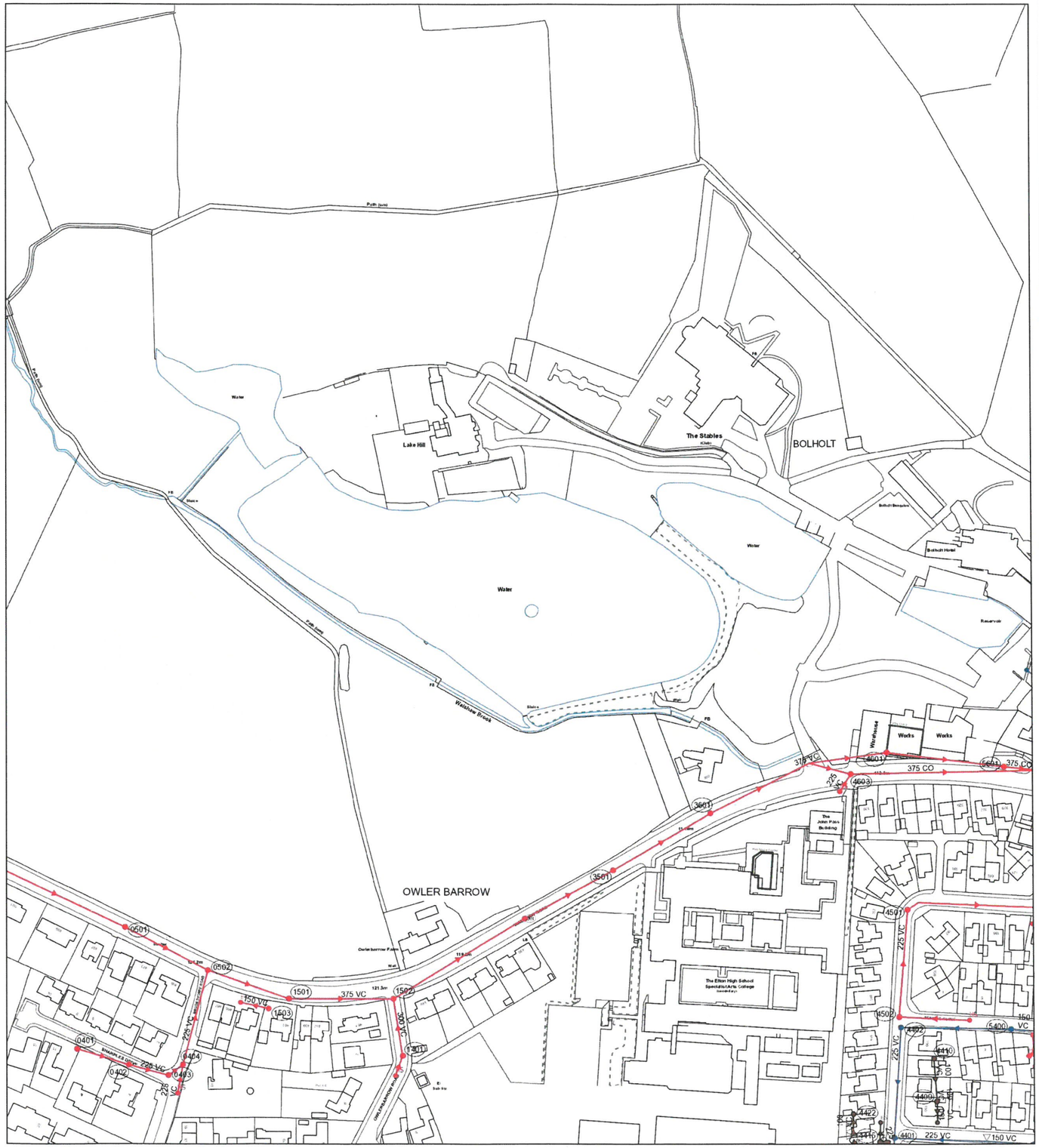
OS sheet Number: SD7812SW
Scale: 1:1250 **Date:** 19/04/2018
Nodes: 177
Sheet: 5 of 8

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.



Refno	Cover	Func	Invert	Size x	Size y	Shape	Matl	Length	Grad
5400	116.79	SW	115.07	225			VC	61.0062	1 in 24
5400	116.79	SW	115.07	225			VC	61.0062	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	105.0894	1 in 64
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	118.96	375			VC	85.75546	1 in 74
1502	121.27	CO	118.96	375			VC	85.75546	1 in 74
1401	122.4	CO	117.52	300			VC	32.38627	1 in 95
1401	122.4	CO	117.52	300			VC	32.38627	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
- 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: SD7811NW
Scale: 1:1250 **Date:** 19/04/2018
Nodes: 51
Sheet: 8 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.

Reece McGuinness

From: Wastewater Developer Services <WastewaterDeveloperServices@uuplc.co.uk>
Sent: 06 January 2020 13:14
To: Reece McGuinness; Wastewater Developer Services
Subject: RE: File Transfer: 4072 - Land at Walshaw Bury Pre-Development Enquiry (HIMOR) - 4200029694

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

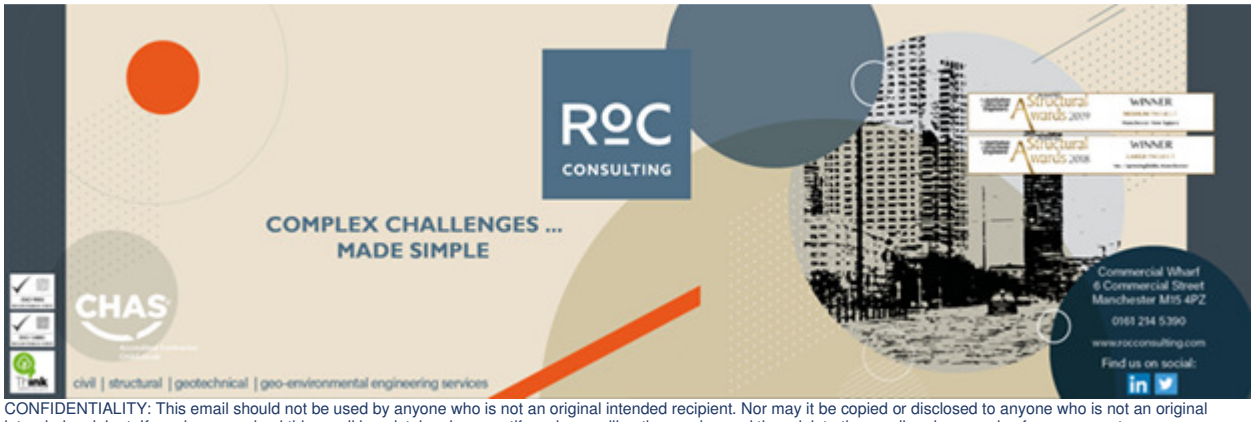
From: Reece McGuinness [mailto:reece.mcguinness@rocconsulting.com]
Sent: 24 December 2019 12:33
To: Wastewater Developer Services <WastewaterDeveloperServices@uuplc.co.uk>
Subject: File Transfer: 4072 - Land at Walshaw Bury Pre-Development Enquiry (HIMOR) - Land at Walshaw, Bury

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 (HIMOR)
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 HIMOR land. **Kind regards** **Reece McGuinness** **Strategic Land Graduate Engineer** T 0161 214 5390 www.rocconsulting.com



Transferred Files

NAME	TYPE	DATE	TIME	SIZE
Transmittal - 00001.pdf	PDF File	12/24/2019	12:37 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
Himor Pre Development Enquiry.pdf	PDF File	12/24/2019	12:22 PM	1,457 KB

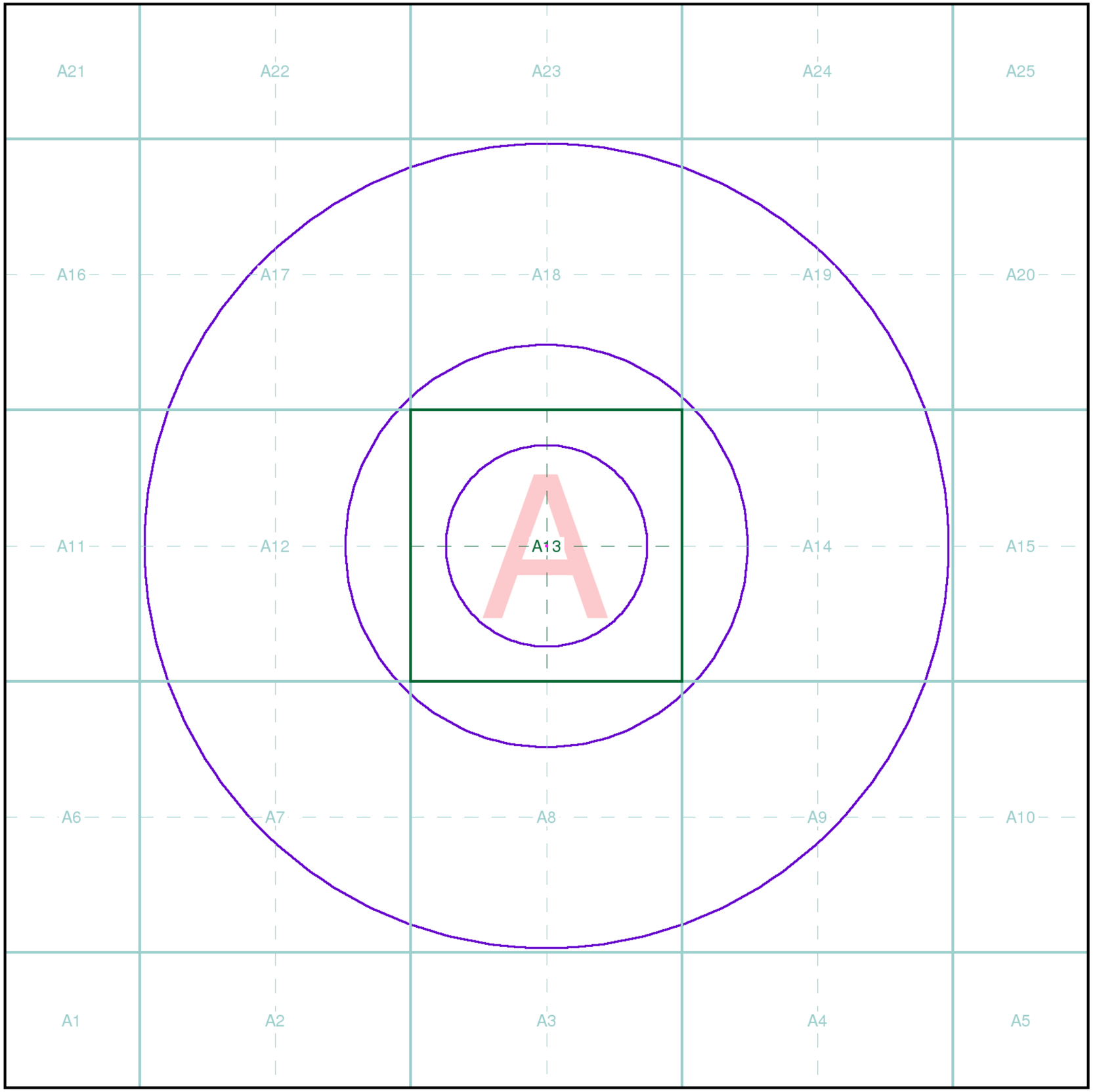
Kind regards
Reece McGuinness
Strategic Land Graduate Engineer
T 0161 214 5390
www.rocconsulting.com

passed on, or arising from the alteration of the contents of this message by a third party.

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

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

APPENDIX E – FLOOD SCREENING REPORT



Envirocheck®

LANDMARK INFORMATION GROUP®

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®
LANDMARK INFORMATION GROUP®

Envirocheck® Report:

Flood Screening Report Datasheet

Order Details:

Order Number:
163324975_1_1

Customer Reference:
180418

National Grid Reference:
378090, 411530

Slice:
A

Site Area (Ha):
0.01

Search Buffer (m):
1000

Site Details:

Walshaw Road
Bury
BL8 3AA

Client Details:

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

Envirocheck®
LANDMARK INFORMATION GROUP®

Contents

Contents

Report Version v53.0

Envirocheck®
LANDMARK INFORMATION GROUP®

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

Report Version v53.0

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

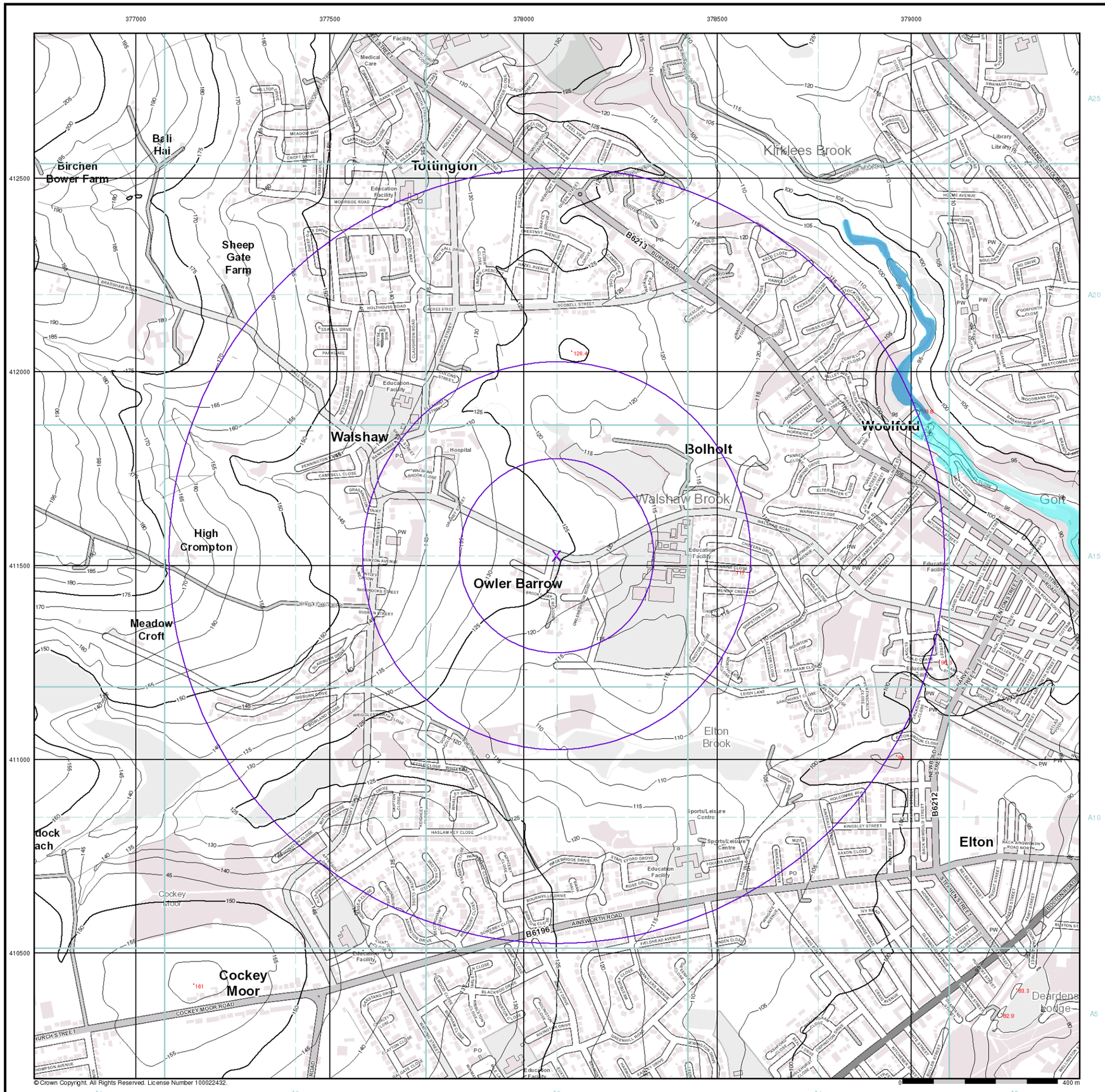
Data Suppliers

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



Envirocheck®

LANDMARK INFORMATION GROUP®

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

General

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

Flood Data

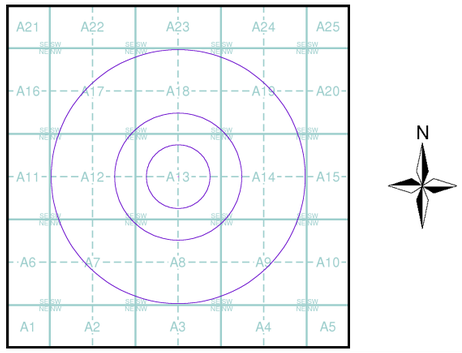
- Extreme Flooding from Rivers or Sea without Defences (Zone 2)
- Flooding from Rivers or Sea without Defences (Zone 3)
- Area Benefiting from Flood Defence
- Flood Water Storage Areas
- Flood Defence

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



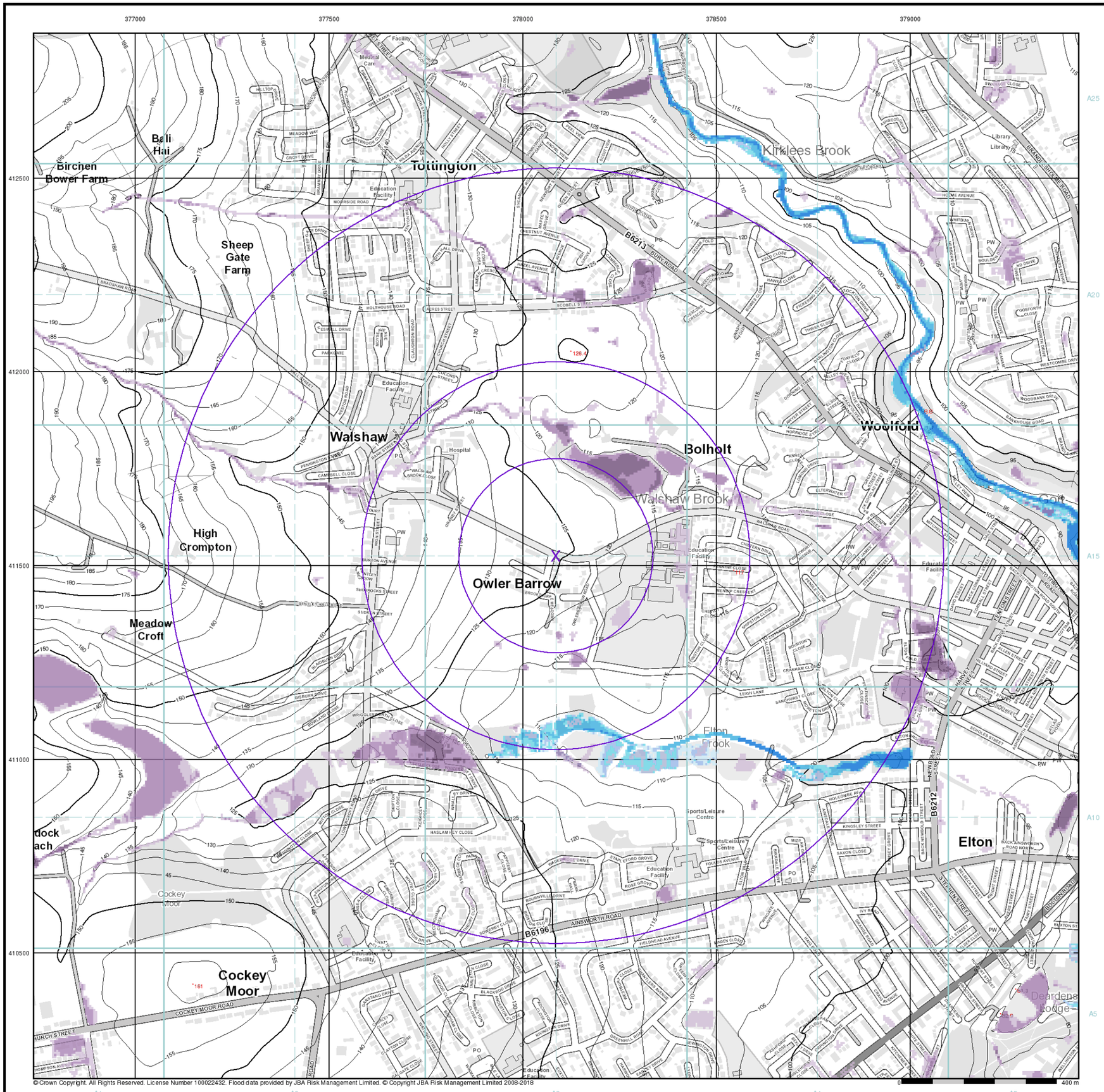
Order Details

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

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



Envirocheck®

LANDMARK INFORMATION GROUP®

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

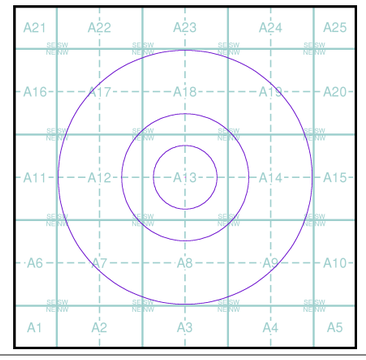
Contours (height in metres)

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

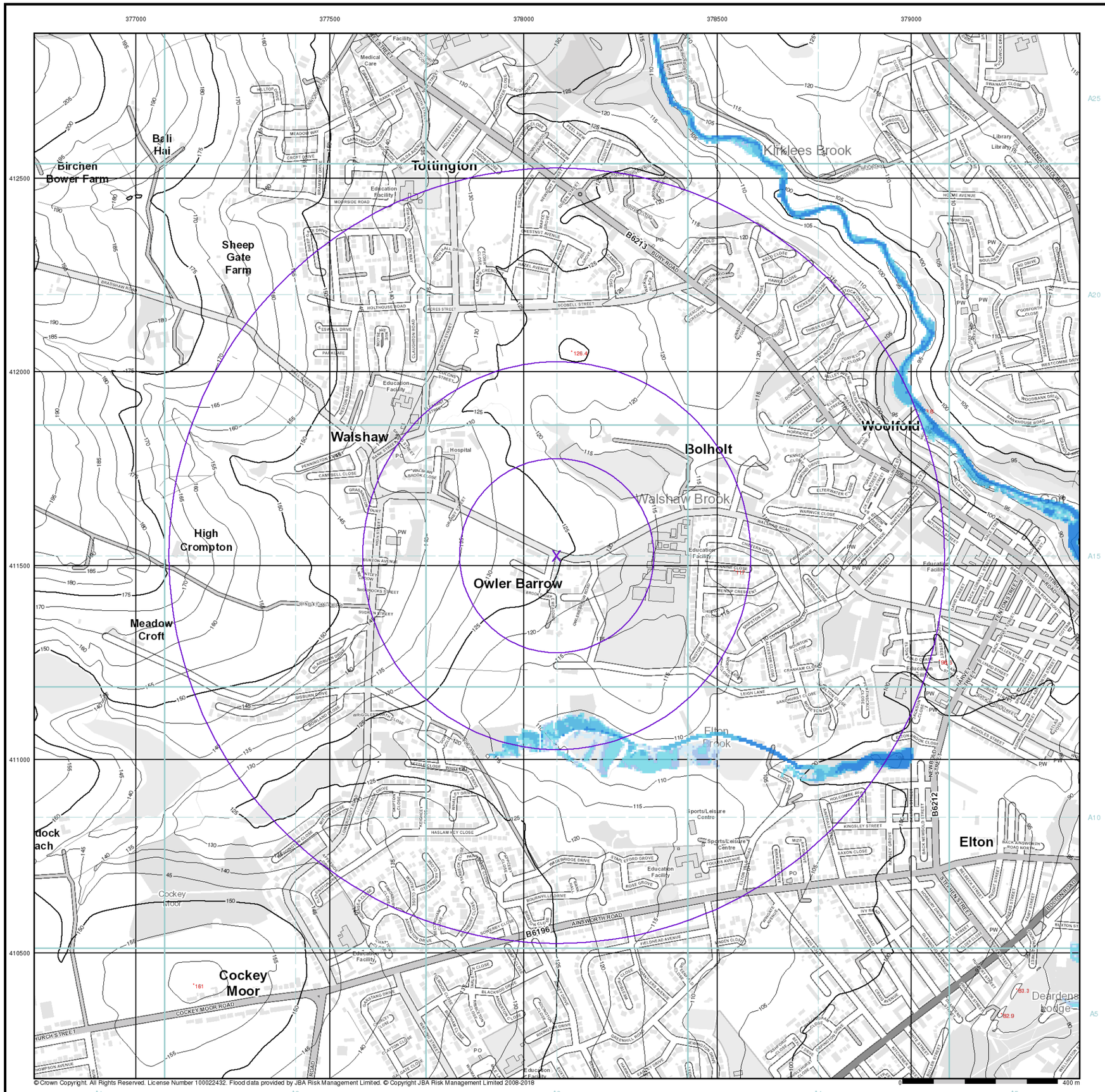
Order Number:	163324975_1_1
Customer Ref:	180418
National Grid Reference:	378090, 411530
Slice:	A
Site Area (Ha):	0.01
Search Buffer (m):	1000

Site Details

Walshaw Road, Bury, BL8 3AA

Landmark INFORMATION GROUP

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



Envirocheck®

LANDMARK INFORMATION GROUP®

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

General

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

Modelled Flood Depth

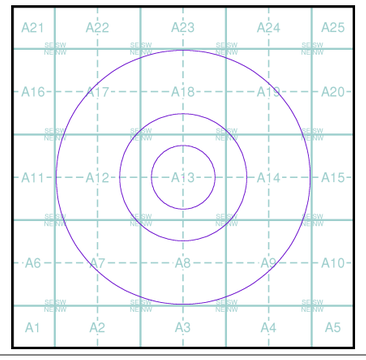
Fluvial Depth	Coastal Depth
0.01m - 0.05m	0.01m - 0.05m
0.05m - 0.1m	0.05m - 0.1m
0.1m - 0.3m	0.1m - 0.3m
0.3m - 1m	0.3m - 1m
>1m	>1m

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



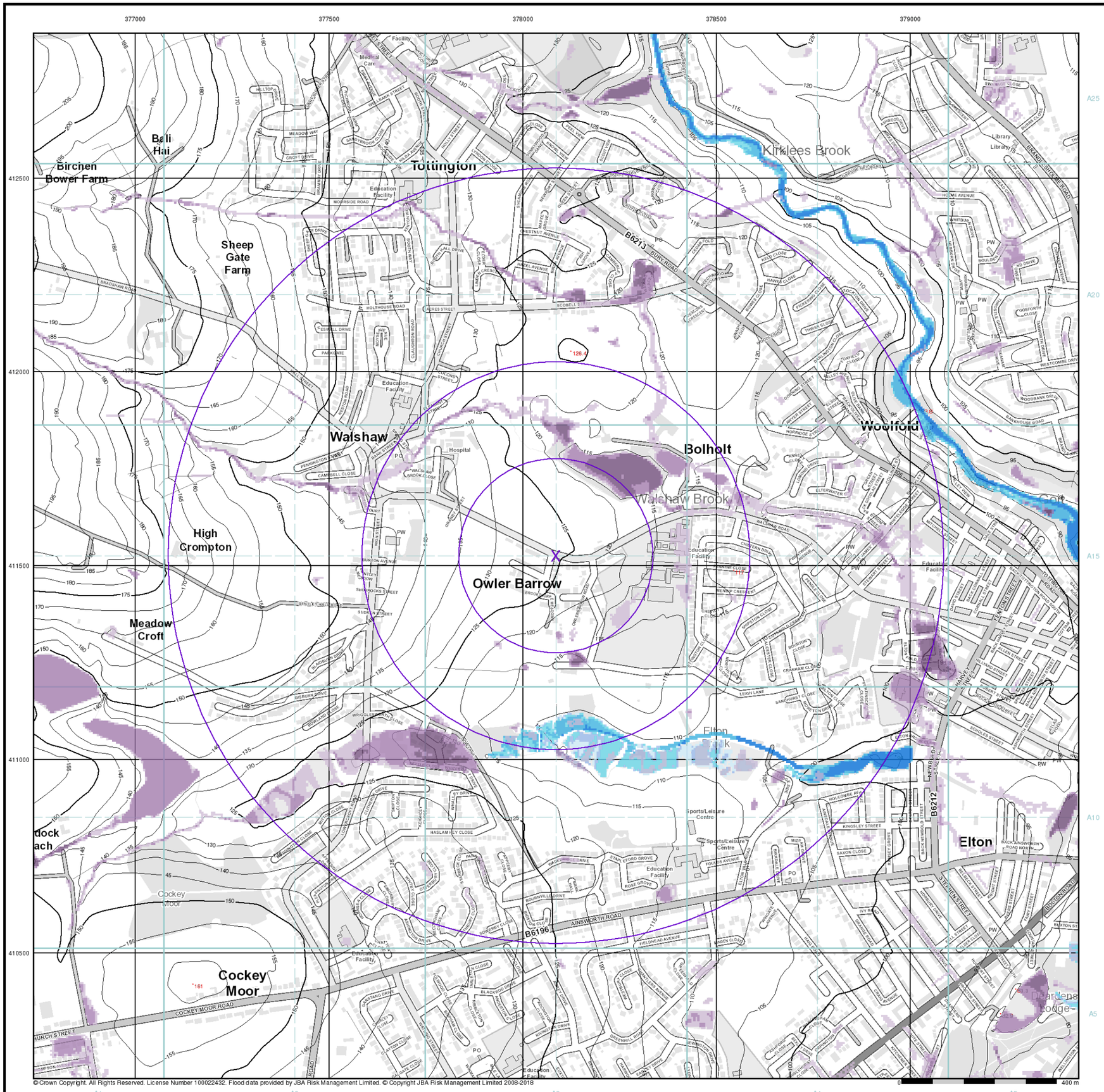
Order Details

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

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



Envirocheck®

LANDMARK INFORMATION GROUP®

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

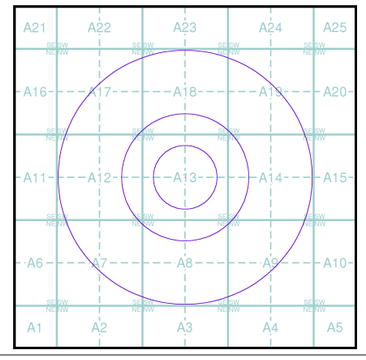
Master Contour

Spot Height 157.8

MLW Mean Low Water

MHW Mean High Water

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



Order Details

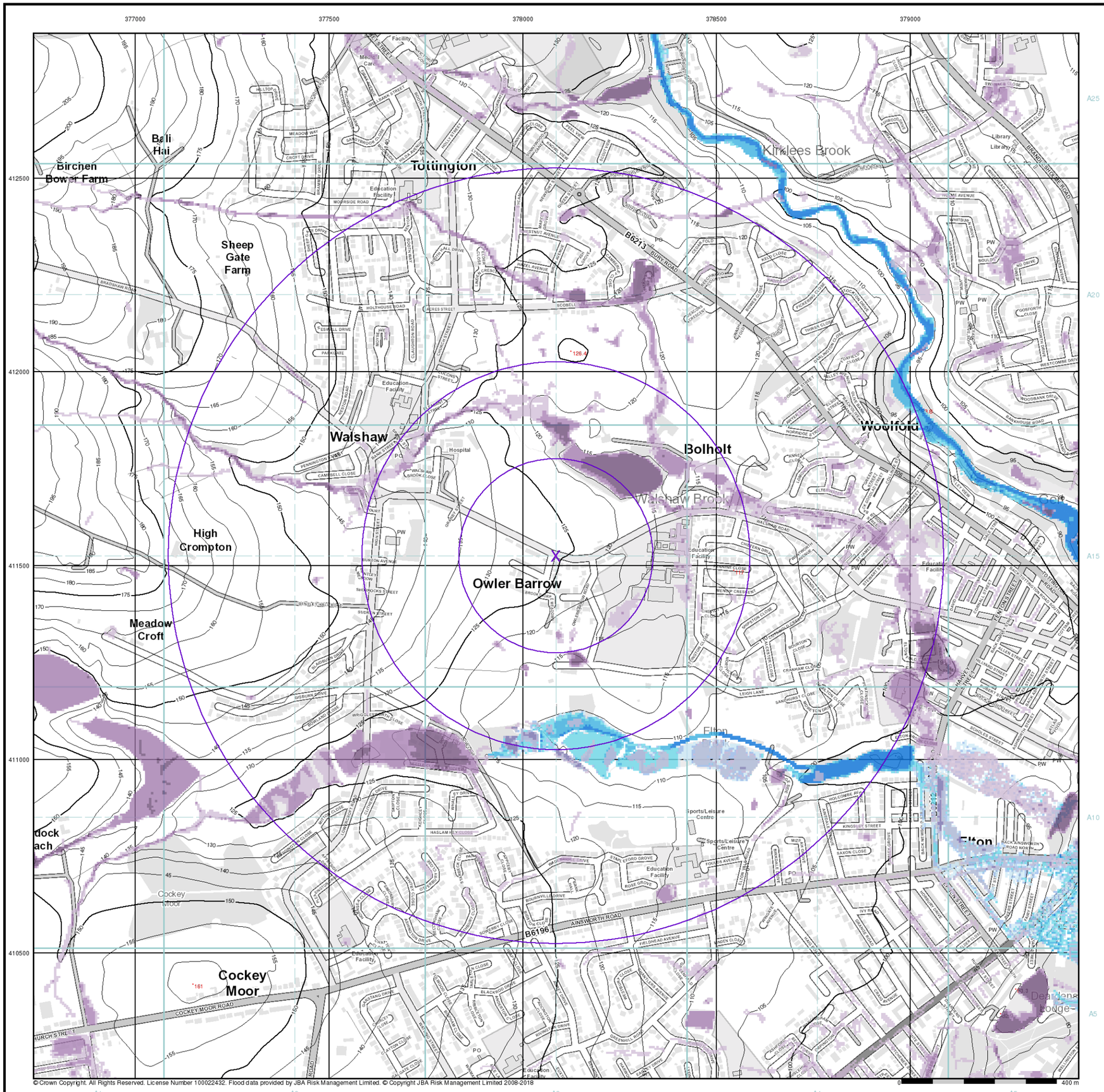
Order Number:	163324975_1_1
Customer Ref:	180418
National Grid Reference:	378090, 411530
Slice:	A
Site Area (Ha):	0.01
Search Buffer (m):	1000

Site Details

Walshaw Road, Bury, BL8 3AA

Landmark INFORMATION GROUP

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



Envirocheck®

LANDMARK INFORMATION GROUP®

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

General

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

Modelled Flood Depth

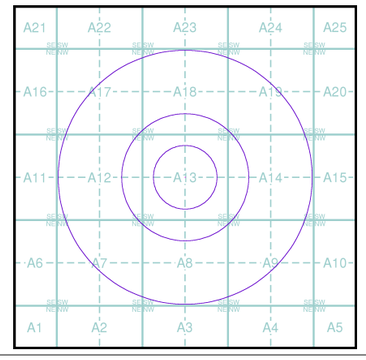
Pluvial Depth	Fluvial Depth	Coastal Depth
0.1m	0.01m - 0.05m	0.01m - 0.05m
0.1m - 0.3m	0.05m - 0.1m	0.05m - 0.1m
0.3m - 1m	0.1m - 0.3m	0.1m - 0.3m
>1m	0.3m - 1m	0.3m - 1m
	>1m	>1m

Contours (height in metres)

Standard Contour 105
Master Contour 100
Spot Height 157.8

MLW Mean Low Water
MHW Mean High Water

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

Walshaw Road, Bury, BL8 3AA

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

Envirocheck®

LANDMARK INFORMATION GROUP®

JBA Canal Failure Map (1:10,000)

General

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

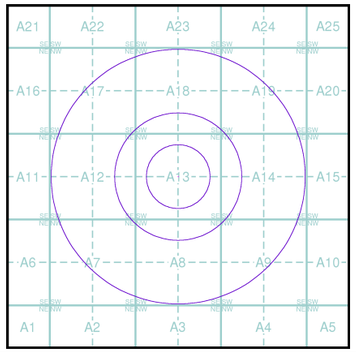
Flood Data

- Canal Failure
- Coverage

Contours (height in metres)

- Standard Contour
- Master Contour
- Spot Height *167.8
- MLW Mean Low Water
- MHW Mean High Water

JBA Canal Failure Flood Map - Slice A



Order Details

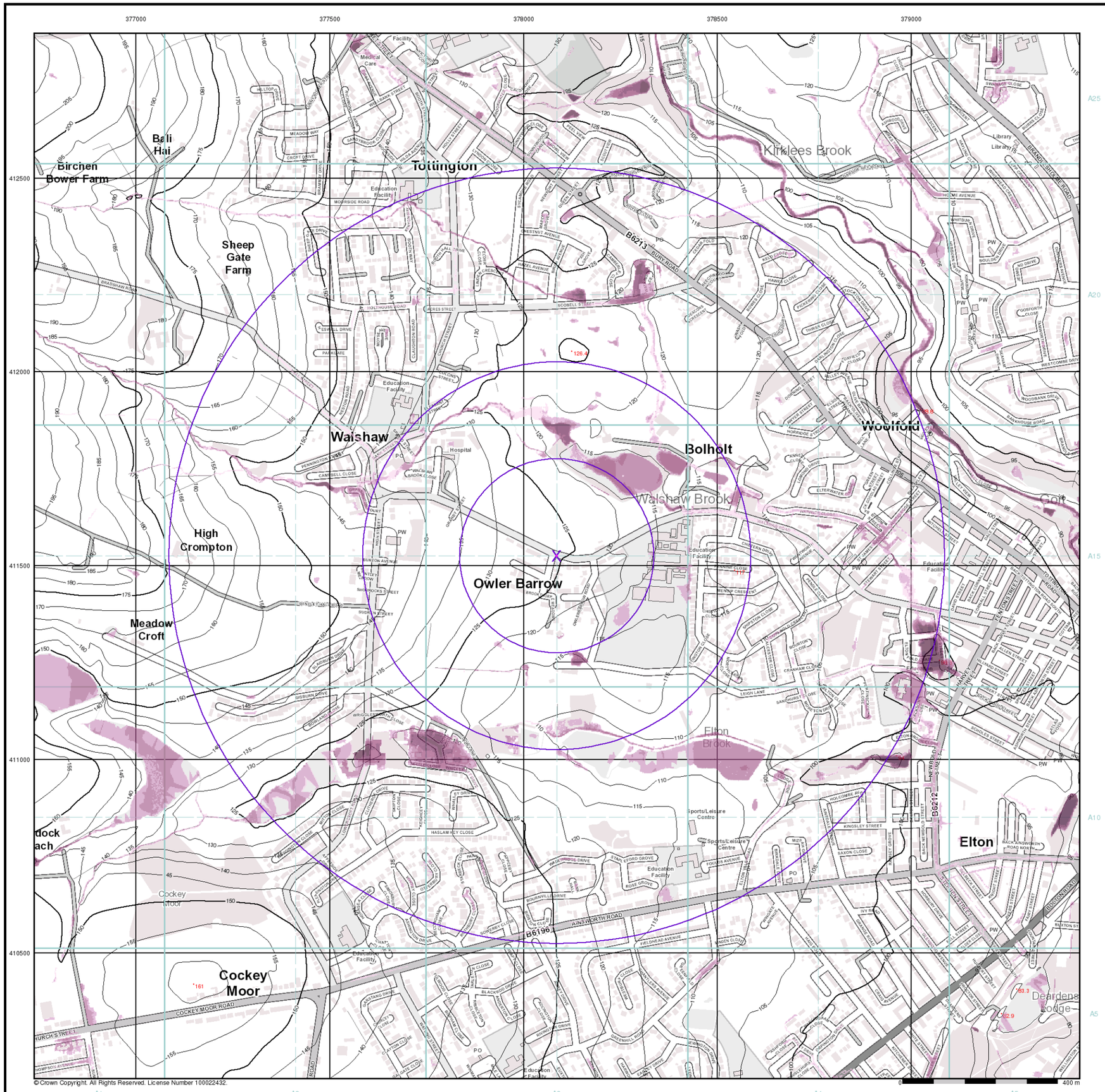
Order Number:	163324975_1_1
Customer Ref:	180418
National Grid Reference:	378090, 411530
Slice:	A
Site Area (Ha):	0.01
Search Buffer (m):	1000

Site Details

Walshaw Road, Bury, BL8 3AA

Landmark® INFORMATION GROUP

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



Envirocheck®

LANDMARK INFORMATION GROUP®

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 105 | Master Contour 100 95 | Spot Height *167.8

MLW Mean Low Water

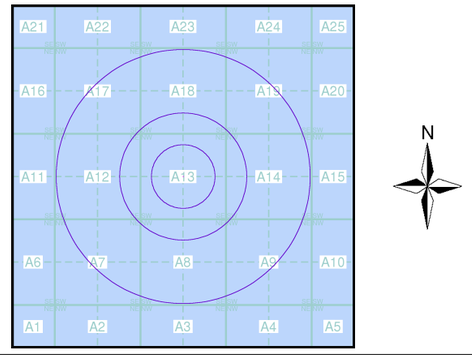
MHW Mean High Water

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

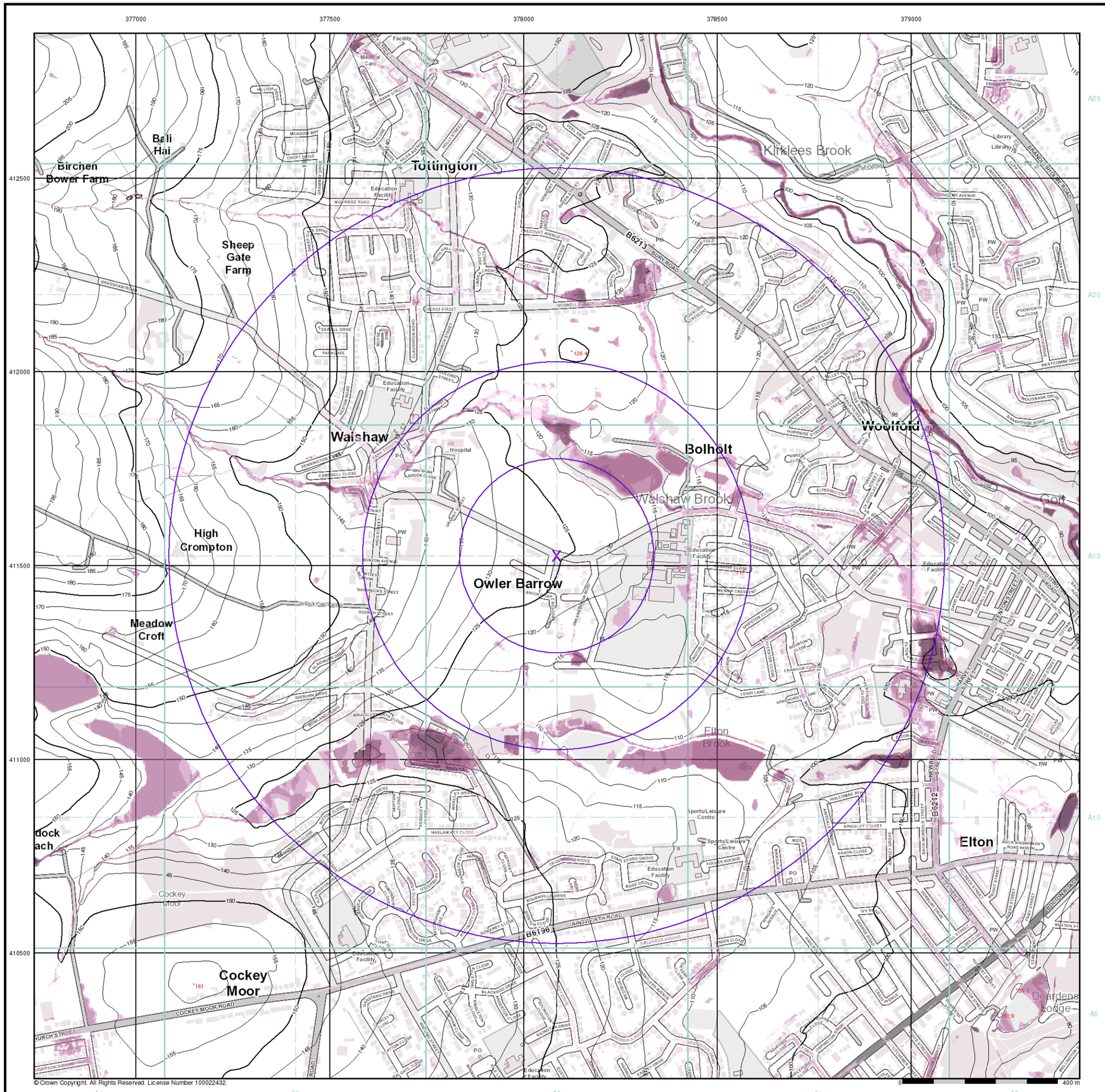
Order Number:	163324975_1_1
Customer Ref:	180418
National Grid Reference:	378090, 411530
Slice:	A
Site Area (Ha):	0.01
Search Buffer (m):	1000

Site Details

Walshaw Road, Bury, BL8 3AA

Landmark INFORMATION GROUP

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



Envirocheck®

LANDMARK INFORMATION GROUP®

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

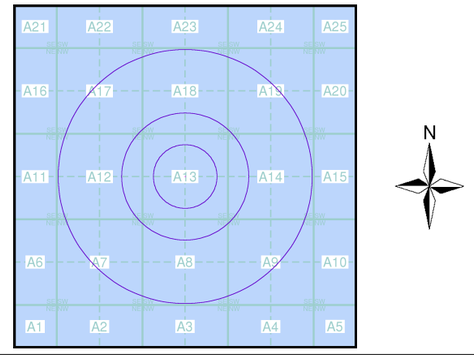
MHW Mean High Water

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

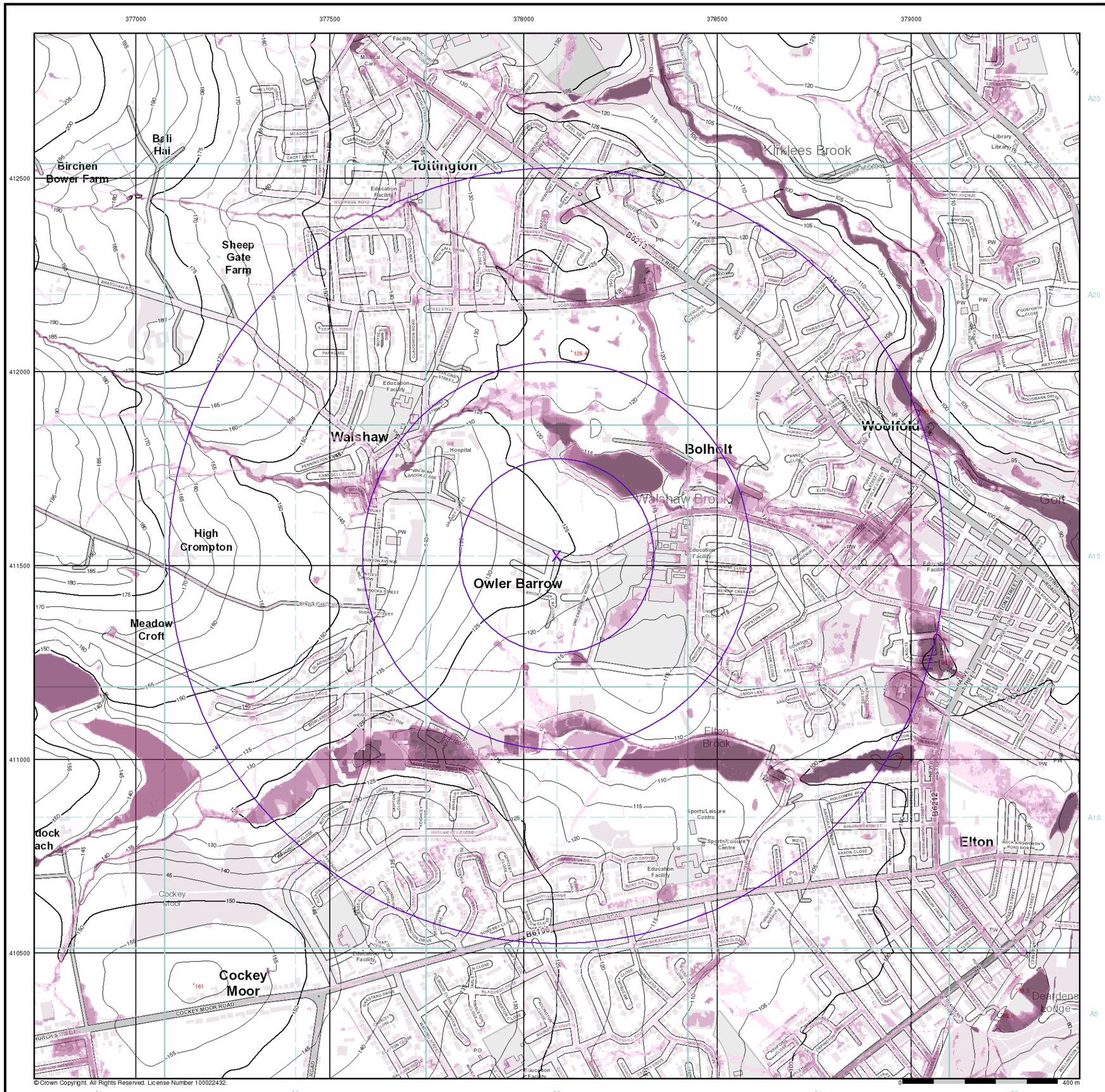
Order Number:	163324975_1_1
Customer Ref:	180418
National Grid Reference:	378090, 411530
Slice:	A
Site Area (Ha):	0.01
Search Buffer (m):	1000

Site Details

Walshaw Road, Bury, BL8 3AA

Landmark INFORMATION GROUP

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



Envirocheck®

LANDMARK INFORMATION GROUP®

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 | Master Contour | Spot Height *167.8

MLW Mean Low Water

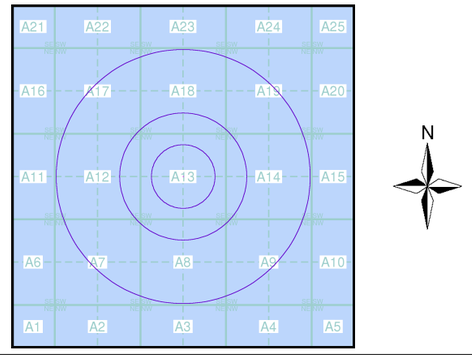
MHW Mean High Water

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

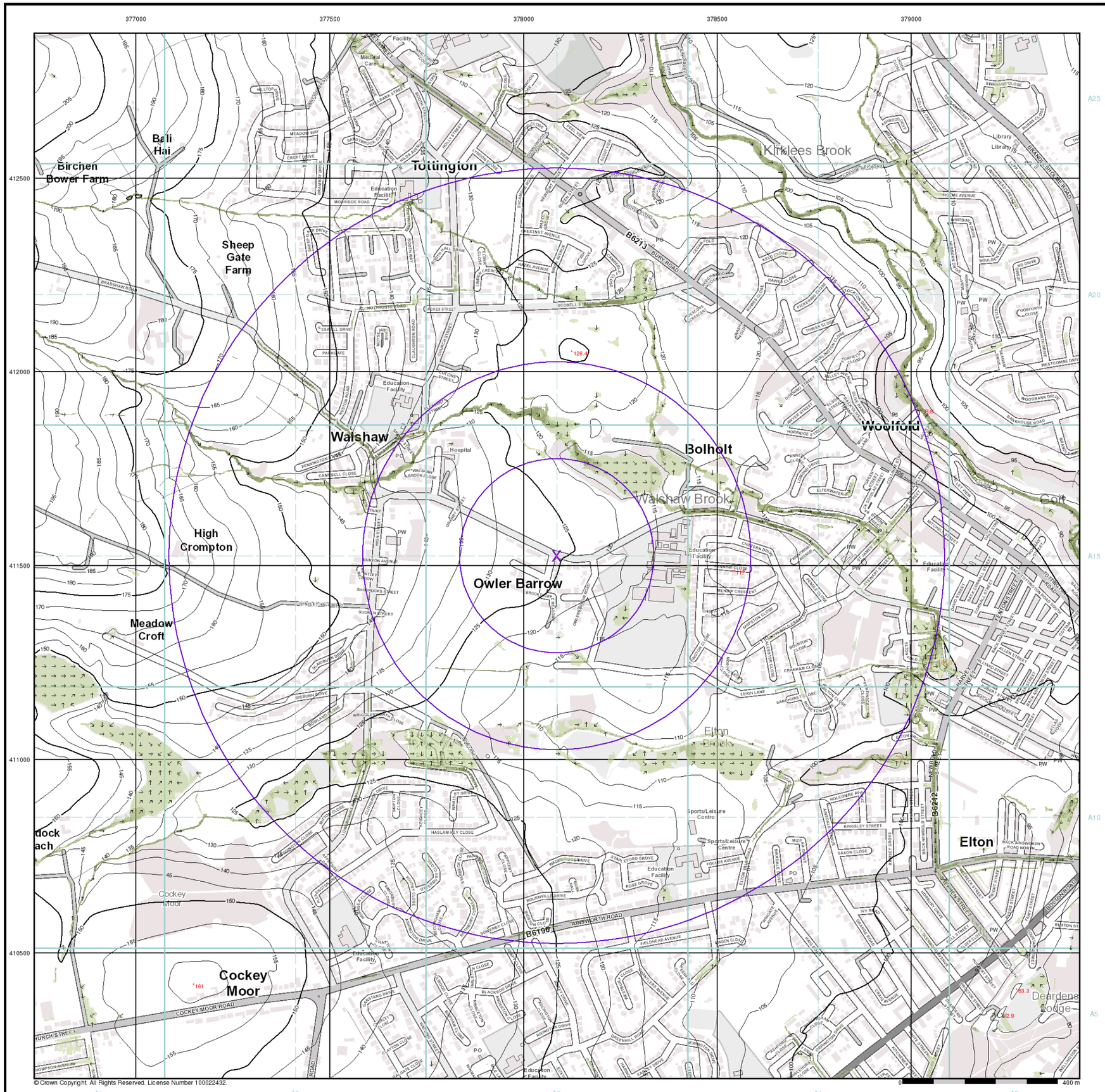
Order Number:	163324975_1_1
Customer Ref:	180418
National Grid Reference:	378090, 411530
Slice:	A
Site Area (Ha):	0.01
Search Buffer (m):	1000

Site Details

Walshaw Road, Bury, BL8 3AA

Landmark INFORMATION GROUP

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



Envirocheck®

LANDMARK INFORMATION GROUP®

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

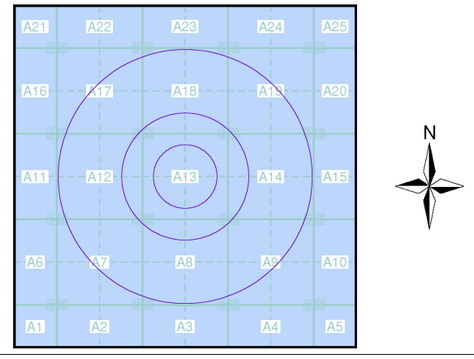
MLW Mean Low Water
MHW Mean High Water

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



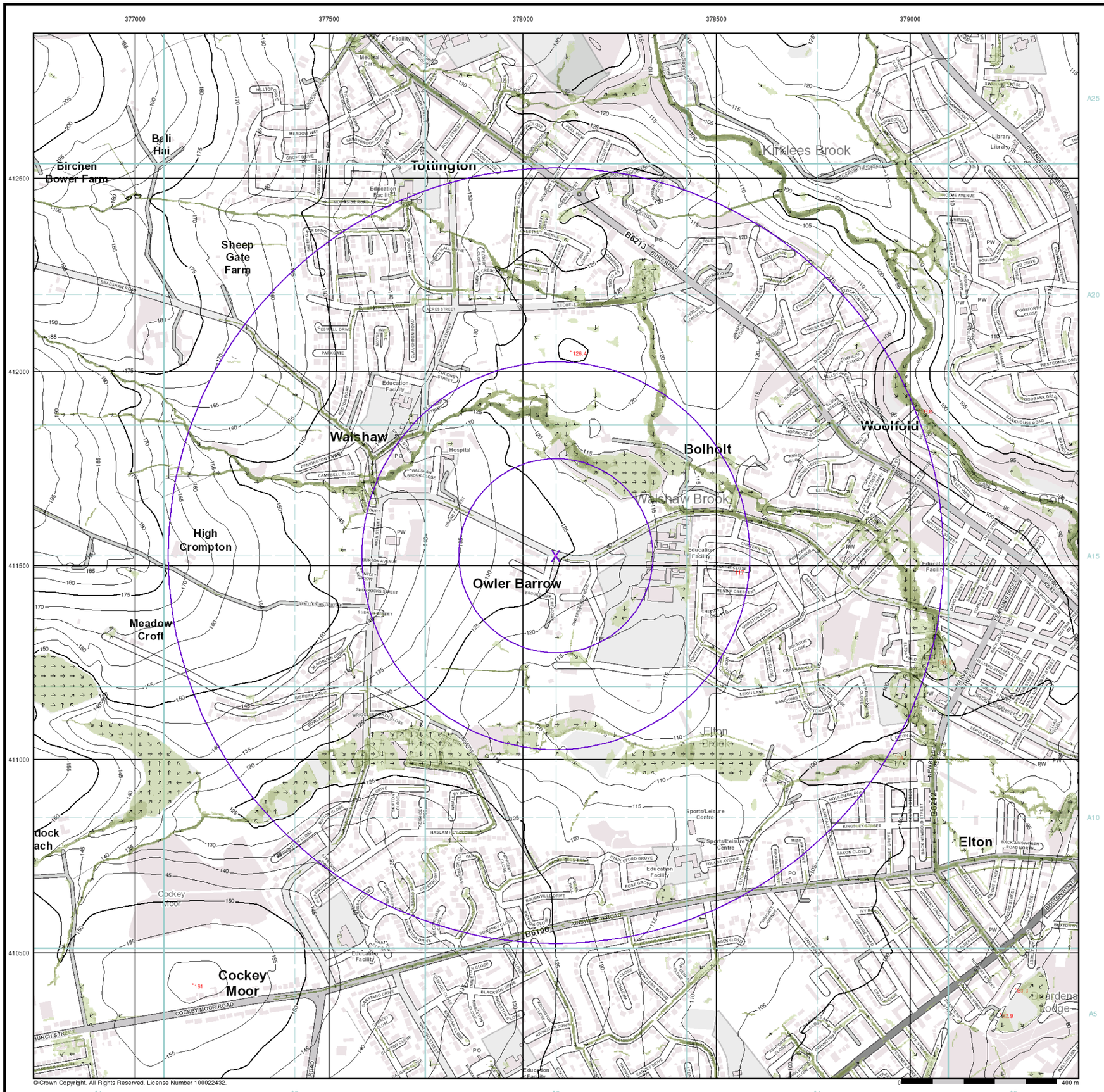
Order Details

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



Envirocheck®

LANDMARK INFORMATION GROUP®

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 | Master Contour | Spot Height *167.8

MLW Mean Low Water

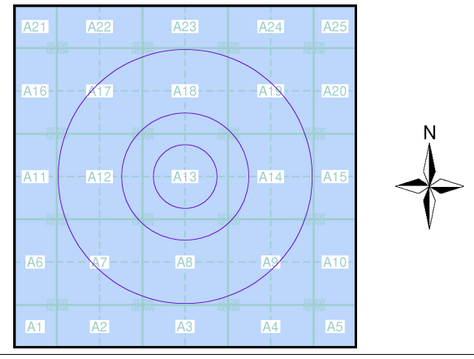
MHW Mean High Water

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



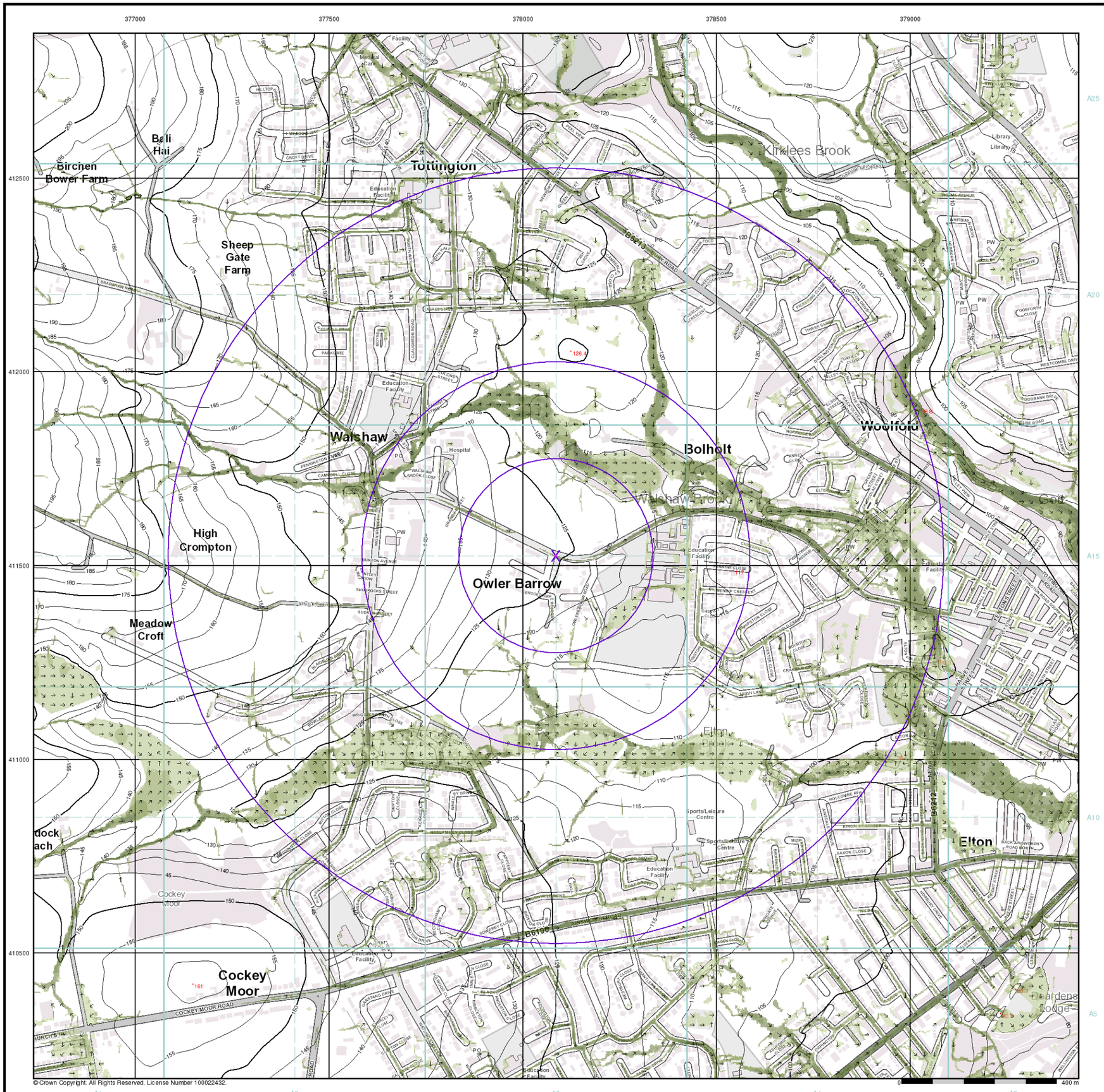
Order Details

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



Envirocheck®

LANDMARK INFORMATION GROUP®

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
Spot Height *167.8

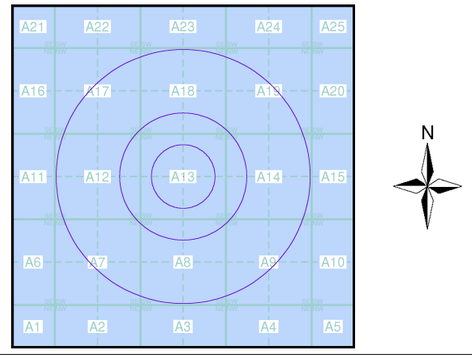
MLW Mean Low Water
MHW Mean High Water

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



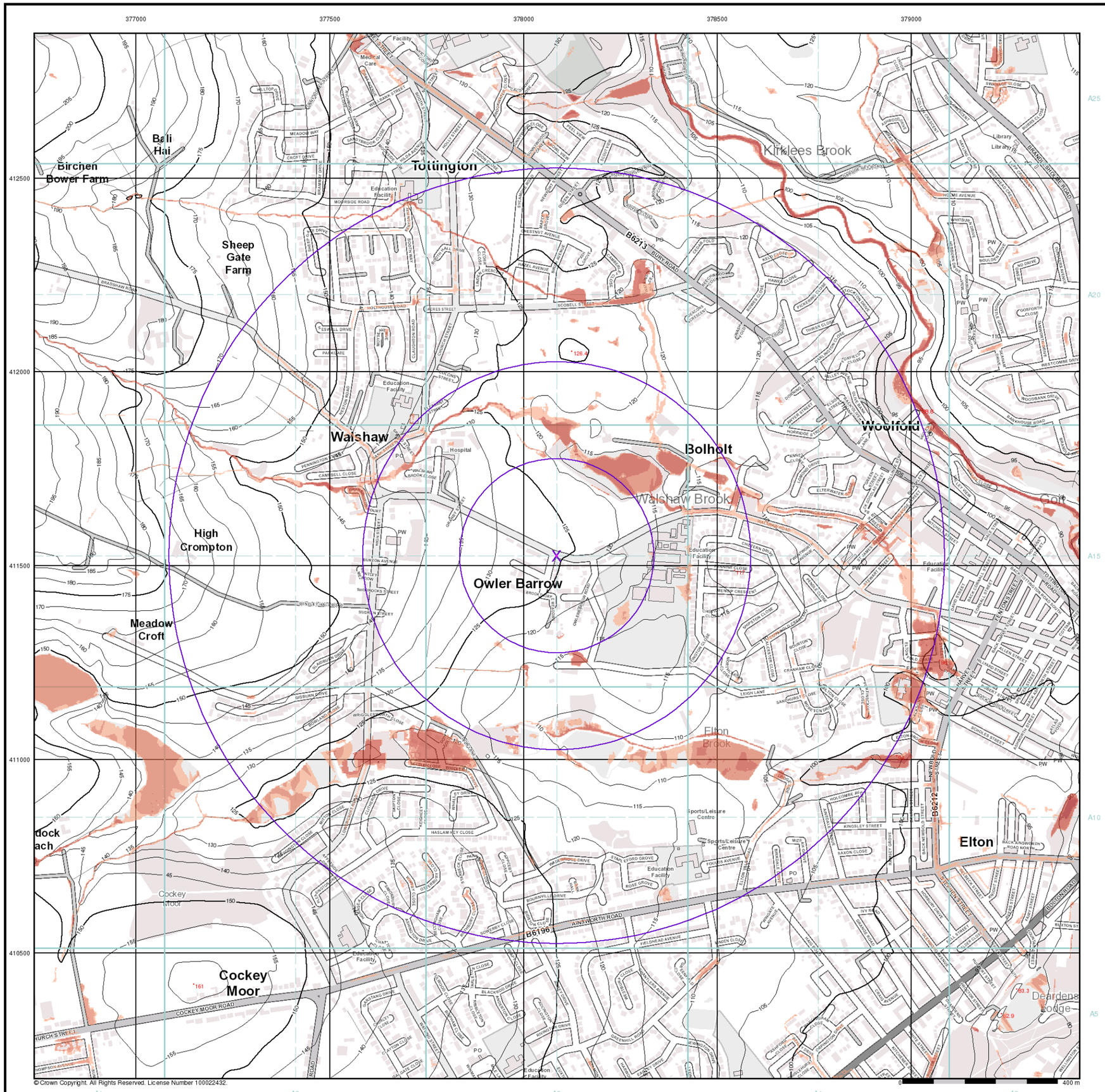
Order Details

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



Envirocheck®

LANDMARK INFORMATION GROUP®

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

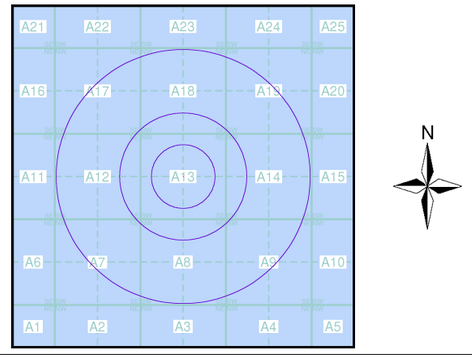
MHW Mean High Water

Suitability

See the suitability map below

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

EA/NRW Suitability Map - Slice A



Order Details

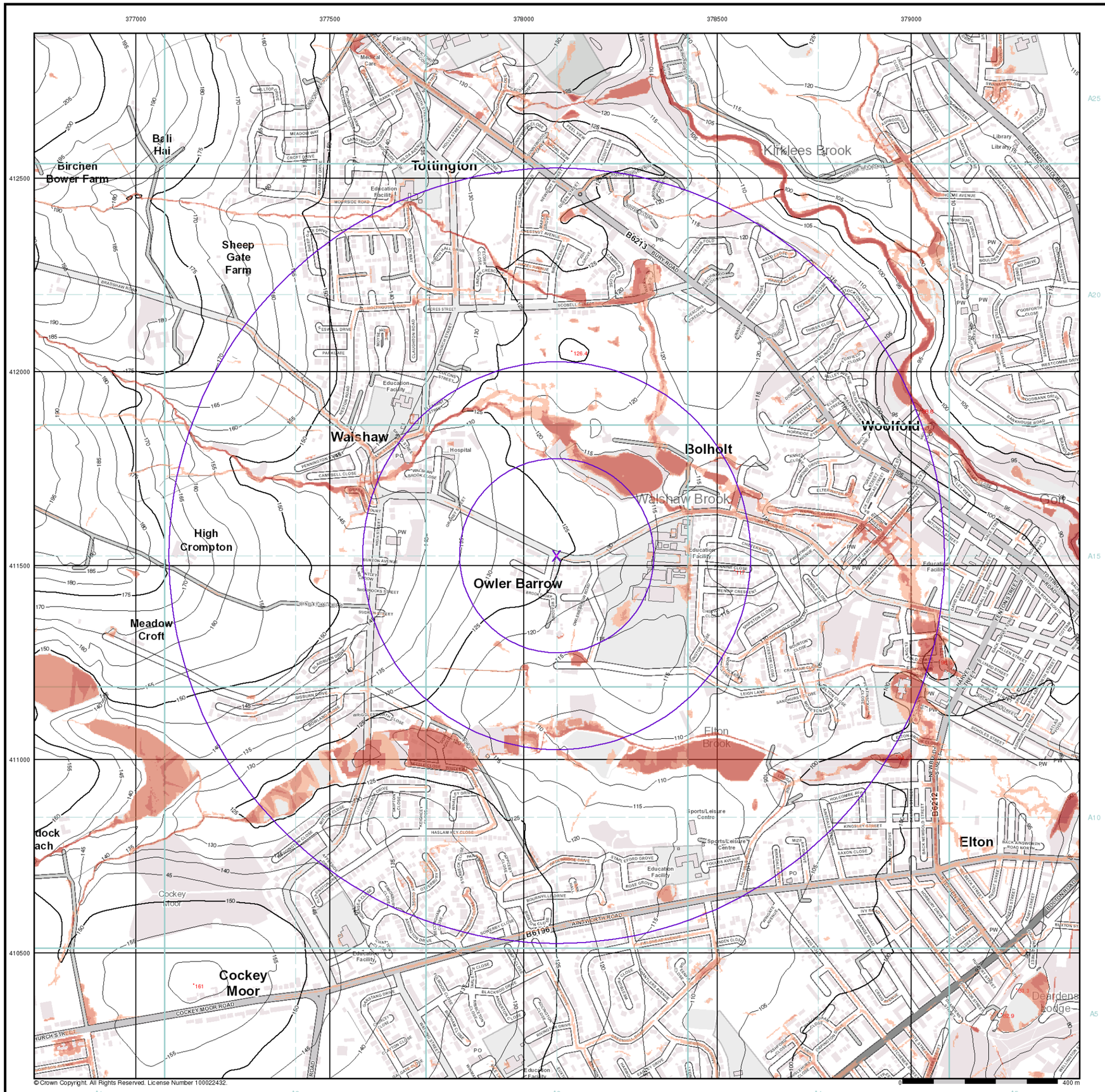
Order Number:	163324975_1_1
Customer Ref:	180418
National Grid Reference:	378090, 411530
Slice:	A
Site Area (Ha):	0.01
Search Buffer (m):	1000

Site Details

Walshaw Road, Bury, BL8 3AA

Landmark INFORMATION GROUP

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



Envirocheck®

LANDMARK INFORMATION GROUP®

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)
- 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

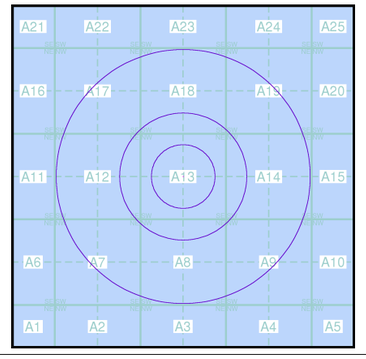
MHW Mean High Water

Suitability

See the suitability map below

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

EA/NRW Suitability Map - Slice A



Order Details

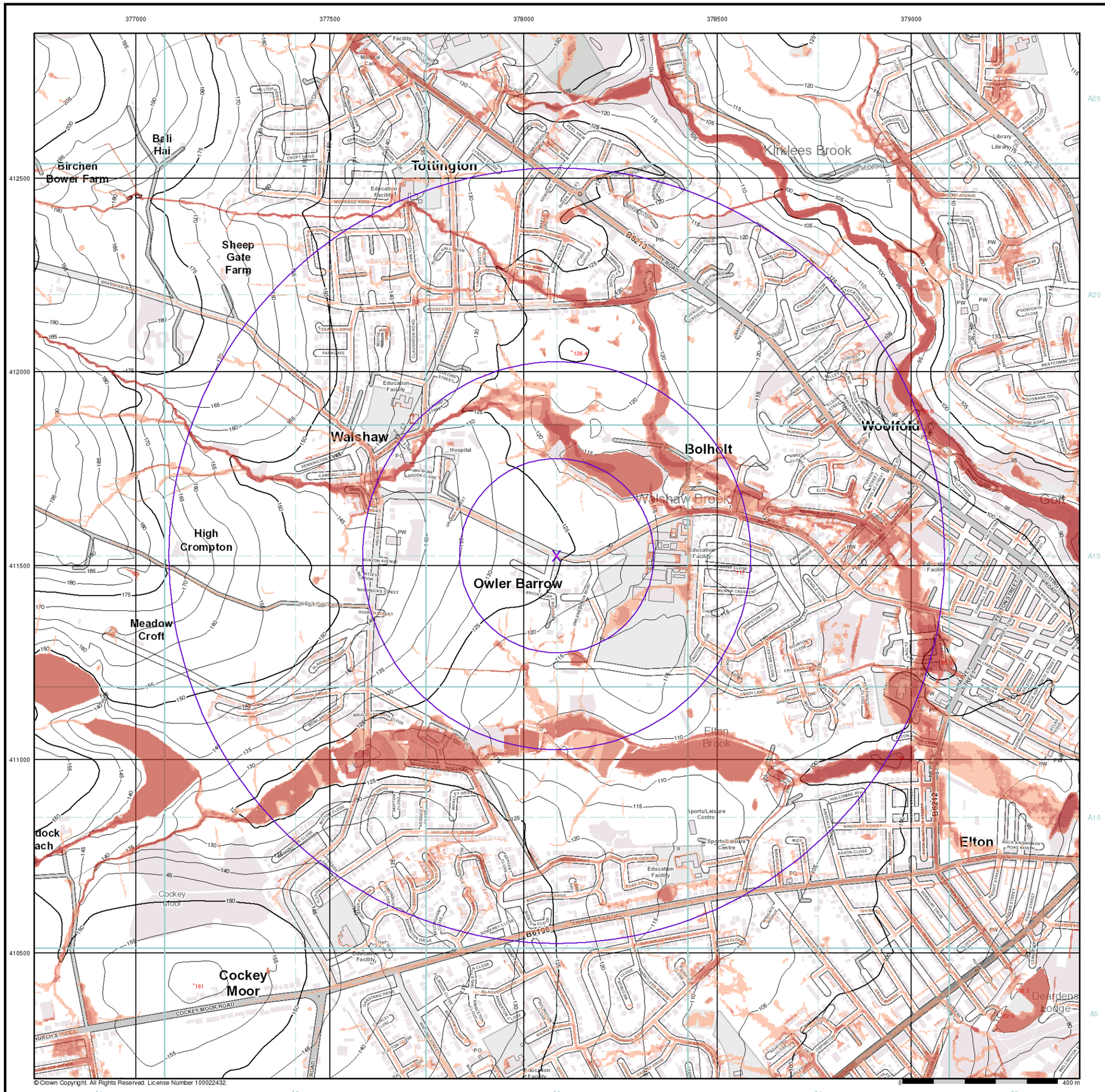
Order Number:	163324975_1_1
Customer Ref:	180418
National Grid Reference:	378090, 411530
Slice:	A
Site Area (Ha):	0.01
Search Buffer (m):	1000

Site Details

Walshaw Road, Bury, BL8 3AA

Landmark INFORMATION GROUP

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



Envirocheck®

LANDMARK INFORMATION GROUP®

EA/NRW Surface Water 1000 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

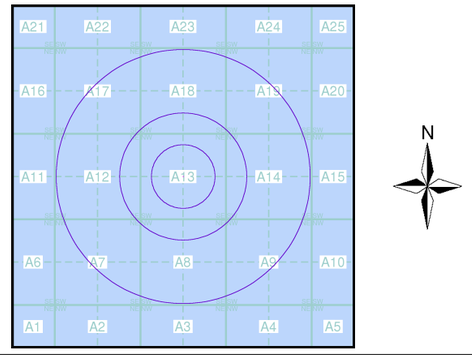
MHW Mean High Water

Suitability

See the suitability map below

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

EA/NRW Suitability Map - Slice A



Order Details

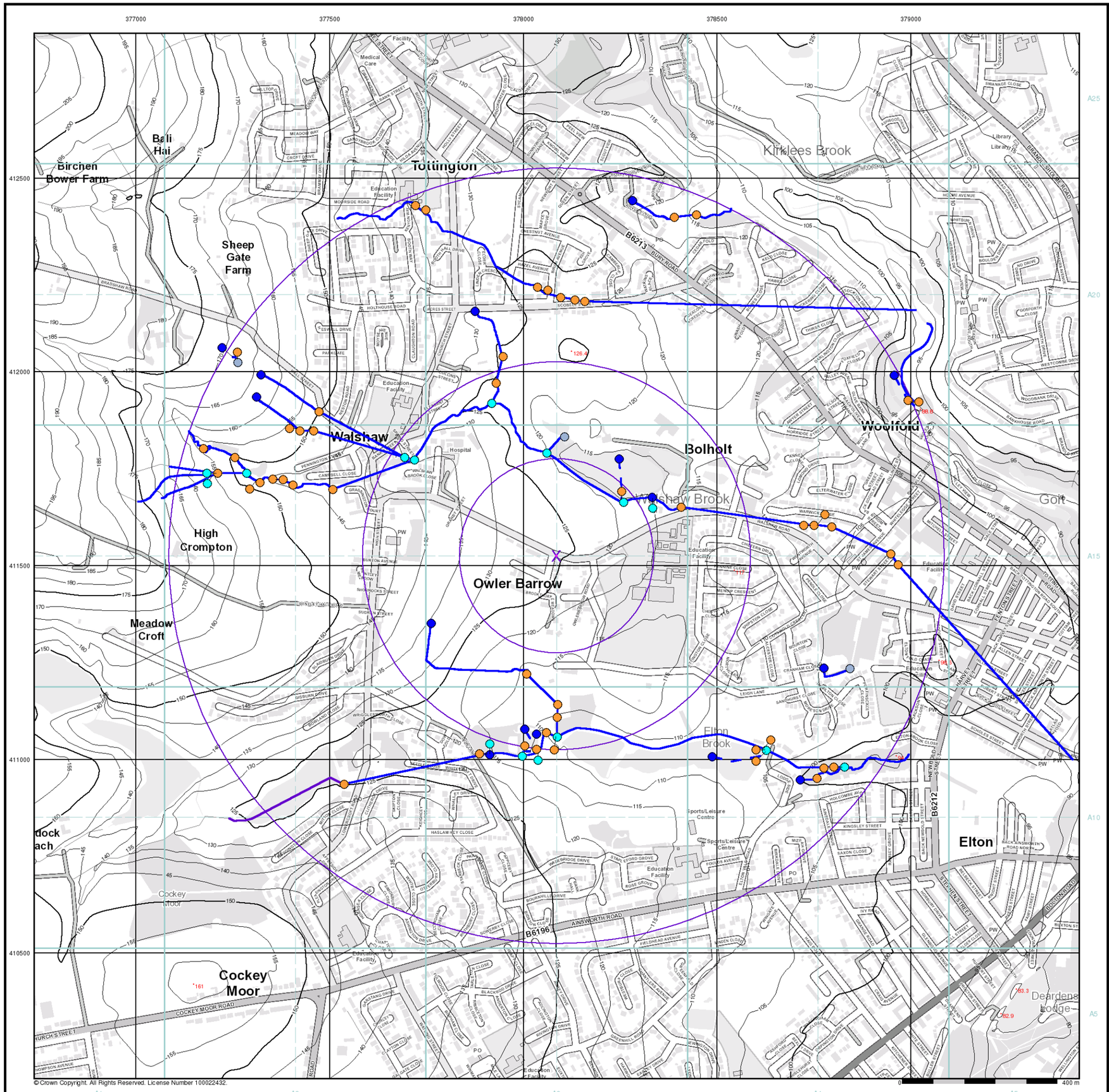
Order Number:	163324975_1_1
Customer Ref:	180418
National Grid Reference:	378090, 411530
Slice:	A
Site Area (Ha):	0.01
Search Buffer (m):	1000

Site Details

Walshaw Road, Bury, BL8 3AA

Landmark INFORMATION GROUP

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



Envirocheck®

LANDMARK INFORMATION GROUP®

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

General

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

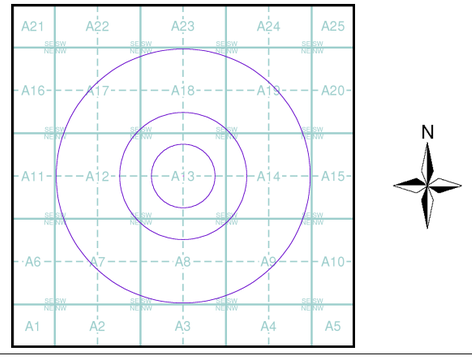
OS Water Network Data

- 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, 95)
- Spot Height *167.3
- MLW Mean Low Water
- MHW Mean High Water

OS Water Network 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

Envirocheck®

LANDMARK INFORMATION GROUP®

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

General

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

Historic Flood Events Data

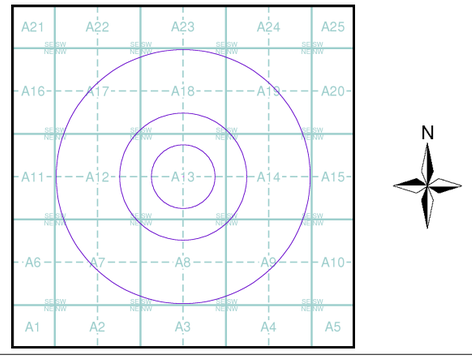
- Channel Capacity Exceeded (no raised defences)
- Channel Capacity Exceeded /Surface Water
- Groundwater/High Water Table
- Local Drainage/Surface Water
- Mechanical Failure
- Obstruction/Blockage - Bridge
- Obstruction/Blockage - Channel
- Historical Flood Liabilities
- Obstruction/Blockage - Culvert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

Contours (height in metres)

Standard Contour 105
Master Contour 100
Spot Height 167.8

MLW Mean Low Water
MHW Mean High Water

EA/NRW Historic Flood Map - Slice A



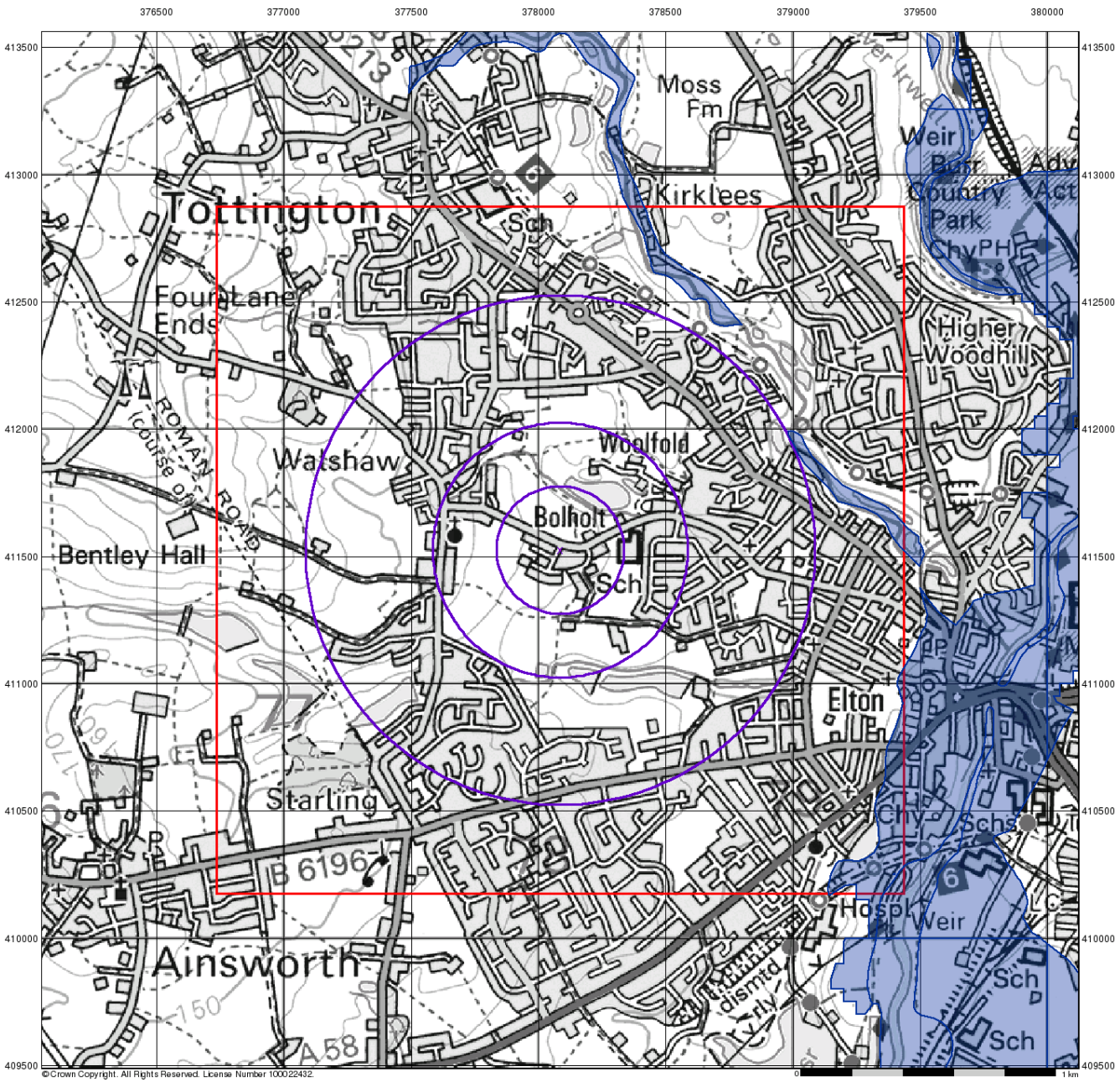
Order Details

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

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



Envirocheck®

LANDMARK INFORMATION GROUP®

BGS Flood Data (1:50,000)

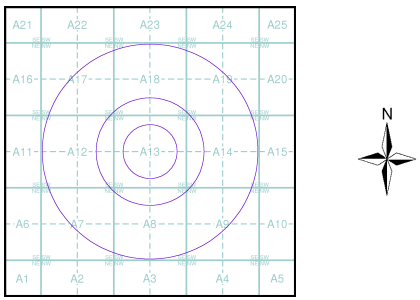
General

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



Order Details

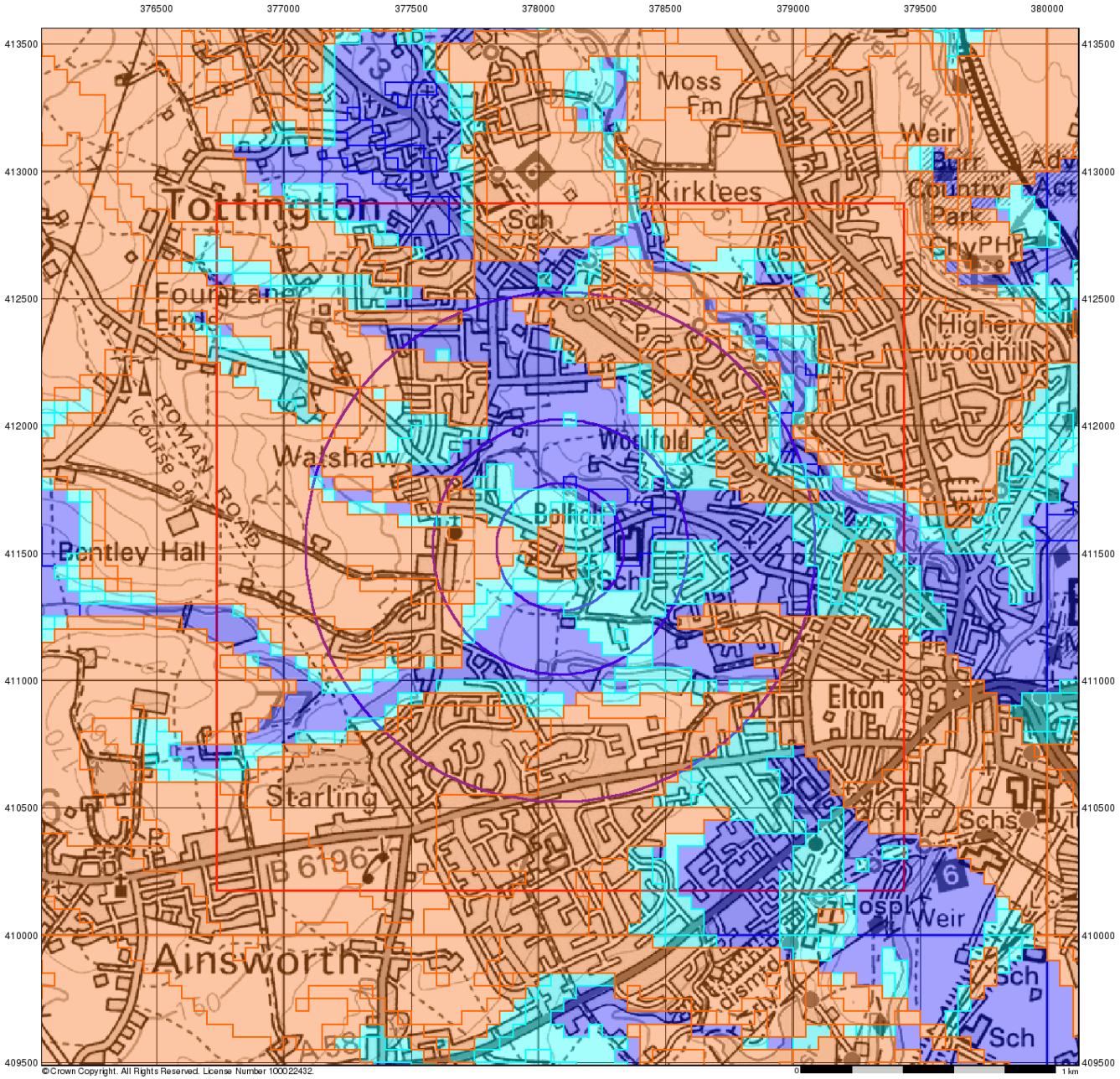
Order Number:	163324975_1_1
Customer Ref:	180418
National Grid Reference:	378090, 411530
Slice:	A
Site Area (Ha):	0.01
Search Buffer (m):	1000

Site Details

Walshaw Road, Bury, BL8 3AA

Landmark® INFORMATION GROUP

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



Envirocheck®

LANDMARK INFORMATION GROUP®

BGS Flood Data (1:50,000)

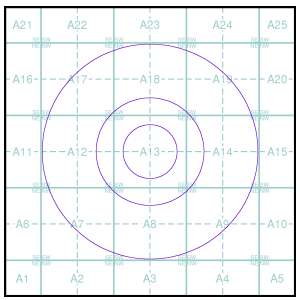
General

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



Order Details

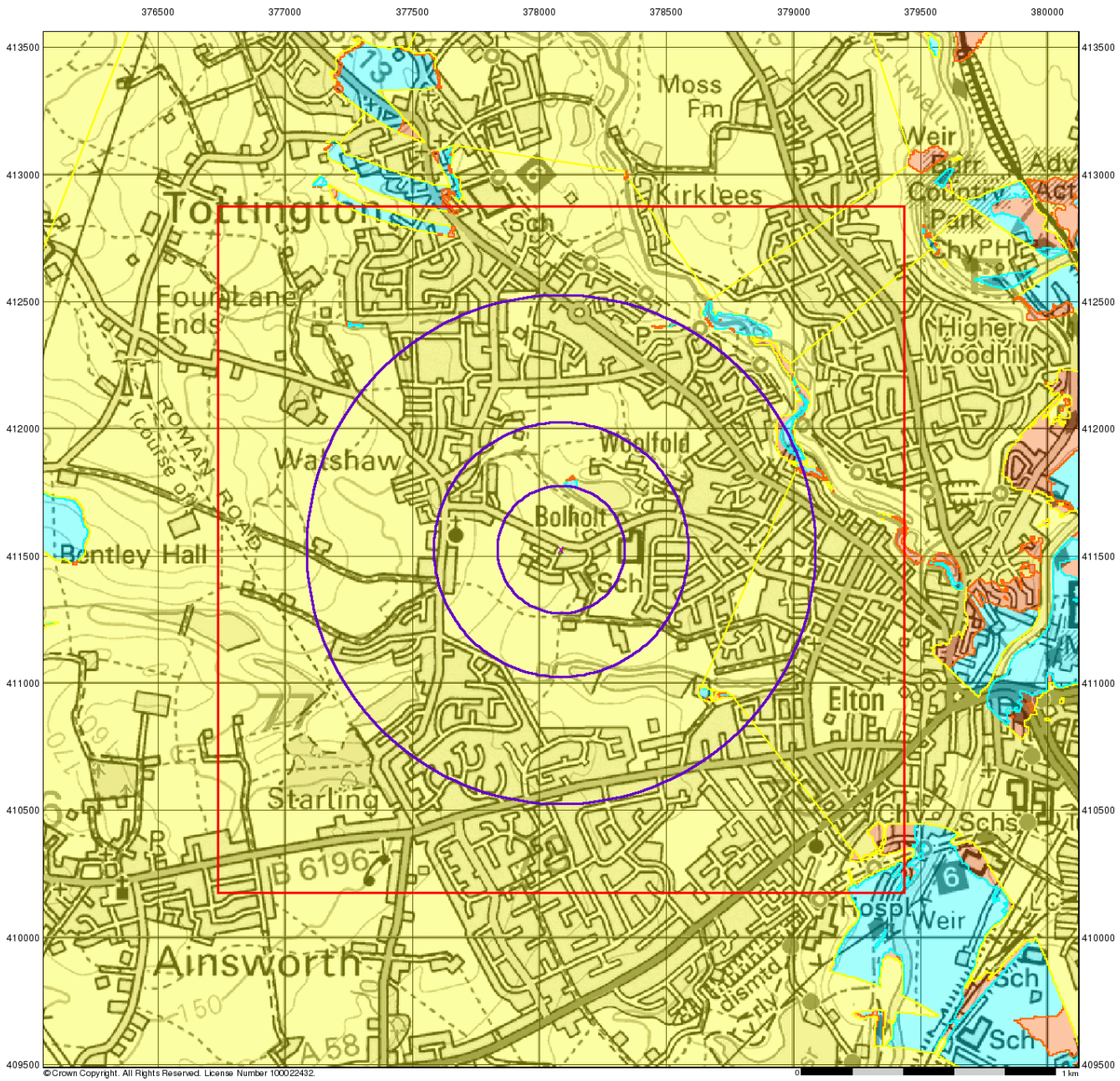
Order Number:	163324975_1_1
Customer Ref:	180418
National Grid Reference:	378090, 411530
Slice:	A
Site Area (Ha):	0.01
Search Buffer (m):	1000

Site Details

Walshaw Road, Bury, BL8 3AA

Landmark® INFORMATION GROUP

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



Envirocheck®

LANDMARK INFORMATION GROUP®

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

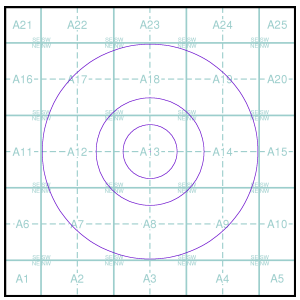
General

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



Order Details

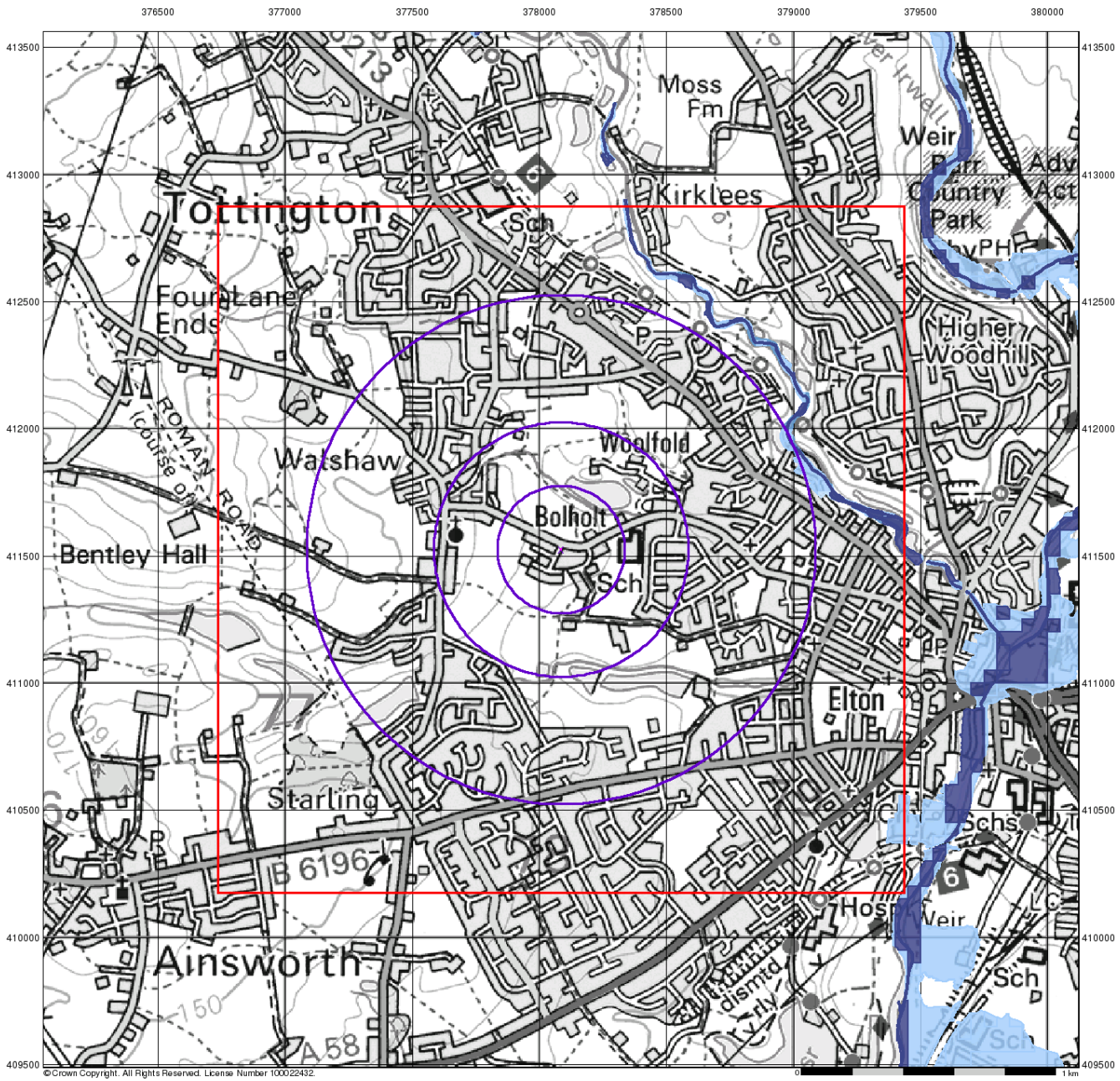
Order Number:	163324975_1_1
Customer Ref:	180418
National Grid Reference:	378090, 411530
Slice:	A
Site Area (Ha):	0.01
Search Buffer (m):	1000

Site Details

Walshaw Road, Bury, BL8 3AA

Landmark® INFORMATION GROUP

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



Envirocheck®

LANDMARK INFORMATION GROUP®

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

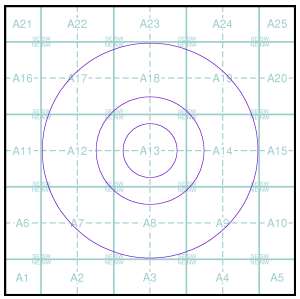
General

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



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

An award-winning practice serving the property and construction industry for more than 25 years

RoCP Ltd
(Trading as RoC Consulting)
Commercial Wharf
6 Commercial Street
MANCHESTER
M15 4PZ

T | 0161 214 5390
W | www.rocconsulting.com