BETTS HYDRO
CONSULTING ENGINEERS

FORMER GLEN DIMPLEX
STONEY LANE
WHISTON

FLOOD RISK ASSESSMENT

For

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Taylor Wimpey

MARCH 2026

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Document Tracking Sheet

Document Reference:	HYD1128_GLEN.DIMPLEX_FRA
Revision:	1.1
Date of Issue:	26/03/2026
Report Status:	FINAL

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Revision History:

Rev:	Date:	Status:	Prepared by:	Checked by:	Issued by:
1.1	26/03/2026	FINAL	HB	KH	HB
1.0	05/12/2025	FINAL	LD	KH	LD
0	03/12/2025	DRAFT	LD	KH	LD

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EXECUTIVE SUMMARY

This Flood Risk Assessment was commissioned by Taylor Wimpey, referred to hereafter as 'the client'. This report has been prepared to support a planning application for the construction of 204no. residential dwellings at the Former Glen Dimplex, Stoney Lane, Whiston site. The proposals are classified as 'More Vulnerable' in Annex 3: Flood Risk Vulnerability Classification, within the National Planning Practice Framework. The Planning Practice Guidance confirms that more vulnerable development is appropriate when located within Flood Zone 1, providing there is no increase in flood risk elsewhere due to the proposals.

Consultation with the Environment Agency, United Utilities and Knowsley Metropolitan Borough Council have been undertaken. A response from Knowsley Metropolitan Borough Council is currently outstanding. The Environment Agency have not identified any historic flooding at or near to site, however United Utilities have identified modelled flood risk nearby.

The nearest Main River to the site is Whiston Brook which is located 130m south of the site. As the site is elevated relative to the Main River, it is understood that the fluvial flood risk is 'low'. Online mapping shows there to be two unnamed culverted watercourse crossing the site, to the east and to the south. These both route generally in a southerly direction and join within the St Edmunds Arrowsmith School land to the south, ultimately discharging into Whiston Brook.

The client has investigated the culverted watercourse crossing the site to its outfall into Whiston Brook. A review of onsite manhole MH1 (cover level 59.120mAOD, invert level 56.730mAOD, available depth 2.39m) confirms sufficient freeboard between the incoming pipe and cover level. Even under complete culvert blockage, water levels at the inlet would remain well below the manhole cover, resulting in no significant risk of manhole surcharge or surface water flooding at MH1.

An Exceedance Flood Flow Routing Plan has been prepared to accurately demonstrate where any exceedance would be conveyed post-development, in a scenario whereby no sub-surface drainage systems are operational. Flows are to be routed toward the proposed road network, and away from existing and proposed properties.

At present the site is at low risk of surface water flooding. There are isolated areas of medium and high probability, but these correspond with existing low-lying areas where ponding naturally occurs. To mitigate any potential residual flood risks, it is advised that external levels fall away from the proposed dwellings, to minimise the flood risk associated with overland flows. By keeping the Finished Floor Levels elevated relative to the externals (typically 150mm to 300mm), this should help create safe overland flood flow routes in the event of any source of flooding including fluvial, surface water and groundwater.

Post development, there would be the chance of increased risk associated with surface water unless appropriate management is implemented. A separate Drainage Management Strategy has been prepared, which will detail the drainage proposals. To summarise, the proposals are at 'low' flood risk from the key flood sources reviewed as part of this assessment and appropriate mitigation will be put in place to ensure that there is no increase in flood risk because of the proposals. This assessment has been prepared in consultation with the relevant interested parties. The report is commensurate with the scale and nature of the proposals and is appropriate with the Planning Practice Guidance.

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Specialist Software

- MicroDrainage WinDES (v.2020.1.3) – Calculation of Greenfield run-off volumes, rates of rainfall and stormwater storage estimates.

Abbreviations & Acronyms

AEP	Annual Exceedance Probability
CC	Climate Change
EA	Environment Agency
FRA	Flood Risk Assessment
KMBC	Knowsley Metropolitan Borough Council
LLFA	Lead Local Flood Authority
LPA	Local Planning Authority
mAOD	Metres Above Ordnance Datum
NPPF	National Planning Policy Framework
PFRA	Preliminary Flood Risk Assessment
PPG	Planning Practice Guidance
SFRA	Strategic Flood Risk Assessment
TWL	Top Water Level
UU	United Utilities

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1.0 INTRODUCTION

1.1 Planning Policy Context

1.1.1 All forms of flooding and their impact on the natural and built environment are material planning considerations. The revised National Planning Policy Framework (NPPF) sets out the Government's objectives for the planning system, and how planning should facilitate and promote sustainable patterns of development, avoiding flood risk and accommodating the impacts of climate change.

1.1.2 Government policy with respect to development in flood risk areas is contained within the revised NPPF and the supporting Planning Practice Guidance (PPG) (refer to extracts in **Appendix A**). A Flood Risk Assessment (FRA) has been completed in accordance with the revised NPPF and the PPG to review all sources of flood risk both to and from the proposed development.

1.1.3 The proposals are classified as 'More Vulnerable' in Annex 3: Flood Risk Vulnerability Classification, within the National Planning Practice Framework. The PPG confirms that this type of land-use is appropriate for Flood Zone 1, providing there is no increase in flood risk elsewhere due to the proposals.

Sequential Testing

1.1.4 Updates to the NPPF (December 2024), along with recent appeal decisions have identified the requirement for focus on sequential testing future development sites in terms of the flood risks identified. *Paragraph 175 (NPPF, 2024)* states that:

> *"The sequential test should be used in areas known to be at risk now or in the future from any form of flooding, except in situations where a site-specific flood risk assessment demonstrates that no built development within the site boundary, including access or escape routes, land raising or other potentially vulnerable elements, would be located on an area that would be at risk of flooding from any source, now and in the future (having regard to potential changes in flood risk)."*

1.1.5 Whilst the Local Planning Authority's/Lead Local Flood Authority's Strategic Flood Risk Assessment provides a starting point in terms of strategic assessment, where there is more up to date mapping which considers current and future flood risks, then this should also be assessed to steer future development to the most appropriate locations.

1.1.6 Recent updates to the PPG (September 2025), have noted that whilst the sequential testing is required for new development where flood risk potential is deemed high, there is a relaxation to the requirement for such being triggered, when it can be demonstrated that there will be no harm (through appropriate mitigation) because of the proposals. Paragraph 027 (PPG, 2025) states that:

> *"In applying paragraph 175 a proportionate approach should be taken. Where a site-specific flood risk assessment demonstrates clearly that the proposed layout, design, and mitigation measures would ensure that occupiers and users would remain safe from current and future surface water flood risk for the lifetime of the development (therefore addressing the risks*

identified e.g. by Environment Agency flood risk mapping), without increasing flood risk elsewhere, then the sequential test need not be applied."

1.1.7 In terms of the updated PPG (2025), there are two aspects to the revised PPG in terms of surface water triggering the Sequential Test. In principle most sites, where there are small areas of ponding generated by small catchments contained within the development site itself; then these will inherently be resolved by developing the site and considered appropriately through mitigation. Developing these sites and ensuring appropriate mitigation is in place, would in turn result in a reduction in flood risk to others, due to the formal drainage and attenuated runoff onsite.

1.1.8 It can also be acknowledged that where there are significant surface water flood-flow routes through sites, then whilst it is relatively easy to mitigate the risk onsite through levels design; the likelihood for is displacement in these circumstances would be greater. This would therefore have the potential to increase flood risk to others, as those flows would not be captured by the proposed site drainage system. In these cases, there is likely to be a requirement for a more detailed assessment to take place considering overland flows and how best to capture these within the future design, to evidence to the satisfaction of the EA/LLFA that there will be no adverse impact.

1.2 Site Context

1.2.1 This FRA has been prepared to support a planning application for the construction of 204no. residential dwellings. The proposals will be complete with access, car parking, external works, boundary fencing, external services, and drainage.

1.3 Consultation

1.3.1 The NPPF advises that Knowsley Metropolitan Borough Council (KMBC) as the Local Planning Authority (LPA) should consult with the EA who will provide advice and guidance on flood issues at a strategic level, and the Lead Local Flood Authority (LLFA) in relation to planning applications.

1.3.2 The preparation of this report has been undertaken in consultation with the Environment Agency (EA), United Utilities (UU) & Knowsley Metropolitan Borough Council (KMBC). The consultation responses can be seen in **Appendix B**, **C, D** respectively.

2.0 EXISTING SITE LOCATION

2.1 Location

2.1.1 The site is located off Stoney Lane in Rainhill, in Prescot. The nearest Ordnance Survey National Grid Reference is E: 347921, N: 391590 and the nearest postcode is L35 2XW (see Location Plan in **Appendix E**). The whole site covers 5.815ha and is edged in red in **Figure 1**.

2.1.2 In terms of the surrounding land-use, the site is bounded to the north by Whiston Hospital and Whiston Ambulance Station, with residential properties located off Stoney Lane, Cartmel Drive, Kendal Drive and Newby Avenue. To the east of the site is Elis (Laundry Centre). To the south lies St Edmund Arrowsmith Catholic Academy with associated playgrounds and grass fields, together with residential development off Cumber Lane. The west of the site is bounded by further residential development. This is illustrated in **Figure 1** below.

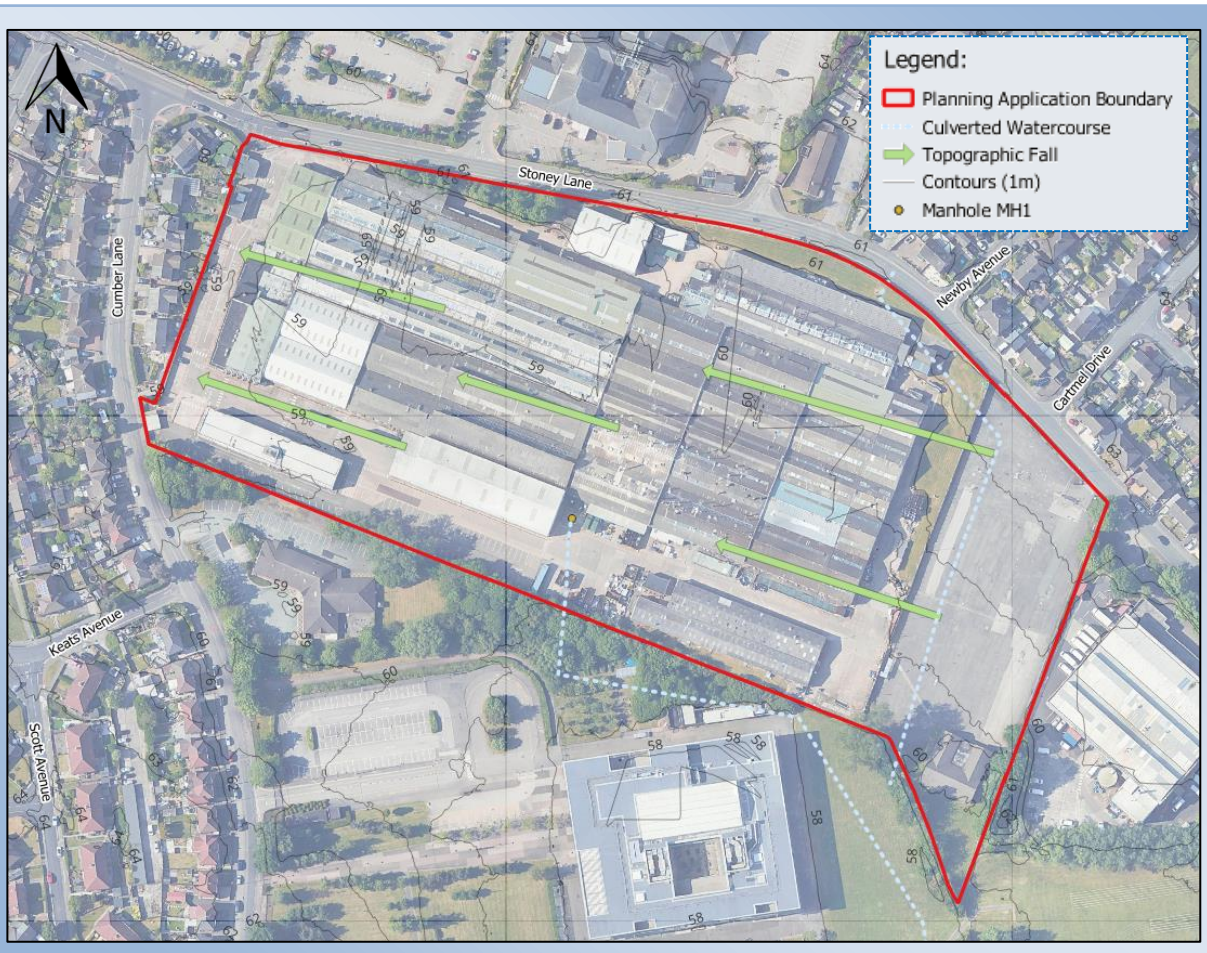

Figure 1: Existing Features Plan (Google Maps, 2026)

2.2 Existing and Historical Land Use

2.2.1 The site currently consists of industrial and manufacturing premises formerly occupied by Glen Dimplex. No other historic uses have been identified during the preparation of this report.

2.3 Topography

2.3.1 A topographic survey has been undertaken and is included in **Appendix F** for completeness. To summarise, the site falls from a high point of 62.82mAOD in the north-eastern corner, located adjacent to Stoney Lane to a low point of 58.40mAOD in the south-western corner. Generally, the levels onsite fall from the east towards the western boundary of the site. The arrows shown in **Figure 1** indicate the general fall across the site.

3.0 DEVELOPMENT PROPOSALS

3.1 Nature of the Development

3.1.1 This planning application is for the construction of 204no. residential dwellings. The proposals will be complete with access, footpaths, car parking, external works, landscaping, boundary fencing, and drainage. The Appraisal Site Layout is included in **Figure 2** (see full plan in **Appendix G**).

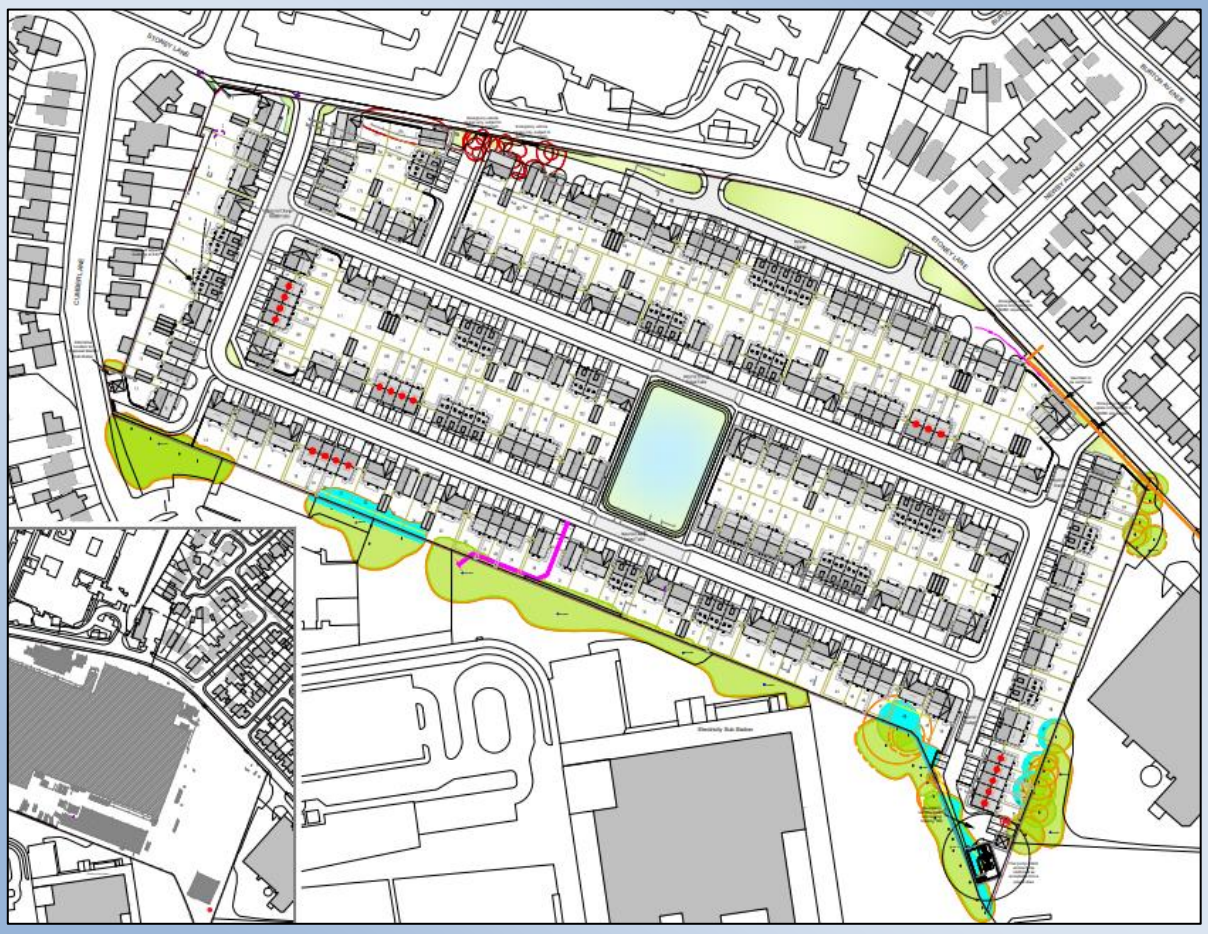

Figure 2: Proposed Site Layout (Banners Gate, 2025)

3.1.2 To satisfy NPPF guidance, it would be recommended that the proposed residential development avoids medium and high-risk of flooding areas where practical. Where residential development is required within these medium and high locations, then the Sequential test may be required, especially where sites have not been allocated as part of the local plan.

3.1.3 Based on the current planning proposals there will be some overlap between development and areas at medium and high risk (see overlay subsequently). It is however understood that surface water run-off currently impacting these locations would ultimately be generated within the development site itself. Developing the site and ensuring appropriate mitigation is in place, would inherently resolve this and in turn result in a reduction in flood risk to others, due to the formal drainage and attenuated run-off onsite.

3.1.4 Review of the United Utilities sewer records has identified an existing combined sewer, foul water sewer and surface water sewer located within the south-western corner of the site. There is a requirement to provide maintenance offsets from the public sewers, where they are located onsite. The specific offset needs to be discussed with UU as they vary depending on the size of the infrastructure and the depth at which it is laid. Should diversion be required to facilitate the development proposals, then early discussion with UU will identify where this is considered acceptable.

3.1.5 There are two culverted watercourses located onsite to the east, and to the south. As required by the LLFA, a 4-6m offset will be maintained post-development from the centerline of both culverted watercourses. It should be noted that diversion of both culverts is proposed post-development, for which consent will be required from the LLFA (KMBC).

3.1.6 The total site covers 5.648ha and is understood to be 100% impermeable at present. Based upon the planning layout, the impermeable area will decrease because of the change in use to 2.940ha. Betterment in the form of permeable surfaces as opposed to external hardstanding should also be considered to reduce the surface water run-off. Opportunities to provide soft landscaping on the site would provide added benefits to water quality and ecology.

3.1.7 National and local policy identifies that SUDS should be incorporated into new development where feasible to manage surface water run-off generated. A separate Drainage Management Strategy is being prepared to support the planning application which will detail the drainage strategy proposed (refer to HYD1128_GLEN.DIMPLEX _DMS).

4.0 SOURCES OF FLOOD RISK

4.1 Fluvial Flood Risk

4.1.1 Information relating to flood risk at the site has been obtained from the Environment Agency and the Gov.uk website. The Environment Agency Flood Map for Planning indicates that the site is located within Flood Zone 1 (Rivers). This is reiterated within the October 2012 Knowsley Metropolitan Borough Council Level 2 Strategic Flood Risk Assessment (Figure B2-2 Environment Agency Flood Zones).

4.1.2 Flood Zone 1 is an area considered to be at little or no flood risk from rivers and/or the sea (as defined by the EA). Flood Zone 2 is an area at 'low' to 'medium' risk of flooding from fluvial/tidal sources (at risk in the undefended 1 in 1000yr return period event). Flood Zone 3 is an area at 'medium' to 'high' flood risk (at risk in the undefended 1 in 100yr fluvial return period event or the undefended 1 in 200yr tidal event).

4.1.3 Recent updates to the Flood Map for Planning mapping now also shows a projection for climate change up to 2070-2125, this includes the Flood Zones plus climate change data (indicated in orange on mapping). This new climate change projection shows how the combined extent of Flood Zones 2 and 3 could increase with climate change over the next century, ignoring any existing flood defences. The Flood Map for Planning (Climate Change 2070 - 2125). The site remains outside these Flood Zones.

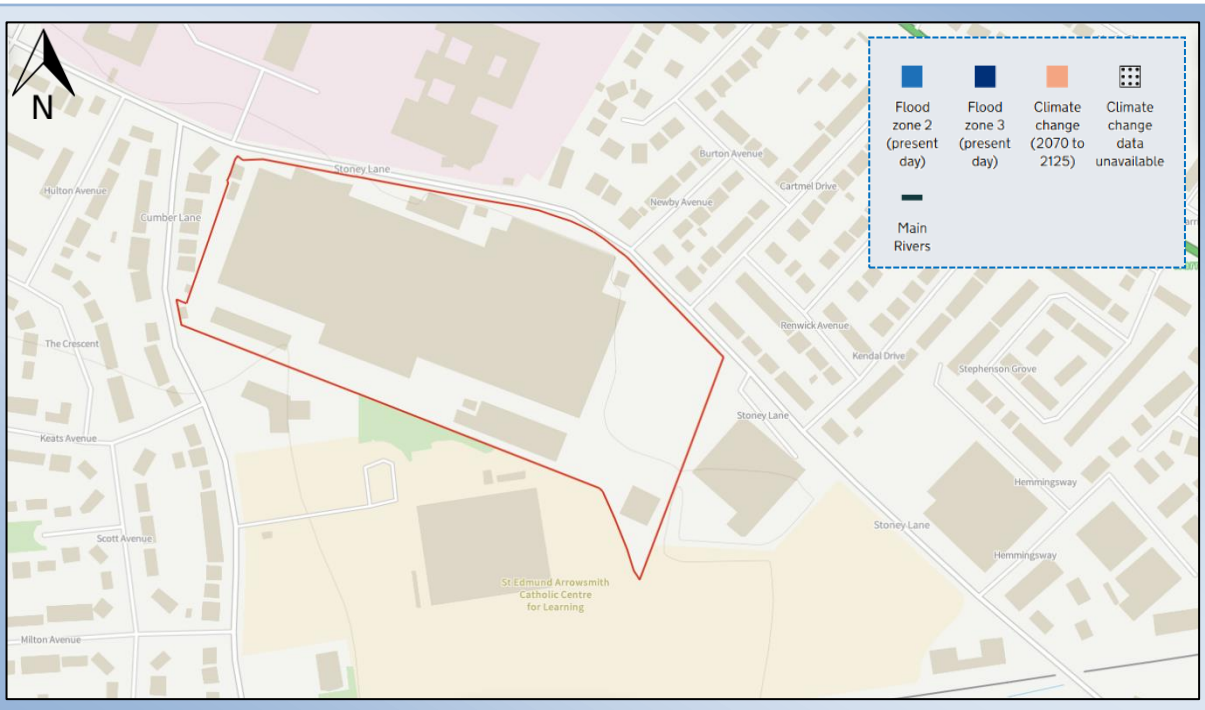

Figure 3: Fluvial/Tidal Flood Zone Map for Planning Extract (GOV.UK, 2025)

Main Rivers

4.1.4 The nearest Main River to the site is Whiston Brook, which is located 130m south of the site. As the site is elevated relative to the Main River, it is understood that the fluvial flood risk is 'low' from this source.

4.1.5 This is supported by the Flood Map for Planning, which demonstrates that the development proposals are located wholly within Flood Zone 1. The Long-Term Risk of Flooding from Rivers and Sea mapping also supports this by showing the site is at little/no fluvial risk (see **Appendix B**).

Ordinary Watercourses

4.1.6 There are two unnamed culverted watercourses crossing the site, one to the east and one to the south. These join offsite to the south, within the adjacent St Edmunds Arrowsmith School land, before discharging into Whiston Brook. This has been confirmed via dye-tracing.

4.1.7 Watercourses with catchments greater than 2km^2 are typically considered as part of the national flood mapping. Due to catchment size of the Ordinary Watercourse, the potential flood risks associated will not have been accurately quantified by the EA or LLFA. Therefore, a qualitative assessment has been undertaken to determine the potential risks associated with possible blockage and exceedance in this instance.

4.1.8 The client has undertaken an investigation of the culverted watercourses within the site and towards the outfall (refer to **Appendix I**). We have considered as part of the qualitative assessment the potential for residual flooding associated with blockage culvert along its routing through the site; the most likely locations for exceedance to occur would be at manhole/inspection chambers through the site given its culverted nature.

4.1.9 Should a blockage occur within the culvert onsite then the most likely location for exceedance would be Manhole ref: MH1. At Ref:MH1, the existing cover level is 59.761mAOD and the invert level of the incoming pipe is 56.730mAOD, giving an available depth within the chamber of 3.03m. There is sufficient freeboard above the incoming and outgoing pipes that as a result, in a blockage scenario, the manhole itself would provide a substantial depth of flooding internally before the chamber is exceeded. The risk from manhole surcharge in this instance because of culvert blockage would be minimal.

4.1.10 In terms of the residual risk associated with exceedance at this point Manhole ref:MH1, given the ground levels, any exceedance flows would continue to route in a south ultimately reconnecting with the open channel section of Whiston Brook away from the proposed development.

4.1.11 An Exceedance Flood Flow Routing Plan has been prepared to accurately demonstrate where any exceedance would be conveyed post-development, in a scenario whereby no sub-surface drainage systems are operational. Flows are to be routed toward the proposed road network, and away from existing and proposed properties. This is included within **Appendix J** for review.

4.2 Tidal Flood Risk

4.2.1 The Mersey Estuary is located around 10km south of the site. The tidal flood risks associated are therefore 'low'. This is supported by the EA's Flood Map for Planning

and Risk of Flooding from Rivers and Sea mapping datasets, which show the site in Flood Zone 1 and at little/no risk from tidal sources.

4.3 Flood Risk Vulnerability Classification and Flood Zone Compatibility

4.3.1 The proposals are classified as 'More Vulnerable' in Annex 3: Flood Risk Vulnerability Classification within the National Planning Policy Framework. The Planning Practice Guidance confirms that this type of land-use is appropriate for Flood Zone 1, providing there is no increase in flood risk elsewhere due to the proposals.

4.4 Surface Water Flood Risk

4.4.1 Surface water flooding occurs when rainwater is unable to drain away through the normal drainage systems or soak into the ground but lies on or flows over the ground instead. The updated Flood Map for Planning (FMfP) data (25th March 2025), includes new published information relating to surface water flooding. The Surface Water Flood Map for Planning data includes present-day chance of flooding and does not currently show climate change scenarios for surface water.

4.4.2 Considering the surface water Flood Map for Planning, the chance of surface water flooding could be more than 3.3% AEP (1 in 30) each year towards the north of the site, northeast and south of the site associated with low-lying areas of hardstanding (see mapping snapshots in **Appendix B**).

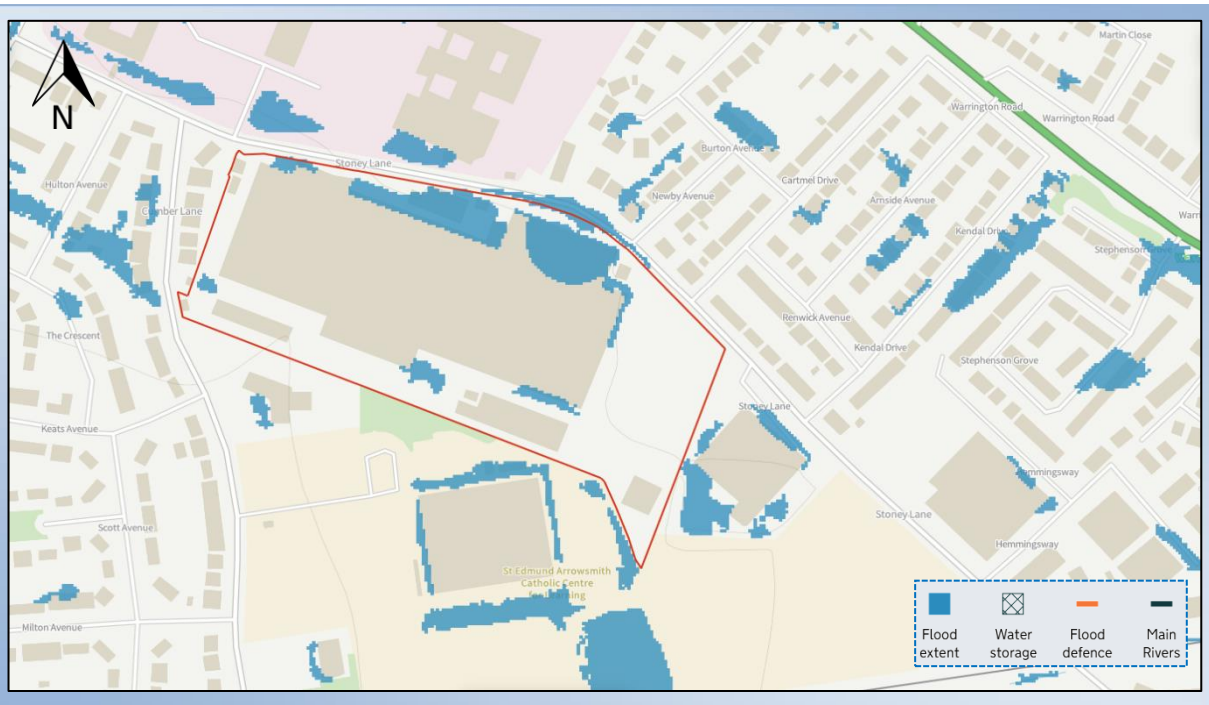

Figure 4: FMfP Surface Water 1 in 100yr Annual likelihood of Flooding (EA, 2025)

4.4.3 The updated FMfP mapping also shows that there are parts of the site to have a chance of flooding equal to the 1% AEP (1 in 100yr) chance of flooding each year. This is considered to represent the medium risk scenario, and the areas again are located to the north of the site, north-east and south of the site, with new areas of surface water

flooding located along the access with Stoney Lane and to the south-west of site (see **Figure 4**). There are also significant areas onsite shown to be at risk within the 0.1% AEP (1 in 1000yr) chance of flooding each year (low risk) with coverage around the existing build infrastructure onsite.

4.4.4 Any run-off conveying through the site at present should be catered for through continued routing in an appropriate manner (whether that be above ground via overland flow routes or below ground through appropriate interception and routing), this will ensure no increased run-off elsewhere because of the proposals.

4.4.5 The EA also provide further information in terms of surface water flooding in the form of the Long-Term Risk of Flooding from Surface Water (RoFSW) mapping, extracts from which have been included subsequently and discussed (**Figure 5** & **Figure 6**). Whilst this data is not intended for use in planning, the guidance does say that it can be used as part of initial risk assessment works.

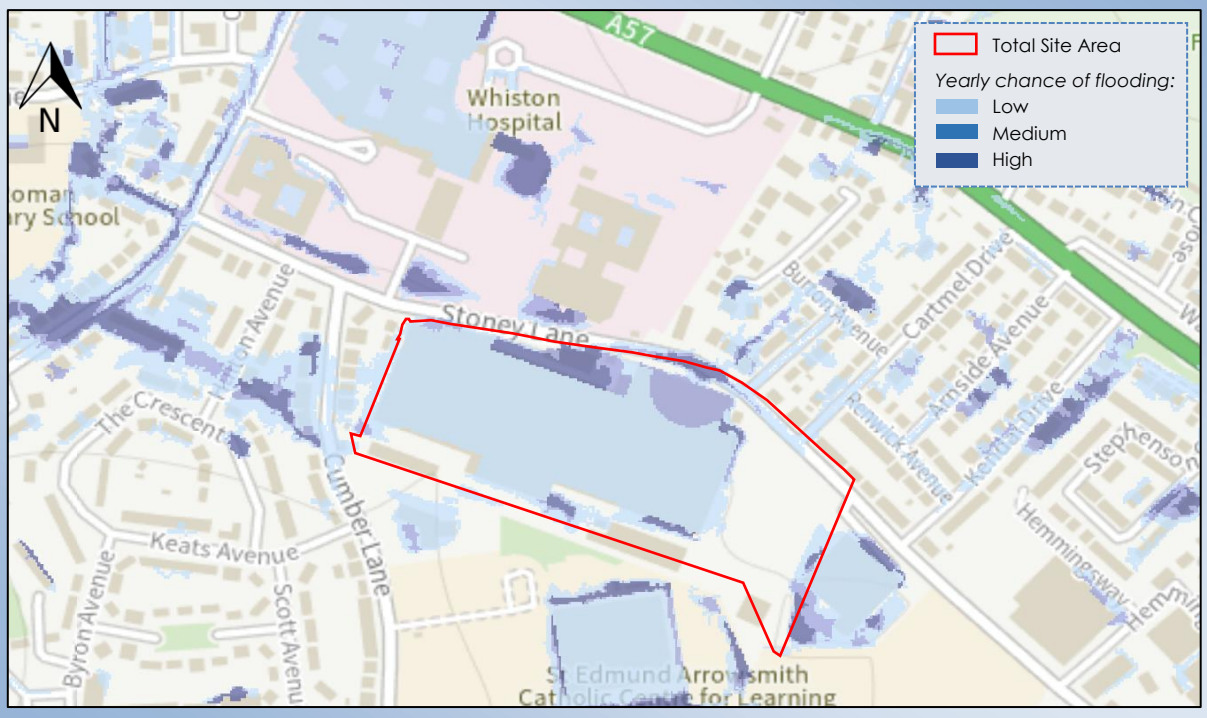

Figure 5: Long-Term 'Current' Surface Water Flood Risk Map Extract (GOV.UK, 2025)

4.4.6 The EA RoFSW dataset shows the current present-day risk from surface water, represented on a 2m resolution grid. The risk is displayed as one of three likelihood categories:

- High (greater than or equal to 1 in 30 or 3.3% chance of flooding for any given year);
- Medium (less than 1 in 30 or 3.3%, but greater than or equal to 1 in 100 or 1% chance of flooding in any given year), and;
- Low (less than 1 in 100 or 1% chance of flooding, but greater than or equal to 1 in 1000 or 0.1% chance of flooding in any given year).

4.4.7 As indicated in **Figure 5**, the site is at predominantly low chance of surface water flooding. There is however an area towards the north, north-east and south is shown to have medium to high chance of surface water flooding. These extents mimic that shown on the Surface Water Flood Map for Planning noted previously.

4.4.8 Along with current chance of surface water flooding, future climate chance scenarios have also been provided as part of the recently updated and published EA mapping. This updated future scenario indicates the predicted impacts of climate change on future flood risk.

4.4.9 The climate change allowances are based on the latest UK Climate Projections (UKCP18) from the Met Office, using the Representative Concentration Pathway (RCP) 8.5. A near-term epoch (2040 – 2060 "2050s" epoch) and central allowances are used.

4.4.10 As indicated in **Figure 6**; areas of low chance are present within the centre of the site. There are also areas of medium and high chance of surface water food risk located within the site boundary. The possible flood extents considering climate change are slightly greater than those indicated by the current scenario (**Figure 5** previously).

4.4.11 Depths of flooding during the Long-Term 'Future' Surface Water Flood Risk are typically to a depth of 300mm, with depths of flooding within the northern extents of the site occurring to depths of 900mm.

4.4.12 In terms of safeguarding any residual risks onsite post-development, it is advised that external levels fall away from the proposed dwellings, to minimise the flood risk from a variety of sources. By keeping the Finished Floor Levels elevated relative to the externals (typically 150mm-300mm to conform to Building Regs), this should help create safe overland flood flow routing in the event of flooding that could lead to overland flows.

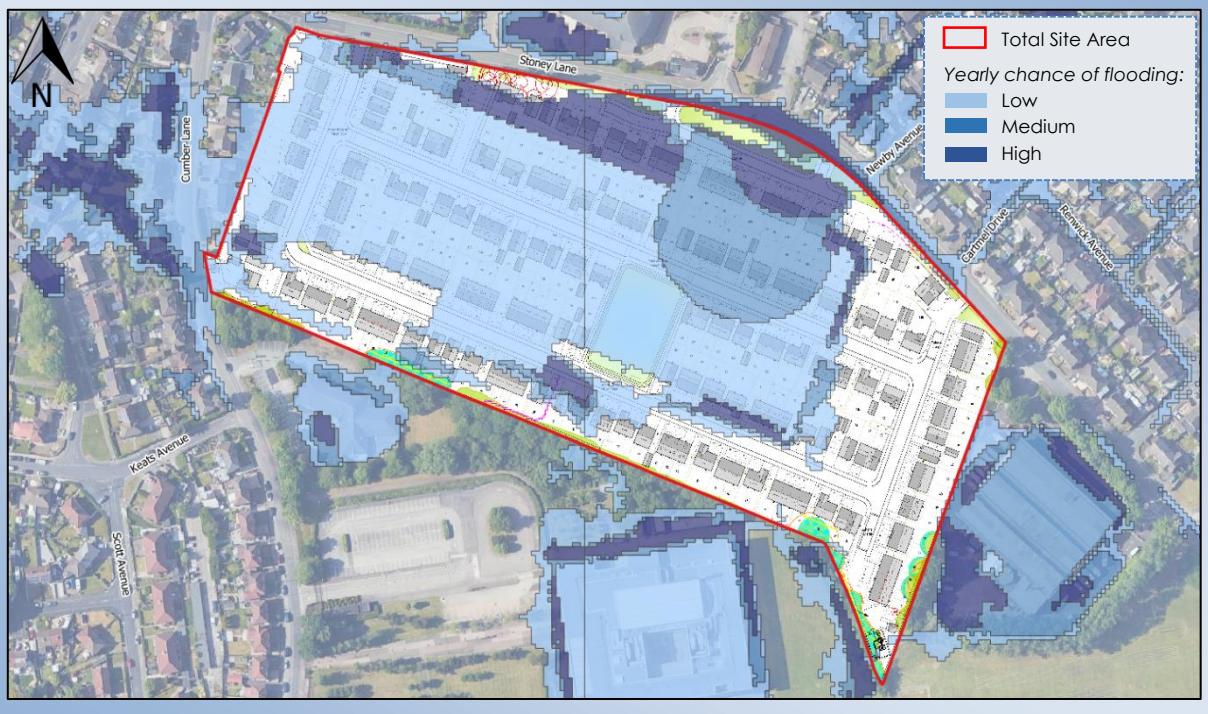

Figure 6: Long-Term 'Future' Surface Water Flood Risk Map (GOV.UK, 2025)

4.4.13 Any run-off conveying through the site at present should be catered for through continued routing in an appropriate manner, this will ensure no increased run-off elsewhere because of the proposals.

4.4.14 Potential residual flood risk from surface water will be managed, post-development through the implementation of a sustainable surface water management regime, to manage surface water run-off generated by the proposed development in a sustainable and efficient manner.

Critical Drainage Areas

4.4.15 The Town and Country Planning (General Permitted Development) (England) Order 2015 introduces the concept of Critical Drainage Areas (CDAs) as:

"An area within Flood Zone 1 which has critical drainage problems, and which has been notified to the local planning authority by the Environment Agency"

4.4.16 In effect, land within a Critical Drainage Area either contributes to flooding at a critical location or acts as a pathway for the water that contributes to that flooding. Measures taken to manage flood risk within a CDA, such as to promote infiltration-based SuDS or reduce surface water runoff to greenfield rates, would therefore contribute towards a reduction in flood risk in that location.

4.4.17 A review of the October 2012 Knowsley Metropolitan Borough Council Level 2 Strategic Flood Risk Assessment has identified Prescot (where the site is located) as being located within a Critical Drainage Area.

4.4.18 Development within a Critical Drainage Area (CDA) is subject to significantly stricter water management requirements than standard national standards. The overriding aim is to ensure that the proposals do not increase flood risk either on-site or elsewhere and, where possible, achieves a net reduction.

Pluvial (Overland run-off) Flood Risk

4.4.19 Intense rainfall that is unable to soak into the ground or enter drainage systems can run-off land and result in flooding. Local topography and the land-use can have a strong influence on the direction and depth of flow.

4.4.20 To the north of the site is bounded by residential dwellings on Stoney Lane, Newby Avenue and Cartmel Avenue as well as emergency service areas such as Whiston Ambulance Station and Whiston Hospital. These developed areas are likely to be served by formal drainage infrastructure, thus reducing the risk to the site from pluvial run-off.

4.4.21 Furthermore, the site is bounded to the north by a boundary wall, with levels ranging from circa. 59.87mAOD in the north-west to 62.61mAOD towards the north-east. Site levels generally fall towards the south by 1-2m. Therefore, any existing surface water flooding is restricted from entering the site from the north, and any surface water flooding within the site is similarly prevented from draining northwards.

4.4.22 To the east of the site is Elis (Laundry Centre). The ground levels for the areas surrounding this development are circa. 300mm lower than the western boundary of the site in this instance and is also understood to be served by drainage infrastructure. Therefore, pluvial run-off towards the site is unlikely to occur.

4.4.23 To the south of the site lies St Edmund's Arrowsmith Catholic Academy. Ground levels surrounding this are circa. 1m below the southern boundary extents and therefore any pluvial run-off will be routed away and not impinge on the site in this instance.

4.4.24 The proposals will likely come with changes in existing ground levels and undoubtedly the inclusion of a new drainage system; these will sufficiently mitigate against pluvial risk onsite.

4.4.25 The volume and rate of overland flow from land can be exacerbated if development increases the percentage of impermeable areas. Any overland flows generated by the development must be carefully controlled; safe avenues directing overland flow away from adjacent development are advised.

4.4.26 An appropriate surface water management regime will be implemented post-development, to cater for impermeable areas on the site, meaning a reduction in the overland flows generated on the site.

Sewer Flood Risk

4.4.27 In urban areas, rainwater is frequently drained into surface water sewers or sewers containing both surface and wastewater known as 'combined sewers'. Foul water flooding often occurs in areas prone to overland flow and can result when the sewer is overwhelmed by heavy rainfall and will continue until the water drains away.

4.4.28 Consultation with United Utilities has been undertaken and has identified there is modelled flood risk within the vicinity of the proposed development. UU records show a combined, foul and surface water sewer located within the south-west of site (see **Appendix C** for correspondence and sewer records).

4.4.29 Regardless, it is advised that external levels fall away from the proposed developments to minimise the flood risk from a variety of sources. By keeping the Finished Floor Levels elevated relative to the externals, this should help create an overland flood flow route in the event of a breach or any other source of overland flooding.

4.5 Groundwater Flood Risk

4.5.1 High groundwater levels are usually the key source of groundwater flooding, which occurs when excess water emerges at the grounds surface (or within manmade underground structures such as basements). Groundwater flooding is often more insistent than surface water flooding and would typically last for weeks/months rather than days meaning the result to property is often more severe.

4.5.2 In general terms groundwater flooding can occur from three main sources:

- If groundwater levels are naturally close to the surface, then this can present a flood risk during times of intense rainfall.

- Seepage and percolation occur were embankments above ground level hold water. In these cases, water travels through the embankment material and emerges on the opposite side of the embankment.
- Groundwater recovery/rebound occurs where the water table has been artificially depressed by abstraction. When the abstraction stops the water table makes a recovery to its original level. There is the potential for groundwater flooding in low lying areas where groundwater levels have been depressed below their pre-pumping conditions, where these were at or close to ground level.

4.5.3 The mapping data for groundwater shows that the site is underlain by a Principal Aquifer, meaning that the rock layers in this area may support water supplies and/or river base flow on a strategic scale. The BGS mapping goes on to state that the site is also underlain with Secondary (undifferentiated) superficial deposits (this refers to rock deposits with variable permeability and storage properties).

4.5.4 The online BGS mapping also provides information on Groundwater Vulnerability, this mapping illustrates the vulnerability of the groundwater to a pollutant discharged at ground level. The mapping uses hydrological, geological, hydrogeological and soil properties within a one-kilometre, square grid. In this case, the site area is shown to be located primarily within a medium-risk area, which means that it is in an area with a medium likelihood of a pollutant reaching the groundwater source (i.e., the vulnerability).

4.5.5 The Knowsley Metropolitan Borough Council Level 2 Strategic Flood Risk Assessment (SFRA) (2012) and does not have any detailed groundwater information and susceptibility to groundwater flooding is not included within the online maps (mapping extracts in **Appendix H**).

4.5.6 No historical flooding at or within proximity of the site due to groundwater related sources has however been identified as part of this assessment, including review of The Knowsley Metropolitan Borough Council Level 2 Strategic Flood Risk Assessment (SFRA) (2012) and Knowsley Metropolitan Borough Council Local Flood Risk Management Strategy (2017 (see mapping extracts in **Appendix H**).

4.5.7 Irrespective, it is advised that external levels fall away from the proposed developments to minimise the flood risk from a variety of sources. By keeping the Finished Floor Levels elevated relative to the externals, this should help create an overland flood flow route in the event of any source of overland flow impacting the site.

Groundwater Source Protection Zones

4.5.8 In addition to the aquifer bedrock designations, mapping is available that shows the extent of groundwater Source Protection Zones (SPZs). The SPZs show the risk of contamination from any activities that might cause pollution in the area. Sources include wells, boreholes, and springs.

4.5.9 The maps show the extents of three main zones: the inner shown in red (SPZ1), outer shown in green (SPZ2) and total catchment shown in blue (SPZ3). The mapping (see extract in **Figure 7**) shows that the whole site is located within SPZ3, which is defined as the total area needed to support the abstraction or discharge from the protected groundwater source.

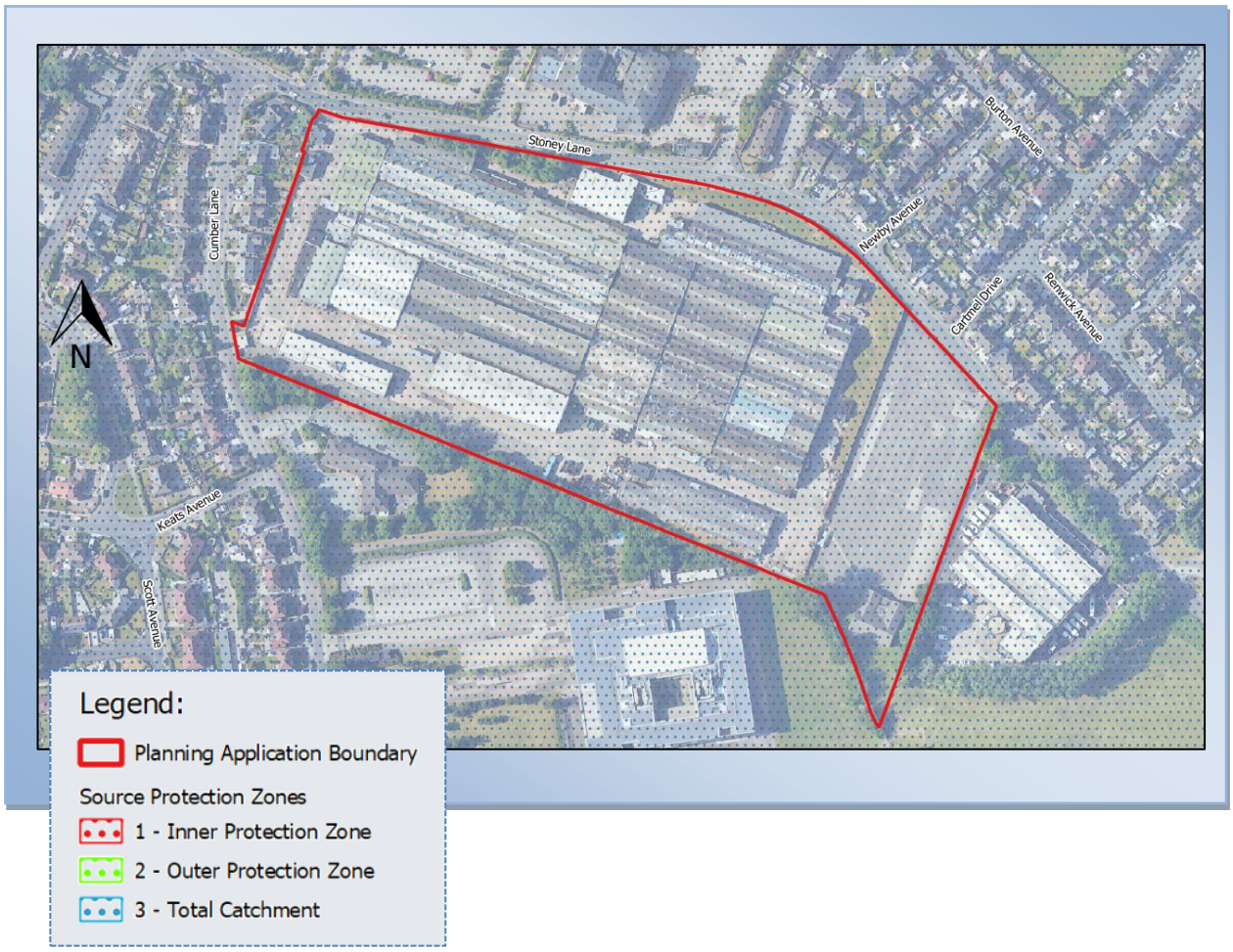

Figure 7: Groundwater Source Protection Zones Map Extract (Betts Hydro, 2025)

4.5.10 In terms of sites located within Groundwater Source Protection Zones, a key consideration is water quality and ensuring any run-off discharging from the site into the ground (either directly or via surface water bodies), is to the highest possible standard. Using Sustainable Drainage Systems (SuDS) that provide water quality improvements for areas of development that potentially act as a source of contamination, can help control any adverse impact on water quality.

4.5.11 In terms of the proposed access and car parking areas, these are likely to have a higher possibility of contaminants in comparison to the roof areas, but the use of a suitable SuDS treatment train would reduce the potential contaminants in any run-off generated and ultimately discharging in this location. A separate Drainage Statement has been prepared (*Refer to HYD1128_GLEN.DIMPLEX_DMS*) to support the proposals, which details the means and methods for managing surface water run-off generated by the proposed development to ensure that it does not increase flood risk elsewhere.

4.6 Artificial Sources of Flood Risk

4.6.1 National policy states that an FRA should consider the potential risks from a variety of other flood sources including artificial sources (such as risks from reservoirs and canals).

Reservoirs

4.6.2 The Environment Agency recognises reservoirs as bodies of water over 25,000cu.m and the long-term flood mapping is included in **Appendix B**. The mapping shows that the site is not susceptible to flooding should a failure occur in a nearby reservoir.

4.6.3 Irrespective, it is advised that external levels fall away from the proposed dwellings, to minimise the flood risk from a variety of sources. By keeping the Finished Floor Levels elevated relative to the external site levels, this should help create an overland flow route in the event of a breach or any source of reservoir flooding.

Canals

4.6.4 There are no canals located within proximity of the site (the closest being the Sankey (St Helens Canal over 7km north-east of the site), therefore the flood risk to the site from canals is 'very low'.

4.6.5 Irrespective, it is advised that external levels fall away from the proposed developments, to minimise the flood risk from a variety of sources. By keeping the Finished Floor Levels elevated relative to the externals, this should help create an overland flood flow route in the event of a breach or any other source of canal flooding.

4.7 Historical and Anecdotal Flooding Information

4.7.1 Consultation with Knowsley Metropolitan Borough Council (KMBC) has been undertaken. At this time of writing A response is currently outstanding.

4.7.2 Consultation with the Environment Agency (EA) & United Utilities (UU) has also been carried out for this application. The Environment Agency have not identified any historic flooding at or near the site, however United Utilities have identified modelled flood risk within the vicinity of the proposed development. The consultation responses can be seen in **Appendix B** & **C** respectively.

4.8 Flood Risk Mitigation Measures & Residual Risks

4.8.1 The development area is located wholly within Flood Zone 1 and is at little risk of fluvial/tidal flooding. To observe a conservative approach however, mitigation measures have been proposed below to safeguard against other potential residual sources of flood risk. The mitigation measures also consider the uncertainties of climate change in accordance with the revised NPPF and PPG.

Mitigation Measures

4.8.2 It is advised that external levels fall away from the proposed development, to minimise the flood risk from a variety of sources. By keeping the Finished Floor Levels elevated relative to the externals (typically 150 to 300mm where practical), should help create a safe overland flood flow route externally in the event of a flooding associated with a variety of sources.

4.8.3 There are two culverted watercourses located onsite to the east, and to the south. As required by the LLFA, a 4-6m offset will be maintained post-development from the centerline of both culverted watercourses. It should be noted that diversion of both culverts is proposed post-development, for which consent will be required from the LLFA (KMBC).

4.8.4 Any run-off conveying through the site at present should be catered for through continued routing in an appropriate manner, this will ensure no increased run-off elsewhere because of the proposals. Safe avenues directing overland flow away from any existing/proposed buildings is advised.

4.8.5 There is a requirement to provide maintenance offsets from the public sewers, where they are located onsite. The specific offset needs to be discussed with UU as they vary depending on the size of the infrastructure and the depth at which it is laid. Should diversion be required to facilitate the development proposals, then early discussion with UU will identify where this is considered acceptable.

4.8.6 To minimise the flood risk to neighbouring properties, it is recommended that the surface water run-off generated by the proposals be managed effectively with the peak rates of run-off being restricted to the equivalent of the pre-development situation (with betterment where required).

4.8.7 The proposed onsite surface water drainage system will need to be sized to contain exceedance from storm events up to and including the 1 in 100yr return period storm event with a 45% allowance for climate change being contained onsite. A separate Drainage Management Strategy has been prepared which will detail the drainage proposals (refer to *HYD1128_GLEN.DIMPLEX _DMS_CON*).

4.8.8 As with any drainage system, blockages within either the foul or surface water system have the potential to cause flooding or disruption. It is important that should any drainage systems not be offered for adoption then an appropriate maintenance regime should be scheduled with a suitably qualified management company for these private drainage systems.

Residual Risks

4.8.9 If an extreme rainfall event exceeds the design criteria for the drainage system it is likely that there will be some overland flows that are unable to enter the system, it is important that these potential overland flows are catered for within the development site if the capacity of the drainage system is exceeded, or in the event of a system failure.

5.0 SUMMARY AND CONCLUSIONS

5.1 The proposals are classified as 'More Vulnerable' in Annex 3: Flood Risk Vulnerability Classification, within the National Planning Practice Framework. The Planning Practice Guidance confirms that more vulnerable development is appropriate when located within Flood Zone 1 providing there is no increase in flood risk elsewhere due to the proposals.

5.2 Consultation with the Environment Agency, United Utilities and Knowsley Metropolitan Borough Council has been undertaken. Consultation with Knowsley Metropolitan Borough Council (KMBC) is currently outstanding at the time of writing. Consultation with the Environment Agency (EA) & United Utilities (UU) has also been carried out for this application. The Environment Agency have not identified any historic flooding at or near the site, however United Utilities have identified modelled flood risk within the vicinity of the proposed development

5.3 This report has reviewed all sources of flood risk both to and resulting from the proposed development site. The nearest Main River to the site is which is located 130m south of the site. As the site is elevated relative to the Main River, it is understood that the fluvial flood risk is 'low' from this source. The online mapping shows there to be an unnamed Ordinary Watercourse which runs beneath the site within a culverted pipe network. The Ordinary Watercourse runs from north though site, before leaving via the southern boundary. It is diverted around the adjacent St Edmunds Arrowsmith School to the south, before discharging beneath the railway, into Whiston Brook.

5.4 The client has undertaken an investigation of the culverted watercourses within the site and towards the outfall. We have considered as part of the qualitative assessment the potential for residual flooding associated with blockage culvert along its routing through the site; the most likely locations for exceedance to occur would be at manhole/inspection chambers through the site given its culverted nature.

5.5 Should a blockage occur within the culvert onsite then the most likely location for exceedance would be Manhole ref: MH1. At Ref:MH1, the existing cover level is 59.761mAOD and the invert level of the incoming pipe is 56.730mAOD, giving an available depth within the chamber of 3.03m. There is sufficient freeboard above the incoming and outgoing pipes that as a result, in a blockage scenario, the manhole itself would provide a substantial depth of flooding internally before the chamber is exceeded. The risk from manhole surcharge in this instance because of culvert blockage would be minimal.

5.6 In terms of the residual risk associated with exceedance at this point Manhole ref:MH1, given the ground levels, any exceedance flows would continue to route in a south ultimately reconnecting with the open channel section of Whiston Brook away from the proposed development.

5.7 An Exceedance Flood Flow Routing Plan has been prepared to accurately demonstrate where any exceedance would be conveyed post-development, in a scenario whereby no sub-surface drainage systems are operational. Flows are to be routed toward the proposed road network, and away from existing and proposed properties.

5.8 At present, the site is at predominantly low chance of surface water flooding. There is however an area towards the north, north-east and south is shown to have medium to high chance of surface water flooding. Post development, there would be the chance of increased risk associated with surface water unless appropriate management is implemented. A separate Drainage Management Strategy has been prepared, which will detail the drainage proposals (refer to HYD1128_GLEN.DIMPLEX_DMS).

5.9 To mitigate any potential residual flood risks, it is advised that external levels fall away from the proposed dwellings, to minimise the flood risk associated with overland flows. By keeping the Finished Floor Levels elevated relative to the externals (typically 150mm to 300mm), this should help create safe overland flood flow routes in the event of any source of flooding including fluvial, surface water and groundwater.

5.10 To summarise, the proposals are at 'low' flood risk from the key flood sources reviewed as part of this assessment and appropriate mitigation will be put in place to ensure that there is no increase in flood risk because of the proposals. This assessment has been prepared in consultation with the relevant interested parties. The report is commensurate with the scale and nature of the proposals and is appropriate with the Planning Practice Guidance.

6.0 RECOMMENDATIONS

6.1 There are two culverted watercourses located onsite to the east, and to the south. As required by the LLFA, a 4-6m offset will be maintained post-development from the centerline of both culverted watercourses. It should be noted that diversion of both culverts is proposed post-development, for which consent will be required from the LLFA (KMBC).

6.2 It is advised that external levels fall away from the proposed development, to minimise the flood risk from a variety of sources. By keeping the Finished Floor Levels elevated relative to the externals (typically 150 to 300mm where practical), should help create a safe overland flood flow route externally in the event of a flooding associated with a variety of sources.

6.3 Any run-off conveying through the site at present should be catered for through continued routing in an appropriate manner, this will ensure no increased run-off elsewhere because of the proposals. Safe avenues directing overland flow away from any existing/proposed buildings is advised

6.4 To minimise the flood risk to the neighbouring properties it is recommended that the surface water run-off generated by the proposals be managed effectively with the peak rates of run-off being restricted to the equivalent of the pre-development situation (with betterment where required).

6.5 The proposed onsite surface water drainage system will need to be sized to contain exceedance from storm events up to and including the 1 in 100yr return period storm event with a 45% allowance for climate change being contained onsite. A separate Drainage Management Strategy has been prepared which will detail the drainage proposals (refer to HYD1128_GLEN.DIMPLEX_DMS_CON)

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APPENDIX A: NPPF & PPG EXTRACTS

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14. Meeting the challenge of climate change, flooding and coastal change

161. The planning system should support the transition to net zero by 2050 and take full account of all climate impacts including overheating, water scarcity, storm and flood risks and coastal change. It should help to: shape places in ways that contribute to radical reductions in greenhouse gas emissions, minimise vulnerability and improve resilience; encourage the reuse of existing resources, including the conversion of existing buildings; and support renewable and low carbon energy and associated infrastructure.

Planning for climate change

162. Plans should take a proactive approach to mitigating and adapting to climate change, taking into account the long-term implications for flood risk, coastal change, water supply, biodiversity and landscapes, and the risk of overheating and drought from rising temperatures[61]. Policies should support appropriate measures to ensure the future health and resilience of communities and infrastructure to climate change impacts, such as providing space for physical protection measures, or making provision for the possible future relocation of vulnerable development and infrastructure.

163. The need to mitigate and adapt to climate change should also be considered in preparing and assessing planning applications, taking into account the full range of potential climate change impacts.

164. New development should be planned for in ways that:

a) avoid increased vulnerability to the range of impacts arising from climate change. When new development is brought forward in areas which are vulnerable, care should be taken to ensure that risks can be managed through suitable adaptation measures, including through incorporating green infrastructure and sustainable drainage systems; and

b) help to reduce greenhouse gas emissions, such as through its location, orientation and design. Any local requirements for the sustainability of buildings in plans should reflect the Government's policy for national technical standards.

165. To help increase the use and supply of renewable and low carbon energy and heat, plans should:

a) provide a positive strategy for energy from these sources, that maximises the potential for suitable development, and their future re-powering and life extension, while ensuring that adverse impacts are addressed appropriately (including cumulative landscape and visual impacts);

[61] In line with the objectives and provisions of the Climate Change Act 2008.

b) consider identifying suitable areas for renewable and low carbon energy sources, and supporting infrastructure, where this would help secure their development; and

c) identify opportunities for development to draw its energy supply from decentralised, renewable or low carbon energy supply systems and for co-locating potential heat customers and suppliers.

166. In determining planning applications, local planning authorities should expect new development to:

a) comply with any development plan policies on local requirements for decentralised energy supply unless it can be demonstrated by the applicant, having regard to the type of development involved and its design, that this is not feasible or viable; and

b) take account of landform, layout, building orientation, massing and landscaping to minimise energy consumption.

167. Local planning authorities should also give significant weight to the need to support energy efficiency and low carbon heating improvements to existing buildings, both domestic and non-domestic (including through installation of heat pumps and solar panels where these do not already benefit from permitted development rights). Where the proposals would affect conservation areas, listed buildings or other relevant designated heritage assets, local planning authorities should also apply the policies set out in chapter 16 of this Framework.

168. When determining planning applications for all forms of renewable and low carbon energy developments and their associated infrastructure, local planning authorities should:

a) not require applicants to demonstrate the overall need for renewable or low carbon energy, and give significant weight to the benefits associated with renewable and low carbon energy generation and the proposal's contribution to a net zero future;

b) recognise that small-scale and community-led projects provide a valuable contribution to cutting greenhouse gas emissions;

c) in the case of applications for the repowering and life-extension of existing renewable sites, give significant weight to the benefits of utilising an established site.

169. Once suitable areas for renewable and low carbon energy have been identified in plans, local planning authorities should expect subsequent applications for commercial scale projects outside these areas to demonstrate that the proposed location meets the criteria used in identifying suitable areas.

Planning and flood risk

170. Inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk (whether existing or future). Where

development is necessary in such areas, the development should be made safe for its lifetime without increasing flood risk elsewhere.

171. Strategic policies should be informed by a strategic flood risk assessment, and should manage flood risk from all sources. They should consider cumulative impacts in, or affecting, local areas susceptible to flooding, and take account of advice from the Environment Agency and other relevant flood risk management authorities, such as lead local flood authorities and internal drainage boards.

172. All plans should apply a sequential, risk-based approach to the location of development – taking into account all sources of flood risk and the current and future impacts of climate change – so as to avoid, where possible, flood risk to people and property. They should do this, and manage any residual risk, by:

a) applying the sequential test and then, if necessary, the exception test as set out below;

b) safeguarding land from development that is required, or likely to be required, for current or future flood management;

c) using opportunities provided by new development and improvements in green and other infrastructure to reduce the causes and impacts of flooding, (making as much use as possible of natural flood management techniques as part of an integrated approach to flood risk management); and

d) where climate change is expected to increase flood risk so that some existing development may not be sustainable in the long-term, seeking opportunities to relocate development, including housing, to more sustainable locations.

173. A sequential risk-based approach should also be taken to individual applications in areas known to be at risk now or in future from any form of flooding, by following the steps set out below.

174. Within this context the aim of the sequential test is to steer new development to areas with the lowest risk of flooding from any source. Development should not be allocated or permitted if there are reasonably available sites appropriate for the proposed development in areas with a lower risk of flooding. The strategic flood risk assessment will provide the basis for applying this test.

175. The sequential test should be used in areas known to be at risk now or in the future from any form of flooding, except in situations where a site-specific flood risk assessment demonstrates that no built development within the site boundary, including access or escape routes, land raising or other potentially vulnerable elements, would be located on an area that would be at risk of flooding from any source, now and in the future (having regard to potential changes in flood risk).

176. Applications for some minor development and changes of use[62] should also not be subject to the sequential test, nor the exception test set out below, but should still meet the requirements for site-specific flood risk assessments set out in footnote 63.

[62] This includes householder development, small non-residential extensions (with a footprint of less than 250m^2) and changes of use; except for changes of use to a caravan, camping or chalet site, or to a mobile home or park

177. Having applied the sequential test, if it is not possible for development to be located in areas with a lower risk of flooding (taking into account wider sustainable development objectives), the exception test may have to be applied. The need for the exception test will depend on the potential vulnerability of the site and of the development proposed, in line with the Flood Risk Vulnerability Classification set out in Annex 3.

178. The application of the exception test should be informed by a strategic or site-specific flood risk assessment, depending on whether it is being applied during plan production or at the application stage. To pass the exception test it should be demonstrated that:

a) the development would provide wider sustainability benefits to the community that outweigh the flood risk; and

b) the development will be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall.

179. Both elements of the exception test should be satisfied for development to be allocated or permitted.

180. Where planning applications come forward on sites allocated in the development plan through the sequential test, applicants need not apply the sequential test again. However, the exception test may need to be reapplied if relevant aspects of the proposal had not been considered when the test was applied at the plan-making stage, or if more recent information about existing or potential flood risk should be taken into account.

181. When determining any planning applications, local planning authorities should ensure that flood risk is not increased elsewhere. Where appropriate, applications should be supported by a site-specific flood-risk assessment[63]. Development should only be allowed in areas at risk of flooding where, in the light of this assessment (and the sequential and exception tests, as applicable) it can be demonstrated that:

a) within the site, the most vulnerable development is located in areas of lowest flood risk, unless there are overriding reasons to prefer a different location;

b) the development is appropriately flood resistant and resilient such that, in the event of a flood, it could be quickly brought back into use without significant refurbishment;

c) it incorporates sustainable drainage systems, unless there is clear evidence that this would be inappropriate;

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home site, where the sequential and exception tests should be applied as appropriate.

[63] A site-specific flood risk assessment should be provided for all development in Flood Zones 2 and 3. In Flood Zone 1, an assessment should accompany all proposals involving: sites of 1 hectare or more; land which has been identified by the Environment Agency as having critical drainage problems; land identified in a strategic flood risk assessment as being at increased flood risk in future; or land that may be subject to other sources of flooding, where its development would introduce a more vulnerable use.

d) any residual risk can be safely managed; and

e) safe access and escape routes are included where appropriate, as part of an agreed emergency plan.

182. Applications which could affect drainage on or around the site should incorporate sustainable drainage systems to control flow rates and reduce volumes of runoff, and which are proportionate to the nature and scale of the proposal. These should provide multifunctional benefits wherever possible, through facilitating improvements in water quality and biodiversity, as well as benefits for amenity. Sustainable drainage systems provided as part of proposals for major development should:

a) take account of advice from the Lead Local Flood Authority;

b) have appropriate proposed minimum operational standards; and

c) have maintenance arrangements in place to ensure an acceptable standard of operation for the lifetime of the development.

Coastal change

183. In coastal areas, planning policies and decisions should take account of the UK Marine Policy Statement and marine plans. Integrated Coastal Zone Management should be pursued across local authority and land/sea boundaries, to ensure effective alignment of the terrestrial and marine planning regimes.

184. Plans should reduce risk from coastal change by avoiding inappropriate development in vulnerable areas and not exacerbating the impacts of physical changes to the coast. They should identify as a Coastal Change Management Area any area likely to be affected by physical changes to the coast, and:

a) be clear as to what development will be appropriate in such areas and in what circumstances; and

b) make provision for development and infrastructure that needs to be relocated away from Coastal Change Management Areas.

185. Development in a Coastal Change Management Area will be appropriate only where it is demonstrated that:

a) it will be safe over its planned lifetime and not have an unacceptable impact on coastal change;

b) the character of the coast including designations is not compromised;

c) the development provides wider sustainability benefits; and

d) the development does not hinder the creation and maintenance of a continuous signed and managed route around the coast[64].

[64] As required by the Marine and Coastal Access Act 2009.

186. Local planning authorities should limit the planned lifetime of development in a Coastal Change Management Area through temporary permission and restoration conditions, where this is necessary to reduce a potentially unacceptable level of future risk to people and the development.

How can neighbourhood plans and neighbourhood development/community right to build orders take account of coastal change?

In any instance where a Neighbourhood Area is proposed in a Coastal Change Management Area, careful attention should be paid to the guidance on what development would be appropriate in such an area, including whether time-limiting planning permissions are needed. The local planning authority will need to be consulted about existing and anticipated levels of risk, and the types of development that may or may not be appropriate.

See related policy in paragraphs 170 to 173 of the National Planning Policy Framework (https://www.gov.uk/guidance/national-planning-policy-framework/14-meeting-the-challenge-of-climate-change-flooding-and-coastal-change).

Paragraph: 076 Reference ID: 7-076-20220825

Revision date: 25 08 2022

Flood Zone and flood risk tables

- Table 1: Flood Zones
- National Planning Policy Framework Annex 3 - Flood risk vulnerability classification (https://www.gov.uk/guidance/national-planning-policy-framework/annex-3-flood-risk-vulnerability-classification)
- Table 2: Flood risk vulnerability and flood zone 'incompatibility'

Paragraph: 077 Reference ID: 7-077-20220825

Revision date: 25 08 2022

Table 1: Flood Zones

Flood Zone	Definition
Zone 1 Low Probability	Land having a less than 0.1% annual probability of river or sea flooding. (Shown as 'clear' on the Flood Map for Planning – all land outside Zones 2, 3a and 3b)
Zone 2 Medium Probability	Land having between a 1% and 0.1% annual probability of river flooding; or land having between a 0.5% and 0.1% annual probability of sea flooding. (Land shown in light blue on the Flood Map)

Flood Zone	Definition
Zone 3a High Probability	Land having a 1% or greater annual probability of river flooding; or Land having a 0.5% or greater annual probability of sea. (Land shown in dark blue on the Flood Map)
Zone 3b The Functional Floodplain	This zone comprises land where water from rivers or the sea has to flow or be stored in times of flood. The identification of functional floodplain should take account of local circumstances and not be defined solely on rigid probability parameters. Functional floodplain will normally comprise: • land having a 3.3% or greater annual probability of flooding, with any existing flood risk management infrastructure operating effectively; or • land that is designed to flood (such as a flood attenuation scheme), even if it would only flood in more extreme events (such as 0.1% annual probability of flooding). Local planning authorities should identify in their Strategic Flood Risk Assessments areas of functional floodplain and its boundaries accordingly, in agreement with the Environment Agency. (Not separately distinguished from Zone 3a on the Flood Map)

Note: The Flood Zones shown on the Environment Agency's Flood Map for Planning (Rivers and Sea) do not take account of the possible impacts of climate change and consequent changes in the future probability of flooding. Reference should therefore also be made to the Strategic Flood Risk Assessment (https://www.gov.uk/guidance/local-planning-authorities-strategic-flood-risk-assessment) when considering location and potential future flood risks to developments and land uses.

Paragraph: 078 Reference ID: 7-078-20220825

Revision date: 25 08 2022

Table 2: Flood risk vulnerability and flood zone 'incompatibility'

Flood Zones	Flood Risk Vulnerability Classification				
	Essential infrastructure	Highly vulnerable	More vulnerable	Less vulnerable	Water compatible
Zone 1	✓	✓	✓	✓	✓
Zone 2	✓	Exception Test required	✓	✓	✓
Zone 3a †	Exception Test required †	**X**	Exception Test required	✓	✓
Zone 3b *	Exception Test required *	**X**	**X**	**X**	✓ *

Key:

✓ Exception test is not required

X Development should not be permitted

Notes to table 2:

- This table does not show the application of the Sequential Test which should be applied first to guide development to the lowest flood risk areas; nor does it reflect the need to avoid flood risk from sources other than rivers and the sea;
- The Sequential and Exception Tests do not need to be applied to those developments set out in National Planning Policy Framework footnote 56 (https://www.gov.uk/guidance/national-planning-policy-framework/14-meeting-the-challenge-of-climate-change-flooding-and-coastal-change). The Sequential and Exception Tests should be applied to 'major' and 'non major' development;
- Some developments may contain different elements of vulnerability and the highest vulnerability category should be used, unless the development is considered in its component parts.

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

APPENDIX B: EA INFORMATION & CORRESPONDENCE

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Liam Davies

From: Liam Davies
Sent: 24 October 2025 10:13
To:
Subject: HYD1128 Former Glen Dimplex, Stoney Lane, Whiston - Flood Risk Information Request – Products 4, 5, 6, & 7 [Filed 24 Oct 2025 10:12]
Attachments: Location Plan.pdf

Categories: Filed by Mail Manager

To whom it may concern,

Former Glen Dimplex, Stoney Lane, Whiston

Please could you confirm whether you have any information (where available, Products 4, 5, 6, & 7) that you feel would be valuable to a Flood Risk Assessment and Drainage Management Strategy for the above site (location plan attached), including details of historical flooding and specific drainage requirements; this would be greatly appreciated. If there are any other specific requirements that you require in a scope of works for this site, please can you advise at this stage so that it can be fully incorporated into the proposals at an early stage.

Please do not hesitate to contact me on the details below to discuss further should you require additional information or clarification.

Kind regards

Liam Davies

From: Greater Manchester, Merseyside and Cheshire Enquiries

Sent: 31 October 2025 08:05
To: Liam Davies
Subject: Request for information - Ref: EIR2025/37531 [Filed 31 Oct 2025 08:23]
Attachments: MRC2GJC18N48.pdf

Categories: Filed by Mail Manager

Dear Liam Davies,

I am writing in response to your request for information, received 24 October 2025, regarding Request for Flood risk assessment data (product 4). Customer request reference MRC2GJC18N48.

We respond to requests for information under the Freedom of Information Act 2000 (FOI) and Environmental Information Regulations 2004 (EIR).

There is no detailed modelling for this site, we have provided a detailed flood map.

We hold no record of flooding in this area.

However, this does not mean flooding has not occurred in the past or that it will not flood in future.

There are no flood defences in the vicinity of the site.

There are no 2D levels available for this site.

We recommend that you also contact United Utilities and Lead Local Flood Authority Knowsley Council,

who may hold additional information (the former especially in relation to sewer flooding.

Lead Local Flood Authority Knowsley Council is responsible for issues relating to surface water and hold information on surface water flooding.

For further surface information: Surface water map - Check your long term flood risk - GOV.UK

For further information on your property's flood risk, visit:

Check Your Long Term Flood Risk: Check the long term flood risk for an area in England - GOV.UK

Check for Flooding: Check for flooding in England - GOV.UK

Sign up for flood warnings: Sign up for flood warnings - GOV.UK

Flood Map for Planning: https://flood-map-for-planning.service.gov.uk/

For additional flood risk information, advice and support in your area, please visit: https://thefloodhub.co.uk/

For more information on how the rivers and see dataset is used and its limitations, we recommend you visit How to use rivers and sea data - Flood map for planning - GOV.UK

Please refer to the Open Government Licence which explains the permitted use of this information.

Rights of appeal

If you are not satisfied with our decision, you can contact us within two calendar months to ask for the decision to be reviewed. We will then conduct an internal review of our response to your request and give you our decision in writing within 40 working days.

If you are not satisfied with the outcome of the internal review, you can then make an appeal to the Information Commissioner Office, the statutory regulator for EIR and FOI. The address is: Information Commissioner's Office, Wycliffe House, Water Lane, Wilmslow, Cheshire. SK9 5AF.

Yours sincerely,

Lauren Blackley

GMMC Area Customers and Engagement Team

Environment Agency

Please tell us how we did

To help improve your experience as a customer we are currently gathering feedback. If you would like to take part in a short customer satisfaction survey, please click the link below:

Environment Agency FOI Customer Satisfaction Survey

Liam Davies

From: Get flood risk information for planning

Sent: 24 October 2025 10:10
To: Liam Davies
Subject: Confirmation of request for flood risk data. Your reference number MRC2GJC18N48 [Filed 24 Oct 2025 10:10]

Categories: Filed by Mail Manager

GOV·UK

Dear Liam Davies,

Thank you for ordering flood risk data.

Location data requested for: 348024,391523 easting and northing coordinates.

Your reference number is: MRC2GJC18N48.

You should receive your flood risk data by email within 20 working days.

You should not submit another request for data for the same location after you have placed an order. We will not action a request for the same location if the email address is the same. If you request the same data twice, it will not speed up your order. If you have any questions about your order, please use the contact details below.

Contact us

Do not reply to this email. This inbox is not checked regularly.

If you have any questions about your order, or no longer need the data, contact the Greater Manchester Merseyside and Cheshire Environment Agency team at

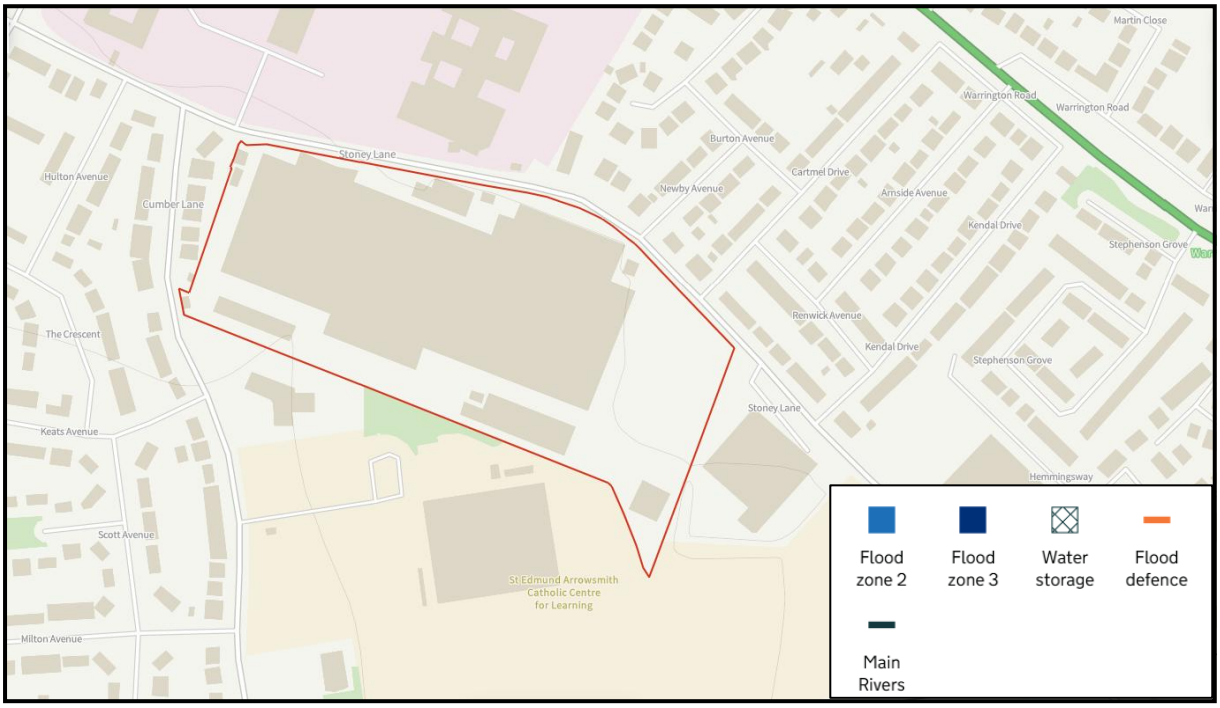
inforequests.gmmc@environment-agency.gov.uk. Make sure you include your reference number.

Regards,

Flood map for planning service
Environment Agency
https://flood-map-for-planning.service.gov.uk/

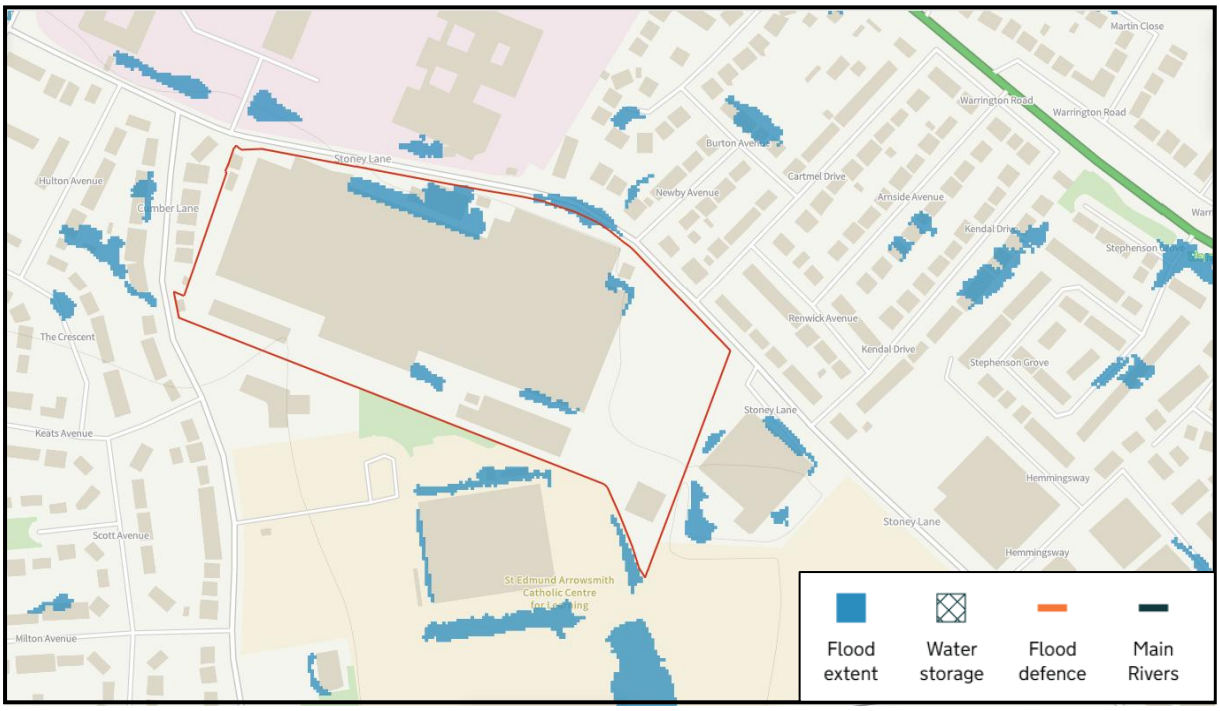
FLOOD MAP FOR PLANNING

Flood Zones – Present Day

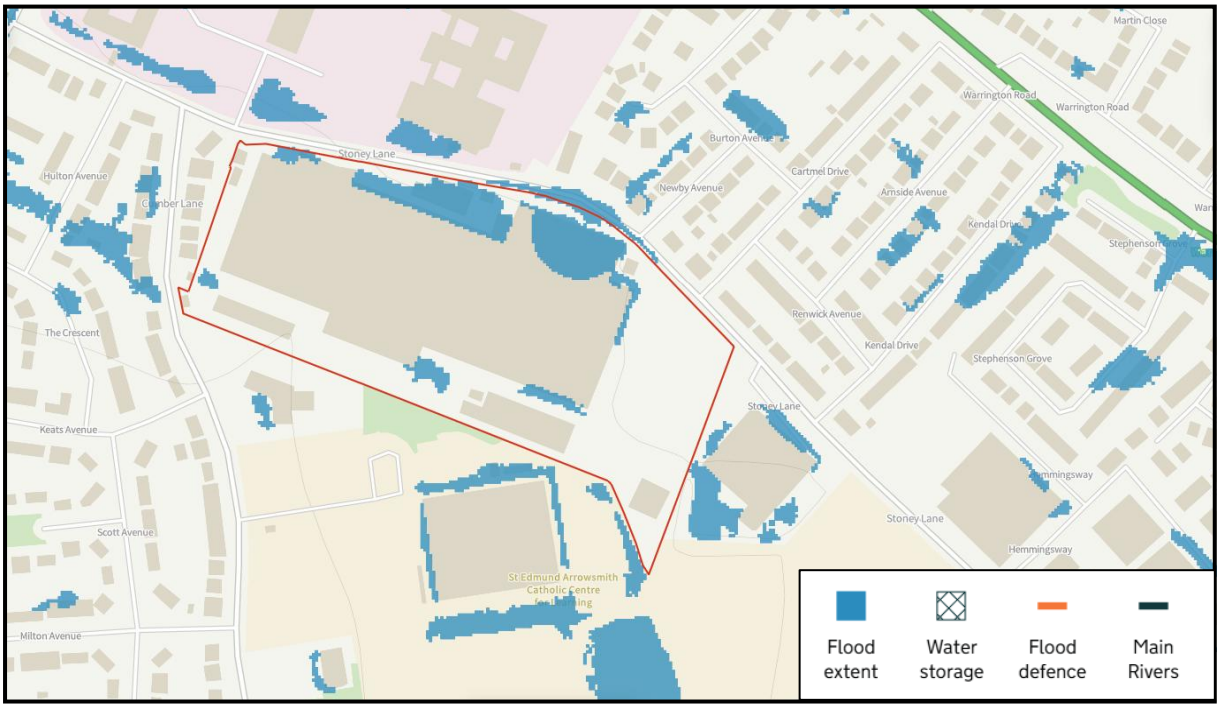


Flood Zones – Future

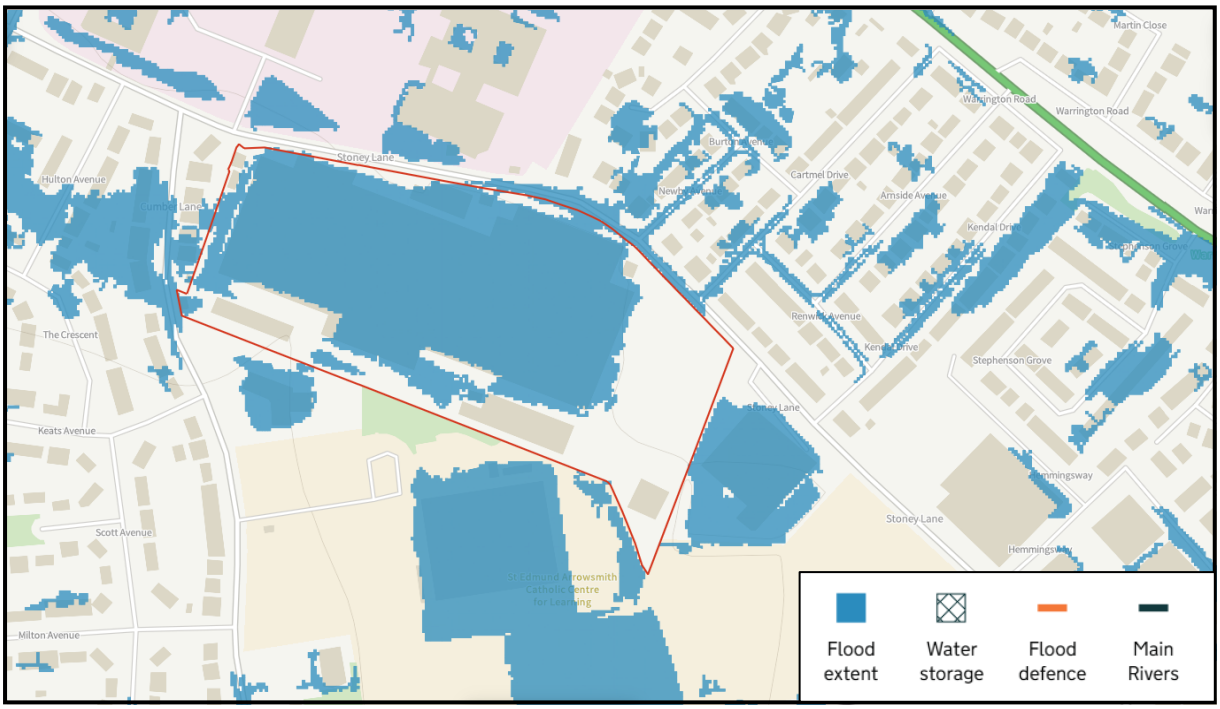
Surface Water Annual Likelihood of Flooding – 1 in 30yr



Surface Water Annual Likelihood of Flooding – 1 in 100yr



Surface Water Annual Likelihood of Flooding – 1 in 1000yr

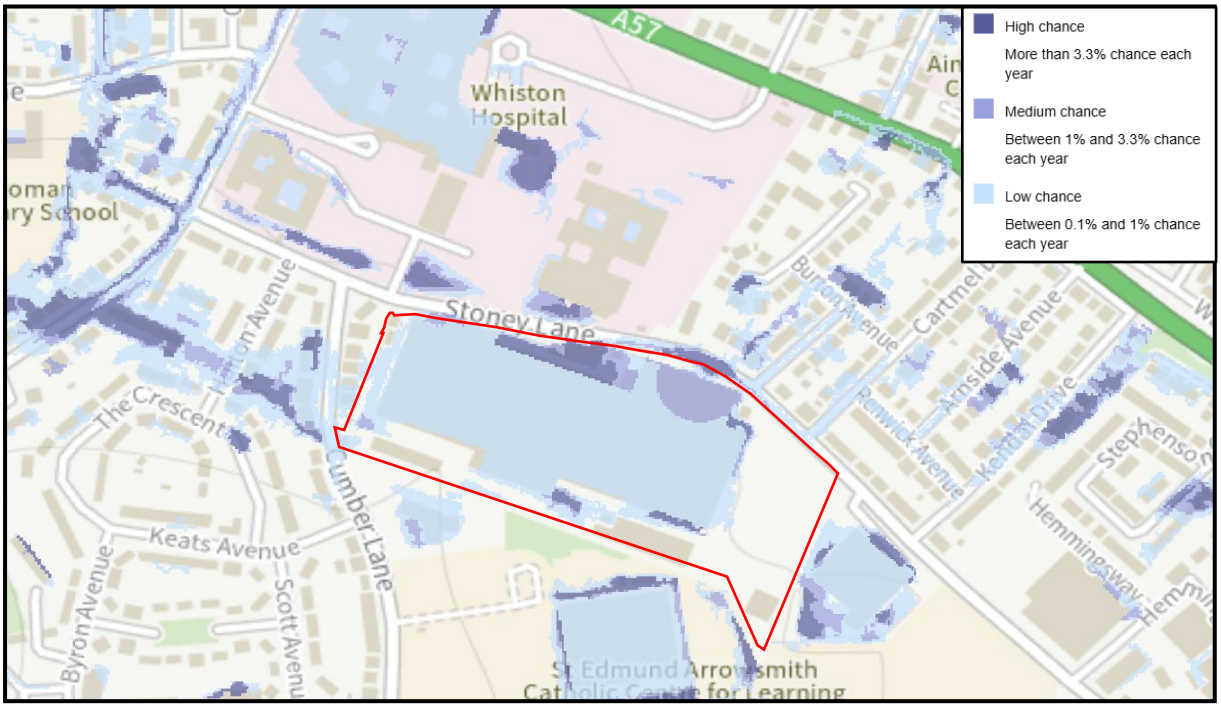


LONG TERM RISK OF FLOODING MAPPING

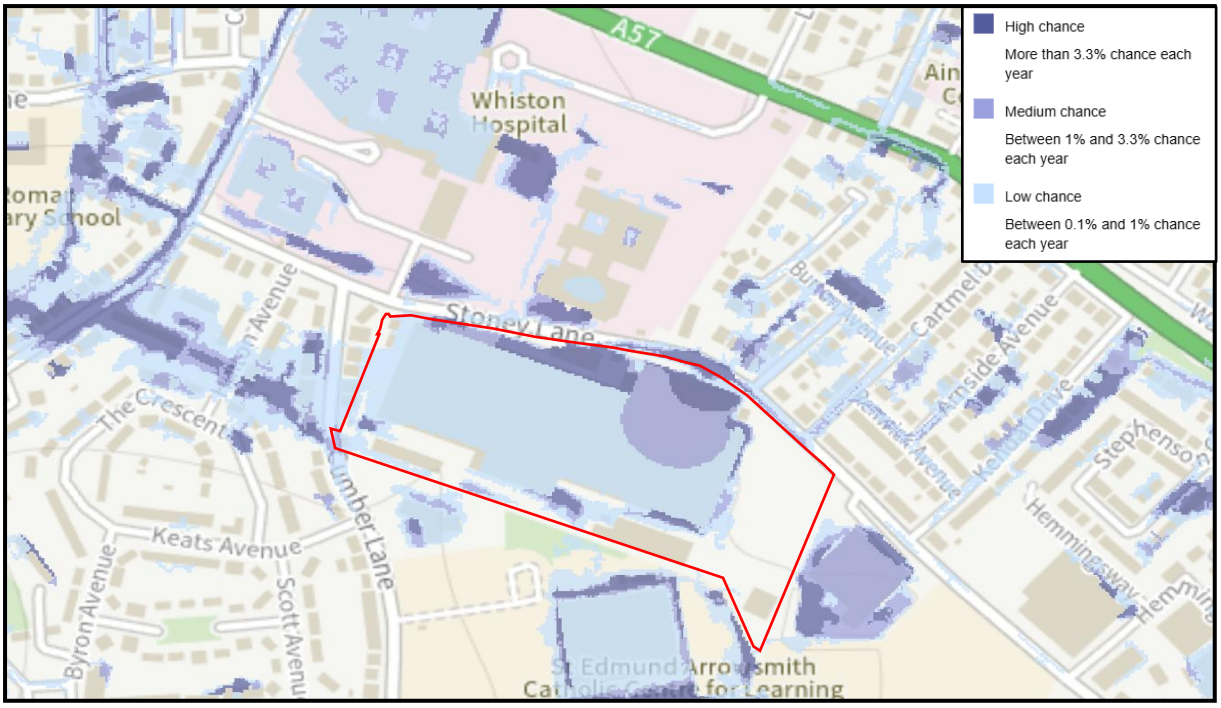
Rivers or Sea – Current

Rivers or Sea – Future (2036-2069)

Surface Water – Current



Future (2040-2060)



Long Term Flood Risk - Reservoirs

APPENDIX C: UU CORRESPONDENCE

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Liam Davies

From:
Sent: 03 November 2025 10:25
To: Liam Davies
Subject: RE: HYD1128 Former Glen Dimplex, Stoney Lane, Whiston - Sewer Flood Risk Information Request [Filed 03 Nov 2025 10:26]

Categories: Filed by Mail Manager

Good Morning Liam,

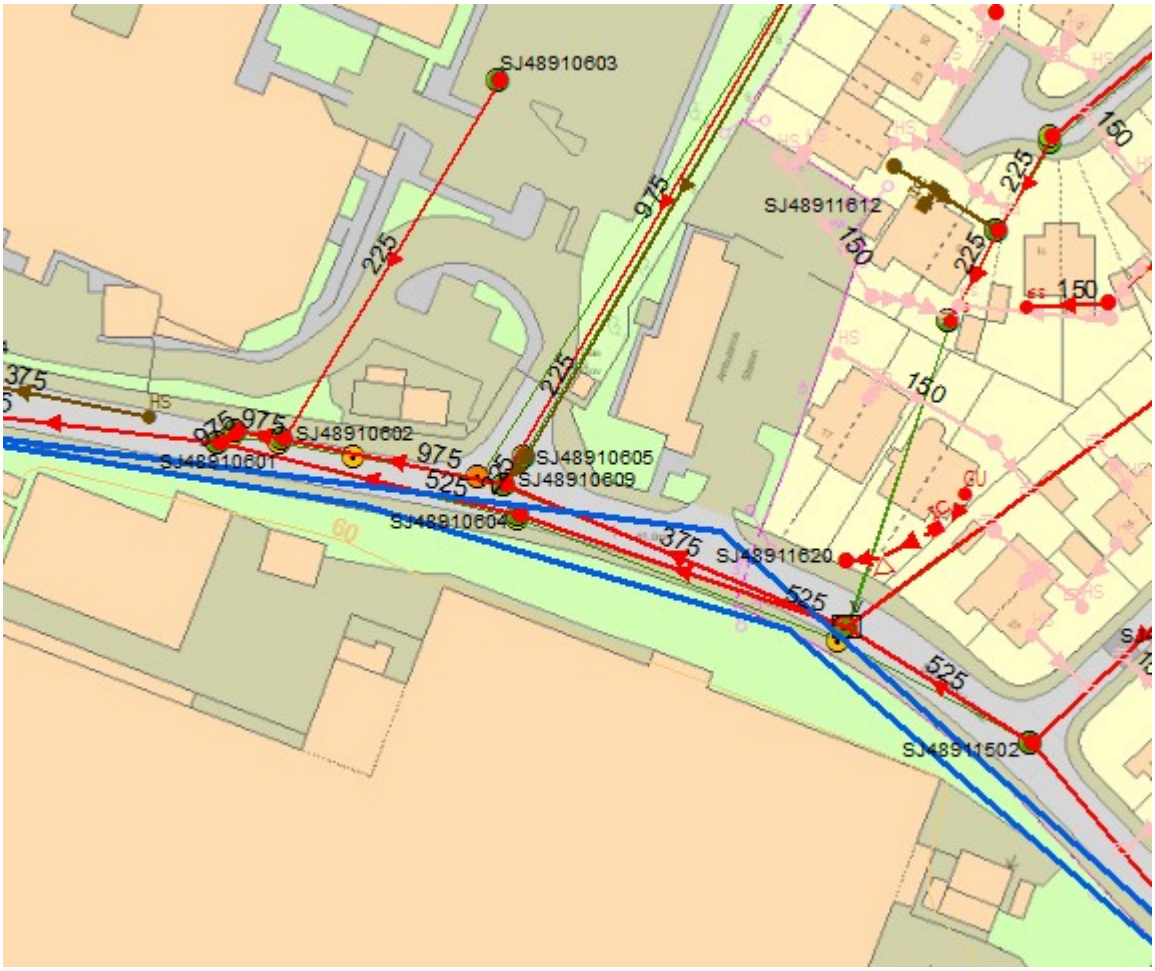
I can confirm that we have modelled flood risk within the vicinity of the proposed development.

Please note that our modelling data is indicative, and only representative of the 1:100year storm event.

United Utilities Water Limited (UUW) can only record and check flooding events which are reported to us, and we must comply with our Regulators instructions on the qualification of flooding events.

Our response does not include:

- any sewer flooding events caused by blockages or collapses which are the result of third-party actions, natural events, or other actions over which UUW has no control and not a facet of sewer capacity; or
- any historical sewer flooding events that have been resolved from investment in our infrastructure.



Thanks

United Utilities
Water for the North West

If you have received a great service today why not tell us?
Visit: unitedutilities.com/wow

---------- Original Message ----------
From:
Sent: 24/10/2025 10:22
To:
Subject: RE: HYD1128 Former Glen Dimplex, Stoney Lane, Whiston - Sewer Flood Risk Information Request

Good Morning,

Your enquiry has been logged and sent to our engineer Shoaib Tauqeer and his contact number is . Our service Level agreement is to respond to you within 5 working days.

Many thanks

If you feel you have received a good service from myself, please can you take two minutes to fill in the survey below. This will be much appreciated

Visit: *https://unitedutilities.thewowawards.co.uk/nominate*

---------- Origin
From: Liam Davies
Sent: 24/10/2025 10:17
To:
Subject: HYD1128 Former Glen Dimplex, Stoney Lane, Whiston - Sewer Flood Risk Information Request

To whom it may concern,

Former Glen Dimplex, Stoney Lane, Whiston

We have recently been instructed to prepare a Flood Risk Assessment and Drainage Management Strategy for the above site (location plan attached). Please could you confirm whether you have any record of sewer flooding impacting on or within proximity of the site?

Please do not hesitate to contact me on the details below to discuss further should you require additional information or clarification.

Kind regards

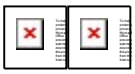
Liam Davies BA MSc

Graduate Flood Risk Analyst

BETTS HYDRO

Consulting Engineers

Old Marsh Farm Barns, Welsh Road, Sealand, Flintshire, CH5 2LY



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www.unitedutilities.com/subsidiaries

Liam Davies

From: Liam Davies
Sent: 24 October 2025 10:18
To:
Subject: HYD1128 Former Glen Dimplex, Stoney Lane, Whiston - Sewer Flood Risk Information Request [Filed 24 Oct 2025 10:18]
Attachments: Location Plan.pdf

Categories: Filed by Mail Manager

To whom it may concern,

Former Glen Dimplex, Stoney Lane, Whiston

We have recently been instructed to prepare a Flood Risk Assessment and Drainage Management Strategy for the above site (location plan attached). Please could you confirm whether you have any record of sewer flooding impacting on or within proximity of the site?

Please do not hesitate to contact me on the details below to discuss further should you require additional information or clarification.

Kind regards

APPENDIX D: LPA/LLFA CORRESPONDENCE

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Liam Davies

From: Liam Davies
Sent: 17 November 2025 14:51
To:
Subject: RE: HYD1128 Former Glen Dimplex, Stoney Lane, Whiston - Historic Flood Risk and Drainage Information Request [Filed 17 Nov 2025 14:50]

Importance: High

Categories: Filed by Mail Manager

Good Afternoon,

Apologies if I am mistaken, but I believe I am still awaiting a response to my request for Flood Risk and Drainage Information Request submitted on 24th October 2025 for the above-named site.

Please can you inform me when I can expect to receive a response, and I hope to hear from you in due course!

Kind regards

From: Liam Davies
Sent: Friday, October 24, 2025 10:15 AM
To:
Subject: HYD1128 Former Glen Dimplex, Stoney Lane, Whiston - Historic Flood Risk and Drainage Information Request [Filed 24 Oct 2025 10:15]

To whom it may concern,

Former Glen Dimplex, Stoney Lane, Whiston

Please could you confirm whether you have any information that you feel would be valuable to a Flood Risk Assessment and Drainage Management Strategy for the above site (location plan attached), including details of historical flooding and specific drainage requirements; this would be greatly appreciated. If there are any other specific requirements that you require in a scope of works for this site, please can you advise at this stage so that it can be fully incorporated into the proposals at an early stage.

Please do not hesitate to contact me on the details below to discuss further should you require additional information or clarification.

Kind regards

Liam Davies

From: Liam Davies
Sent: 24 October 2025 10:16
To:
Subject: HYD1128 Former Glen Dimplex, Stoney Lane, Whiston - Historic Flood Risk and Drainage Information Request [Filed 24 Oct 2025 10:15]
Attachments: Location Plan.pdf

Categories: Filed by Mail Manager

To whom it may concern,

Former Glen Dimplex, Stoney Lane, Whiston

Please could you confirm whether you have any information that you feel would be valuable to a Flood Risk Assessment and Drainage Management Strategy for the above site (location plan attached), including details of historical flooding and specific drainage requirements; this would be greatly appreciated. If there are any other specific requirements that you require in a scope of works for this site, please can you advise at this stage so that it can be fully incorporated into the proposals at an early stage.

Please do not hesitate to contact me on the details below to discuss further should you require additional information or clarification.

Kind regards

Liam Davies

From: Liam Davies
Sent: 24 October 2025 10:16
To:
Subject: HYD1128 Former Glen Dimplex, Stoney Lane, Whiston - Historic Flood Risk and Drainage Information Request [Filed 24 Oct 2025 10:15]
Attachments: Location Plan.pdf

Categories: Filed by Mail Manager

To whom it may concern,

Former Glen Dimplex, Stoney Lane, Whiston

Please could you confirm whether you have any information that you feel would be valuable to a Flood Risk Assessment and Drainage Management Strategy for the above site (location plan attached), including details of historical flooding and specific drainage requirements; this would be greatly appreciated. If there are any other specific requirements that you require in a scope of works for this site, please can you advise at this stage so that it can be fully incorporated into the proposals at an early stage.

Please do not hesitate to contact me on the details below to discuss further should you require additional information or clarification.

Kind regards

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APPENDIX E: LOCATION PLAN

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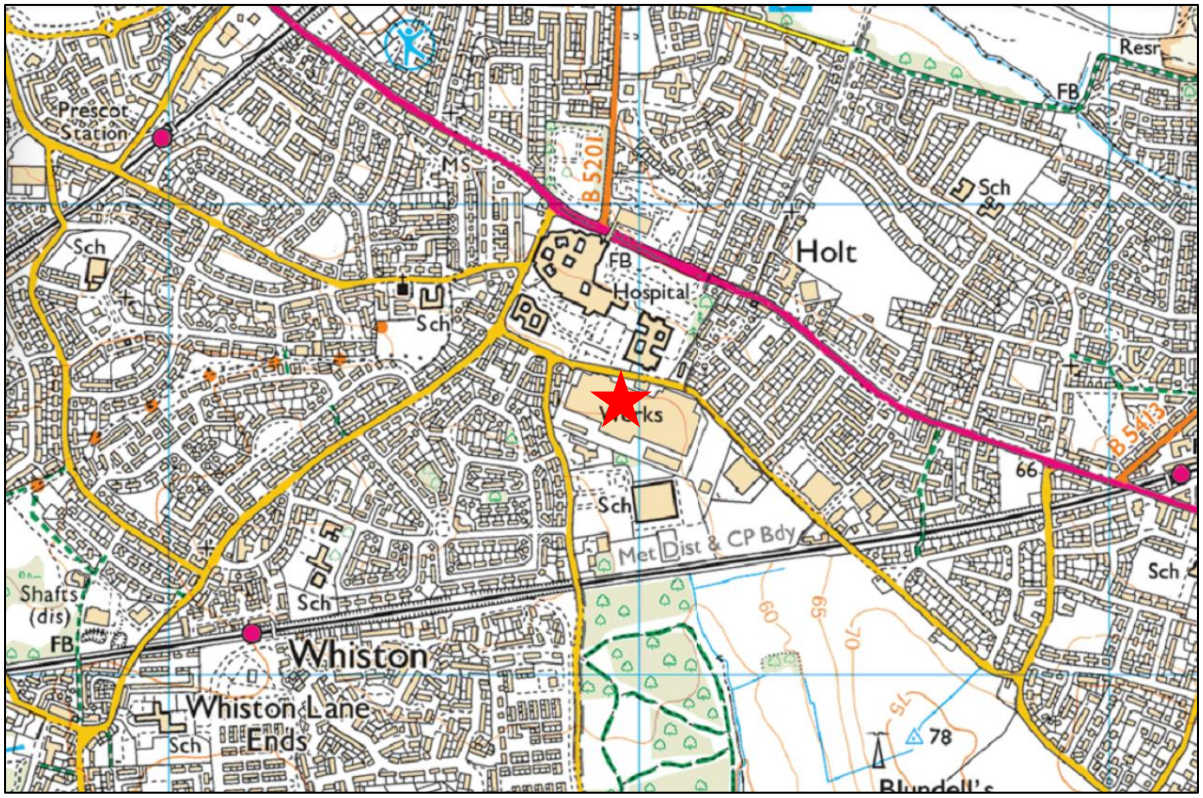
LOCATION PLAN

Former Glen Dimplex, Stoney Lane, Whiston



OS X (Eastings) 347921
OS Y (Northings) 391590
Nat Grid SJ479915 / SJ4792191590
Nearest Post Code L35 2XW
Lat (WGS84) N53:25:07 (53.41852684321607)
Long (WGS84) W2:47:06 (-2.785068353974353)
Lat,Long (WGS84) 53.41852684321607,-2.785068353974353
Lat (OSGB36) N53:25:06 (53.41827891888551)
Long (OSGB36) W2:47:01 (-2.783696832357844)
Lat,Long (OSGB36) 53.41827891888551,-2.783696832357844

APPENDIX F: TOPOGRAPHIC SURVEY

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N

PLAN GRID NORTH

File Name: TAY143 - Stoney Lane, Prescot Topographical and Utility Survey.dwg

LEGEND

AV	AIR VALVE	BT	BT
BT	BT INSPECTION COVER	CABLE DUCT	DUCT
CCTV	CCTV CAMERA	CCTV	CCTV
CCTV	CCTV CAMERA POST	CCTV	CCTV
COM	COMMUNICATIONS COVER	TELECOMS	TCM
CP	CABLE POST	TELECOMS STRIP	TCM
CTL	CABLE TO LOOM	ELECTRIC	ELEC
DI	DRAINAGE CHANNEL	ELECTRIC	ELEC
EP	ELEC POST	FUEL LINE	FL
GM	GRID	FUEL/TELECOM LINE	FL
IC	INSPECTION COVER	GAS	GAS
EJB	ELECTRIC BOX	MAINS WATER	W
LP	LAMP POST	SEWER	FW
EP	ELECTRICITY POLE	SEWER FW	FW
FFL	FINISHED FLOOR LEVEL	SEWER CW	CW
FH	FIRE HYDRANT	UNDENTIFIED CABLE	UNID
GLY	GULLY	UNIDENTIFIED TRACE	UNID
GLT	GROUND LIGHT	UNIDENTIFIED CABLE	UC
GV	GAS VALVE	UNIDENTIFIED TRACE	UC
GSV	GAS VALVE	VEHICLE DETECTION CABLE	VDC
IC	INSPECTION COVER	VDC	VDC
		SURVEY STATION	SS
		SURVEY BOUNDARY	

IL	INVERT LEVEL
KO	KERB OUTLET
MH	MANHOLE
MK	MARKER
MKR	MARKER
PIP	PLASTIC PIPE
PN	PYLON
PT	PICKING POINT
RP	RECORDED POINT
SVP	SURFACE VENT PIPE
TP	TEMPORARY POINT
SV	STOP VALVE
TB	TELECOMS DUCTING BOX
TL	TRAFFIC LIGHT
TLB	TRAFFIC LIGHT BOX
WB	WATER BOUNDARY
WM	WATER METER
WO	WATER OUTLET
WT	WATER TANK TAP
WSV	WATER STOP VALVE
EOT	END OF TRACE
UTA	UNABLE TO ACCESS AREA
UTL	UNABLE TO LOCATE
UTS	UNABLE TO SPACE
SL	STREET LIGHT
SJ	SIGNAL JUNC
MFN	NO FURTHER SPR CONTACTS
NFC	NO FURTHER CPE
NVP	NO VISIBLE PIPE
TUP	TOP OF PIPE
UNK	UNKNOWN
UTE	UNABLE TO TRACE
LOR	LOSS OF REFLECTION

FROM STATUTORY AUTHORITY PLANS

BT		
CABLE DUCT		
CATV		
CCTV		
TELECOMS		
ELECTRIC		
MAINS GAS		
MAINS WATER		
SEWER CW		
SEWER FW		
SEWER GM		
FIBRE-OPTICS		

NOTES

All levels relate to O.S (Newlyn) Datum, Established using network RTK.
Survey plotted on a plane local grid, orientated to National Grid.

Services shown as 'From Statutory Authority Plans' line styles are taken from Statutory Records plans supplied by the relevant regional authorities. These services were not located and are shown for indicative purposes only.

Survey Control Markers established for Mapping purposes only and should not be used for Construction without the written approval of GEO UK Ltd.

TYPE AL TILE KIT	TYPE BL TILE KIT	TYPE BT TILE KIT
ELECTRICITY TILE KIT	TELECOMMUNICATIONS TILE KIT	WATER TILE KIT
CABLE TYPE: 132KV	CABLE TYPE: 11KV	CABLE TYPE: TELECOMS
CABLE TYPE: 33KV	CABLE TYPE: 6.6KV	CABLE TYPE: WATER
CABLE TYPE: 11KV	CABLE TYPE: 3.3KV	
CABLE TYPE: 6.6KV	CABLE TYPE: LV	
CABLE TYPE: 3.3KV		
CABLE TYPE: LV		

DISCLAIMER:

At GEO UK LTD we use skilled and experienced staff, modern up to date techniques and top of the range electromagnetic and radar technology to locate and trace sub-surface utilities. However the performance of the equipment employed in non-invasive surveys can be adversely affected by factors outside the control of GEO UK LTD.. Therefore GEO UK LTD cannot guarantee that all utilities present on site have been located. It is the responsibility of the Client to consult regional authority records and undertake trial digs where appropriate.

Where similar services run in close proximity it may be impossible to separately trace individual services as the trace signal can experience interference. In such cases, services will be shown as a single, annotated line. The displayed depth will refer to the shallowest detected utility.

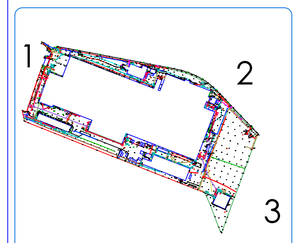
Successful tracing of non-conductive materials may be limited. Drainage gullies are duly tested where possible to prove connectivity but it is not always possible to introduce the sonde due to narrow pipe sizes and/or accumulated silt.

Depth information of underground services/features are generally accurate to within +/- 10% (i.e. a pipe at 2m deep may be accurate to +/-200mm) but cannot be guaranteed. Depths are usually refer to the top of the service. Gravity sewer and drain depths are usually to invert (base of drainage channel) unless otherwise stated.

Some above ground features may have been obscured at time of survey. It is not always possible to operate the Ground Penetrating Radar in areas including, but not limited to, dense vegetation, rubble, debris and/or roughly/uneven ground.

Existing record information that was made available to GEO UK LTD by the Client or by the statutory utility provider should be regarded only as an indication and cannot be guaranteed.

Excavation in the vicinity of services shown should be carried out with due diligence (Ref. HSG47).



SHEET LAYOUT

0 2.5m 5m 10m 15m 20m

SCALE BAR

REV	DATE	DESCRIPTION

GEO
Geographical Engineering Operations

Client
E3P
Taylor Road
Urmston
Manchester
M41 7JQ

Project Title
Utility Survey of Land at:
Stoney Lane
Whiston Cross
Whiston
Knowsley
L35 9JU

Surveyed	Drawn	Checked
CT	JAS	GEO UK LTD

Scale	Date	Drawing Ref.	No.	Size	Rev
1:250	MAR 24	G24104	01	A0	--

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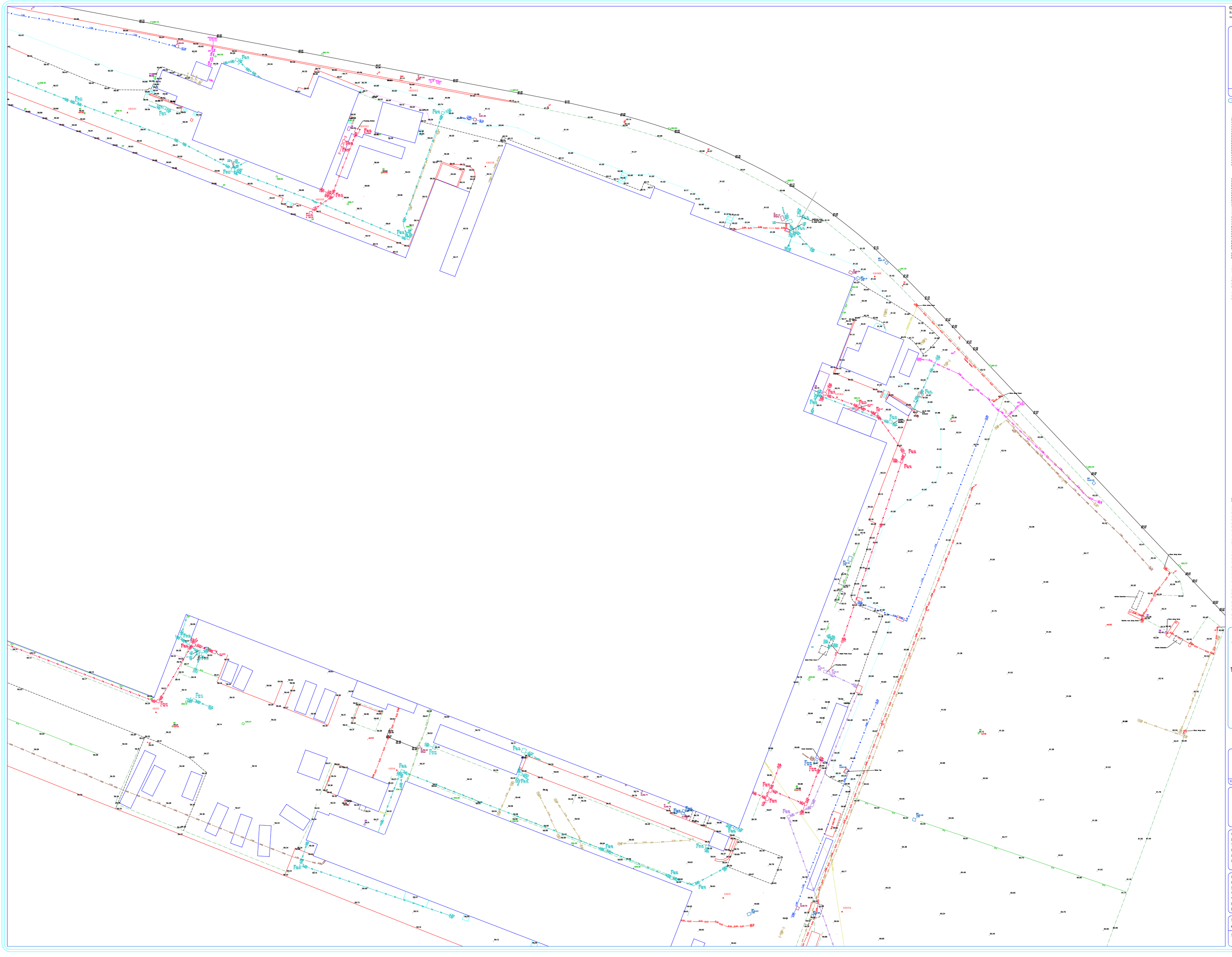

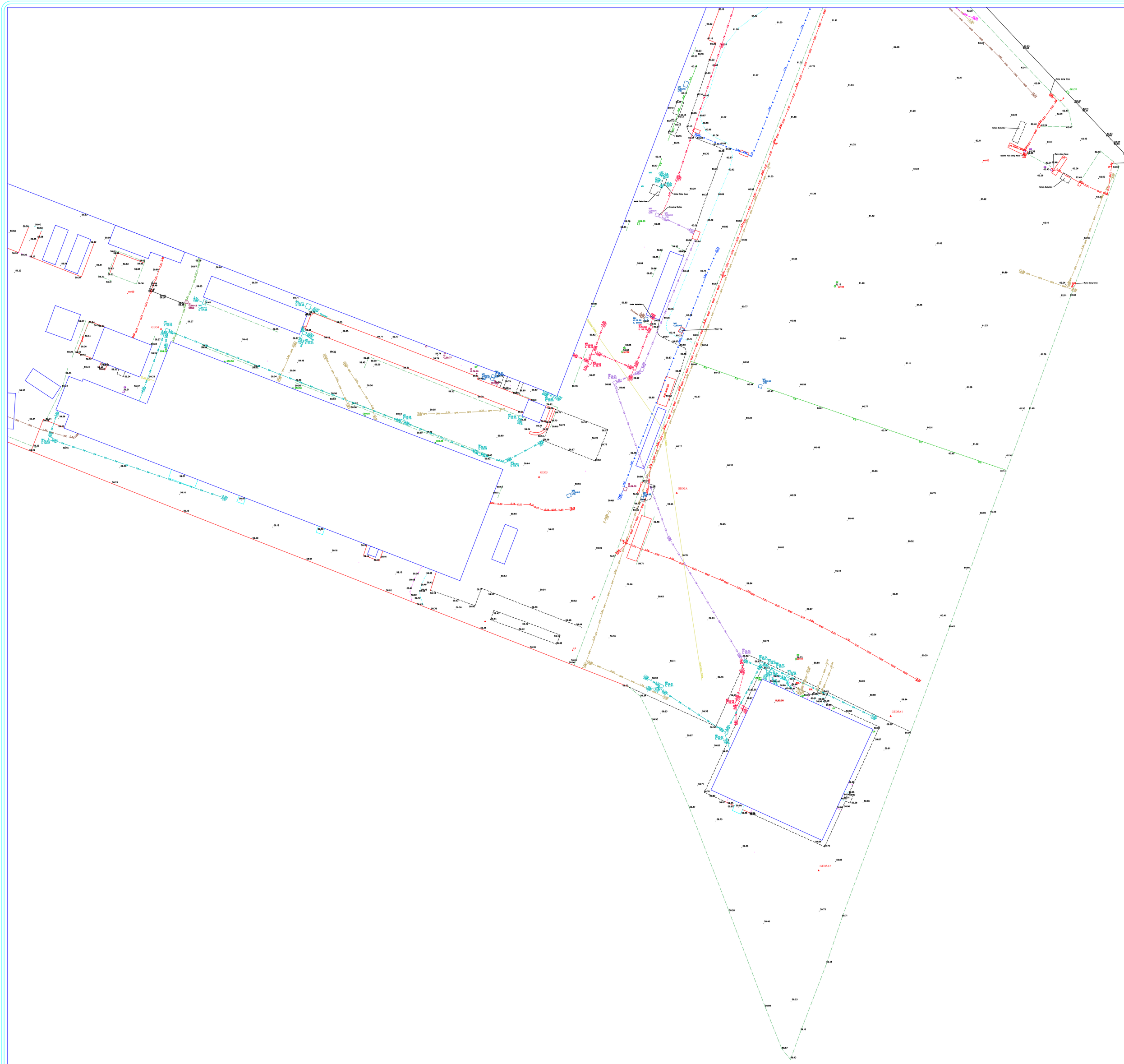

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N

PLAN GRID NORTH

File Name: TAY143 - Stoney Lane, Prescot Topographical and Utility Survey.dwg

LEGEND

AV	AIR VALVE	BT	BT
BT	BT INSPECTION COVER	CABLE DUCT	CABLE DUCT
CAB	CABLE TV BOX	CABLE TV	CABLE TV
CCTV	CCTV CAMERA POST	CCTV	CCTV
COM	COMMUNICATIONS COVER	TELECOMS	TELECOMS
CP	CABLE TV COVER	CONTROL STRIP	CONTROL STRIP
CTV	CABLE TV DUCT	ELECTRIC	ELEC
DP	DRAINAGE CHANNEL	ELECTRIC	ELEC
DP	DRAIN POINT	FUEL LINE	FL
DP	DRAIN	FUEL LINE/TELEPHONE LINE	FL/TL
EIC	ELECTRIC INSPECTION COVER	GAS	GAS
ELB	ELECTRIC BOX	MAINS WATER	W
EP	ELECTRIC POST	SEWER	FW
EP	ELECTRICITY POLE	SEWER FW	FW
FFL	FINISHED FLOOR LEVEL	SEWER SW	SW
FP	FLAG POST	UNDERGROUND CABLE	UNID
G	GULLY	UNIDENTIFIED TRACE	UNID
GLT	GROUND LIGHT	UNIDENTIFIED CABLE	UC
GP	GAS POST	VEHICLE DETECTION	VDC
GSV	GAS VALVE	VEHICLE DETECTION CABLE	VDC
IC	INSPECTION COVER	WATER	W
		WATER/GAS	W/G
		SURVEY BOUNDARY	

IL	INVERT LEVEL
KO	KERB OUTLET
LP	LAMP POST
MH	MANHOLE
MKR	MARKER
OP	OVERFLOW PIPE
PN	PYLON
PT	PICTORIAL POST
RP	RAINWATER PIPE
SMP	SUMMIT PIPE
SP	SOIL VENT PIPE
ST	STOP VALVE
TB	TRAFFIC LIGHT JNCTL BOX
TL	TRAFFIC LIGHT
TLB	TRAFFIC LIGHT BOX
TP	TELEGRAPH POLE
WB	WATER METER
WO	WATER OUTLET
WP	WATER POST TAP
WSV	WATER STOP VALVE
EOT	END OF TRACE
INA	INACCESSIBLE AREA
UTL	UNABLE TO LOCATE
UTS	UNABLE TO TRACE
SCP	SURVEY POINT
S.V.	SIGNAL LOOP
MFN	MULTIPLE FINDS
NFN	NO FURTHER SPR CONTACTS
NVP	NO VISIBLE PIPES
NVR	NO VISIBLE EVES
TUP	TOP OF RSPC
TVP	TOP OF VPC
UTR	UNABLE TO RAISE
LOR	LOSS OF REFLECTION

FROM STATUTORY AUTHORITY PLANS

BT	BT
CABLE DUCT	CABLE DUCT
CABLE TV	CABLE TV
CCTV	CCTV
TELECOMS	TELECOMS
ELECTRIC	ELECTRIC
MAINS GAS	MAINS GAS
MAINS WATER	MAINS WATER
SEWER CW	SEWER CW
SEWER FW	SEWER FW
SEWER SW	SEWER SW
FIBRE-OPTICS	FIBRE-OPTICS

NOTES

All levels relate to O.S (Newlyn) Datum, Established using network RTK.
Survey plotted on a plane local grid, orientated to National Grid.

Services shown as 'From Statutory Authority Plans' line styles are taken from Statutory Records plans supplied by the relevant regional authorities. Such services were not located and are shown for indicative purposes only.

Survey Control Markers established for Mapping purposes only and should not be used for Construction without the written approval of GEO UK LTD.

TYPICAL TELECOMS AND ELECTRICITY DUCTWORK

ELECTRICITY/TELECOMS DUCTWORK | TELECOMS DUCTWORK | ELECTRICITY DUCTWORK

DISCLAIMER:

At GEO UK LTD we use skilled and experienced staff, modern up to date techniques and top of the range electromagnetic and radar technology to locate and trace sub-surface utilities. However the performance of the equipment employed in non-invasive surveys can be adversely affected by factors outside the control of GEO UK LTD. Therefore GEO UK LTD cannot guarantee that all of the services present on site have been located. It is the responsibility of the Client to consult regional authority records and undertake trial digs where appropriate.

Where similar services run in close proximity it may be impossible to separately trace individual services as the trace signal can experience interference. In such cases, services will be shown as a single, annotated line. The displayed depth will refer to the shallowest detected utility.

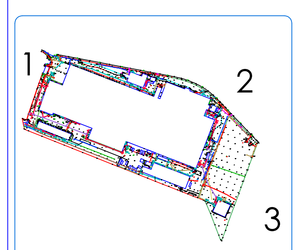
Successful tracing of non-conductive materials may be limited. Drainage gullies are, due tested where possible to prove connectivity but it is not always possible to introduce the sonde due to narrow pipe sizes and/or accumulated silt.

Depth information of underground services/features are generally accurate to within +/- 10% (i.e. a pipe at 2m deep may be accurate to +/-200mm) but this cannot be guaranteed. Depths shown usually refer to the top of the service. Gravity sewer and drain depths are usually to invert (base of drainage channel) unless otherwise stated.

Some above ground features may have been obscured at time of survey. It is not always possible to operate the Ground Penetrating Radar in areas including, but not limited to, dense vegetation, rubble, debris and/or rough/uneven ground.

Existing record information that was made available to GEO UK LTD by the Client or by the statutory utility provider should be regarded only as an indication and cannot be guaranteed.

Excavation in the vicinity of services shown should be carried out with due diligence (Ref: HSG47).



SHEET LAYOUT

0 2.5m 5m 10m 15m 20m

SCALE BAR

REV	DATE	DESCRIPTION

Geographical Engineering Operations

Client
E3P
Taylor Road
Urmston
Manchester
M41 7JQ

Project Title
Utility Survey of Land at:
Stoney Lane
Whiston Cross
Whiston
Knowsley
L35 9JU

Surveyed	Drawn	Checked
CT	JAS	GEO UK LTD

Scale	Date	Drawing Ref.	No.	Size	Rev
1:250	MAR 24	G24104	03	A0	--

APPENDIX G: PLANNING LAYOUT

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FORMER GLEN DIMPLEX | LAND SOUTH OF STONEY LANE

0 5 10 15 25m
1:500

N

The Contractor is to check and verify in conjunction with the Architects details all setting out dimensions, levels and boundary positions before commencing any work on site and ensure that they are fully conversant with the content and the requirements of the Site Investigation Report before work starts.
The Contractor is to comply in all respects with current building legislation, British and European Standard specifications, Building Regulations, Robust Details etc., whether or not specifically stated on this drawing.

This drawing is not intended to show details of ground conditions or ground contaminants. Each area of ground relied upon to support any structure depicted (including drainage) must be investigated by the Contractor. Any areas of formation for said structures which do not accord with the anticipated conditions as described in the Site Investigation Report are to be immediately brought to the attention of the Contractor's engineer. Any areas of made ground encountered on or within the ground should be further investigated by a suitable expert. Any earthworks shown indicate typical slopes for guidance only and should be investigated further by a suitable geotechnical expert.

Where existing trees are shown to be retained they should be subject to a full arboricultural survey and report and should be fully protected by the Contractor during construction to a minimum of 5 metres from buildings and 2 metres from drainage and services, where applicable. A foundation is to be provided to accommodate the proposed tree planting, where applicable.

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Drawing Status:

X	FOR COMMENT
	PRELIMINARY ISSUE
	TENDER ISSUE
	CONSTRUCTION ISSUE
	AS BUILT

Notes:

ACCOMMODATION SCHEDULE

Name	Ref	TW ref	Bed	Storey	Unit No's	Unit ft²	ft² Total
Open Market Dwellings (184)							
Beaford Mid	BEA	EMA22	2 Bed	2	14	778	10892
Beaford Semi	BEA	EMA22	2 Bed	2	1	778	778
Brambleford Mid	BRA	EMA32	3 Bed	2	2	907	1814
Brambleford Semi	BRA	EMA33	3 Bed	2	29	907	26303
Aynesdale Semi	AYN	EMT31	3 Bed	2	9	1058	9522
Aynesdale Semi	AYN	EMT31	3 Bed	2	4	1058	4232
Tetford Det	TET	EMA35	3 Bed	2	5	1021	5105
Tetford Semi	TET	EMA35	3 Bed	2	11	1021	11231
Harrton Mid	HAR	EMB31	3 Bed	2.5	13	1140	14820
Harrton End	HAR	EMB31	3 Bed	2.5	30	1140	34200
Ayleford Semi	AYL	EMA41	4 Bed	2	10	1101	11010
Ayleford Det	AYL	EMA41	4 Bed	2	12	1101	13212
Corkham	COR	EMG42	4 Bed	2	24	1347	32328
Henford	HEN	EMA44	4 Bed	2	12	1359	16308
Wansdale	WAN	EMT45	4 Bed	2	8	1450	11600
Sub Total:			184 Units				203355 ft²
Affordable Dwellings @ 10% (20)							
Beaford Mid	BEA	EMA22	2 Bed	2	10	778	7780
Beaford Semi	BEA	EMA22	2 Bed	2	6	778	4668
Eynsford Mid	EYN	EMA33	3 Bed	2	4	972	3888
Sub Total:			20 Units				16336 ft²
Grand Total:			**204 Units**				**219691 ft²**
Net Site Area:			**5.147713**				**12.7200**
Net Coverage:			**3964.86 m²/ha**				**17271.31 ft²/ac**

LOCATION PLAN - 1:1250

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SITE PLAN - 1:500

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Key

- TW Red line / Legal Ownership
- Fencing - rear/side boundaries
- Fencing - plot boundaries
- Brick Screenwall
- Knee Rail Fence
- Paladin Mesh Fencing
- POS / SUDS Area
- POS and buffers
- Proposed Tree Planting
- Existing Tree / Vegetation to be retained
- Existing Tree / Vegetation to be cut back
- Existing Tree / Vegetation to be removed
- Affordable house types

Rev V 07-11-2025
Schedule amended OM Beaford end to mid. Rear paths, gates and car bay numbers indicated.

Rev U 31-10-2025
Garage shown to Plot 204.

Rev T 30-10-2025
Client amendments. Schedule updated.

Rev S 29-10-2025
Plots 1-13, 71, 86-87, 119-125, 138-139, 169-175,181-204 repositioned. Schedule updated.

Rev R 23-10-2025
Plots 62-65, 71, 13-139 repositioned. Schedule updated.

Rev P 22-10-2025
Plots 6-9, 36-39, 82-86, 103-110, 124-129, 169-175, 180-204 amended and repositioned. Parking to plots 50-51 amended.

Rev N 09-10-2025
Amend parking bay locations and drive lengths.

Rev M 08-10-2025
Partial layout redesign in accordance with clients sketch design.

Rev L 03-10-2025
Partial layout redesign.

Rev K 26-09-2025
General amendments to layout

Rev J 27-08-2025
Parking bay nos updated. Schedules updated. Net dev and POS areas updated.

Rev H 26-08-2025 (TW)
Entrance pod re-designed and two plots removed to accommodate POS and Sales Centre car park, two plots plotted to central POS to re-balance mix and POS.

Rev G 14-08-2025
Net dev area updated to suit TW Site /Contract boundary.

Rev F 13-08-2025
TW Site /Contract boundary indicated.

Rev E 11-08-2025
Plots 169-170 house type substitution from Brambleford to Teford. Plots 2-3 house type substitution from Beaford to Brambleford.

Rev D 08-08-2025
Parking bays plots 172-175 corrected to 5.0m length.
Plots 177-181 repositioned by 0.1m. Plots 171-175 repositioned by 0.4m.
Plots 169-170 house type substitution from Teford to Brambleford.

Rev C 28-05-2025
Plot 14-33, 62-70 & 181 repositioned by 1m.

Rev B 12-05-2025
Amended in accordance with TW comments.

Rev A 11-04-2025
Amended in accordance with TW comments.

Client:
Taylor Wimpey
Taylor Wimpey North West

Project:
Former Glen Dimplex
Land South of Stoney Lane

Title:
Plannning Layout

BANNERS GATE
CIVIL, STRUCTURAL & ARCHITECTURAL DESIGN SERVICES
Cavendish House, 10-11 Birmingham Street, Halesowen, West Midlands B63 3HN
Tel: 0121 687 1500 Fax: 0121 687 1501
E-mail: mail@bannersgate.com

Scale:	Plot Size:	Drawn:	Check:	Date:
1:500	A0L	BGA	BGA	NOV 2025

CAD Ref:
J:\Land Yeo\Work\J-L Live Land Opportunities\Glen Dimplex, Whitton\2. Planning\2.2 Planning Design Layout\GA\2025-1009 SH Layout_2025-10-09

Project no.: 25053
Drawing no.: 1000V

APPENDIX H: PFRA/SFRA PLANNING EXTRACTS

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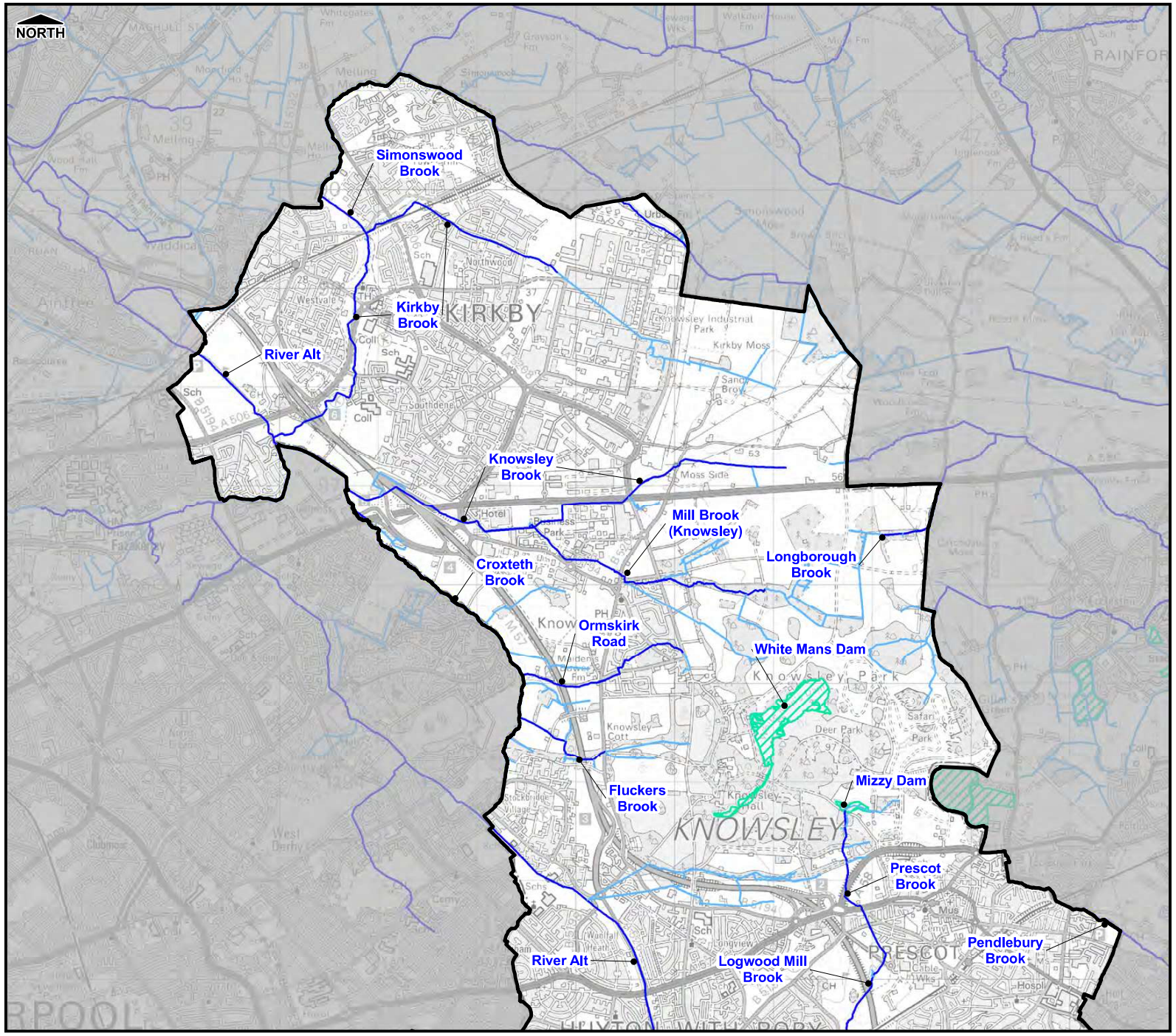

Legend

- Borough Administrative Boundary
- Main River
- Ordinary Watercourse
- Lakes/Reservoirs

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DRAWN BY	DATE	CHECKED BY	PASSED BY
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SCALE @ A3	ISSUING OFFICE
1:40,000	Sheffield

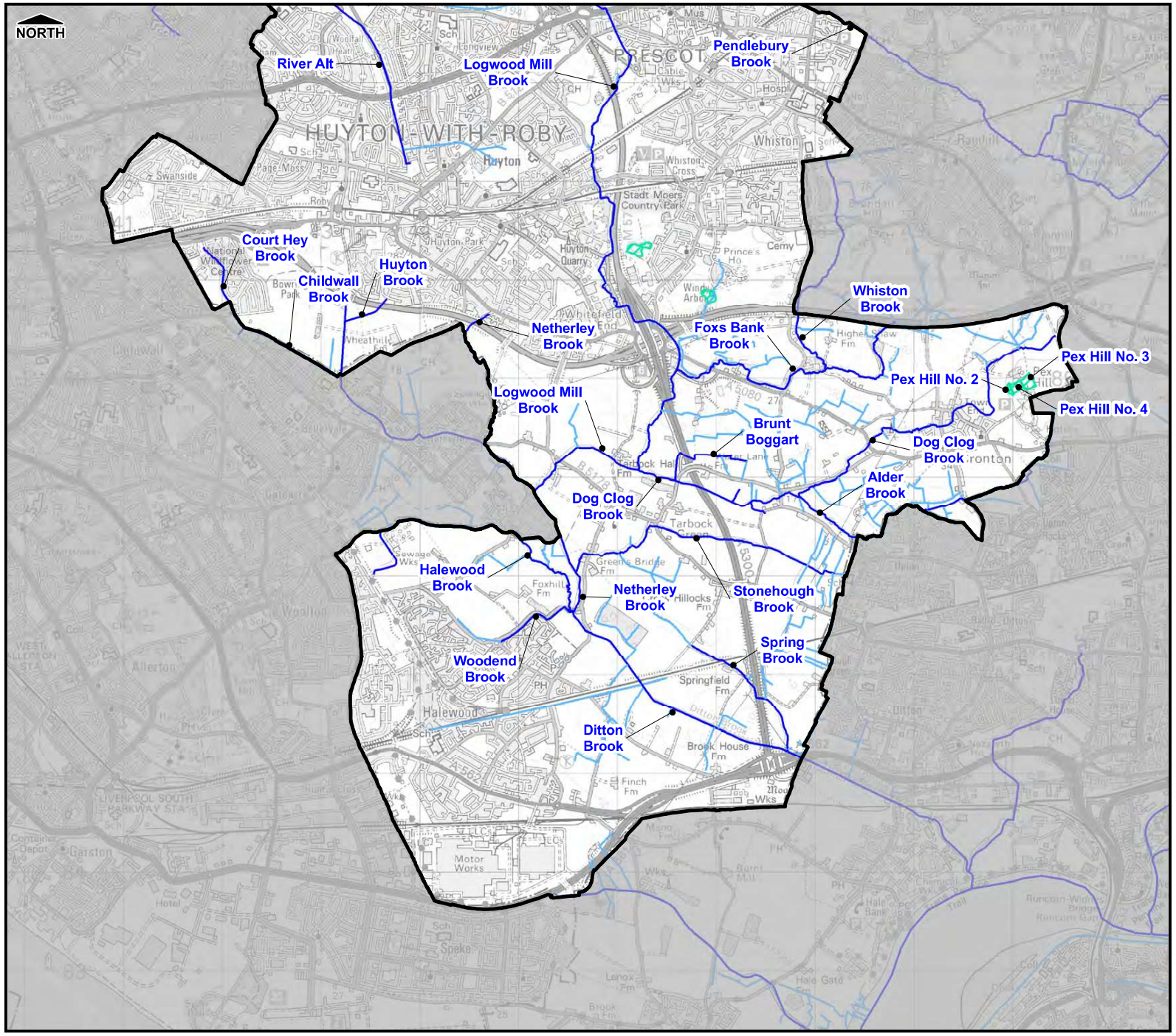
KNOWSLEY METROPOLITAN BOROUGH COUNCIL LEVEL 2 STRATEGIC FLOOD RISK ASSESSMENT

Figure B1-1-1
Catchment Overview

Knowsley Council

CAPITA SYMONDS

DRAWING NUMBER	REV
CS056421/B1-1-1	-



Legend

- Borough Administrative Boundary
- Main River
- Ordinary Watercourse
- Lakes/Reservoirs

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KNOWSLEY METROPOLITAN BOROUGH COUNCIL LEVEL 2 STRATEGIC FLOOD RISK ASSESSMENT

Figure B1-1-2
Catchment Overview

Knowsley Council

CAPITA SYMONDS

DRAWING NUMBER	REV
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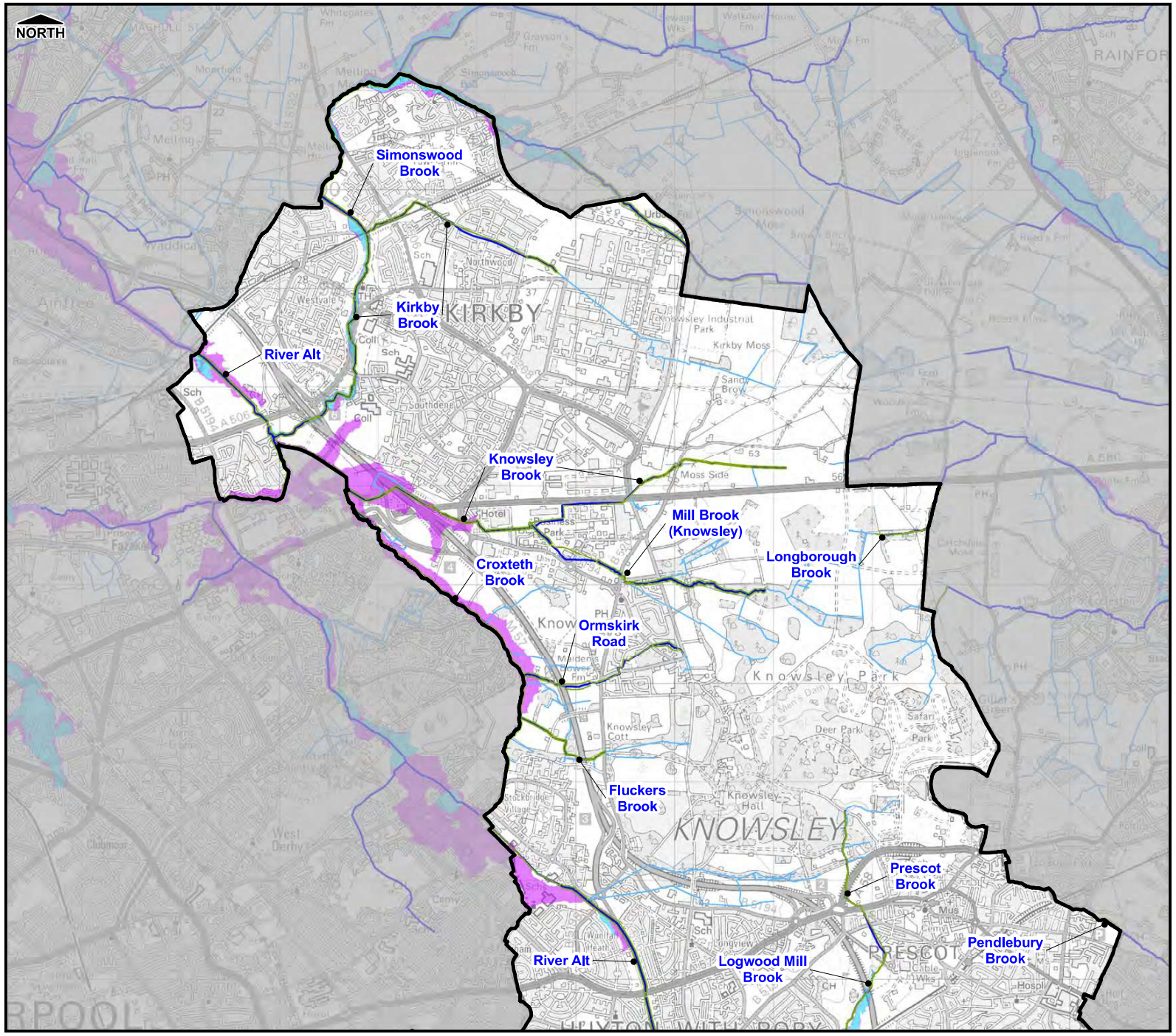

Legend

- Borough Administrative Boundary
- Defences
- Main River
- Ordinary Watercourse
- Flood Zone 2 Fluvial and Tidal
- Flood Zone 2 Tidal
- Flood Zone 3a Fluvial and Tidal
- Flood Zone 3a Tidal
- Flood Zone 2 Fluvial
- Flood Zone 3a Fluvial

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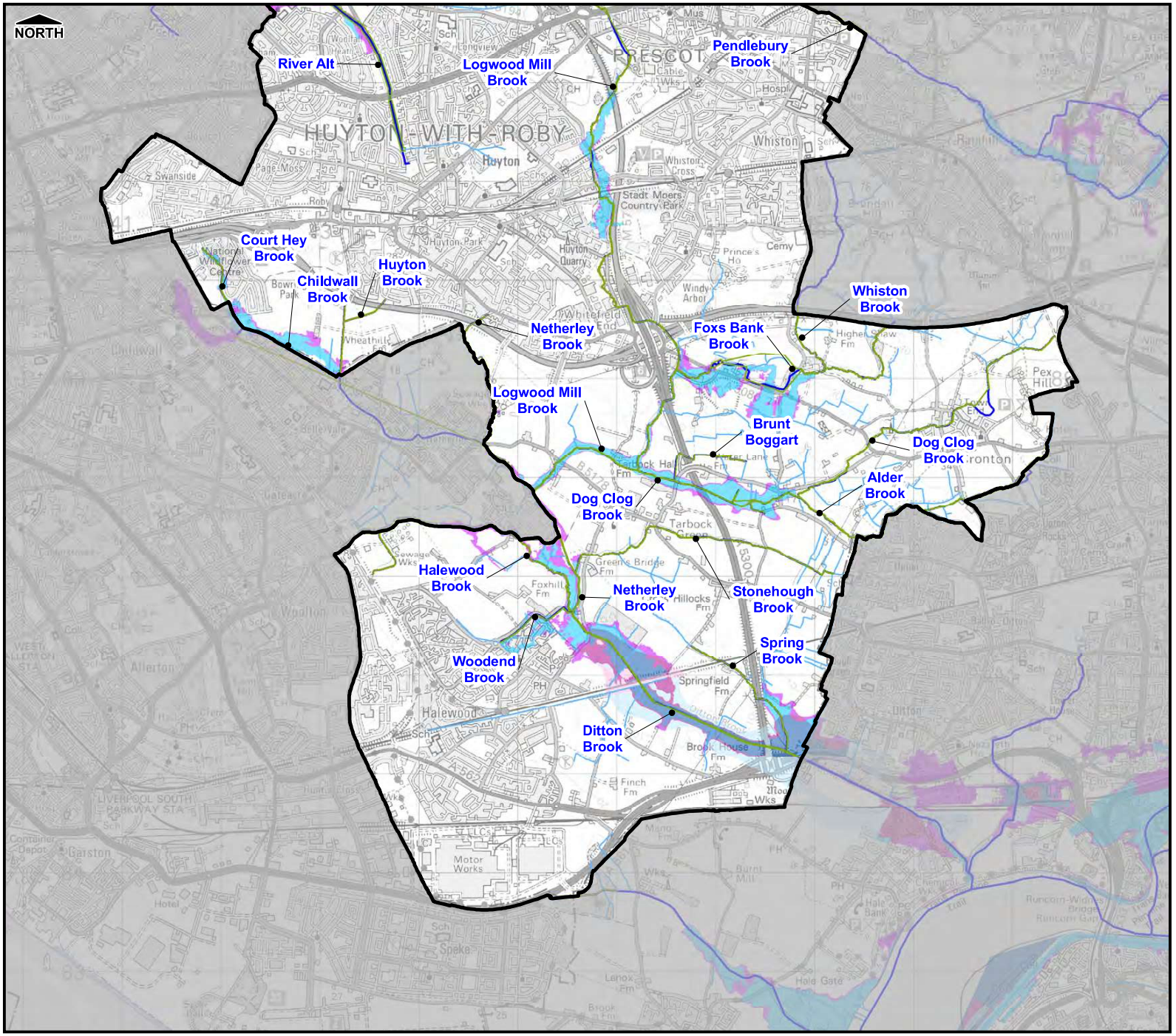
KNOWSLEY METROPOLITAN BOROUGH COUNCIL LEVEL 2 STRATEGIC FLOOD RISK ASSESSMENT

Figure B2-1
Environment Agency Flood Zones

Knowsley Council

CAPITA SYMONDS

DRAWING NUMBER	REV
CS056421/B2-1	-



Legend

- Borough Administrative Boundary
- Defences
- Main River
- Ordinary Watercourse
- Flood Zone 2 Fluvial and Tidal
- Flood Zone 2 Tidal
- Flood Zone 3a Fluvial and Tidal
- Flood Zone 3a Tidal
- Flood Zone 2 Fluvial
- Flood Zone 3a Fluvial

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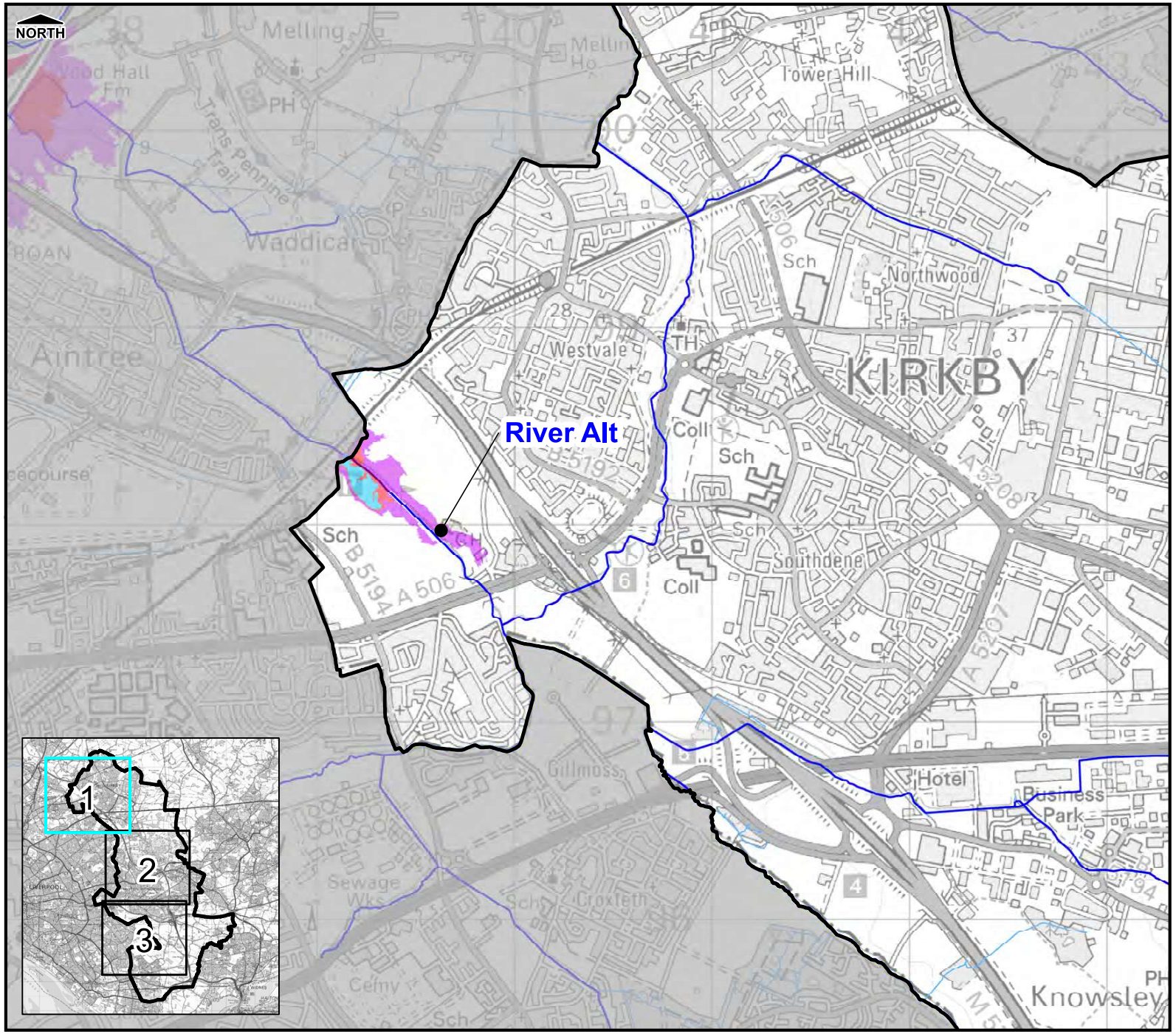
KNOWSLEY METROPOLITAN BOROUGH COUNCIL LEVEL 2 STRATEGIC FLOOD RISK ASSESSMENT

Figure B2-2
Environment Agency Flood Zones

Knowsley Council

CAPITA SYMONDS

DRAWING NUMBER	REV
CS056421/B2-2	-



Legend

- Borough Administrative Boundary
- 5% AEP Flood Extent
- 1% AEP Flood Extent
- 1%+CC AEP Flood Extent
- 0.1% AEP Flood Extent
- Main River
- Ordinary Watercourse

NOTES:

The flood extents are taken from the Logwood Mill Brook (2012), Netherley and Halewood (2012), Childwall Brook (2008) and Lower Alt (2010) studies and take into account the presence of existing defences

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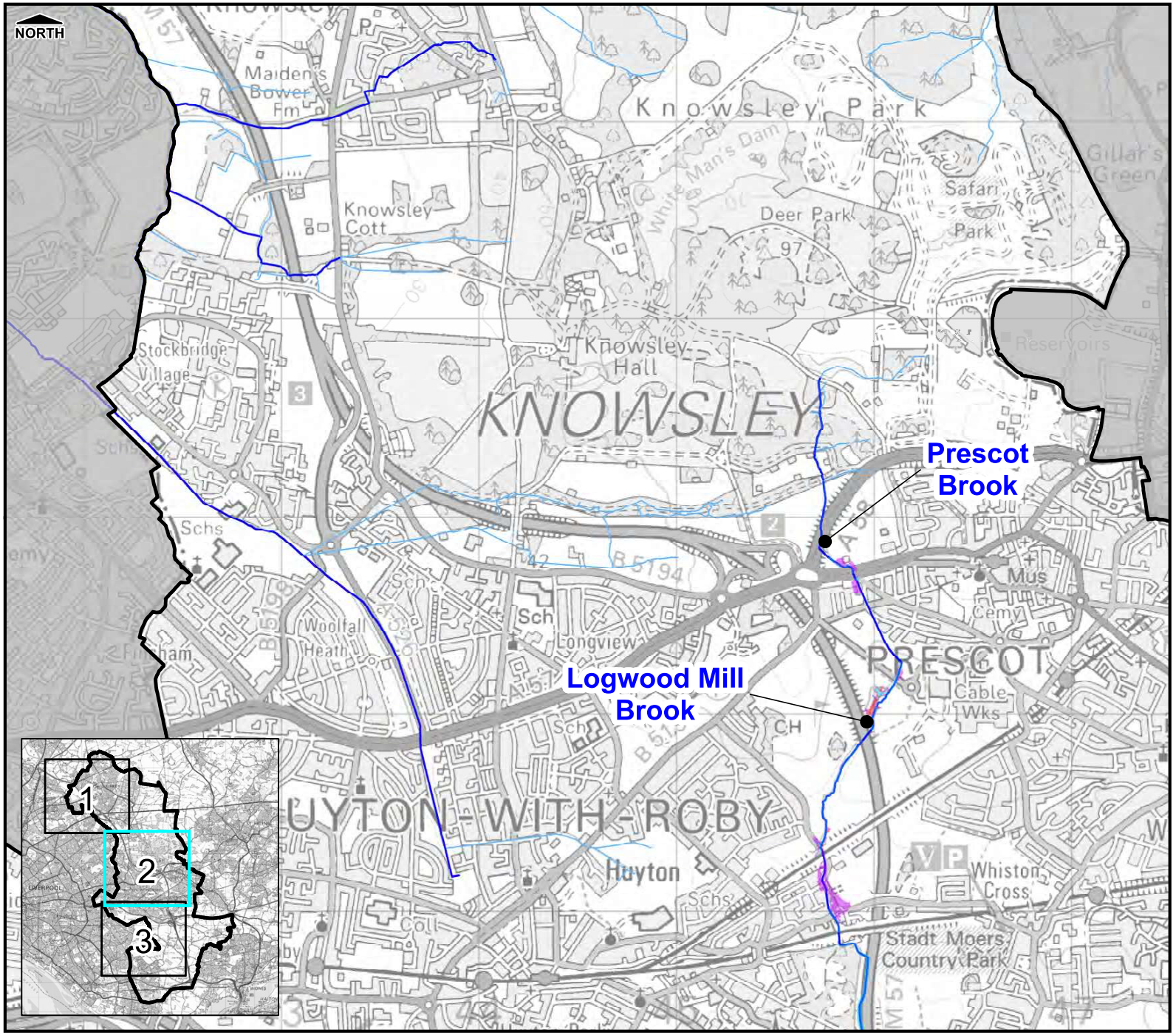
KNOWSLEY METROPOLITAN BOROUGH COUNCIL
LEVEL 2 STRATEGIC FLOOD RISK ASSESSMENT

Figure B3-A-1
Actual Risk
Flood Extent

Knowsley Council

CAPITA SYMONDS

DRAWING NUMBER	REV
CS056421/B3-A-1	-



Legend

- Borough Administrative Boundary
- 5% AEP Flood Extent
- 1% AEP Flood Extent
- 1%+CC AEP Flood Extent
- 0.1% AEP Flood Extent
- Main River
- Ordinary Watercourse

NOTES:

The flood extents are taken from the Logwood Mill Brook (2012), Netherley and Halewood (2012), Childwall Brook (2008) and Lower Alt (2010) studies and take into account the presence of existing defences

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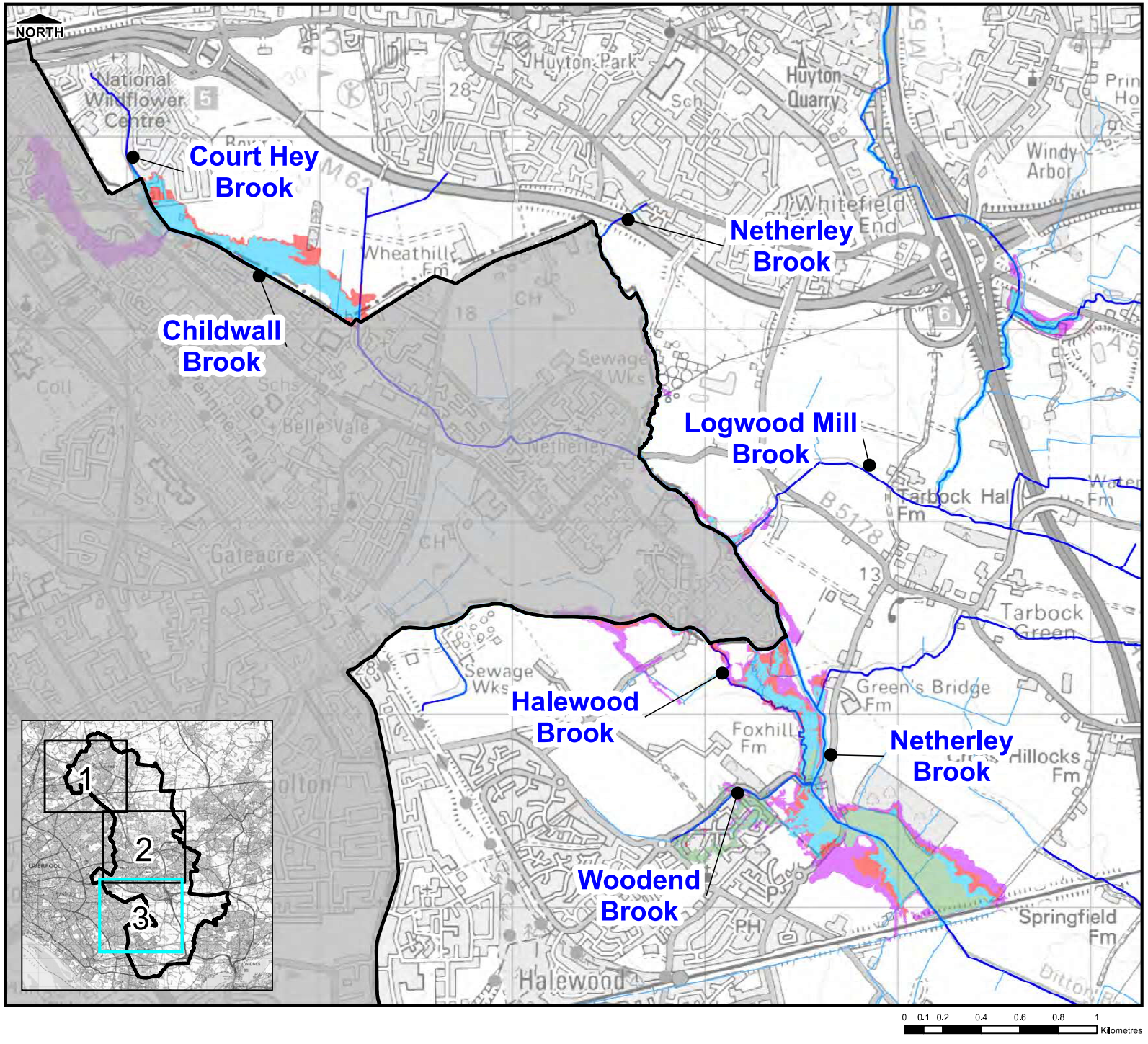
KNOWSLEY METROPOLITAN BOROUGH COUNCIL
LEVEL 2 STRATEGIC FLOOD RISK ASSESSMENT

Figure B3-A-2
Actual Risk
Flood Extent

Knowsley Council

CAPITA SYMONDS

DRAWING NUMBER	REV
CS056421/B3-A-2	-



Legend

- Borough Administrative Boundary
- 5% AEP Flood Extent
- 1% AEP Flood Extent
- 1%+CC AEP Flood Extent
- 0.1% AEP Flood Extent
- Main River
- Ordinary Watercourse

NOTES:

The flood extents are taken from the Logwood Mill Brook (2012), Netherley and Halewood (2012), Childwall Brook (2008) and Lower Alt (2010) studies and take into account the presence of existing defences

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SCALE @ A3	ISSUING OFFICE
1:20,000	Sheffield

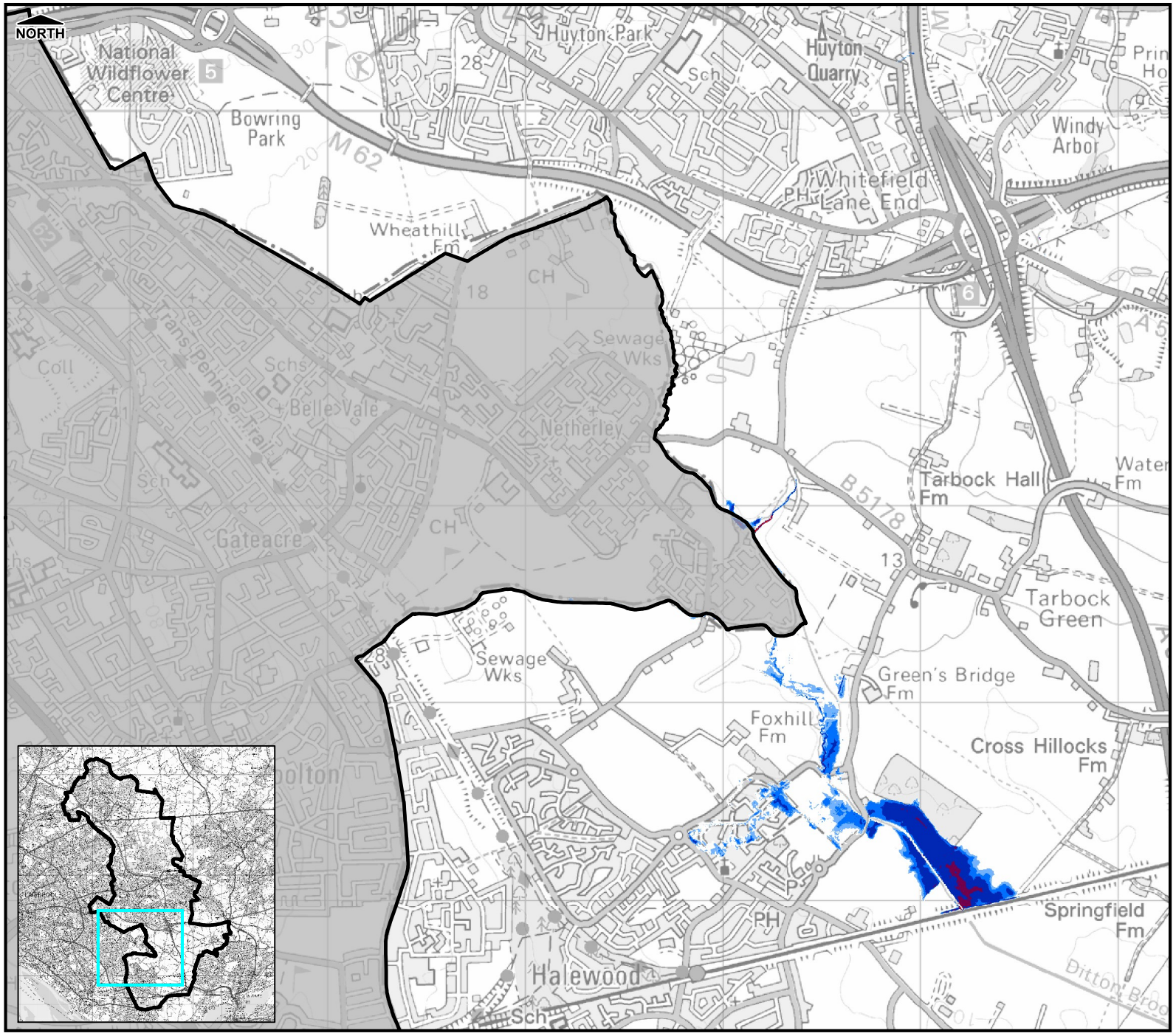
KNOWSLEY METROPOLITAN BOROUGH COUNCIL
LEVEL 2 STRATEGIC FLOOD RISK ASSESSMENT

Figure B3-A-3
Actual Risk
Flood Extent

Knowsley Council

CAPITA SYMONDS

DRAWING NUMBER	REV
CS056421/B3-A-3	-



Legend

- Borough Administrative Boundary

Flood Depth (1% AEP Event)

- < 0.1m
- 0.1m to 0.25m
- 0.25 to 0.5m
- 0.5 to 1.0m
- 1.0m to 1.5m
- > 1.5m

NOTES:

The outputs are from the River Netherley and Halewood (2011) and the Logwood Mill Brook (2012) Flood Risk Mapping Studies)

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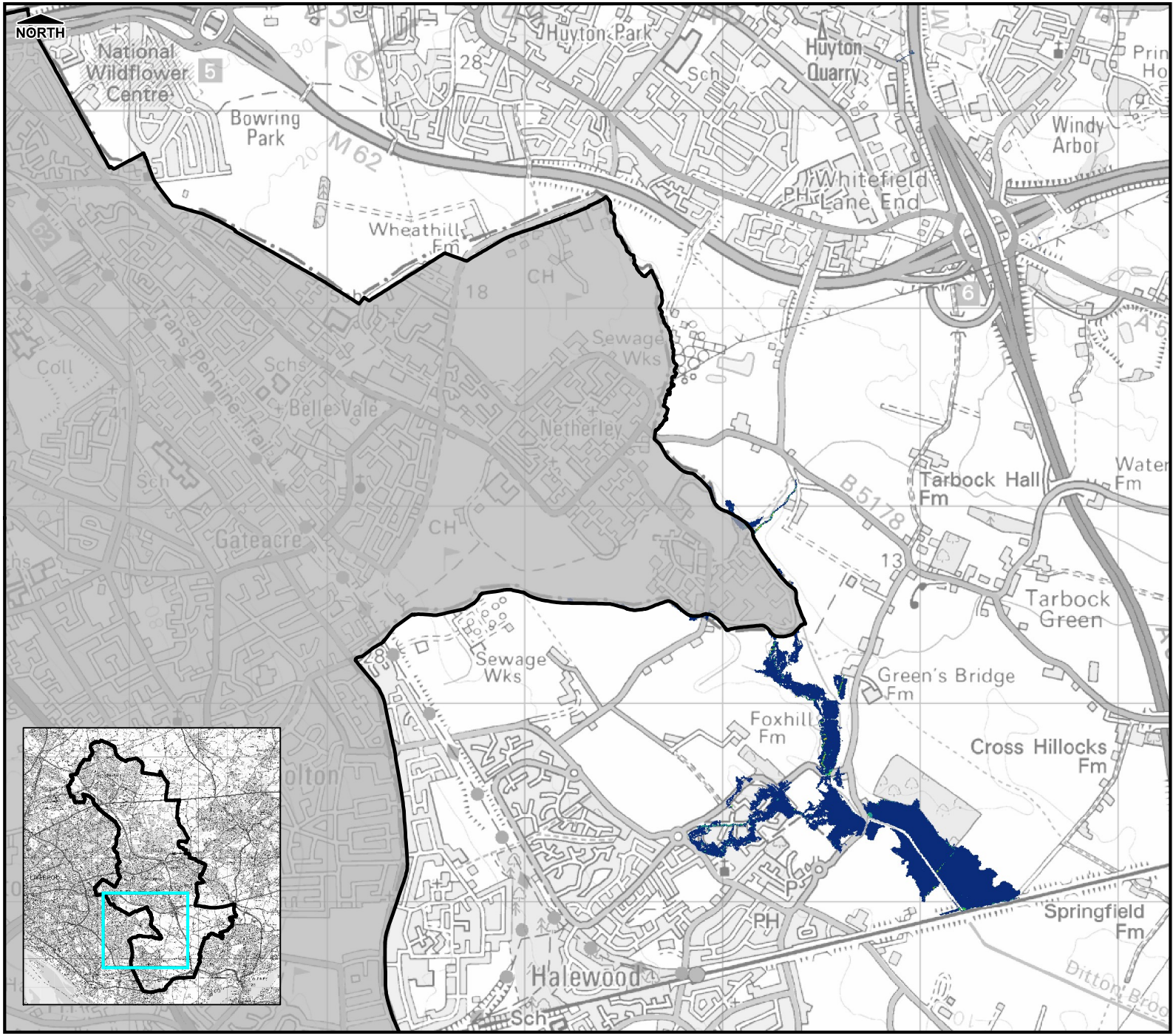
KNOWSLEY METROPOLITAN BOROUGH COUNCIL LEVEL 2 STRATEGIC FLOOD RISK ASSESSMENT

Figure B3-B-1
Actual Risk
Flood Depth

Knowsley Council

CAPITA SYMONDS

DRAWING NUMBER	REV
CS056421/B3-B-1	-



Legend

- Borough Administrative Boundary

Water Velocity (1% AEP Event)

- < 0.5m/s
- 0.5m/s to 1.0m/s
- 1.0m/s to 1.5m/s
- 1.5m/s to 2.0m/s
- 2.0m/s to 5.0m/s
- > 5.0m/s

NOTES:

The outputs are from the River Netherley and Halewood (2011) and the Logwood Mill Brook (2012) Flood Risk Mapping Studies

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1:20,000	Sheffield

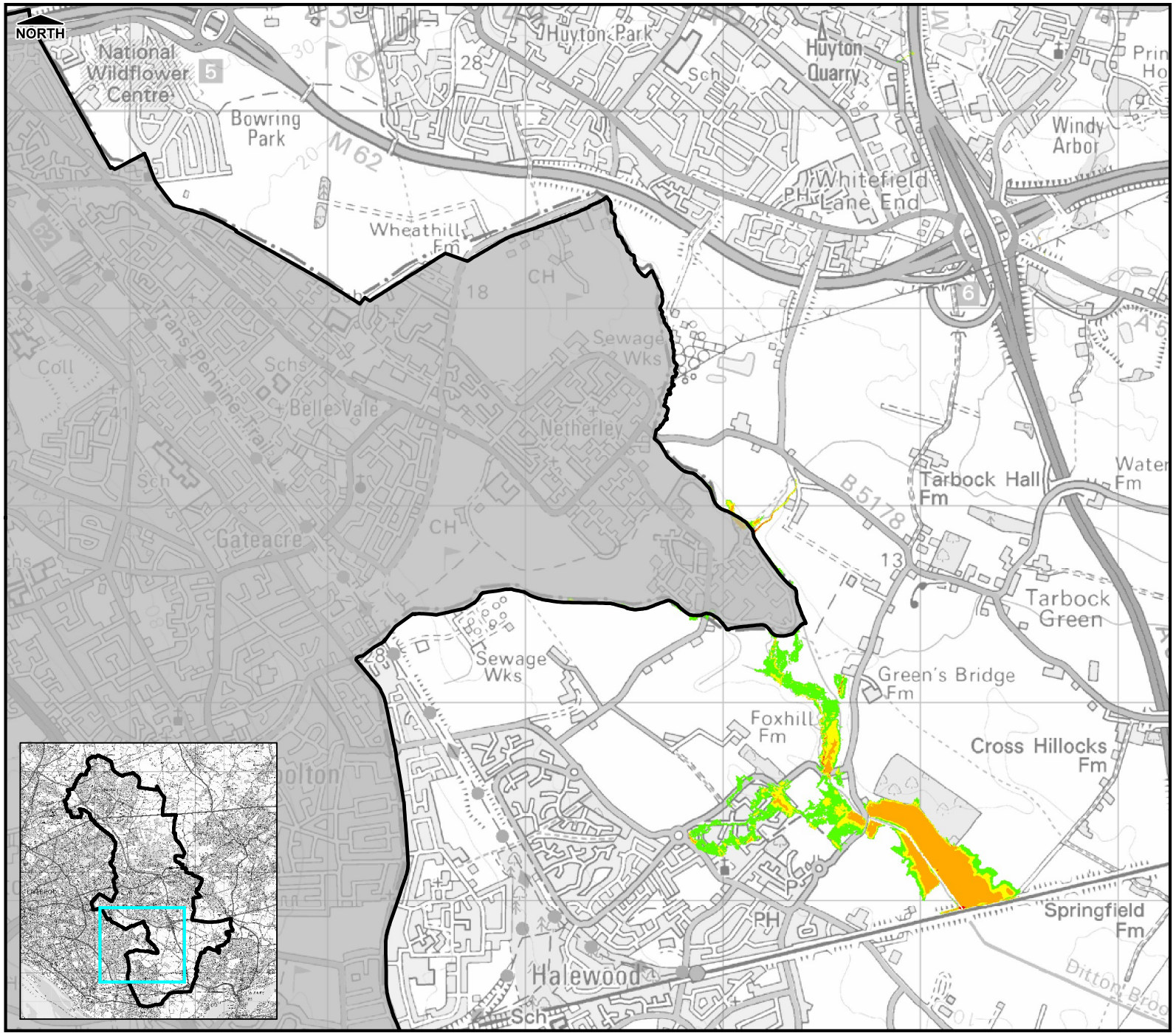
KNOWSLEY METROPOLITAN BOROUGH COUNCIL LEVEL 2 STRATEGIC FLOOD RISK ASSESSMENT

Figure B3-C-1
Actual Risk
Flood Velocity

Knowsley Council

CAPITA SYMONDS

DRAWING NUMBER	REV
CS056421/B3-C-1	-



Legend

- Borough Administrative Boundary

Flood Hazard Rating (1% AEP Event)

- < 0.75 (Low)
- 0.75 to 1.25 (Moderate)
- 1.25 to 2.0 (Significant)
- > 2.0 (Extreme)

NOTES:

The outputs are from the River Netherley and Halewood (2011) and the Logwood Mill Brook (2012) Flood Risk Mapping Studies

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SCALE @ A3	ISSUING OFFICE
1:20,000	Sheffield

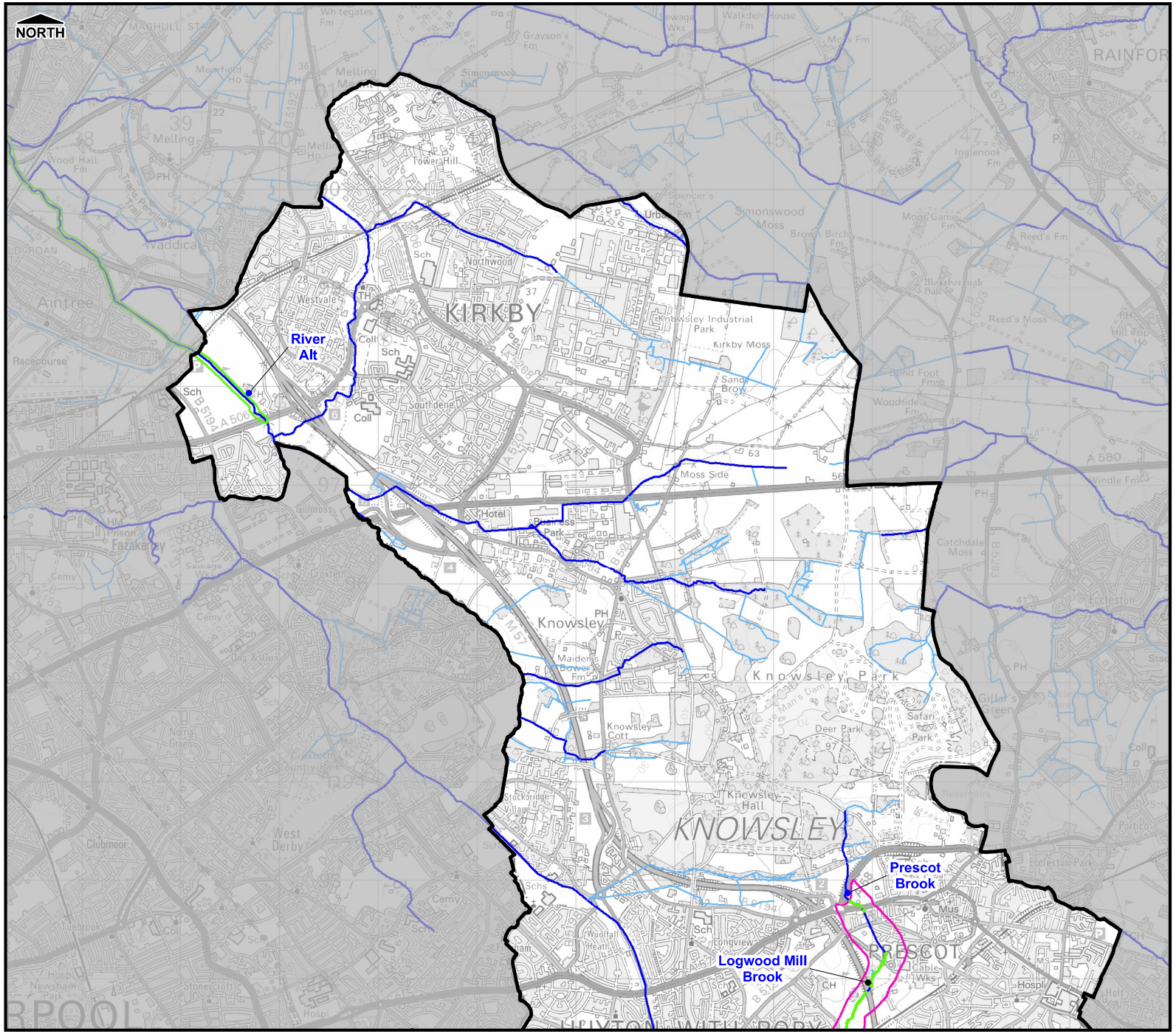
KNOWSLEY METROPOLITAN BOROUGH COUNCIL
LEVEL 2 STRATEGIC FLOOD RISK ASSESSMENT

Figure B3-D-1
Actual Risk
Flood Hazard

Knowsley Council

CAPITA SYMONDS

DRAWING NUMBER	REV
CS056421/B3-D-1	-



Legend

- Borough Administrative Boundary
- 1D Model Boundary
- 2D Model Boundary
- Main River
- Ordinary Watercourse

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1:40,000	Sheffield

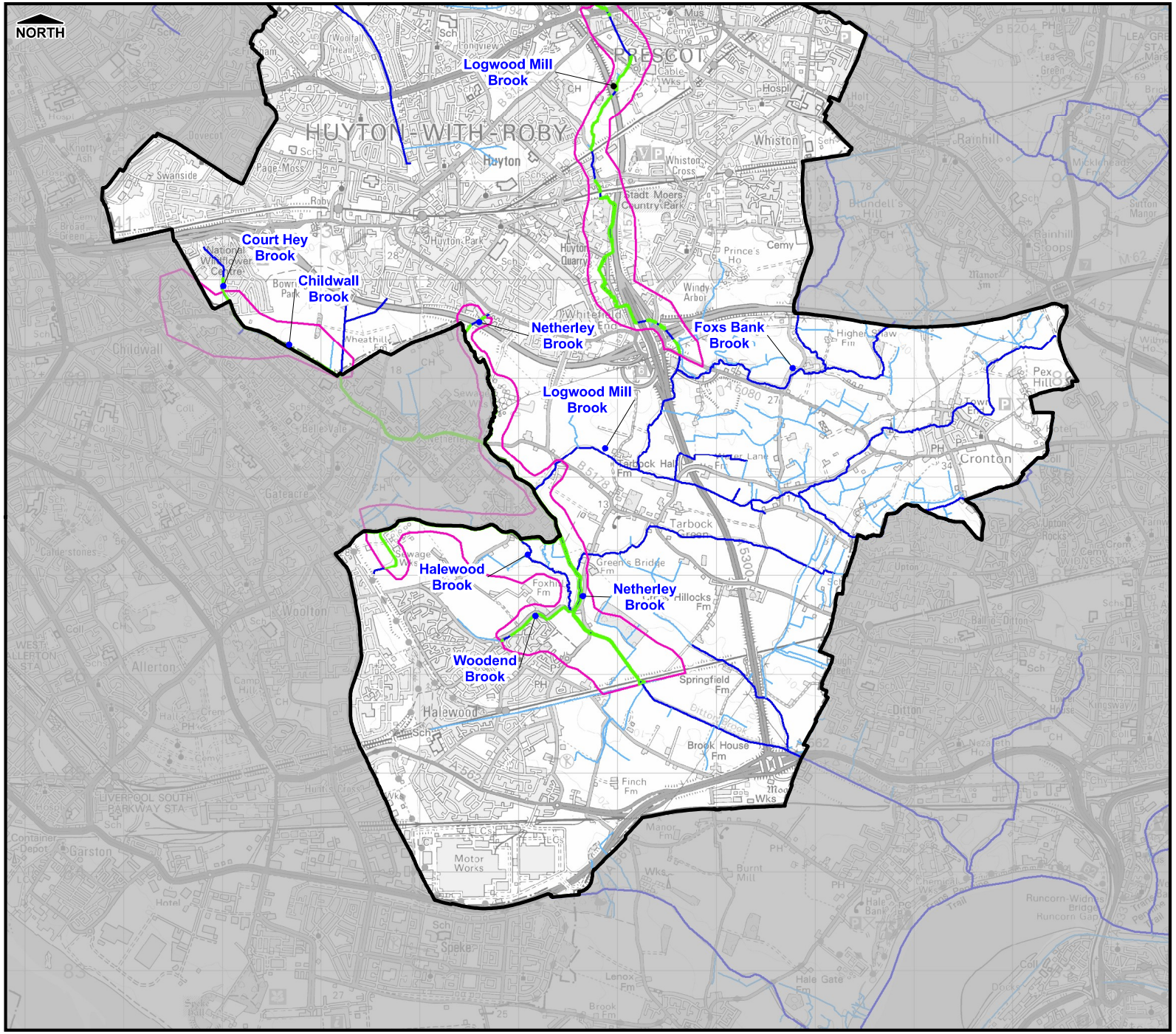
KNOWSLEY METROPOLITAN BOROUGH COUNCIL LEVEL 2 STRATEGIC FLOOD RISK ASSESSMENT

Figure B4-1
Modelled Watercourses

Knowsley Council

CAPITA SYMONDS

DRAWING NUMBER	REV
CS056421/B4-1	-



Legend

- Borough Administrative Boundary
- 1D Model Boundary
- 2D Model Boundary
- Main River
- Ordinary Watercourse

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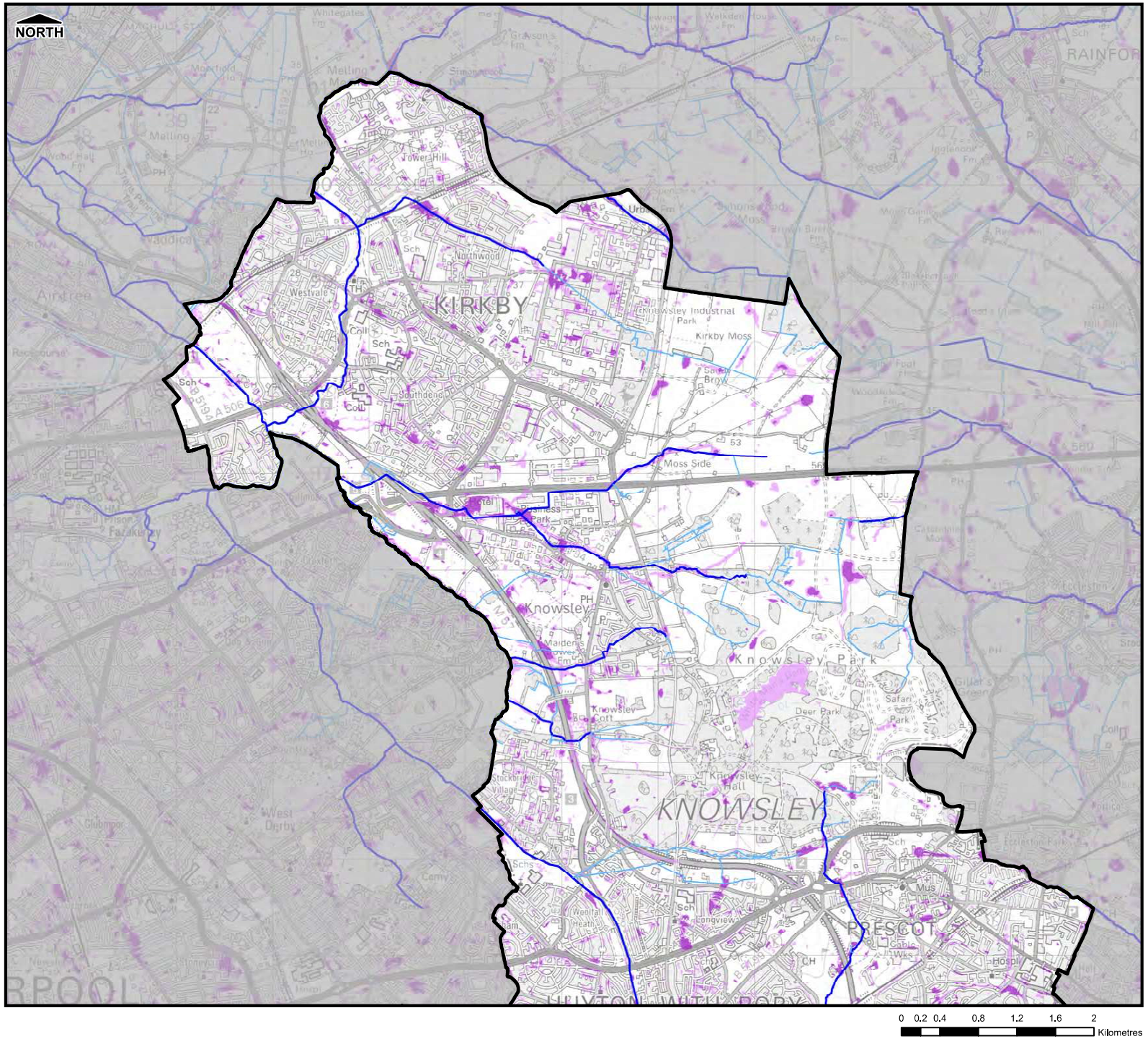
Figure B4-2
Modelled Watercourses

Knowsley Council

CAPITA SYMONDS

DRAWING NUMBER	REV
CS056421/B4-2	-



Legend

- Borough Administrative Boundary
- Main River
- Ordinary Watercourse
- 200yr Surface Water Event (Deep)
- 200yr Surface Water Event (Shallow)

DISCLAIMER:

This map gives an indication of the broad areas likely to be at risk of surface water flooding. It is not suitable for use at an individual property scale due to the method used.

NOTES:

The outputs are from the Environment Agency Flood Map for Surface Water Data Set (2010).

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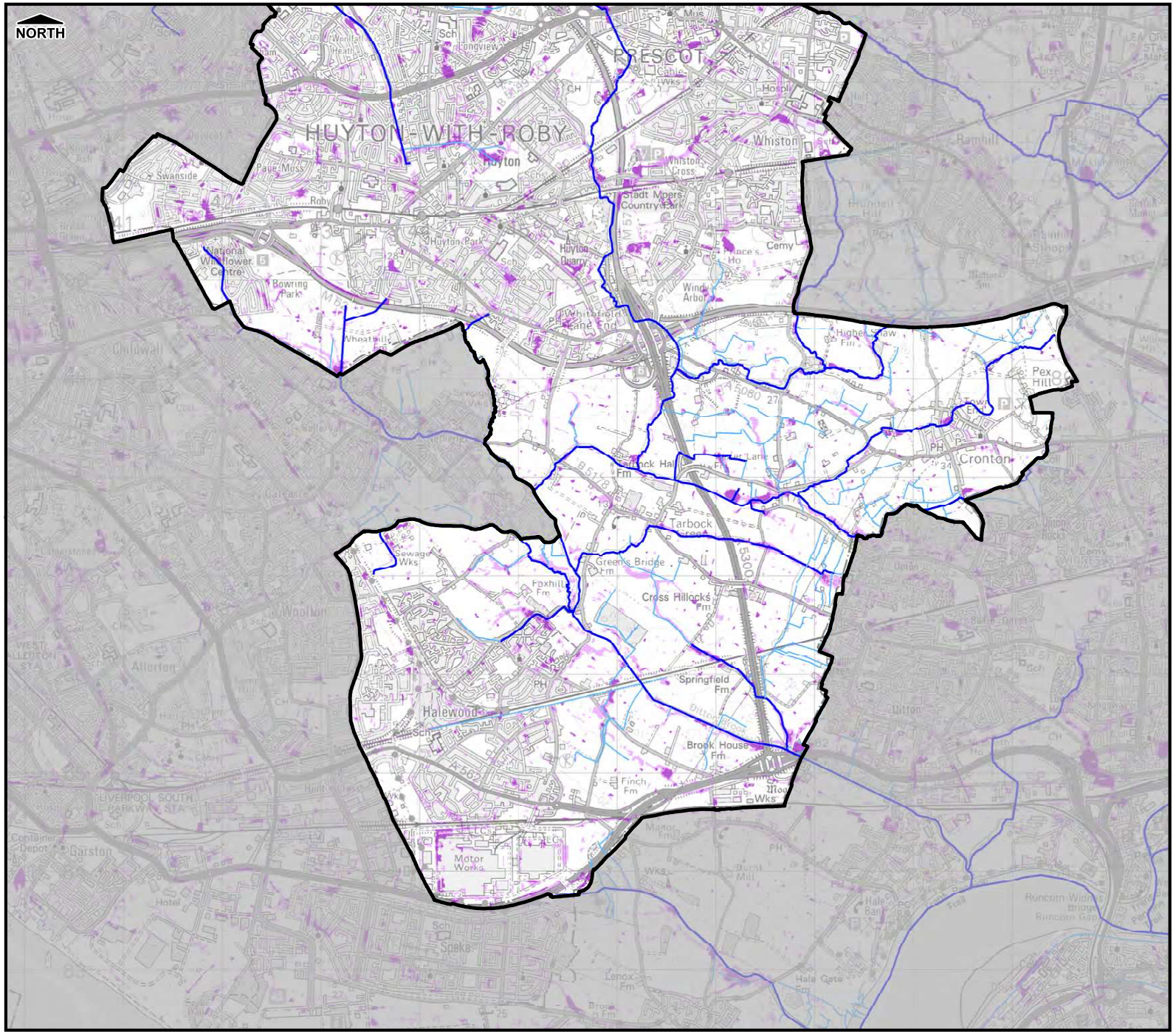
Figure B5-1 Environment Agency Flood Map for Surface Water

Knowsley Council

CAPITA SYMONDS

DRAWING NUMBER	REV
CS056421/B5-1	-



Legend

- Borough Administrative Boundary
- Main River
- Ordinary Watercourse
- 200yr Surface Water Event (Deep)
- 200yr Surface Water Event (Shallow)

DISCLAIMER:

This map gives an indication of the broad areas likely to be at risk of surface water flooding. It is not suitable for use at an individual property scale due to the method used.

NOTES:

The outputs are from the Environment Agency Flood Map for Surface Water Data Set (2010).

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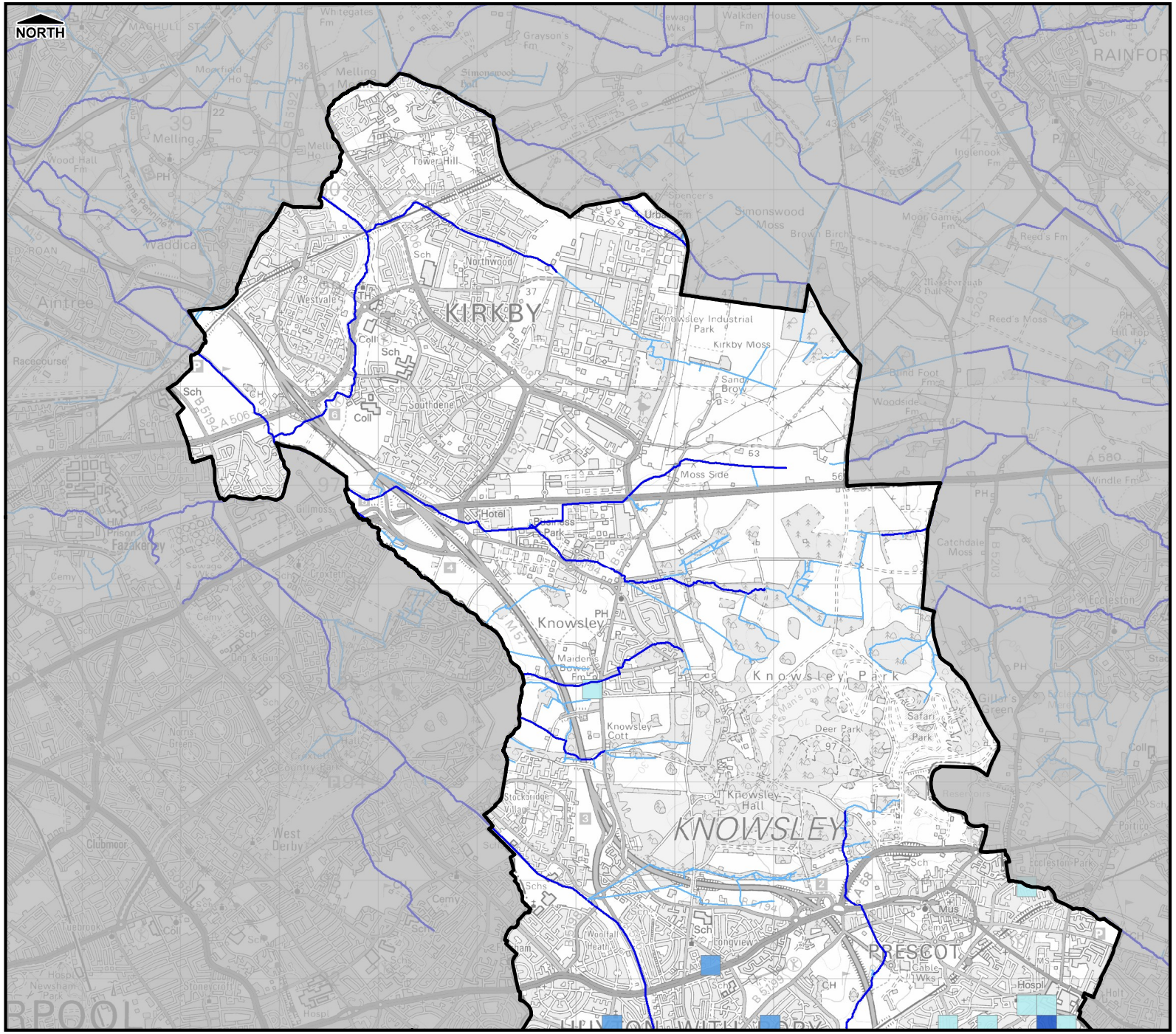
KNOWSLEY METROPOLITAN BOROUGH COUNCIL
LEVEL 2 STRATEGIC FLOOD RISK ASSESSMENT

Figure B5-2
Environment Agency Flood Map for Surface Water

Knowsley Council

CAPITA SYMONDS

DRAWING NUMBER	REV
CS056421/B5-2	-



Legend

- Borough Administrative Boundary
- Main River
- Ordinary Watercourse

Flooding incidents from 1st April 2008 - 3rd May 2012:

- 1 - 2
- 3 - 5
- 6 - 9
- > 10

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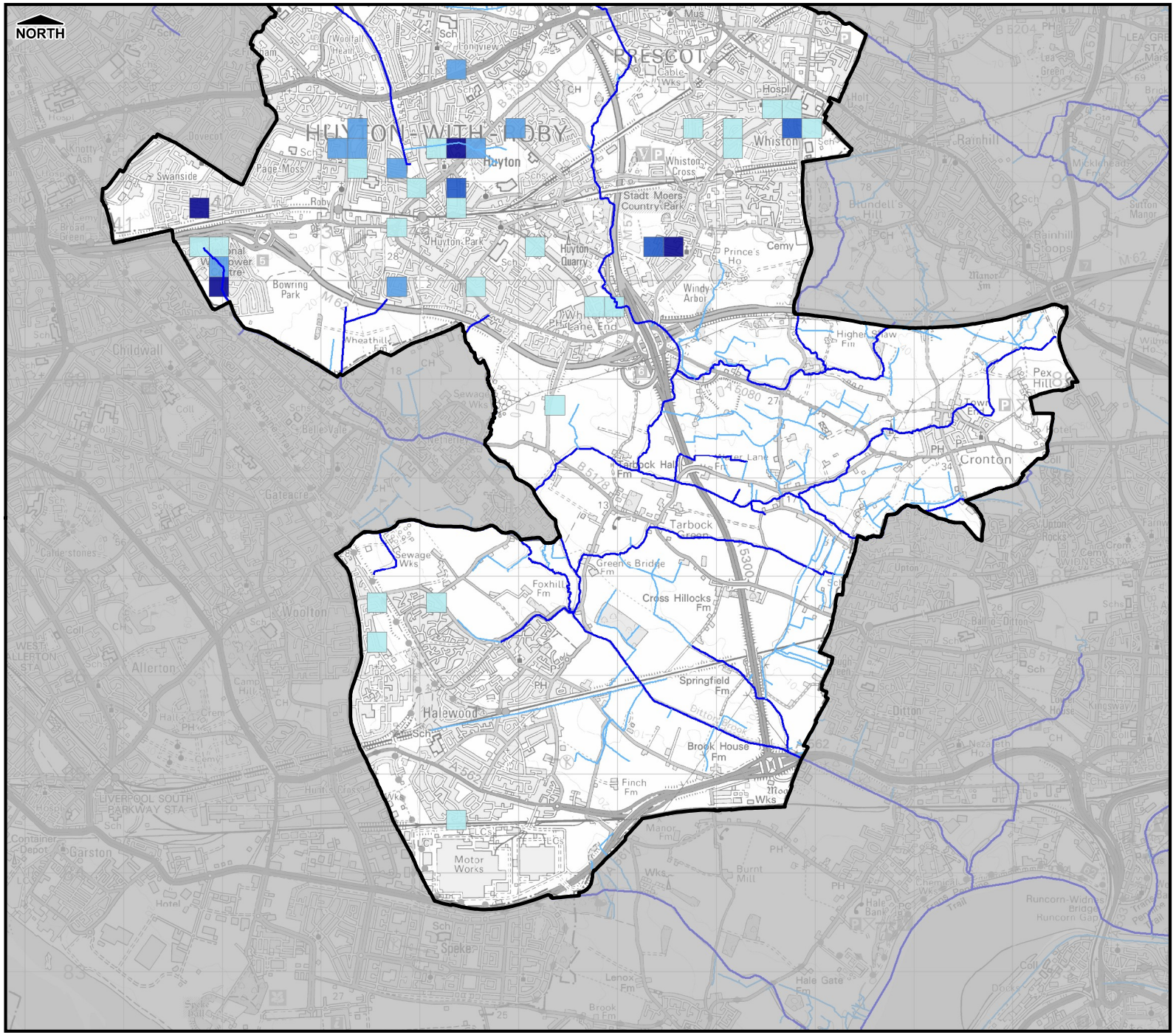
KNOWSLEY METROPOLITAN BOROUGH COUNCIL
LEVEL 2 STRATEGIC FLOOD RISK ASSESSMENT

Figure B6-1
Number of Sewer Related Surface Water Flooding Incidents

Knowsley Council

CAPITA SYMONDS

DRAWING NUMBER	REV
CS056421/B6-1	-



Legend

- Borough Administrative Boundary
- Main River
- Ordinary Watercourse

Flooding incidents from 1st April 2008 - 3rd May 2012:

- 1 - 2
- 3 - 5
- 6 - 9
- > 10

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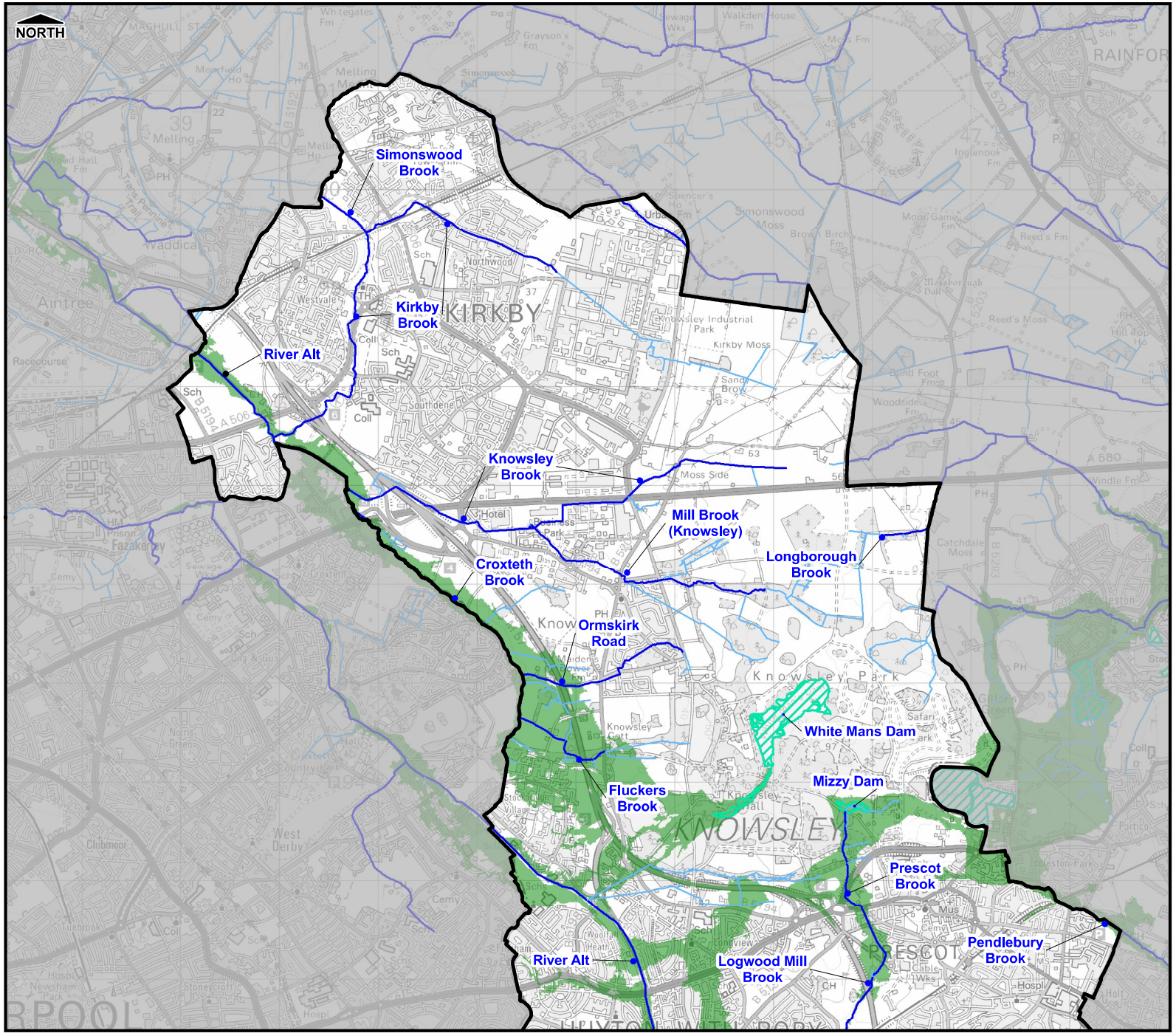
KNOWSLEY METROPOLITAN BOROUGH COUNCIL
LEVEL 2 STRATEGIC FLOOD RISK ASSESSMENT

Figure B6-2
Number of Sewer Related Surface Water Flooding Incidents

Knowsley Council

CAPITA SYMONDS

DRAWING NUMBER	REV
CS056421/B6-2	-



Legend

- Borough Administrative Boundary
- Main River
- Ordinary Watercourse
- Lakes/Reservoirs
- Maximum Extent of Resevoir Flooding

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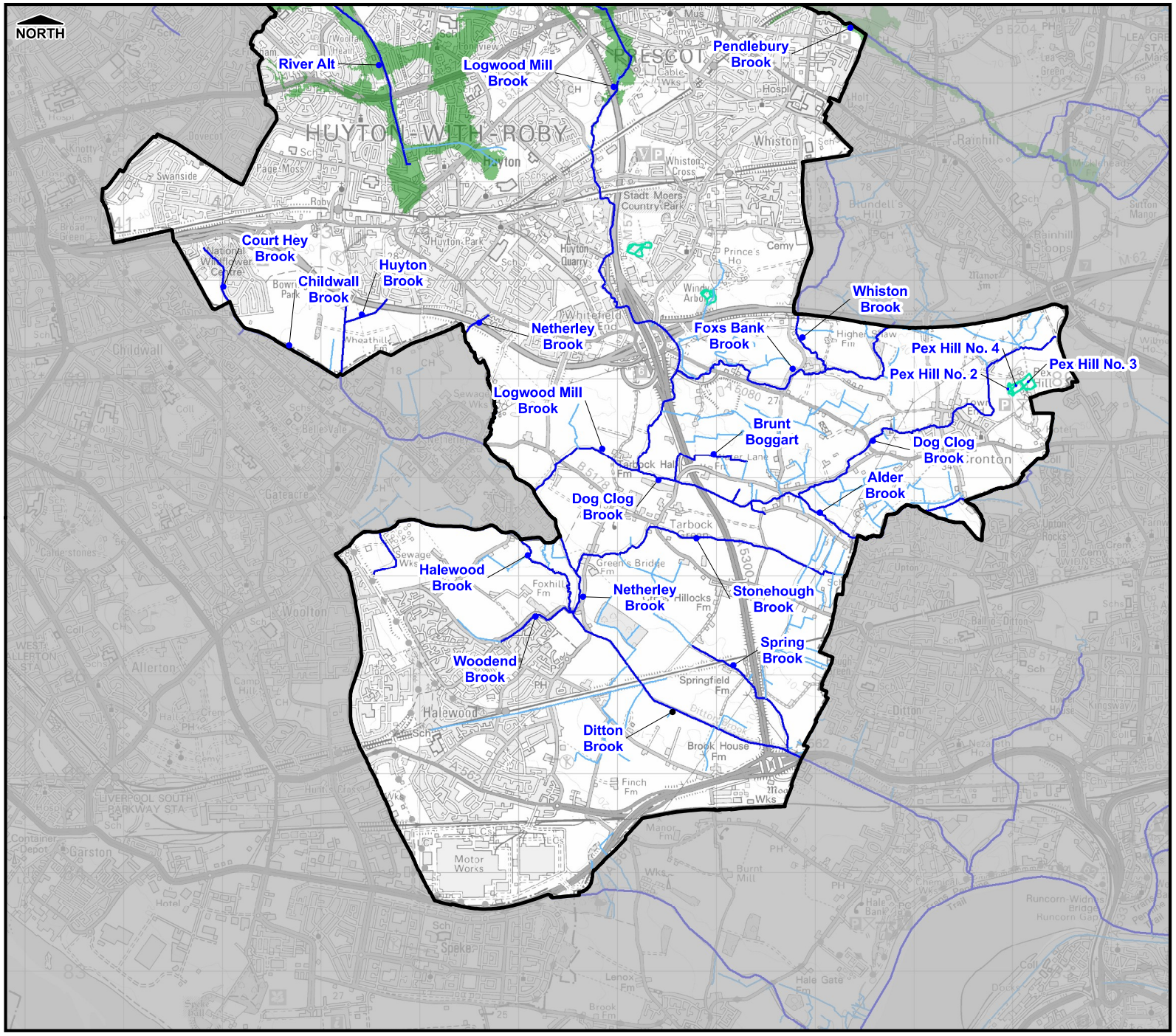
Figure B7-1
Reservoir Flooding

Knowsley Council

CAPITA SYMONDS

DRAWING NUMBER	REV
CS056421/B7-1	-



Legend

- Borough Administrative Boundary
- Main River
- Ordinary Watercourse
- Lakes/Reservoirs
- Maximum Extent of Resevoir Flooding

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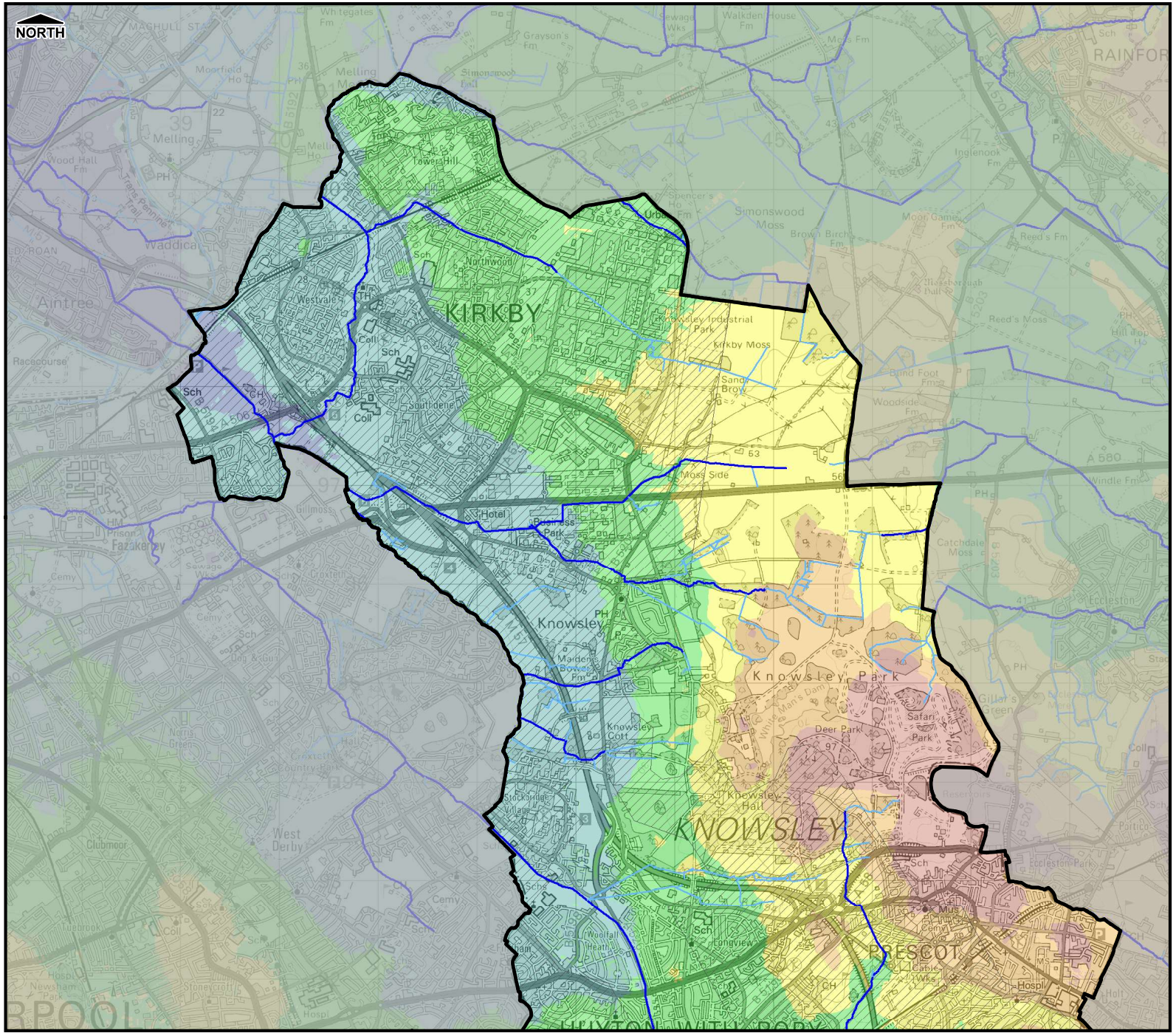
KNOWSLEY METROPOLITAN BOROUGH COUNCIL LEVEL 2 STRATEGIC FLOOD RISK ASSESSMENT

Figure B7-2
Reservoir Flooding

Knowsley Council

CAPITA SYMONDS

DRAWING NUMBER	REV
CS056421/B7-2	-



Legend

- Borough Administrative Boundary
- Main River
- Ordinary Watercourse
- LiDAR Coverage (remainder SAR data)

Terrain Height (mAOD)

- < 15
- 15 - 30
- 30 - 45
- 45 - 60
- 60 - 75
- >75

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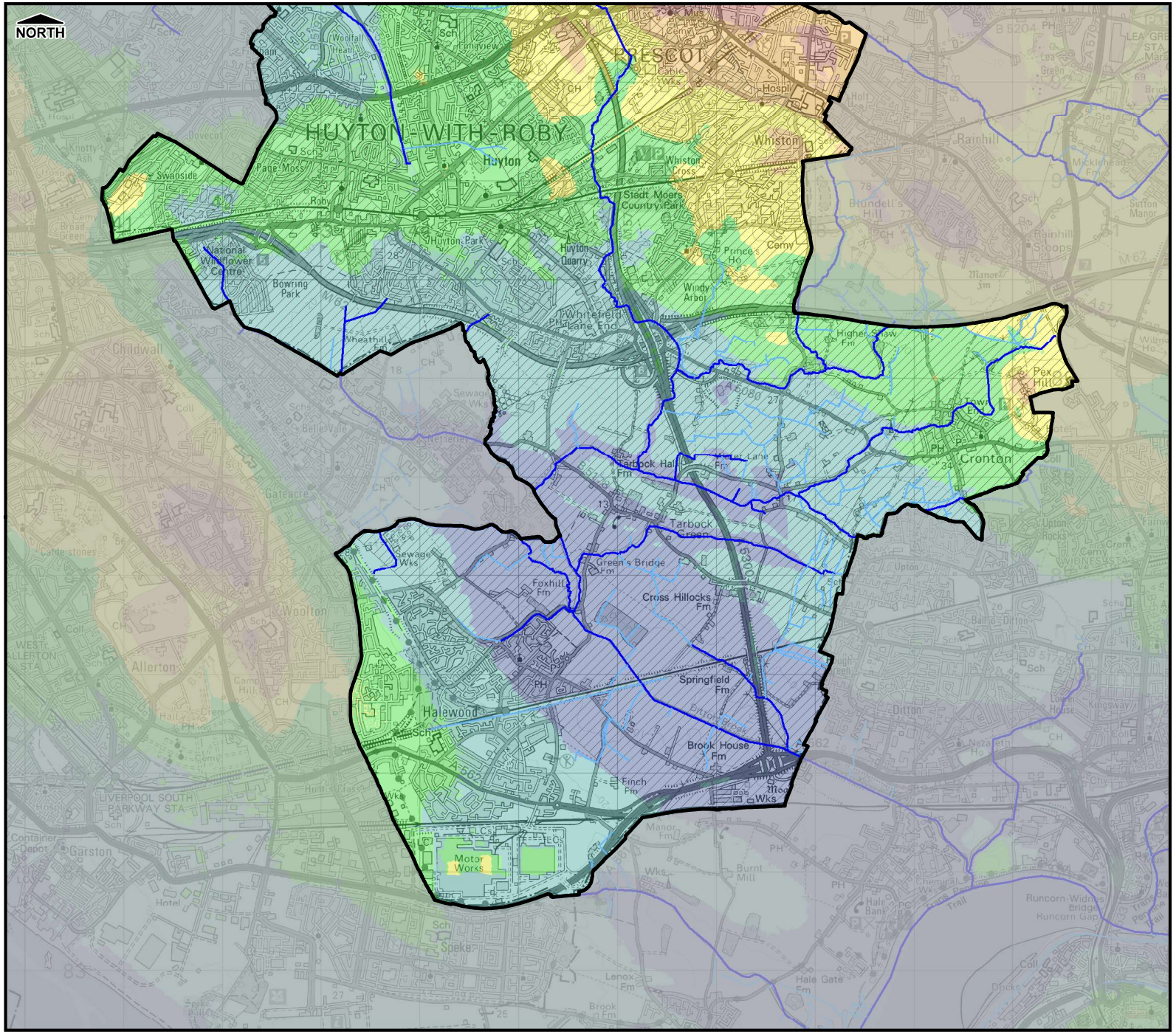
KNOWSLEY METROPOLITAN BOROUGH COUNCIL LEVEL 2 STRATEGIC FLOOD RISK ASSESSMENT

Figure B8-1
LiDAR

Knowsley Council

CAPITA SYMONDS

DRAWING NUMBER	REV
CS056421/B8-1	-



Legend

- Borough Administrative Boundary
- Main River
- Ordinary Watercourse
- LiDAR Coverage (remainder SAR data)

Terrain Height (mAOD)

- < 15
- 15 - 30
- 30 - 45
- 45 - 60
- 60 - 75
- >75

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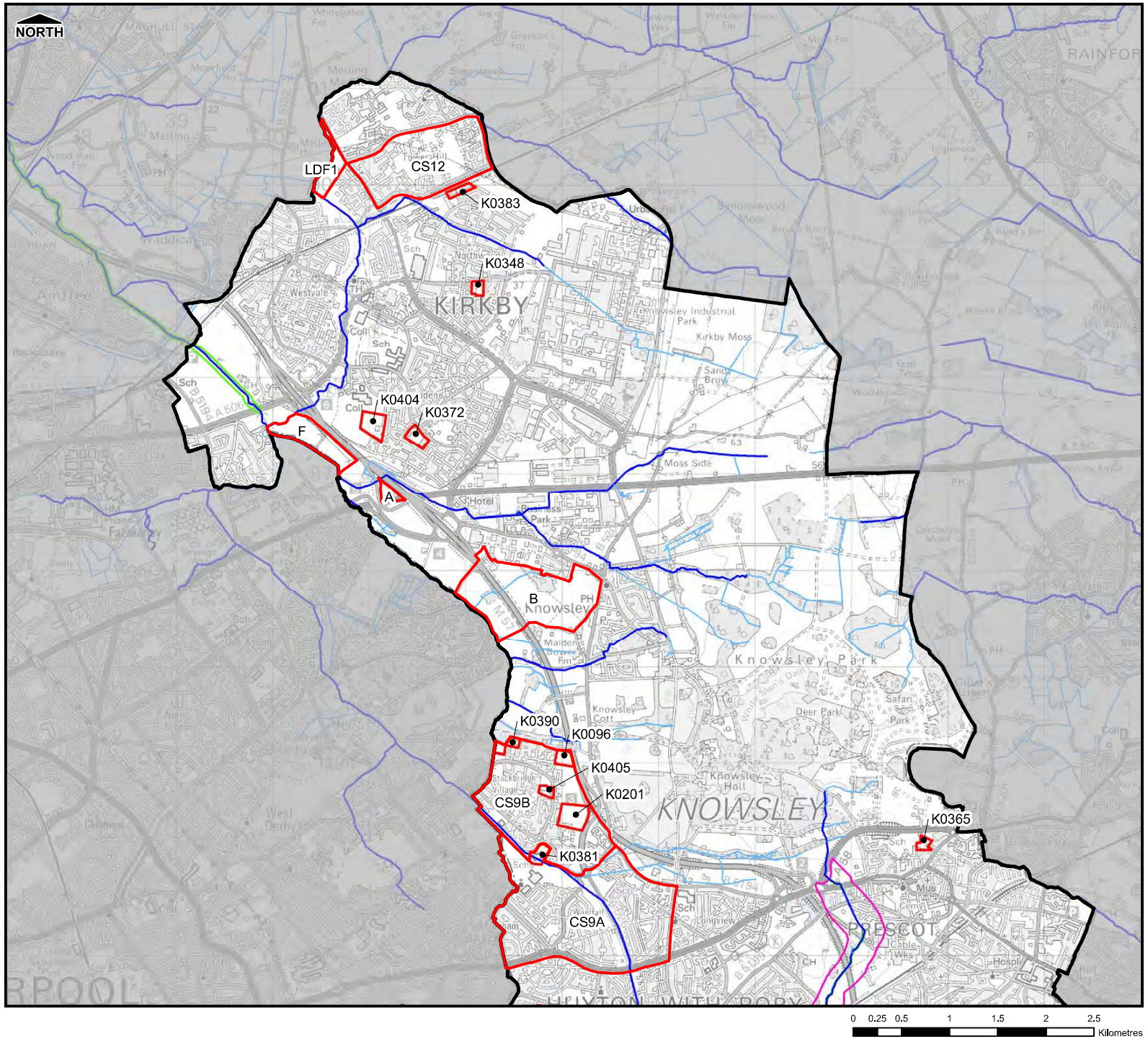
KNOWSLEY METROPOLITAN BOROUGH COUNCIL LEVEL 2 STRATEGIC FLOOD RISK ASSESSMENT

Figure B8-2
LiDAR

Knowsley Council

CAPITA SYMONDS

DRAWING NUMBER	REV
CS056421/B8-2	-



Legend

- Borough Administrative Boundary
- Main River
- Ordinary Watercourse
- Site under consideration
- 1D Model Boundary
- 2D Model Boundary

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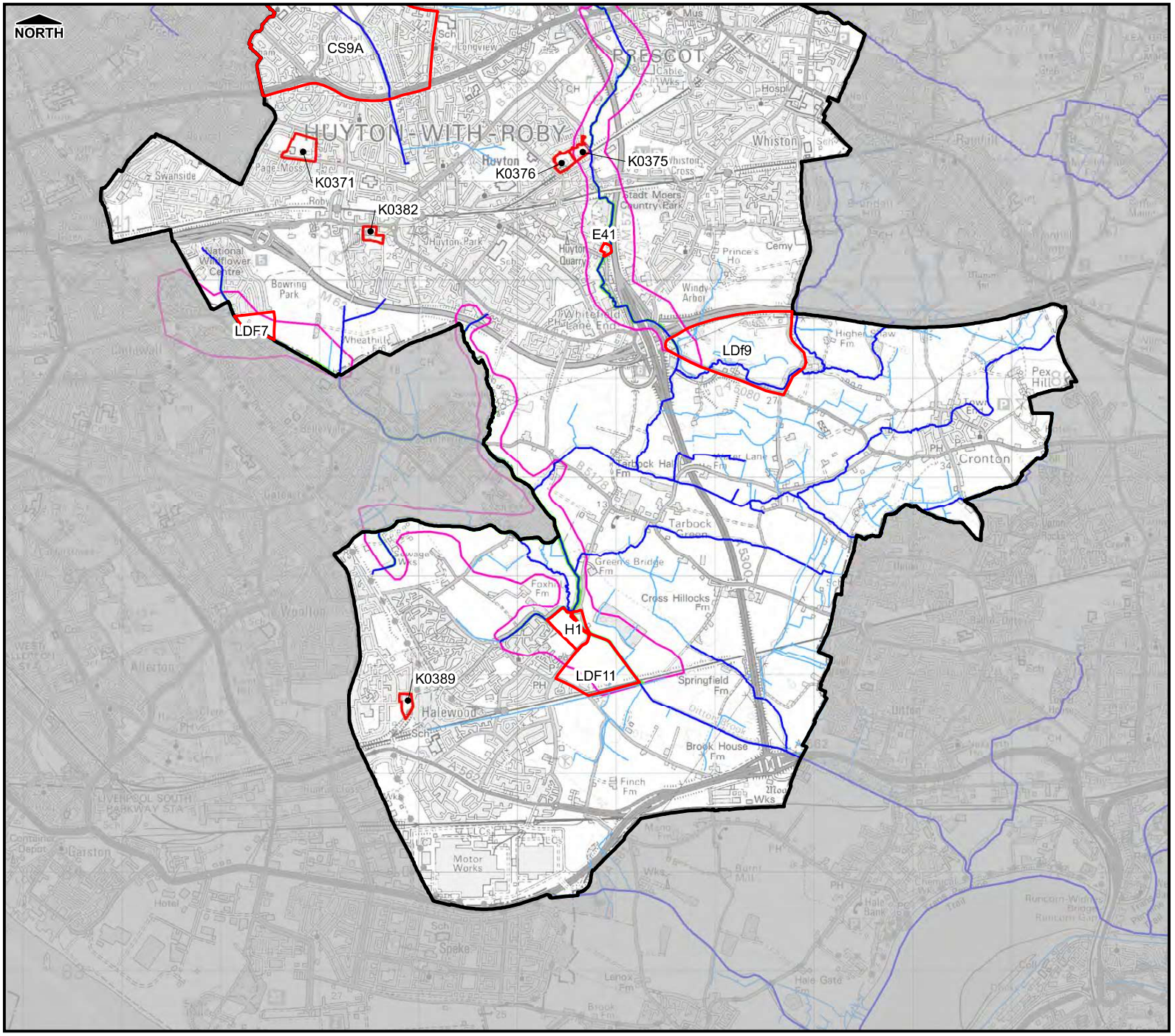
KNOWSLEY METROPOLITAN BOROUGH COUNCIL
LEVEL 2 STRATEGIC FLOOD RISK ASSESSMENT

Figure B9-1
Sites considered as part of the Study and Model Extents

Knowsley Council

CAPITA SYMONDS

DRAWING NUMBER	REV
CS056421/B9-1	-



Legend

- Borough Administrative Boundary
- Main River
- Ordinary Watercourse
- Site under consideration
- 1D Model Boundary
- 2D Model Boundary

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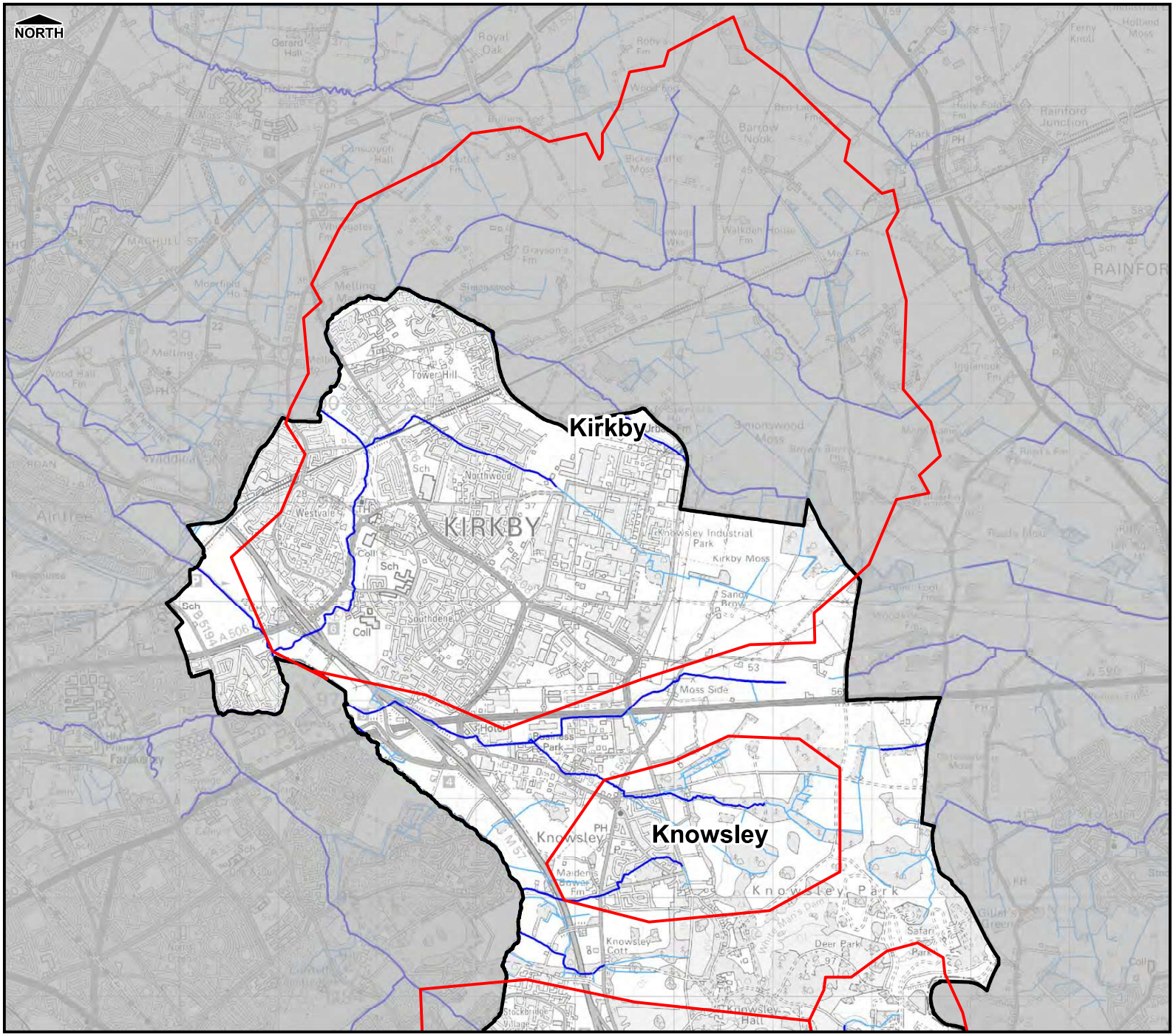
KNOWSLEY METROPOLITAN BOROUGH COUNCIL
LEVEL 2 STRATEGIC FLOOD RISK ASSESSMENT

Figure B9-2
Sites considered as part of the Study and Model Extents

Knowsley Council

CAPITA SYMONDS

DRAWING NUMBER	REV
CS056421/B9-2	-



Legend

- Critical Drainage Areas
- Borough Administrative Boundary
- Main River
- Ordinary Watercourse

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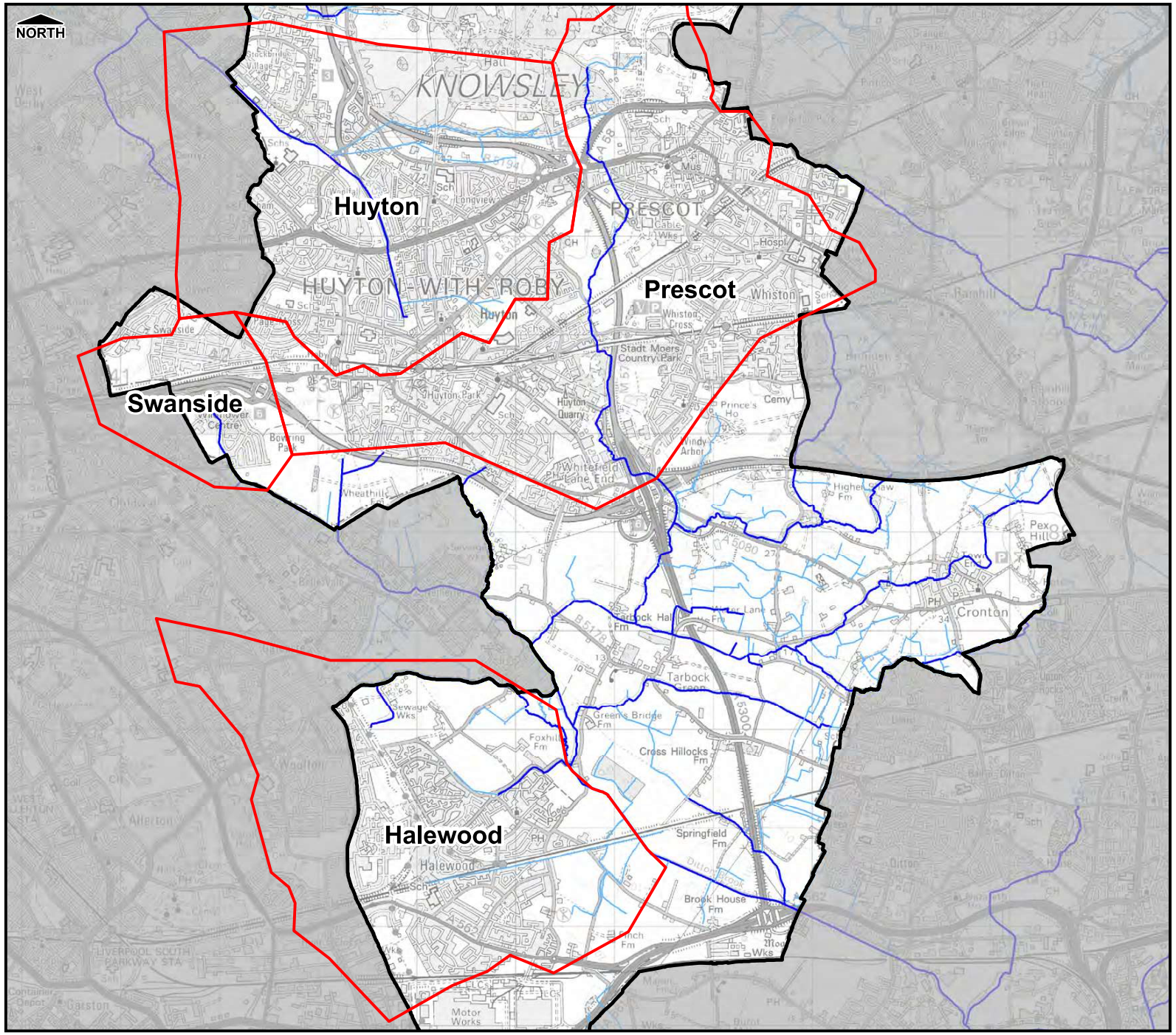
KNOWSLEY METROPOLITAN BOROUGH COUNCIL LEVEL 2 STRATEGIC FLOOD RISK ASSESSMENT

Figure B10-1
Critical Drainage Areas

Knowsley Council

CAPITA SYMONDS

DRAWING NUMBER	REV
CS056421/B10-1	-



Legend

- Critical Drainage Areas
- Borough Administrative Boundary
- Main River
- Ordinary Watercourse

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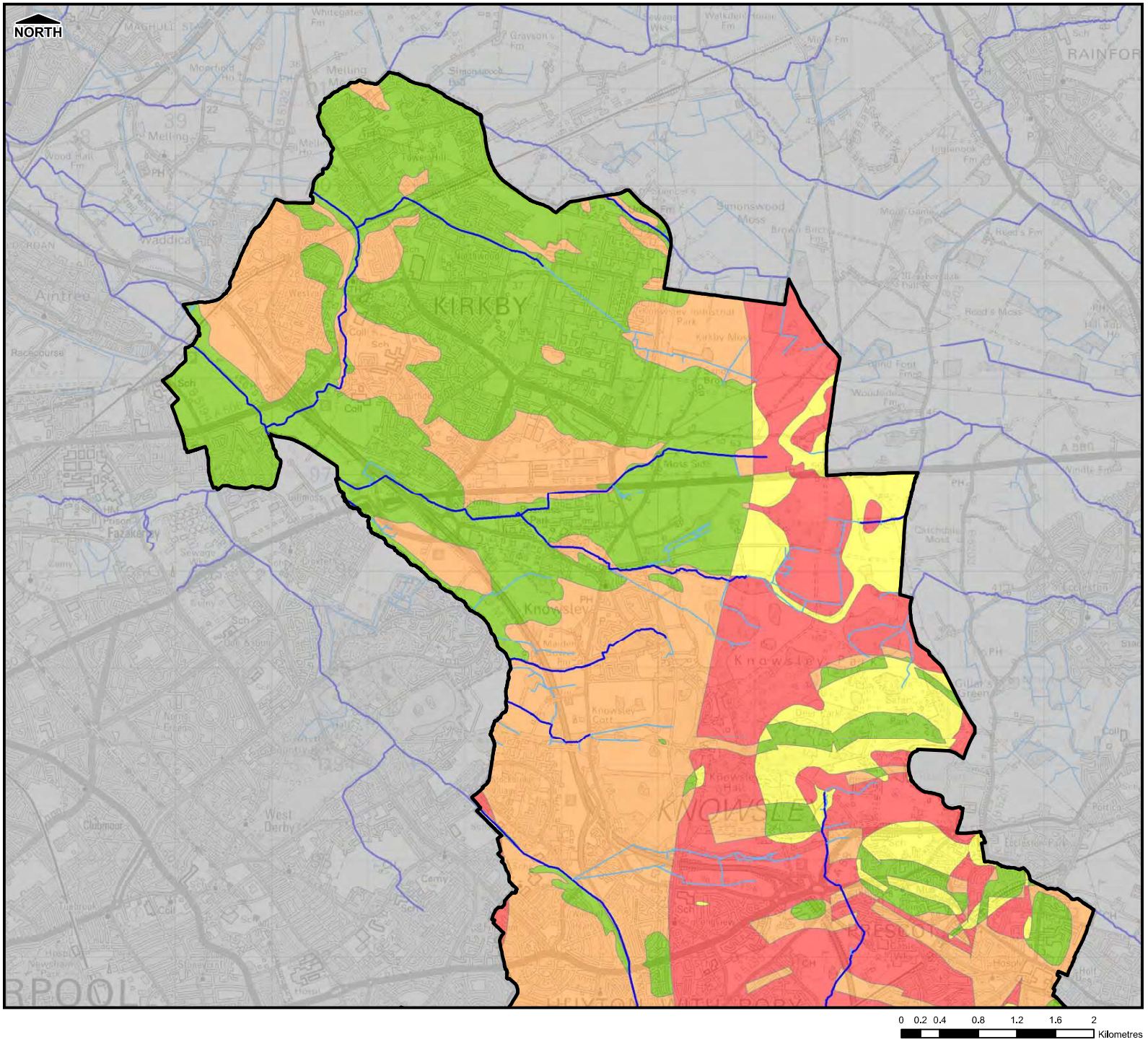
Figure B10-2
Critical Drainage Areas

Knowsley Council

CAPITA SYMONDS

DRAWING NUMBER	REV
CS056421/B10-2	-



Legend

- Borough Administrative Boundary
- Main River
- Ordinary Watercourse

Potential Suitability for SuDS

- High
- Medium 1
- Medium 2
- Low

Notes

Areas identified as High Probability are those that combine a permeable drift (or no drift) above a Sandstone solid geology. The Medium Probability (1) class consists of those that are permeable drift above Coal Measures, whilst the Medium Probability Class (2) consists of impermeable/other types of drift above Sandstone solid geology. The Low Probability Class consists of impermeable/other types of drift above Coal Measures.

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DRAWN BY	DATE	CHECKED BY	PASSED BY
S.Turnbull	30/05/2012	L.Tattersall	P.Raynor

SCALE @ A3	ISSUING OFFICE
1:40,000	Sheffield

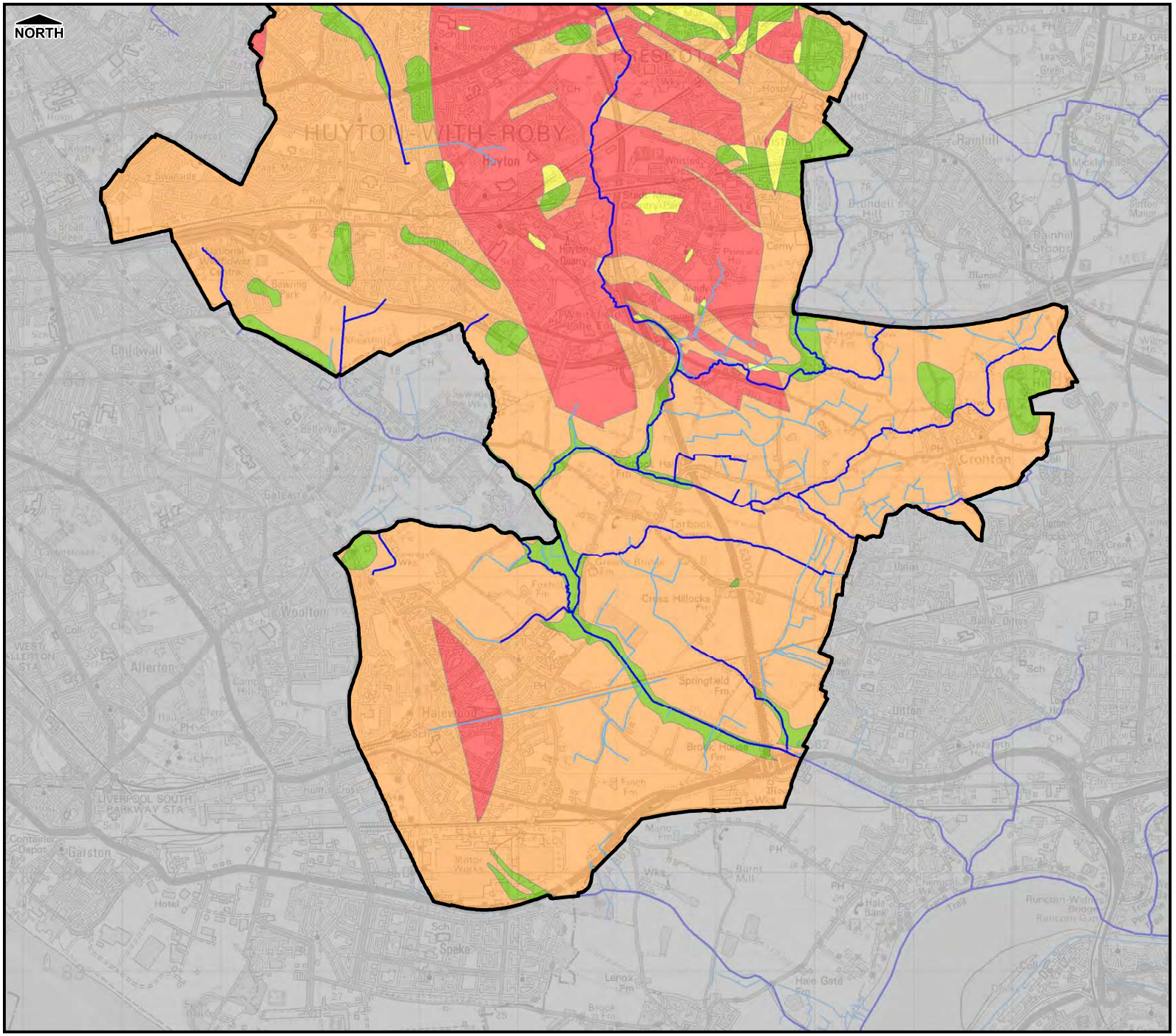
KNOWSLEY METROPOLITAN BOROUGH COUNCIL LEVEL 2 STRATEGIC FLOOD RISK ASSESSMENT

Figure B11-1
Potential Suitability for SuDS

Knowsley Council

CAPITA SYMONDS

DRAWING NUMBER	REV
CS056421/B11-1	-



Legend

- Borough Administrative Boundary
- Main River
- Ordinary Watercourse

Potential Suitability for SuDS

- High
- Medium 1
- Medium 2
- Low

Notes

Areas identified as High Probability are those that combine a permeable drift (or no drift) above a Sandstone solid geology. The Medium Probability (1) class consists of those that are permeable drift above Coal Measures, whilst the Medium Probability Class (2) consists of impermeable/other types of drift above Sandstone solid geology. The Low Probability Class consists of impermeable/other types of drift above Coal Measures.

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S.Turnbull	30/05/2012	L.Tattersall	P.Raynor

SCALE @ A3	ISSUING OFFICE
1:40,000	Sheffield

KNOWSLEY METROPOLITAN BOROUGH COUNCIL LEVEL 2 STRATEGIC FLOOD RISK ASSESSMENT

Figure B11-2 Potential Suitability for SuDS

Knowsley Council

CAPITA SYMONDS

DRAWING NUMBER	REV
CS056421/B11-2	-

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APPENDIX I: CULVERT INVESTIGATIONS

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A1

Ex MH33

2250 VC

2250 VC

375Ø VC

Ex MH34
C.L.58.62m
I.L.56.96m

450Ø Concrete

450Ø Concrete

SW01
Buried Under Grass
G.L.58.23m

Partially exposed SW18 buried in grass. Unable to access

CCTV showing new 450Ø concrete pipe - culverted watercourse diversion

450Ø Concrete

SW02
Buried Under Grass

450Ø Concrete

SW03 Buried under grass but exposed

450Ø Concrete

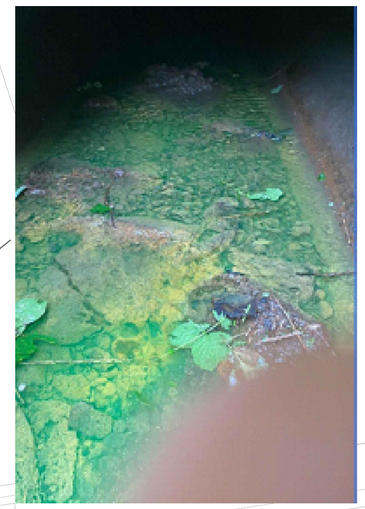
SW04
Buried Under Grass. Line Comes in on T not bend so can not CCTV to outfall.

Outfall discharges under railway into Whiston Brook, confirmed via dye test.

Exposed SW20 buried in grass

Pin showing location of buried SW21. Unable to access

Dye in Whiston Brook from MH33 in Glen Dimplex



Key:

- Culverted watercourse diversion within St Edmunds Arrowsmith (CCTV completed)
- Existing culverted watercourse within St Edmunds Arrowsmith (CCTV unavailable)
- Buried Manholes. Locations confirmed by probing.

Rev	Description	Date	Initial

Revisions

Taylor Wimpey

Taylor Wimpey North West
Washington House, Birchwood Park,
Warrington, Cheshire WA3 6GR
Tel 01925 849 500 Fax 01925 849 501
www.taylorwimpey.com

DRAWING TITLE:

GLEN DIMPLEX

RAINHILL
CULVERTED WATERCOURSE DIVERSION INVESTIGATION

DRAWING STATUS: PRELIMINARY

DWG SCALE	DATE	DRAWN	CHECKED BY
NTS @ A1	03/09/25	CP	-

DRAWING NUMBER

SITE CODE	DRAWING CODE	DRAWING NO	REVISION
GLEN DIM	100	01	-

N.B. NEW MAINS TO BE TAKEN FROM EXISTING 6" MAINS IN DRAGON LANE ABOUT 1900 FEET WEST OF NEW STOP-COCKS AT K

WHISTON INFIRMARY

DESCRIPTION

GAS MAINS MARKED THVS

WATER MAINS " "

ELECTRIC MAINS " "

SEWER (EXISTING) " "

NEW DRAINS " "

SURFACE WATER DRAINS " "

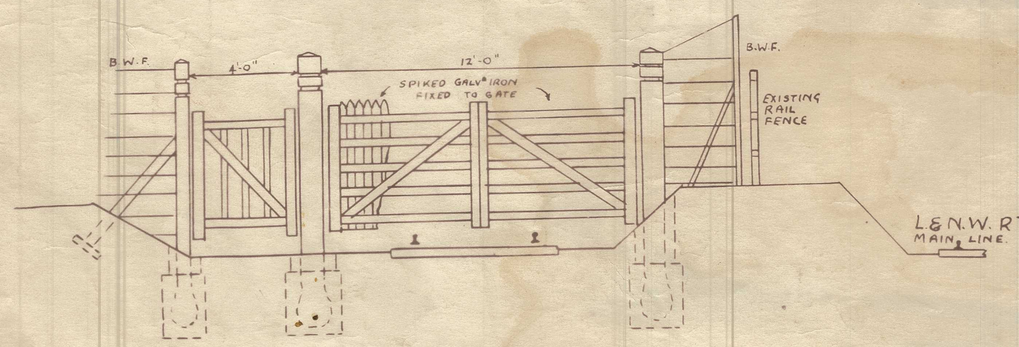
LAND DRAINS " "

SLIDING DOORS " "

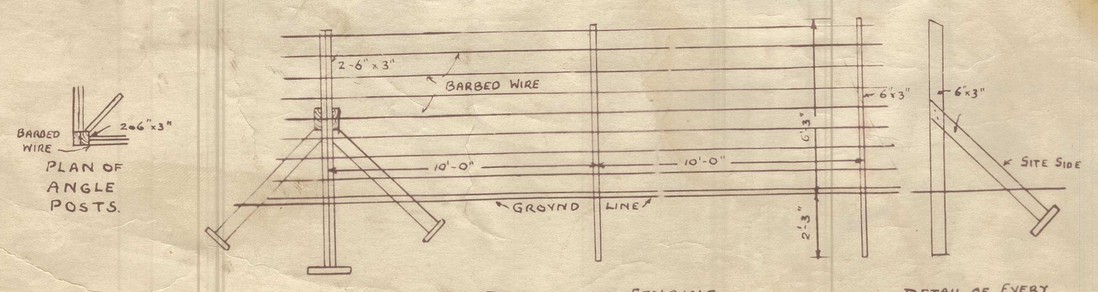
SKYLIGHTS " "

LEVELS " "

N.B. LEVELS TAKEN AS BEING ABOVE DATUM WHICH IS 40'-0" BELOW THE SIGNAL BOX GROUND LEVEL AT 'A'.



DETAIL OF GATES OVER RAILWAY



WHISTON RAINHILL: NR. LIVERPOOL.

MVNITION STORE SITE PLAN.

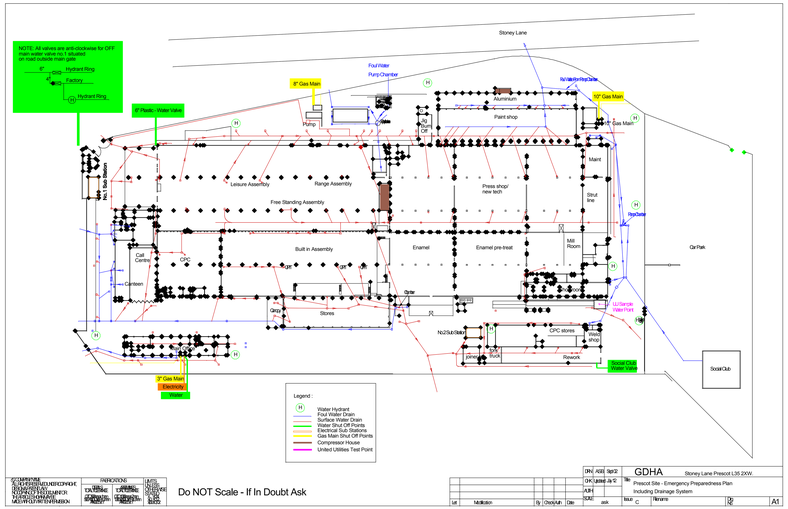
SCALE OF 66 FEET TO AN INCH.

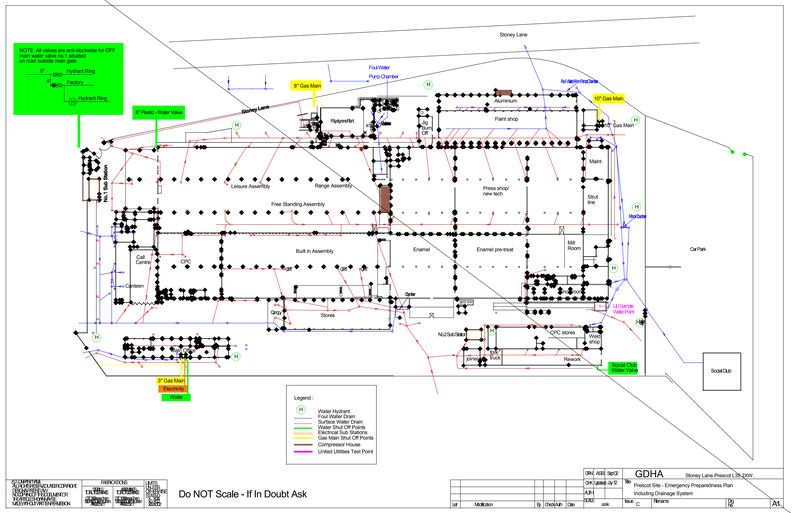
COPIED FROM DR. No 1 H.M. OFFICE OF WORKS. STORE'S GATE WESTMINSTER S.W.

STOVES LIMITED RAINHILL PLAN OF WORKS

TRACED BY WM

CHECKED WM


NOTE: All valves are anti-clockwise for OFF
main water valve no.1 situated
on road outside main gate
8" Hydrant Ring
Factory
Hydrant Ring
8" Plastic - Water Valve
Stoney Lane
Foul Water
Pump Chamber
8" Gas Main
Pump
Aluminium
Paint shop
10" Gas Main
4" Gas Main
No.1 Side Ribbon
Leisure Assembly
Range Assembly
Free Standing Assembly
Maint
Press shop/
new tech
Strut
line
Ring Dam
Built in Assembly
Enamel
Enamel pre-treat
Mill
Room
Car Park
Call
Centre
Canteen
Qlty
Stores
CPC stores
Weld
shop
Rework
Social Club
Water Valve
Social Club
3" Gas Main
Electricity
Water
Legend :
Water Hydrant
Foul Water Drain
Surface Water Drain
Water Shut Off Points
Electrical Sub Stations
Gas Main Shut Off Points
Compressor House
United Utilities Test Point
Do NOT Scale - If In Doubt Ask
GDHA
Stoney Lane Prescot L35 2XW.
Prescot Site - Emergency Preparedness Plan
Including Drainage System
A1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Factory
Hydrant Ring
8" Plastic - Water Valve
Stoney Lane
Foul Water
Pump Chamber
8" Gas Main
Pump
Aluminium
Paint shop
10" Gas Main
4" Gas Main
No.1 Side Ribbon
Leisure Assembly
Range Assembly
Free Standing Assembly
Maint
Press shop/
new tech
Strut
line
Ring Dam
Built in Assembly
Enamel
Enamel pre-treat
Mill
Room
Car Park
Call
Centre
Canteen
Qlty
Stores
CPC stores
Weld
shop
Rework
Social Club
Water Valve
Social Club
3" Gas Main
Electricity
Water
Legend :
Water Hydrant
Foul Water Drain
Surface Water Drain
Water Shut Off Points
Electrical Sub Stations
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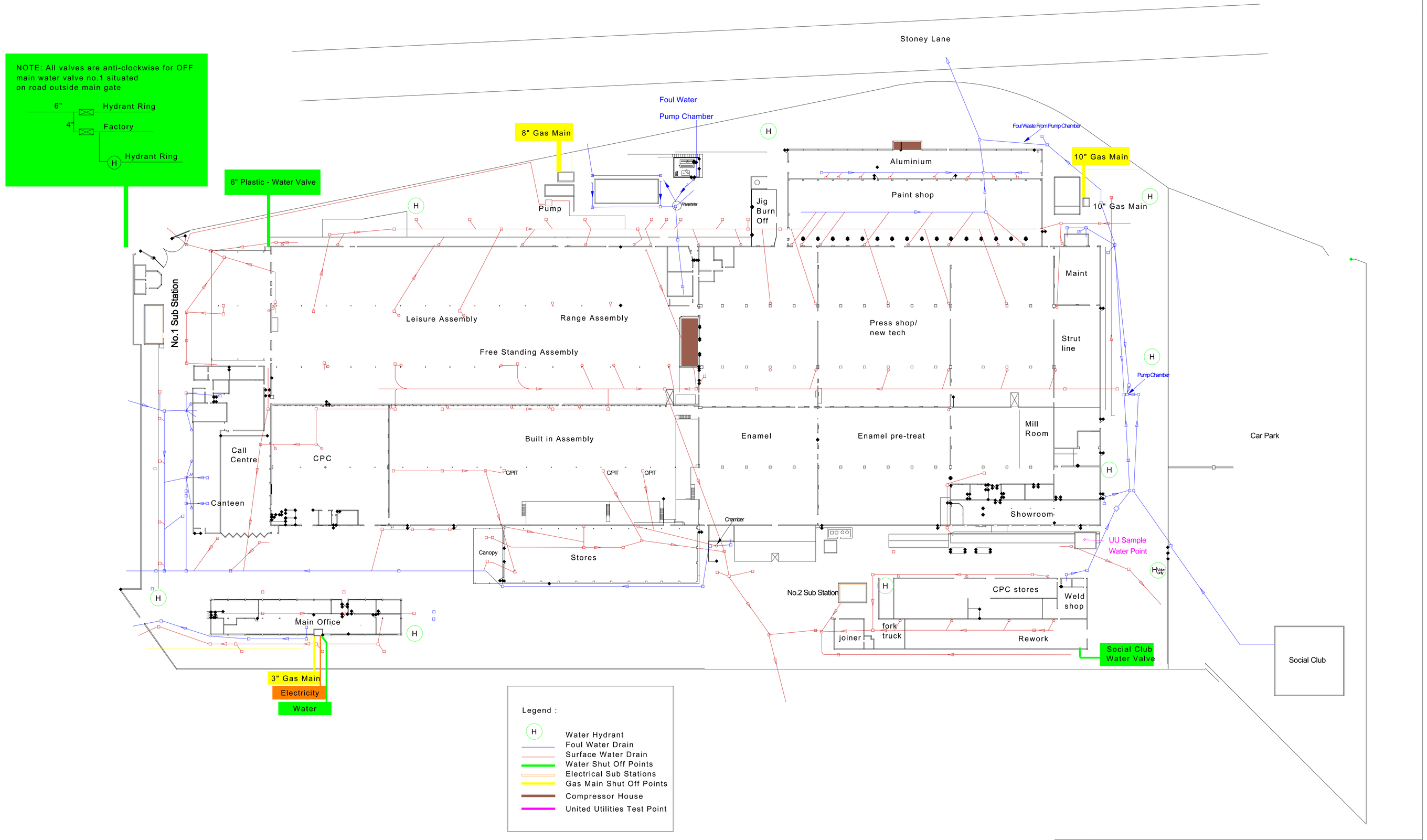

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FABRICATIONS

DETAILS TOTAL TOLERANCE	ASSEMBLIES TOTAL TOLERANCE
0 TO 500mm ± 1mm 500 AND OVER ± 3mm ANGLES ± 1°	0 TO 1000mm ± 2mm 1000 AND OVER ± 3mm ANGLES ± 1°

LIMITS UNLESS OTHERWISE STATED
x ± 0.4
x.0 ± 0.2
x.00 ± 0.02

Do NOT Scale - If In Doubt Ask

Let	Modification	By	Check/Auth	Date

DRN	A.S.B.	Sept 02	GDHA Stoney Lane Prescot L35 2XW.
CHK	Updated	July 12	Title: Prescot Site - Emergency Preparedness Plan Including Drainage System
AUTH			
SCALE	ask	Issue C	Filename / Drg No. A1

NOTE: All valves are anti-clockwise for OFF
main water valve no.1 situated
on road outside main gate

6" Hydrant Ring
4" Factory
H Hydrant Ring

6" Plastic - Water Valve

Stoney Lane

8" Gas Main

Foul Water
Pump Chamber

Foul Waste From Pump Chamber

10" Gas Main

Pump
Polystyrene Plant
Jig Burn Off
Aluminium
Paint shop
Maint
No.1 Sub Station
Leisure Assembly
Range Assembly
Free Standing Assembly
Press shop/ new tech
Strut line
Pump Chamber
Call Centre
CPC
Built in Assembly
Enamel
Enamel pre-treat
Mill Room
Car Park
Canteen
CPIT
Chamber
Showroom
UU Sample Water Point
Canopy
Stores
No.2 Sub Station
CPC stores
Weld shop
fork truck
joiner
Rework
Social Club Water Valve
Social Club
Main Office
3" Gas Main
Electricity
Water

Legend :

- H Water Hydrant
- Foul Water Drain
- Surface Water Drain
- Water Shut Off Points
- Electrical Sub Stations
- Gas Main Shut Off Points
- Compressor House
- United Utilities Test Point

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FABRICATIONS		LIMITS
DETAILS TOTAL TOLERANCE	ASSEMBLIES TOTAL TOLERANCE	UNLESS OTHERWISE STATED
0 TO 300mm ± 1mm 600 AND OVER ± 3mm ANGLES ± 1°	0 TO 1000mm ± 2mm 1000 AND OVER ± 3mm ANGLES ± 1°	x ± 0.4 x.0 ± 0.2 x.00 ± 0.02

Do NOT Scale - If In Doubt Ask

Let	Modification	By	Check	Auth	Date

DRN	A.S.B.	Sept 02
CHK	Updated	July 12
AUTH		
SCALE	ask	

GDHA Stoney Lane Prescot L35 2XW.

Title: Prescot Site - Emergency Preparedness Plan
Including Drainage System

Issue C | Filename | Drg No. | A1

NOTE: All valves are anti-clockwise for OFF
main water valve no.1 situated
on road outside main gate

6" Hydrant Ring
4" Factory
H Hydrant Ring

6" Plastic - Water Valve

Stoney Lane

8" Gas Main

Foul Water
Pump Chamber

Foul Waste From Pump Chamber

10" Gas Main

10" Gas Main

Pump

Polystyrene Plant

Hydraclear

Jig
Burn
Off

Aluminium

Paint shop

Maint

No.1 Sub Station

Leisure Assembly

Range Assembly

Free Standing Assembly

Press shop/
new tech

Strut
line

Pump Chamber

Call
Centre

CPC

Canteen

Built in Assembly

C/PIT

C/PIT

C/PIT

Enamel

Enamel pre-treat

Mill
Room

Car Park

Showroom

Chamber

Canopy

Stores

UU Sample
Water Point

No.2 Sub Station

CPC stores

Weld
shop

fork
truck

joiner

Rework

Main Office

Social Club
Water Valve

Social Club

3" Gas Main
Electricity
Water

Legend :

- H — Water Hydrant
- Foul Water Drain
- Surface Water Drain
- Water Shut Off Points
- Electrical Sub Stations
- Gas Main Shut Off Points
- Compressor House
- United Utilities Test Point

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LIMITS
UNLESS
OTHERWISE
STATED

Do NOT Scale - If In Doubt Ask

DRN	A.S.B.	Sept 02
CHK	Updated	July 12
AUTH		

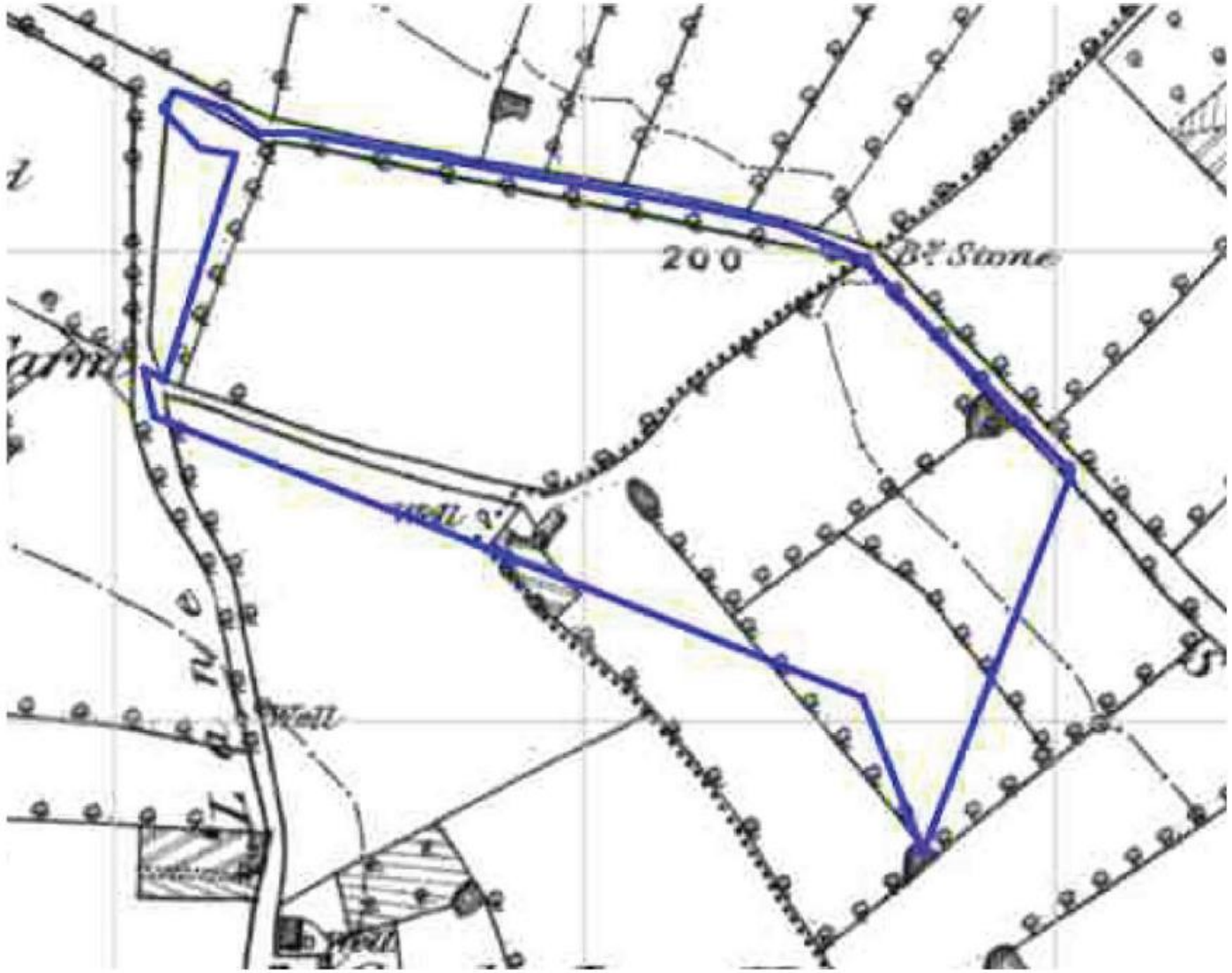
GDHA

Stoney Lane Prescot L35 2X

Title: Prescot Site - Emergency Preparedness Plan
Including Drainage System

On-site historical development of Glen Dimplex

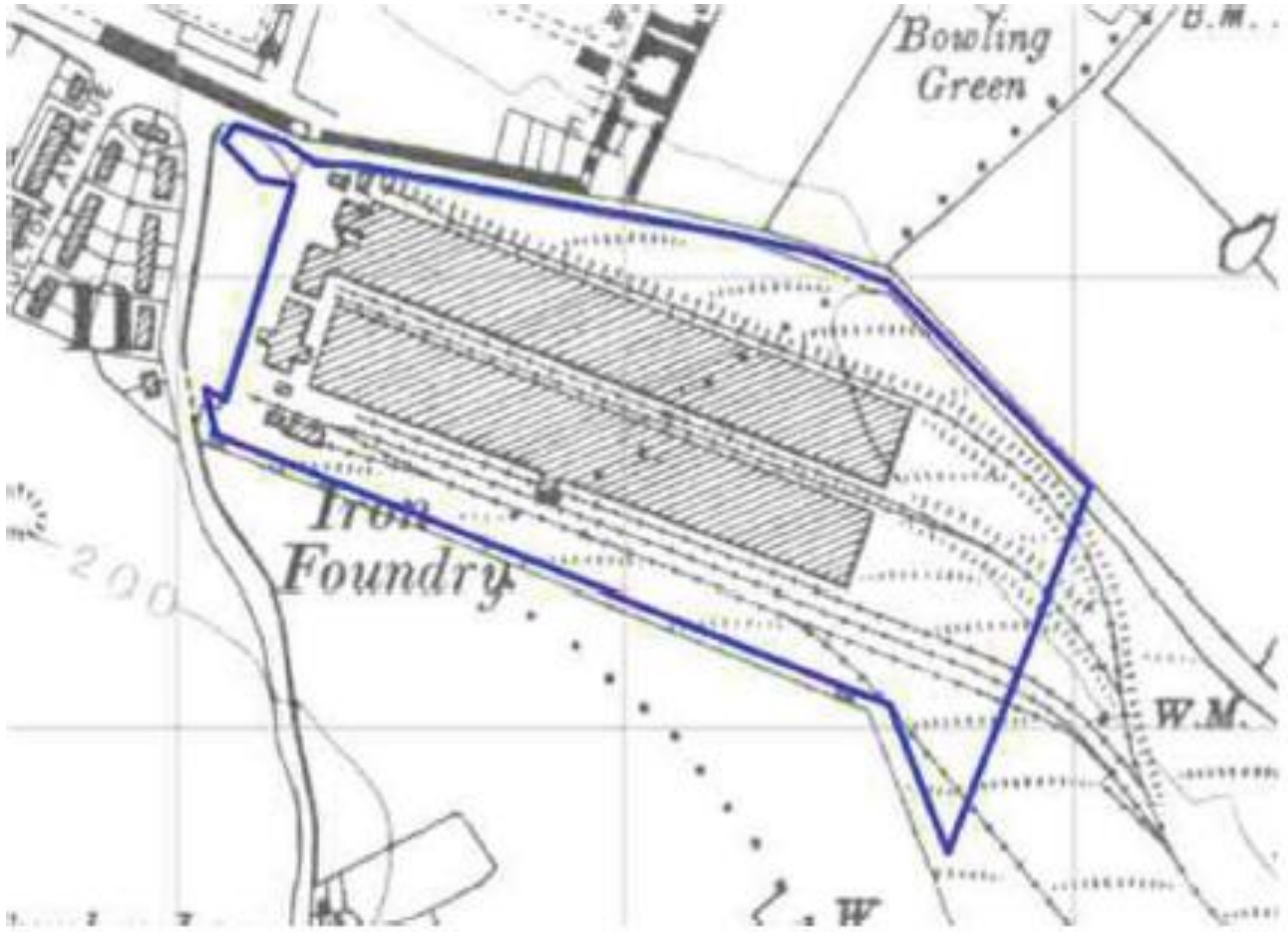
1850 – Several segmenting field boundaries are present, with the site comprising seven smaller fields



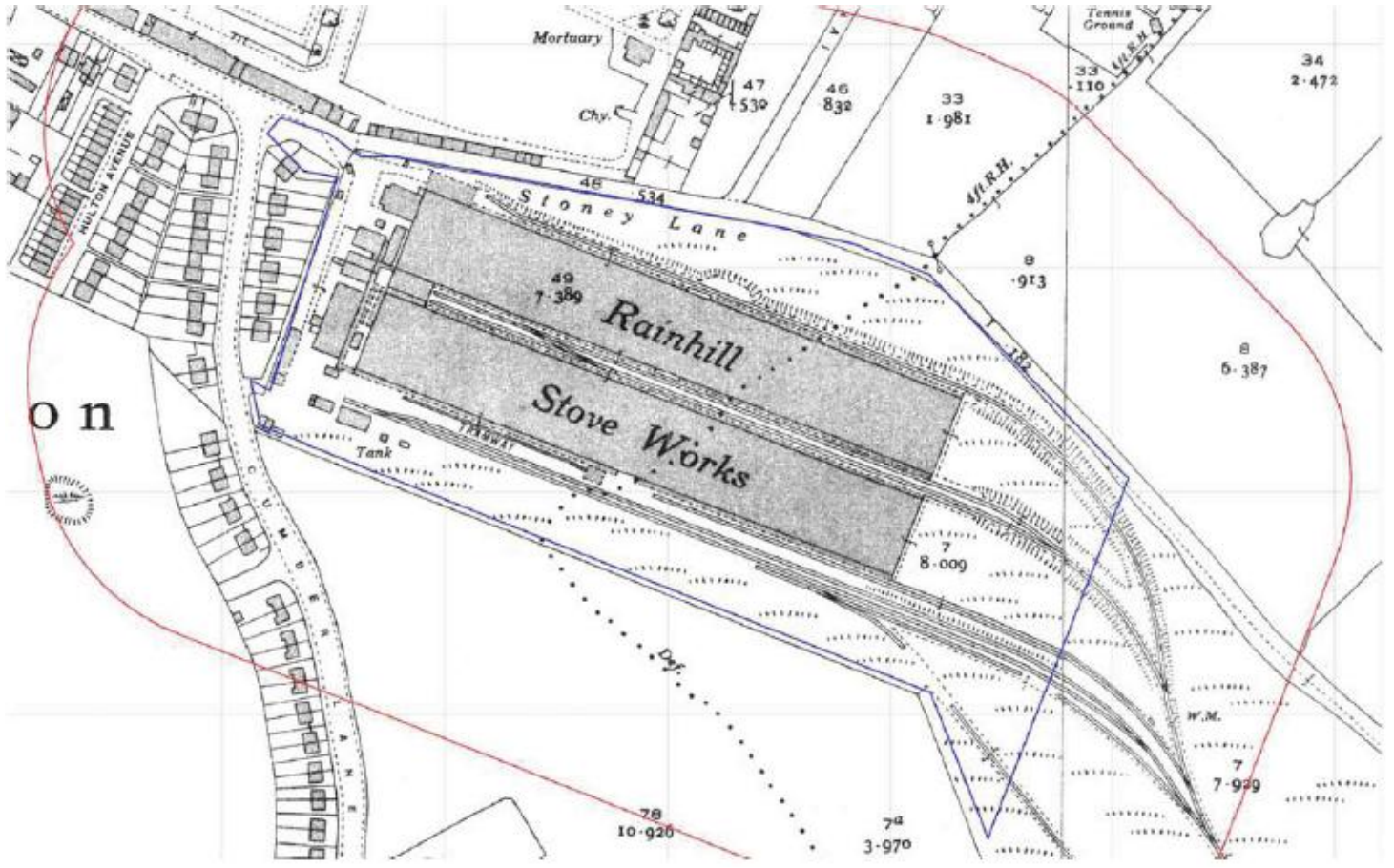
1892 – Majority of field boundaries removed and field boundary traversing through the centre of the site is now noted as a small hedge-lined road traversing from the south towards the northeast, continuing off site.

1907-1925 – Historical mapping unavailable but records held by Heritage Gateway indicates a factory had been developed used as munitions works.

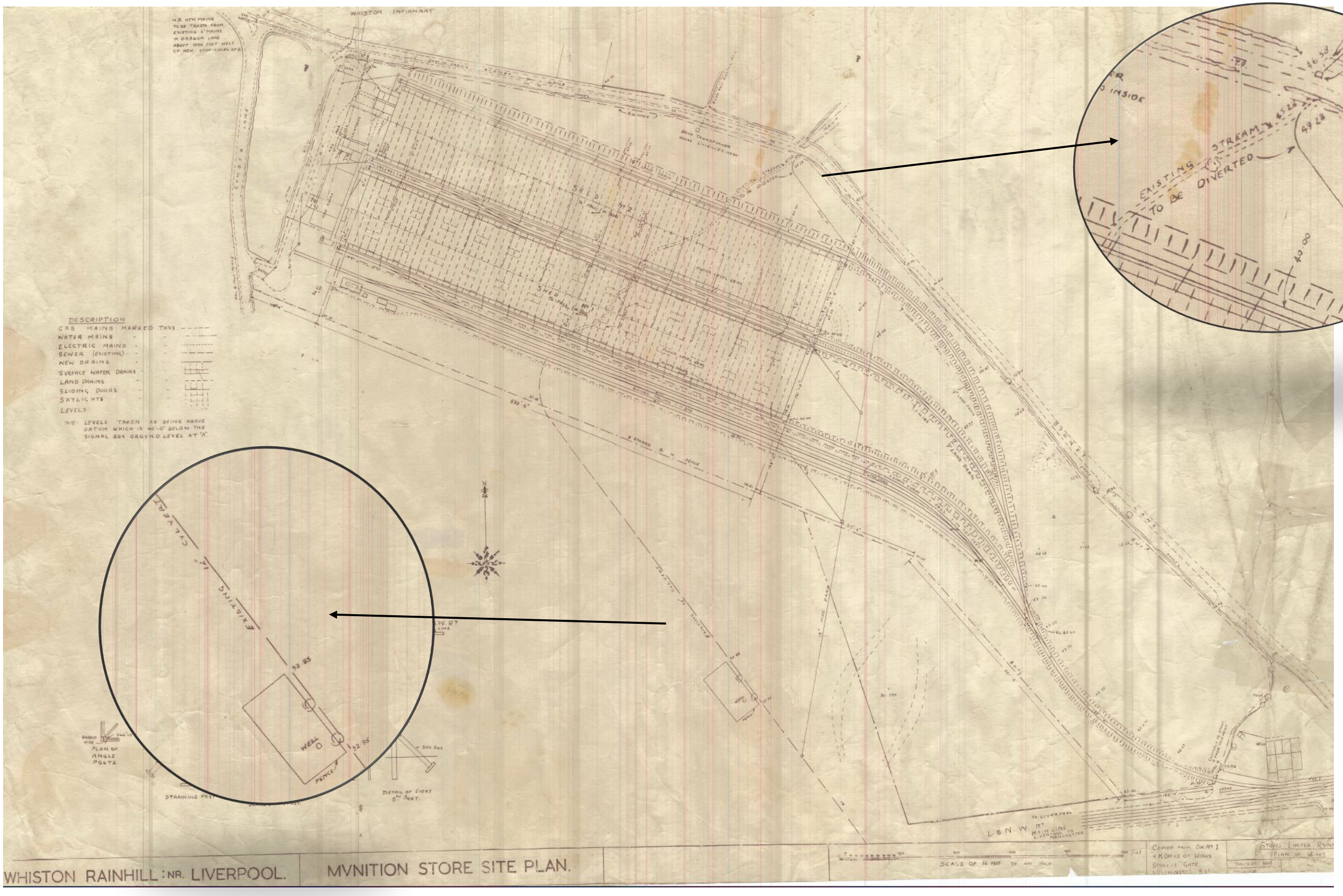
1925 – Site redeveloped and comprises an iron foundry with associated railway sidings



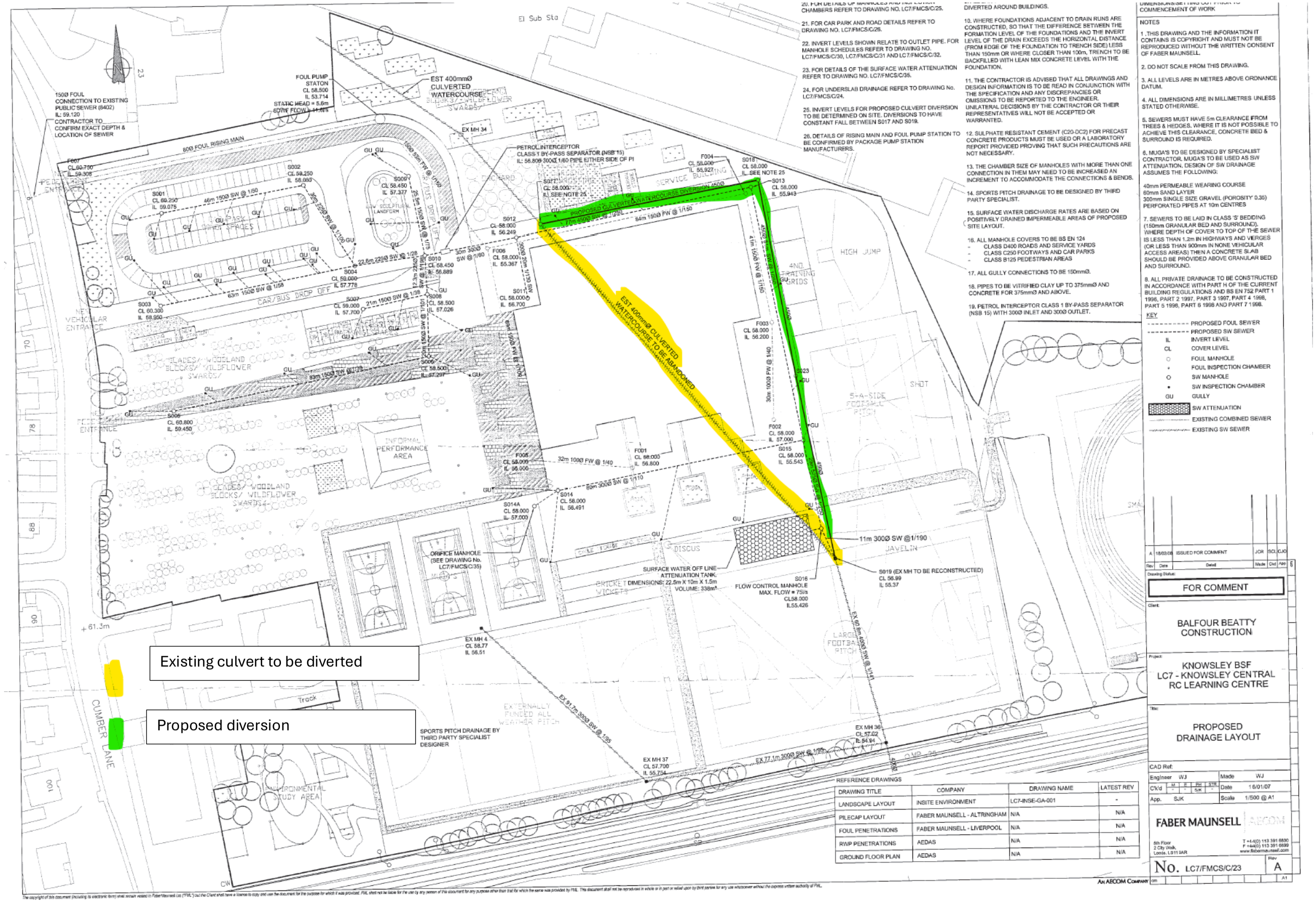
1937 – Site now renamed as Stove Works



1955 – Historical map shows existing stream traversing along route of field boundary to be diverted to east of development into 12'' pipe (location and condition of eastern culverted watercourse still to be confirmed). Plan also references existing 12'' culvert to south of site



2007 – Revision A Faber Maunsell plans showing existing route of 400mm culverted watercourse to be abandoned downstream from MH34 and diverted as 450mm around new school building downstream to existing manhole S019.



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2. DO NOT SCALE FROM THIS DRAWING.
3. ALL LEVELS ARE IN METRES ABOVE ORDNANCE DATUM.
4. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS STATED OTHERWISE.
5. SEWERS MUST HAVE 5m CLEARANCE FROM TREES & HEDGES. WHERE IT IS NOT POSSIBLE TO ACHIEVE THIS CLEARANCE, CONCRETE BED & SURROUND IS REQUIRED.
6. MUGA'S TO BE DESIGNED BY SPECIALIST CONTRACTOR. MUGA'S TO BE USED AS SW ATTENUATION. DESIGN OF SW DRAINAGE ASSUMES THE FOLLOWING:

40mm PERMEABLE WEARING COURSE
60mm SAND LAYER
300mm SINGLE SIZE GRAVEL (POROSITY 0.35)
PERFORATED PIPES AT 10m CENTRES

7. SEWERS TO BE LAID IN CLASS 'S' BEDDING (150mm GRANULAR BED AND SURROUND). WHERE DEPTH OF COVER TO TOP OF THE SEWER IS LESS THAN 1.2m IN HIGHWAYS AND VERGES (OR LESS THAN 900mm IN NONE VEHICULAR ACCESS AREAS) THEN A CONCRETE SLAB SHOULD BE PROVIDED ABOVE GRANULAR BED AND SURROUND.
8. ALL PRIVATE DRAINAGE TO BE CONSTRUCTED IN ACCORDANCE WITH PART H OF THE CURRENT BUILDING REGULATIONS AND BS EN 752 PART 1 1996, PART 2 1997, PART 3 1997, PART 4 1998, PART 5 1998, PART 6 1998 AND PART 7 1998.

KEY

- PROPOSED FOUL SEWER
- PROPOSED SW SEWER
- IL INVERT LEVEL
- CL COVER LEVEL
- FOUL MANHOLE
- FOUL INSPECTION CHAMBER
- SW MANHOLE
- SW INSPECTION CHAMBER
- GU GULLY
- SW ATTENUATION
- EXISTING COMBINED SEWER
- EXISTING SW SEWER

20. FOR DETAILS OF MANHOLES AND INSPECTION CHAMBERS REFER TO DRAWING NO. LC7/FMCS/C/25.
21. FOR CAR PARK AND ROAD DETAILS REFER TO DRAWING NO. LC7/FMCS/C/26.
22. INVERT LEVELS SHOWN RELATE TO OUTLET PIPE. FOR MANHOLE SCHEDULES REFER TO DRAWING NO. LC7/FMCS/C/30, LC7/FMCS/C/31 AND LC7/FMCS/C/32.
23. FOR DETAILS OF THE SURFACE WATER ATTENUATION REFER TO DRAWING NO. LC7/FMCS/C/35.
24. FOR UNDERSLAB DRAINAGE REFER TO DRAWING No. LC7/FMCS/C/24.
25. INVERT LEVELS FOR PROPOSED CULVERT DIVERSION TO BE DETERMINED ON SITE. DIVERSIONS TO HAVE CONSTANT FALL BETWEEN S017 AND S019.
26. DETAILS OF RISING MAIN AND FOUL PUMP STATION TO BE CONFIRMED BY PACKAGE PUMP STATION MANUFACTURERS.

DIVERTED AROUND BUILDINGS.

10. WHERE FOUNDATIONS ADJACENT TO DRAIN RUNS ARE CONSTRUCTED, SO THAT THE DIFFERENCE BETWEEN THE FORMATION LEVEL OF THE FOUNDATIONS AND THE INVERT LEVEL OF THE DRAIN EXCEEDS THE HORIZONTAL DISTANCE (FROM EDGE OF THE FOUNDATION TO TRENCH SIDE) LESS THAN 150mm OR WHERE CLOSER THAN 100m, TRENCH TO BE BACKFILLED WITH LEAN MIX CONCRETE LEVEL WITH THE FOUNDATION.
11. THE CONTRACTOR IS ADVISED THAT ALL DRAWINGS AND DESIGN INFORMATION IS TO BE READ IN CONJUNCTION WITH THE SPECIFICATION AND ANY DISCREPANCIES OR OMISSIONS TO BE REPORTED TO THE ENGINEER. UNILATERAL DECISIONS BY THE CONTRACTOR OR THEIR REPRESENTATIVES WILL NOT BE ACCEPTED OR WARRANTED.
12. SULPHATE RESISTANT CEMENT (C20-DC2) FOR PRECAST CONCRETE PRODUCTS MUST BE USED OR A LABORATORY REPORT PROVIDED PROVING THAT SUCH PRECAUTIONS ARE NOT NECESSARY.
13. THE CHAMBER SIZE OF MANHOLES WITH MORE THAN ONE CONNECTION IN THEM MAY NEED TO BE INCREASED AN INCREMENT TO ACCOMMODATE THE CONNECTIONS & BENDS.
14. SPORTS PITCH DRAINAGE TO BE DESIGNED BY THIRD PARTY SPECIALIST.
15. SURFACE WATER DISCHARGE RATES ARE BASED ON POSITIVELY DRAINED IMPERMEABLE AREAS OF PROPOSED SITE LAYOUT.
16. ALL MANHOLE COVERS TO BE BS EN 124
    - CLASS D400 ROADS AND SERVICE YARDS
    - CLASS C250 FOOTWAYS AND CAR PARKS
    - CLASS B125 PEDESTRIAN AREAS
17. ALL GULLY CONNECTIONS TO BE 150mmØ.
18. PIPES TO BE VITRIFIED CLAY UP TO 375mmØ AND CONCRETE FOR 375mmØ AND ABOVE.
19. PETROL INTERCEPTOR CLASS 1 BY-PASS SEPARATOR (NSB 15) WITH 300Ø INLET AND 300Ø OUTLET.

REFERENCE DRAWINGS

DRAWING TITLE	COMPANY	DRAWING NAME	LATEST REV
LANDSCAPE LAYOUT	INSITE ENVIRONMENT	LC7-INSE-GA-001	-
PILECAP LAYOUT	FABER MAUNSELL - ALTRINGHAM	N/A	N/A
FOUL PENETRATIONS	FABER MAUNSELL - LIVERPOOL	N/A	N/A
RWP PENETRATIONS	AEDAS	N/A	N/A
GROUND FLOOR PLAN	AEDAS	N/A	N/A

Rev	Date	Detail	Made	Chd	Appr
A	18/02/08	ISSUED FOR COMMENT	JCR	SCL	GJO

Drawing Status: FOR COMMENT

Client: BALFOUR BEATTY CONSTRUCTION

Project: KNOWSLEY BSF LC7 - KNOWSLEY CENTRAL RC LEARNING CENTRE

Title: PROPOSED DRAINAGE LAYOUT

CAD Ref:

Engineer	WJ	Made	WJ
Ck'd	SJK	Date	16/01/07
App.	SJK	Scale	1/500 @ A1

FABER MAUNSELL AECOM

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T +44(0) 113 391 6800
F +44(0) 113 391 6899
www.fabermaunsell.com

No. LC7/FMCS/C/23 Rev A

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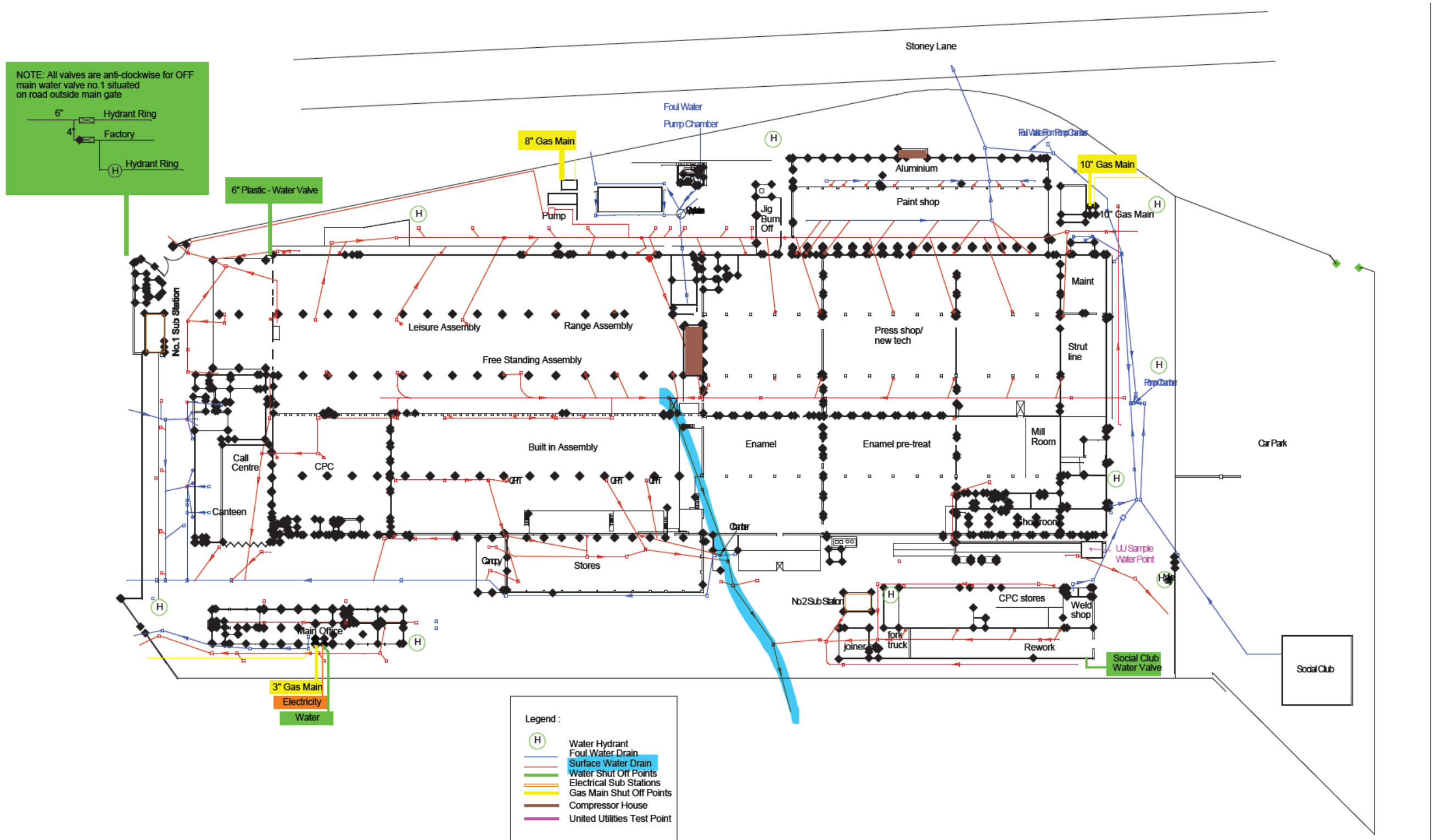
2009 – Revision 11 of the Faber Maunsell proposed drainage diversion plan provided by St Edmunds Arrowsmith showing diversion directly from MH34.

2012 – Glen Dimplex emergency preparedness plan including drainage system showing surface water factory drains connecting into culverted watercourse to south.



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FABRICATIONS
DEALS TOLERANCE
ASSEMBLIES TOLERANCE

UNITS UNLESS OTHERWISE STATED

Do NOT Scale - If In Doubt Ask

Let	Modification	By	Check	Auth	Date

DRN	ASB	Sept 12	GDHA Stoney Lane Prescot L35 2XW.
CHK	Updated	July 12	Title: Prescot Site - Emergency Preparedness Plan Including Drainage System
AUTH			
SCALE:	ask		Issue C · Filename · Dg No. · A1

Project

Project Name:	Glen Dimplex Rainhill Taylor Wimpey 2026_01_19
Project Date:	19/01/2026
Inspection Standard:	MSCC5 Sewers & Drainage GB (SRM5 Scoring)

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Project Name	Project Number	Project Date
Glen Dimplex Rainhill Taylor Wimpey 2026_01_19		19/01/2026

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Section Profile P-6
Section Summary P-7
Project Summary P-9
Section Item 1: LINE C > MH01 (LINE C X) 1
Section Item 2: MH01 > LINE X (MH01X) 4
Section Item 3: MH01 > LINE X (MH01X) 7
Section Item 4: MH01 > LINE X (MH01X) 11
Section Item 5: MH02 > LINE X (MH02X) 16

GENERAL UTILITIES NORTHWEST LTD
LIVERPOOL ROAD, IRLAM
Tel. 0161 776 0011
generalutilities@btconnect.com

Project Information

Project Name	Project Number	Project Date
Glen Dimplex Rainhill Taylor Wimpey 2026_01_19		19/01/2026

Contractor

Company: GENERAL UTILITIES NORTHWEST LTD
Description: DRAINAGE COMPANY
Contact: CRAIG MORRIS
Department: OPERATIONS MANAGER
Street: LIVERPOOL ROAD
Town or City: IRLAM
County: MANCHESTER
Post Code: M44 6FB

Scoring Summary

Project Name	Project Number	Project Date
Glen Dimplex Rainhill Taylor Wimpey 2026_01_19		19/01/2026

Structural Defects

Section	PLR	Grade	Description
All inspected pipes are in an acceptable structural condition (< grade 3).			

Service / Operational Condition

Grade 3: Best practice suggests consideration should be given to maintenance activities in the medium term.

Grade 4: Best practice suggests consideration should be given to maintenance activity to avoid potential blockages.

Grade 5: Best practice suggests that this pipe is at a high risk of backing up or causing flooding.

Section	PLR	Grade	Description
4	MH01X	4	Multiple defects
5	MH02X	5	Multiple defects

Abandoned Surveys

Section	PLR	Description
2	MH01X	Survey abandoned
3	MH01X	Survey abandoned
5	MH02X	Survey abandoned

Information

These scoring summaries are based on the SRM grading from the WRc.

Project Pictures

Project Name	Project Number	Project Date
Glen Dimplex Rainhill Taylor Wimpey 2026_01_19		19/01/2026

Snapchat-234428335

Snapchat-252995984

Snapchat-596628809

Snapchat-1057820836

Snapchat-1136869154

Snapchat-1193287971

Project Pictures

Project Name	Project Number	Project Date
Glen Dimplex Rainhill Taylor Wimpey 2026_01_19		19/01/2026

Snapchat-1291724273

Snapchat-1773722590

Snapchat-1835990011

Snapchat-1854727421

Snapchat-1931062557

Defect Grade Description (Section)

Project Name	Project Number	Project Date
Glen Dimplex Rainhill Taylor Wimpey 2026_01_19		19/01/2026

1:	Brick: Minor structural defects. Other: Minor structural defects, i.e. open or displaced joints without additional characteristics. **Acceptable structural condition.**
2:	Brick: Circumferential cracking. Single longitudinal crack. Surface mortar loss (depth missing < 15 mm). Surface damage - spalling slight (breaking away of small fragments from the surface). Surface damage - wear slight (increased roughness). Other: Circumferential cracking. Surface damage - spalling slight (breaking away of small fragments from the surface). Surface damage - wear slight (increased roughness). **Minimal collapse likelihood in the short term but potential for further deterioration.**
3:	Brick: Total mortar loss (depth missing > 50 mm) without other defects. More than one longitudinal crack (at a single location). Multiple cracking. Single bricks displaced. Deformation < 5%, no fracture and only moderate mortar loss. Surface damage - spalling medium (large areas of chipped brick). Surface damage - wear medium (entire surface of brick is missing). Other: Fracture with no deformation or deformation < 5%. Longitudinal cracking or multiple cracking. Minor loss of level. Severe joint defects i.e. Surface damage - spalling medium. Surface damage - wear medium. **Collapse unlikely in the near future but further deterioration likely.**
4:	Brick: Total mortar loss (depth missing > 50mm) with deformation > 10%; deformation up to 10% and fractured; displaced or hanging brickwork; small number of missing bricks; dropped invert (drop > 20mm); moderate loss of level; surface damage - large spalling (entire surface of brick is missing); surface damage - large wear (entire surface of brick is missing). Other: Broken; deformation up to 10% and broken; fracture with deformation 5-10%; multiple fractures; serious loss of level; serious joint defects with voids or soil visible (open joint with > 50mm soil or void visible or joint displacement > 25% of diameter); surface damage - entire area of pipe surface is missing or severly worn. **Collapse likely in the foreseeable future.**
5:	Brick: Already collapsed; missing Invert; deformation > 10% and fractured; displaced or hanging brickwork and deformation < 10%; extensive areas of missing brickwork. Other: Already collapsed; deformation > 10% and broken; extensive areas of pipe fabric missing; fractures with deformation > 10% **Collapsed or collapse imminent.**

Section Profile

Project Name	Project Number	Project Date
Glen Dimplex Rainhill Taylor Wimpey 2026_01_19		19/01/2026

Circular, 300 mm

Item No.	Upstream Node	Downstream Node	Date	Road	Material	Total Length	Inspected Length
1	LINE C	MH01	19/01/2026	Stoney Lane	Vitrified clay	23.09 m	23.09 m
4	MH01	LINE X	19/01/2026	Stoney Lane	Vitrified clay	53.71 m	53.71 m

Total: 2 Inspections x Circular 300 mm = 76.80 m Total Length and 76.80 m Inspected Length

Total: 2 Inspections = 76.80 m Total Length and 76.80 m Inspected Length

Section Summary

Project Name	Project Number	Project Date
Glen Dimplex Rainhill Taylor Wimpey 2026_01_19		19/01/2026

Number of sections	5
Total length of sections	138.44 m
Total length of inspected sections	133.89 m
Total length of not inspected sections	4.56 m
Number of abandoned inspections	3
Number of section inspection photos	27
Number of section inspection videos	5
Number of section inspection scans	0
Number of section inclination measurements	0

PLR:	LINE C X	**Upstream Node:**	LINE C
Inspection Direction:	Upstream	**Downstream Node:**	MH01
Inspected Length:	23.09 m	**Dia/Height:**	300 mm
Total Length:	23.09 m	**Material:**	Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH01
2	0.00	WL	Water level, 30% of the vertical dimension
3	8.66	WL	Water level, 10% of the vertical dimension
4	22.37	CLJ	Crack, longitudinal at joint at 12 o'clock
5	23.09	MHF	Finish node, manhole, reference: LINE C

PLR:	MH01X	**Upstream Node:**	MH01
Inspection Direction:	Downstream	**Downstream Node:**	LINE X
Inspected Length:	6.42 m	**Dia/Height:**	300 mm
Total Length:	10.98 m	**Material:**	Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH01
2	0.00	WL	Water level, 30% of the vertical dimension
3	4.78	WL	Water level, 50% of the vertical dimension
4	4.78	CUW	Loss of vision, camera under water
5	6.42	SA	Survey abandoned

PLR:	MH01X	**Upstream Node:**	MH01
Inspection Direction:	Downstream	**Downstream Node:**	LINE X
Inspected Length:	44.25 m	**Dia/Height:**	300 mm
Total Length:	44.25 m	**Material:**	Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH01

Section Summary

Project Name	Project Number	Project Date
Glen Dimplex Rainhill Taylor Wimpey 2026_01_19		19/01/2026

No.	m+	Code	Observation
2	0.00	WL	Water level, 30% of the vertical dimension
3	2.49	WL	Water level, 5% of the vertical dimension
4	2.49	WL	Water level, 50% of the vertical dimension
5	4.37	WL	Water level, 60% of the vertical dimension
6	4.54	CUW	Loss of vision, camera under water
7	44.25	SA	Survey abandoned

PLR:	MH01X	**Upstream Node:**	MH01
Inspection Direction:	Downstream	**Downstream Node:**	LINE X
Inspected Length:	53.71 m	**Dia/Height:**	300 mm
Total Length:	53.71 m	**Material:**	Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH01
2	0.00	WL	Water level, 10% of the vertical dimension
3	0.00	DES	Settled deposits, fine, 25% cross-sectional area loss
4	19.05	JDL	Joint displaced, large
5	19.05	CLJ	Crack, longitudinal at joint at 11 o'clock
6	20.06	WL	Water level, 30% of the vertical dimension
7	26.65	WL	Water level, 20% of the vertical dimension
8	53.71	MHF	Finish node, manhole, reference: LINE X

PLR:	MH02X	**Upstream Node:**	MH02
Inspection Direction:	Downstream	**Downstream Node:**	LINE X
Inspected Length:	6.41 m	**Dia/Height:**	300 mm
Total Length:	6.41 m	**Material:**	Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH02
2	0.00	WL	Water level, 25% of the vertical dimension
3	0.00	DES	Settled deposits, fine, 20% cross-sectional area loss
4	2.72	RFJ	Roots, fine at joint
5	4.54	RTJ	Roots, tap at joint
6	5.44	RMJ	Roots, mass at joint, 80% cross-sectional area loss
7	6.01	OBZ	Other obstacles from 12 o'clock to 12 o'clock, 95% cross-sectional area loss
8	6.41	SA	Survey abandoned

Project Summary

Project Name	Project Number	Project Date
Glen Dimplex Rainhill Taylor Wimpey 2026_01_19		19/01/2026

Pipe Summary

No.	Type	PLR	Upstream Node	Downstream Node	Road	Town	Use	Mat.	Profile	Length
1	SEC	LINE C X	LINE C	MH01	Stoney Lane	Rainhill	S	VC	Circular 300mm	23.09 m
2	SEC	MH01X	MH01	LINE X	Stoney Lane	Rainhill	S	VC	Circular 300mm	10.98 m
3	SEC	MH01X	MH01	LINE X	Stoney Lane	Rainhill	S	VC	Circular 300mm	44.25 m
4	SEC	MH01X	MH01	LINE X	Stoney Lane	Rainhill	S	VC	Circular 300mm	53.71 m
5	SEC	MH02X	MH02	LINE X	Stoney Lane	Rainhill	S	VC	Circular 300mm	6.41 m
									Total:	**138.44 m**

Pipe Levels

No.	PLR	Upstream Node	Upstream C.L.	Upstream I.L.	Upstream I.D.	Downstream Node	Downstream C.L.	Downstream I.L.	Downstream I.D.
1	LINE C X	LINE C			0.000 m	MH01			0.000 m
2	MH01X	MH01			2.730 m	LINE X			0.000 m
3	MH01X	MH01			2.970 m	LINE X			0.000 m
4	MH01X	MH01			2.970 m	LINE X			0.000 m
5	MH02X	MH02			0.000 m	LINE X			0.000 m

Pipe Summary by Profile

Profile		Total Length	No. Pipes
Circular 300mm Circular 300mm Circular 300mm Circular 300mm Circular 300mm		23.09 m 10.98 m 44.25 m 53.71 m 6.41 m	
Circular 300mm	=	138.44 m	5
Total	**=**	**138.44 m**	**5**

Project Summary

Project Name	Project Number	Project Date
Glen Dimplex Rainhill Taylor Wimpey 2026_01_19		19/01/2026

Inspection Summary

Pipe No.	Insp. No.	Upstream Node	Downstream Node	Dir.	Operator	Insp. Date	Insp. Time	Str	Ser	Final Observation	Length
1	1	LINE C	MH01	US	Mike	19/01/2026	9:54	2	2	MHF, BURIED MANHOLE NO LID	23.09 m
2	**1**	**MH01**	**LINE X**	**DS**	**Mike**	**19/01/2026**	**13:08**	**1**	**1**	**SA, UNABLE TO DRIVE ON**	**6.42 m**
3	**1**	**MH01**	**LINE X**	**DS**	**Mike**	**19/01/2026**	**13:20**	**1**	**1**	**SA, UNABLE TO DRIVE ON**	**44.25 m**
4	1	MH01	LINE X	DS	Mike	19/01/2026	14:01	2	4	MHF, MH02 BURIED	53.71 m
5	**1**	**MH02**	**LINE X**	**DS**	**Mike**	**19/01/2026**	**14:15**	**1**	**5**	**SA, ON OBSTRUCTION**	**6.41 m**
										Total:	**133.89 m**

Inspection Summary by Profile

Profile		Total Length	No. Inspections
Circular 300mm		23.09 m	
Circular 300mm		6.42 m	
Circular 300mm		44.25 m	
Circular 300mm		53.71 m	
Circular 300mm		6.41 m	
Circular 300mm	=	133.89 m	5
Total	**=**	**133.89 m**	**5**

Defect Summary

				CCTV Drainage Survey Observation Count																			
				General				Structural Condition									Service Condition						Misc	
Sect. No.	Insp. No.	Upstream Node	Downstream Node	Insp. Length (m)	No. Grade 4/5 Obs.	Survey Abandoned	Camera Under Water	Cracks	Fractures	Broken	Deformed	Collapsed	Holes	Surface Damage	Displaced Joints	Open Joints	Roots	Infiltration	Encrustation	Silt	Grease	Obstruction	Water Level	Line Deviates
1	1	LINE C	MH01	23.1				1															2	
2	**1**	**MH01**	**LINE X**	**6.4**		**1**	**1**																**2**	
3	**1**	**MH01**	**LINE X**	**44.3**		**1**	**1**																**4**	
4	1	MH01	LINE X	53.7	2			1							1					1			3	

Project Summary

Project Name	Project Number	Project Date
Glen Dimplex Rainhill Taylor Wimpey 2026_01_19		19/01/2026

Sect. No.	Insp. No.	Upstream Node	Downstream Node	Insp. Length (m)	No. Grade 4/5 Obs.	Survey Abandoned	Camera Under Water	Cracks	Fractures	Broken	Deformed	Collapsed	Holes	Surface Damage	Displaced Joints	Open Joints	Roots	Infiltration	Encrustation	Silt	Grease	Obstruction	Water Level	Line Deviates
5	1	MH02	LINE X	6.4	4	1											3			1		1	1	
			Total:	133.9	6	3	2	2									3			2		1	12	

Section Inspection - 19/01/2026 - LINE C X

Item No.	Insp. No.	Date:	Time:	Client`s Job Ref	Weather	Pre Cleaned	PLR
1	1	19/01/26	9:54	Not Specified	No Rain Or Snow	Yes	LINE C X

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
MIKE	WM19 HWE	Crawler	Not Specified	Not Specified	Not Specified

Town or Village:	Rainhill	**Inspection Direction:**	Upstream	**Upstream Node:**	LINE C
Road:	Stoney Lane	**Inspected Length:**	23.09 m	**Upstream Pipe Depth:**	
Location:	Property or buildings	**Total Length:**	23.09 m	**Downstream Node:**	MH01
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:	Gravity drain/sewer	**Dia/Height:**	300 mm
Flow Control:	No flow control	**Material:**	Vitrified clay
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Sample condition survey	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:200

Position [m]	Code	Observation	MPEG	Photo	Grade
0.00	MH	Start node, manhole, reference: MH01: US LINE C	00:00:01		
0.00	WL	Water level, 30% of the vertical dimension	00:00:02	LINE C X_57adafd3-bcc7-4d	
8.66	WL	Water level, 10% of the vertical dimension	00:00:43	LINE C X_f88fa237-e03d-49	
22.37	CLJ	Crack, longitudinal at joint at 12 o'clock	00:02:22	LINE C X_7db6fb8c-12cd-48	2 / 2
23.09	MHF	Finish node, manhole, reference: LINE C: BURIED MANHOLE NO LID	00:02:59	LINE C X_8666a43d-26c5-4f	

STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
1	10.0	0.4	10.0	2.0	1	1.0	0.0	1.0	2.0

Section Pictures - 19/01/2026 - LINE C X

Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
1	Upstream	LINE C X		

LINE C X_57adafd3-bcc7-4db4-a8a3-28ff7dcfe964_20260119_095442_119.jpg, 00:00:02, 0.00 m
Water level, 30% of the vertical dimension

LINE C X_f88fa237-e03d-49c1-8590-68f341db64be_20260119_095529_460.jpg, 00:00:43, 8.66 m
Water level, 10% of the vertical dimension

Section Pictures - 19/01/2026 - LINE C X

Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
1	Upstream	LINE C X		

LINE C X_7db6fb8c-12cd-48be-8b0e-f442d7036300_20260119_095712_595.jpg, 00:02:22, 22.37 m
Crack, longitudinal at joint at 12 o'clock

LINE C X_8666a43d-26c5-4f4e-97dc-4a2f0f2416f2_20260119_095818_855.jpg, 00:02:59, 23.09 m
Finish node, manhole, reference: LINE C

Section Inspection - 19/01/2026 - MH01X

Item No.	Insp. No.	Date:	Time:	Client`s Job Ref	Weather	Pre Cleaned	PLR
2	1	19/01/26	13:08	Not Specified	No Rain Or Snow	Yes	MH01X

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
MIKE	WM19 HWE	Crawler	Not Specified	Not Specified	Not Specified

Town or Village:	Rainhill	**Inspection Direction:**	Downstream	**Upstream Node:**	MH01
Road:	Stoney Lane	**Inspected Length:**	6.42 m	**Upstream Pipe Depth:**	2.730 m
Location:	Property or buildings	**Total Length:**	10.98 m	**Downstream Node:**	LINE X
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:	Gravity drain/sewer	**Dia/Height:**	300 mm
Flow Control:	No flow control	**Material:**	Vitrified clay
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Sample condition survey	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:96

Position [m]	Code	Observation	MPEG	Photo	Grade
0.00	MH	Start node, manhole, reference: MH01: DS LINE X	00:00:01		
0.00	WL	Water level, 30% of the vertical dimension	00:00:02	MH01X_bcf6c98a-9338-43f5-bf	
4.78	WL	Water level, 50% of the vertical dimension	00:00:35	MH01X_a2861922-de3a-4279-	
4.78	CUW	Loss of vision, camera under water	00:00:40	MH01X_10fe84f4-7d51-492e-a	
6.42	SA	Survey abandoned: UNABLE TO DRIVE ON	00:03:11	MH01X_f7a9732e-a9c3-4e56-8	
10.98		End of pipe			

STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

Section Pictures - 19/01/2026 - MH01X

Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
2	Downstream	MH01X		

MH01X_bcf6c98a-9338-43f5-bfe3-91e0ac8f9c03_20260119_130820_138.jpg, 00:00:02, 0.00 m
Water level, 30% of the vertical dimension

MH01X_a2861922-de3a-4279-a7d5-328469b86f45_20260119_130915_657.jpg, 00:00:35, 4.78 m
Water level, 50% of the vertical dimension

Section Pictures - 19/01/2026 - MH01X

Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
2	Downstream	MH01X		

MH01X_10fe84f4-7d51-492e-aeff-d90d81f2192a_20260119_130916_879.jpg, 00:00:40, 4.78 m
Loss of vision, camera under water

MH01X_f7a9732e-a9c3-4e56-8df6-43d286b38e27_20260119_131156_100.jpg, 00:03:11, 6.42 m
Survey abandoned

Section Inspection - 19/01/2026 - MH01X

Item No.	Insp. No.	Date:	Time:	Client`s Job Ref	Weather	Pre Cleaned	PLR
3	1	19/01/26	13:20	Not Specified	No Rain Or Snow	Yes	MH01X

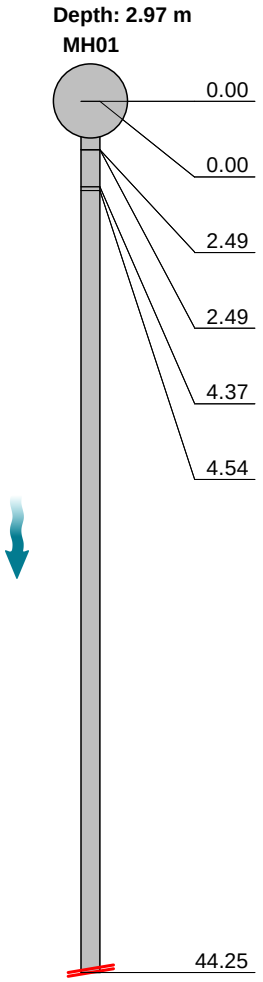
Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
MIKE	WM19 HWE	Crawler	Not Specified	Not Specified	Not Specified

Town or Village:	Rainhill	**Inspection Direction:**	Downstream	**Upstream Node:**	MH01
Road:	Stoney Lane	**Inspected Length:**	44.25 m	**Upstream Pipe Depth:**	2.970 m
Location:	Property or buildings	**Total Length:**	44.25 m	**Downstream Node:**	LINE X
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:	Gravity drain/sewer	**Dia/Height:**	300 mm
Flow Control:	No flow control	**Material:**	Vitrified clay
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Sample condition survey	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:384



Position [m]	Code	Observation	MPEG	Photo	Grade
0.00	MH	Start node, manhole, reference: MH01: DS LINE X	00:00:01		
0.00	WL	Water level, 30% of the vertical dimension	00:00:03	MH01X_71ab1fbf-4e75-4ffe-bb	
2.49	WL	Water level, 5% of the vertical dimension	00:00:29		
2.49	WL	Water level, 50% of the vertical dimension	00:00:33	MH01X_13715f78-5bd9-4a56-	
4.37	WL	Water level, 60% of the vertical dimension	00:01:08	MH01X_1ba77445-b3dd-4fd4-9	
4.54	CUW	Loss of vision, camera under water	00:01:15	MH01X_95bcc429-bc77-4de9-	
44.25	SA	Survey abandoned: UNABLE TO DRIVE ON	00:09:14	MH01X_3f1d14d3-6317-4841-8	

STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

Section Pictures - 19/01/2026 - MH01X

Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
3	Downstream	MH01X		

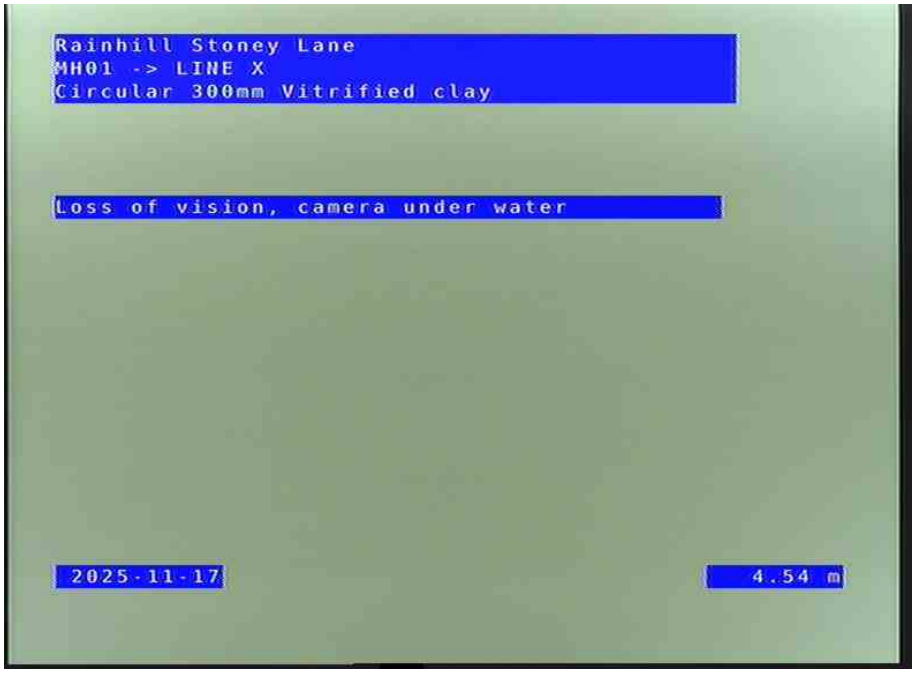
MH01X_71ab1fbf-4e75-4ffe-bba2-05376304bfc9_20260119_132017_195.jpg, 00:00:03, 0.00 m
Water level, 30% of the vertical dimension

MH01X_13715f78-5bd9-4a56-a2e9-c84d27737a7d_20260119_132055_178.jpg, 00:00:33, 2.49 m
Water level, 50% of the vertical dimension

Section Pictures - 19/01/2026 - MH01X

Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
3	Downstream	MH01X		

MH01X_1ba77445-b3dd-4fd4-9dbe-5f53d575da81_20260119_132133_562.jpg, 00:01:08, 4.37 m
Water level, 60% of the vertical dimension



MH01X_95bcc429-bc77-4de9-8b05-05b91f63d2d9_20260119_132142_683.jpg, 00:01:15, 4.54 m
Loss of vision, camera under water

Section Pictures - 19/01/2026 - MH01X

Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
3	Downstream	MH01X		

MH01X_3f1d14d3-6317-4841-8943-2263b8dff14b_20260119_133025_651.jpg, 00:09:14, 44.25 m
Survey abandoned

Section Inspection - 19/01/2026 - MH01X

Item No.	Insp. No.	Date:	Time:	Client`s Job Ref	Weather	Pre Cleaned	PLR
4	1	19/01/26	14:01	Not Specified	No Rain Or Snow	Yes	MH01X

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
MIKE	WM19 HWE	Crawler	Not Specified	Not Specified	Not Specified

Town or Village:	Rainhill	**Inspection Direction:**	Downstream	**Upstream Node:**	MH01
Road:	Stoney Lane	**Inspected Length:**	53.71 m	**Upstream Pipe Depth:**	2.970 m
Location:	Property or buildings	**Total Length:**	53.71 m	**Downstream Node:**	LINE X
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:	Gravity drain/sewer	**Dia/Height:**	300 mm
Flow Control:	No flow control	**Material:**	Vitrified clay
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Sample condition survey	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:466

Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: 2.97 m **MH01**					
0.00	MH	Start node, manhole, reference: MH01: DS LINE X	00:00:01		
0.00	WL	Water level, 10% of the vertical dimension	00:00:02	MH01X_bd9d16c2-5415-4740-	
0.00	DES	Settled deposits, fine, 25% cross-sectional area loss	00:00:02	MH01X_080b0c3a-0308-4986-	4
19.05	JDL	Joint displaced, large	00:02:50	MH01X_ea479d62-2bbf-42a9-b	1 / 4
19.05	CLJ	Crack, longitudinal at joint at 11 o'clock	00:02:54	MH01X_b7e34c03-280c-4d90-	2 / 2
20.06	WL	Water level, 30% of the vertical dimension	00:03:06	MH01X_84118786-2d22-43e2-	
26.65	WL	Water level, 20% of the vertical dimension	00:03:35	MH01X_386a82cc-3660-4a68-	
53.71	MHF	Finish node, manhole, reference: LINE X: MH02 BURIED	00:05:42	MH01X_93f4234a-61f5-4b52-9	
LINE X **Depth: m**					

STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
2	12.0	0.2	12.0	2.0	3	6.0	0.2	11.0	4.0

Section Pictures - 19/01/2026 - MH01X

Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
4	Downstream	MH01X		

MH01X_bd9d16c2-5415-4740-ab56-d94546f50628_20260119_140155_685.jpg, 00:00:02, 0.00 m
Water level, 10% of the vertical dimension

MH01X_080b0c3a-0308-4986-8efd-533696c90ce0_20260119_140156_414.jpg, 00:00:02, 0.00 m
Settled deposits, fine, 25% cross-sectional area loss

Section Pictures - 19/01/2026 - MH01X

Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
4	Downstream	MH01X		

MH01X_ea479d62-2bbf-42a9-b1a2-6b345d5c5c44_20260119_140449_633.jpg, 00:02:50, 19.05 m
Joint displaced, large

MH01X_b7e34c03-280c-4d90-9ca1-0076bd9bbcae_20260119_140458_422.jpg, 00:02:54, 19.05 m
Crack, longitudinal at joint at 11 o'clock

Section Pictures - 19/01/2026 - MH01X

Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
4	Downstream	MH01X		

MH01X_84118786-2d22-43e2-b0b9-6774b3ede572_20260119_140514_190.jpg, 00:03:06, 20.06 m
Water level, 30% of the vertical dimension

MH01X_386a82cc-3660-4a68-99de-1f04f7dca498_20260119_140547_733.jpg, 00:03:35, 26.65 m
Water level, 20% of the vertical dimension

Section Pictures - 19/01/2026 - MH01X

Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
4	Downstream	MH01X		

MH01X_93f4234a-61f5-4b52-9663-c3d31f5c5b66_20260119_140808_995.jpg, 00:05:42, 53.71 m
Finish node, manhole, reference: LINE X

Section Inspection - 19/01/2026 - MH02X

Item No.	Insp. No.	Date:	Time:	Client`s Job Ref	Weather	Pre Cleaned	PLR
5	1	19/01/26	14:15	Not Specified	No Rain Or Snow	Yes	MH02X

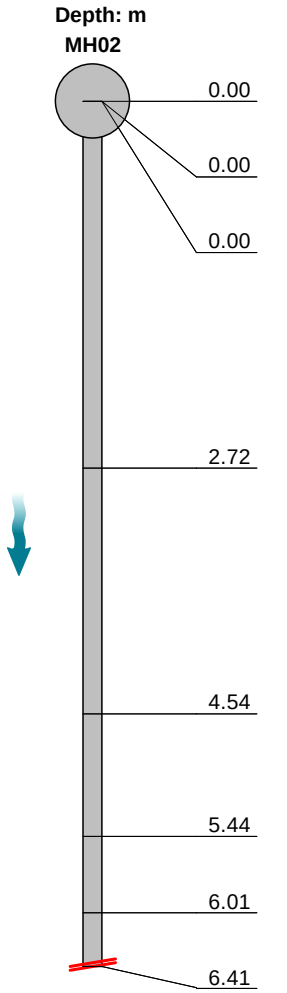
Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
MIKE	WM19 HWE	Crawler	Not Specified	Not Specified	Not Specified

Town or Village:	Rainhill	**Inspection Direction:**	Downstream	**Upstream Node:**	MH02
Road:	Stoney Lane	**Inspected Length:**	6.41 m	**Upstream Pipe Depth:**	
Location:	Property or buildings	**Total Length:**	6.41 m	**Downstream Node:**	LINE X
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:	Gravity drain/sewer	**Dia/Height:**	300 mm
Flow Control:	No flow control	**Material:**	Vitrified clay
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Sample condition survey	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:56



Position [m]	Code	Observation	MPEG	Photo	Grade
0.00	MH	Start node, manhole, reference: MH02: DS LINE X	00:00:01		
0.00	WL	Water level, 25% of the vertical dimension	00:00:01	MH02X_a9557cda-19ca-418c-	
0.00	DES	Settled deposits, fine, 20% cross-sectional area loss	00:00:02	MH02X_93204014-fabc-4ef3-a	4
2.72	RFJ	Roots, fine at joint	00:00:16	MH02X_d926e63d-f3db-4459-	2
4.54	RTJ	Roots, tap at joint	00:00:27	MH02X_01ddac3f-5c0a-46c0-	4
5.44	RMJ	Roots, mass at joint, 80% cross-sectional area loss	00:00:35	MH02X_370b1f8c-6ae8-4d35-	5
6.01	OBZ	Other obstacles from 12 o'clock to 12 o'clock, 95% cross-sectional area loss: LARGE PLASTIC BAG	00:01:06	MH02X_a7f5b8d4-4918-44ad-	5
6.41	SA	Survey abandoned: ON OBSTRUCTION	00:01:27	MH02X_938603b7-4133-4326-	

STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	5	20.0	6.4	41.0	5.0

Section Pictures - 19/01/2026 - MH02X

Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
5	Downstream	MH02X		

MH02X_a9557cda-19ca-418c-aec7-019c10feeb0c_20260119_141512_980.jpg, 00:00:01, 0.00 m
Water level, 25% of the vertical dimension

MH02X_93204014-fabc-4ef3-ae14-25bb8dfaf952_20260119_141513_980.jpg, 00:00:02, 0.00 m
Settled deposits, fine, 20% cross-sectional area loss

Section Pictures - 19/01/2026 - MH02X

Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
5	Downstream	MH02X		

MH02X_d926e63d-f3db-4459-91af-8a63708fae9e_20260119_141529_753.jpg, 00:00:16, 2.72 m
Roots, fine at joint

MH02X_01ddac3f-5c0a-46c0-8bc6-e81d0b398bca_20260119_141545_101.jpg, 00:00:27, 4.54 m
Roots, tap at joint

Section Pictures - 19/01/2026 - MH02X

Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
5	Downstream	MH02X		

MH02X_370b1f8c-6ae8-4d35-a521-1951eb794a05_20260119_141612_968.jpg, 00:00:35, 5.44 m
Roots, mass at joint, 80% cross-sectional area loss

MH02X_a7f5b8d4-4918-44ad-8526-3e1e63966677_20260119_141720_731.jpg, 00:01:06, 6.01 m
Other obstacles from 12 o'clock to 12 o'clock, 95% cross-sectional area loss

Section Pictures - 19/01/2026 - MH02X

Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
5	Downstream	MH02X		

MH02X_938603b7-4133-4326-84bd-bcc5fe21176f_20260119_141801_021.jpg, 00:01:27, 6.41 m
Survey abandoned

PROBED N/
MARKED

BURIED MH
MH BLOCKED
BY LARGE OBJECT
INSIDE MANHOLE

MH01
2.73m

BURIED
MH02

PROBED N/
MARKED

STOPPING ON A LARGE PLASTIC BAG IN LINE

STONEY LANE

NEWBY AVENUE

CARTMEL

ARNSIDE AVENUE

KENDAL DRIVE

KENWICK AVENUE

HEMMINGSWAY

Stoney Lane Industrial Estate

Works

Factory

Laundry

Tank

Warehouse

Sports Centre

Playing Field

El Sub Sta

9602
9603
0601
0604
0605
0608
1601
1602
1501
1502
2501
2802
3601
3501
3503
3502
2407
2406
2402
2401
2403
3403
4403
4401
4402
4405
5401
4301
4302
4303
3301
375 CO
525 CO
450 CO
225 VC
300 VC
750 VC
300 CO
225 VG

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APPENDIX J: EXCEEEDANCE FLOOD FLOW ROUTING PLAN

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Mark	Date	Details	By	Chk
A	17.03.26	First issue	CP	

Drawing Upgraded for: Brixton Notary

BETTS HYDRO CONSULTING ENGINEERS | BETTS ASSOCIATES CHARTERED SURVEYORS | BETTS GEO CONSULTING GEOLOGISTS

Client:

Taylor Wimpey

Project Title:

Glen Dimplex
Stoney Lane

Drawing Title:

Existing Services Layout

Scale: For the original size of A0

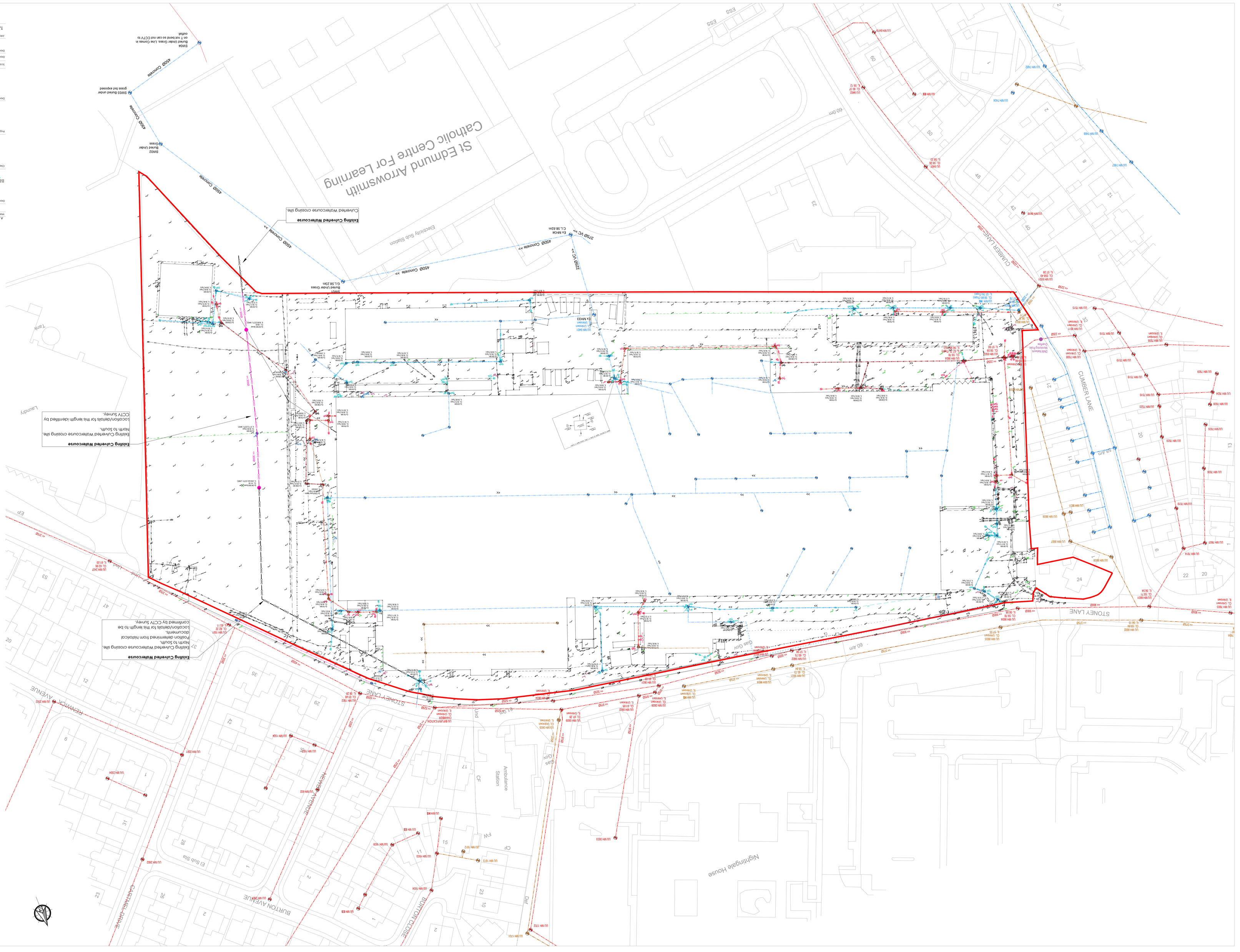
Drawn by: CP | Checked by: | Passed by: | Date: March 2026

Drawing (Title):

Job No	Drawing No	Volume	Level	Type	Class	Status	Number	Revision
TA7143	GDX	BEI	ZZ	XX	DE	C	001	A

Do not scale this drawing

6 -7 Old Aspen Apex, Aspen Road, Sandyford Industrial Estate, Dublin 18, D18 Y2Y7
enquiries@betts-associates.co.ie
Civil/Mr: 01244 288178 | Arboriculture: 01-91 410321



APPENDIX K: NOTES OF LIMITATIONS

The data essentially comprised a study of available documented information from various sources together with discussions with relevant authorities and other interested parties. There may also be circumstances at the site that are not documented. The information reviewed is not exhaustive and has been accepted in good faith as providing representative and true data pertaining to site conditions. If additional information becomes available which might impact our conclusions, we request the opportunity to review the information, reassess the potential concerns and modify our opinion if warranted.

It should be noted that any risks identified in this report are perceived risks based on the available information.

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