FOUL AND SURFACE WATER DRAINAGE STRATEGY

FOR

WOODHEAD ROAD, BROCKHOLES, HONLEY

ON BEHALF OF

MILLER HOMES (YORKSHIRE) LIMITED

ARP ASSOCIATES
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Foul and Surface Water Drainage Strategy for Woodhead Road, Brockholes, Honley 425/58r6b			
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1.0 INTRODUCTION

1.1 Miller Homes (Yorkshire) Limited is proposing to develop a site on land off Woodhead Road, Brockholes, Honley, with residential dwellings. To support the planning application and assist with the appraisal of the site, a Foul and Surface Water Drainage Strategy is required to outline the proposed means of sustainably managing foul effluent and surface water runoff from the development.

1.2 ARP Associates have been appointed to carry out a Foul and Surface Water Drainage Strategy for the development, implement appropriate consultations and prepare a report to satisfy the requirements of the Planning Authority.

1.3 ARP Associates has undertaken previous commissions on this site, and the work included Regulatory Authority consultations, site visits, data assessment and production of Flood Risk Assessments and Geotechnical reports. This information has been utilised in the formation of this current report where appropriate. Additionally, ARP has prepared a recent Flood Risk Assessment for the site, report reference 425/58r5, and this has been drawn from whilst preparing this drainage strategy.

1.4 The regulatory authority consultations and site appraisal for this current assessment were carried out between March and May 2021 and this drainage strategy was submitted thereafter. This update to the report has subsequently been prepared to address comments received from the Regulatory Authorities and the subsequently updated masterplan. The authority's comments are appended to this report.

1.5 The report has been initially prepared for the use and reliance of the Client only. The report shall not be relied upon or transferred to any other parties without the written agreement of ARP Associates. For the avoidance of any doubt, where ARP Associates enters into a letter of reliance for the benefit of a third party, that third party will be permitted to rely on the report. No responsibility will be accepted where this report is used, either in its entirety or in part, by any other party without ARP Associates consent.

1.6 Attention is drawn to the requirements of the Construction Design and Management Regulations 2015, and in particular, the duties and obligations of the Client.

2.0 SITE DESCRIPTION

General

2.1 The site, which is centred on Ordnance Survey Grid Reference 414747, 411145 is located on the land adjacent to Woodhead Road, Brockholes, Honley. The site is just south of Huddersfield and the nearest postcode is HD9 7AH.

2.2 A site location plan is presented in Appendix A.

2.3 The application site is an irregular shaped piece of land and is approximately 8.25ha. The site is greenfield.

Current Use

2.4 The proposed development site comprises arable fields and vegetated areas. No particular farming activities were noted during site investigations.

Boundaries

2.5 The site boundaries are generally formed by dense tree lines, bushes and vegetation. Due to the irregular shaped boundary and the location of an existing access track, Smithy Place, which crosses the site, the proposed development is effectively split into two parcels of land. One parcel is located to the north of Smithy Place which is separated by a dry stone wall and a row of mature trees. To the south, the second parcel is also split into two by a dry stone wall. The boundaries of the site are mainly formed by dry stone walling and several fences.

2.6 The site abuts Woodhead Road along the full extent of the western boundary. The site is considerably lower than the road at this location. A retaining embankment runs along the western boundary, beyond which is Woodhead Road, at a higher level than the site. The site is bisected roughly east-west by Smithy Place which therefore forms part of the site boundaries

in this location, which is towards the south of the site. Smithy Place is partly open to vehicular traffic at the eastern end providing access to residential properties to the east of the site. The remainder of Smithy Place provides pedestrian access along its length, and has a tarmac surface in places with stone track for the remainder. The far southern site boundary is against property boundaries of residential dwellings served from Haggard Lane. This joins with Smithy Place Lane, which forms part of the south eastern boundary, and this in turn joins with Smithy Place, described above.

2.7 The eastern site boundary is formed by an embankment and vegetation surrounding the River Holme with the main residential area of Brockholes beyond. The River Holme is considerably lower than the site itself. The embankment drops sharply down to the river along this boundary. The northern boundary partly follows the outlines of neighbouring commercial and industrial properties, with Allsops sheet metal contractor bordering the north-eastern boundary. A commercial development, PA Welding, bisects part of the northwest of the site but is not within the redline boundary of the site. A dense wooded and vegetated area forms the remainder of the northern boundary between these adjacent commercial properties.

Topography and Vegetation

2.8 The site falls prominently in a north-eastern direction towards the River Holme, with a steep slope down to the river, which is in a deeper cutting. In the southeast corner, the site is approximately 1m to 2m higher than the adjoining land. Along the western boundary, the site is approximately 4m lower than Woodhead Road.

2.9 A copy of the topographical survey information for the site is presented in Appendix B. This survey was originally undertaken in June 2021 and additional areas were surveyed and added during October 2021. It shows that there is significant level difference across the site, falling generally to the northeast, towards the River Holme. Along the western boundary there is a highway retaining wall and embankment where levels rise up approximately four metres to meet Woodhead Road. The highest levels on site are at the southwestern corners, where levels are approximately 137m Above Ordnance Datum (AOD) at the top of this embankment.

Levels in the northwest corner are around 126m AOD. Levels are approximately 129m AOD towards the south east boundary of the site. Along the eastern side of the site, there is an embankment which falls down to the River Holme, with levels along the top of the embankment ranging between approximately 116m AOD – 108m AOD. Measured from southwest to northeast, an indicative existing gradient across the site would be approximately of 1 in 14, with a range of around 25m level difference. The water level in the river on the day of the topographical survey was between approximately 103.9m AOD and 106.3m AOD.

2.10 Vegetation on the site is generally rough grassland. Extensive mature vegetation in the form of bushes, shrubs and mature trees are located along all boundaries. Rows of mature trees also follow the alignment of Smithy Place. Several sporadically located trees are also present within the development.

Hydrology

2.11 The River Holme is present to the east of the site. It is classified as a Main River by the Environment Agency. On the day of the topographical survey, the water level was recorded as being approximately 9m lower than the site at the south eastern site corner of the site. Due to dense vegetation, the topographical survey could not determine levels close to the north-eastern boundary but close to this area the water level was recorded as being approximately 6m lower than the site.

2.12 A small water course was conjectured to be located perpendicular to Woodhead Road in the west of the site. This was shown on the 1892 historical Ordinance Survey Maps. Subsequent intrusive investigation has not found any evidence of any watercourse or culvert, and it has been agreed in principle with the LLFA that there is no evidence of such. This, however, corresponds to an area where abandoned water well is located (also shown on the 1892 maps). This well was located during the intrusive investigation, and was shown to have water flowing from it. Further investigation and descriptions are detailed within a Stage 2 Geo-

Environmental Report prepared by ARP Geotechnical Ltd (reference MLR/07r4, dated March 2021)

Existing Drainage

2.13 The site is greenfield and no formal drainage is currently known of within the site.

2.14 It is likely that surface water currently falling within the development site would infiltrate to some degree, with the remainder of the surface water following the topographical trend and outfalling into the River Holme.

2.15 Yorkshire Water public sewer records (Appendix D) indicate that there are no Yorkshire Water (YW) assets within the site or within Woodhead Road. A 225mm diameter public combined sewer is present in Banks Road to the west of Woodhead Road. There are public sewers serving the properties to the south east of the site within Smithy Place and Smithy Place Lanes, including both combined and surface water sewers. The majority of the flows discharge through a 225mm diameter combined sewer which crosses the River Holme and joins the combined system to the north east of the site and north east of the River Holme. Only properties numbered 6 and 7 Smithy Place Lane are shown to have an alternative outfall, where the public surface water sewer associated with these properties is shown to have a connection into the River Holme.

2.16 The presence of gullies suggests that highway drainage is present within Woodhead Road to the west of the site.

2.17 As part of previous site assessments, historical maps have been reviewed. The historical plans show an open channel, Mill Race, running through the site from a Mill Pond located to the north. Part of this section is still visible on the 1955 plans with the outfall section still showing on modern day plans. An existing well and open section of ditch are shown adjacent to Woodhead Road.

2.18 A historical Mill Race with sluice outfalls into the River Holme along the north-eastern boundary.

3.0 CONSULTATION

Environment Agency

3.1 This report references a number of sets of information relating to consultation with the Environment Agency (EA). An initial consultation was requested from the Environment Agency, and a copy of the response, referenced RFI/2021/212220 and dated 1st July 2021 is included in Appendix C. The EA provided flood model information and various data extracts which are covered in more detail within this report. The EA also provided a consultation response relating to first draft of this report, which was submitted for planning prior to receiving the initial EA consultation. The comprehensive set of comments is included in Appendix C, dated 1st July 2021, and referenced RA/2021/143227/01-L01. Publicly available Environment Agency (EA) data has also been reviewed for reference and extracts from relevant online flood risk mapping is included in Appendix C.

3.2 The Environment Agency flood map for planning show areas of land that could flood from rivers or the sea and are shaded blue. These areas do not take into account defences, as water can overtop them or the defences can fail in extreme conditions. The Zone classifications are:-

3.2.1 Flood Zone 1 - ''Low Probability'' is assessed as having a less than 1 in 1,000 annual probability of river or sea flooding in any year (less than 0.1%).

3.2.2 Flood Zone 2 - ''Medium Probability'' is assessed as having between a 1 in 100 and 1 in 1,000 annual probability of river flooding in any year (1% - 0.1%) and between a 1 in 200 and 1 in 1,000 annual probability of flooding from the sea (0.5% - 0.1%).

3.2.3 Flood Zone 3 - ''High Probability'' is assessed as having a 1 in 100 or greater annual probability of river flooding in any year (greater than 1%) and a 1 in 200

chance or greater annual probability of flooding from the sea (less than 0.5%).

3.3 The Environment Agency flood map shows that the site is within Flood Zone 1.

3.4 The Environment Agency surface water flood map shows areas where surface water only would be expected to flow or pond in England and Wales. The classifications of risk for surface water flooding are as follows:-

3.4.1 Very low - This area has a chance of flooding of less than 1 in 1000 (0.1%) in any given year.

3.4.2 Low - This area has a chance of flooding between 1 in 1000 (0.1%) and 1 in 100 (1%) in any given year.

3.4.3 Medium - This area has a chance of flooding between 1 in 100 (1%) and 1 in 30 (3.3%) in any given year.

3.4.4 High - This area has a chance of flooding greater than 1 in 30 in any given year (annual probability of flooding 3.3%).

3.5 The Environment Agency Risk of Flooding from Surface Water map suggests that the majority of the site is at a 'very low' risk of flooding from surface water. However, a small area of the site to the west of Smithy Place is highlighted as being at 'high' risk of pluvial flooding, and the mapping shows that there is a 'low' risk of pluvial flooding in three narrow bands across the site, following the topographical trend of south to north.

3.6 The Environment Agency's online Flood Risk from Reservoirs map has also been reviewed as part of this study. This mapping shows the expected inundation area should a reservoir fail and release its capacity. Part of the eastern side of the site, closest to the River Holme, is located in an area shown to be at risk of flooding from this source.

Water Authority

3.7 Consultation was undertaken with Yorkshire Water, which is the Water Authority for this area, and a copy of the response, reference X005534 dated 16th April 2021 is presented in Appendix D for reference.

3.8 Yorkshire Water records suggest there are no public sewers within the site. However, it is noted that, due to the change in legislation in October 2011, there may be public sewers within the site boundary which are not recorded on the statutory sewer map, the presence of which should be taken into account in the design of the site.

3.9 It is noted that development of the site should take place with separate systems for foul and surface water drainage. The separate systems should extend to the point of discharge to be agreed.

3.10 It was confirmed that foul water domestic waste from the proposed development can be discharged to the 150 / 225mm diameter public combined sewer recorded in Smithy Place or Smithy Place Lane. The pumped rate should not exceed 5 (five) litres / second.

3.11 It is understood that surface water will discharge to the River Holme located to the east of the site. The Water Authority confirmed that this appears to be the obvious place for surface water disposal (if SuDS are not viable) and while they have no objection to this they cannot agree the rate as it is not discharging to a Yorkshire Water asset.

3.12 Yorkshire Water note that further restrictions on surface water disposal from the site may be imposed by other parties. The Water Authority strongly advise the Developer to seek advice/comments from the Environment Agency/Land Drainage Authority/Internal Drainage Board, with regard to surface water disposal from the site.

Lead Local Flood Authority

3.13 Consultation with Kirklees Council, which is the Lead Local Flood Authority (LLFA) for this area, has been undertaken. A copy of the response received, dated 28th April 2021 is presented in Appendix E for reference.

3.14 Within the response, the LLFA advised there are earlier applications on the Kirklees Planning Applications web site which include detailed negotiations on flood routing in particular. It was noted there is a watercourse/land drainage system that has been identified on site which will need to be incorporated into the layout and will be a constraint.

3.15 In terms of surface water attenuation, if the 1 in 100 year event is stored then the LLFA policy is a requirement for a 30% climate change allowance to be considered. No urban creep allowance is required when storing the 1 in 100 year event below ground.

3.16 The LLFA confirmed greenfield rates are set at 5l/s/ha for the developable area. They stipulated that there was to be strictly no double counting of landscaped areas to remain around the fringes of the built area, or gardens falling away from the main development. If retaining walls are proposed with drainage behind them that landscaping and gardens need to be removed out of the equation.

3.17 The LLFA advised that the design will likely need some perimeter drainage and to pick up the watercourse in a separate drain with a separate outfall.

3.18 The exact discharge rate cannot be confirmed until a drawing demonstrating the developable area is provided for the LLFA to scrutinise.

3.19 It was also stated that the LLFA would seek clarification that the southern parcel can drain by gravity to the main site.

3.20 The LLFA provided further consultation following the initial planning application, and a copy of their response, dated 12th July 2021, is included in Appendix E. A summary of the comments is provided below:

3.20.1 The surface water flood risk maps (3rd generation 1 in 100 and 1 in 1000 events) should be superimposed over the layout maps, to clearly identify the risk involved rather than rely on narrative.

3.20.2 All photographs of the watercourse entering the site from under Woodhead Road, including discovered troughs etc., previously submitted, should be packaged together in updated Flood Risk Assessment. The location should be clearly shown on a plan. A discussion with the LLFA should then take place.

3.20.3 All flood routing, from road and field run off entering the site (including the new entrance) should be followed through avoiding property and curtilage, utilising the road network and public open space.

3.20.4 An exceedance event affecting the attenuation should be examined although the LLFA do not foresee a problem with this aspect.

3.20.5 Contours for roads indicate that area around various properties will be problematic. A discussion with the LLFA prior to resubmission is advised (plots 115, 26, 95, 37, 69 and 70 are examples of further analysis including the effects of road humps. High and low spots should be clearly identified).

3.20.6 The EA will need to comment on flood risk from the river Holme and the former mill race.

3.20.7 A more detailed assessment of built area, not double counting landscaped areas falling away from mains drainage was requested at pre-app to justify and agree final discharge rates. The applicant is reminded that although infiltration is not advisable on this site, SUDS as treatment for water quality should be assessed given that SUDS can now be adopted by the Statutory Undertaker.

4.0 CLIMATE CHANGE

4.1 NPPF requires that the projected impacts of climate change are taken into account over the lifetime of a development. The NPPF and PPG have indicated that the Global sea level will continue to rise, depending on greenhouse gas emissions, and the sensitivity of the climate system and there will be an increase in river flows and rainfall across the country. United Kingdom climate change guidance was most recently revised in October 2021. Recommended allowances for assessment are set out in Environment Agency publication 'Flood risk assessments: climate change allowances'.

4.2 In accordance with the revised climate change data, the published figures show that for an expected development life of greater than 50 years, the anticipated increase in rainfall intensity could range from 20% to 40%, subject to the location within the country.

4.3 At this stage the outline surface water drainage strategy (discussed further below) has been defined with respect to a 30% allowance, as per the requirements of the LLFA.

5.0 DEVELOPMENT PROPOSALS

5.1 The development proposals for the site are for the construction of residential units with associated access roads and landscaping areas. The current proposal is for 137 properties. The indicative development proposals are illustrated in the Proposed Site Plan in Appendix F.

6.0 SURFACE WATER DRAINAGE

6.1 It is a requirement of the NPPF to ensure that surface water run-off from any proposed development has negligible consequence on downstream areas, either in terms of impact upon downstream sewer capacity or flood risk impacts due to discharge to a watercourse. The existing and proposed surface water run-off regime is considered below.

Existing Surface Water Run-off

6.2 As set out above the land is arable and appears broadly unused with no known formal drainage system in place.

6.3 The site would be considered to be 'greenfield'. Surface water falling on the site in the existing scenario would be expected to discharge from the site at a greenfield rate. Whilst some of the surface water would be likely to infiltrate to a degree, ultimately the run off would be expected to migrate to the lowest parts of the site. Therefore, it is considered that in the existing scenario surface water falling on the site discharges to the River Holme at greenfield run-off rate.

6.4 For the purpose of defining an appropriate rate of discharge from the proposed drainage system, the LLFA have agreed to the principle of utilising 5l/s/ha of developable area.

6.4 An assessment has been undertaken to determine the developable area of the existing site. There are existing topographical constraints such as steep banking along the northern boundary and existing earth retaining the highway along much of the southern boundary. Dense vegetation is present across parts of the boundaries as discussed in section 2 of this report, and a track bisects the site. Due to these factors, the site is assessed as having approximately 4.99ha net developable area. A plan showing the assessment is presented in Appendix G.

Proposed Surface Water Runoff Destination

6.5 The proposed means of managing surface water runoff from the proposed development has been considered with respect to the hierarchy set out in Building Regulations Part H (2010).

6.6 Infiltration – As part of the ARP Geotechnical Ltd Stage 2 Geo-Environmental Report (reference MLR/07r4, dated March 2021), percolation testing was carried out on the site. In light of unfavourable results, the report advises that the use of soakaways is not considered to be feasible.

6.8 Watercourse – As infiltration is unfeasible, discharge to a watercourse is considered to be the next option. As set out in Section 2, there is the River Holme is located to the east of the site. This is considered to be the most practical location for surface water discharge and is agreed in principle with the LLFA and Water Authority. The Environment Agency has specific requirements to allow a future connection into the River Holme. The introduction of any headwalls or works to the river will need the consent of the Environment Agency. It is expected that there will also be a requirement for a 9m strip to be provided from the top of the river embankment of the watercourse where no development can take place in order to allow for future improvements or maintenance.

6.9 Sewers - On the basis that surface water is proposed to be discharged to the River Holme, discharge to sewer does not need to be considered. However, foul water is proposed to discharge to the public sewer network.

Proposed Surface Water Drainage

6.10 The suggested drainage strategy arrangement is indicated on ARP Associates Drainage Strategy drawings, reference 0425-58-03.01 and 02 Section 104 Layouts Sheet 01 and 02. As discussed above, it is expected that discharging surface water to the River Holme will be the most appropriate measure for discharging proposed surface water. The 8.25ha site is not considered to be fully developable due to topographical constraints and existing vegetation. The net developable area has been assessed as 4.99ha. Therefore, the suggested discharge rate for this development is 25l/s. It is anticipated that flow restriction would need to be achieved using a vortex flow control device.

6.11 The proposed development layout has been assessed as having a proposed impermeable area of 2.67ha, as shown on ARP Associates Drainage Strategy drawings, reference 0425-58-09.01 and 02 Impermeable Area Plan Sheets 01 and 02. At this stage this is considered an appropriate estimate as the proposed development plan is likely to change through the detailed design process.

6.12 The proposed surface water system should be designed to accommodate a 1 in 30 year storm event without flooding and, to accord with the requirements of the LLFA, the drainage system will need to accommodate the 1 in 100 year plus 30% climate change allowance event without causing flooding of property or third-party land.

6.13 Restricting the discharge rate to no greater than 25l/s will require on-site storage to be provided for a 1 in 100 year plus 30% climate change event. It is envisaged that this volume will be accommodated on site by means of underground storage. The proposed arrangement and indicative attenuation tank size and volume requirements are demonstrated on ARP Associates S104 layout drawings, reference 425/58/03.01 and 03.02.

6.14 Detailed calculations and proposals will need to be prepared and submitted to the Planning Authority for approval prior to construction.

6.15 Assessment of levels indicates that surface water can most likely be discharged to the River by means of a gravity connection.

6.16 The strategy above is subject to agreement with the Regulatory Authorities.

Exceedance Flow Routes

6.17 For rainfall events in excess of the design standard (i.e. greater than 1 in 100 year plus climate change event) the capacity of the drainage system is likely to be exceeded. There also remains a residual risk of flows leaving the surface water drainage system in the event of a blockage.

Additionally, as detailed earlier in this report, an existing surface water flow path has been identified in the northern part of the site.

6.18 So that exceedance flows do not adversely affect properties on or off site, site levels should be designed to direct flows away from the building entrances where possible, so that any flooding remains in landscaped areas, car parking areas, or roads, where the consequences of surface water flooding would be less significant.

6.19 Exceedance flow routes will be reviewed as part of the detailed drainage and levels design, with details provided to the LLFA for review. Consensus has been agreed with the LLFA that the groundwater and subsequent surface water will be best managed through detailed design of external works and exceedance flow routing, such that the water will be able to continue to flow through the site in a specific and controlled manner. A cut off/ filter drain is proposed to intercept flow and convey the water through the site to outfall into the River Holme, and this arrangement is indicated on ARP Associates exceedance flow design drawings, shown on 0425-58-10.01 and 02 Flood Exceedance Route Sheets 01 and 02.

Sustainable Drainage Systems (SuDS)

6.20 NPPF requires that SuDS are implemented in 'major development', if feasible, and it is considered good practice to introduce such methods if possible during residential development. It must be recognised that not all types of SuDS are feasible or appropriate for all development sites, with factors such as available space, ground conditions, and site gradient influencing the feasibility of their use.

6.21 As noted above, infiltration drainage systems are considered unlikely to be suitable for the site. However, SuDS in the form of attenuation of surface water flows within an underground storage tank and regulating the surface water discharge rate are proposed as part of the drainage strategy.

6.22 It is envisaged that it may be feasible to utilise further SuDS components within the surface water drainage network, but the proposals for these will be confirmed at the detailed design stage.

7.0 FOUL DRAINAGE

7.1 This section sets out the proposed means of managing foul discharge from the development.

7.2 Yorkshire Water has advised that foul water domestic waste from the proposed development should be discharged to the 150 / 225mm diameter public combined sewer recorded in Smithy Place or Smithy Place Lane. The water authority require that if pumping is required, the pumped rate should not exceed 5 (five) litres / second.

7.3 The current foul water design prepared by ARP Associates has foul water from dwellings north of Smithy Place draining by gravity northwards to a low point close to the attenuation tank. A pump station is required, and this drainage is pumped towards the south. At a point south of Smithy Place, the pumped system outfalls into a further proposed gravity system. This in turn ultimately discharges by gravity into the existing public sewer system in Smithy Place Lane, at a point to the south east of the site.

7.4 The strategy is subject to agreement with the Regulatory Authorities.

8.0 MAINTENANCE

8.1 There is a residual risk of flooding from drainage systems in the event of siltation or a blockage occurring. It is therefore essential that drainage systems are subject to periodic inspection and maintenance, so that the design standard is not compromised, and to reduce the risk of blockage.

8.2 The inspection and maintenance of any drainage infrastructure serving a single property, and located within the curtilage of that property, will remain the responsibility of the relevant property owner.

8.3 Responsibility for the ongoing inspection and maintenance of the remainder of the drainage systems will be confirmed following detailed design. It may be feasible for some parts of the drainage system to be adopted by Yorkshire Water. Where drainage remains unadopted, it is envisaged that the responsibility for ongoing inspection and maintenance of the remainder of the drainage systems will be assigned by the developer to appropriate individual property owners, or an appropriate group of property owners, through specific clauses in individual property deeds. Alternatively, the ongoing inspection and maintenance may remain the responsibility of the site/building owner or to be transferred to an appropriate Management Company.

8.4 An appropriate inspection and maintenance plan will be developed prior to building occupation, and implemented thereafter by responsible party, using suitably qualified professionals. The plan shall be agreed with the LLFA.

9.0 SUMMARY

9.1 The principles of a sustainable surface water management strategy for the proposed development are outlined within the report. Infiltration techniques are unfeasible on this particular site, and direct connection to the River Holme is proposed.

9.2 The surface water discharge will be attenuated to a maximum rate of 25l/s, subject to agreement with the relevant authorities. Storage will be provided in an attenuation tank, to manage surface water up to the 1 in 100 year plus climate change event before discharge to the river. A 30% increase in rainfall intensity has been incorporated into the proposals to account for the projected impacts of climate change.

9.3 Preliminary assessment of levels indicates that surface water can most likely be discharged to the river by means of a gravity connection.

9.4 Exceedance flow routes should be reviewed at the detailed design stage to mitigate any potential adverse off-site impacts.

9.5 Yorkshire Water has advised that foul water domestic waste from the proposed development should be discharged to the 150/225mm diameter public combined sewer recorded in Smithy Place or Smithy Place Lane. Pumping is required for part of the system and the water authority require that the pumped rate should not exceed 5 (five) litres / second. The foul water drainage has been designed to outfall into Smithy Place Lane at a point to the southeast of the site.

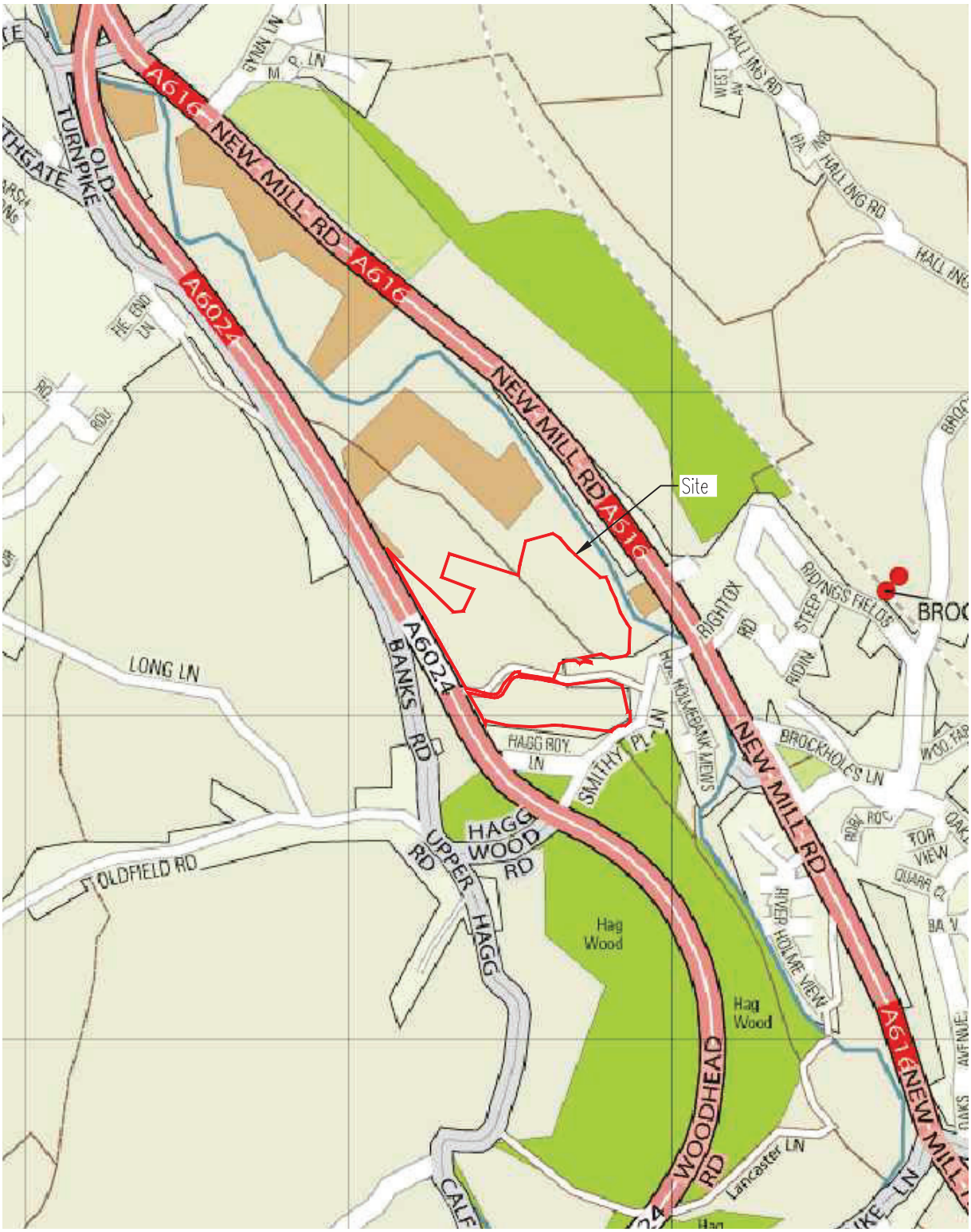
9.6 Suitable maintenance regimes will be required for proposed drainage infrastructure. Details of maintenance plans will be confirmed and agreed at the detailed design stage.

9.7 The findings of this report are subject to the approval of the Regulatory Authorities. The detailed design and calculations shall be submitted to the Planning Authority for approval prior to construction on the development site.

9.8 Subject to compliance with the above, the proposed development can satisfy the requirements of the National Planning Policy Framework and the Planning Practice Guidance in relation to surface water management and foul drainage.

APPENDIX A

SITE LOCATION PLAN



GRID REFERENCE: 414747, 411145

Rev	By	Date	Amendment	Chk
/	PSC	21.05.21	Issued for information	MI

Title

SITE LOCATION PLAN

Project/Client

WOODHEAD ROAD, BROCKHOLES
MILLER HOMES (YORKSHIRE) LTD

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Scale	Drawn
1:10,000 @ A4	PSC
Date	**Chk.**
MAY 21	MI

Drg. No.	Rev
425/58/NA	-

APPENDIX B

TOPOGRAPHICAL SURVEY



Haycock+Todd

Land Survey Consultants Architectural Surveyors

The Hollies, 43 Church Street, Royston, Barnsley, S71 4QU. Tel:01226 709630
Email:info@haycock-todd.co.uk Web:haycock-todd.co.uk

Site Survey

Woodhead Road,
Honley.
HD9 6PR

Sheet 1 of 1	Surveyed by RF
Datum	Drawn by RF
GRID - Related to Ordnance Survey using GPS observation on Station 115, Otherwise at OS Grid North	Date of Survey Original June 2021 Revised October 2021
	Scale 1/200
LOCAL - Related to Ordnance Survey by correction to the OS Active Network by GPS	Survey Job No. S10125 Original S10006

LEGEND

Access cover Plan	CP	Point Level	O.S.datum
Air Valve	AV	100000 Spot & Level	100.000
Cable Post	CP	100000 Spot & Level	100.000
Catchpit	CP	100000 Spot & Level	100.000
Centre Line	CL	100000 Spot & Level	100.000
Centre Line Pole	CLP	100000 Spot & Level	100.000
Double Gates	DG	Spot Level to Kerb	100.000
Electricity Cabinet	EC	100000 Spot & Level	100.000
Fence	F	100000 Spot & Level	100.000
Flood Light	FL	100000 Spot & Level	100.000
Gas Valve	GV	100000 Spot & Level	100.000
Hedge	H	100000 Spot & Level	100.000
Inspection Chamber	IC	100000 Spot & Level	100.000
Manhole	MH	100000 Spot & Level	100.000
Overhead Wires	OHW	Spot Level	100.000

SURVEY STATIONS

100	100.000	100.000
101	100.000	100.000
102	100.000	100.000
103	100.000	100.000
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200	100.000	100.000

APPENDIX C

ENVIRONMENT AGENCY CONSULTATION

Flood map for planning

Your reference	Location (easting/northing)	Created
425/58	**414771/411141**	**20 May 2021 21:38**

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

This means:

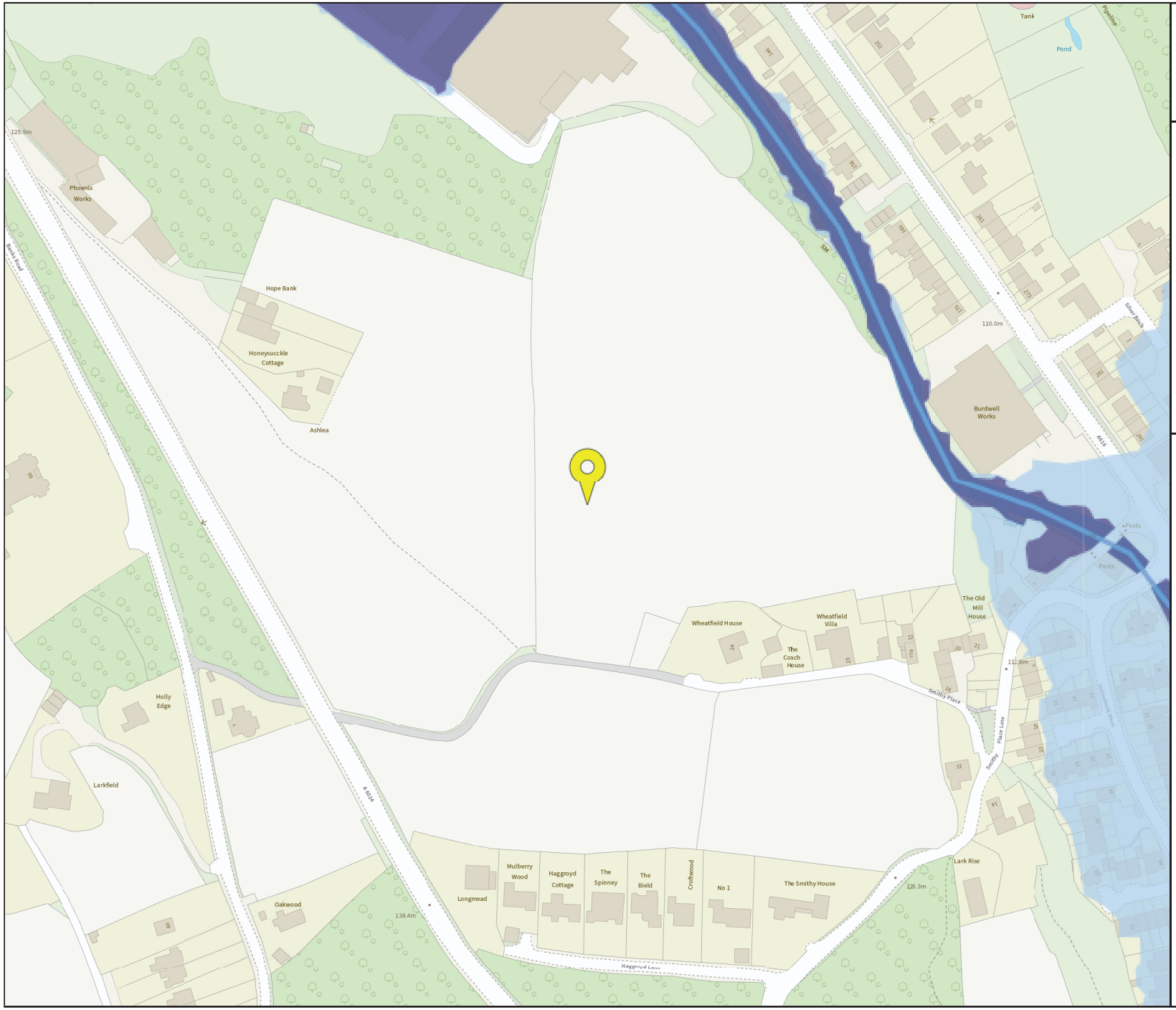
- you don't need to do a flood risk assessment if your development is smaller than 1 hectare and not affected by other sources of flooding
- you may need to do a flood risk assessment if your development is larger than 1 hectare or affected by other sources of flooding or in an area with critical drainage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

Notes

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

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

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



Environment Agency

Flood map for planning

Your reference
425/58

Location (easting/northing)
414771/411141

Scale
1:2500

Created
20 May 2021 21:38

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

0 20 40 60m

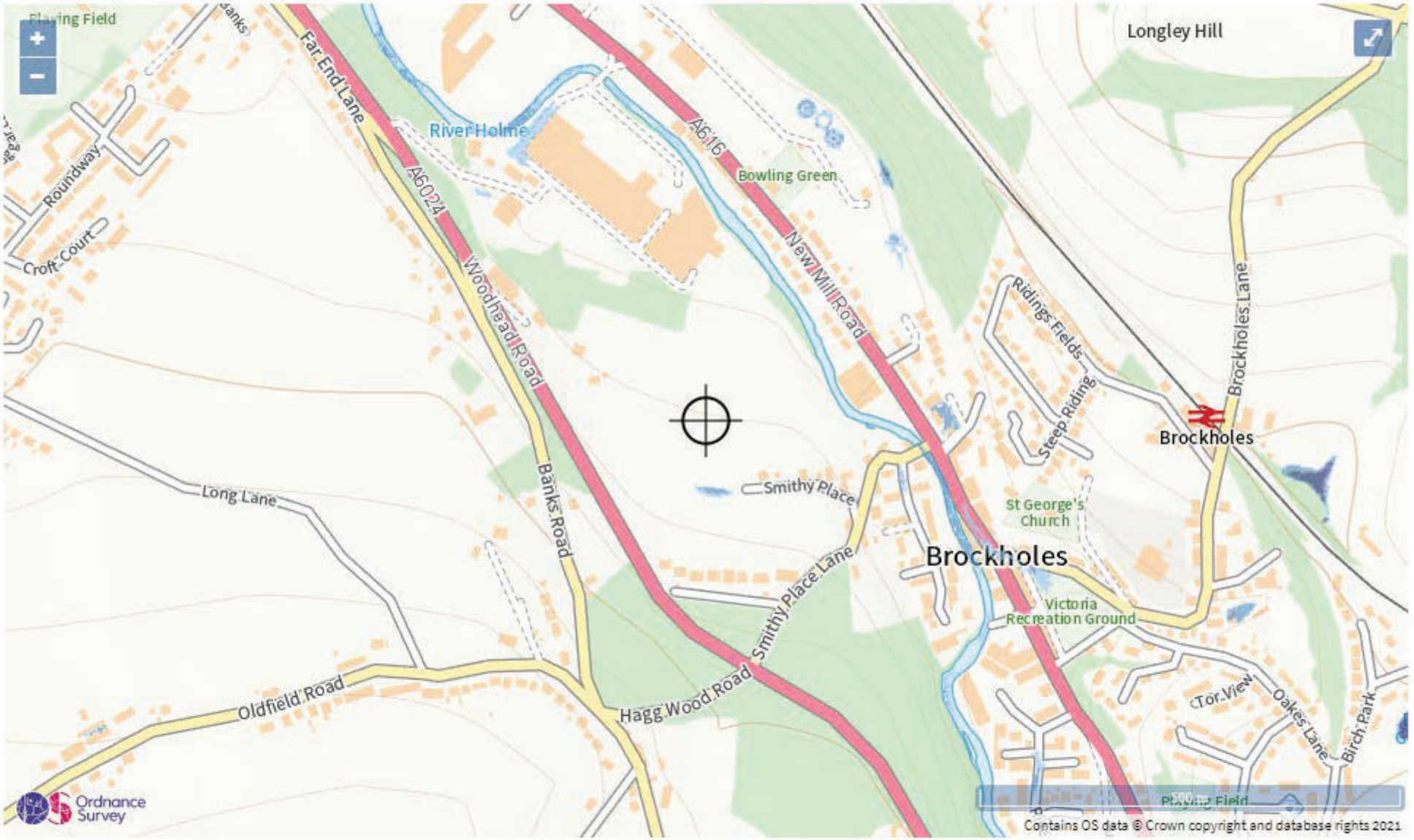
© Environment Agency copyright and / or database rights 2021. All rights reserved. © Crown Copyright and database right 2021. Ordnance Survey licence number 100024198.

Flood risk

High risk: depth

Location

Enter a place or postcode



Surface water flood risk: water depth in a high risk scenario

Flood depth (millimetres)

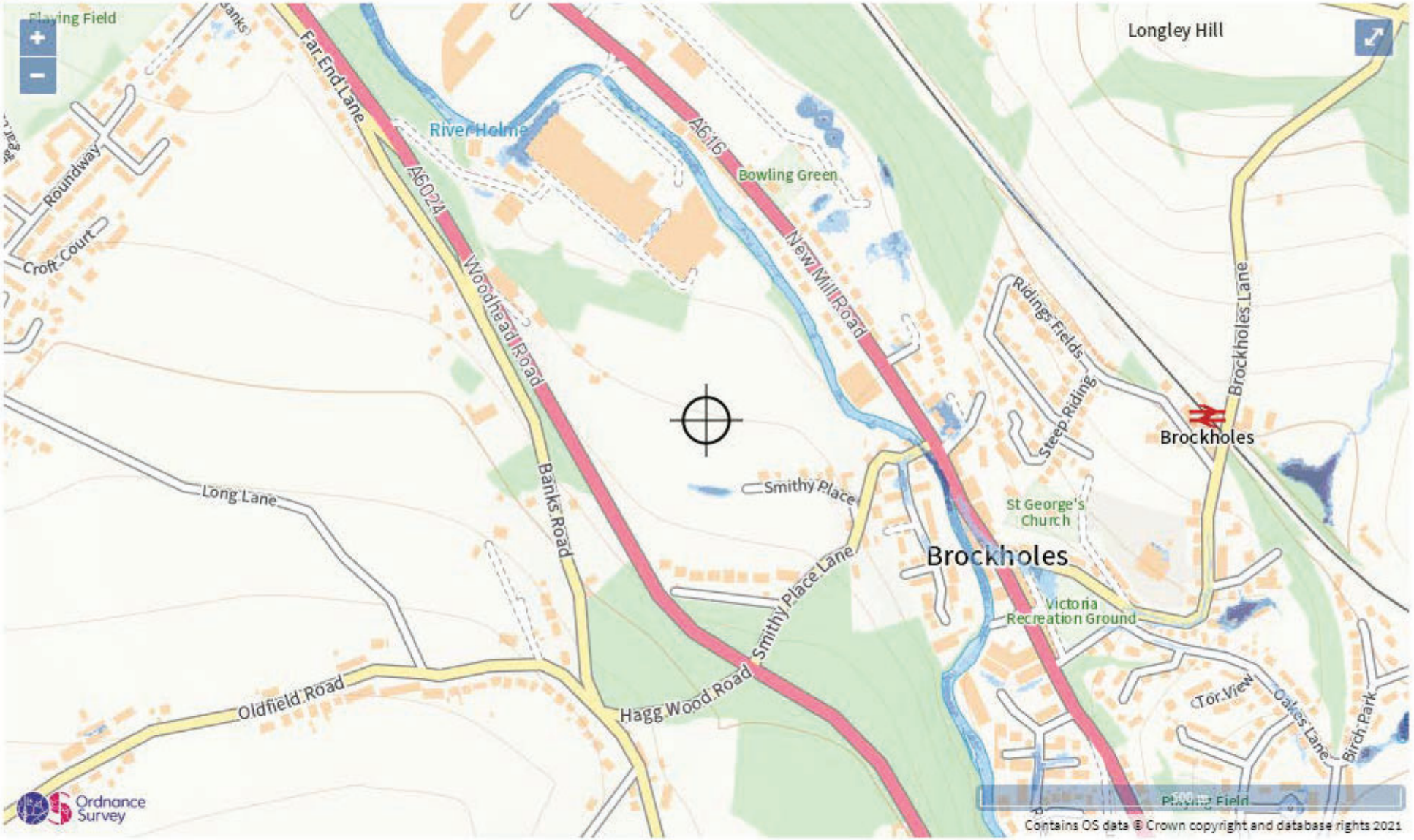
Over 900mm | 300 to 900mm | Below 300mm | Location you selected

Flood risk

Medium risk: depth

Location

Enter a place or postcode



Surface water flood risk: water depth in a medium risk scenario

Flood depth (millimetres)

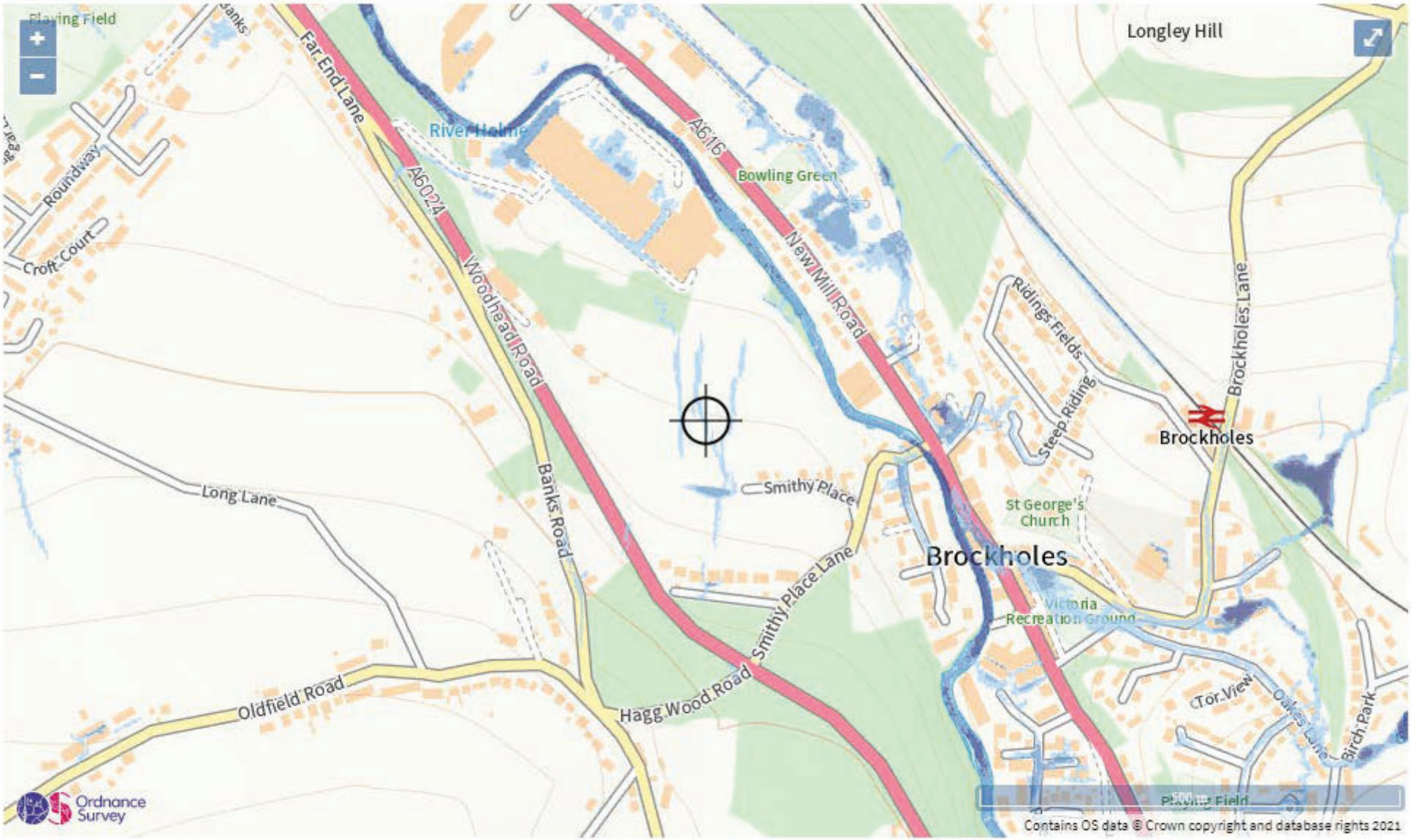
Over 900mm | 300 to 900mm | Below 300mm | Location you selected

Flood risk

Low risk: depth

Location

Enter a place or postcode



Surface water flood risk: water depth in a low risk scenario

Flood depth (millimetres)

Over 900mm | 300 to 900mm | Below 300mm | Location you selected

Flood risk

Extent of flooding

Location

Enter a place or postcode



Extent of flooding from reservoirs

Maximum extent of flooding Location you selected



Planning advice for developers – FAQs

Introduction

Local planning authorities (LPAs) across Yorkshire are required to consult us on certain planning applications which affect flood risk, groundwater, waste, or water quality.

If your development falls into one of these categories, we'll be invited to comment on your planning application. Your LPA, when considering your application, will take our comments into account.

We've produced this guidance to summarise the environmental issues we're responsible for. The guidance forms part of our free advice service; if you require site-specific or face-to-face advice, we'll need to recover our costs through our charged advice service. Engaging with us early can help you identify the big issues, reduce the chances of subsequent delays and help you design a more sustainable and attractive development.

Development and flood risk

Is my development proposal at risk of flooding?

The flood map for planning shows where flooding from rivers and the sea may occur. Whilst this map isn't suitable for a detailed flood risk assessment, it'll show which flood zone your development is located within and therefore will indicate whether further assessment is needed. You should also refer to your LPA's strategic flood risk assessment which will provide additional local information on flood risk, including the location of functional floodplain and areas which are susceptible to other sources of flooding such as from surface water or reservoirs.

Will my application need to pass the sequential and exception tests?

Local planning authorities apply the sequential test to steer development towards areas at the lowest risk of flooding. If your proposal is located within flood zones 2 or 3, you should contact your LPA to discuss the sequential test **before** submitting your application. The LPA may require you to submit information with your application in support of the sequential test.

If the LPA confirm that the sequential test has ruled out steering the development to lower risk sites, the development may also need to pass the exception test by demonstrating that its sustainability benefits outweigh flood risk and that it can be made safe for its lifetime, through the production of a site-specific flood risk assessment. Planning practice guidance advises when an exception test will be required, which will depend on the vulnerability of the development and the flood zone it lies within.

Do I need to submit a flood risk assessment with my planning application?

You'll need to submit a flood risk assessment if your application lies within flood zones 2 or 3 or is over 1 hectare within flood zone 1. You'll also need to submit an assessment if your proposal could be affected by sources of flooding other than from rivers or the sea. For certain lower risk applications, we've provided 'flood risk standing advice' which enables local planning authorities to assess flood risk assessments without the need to consult us.

What information should I include in my flood risk assessment?

We recommend that you refer to the checklist for a site-specific flood risk assessment for detailed advice on what to include in your flood risk assessment. Alongside referring to your LPA's strategic flood risk assessment, you should contact your LPA to find out whether there are any development guidelines which are specific to your locality.

Can I undertake my own flood risk assessment?

Your FRA must be appropriate to the scale, nature and location of the development whilst being credible and fit-for-purpose. Whilst it's possible to undertake your own assessment, most applicants employ suitably experienced professionals. We're not able to recommend specific consultants, but a simple web search should help you source a competent individual or company.

Do I need to consider how climate change will affect my proposal's flood risk?

Yes, you should demonstrate how flood risk will be managed now and over the development's lifetime, taking climate change into account. Please refer to the following guidance when undertaking your flood risk assessment. In some cases we'll hold the climate change flood data you need. In others you'll need to undertake your own analysis to understand the impacts.

Where can I get modelled or historic flood levels from?

Email our Customers and Engagement team (neyorkshire@environment-agency.gov.uk) to find out whether we have any modelled or historic flood levels available for your development site. A list of the packages of information we're able to provide can be found under the 'get information to complete an assessment' section of the planning practice guidance. They'll aim to provide this information within 20 days. We no longer charge for providing this information.

The risk portrayed by your flood map doesn't seem to reflect the site's actual risk. How do I 'challenge' your flood map?

If you have evidence suggesting that our flood map is inaccurate, please contact our Customers and Engagement team (neyorkshire@environment-agency.gov.uk) who will provide you with any existing data we hold. To formally contest our flood zones, you'll need to submit supporting evidence, such as digital copies of a topographic survey or modelling for quality assurance purposes. Digital files of the proposed new flood zones in ArcMap or MapInfo format should also be supplied. Any new outline data you submit must conform to our flood zones policy, copies of which are available on request.

Whilst we'll usually be happy to review any topographical survey or model prior to the application being submitted, we would have to recover our costs for this work. In some cases where work to review and update our existing models is already underway, we may decline to consider a challenge.

As we have to be certain that the data which informs our flood map is fit-for-purpose, any revisions will need to meet stringent quality checks.

SURFACE WATER AND DRAINAGE

Who's responsible for managing surface water?

Lead local flood authorities are responsible for providing advice on the management of surface water resulting from new major development. Internal drainage boards, where established, have permissive powers to manage water levels within their drainage districts, so also play a key role in managing surface water.

Will I need to provide surface water storage and limit the discharge rate?

You should contact your lead local flood authority to discuss surface water discharge rates and storage requirements. Typically, they'll ask that your development does not increase run-off and limits the discharge to the existing greenfield run-off rate (usually 1.4l/s/ha if not calculated).

Do I need to install sustainable drainage systems?

Sustainable Drainage Systems (SuDS) should always be carefully considered in discussion with your lead local flood authority. A SuDS scheme can reduce flood risk, improve water quality, create better habitats for wildlife, and produce pleasant, more amenable places for people.

Infiltration drainage must not, however, pose a risk to groundwater quality. All infiltration SuDS must:

- Meet the groundwater protection criteria set out on GOV.UK
- Not be constructed in ground affected by contamination

Who should I contact about connecting my development to the mains sewer?

Talk to your water company about connecting to their sewerage system. Here are some contact details for water companies operating in the Yorkshire Environment Agency area:

Yorkshire Water	planningconsultation@yorkshirewater.co.uk
Northumbrian Water	developmentenquiries@nwl.co.uk
Severn Trent Water	new.connections@severntrent.co.uk

My development is a long way from the mains sewer. Can I install a 'non-mains' drainage system, such as a package treatment plant?

New development should connect to the public mains sewer wherever possible. Individual treatment plants can deteriorate local water quality and are more challenging to monitor and regulate. If you can't connect to the mains sewer, your planning submission should outline how you will deal with foul drainage discharge. You should include evidence as to why it is not possible to connect to the mains system, including details of any prohibitive costs. Please note that some 'non-mains' foul water drainage systems will require an environmental permit, irrespective of any planning approval.

OTHER ENVIRONMENTAL CONSIDERATIONS

What other environmental issues will you consider with my planning application?

Your planning application will need to demonstrate that any environmental risks can be managed, through design and construction, for the development's lifetime. Alongside flood risk, the key environmental risks we'll consider are:

- **Land Contamination**
  We're mainly interested in those sites where there is a risk of pollution to controlled waters. You should investigate any contamination to see whether the environmental risk or cost of clean-up (remediation) would hinder your proposal. If contamination is known or suspected, a desktop study, investigation, remediation and other works may be required to enable safe development. Our model procedures for the management of land contamination provide further information.

- **Pollution prevention**
  Your application should demonstrate how you'll minimise the risk of pollution from all aspects of your development, including construction and

operation phases. Groundwater can be vulnerable to pollution, as well as rivers and streams. Some areas (source protection zones and aquifers) are especially sensitive to pollutants as they typically supply public drinking water. To find out whether your development is located in an area sensitive to groundwater pollution, visit our interactive maps. Advice on groundwater protection can be found on GOV.UK

- **Fisheries, biodiversity, geomorphology and protected species**
  If your proposal is likely to affect the ecology of a main river, you'll need to carry out a risk assessment. This assessment should show that your development can proceed without demonstrable harm, and should propose mitigation, compensation or enhancements where required. A survey should be carried out if any protected species are thought to be nearby. If this survey confirms the presence of protected species or their habitat, measures should be taken to manage the development's risks. Natural England are the statutory consultee for other biodiversity-related matters. Further information on their remit can be found on GOV.UK

- **Water framework directive**
  If your proposal affects ground or surface waterbodies, you'll need to consider the Water Framework Directive (WFD) and the actions set out in the Humber River Basin Management Plan. You'll also need to submit a WFD Assessment demonstrating how the development will prevent deterioration and improve the waterbody's ecological status.

- **River buffer zone**
  Your development should ensure that an 8m strip of land (planted with locally appropriate, native species) is left undisturbed next to the bank of any main river. This 'river corridor' will improve habitat connectivity and will ensure we're able to access the bank for any future flood defence construction and maintenance.

- **Culverting**
  We're opposed to culverting. Culverts degrade watercourses' ecology and prevent the movement of wildlife and fish. As culverts can easily become blocked, they increase flood risk. They're also difficult to inspect and maintain. We may object to any planning applications involving culverting on a main river and may refuse to grant an environmental permit. Existing culverts should be removed and the river channel and bankside habitat reinstated to restore the ecological continuity of the river channel and its corridor.

Will I need any other Environment Agency permits for my development?

You might need an environmental permit if your development manages or produces waste or emissions that pollute the air, water or land or is work that affects a main river or a sea defence. The lead local flood authority is responsible for any consents relating to ordinary watercourses.

The Environmental Permitting Regulations (England and Wales) 2015 cover water discharges, groundwater activities, flood risk activities, radioactive substances, waste, mining waste and installations. They also include provision for a number of directives including batteries. Further information, including contact details for further permitting related enquiries, can be found here.

As planning and permitting decisions are often closely linked, we have issued detailed guidance for developments requiring planning permission and environmental permits. This guidance explains how, when responding to planning consultations that require environmental permits, we will advise of three possible positions:

- No major permitting concerns
- More detailed consideration is required and parallel tracking is recommended
- Don't proceed – unlikely to grant a permit.

PRE-APPLICATION ADVICE

Can you provide site-specific advice, review a submission document, or attend a site meeting before I submit my planning application?

We encourage you to seek pre-application advice as it can help you solve key environmental issues early, reduce the chance of an objection and help you design a more sustainable development. If you'd like to take advantage of this service, please email our Sustainable Places team so that we can provide further details and estimated costs.

Please note that any pre-application guidance we provide doesn't represent our final view in relation to any future planning application. We recommend that you seek your own expert advice prior to submitting your application.

Who should I contact for further information?

Yorkshire planning enquiries: sp-yorkshire@environment-agency.gov.uk

General enquiries: 03708 506 506

Environment Agency, Lateral, 8 City Walk, Leeds LS11 9AT
https://www.gov.uk/government/organisations/environment-agency

The Flood Map for Planning

The Flood Map for Planning (Rivers and Sea) can be viewed and downloaded as a PDF file on GOV.UK by following this link: https://flood-map-for-planning.service.gov.uk **or downloaded in GIS format under an open data licence from the following address**: https://data.gov.uk/publisher/environment-agency
Please type Flood Map for Planning in the search box.

What is the Flood Map for Planning?

The Flood Map for Planning provides information on flooding from rivers and the sea for England and Wales. The Flood Map also has information on flood defences and the areas benefiting from those flood defences.

The Flood Map for Planning shows the following:

1. Flood Zone 3 (dark blue area on the enclosed map): natural flood plain area that could be affected by flooding from rivers and/or the sea – not taking into account the presence of any flood defences
    - For flooding from rivers the map indicates the extent of a flood with a 1% (1 in 100) chance of happening each year;
    - For flooding from the sea the map shows the extent of a flood with a 0.5% (1 in 200) chance of happening each year.

2. Flood Zone 2 (light blue area): natural flood plain area that could be affected by flooding from rivers and/or the sea – not taking into account the presence of any flood defences. Flood Zone 2:
    - indicates the extent of a flood with a 0.1% (1 in 1000) chance of happening each year.
    - and/or indicates the greatest recorded historic flood, whichever is greater.

3. Flood defences built in the last five years to protect against river floods with a 1% (1 in 100) chance of happening each year, together with some natural or constructed entities which retain, store or channel water and which may protect against smaller floods.

4. Areas benefiting from flood defences - areas that benefit from the flood defences shown, in the event of a river flood with a 1% (1 in 100) chance of happening each year, or a flood from the sea with a 0.5% (1 in 200) chance of happening each year. If the defences were not there, these areas would flood.

Flood History

To the best of our knowledge there is no known flood history for this site. The extent of flooding, and/or flood level information is only shown for those watercourses surveyed after the flood. Other flooding may have occurred which is not shown. This is the best information currently available. For local drainage information please contact your water utility company and your local council.

Water causing flooding can come from different places, for example from rivers or the sea; surface water (i.e. rainwater flowing over or accumulating on the ground before it is able to enter rivers or the drainage system); overflowing or backing up of sewers or drainage systems which have been overwhelmed or from groundwater rising up from underground aquifers.

Please note that this record doesn't include all of the flooding that may have occurred including and since 3rd February 2021.
Given the process of recording, verifying and updating our record from major floods is extensive and may take a considerable amount of time.

Assets

Asset Location Map
Please find attached asset map(s) showing location of all (Agency and non Agency maintained) flood defences and channels.

Description of Works
See attached table with description of the defences and structures shown on the above drawing, including condition ratings, upstream and downstream crest levels, where available.

Risk of Flooding – Environment Agency Defences
The risk of flooding in this area is now reduced by the presence of flood defences that we maintain, but there still is a residual risk of flooding if these were to breach or be overtopped by a flood greater than that for which they were designed.

Risk of Flooding – Privately Maintained Defences
You will see that the Environment Agency does not maintain any of those defences. However we undertake regular risk based visual inspections. We do not hold design levels and have no height information on these defences or structures.

Asset Condition Ratings
The performance of a flood defence asset is recorded as the condition of the asset. Our asset inspectors subjectively assess the conditions of assets (during visual inspection site visits) with reference to a national standard template. Each asset is given a rating between one and five with one being very good condition and five being very poor. A condition rating of 3, or 'fair' is the minimal acceptable standard for a critical asset, such as a defence wall that protects properties. We are striving to improve all assets below 'fair' to an acceptable standard.

Asset inspections are done on average every six months, although some critical assets are assessed on a more regular basis. It is possible that adjacent assets are inspected on different dates, which may result in two assets of a similar state of repair having different condition ratings.

Condition ratings of assets may also be affected by the time of year the surveys are conducted, as vegetation may obscure the asset in the summer months, or accessibility may be an issue during winter months. These factors would not usually affect the recorded condition rating of an asset unless the asset is on a borderline between two ratings.

Asset Standard of Protection
Please note that the provided Design Standard of Protection is an estimate and should not be relied on. Please note that where available the defended flood extents provide more reliable information relating to the protection offered by the defence (i.e. at which return period the water levels are likely to overtop the defence). If available and required the defended flood extents can be provided on request.

Modelling

River Colne & Holme - Flood Modelling
The River Colne & Holme Flood Mapping Study, Flood Estimation, Modelling and Floodplain Mapping report was produced by Jeremy Ben Associates in March 2006. It was updated in 2010 to incorporate bank level data surveyed in 2009.

See enclosed:

- Model Nodes Location Map.
- Table showing modelled water levels and flows for the 1% (1 in 100), 1.3% (1 in 75), 2% (1 in 50), 4% (1 in 25) and 10% (1 in 10) Annual Exceedance Probabilities (AEP).
- Model Summary Sheets showing the results for the 0.1% Annual Exceedance Probabilities (AEP), as calculated in 2006. These were not updated in 2010.

Please note there are no depth grids currently available for this model.

Please note no breach scenarios were modelled for this study.

Climate Change

Updated guidance on how climate change could affect flood risk to new development - 'Flood risk assessments: climate change allowances' was published on gov.uk on 19 February 2016. You should confirm the flood risk vulnerability classification and lifetime of your proposed development in line with NPPF and apply the appropriate climate change allowances.

Bespoke Flood Risk Assessment (FRA) advice:

If the pre-application advice is required with regards the preparation of a site-specific Flood Risk Assessment, this can be requested via the Yorkshire Sustainable Places team (email: sp-yorkshire@environment-agency.gov.uk). Charges may apply for any advice that is provided, this currently stands at £100 per hour per person. The .gov.uk pages provide a good starting point on what to include within a site-specific Flood Risk Assessment and can be accessed via https://www.gov.uk/guidance/flood-risk-assessment-for-planning-applications. A site-specific Flood Risk Assessment will need to consider flood risks from all sources, including those associated with defence failure (e.g. breach) and accounting for the predicted impacts as a result of climate change. Please contact the Sustainable Places team if you require advice on how to include these within a Flood Risk Assessment.

Other

Surface Water Map

Lead Local Flood Authorities (LLFA) are responsible for managing local flood risk from surface water flooding and groundwater flooding. You should check with the LLFA as they may have more up to date information regarding this type of flooding.

The Risk of Flooding from Surface Water Flood Map can be viewed and downloaded as a PDF file on GOV.UK by following this link: https://flood-warning-information.service.gov.uk/long-term-flood-risk

Surface Water Drainage

The Lead Local Flood Authority is the statutory consultee for planning matters relating to surface water drainage, therefore it is recommended they should be consulted separately regarding this.

Surface water discharge from new development should ideally ‘mimic’ the pre-development situation using a sustainable drainage system so that the flow and volume of water in watercourses is not increased.

A permit may be required, under the Environmental Permitting Regulations 2016 from the Environment Agency for any proposed works or structures in, under, over or within eight metres of a ‘main river’ (e.g. a new outfall). A permit is separate to and in addition to any planning permission granted. Further details and guidance are available on the GOV.UK website: https://www.gov.uk/guidance/flood-risk-activities-environmental-permits

Risk of Flooding from Reservoirs Map

Outlines and simplified depth and velocity maps can be viewed on our website:

https://flood-warning-information.service.gov.uk/long-term-flood-risk/#x=438988&y=406600&scale=2

Please, zoom into the location of interest, and then click on the inundated location for details. As a result a list of reservoirs will be provided with supporting information and a links to other data, such as estimated depths and speed of flooding, at the bottom of the result page.

A map showing the outlines can also be provided on request.

Flood Warning

The site is not covered by a Flood Warning.

LIDAR Data

Please note that our LiDAR data is now available free of charge (Open Data) from http://environment.data.gov.uk/ds/survey/index.jsp#/survey (once zoomed to the relevant location the available LiDAR products will be listed below the map).

Two LIDAR products are available:

1. Tiled LIDAR data - The full tiled dataset consists of historic LIDAR data which has been gathered since 1998. For some areas we have carried out repeat surveys and data is available in a range of resolutions.
2. Composite LIDAR data - The composite dataset is derived from a combination of our full tiled dataset which has been merged and re-sampled to give the best possible spatial coverage.

Light Detection and Ranging (LIDAR) is an airborne mapping technique, which uses a laser to measure the distance between the aircraft and the ground. This technique results in the production of an accurate, cost-effective terrain model suitable for assessing flood risk and other environmental applications.

The Environment Agency owns two LIDAR systems, which are installed in a survey aircraft along with its other operational remote sensing instruments.

The aircraft is positioned and navigated using Global Positioning System (GPS) corrected to known ground reference points. The aircraft typically flies at a height of about 800 metres above ground level and a scanning mirror allows a swath width of about 600 metres to be surveyed during a flight.

The Rights & Responsibilities of a Riverside Owner

The owner of property adjacent to a watercourse is usually deemed to be the riparian owner and, as such, has both riparian rights and responsibilities with regard to the watercourse within their ownership.

For more information on Rights and Responsibilities of a riverside owner, you can visit our website at:

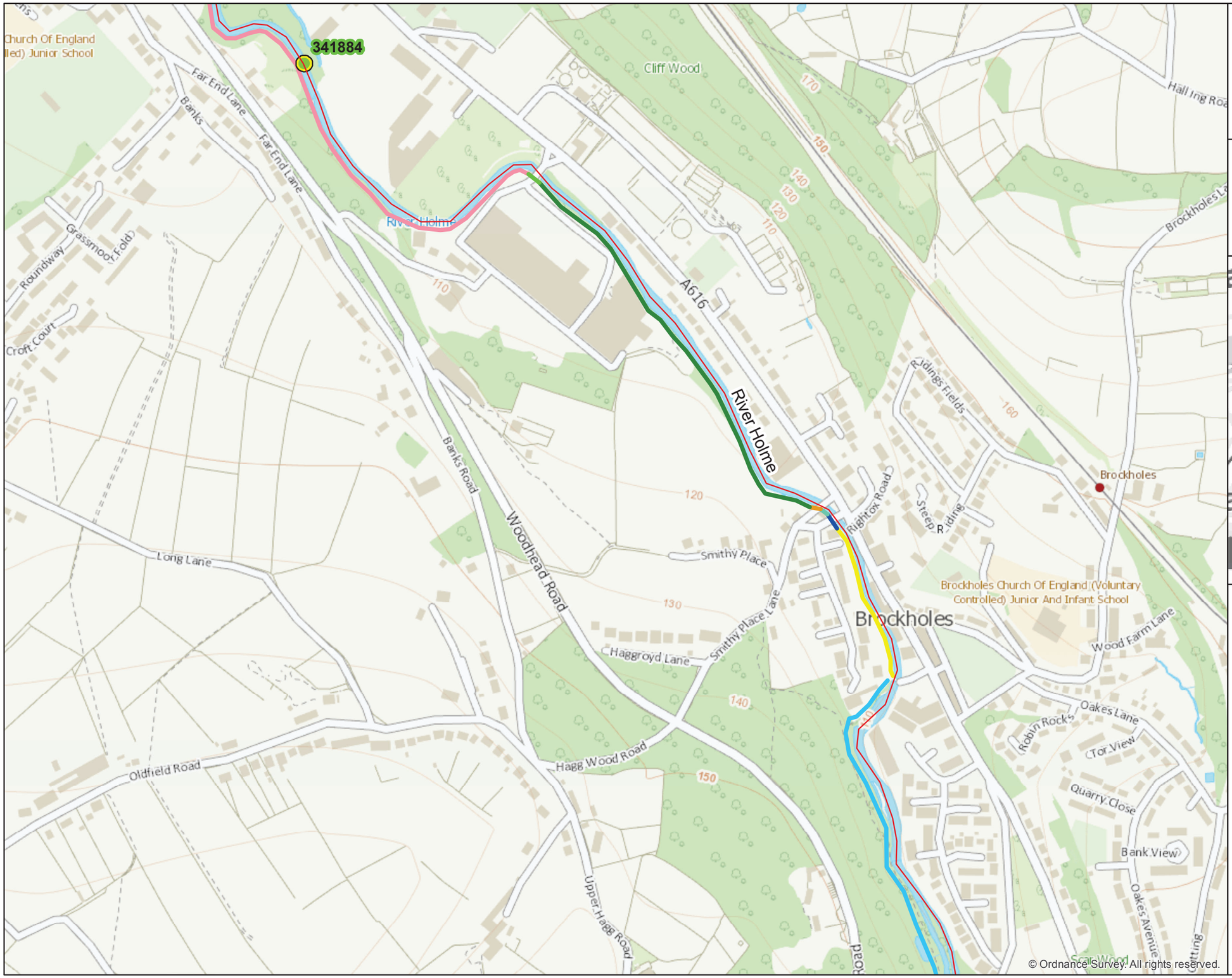
https://www.gov.uk/guidance/owning-a-watercourse

Ordnance Survey Data

Under the terms of our licence agreement with the Ordnance Survey, we are unable to supply the OS data. Under this agreement we can only supply OS data to consultants/contractors carrying out work on our behalf.

RFI/2021/212220 Assets Map centred on land off Woodhead Road, Brockholes, Honley, HD9 7AH

Date created: 14/06/2021



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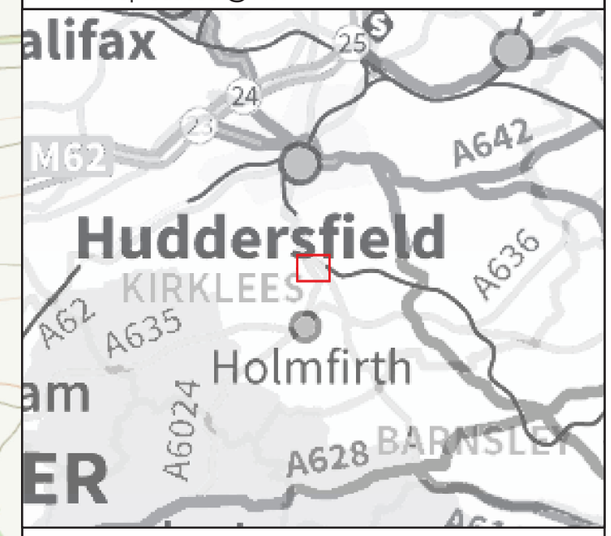
Environment Agency

www.environment-agency.gov.uk

Scale: 1:5,000

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N
W E
S



LEGEND

- Main River
- Structures (3rd party maintained)

Defences (3rd party maintained)

ASSET_ID

- 27848
- 27850
- 27983
- 27984
- 27985
- 49270
- 49271
- 50643

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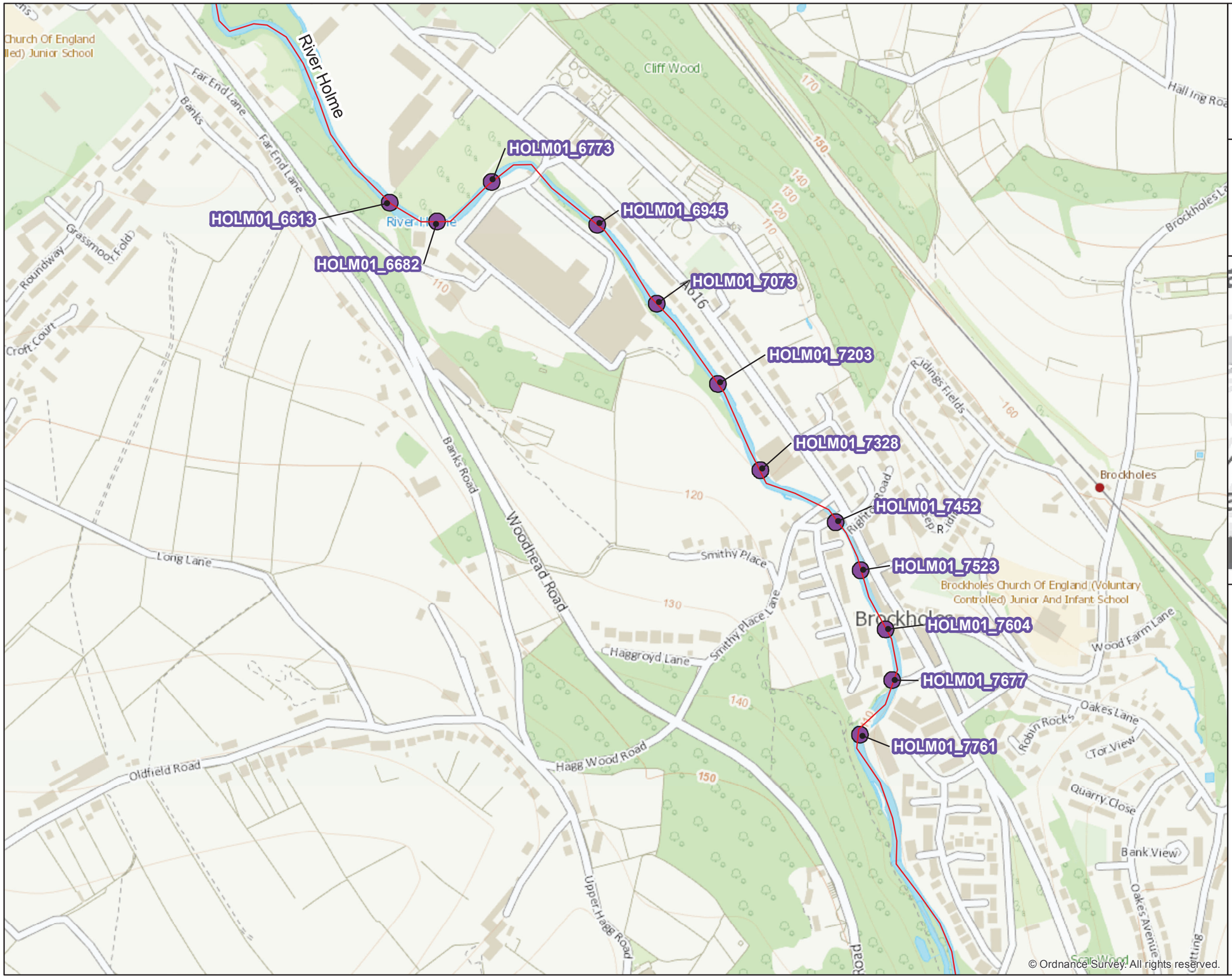
Contact Us: National Customer Contact Centre, PO Box 544, Rotherham, S60 1BY. Tel: 03708 506 506(Mon-Fri 8-6). Email: enquiries@environment-agency.gov.uk

Defences (3rd Party Maintained) - RFI/2021/212220										
ASSET ID	DESCRIPTION	ASSET MAINTAINER	ASSETS TYPE	LENGTH (m)	ACTUAL Downstream Crest Level (mAOD)	ACTUAL Upstream Crest Level (mAOD)	PROTECTION	TARGET CONDITION	OVERALL CONDITION	DESIGN STANDARD OF PROTECTION (SOP)
27850	high_ground	private	flood_risk_management	499.38			fluvial	3	3	
49271	high_ground	private	flood_risk_management	205.88			fluvial	3	3	
27848	high_ground	private	flood_risk_management	22.02			fluvial	3	2	
49270	high_ground	private	flood_risk_management	10.99			fluvial	3	2	
27985	high_ground	private	flood_risk_management	14.29			fluvial	3	2	
27984	high_ground	private	flood_risk_management	561.77			fluvial	3	3	
50643	high_ground	private	flood_risk_management	904.50			fluvial	3	3	
27983	high_ground	private	flood_risk_management	17.74			fluvial	3	2	

Structures (3rd Party Maintained) - RFI/2021/212220							
ASSET ID	ASSETS TYPE	DESCRIPTION	DESIGN STANDARD OF PROTECTION (SOP)	ASSET MAINTAINER	PROTECTION	TARGET CONDITION	OVERALL CONDITION
341884	weir			private	fluvial	9	2

RFI/2021/212220 Node Point Map centred on land off Woodhead Road, Brockholes, Honley, HD9 7AH

Date created: 14/06/2021



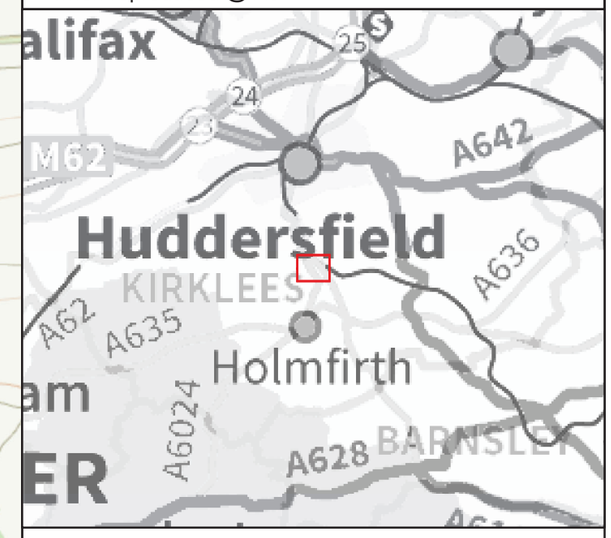
Environment Agency

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Scale: 1:5,000

when reproduced @ A3

N W E S



LEGEND

- Main River
- 2010 ASM Colne and Holme Node Points

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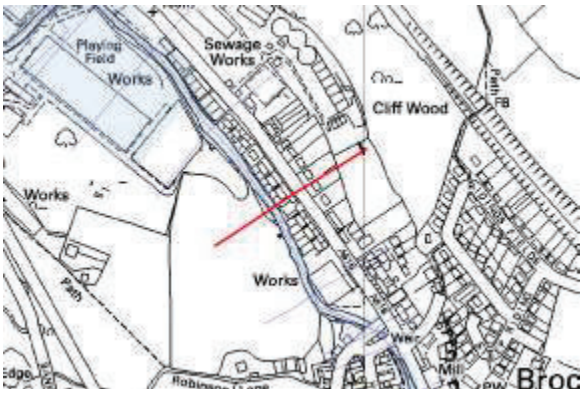
2010 ASM Colne and Holme Pre-feasibility- Do Minimum(Defended) Scenario - RFI 131202 (Level - mAOD, Flow - m³s)

	Annual Exceedance Probability (AEP) (2010 Model)										2005 Model	
	10% AEP (1 in 10)		4% AEP (1 in 25)		2% AEP (1 in 50)		1.33% AEP (1 in 75)		1% AEP (1 in 100)		0.1% AEP (1 in 1000)	
Label	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow
HOLM01_6613	103.23	55.30	103.32	62.26	103.38	68.25	103.40	71.40	103.41	72.79	104.22	128.00
HOLM01_6682	103.56	55.30	103.68	62.27	103.76	68.25	103.81	71.40	103.82	72.79	104.93	128.00
HOLM01_6773	104.17	56.50	104.28	67.04	104.33	77.16	104.35	82.59	104.36	84.97	105.48	128.00
HOLM01_6945	105.02	57.99	105.25	70.60	105.46	83.34	105.56	90.50	105.61	93.78	106.55	128.00
HOLM01_7073	105.63	57.99	105.86	70.60	106.08	83.36	106.19	90.50	106.23	93.79	106.79	128.00
HOLM01_7203	106.18	58.00	106.40	70.61	106.58	83.37	106.68	90.50	106.72	93.80	107.10	128.00
HOLM01_7328	107.81	58.00	108.02	70.60	108.22	83.36	108.33	90.49	108.38	93.79	108.81	128.00
HOLM01_7328	107.81	58.00	108.02	70.60	108.22	83.36	108.33	90.49	108.38	93.79	108.81	128.00
HOLM01_7452	109.68	58.01	110.07	70.60	110.29	83.36	110.33	90.49	110.39	93.77	111.47	128.00
HOLM01_7523	110.52	58.01	110.91	70.59	111.20	83.36	111.34	90.50	111.44	93.78	112.08	128.00
HOLM01_7604	110.96	58.01	111.34	70.60	111.64	83.36	111.79	90.51	111.85	93.80	112.28	128.00
HOLM01_7677	111.35	58.01	112.05	70.61	112.57	83.35	112.72	90.52	112.78	93.80	113.21	128.00
HOLM01_7761	111.95	58.02	112.48	70.63	112.77	83.37	112.86	90.53	112.91	93.82	113.36	128.00

2010 ASM Colne and Holme Undefended Model Results – RFI/2021/212220 (Level - mAOD, Flow - m³s)										
Node Point	Annual Exceedance Probability (AEP)									
	10% AEP (1 in 10)		4% AEP (1 in 25)		2% AEP (1 in 50)		1.33% AEP (1 in 75)		1% AEP (1 in 100)	
	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow
HOLM01_6613	103.22	55.05	103.32	61.98	103.38	68.12	103.40	71.21	103.41	72.47
HOLM01_6682	103.55	55.05	103.67	61.98	103.76	68.12	103.80	71.21	103.82	72.47
HOLM01_6773	104.17	56.17	104.27	66.61	104.33	77.06	104.35	82.42	104.36	84.57
HOLM01_6945	105.01	57.61	105.24	69.99	105.45	82.99	105.56	89.98	105.60	92.87
HOLM01_7073	105.62	57.61	105.85	69.99	106.07	83.00	106.18	90.00	106.22	92.87
HOLM01_7203	106.17	57.60	106.39	69.99	106.58	83.02	106.68	90.01	106.71	92.88
HOLM01_7328	107.80	57.61	108.01	70.00	108.21	83.02	108.32	90.01	108.36	92.87
HOLM01_7328	107.80	57.61	108.01	70.00	108.21	83.02	108.32	90.01	108.36	92.87
HOLM01_7452	109.67	57.61	110.05	70.01	110.29	83.02	110.32	90.01	110.37	92.86
HOLM01_7523	110.51	57.61	110.90	70.01	111.20	83.02	111.33	90.01	111.42	92.87
HOLM01_7604	110.94	57.62	111.32	70.01	111.63	83.02	111.78	90.00	111.84	92.89
HOLM01_7677	111.33	57.62	112.02	70.01	112.55	83.02	112.71	90.01	112.76	92.91
HOLM01_7761	111.94	57.62	112.46	70.02	112.76	83.01	112.86	90.03	112.89	92.91

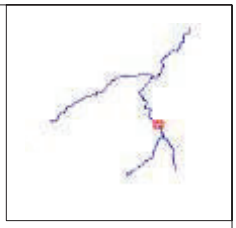
Environment Agency - North East Region
Colne and Holme Flood Mapping Study
ISIS Hydraulic Model Summary Sheet

Location Plan



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Cross Section References



River: HOLME

Reach: 01

Chainage: 7203

Section Type: SECTION

OS NGR: SE 14878 11280

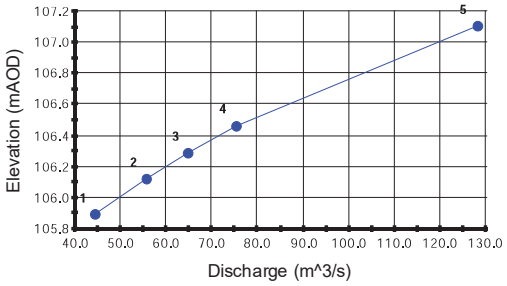
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Photograph Ref: HOLM01_7203.JPG

Next
Section d/s: 7073
Section u/s: 7328



Rating Curve



Number represents model profile number

Summary of Results

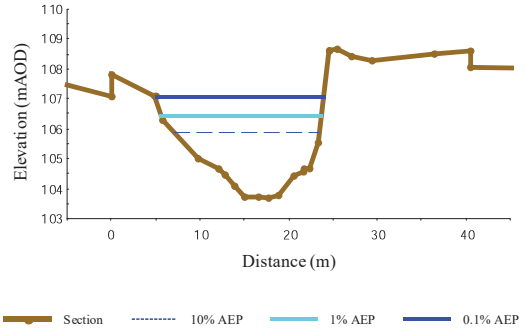
Profile No	AEP (%)	Flow (m^3/s)	Water Level (mAOD)	Velocity (m/s)
1	10.0	44.5	105.899	1.97
2	4.0	55.7	106.125	2.11
3	2.0	64.8	106.291	2.22
4	1.0	75.3	106.464	2.33
5	0.1	128.0	107.104	2.90

Level of Left Bank 107.834 mAOD

Level of Right Bank 108.075 mAOD

AEP: Annual Exceedance Probability = 1/T, where T = Return Period (Years)

Cross Section Profile

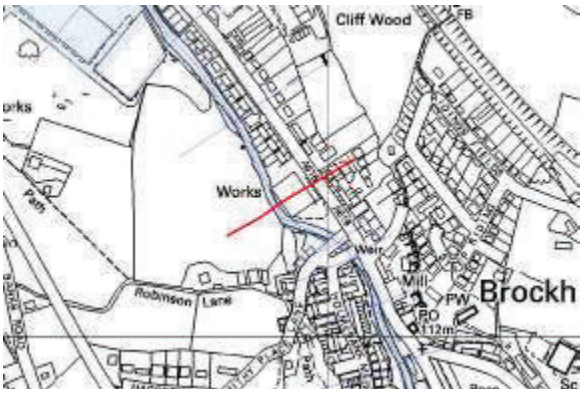


HOLME: 01: CROSS SECTION NUMBER 7203

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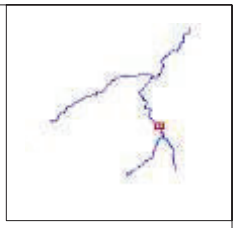
Print Date: 29/03/2006

Location Plan



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Cross Section References



River: HOLME

Reach: 01

Chainage: 7328

Section Type: SECTION

OS NGR: SE 14932 11169

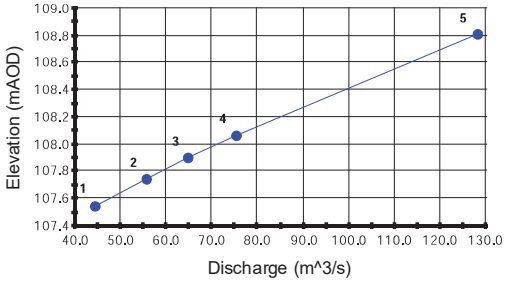
Survey Dwg Ref: N/A

Photograph Ref: HOLM01_7328.JPG

Next
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Section u/s: 7425b



Rating Curve



Number represents model profile number

Summary of Results

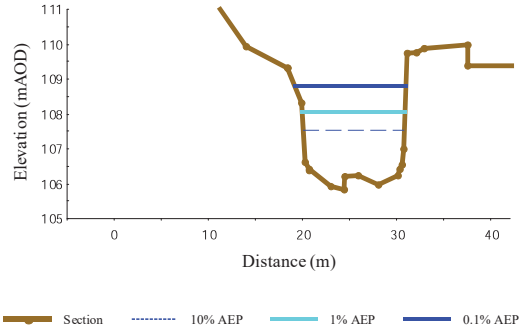
Profile No	AEP (%)	Flow (m^3/s)	Water Level (mAOD)	Velocity (m/s)
1	10.0	44.5	107.550	3.07
2	4.0	55.7	107.748	3.35
3	2.0	64.8	107.906	3.54
4	1.0	75.3	108.067	3.75
5	0.1	128.0	108.808	4.51

Level of Left Bank 114.867 mAOD

Level of Right Bank 109.400 mAOD

AEP: Annual Exceedance Probability = 1/T, where T = Return Period (Years)

Cross Section Profile



HOLME: 01: CROSS SECTION NUMBER 7328

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Environment Agency

Mr Adam Walker
Kirklees Metropolitan Borough Council
Development Management
PO Box B93
Huddersfield
West Yorkshire
HD1 2JR

Our ref: RA/2021/143227/01-L01
Your ref: 2021/92206

Date: 01 July 2021

Dear Adam

ERECTION OF 146 HOMES WITH OPEN SPACE, LANDSCAPING AND ASSOCIATED INFRASTRUCTURE – LAND OFF, WOODHEAD ROAD, HONLEY, HOLMFIRTH

Thank you for consulting us on this application which we received on 14 June 2021.

Environment Agency position
Our Flood Map for Planning shows this site lies predominantly in flood zone 1 with flood zones 2 and 3 along the eastern site boundary adjacent to the River Holme. We are updating our data in this area which may result in a change to the flood zones. When available, updates to the flood map will be sent to Kirklees Council as the Lead Local Flood Authority (LLFA) for this area. We rely on the applicant to request the most up to date flood zones before development commences.

Residential developments are classed as 'more vulnerable'. Normally, a more vulnerable development in flood zone 1 would be considered in line with our flood risk standing advice (FRSA) and we wouldn't be consulted by the LPA. However, we are consulted on developments which are within 20m of a designated 'main river', which is the case with this application.

Whilst reviewing the flood risk assessment (FRA) to understand the proposals, we noted that the proposed finished floor levels (FFLs) don't meet the requirements of FRSA to be set at the highest of i) 300mm above the ground level of the site, or ii) 600mm above the estimated river level, taking climate change into account.

We have a number of concerns which need to be addressed and are therefore submitting a **holding objection**. The FFLs and requirements for compensatory storage are not assessed against the future flood risk from climate change. In addition, certain aspects of the development will require an Environmental Permit from us (see below for further details) and there isn't enough information submitted with the planning application to say whether we will be able to grant a permit.

The FRA does not include any modelled flood information from us. We acknowledge that the FRA states this information has been requested but at the time of writing the FRA it had not been received. We confirm we have received the data request and

apologise for the delay in providing it. We expect to send this information out shortly.

Finished floor levels and compensatory storage
The FRA does not fully assess the impacts of flooding up to and including the 1% AEP flood event plus the latest climate change allowances (the design event) for all areas of the site. The design event needs to be assessed in relation to: compensatory storage, re-profiling of site levels, the assessment of flood risk to areas of land within the site and FFLs.

The FRA needs to demonstrate that:

- FFLs of the ground floors across the site are above the 1% probability (or 1 in 100) level, plus climate change (CC) (the design flood), plus a further 600mm freeboard (using the most appropriate modelled node point). We recommend the applicant considers the 30% CC for design and mitigation purposes. FFLs also need to be above the surface water flood risk to the site
- compensatory storage can be provided to offset any loss in floodplain storage in any areas of the site, up to and including the design event, and demonstrate that there is no transfer of flood risk beyond the site boundary
- indicate site ground levels pre and post any re-profiling and compare this to the 1% plus climate change levels. Cross sectional drawings may be used to demonstrate this, and demonstrate this does not alter the flood risk to the site, alter existing flood flow routes or transfer flood risk to others
- show there is no loss of storage in the 1% plus climate change scenario.

Environmental Permit
An Environmental Permit for a flood risk activity will be required from the Environment Agency for any new structures located within 8m of the River Holme.

The Environmental Permitting (England and Wales) Regulations 2016 require a permit to be obtained for any activities which will take place:

- on or within 8 metres of a main river (16 metres if tidal)
- on or within 8 metres of a flood defence structure or culvert (16 metres if tidal)
- on or within 16 metres of a sea defence
- involving quarrying or excavation within 16 metres of any main river, flood defence (including a remote defence) or culvert
- in a floodplain more than 8 metres from the river bank, culvert or flood defence structure (16 metres if it's a tidal main river) and you don't already have planning permission.

For further guidance please visit https://www.gov.uk/guidance/flood-risk-activities-environmental-permits or contact our National Customer Contact Centre on 03708 506 506. Applicants should not assume that a permit will automatically be forthcoming once planning permission has been granted, and we advise them to consult with us at the earliest opportunity.

In order to obtain a permit from us for this development, the applicant must be able to demonstrate that there is no increased flood risk as a result of the development.

We are unable to say at this stage whether we would grant a permit for the application without further information on i) the proposed pipe crossing the River Holme, ii) the impact of the land re-profiling adjacent to the river which is natural high ground, and iii) the distance of the properties along the eastern boundary of the site from the main river.

Cont/d..

i. Drawing ref 425/58 SK03.01 by ARP dated May 2021 indicates “further information is required about existing watercourse that will need crossing”. It is not clear what the proposed crossing is and we require further details on this at the planning stage because there could be impacts on the design to meet our permitting requirements that could involve a variation to any planning permission granted. What is the purpose of the crossing? Will it be a clear span structure? We expect the soffit level of any new structure across the River Holme to be above the 1% plus climate change plus 600mm to allow for debris to flow under and to ensure it does not alter the channel capacity or increase flood risk to others.

   Cross sectional drawings should be provided to illustrate the structure, with soffit levels marked on in mAOD and in comparison to the modelled 1% plus CC plus 600mm level in mAOD. The distance of any pillar supports from the main river channel in metres, and any alterations to existing ground levels pre and post development in the vicinity of the works need to be indicated.

ii. Drawing 425/58/SK04.01 by ARP dated May 2021 indicates the existing banking is to be regraded to suit proposed road levels. There is an area of high ground adjacent to the River Holme. The FRA needs to confirm the levels subject to the re-profiling both before and after the regrading, and compare this to the 1% plus climate change levels. Cross sectional drawings may be used to demonstrate this. The FRA needs to demonstrate this does not alter the flood risk to the site, alter existing flood flow routes, or transfer flood risk to others, and show there is no loss of storage in the 1% plus climate change scenario.

iii. Confirmation is required of how far the properties on the eastern boundary of the site are from the high ground or the River Holme, in metres. In particular, whether any properties are within 8 meters of the river or high ground/ embankment.

For any development in close proximity to the river’s edge we recommend a structural engineer is consulted to demonstrate this has no detrimental impact on the stability of the embankment. Any damage to the embankment or high ground along the river side will be the responsibility of the riparian owner to ensure there is no increase in flood risk or transfer of flood risk to others as a result.

It is the responsibility of the riparian owner (ie the land owner) to maintain the watercourse so if development takes place close to the river side they need to be satisfied they can gain access.

In addition to flood risk impacts, as part of our determination of the Environmental Permit we will consider other issues relating to the water environment to ensure the proposed works don’t cause unacceptable impacts, for example biodiversity, protected species/habitats, Water Framework Directive requirements and pollution prevention impacts which could prevent us from being able to grant a permit.

Surface water and groundwater

The applicant will need to demonstrate, with calculations, that channelling the groundwater into a new filter drain which flows into the main river does not change the existing flood risk to the site or flood storage available. Matters relating to the impact of channelling the groundwater, surface water flood risk and the detailed surface water design need to be discussed and agreed with Kirklees Council’s Flood Risk and Drainage Teams as the LLFA.

Cont/d..

Issues relating to the requirement for the pumping station, and filter drain design, operation and maintenance should also be discussed with the LLFA, and should include consideration of pumping station failure.

We understand surface water is to be discharged via a new outfall into proposed into the river.

Surface water drainage is now the responsibility of the LLFA. Changes to the Planning Practice Guidance (Flood Risk) and the new DMPO took effect on 15 April 2015. These support the use of SuDS solutions for surface water management from new development, and explain that the expert advice on surface water proposals should come from the LLFA.

The LLFA is now the Statutory Consultee on these matters for major applications, and manage the regulation of works affecting all watercourses except for those designated 'main river' (this remains with the Environment Agency).

The details of the discharge rate and surface water design need to be agreed with the LLFA, but an Environmental Permit will be needed from us for the outfall structure and any associated works.

Biodiversity Net Gain
New developments should not only protect watercourses and their riparian corridors but also provide overall net gain for biodiversity. Net gain for biodiversity is defined as delivering more or better habitats for biodiversity and demonstrating this through use of the Defra Biodiversity Metric. It encourages development that delivers biodiversity improvements through habitat creation or enhancement after avoiding or mitigating harm.

The Government introduced the Environment Bill in January 2020 to ensure that the overall impact from development on the environment is positive. The Bill includes measures to strengthen local government powers in relation to net gain and a minimum requirement of 10% biodiversity net gain. Chapter 15 and Paragraphs 170, 171, 174 and 175 of Nationally Planning Policy Framework (NNPF) contain strengthened net gain policies. We encourage developers to consider an approach to development that results in measurable net gains in biodiversity, having taken positive and negative impacts into account. Planning Practice Guidance (PPG) provides guidance on the application of net gain.

IEEM, together with CIRIA and IEMA have published guidance on how to deliver net gain in practice. These can be downloaded here

Further detailed advice to overcome our objection
Please advise the applicant that if they would like to get further specific advice on how to overcome our objection, they can take advantage of our planning advice service. We can offer services including meetings, telecons and reviews of revised information prior to formal submission. We encourage the applicant to contact us directly to discuss this further.

We currently charge £100 plus VAT per officer per hour. We will provide you with an estimated cost for any further discussions or review of documents. The standard terms for our charged for service are available here.

Cont/d..

Should you require any additional information, or wish to discuss these matters further, please do not hesitate to contact me on the number below.

Yours sincerely

Mrs Beverley Lambert
Sustainable Places - Planning Advisor

Direct dial 020 302 57982
Direct e-mail bev.lambert@environment-agency.gov.uk

Team phone 020 302 56862
Team e-mail sp-yorkshire@environment-agency.gov.uk

End

APPENDIX D

WATER AUTHORITY CONSULTATION

YorkshireWater

Mr P Carter
ARP Associates
5/6 Northwest Business Park
Servia Hill
Leeds
LS6 2QH
paulcarter@arpassociates.co.uk

Yorkshire Water Services
Developer Services
Pre-Development Team
PO BOX 52
Bradford
BD3 7AY

Tel: 0345 120 8482
Fax:

Email:
technical.sewerage@yorkshirewater.co.uk

For telephone enquiries ring:
Chris Roberts on 0345 120 8482

Your Ref:
Our Ref: X005534

16th April 2021

Dear Mr Carter,

Land off Woodhead Road, Brockholes, Honley, HD9 7AH – Pre-Planning Sewerage Enquiry U200549

Thank you for your recent enquiry. Our charge of £157.00 will be added to your account with us, reference ARP013. You will receive an invoice for your account in due course.

Please find enclosed a complimentary extract from the Statutory Sewer Map which indicates the recorded position of the public sewers. Please note that as of October 2011 and the private to public sewer transfer, there are many uncharted Yorkshire Water assets currently not shown on our records. The following comments reflect our view, with regard to the public sewer network only, based on a 'desk top' study of the site and are valid for a maximum period of twelve months:

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CUSTOMER SERVICE EXCELLENCE CSE

Development of the site should take place with separate systems for foul and surface water drainage. The separate systems should extend to the points of discharge to be agreed.

Foul Water

Foul water domestic waste can discharge to the 150/225 mm diameter public combined sewer recorded in Smith Place or Smithy PLace Lane, pumped rate should not exceed 5 (five) litres/second.

Surface Water

It is understood that surface water will discharge to the River Holme located to the east of the site. This appears to be the obvious place for surface water disposal (if SuDS are not viable). While we have no objection to this I cannot agree the rate as it's not discharging to a Yorkshire Water asset.

Please note further restrictions on surface water disposal from the site may be imposed by other parties. You are strongly advised to seek advice/comments from the Environment Agency/Land Drainage Authority/Internal Drainage Board, with regard to surface water disposal from the site.

Other Observations

An off-site foul and surface water sewer may be required which may be provided by the developer and considered for adoption under Section 104 of the Water Industry Act 1991. Please telephone 0345 120 84 82 for advice on sewer adoptions. Alternatively, the developer may in certain circumstances be able to requisition off-site sewers under Section 98 of the Water Industry Act 1991 for which an application must be made in writing. For further information, please telephone 0345 120 84 82.

YorkshireWater

Prospectively adoptable sewers and pumping stations must be designed and constructed in accordance with the WRc publication "Sewers for Adoption - a design and construction guide for developers" 6th Edition as supplemented by Yorkshire Water's requirements, pursuant to an agreement under Section 104 of the Water Industry Act 1991. An application to enter into a Section 104 agreement must be made in writing prior to any works commencing on site. Please contact our Developer Services Team (telephone 0345 120 84 82) for further information.


The site is within an area that may be affected by river, coastal or estuarine flooding. We would advise you to contact the Environment Agency for details.

Any new connection to an existing public sewer will require the prior approval of Yorkshire Water. You may apply on line or obtain an application form from our website (www.yorkshirewater.com) or by telephoning 0345 120 84 82.

All the above comments are based upon the information and records available at the present time and is subject to formal planning approval agreement. The information contained in this letter together with that shown on any extract from the Statutory Sewer Map that may be enclosed is believed to be correct and is supplied in good faith. Please note that capacity in the public sewer network is not reserved for specific future development. It is used up on a 'first come, first served' basis. You should visit the site and establish the line and level of any public sewers affecting your proposals before the commencement of any design work.

Yours sincerely

Chris Roberts
Development Services Technician



414658 : 410963

Map Name : SE1410NW

Yorkshire Water,
PO Box 500,
Halifax Road,
Bradford BD6 2LZ
Contact Name :
YorMap Advisor C ROBERTS
Contact Tel : 87 2582

Title

Notes

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Partial Key
Foul Sewer = F
Combined Sewer = C
Surface Water Sewer = SW
Trade Sewer = TD
Partially Separate = PS

This plan is furnished as a general guide only and no warranty as to its correctness is given or implied. This plan must not be relied upon in the event of excavations or other works made in the vicinity of public sewers. No house or property connections are shown.

Date Req : 16/04/2021, 09:24:44
Date Gen : 16/04/2021, 09:34:40
Source : Sewer Network Enquiry

UPN: Undefined
Originator: C ROBERTS, YorMap, 87 2582

APPENDIX E

LEAD LOCAL FLOOD AUTHORITY CONSULTATION

Paul Carter

From: Paul Farndale <Paul.Farndale@kirklees.gov.uk>
Sent: Wednesday 28 April, 2021 11:05 am
To: Paul Carter
Cc: Martin Ingram
Subject: RE: 425-58 Woodhead Rd, Brockholes, Honley - LLFA consultation [Filed 29 Apr 2021 09:24]

Hello Paul,

Please have a look at earlier applications on the Kirklees Planning Applications web site. There is detailed negotiations on flood routing in particular and also there is a watercourse/land drainage system that has been identified on site which will need to be incorporated into the layout and will be a constraint.

If we are storing the 1 in 100 then 30% is in our policy for climate change. No urban creep is required when storing the 1 in 100 event below ground.

I can confirm greenfield rates are set at 5l/s/ha for the developable area. Strictly no double counting of landscaped areas to remain around the fringes of the built area, or gardens falling away from the main development. If you are going to have retaining walls and drainage behind them that take all landscaping and gardens out of the equation. You are likely to need some perimeter drainage and to pick up the watercourse in a separate drain with a separate outfall.

I cannot confirm the exact discharge rate until you confirm the above and shade a map accordingly showing the area you feel qualifies so I can scrutinise it.

I take it 380.2l/s is a typo. For example 5 ha would be 25l/s. I will need to know that the southern parcel can drain by gravity to the main site.

Regards,

PF

Note deep surface water ponding adjacent to Smithies Place which will need picking up in an FRA. You will definitely need to justify a layout for flood routing and try if we can not to let water in off the main road. You will need to consult with Section 38 on this to see if a ramp up to maintain flows across the entrance is feasible. This will limit the risk involved.

From: Paul Carter <PaulCarter@arpassociates.co.uk>
Sent: 26 March 2021 17:11
To: Paul Farndale <Paul.Farndale@kirklees.gov.uk>
Cc: Martin Ingram <MartinIngram@arpassociates.co.uk>
Subject: 425-58 Woodhead Rd, Brockholes, Honley - LLFA consultation

Good Afternoon

Our Client is proposing to develop a site situated on land off Woodhead Road, Brockholes, Honley, HD9 7AH. The site has a net developable area of 5.47ha and is centred on Ordnance Survey Grid Reference 414747, 411145. Attached is a development masterplan, topographical survey and historical agreements with YW for your consideration. ARP has been appointed to undertake a Flood Risk

Consultation Response from KC, Lead Local Flood Authority		
2021/92206 Land Off, Woodhead Road, Honley, Holmfirth		
Erection of 146 homes with open space, landscaping and associated infrastructure		
Date Responded:12th July 2021	**Responding Officer: Paul Farndale**	**Responding Ref:**

Kirklees Flood Management & Drainage acting as Lead Local Flood Authority requires FURTHER INFORMATION on flood risk assessment in order to support this application subject to appropriate conditions.

As directed in a pre-planning enquiry, the surface water flood risk maps (3rd generation 1 in 100 and 1 in 1000 events) should be superimposed over the layout maps, to clearly identify the risk involved rather than rely on narrative.

All photographs of the watercourse entering the site from under Woodhead Road, including discovered troughs etc., previously submitted, should be packaged together in updated Flood Risk Assessment. The location should be clearly shown on a plan. A discussion with the LLFA should then take place as to the route any culverted section or open section should take as a tributary to the river Holme.

A direct open route along current pre-development contour patterns should be favoured where reasonably practicable. Other interception drainage will need to connect this tributary and its pathway should have a separate outfall to the surface water drainage unless agreed otherwise with Yorkshire Water. Any riparian aspect to this infrastructure will need to be managed long term by a management company set up under section 106 of the Town and Country Planning Act 1990. Flood Routing for this aspect should be clearly shown in the FRA.

All flood routing, from road and field run off entering the site (including the new entrance) should be followed through avoiding property and curtilage, utilising the road network and public open space.

This includes blockage scenarios from main drainage runs of surface water sewers and watercourse and land drainage within the site boundary.

Finally, an exceedance event affecting the attenuation should be examined although we do not foresee a problem with this aspect.

Contours for roads indicate that area around various properties will be problematic. A discussion with the LLFA prior to resubmission is advised (plots 115,26,95,37,69,70 are examples of further analysis including the effects of road humps. High and low spots should be clearly identified).

The EA will need to comment on flood risk from the river Holme and the former mill race.

A more detailed assessment of built area, not double counting landscaped areas falling away from mains drainage was requested at pre-app to justify and agree final discharge rates. The applicant is reminded that although infiltration is not advisable on this site, SUDS as treatment for water quality should be assessed given that SUDS can now be adopted by the Statutory Undertaker.

APPENDIX F

DEVELOPMENT PROPOSALS

Notes:

DRAWING LEGEND: -

- Denotes Development Boundary
- 450mm Knee-rail - please refer to boundary treatment plan for additional details
- 1200mm railing - please refer to boundary treatment plan for additional details
- Boundary fences - please refer to boundary treatment plan for additional details
- Boundary wall & fence panel - please refer to boundary treatment plan for additional details
- Denotes lockable 1.8m Garden Gates
- Denotes Highway Ramp
- Denotes Change of Highway surface material please refer to external materials plan for additional details
- Denotes extent of flagging for bin storage
- Denotes affordable unit
- Denotes PROW as per the definitive right of way map
- Denotes Location of trodden path
- Denotes Location of public open space
- Denotes Proposed tree, refer to FDA Landscape Plan R2-2491-1

Tree to be removed on advice from the Tree Constraints Plan (ref. 19820) or as necessary for construction of infrastructure.

Tree to be retained contrary to advice from the Tree Constraints Plan.

Tree to be retained.

Dry Stone wall to be removed

Dry Stone wall to be retained and made good with stone from removed dry stone wall.

Drainage Easement

Retaining walls

	Brockholes Increase Numbers Sk 2	

FREE SALE					
Housetype	Description	Sqft.	Number	Total Sq ft	% of Mix
3 BED Mews					
Overton	3 Bed Mews	819	6	4914	5.5
Kingston Semi	3 Bed Corner	869	6	5214	5.5
3 BED Detached					
Eaton	3 Bed Corner	1,016	16	16256	14.5
Tiverton	3 Bed Detached	972	8	7776	7.3
4 BED					
Maplewood	4 Bed Detached	1,269	16	20304	14.5
Oakwood	4 Bed Detached	1,388	11	15268	10.0
Sherwood	4 Bed Detached	1,400	13	18200	11.8
Cedarwood	4 Bed Detached	1,448	16	23168	14.5
5 BED					
Castleford	5 Bed Detached	1,601	11	17611	10.0
Thetford	5 Bed Detached	1,674	7	11718	6.4
SUB TOTAL			110	140429	100.0
AFFORDABLE					
Housetype	Description	Sqft.	Number	Total Sq ft	% of Mix
2 Bedroom Properties					
Rosamond	2 Bed Semi/Mews	761	16	12176	59.3
3 Bedroom Properties					
Harrison	3 Bed Semi/Mews	907	11	9977	40.7
SUB TOTAL			27	22153	100.0
Total			137	162582	

REV:	DESCRIPTION:	BY:	DATE:
G	Landscaping and engineering information overlaid	TS	02.12.21
F	Numbers reduced to 137no. General update to mitigate levels. LPA comments addressed	BMS	27.10.21
E	Updated in accordance with miller comments and updated by Miller Homes	AP	08.06.21
D	Proposed site entrance and tree information updated to latest designs	TS	20.05.21
C	Red line removed. tree information updated inline with Miller tree removal plan.	TS	19.05.21
B	Red line updated to millers issue of 17.05.21	TS	18.05.21
A	Position of plot 105 amended.	TS	13.05.21

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CLIENT: miller homes

SITE: Woodhead Road, Brockholes

TITLE: Planning LAYOUT

SCALE AT A0:	DATE:	DRAWN:	CHECKED:
1:500	07.05.21	TS	SH

PROJECT NO:	DRAWING NO:	REVISION:
2108	2108.01	G

Scaled @ 1:500

10m 20m 50m

APPENDIX G

GREENFIELD ASSESSMENT PLAN



SUBJECT TO THE APPROVAL OF ALL RELEVANT AUTHORITIES

N O T E S

ATTENTION IS DRAWN TO THE REQUIREMENTS OF THE CONSTRUCTION DESIGN AND MANAGEMENT REGULATIONS 2015 AND THE DUTIES AND RESPONSIBILITIES CONTAINED THEREIN

Net Developable Area

Rev	By	Date	Revision	Chk	Apvd
/	MI	06.01.22	Issued for approval	PC	MI

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TITLE
NET DEVELOPABLE AREA GREENFIELD RUN-OFF

PROJECT
WOODHEAD ROAD
BROCKHOLES

CLIENT
MILLER HOMES
(YORKSHIRE LTD)

DRAWING STATUS
PRELIMINARY

Scale	Date	Drawn
1:1000 @ A1	MI	MI
		Chk.

Drg. No. 425/58/SK13 Rev /