



Eastwood
CONSULTING ENGINEERS

Drainage Assessment

OLD COAL DROPS, PENISTONE

FAIRBANK INVESTMENTS

31/01/2025

DRAINAGE ASSESSMENT OLD COAL DROPS, PENISTONE FOR FAIRBANK INVESTMENTS LTD



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31 January 2025

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DRAINAGE ASSESSMENT
OLD COAL DROPS, PENISTONE
FOR
FAIRBANK INVESTMENTS LTD

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CONTENTS

EXECUTIVE SUMMARY 6

1.0 INTRODUCTION 8

 1.2 Site Location and Description 8

2.0 DRAINAGE STRATEGY 9

 2.1 Existing Drainage 9

 2.2 Consultation with Statutory Bodies 9

 2.2.1 Yorkshire Water 9

 2.3 Ground Conditions..... 10

 2.4 Greenfield Calculations..... 11

 2.5 Surface Water Flood Risk..... 11

 2.6 Drainage Hierarchy..... 13

 2.6.1 Sustainable Drainage Systems (SuDS) 13

 2.6.2 Watercourse..... 13

 2.6.3 Public Sewer 13

 2.7 Proposals for Surface Water Disposal 14

 2.8 SuDS Maintenance..... 14

 2.9 Proposals for Foul Water Disposal..... 19

 2.10 Residual Flood Risk..... 19

 2.11 Mitigation Measures..... 19

3.0 CONCLUSIONS 20

APPENDICES

Appendix 1 – M Booth Design	Location plan
Appendix 2 – HH Surveys	Topographical survey
Appendix 3 – M Booth Design	Proposed Site plan
Appendix 4 – Yorkshire Water	Sewer assets plans
	Pre-development response
Appendix 5 – Eastwood CE	Greenfield runoff rates
	Attenuation calculations
	SuDS checklist
	Drainage strategy
Appendix 6 – Environment Agency	Surface Water Flood Maps

Issue 1: 30 October 2024

Issue 2: 31 January 2025 – layout for planning included

EXECUTIVE SUMMARY

The project comprises the proposed re-development of a brownfield site brownfield site for short let accommodation, offices, business units and a restaurant.

Surface water disposal is considered in accordance with the drainage hierarchy in Building Regulations Part H 2015 and Planning Practice Guidance 'Reducing the causes and impacts of flooding', paragraph 080 reference ID 7-080-20150323.

Full infiltration type SuDS such as soakaways are not expected to be viable on the site due to the expected shallow groundwater table and potential for infiltration to compromise the structural integrity of the foundations associated with the bridge crossing Bridge Street to the east of site.

The nearest watercourse is the River Don which is located 250 m north of site. The River Don is not considered viable for surface water discharge due to the distance from the site and requirement for any connection to cross third-party land.

There is a 225 mm public combined sewer and a 150 mm public surface water sewer located within Stottercliffe Road to the east and south-east of the site. Discharge to surface water sewer is the preferred method of surface water disposal.

Surface water disposal will be via gravity to the 150 mm surface water sewer in Stottercliffe Road to the south of the site.

As any historic drainage connections from the site have been lost, discharge will be restricted to 3.5 l/s as the minimum practical rate, subject to agreement with Yorkshire Water.

The total attenuation volume required for events up to the 1 in 100 year plus 40% climate change has been calculated based on the layout plan which proposes 95% of the site as impermeable / positively drained. The volume required is 215 m³, subject to detailed design.

A green roof is proposed for the restaurant.

Foul water disposal will be to the existing 225 mm combined sewer in Stottercliffe Road, south of the site.

Maintenance of the drainage systems and potential SuDS systems will be in accordance with the recommendations provided by suppliers and product specifications as well as the recommendations within The SuDS Manual.

Method statements will be provided prior to construction. These will include details on how contaminated water, erosion and sediment control will be dealt with during construction.

Both the surface and foul water drainage systems will be maintained by a private management company.

1.0 INTRODUCTION

This Drainage Assessment has been prepared on the instruction of Fairbank Investments Limited. Any other parties using the information in this report do so at their own risk, unless previously approved in writing.

The project comprises the proposed re-development of an approximately 0.34-hectare brownfield site for short let accommodation, offices, business units and a restaurant.

1.2 Site Location and Description

The site is located within Penistone, to the north-west of Sheffield, and is centred on coordinates 424400, 403395 (Appendix 1).

The site is bounded by Bridge Street to the east, Stottercliffe Road, a garage and commercial unit to the south and west, and residential properties fronting on to Talbot Road to the north.

The site is currently occupied by areas of hardstanding used for parking, Regency House (a former railway building) and the Grade-II listed Old Coal Drops. The Trans Pennine Trail runs through the northern part of the site.

The site falls from north-west to south-east from 221.89 mAOD to 217.42 mAOD at an average gradient of 1 in 32. A topographic survey is included in Appendix 2.

Proposals are for the conversion of the Coal Drop Arches into a restaurant and Regency House to a short term let. New offices and an industrial unit are also proposed with associated parking and access (Appendix 3).

2.0 DRAINAGE STRATEGY

2.1 Existing Drainage

No existing on-site drainage is recorded. This was confirmed by a site walkover carried out by Eastwood CE in September 2024. If any on-site drainage existed previously, it has now been lost. The nearest existing drains are the public combined and surface water sewers located within Stottercliffe Road east of site. A CCTV survey of the existing public sewers would prove either way whether connections from the site exist.

2.2 Consultation with Statutory Bodies

2.2.1 Yorkshire Water

Pre-planning advice has been received from Yorkshire Water; their reference A003985 dated 20th August 2024 (Appendix 4). The main points of the advice are summarised below.

- 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 domestic waste can discharge to the 225 mm diameter public combined sewer recorded in Stottercliffe Road, at a point to the east of the site.
- Foul water from kitchens and/or food preparation areas of any restaurants and/or canteens etc. must pass through a fat and grease trap of adequate design before any discharge to the public sewer network.
- It is accepted that soakaways will not be suitable at this location.
- Curtilage surface water discharges to the public sewer will be restricted to the level of run-off – i.e. same rate of discharge – to that from the existing use of the site less a 30% reduction in the existing discharge. Any discharge of surface water from the site should discharge to similar points of connection to that of the existing use of the site. Positive drainage based on a 1 in 1 year storm to the public sewer will need to be demonstrated by means of investigation and calculation carried out at your expense.

- To do this, Yorkshire Water requires to see existing and proposed drainage layouts with pipe sizes, gradients, gullies, downpipes and connection points, measured impermeable areas of the present and proposed use of the site, along with the calculations that show the existing and proposed discharge rate from the site to the public sewer.
- Surface water run-off from communal parking (greater than 800m² or more than 50 car parking spaces) and hardstanding must pass through an oil, petrol and grit interceptor/separator of adequate design before any discharge to the public sewer network. Roof water should not pass through the traditional 'stage' or full retention type of interceptor/separator. It is good drainage practice for any interceptor/separator to be located upstream of any on-site balancing, storage or other means of flow attenuation that may be required.
- Surface water run-off from areas of vehicular parking and/or hardstanding etc. must pass through an oil, petrol and grit interceptor/separator of adequate design before any discharge to the public sewer network. Roof water should not pass through the traditional 'stage' or full retention type of interceptor/separator.

2.3 Ground Conditions

The British Geological Survey maps show the western and eastern ends of the site to be underlain by mudstone and siltstone of the Pennine Lower Coal Measures Formation and the central part of the site to be underlain by Penistone Flags sandstone. No superficial deposits are recorded.

A previous site investigation undertaken by GRM Development Solutions for Reliant Building Contractors showed the site superficial deposits to consist of made ground (sand or ash with varying amounts of brick, concrete, sandstone and clinker) varying between 0.7m below ground level (bgl) to 3.3m bgl.

Groundwater was not initially encountered during the exploratory holes dug during this site investigation; however, during subsequent monitoring visits, standing water was noted at depths ranging from 0.5m bgl – over 3.0m bgl.

2.4 Greenfield Calculations

The site was previously occupied by two commercial units which were demolished sometime between 2009 and 2018. Regency House and the remains of the old coal drops still exist on site. Although technically the site is considered to be brownfield in that it was previously developed, for the purposes of drainage the site is considered to be greenfield since evidence of any drainage connections from the site to the wider drainage network, if they ever existed, have been lost.

Greenfield runoff is calculated using the UK SuDS runoff rate estimation tool¹ (Appendix 5). Table 1 below summarises the flow rates for varying return periods. These figures relate to the whole 0.55 hectares and runoff per unit area (hectare).

Greenfield runoff				
Catchment	Return period			
	Q _{BAR}	1 in 1 yr	1 in 30 yr	1 in 100 yr
Don and Rother Management Catchment	1.36 l/s	1.17 l/s	2.37 l/s	2.82 l/s
	2.47 l/s/ha	2.13 l/s/ha	4.31 l/s/ha	5.13 l/s/ha

Table 1: Greenfield runoff rates

2.5 Surface Water Flood Risk

The Environment Agency surface water flood risk map (Figure 1 and Appendix 6) shows the majority of the site is at very low risk of surface water flooding. Very low risk corresponds to the unshaded areas of the map and refers to land having a less than 1 in 1,000 annual exceedance probability of flooding (<0.1% AEP).

There is a small area in the south-east corner of the site at low risk of surface water flooding with flood depths up to 300 mm during the 1 in 1,000 year rainfall event. Low risk refers to land having between a 1 in 1,000 and 1 in 100 annual exceedance probability of flooding (0.1% - 1% AEP). Flood depth maps are included in Appendix 6.

¹ <https://www.uksuds.com/tools/greenfield-runoff-rate-estimation>

The western end of the site is shown to be at low to high risk of surface water flooding. Flood depths during the high risk scenario (1 in 30 year event) range between 150 and 300 mm. During the medium risk scenario (1 in 100 year event), flood depths generally remain at 300 mm with some smaller areas shown to flood up to 600 mm. Flood depths during the low risk scenario (1 in 1,000 year event) are largely between 150 and 300 mm with some small areas flooding to between 300 and 600 mm.

Both areas of surface water flooding are the result of flow pathways and these should be retained as part of the development, or re-routed within the site preventing detrimental impacts to third party land. This can be achieved by keeping external areas such as roads, parking, footways and open space lower than the proposed buildings and ensuring that levels allow surface water to flow un-impeded.

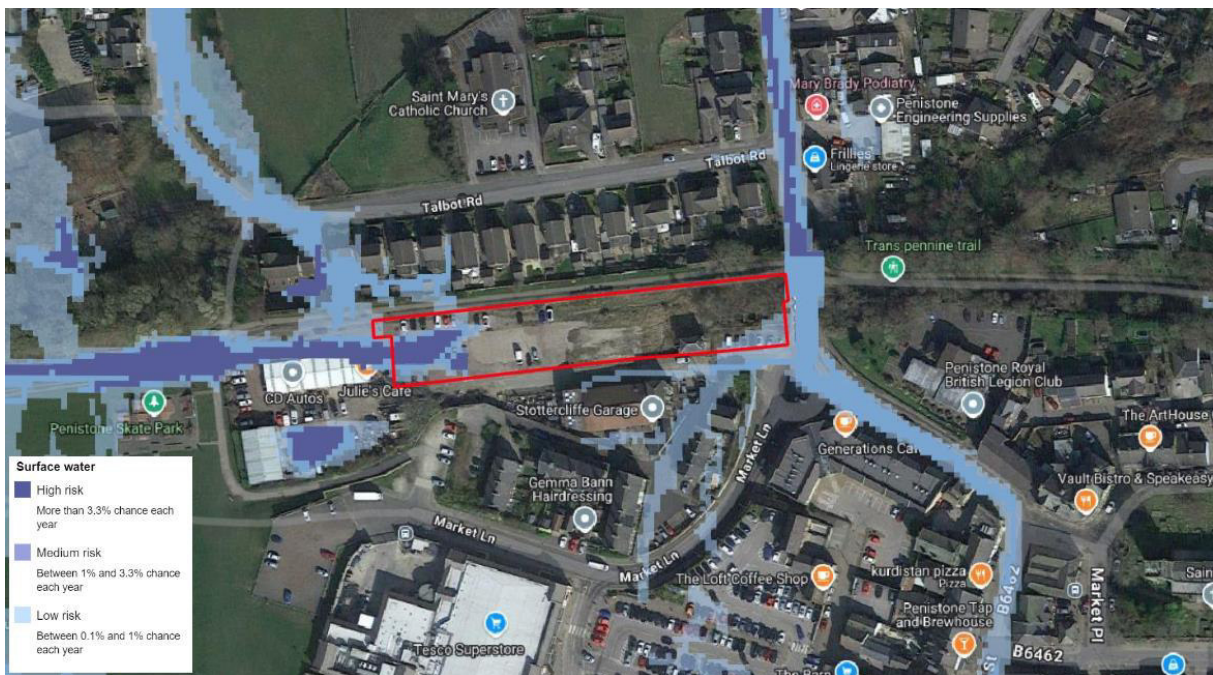


Figure 1: Environment Agency Surface Water Flood Risk Map

2.6 Drainage Hierarchy

Surface water disposal should be in accordance with the drainage hierarchy in Building Regulations Part H 2015² and Planning Practice Guidance 'Reducing the causes and impacts of flooding', paragraph 080. Disposal via SuDS methods should be considered as the first option. Disposal to the public sewer should be considered only when SuDS methods and disposal to the watercourse are shown to be unsuitable.

2.6.1 Sustainable Drainage Systems (SuDS)

SuDS methods include water infiltration systems such as soakaways, basins and filter strips, together with swales, pervious pavements, detention basins, ponds and other wetland solutions. The various methods are considered in detail in The SuDS Manual (CIRIA C753).

Full infiltration type SuDS such as soakaways are not expected to be viable on the site due to the expected shallow groundwater table and potential for infiltration to compromise the structural integrity of the foundations associated with the bridge crossing Bridge Street to the east of site.

A green roof is proposed for the restaurant. An assessment of SuDS methods and their applicability to this site is included in Appendix 4.

2.6.2 Watercourse

The nearest watercourse is the River Don which is located 250 m north of site. The River Don is not considered viable for surface water discharge due to the distance from the site and requirement for any connection to cross third-party land.

2.6.3 Public Sewer

There is a 225 mm public combined sewer and a 150 mm public surface water sewer located within Stottercliffe Road to the east and south-east of the site. Discharge to surface water sewer is the preferred method of surface water disposal.

² <https://www.gov.uk/government/publications/drainage-and-waste-disposal-approved-document-h>

2.7 Proposals for Surface Water Disposal

The final design will need the approval of the relevant statutory bodies but will broadly follow these principles:-

- Surface water disposal will be via gravity to the 150 mm surface water sewer in Stottercliffe Road to the south of the site.
- As any historic drainage connections from the site have been lost, discharge will be restricted to 3.5 l/s as the minimum practical rate, subject to agreement with Yorkshire Water.
- The total attenuation volume required for events up to the 1 in 100 year plus 40% climate change has been calculated based on the layout plan which proposes 95% of the site as impermeable / positively drained. The volume required is 215 m³, subject to detailed design. An outline drainage strategy is included in Appendix 5.
- A green roof is proposed for the restaurant.
- The surface water drainage system will be maintained by a private management company.

2.8 SuDS Maintenance

Maintenance of the SuDS systems proposed for this site will be in accordance with the recommendations within The SuDS Manual (CIRIA C753, 2015) as stipulated in Table 2, along with any recommendations provided by suppliers and product specifications.

Table 2 summarises maintenance actions and frequency for each component (surface and sub surface) of the drainage system. Maintenance access requirements such as vehicle and machinery access (where applicable) will also need consideration.

The maintenance schedules below should be followed to ensure flood risk on site does not increase through system blockages or poor maintenance and drainage features remain functional for the lifetime of the development.

<u>SuDS SYSTEM</u>	<u>ACTION</u>	<u>FREQUENCY</u>
Silt trap manholes	Inspect surface structures of inlets and outlets removing obstructions and silt as necessary. Check there is no physical damage.	Monthly
	Inspect silt traps and note rate of sediment accumulation	Monthly in the first year and then annually (or more frequently if necessary)
	Remove cover and inspect ensuring water is flowing freely and that the route for water is unobstructed. Remove debris and silt. Undertake inspection after leaf fall in autumn.	Annually
	Where there is a build-up of silt, remove and spread on site. Undertake when ground is damp in autumn or early spring and transplant turf and overseed to original design level.	As required

Sub-surface storage	Remove debris from catchment surface where it may affect performance	Monthly
	If the system allows rainfall infiltration from above, check filter surface for blockages. Remove and replace infiltration material if deemed necessary.	Annually
	Remove sediment from pre-treatment structures	Annually or as required
	Inspect inlets, outlets, vents and overflows to ensure they are operating as designed	Annually
	Remedial work to repair inlets, outlets, overflows and vents	As required
	Survey inside of storage area for sediment build up. Remove sediment if required.	As required

Permeable Paving	Initial inspection of porous pavement	Monthly for three months after installation
	General removal of litter and debris. Brush regularly.	Monthly (or more frequently if required)
	Inspect porous pavements for evidence of poor operation and/or weed growth – if required, take remedial action	Three-monthly, 48 hours after large storms for first six months
	Inspect silt accumulation rates and establish appropriate brushing frequencies	Annually
	Brushing and vacuuming of porous pavements (standard cosmetic sweep over whole surface)	Annually, after autumn leaf fall
	Removal of weeds from porous pavements or management using glyphosate applied directly into the weeds by an applicator rather than spraying	Annually (or more frequently if necessary)
	Remedial work to any depressions, rutting and cracks of the permeable pavement considered detrimental to the structural performance or a hazard to users, and replace lost jointing material	As required
	Rehabilitation of surface and upper substructure of the permeable pavement by remedial sweeping	Every 15 years or as required

Guttering, gullies and piped drainage system	General removal of litter and debris.	6 monthly, after autumn leaf fall (or as required)
	Cleaning of gullies, drainage channel and drainage channel sump units to remove debris and silt.	6 monthly, after autumn leaf fall (or more frequently if necessary)
	Cleaning of manholes to remove debris and silt.	Annually, after autumn leaf fall (or more frequently if necessary)
	If the system allows rainfall infiltration from above, check filter surface for blockages. Remove and replace infiltration material if deemed necessary.	Annually
	Remove sediment from pre-treatment structures.	Annually or as required
	Inspection of all access chambers, inspection chambers, manholes and proprietary storage units to identify and make good any defects as necessary.	Annually
	Inspect inlets, outlets, vents and overflows to ensure they are operating as designed.	Annually

Vortex flow control	Remove Litter and Debris	Monthly
	Cleaning of flow control to remove debris and silt	Annually (or more frequently if necessary)
	Inspect inlets and outlets for blockages and clear if required	Monthly
	Repair any damages to flow control device and manhole	As required
	Repair any damage to manhole cover	As required
	Repair any damage to inlet/outlet	As required

Green Roof	Inspect all components including soil substrate, vegetation, drains, irrigation systems (if applicable), membranes and roof structure for proper operation, integrity of waterproofing and structural stability	Annually and after severe storms
	Inspect soil substrate for evidence of erosion channels and identify any sediment sources	Annually and after severe storms
	Inspect drain inlets to ensure unrestricted runoff from the drainage layer to the conveyance or roof drain system	Annually and after severe storms
	Inspect underside of roof for evidence of leakage	Annually and after severe storms
	Remove debris and litter to prevent clogging of inlet drains and interference with plant growth	Six monthly and annually or as required
	During establishment (i.e. year one), replace dead plants as required	Monthly (but usually responsibility of manufacturer)
	Post establishment, replace dead plants as required (where >5% of coverage)	Annually (in autumn)
	Remove fallen leaves and debris from deciduous plant foliage	Six monthly or as required
	Remove nuisance and invasive vegetation, including weeds	Six monthly or as required
	Mow grasses, prune shrubs and manage other planting (if appropriate) as required – clippings should be removed and not allowed to accumulate	Six monthly or as required
	If erosion channels are evident, these should be stabilised with extra soil substrate similar to the original material, and sources of erosion should be identified and controlled	As required
	If drain inlet has settled, cracked or moved, investigate and repair as appropriate	As required

Inlets	Inspection for debris and sediment build up.	Annually (and following poor performance)
	Inspect inlets for blockages and clear if required.	Monthly
	Inspect inlet pipework for blockages, clogging, standing water and structural damage.	Monthly
	If drain inlet has settled, cracked or moved, investigate and repair as appropriate.	As required

Table 2: SuDS Maintenance

Method statements will be provided prior to construction. These will include details on how contaminated water, erosion and sediment control will be dealt with during construction.

2.9 Proposals for Foul Water Disposal

Foul water disposal will be to the existing 225mm combined sewer within Stottercliffe Road south of the site.

The foul water drainage system will be maintained by a private management company.

2.10 Residual Flood Risk

There is a potential flood risk to site occupiers and to others from surface water runoff as a result of developing the site. The residual risk can be managed by the general flood mitigation measures outlined below.

2.11 Mitigation Measures

The proposed surface water drainage system is designed to current best practice and to the standards laid out in the publication 'Design and Construction Guidance for foul and surface water sewers' and Building Regulations Part H 2015.

In the event of surface water exceedance during extreme rainfall events the site is laid out so that surface water runoff is directed away from buildings, including those on neighbouring streets.

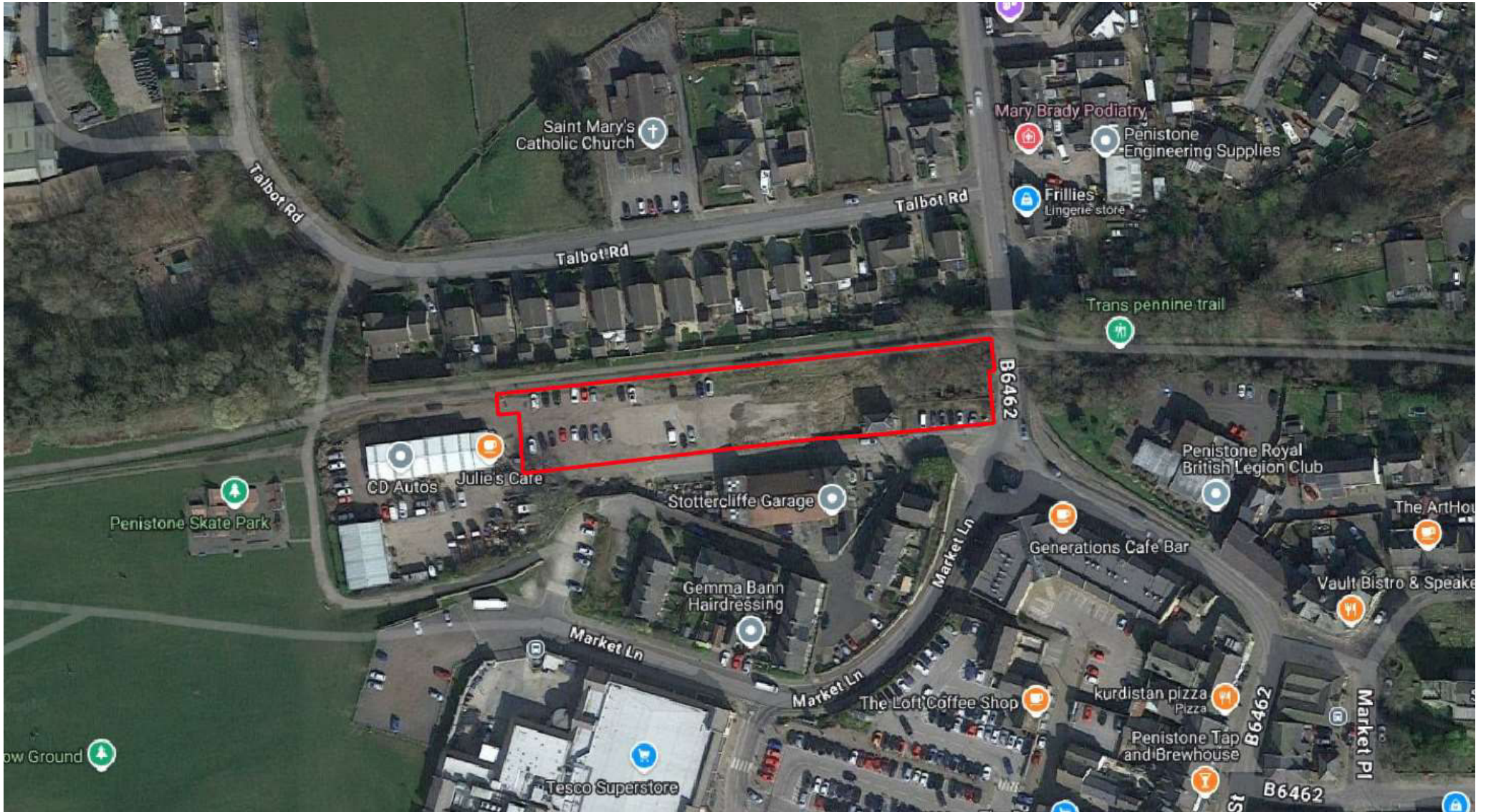
3.0 CONCLUSIONS

1. The project comprises the proposed re-development of a brownfield site for retail, short let accommodation, a hostel, offices and business units.
2. Surface water disposal has been considered in accordance with the drainage hierarchy in Building Regulations Part H 2015 and Planning Practice Guidance 'Reducing the causes and impacts of flooding', paragraph 080 reference ID 7-080-20150323.
3. Full infiltration type SuDS such as soakaways are not expected to be viable on the site due to the expected shallow groundwater table and potential for infiltration to compromise the structural integrity of the foundations associated with the bridge crossing Bridge Street to the east of site.
4. The nearest watercourse is the River Don which is located 250 m north of site. The River Don is not considered viable for surface water discharge due to the distance from the site and requirement for any connection to cross third-party land.
5. There is a 225 mm public combined sewer and a 150 mm public surface water sewer located within Stottercliffe Road to the east and south-east of the site. Discharge to surface water sewer is the preferred method of surface water disposal.
6. Surface water disposal will be via gravity to the 150 mm surface water sewer in Stottercliffe Road to the south of the site.
7. As any historic drainage connections from the site have been lost, discharge will be restricted to 3.5 l/s as the minimum practical rate, subject to agreement with Yorkshire Water.
8. The total attenuation volume required for events up to the 1 in 100 year plus 40% climate change has been calculated based on the layout plan which proposes 95% of the site as impermeable / positively drained. The volume required is 215 m³, subject to detailed design.
9. A green roof is proposed for the restaurant.

10. Foul water disposal will be to the existing 225 mm combined sewer in Stottercliffe Road, south of the site.
11. Maintenance of the drainage systems and potential SuDS systems will be in accordance with the recommendations provided by suppliers and product specifications as well as the recommendations within The SuDS Manual.
12. Method statements will be provided prior to construction. These will include details on how contaminated water, erosion and sediment control will be dealt with during construction.
13. Both the surface and foul water drainage systems will be maintained by a private management company.

APPENDICES

APPENDIX 1



APPENDIX 2

APPENDIX 3



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Old Coal Drops
 Land at St Mary's Street
 Penistone
 Fairbank Investments Ltd

Proposed Site Plan

A1 Scale	A3 Scale	Date	Drawn By	REVISION
1:200	1:400	JAN 2025	A X L S	

Drawing Number
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 PLANNING

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 DO NOT SCALE for manufacture. Verify all dimensions prior to construction

APPENDIX 4

YORKSHIRE WATER PROTECTION OF MAINS AND SERVICES

1. The position of Yorkshire Water Services Ltd (YWS) apparatus shown on the existing mains record drawing(s) indicates the **general** position and nature of our apparatus and the accuracy of this information cannot be guaranteed. Any damage to YWS apparatus as a result of your works may have serious consequences and you will be held responsible for all costs incurred. Prior to commencing major works, the exact location of apparatus must be determined on site, if necessary by excavating trial holes. The actual position of such apparatus and that of service pipes which have not been indicated must be established on site by contacting the Customer Helpline on 0845 124 24 24 for both water and sewerage.
2. The public sewer and water network is lawfully retained in its existing position and the sewerage and water undertaker is entitled to have it remain so without any disturbance. The provisions of section 159 of the Water Industry Act 1991 provides that the undertaker may "inspect, maintain, adjust, repair or alter" the network. Those rights are given to enable the undertaker to perform its statutory duties. Any development of the land or any other action that unacceptably hindered the exercise of those rights would be unlawful. The provisions contained in Section 185 of the Water Industry Act 1991 state that where it is reasonable to do so, a person may require the water supply undertaker to alter or remove a pipe where it is necessary to enable that person to carry out a proposed change of use of the land. The provisions contained in Section 185 also require the person making the request to pay the full cost of carrying out the necessary works.
3. Ground levels over existing YWS apparatus are to be maintained. Sewers in highways will **generally** be laid to give 1200mm of cover from finished ground level working to kerb races, other permanent identification of the limits of the road or to an agreed line and level. Substantial increases or decreases to this 1200mm depth of cover will result in the sewer being re-laid at your expense. Water mains and services will **generally** be laid with a minimum of 750mm depth of cover however some mains and services usually those installed over 50 years ago may have less ground cover.
4. If surface levels are to be decreased / increased significantly the effects on existing water supply apparatus will be carefully considered and if any alterations are necessary, the costs of the alterations will be recharged to you in full. Outlets on fire hydrants must be no more than 300mm below the new levels and all surface boxes must be adjusted as part of the scheme.
5. To enable future repair works to be carried out without hindrance; any pipe, cable, duct, etc. installed parallel to a water main or service pipe should not be installed directly over or within 300mm of a water main or service pipe or 1000mm of a waste water asset. Where a pipe, cable, duct, etc. crosses a main or service it should preferably cross perpendicular or at an angle of no less than 45° and with a minimum clearance of 150mm. These requirements apply to activities within an existing highway and are relevant to the installation of pipes, cables, ducts, etc. up to and including 250mm in diameter (*see illustration below*). Necessary protection measures for installations greater than 250mm in diameter and/or in private land will need to be agreed on an individual basis. Installations within a new development site must comply with the National Joint Utilities Group publication Volume 2: NJUG Guidelines On The Positioning Of Underground Utilities Apparatus For New Development Sites.
6. All excavation works near to YW apparatus should be by hand digging only.
7. Backfilling with a suitable material to a minimum 300mm above YW apparatus is required.
8. Adequate support must be provided where any works pass under YW apparatus.
9. Jointing chambers, lighting columns and other structures must be installed in such a way that future repair or maintenance works to YW apparatus will not be hindered.
10. Apparatus such as; railings, sign posts, etc. must not be placed in such a way that they prevent access to or full operation of controlling valves, hydrants or similar apparatus. YWS surface boxes must not be covered or buried. Any adjustment, alteration or replacement of manhole covers must be agreed on site prior to the commencement of the works with a YWS Inspector who may be contacted via our Call Centre on 0845 124 24 24.
11. Explosives shall not be used within 100 metres of any Yorkshire Water Services apparatus or installations.
12. Vibrating plant should not be used directly over any apparatus. Movement or operation by vehicles or heavy plant is not to be permitted in the immediate vicinity of YWS plant or apparatus unless there has been prior consultation and, if necessary, adequate protection provided without cost to YWS.
13. **Under no circumstances** should thrust boring or similar trenchless techniques commence until the actual position of the Company's mains/services along the proposed route have been confirmed by trial holes.
14. Any alterations to the highway should be notified following the procedures outlined in the New Road and Street Works Act 1991 Code of Practice; Measures Necessary Where Apparatus Is Affected By Major Works (Diversionary Works).
15. You will be held responsible for any damage or loss to YWS apparatus during and after completion of work, caused by yourselves, your servant or agent. Any damage caused or observed to YWS plant or apparatus should be immediately reported to YWS. Should YW incur any costs as a result of non-compliance with the above, all costs will be rechargeable in full.
16. You should ensure that nothing is done on the site to prejudice the safety or operation of YWS employees, plant or apparatus.
17. In accordance with the New Roads and Street Works Act 1991, Chapter 22, Part 3, Section 80. The location of any identified YW asset "*which is not marked, or is wrongly marked, on the records made available*" should be communicated back to Yorkshire Water. The location of the apparatus should be identified on copies of the supplied plans which should be returned to Yorkshire Water (Asset Records Team) with photographic supporting evidence where possible.
18. The Government has decided that responsibility for private sewers serving two or more properties and lateral drains (the section of pipe beyond the boundary of a single property, connecting it to the public sewer) will be transferred to the water companies on Oct 1 2011.














Private pumping stations will also transfer during the period 1 October 2011 – 1 Oct 2016. Records of these assets may not yet be shown on the existing mains record drawing(s). If you encounter any of these assets you must inform Yorkshire Water Services Ltd (YWS).

19. Please note that the information supplied on the enclosed plans is reproduced from Ordnance Survey material with the permission of the Ordnance Survey on behalf of the Controller of Her Majesty's Stationery Office, © Crown Copyright. Unauthorised reproduction infringes Crown Copyright and may lead to prosecution or civil proceedings. Licence Number 1000019559.
20. This information is for guidance only and the position and depth of any YW apparatus is approximate only. Likewise, the nature and condition of any YW apparatus cannot be guaranteed. YW has no responsibility for recording the locations of privately owned apparatus. As of 1 October 2011, there may be some lateral drains and/or public sewers which are not documented on YW records but may still be present. For the avoidance of doubt, this information is not a substitute for appropriate professional and/or legal advice. YW accepts no responsibility for any inaccuracy or omissions in this information. The actual position of YW apparatus must be determined on site by excavating trial holes by hand. YW requires a minimum of two working days' written notice of the intention to excavate any trial holes before any excavation can be undertaken. If there are any queries in this respect please contact Yorkshire Water on 0845 124 24 24.

Property Identifier










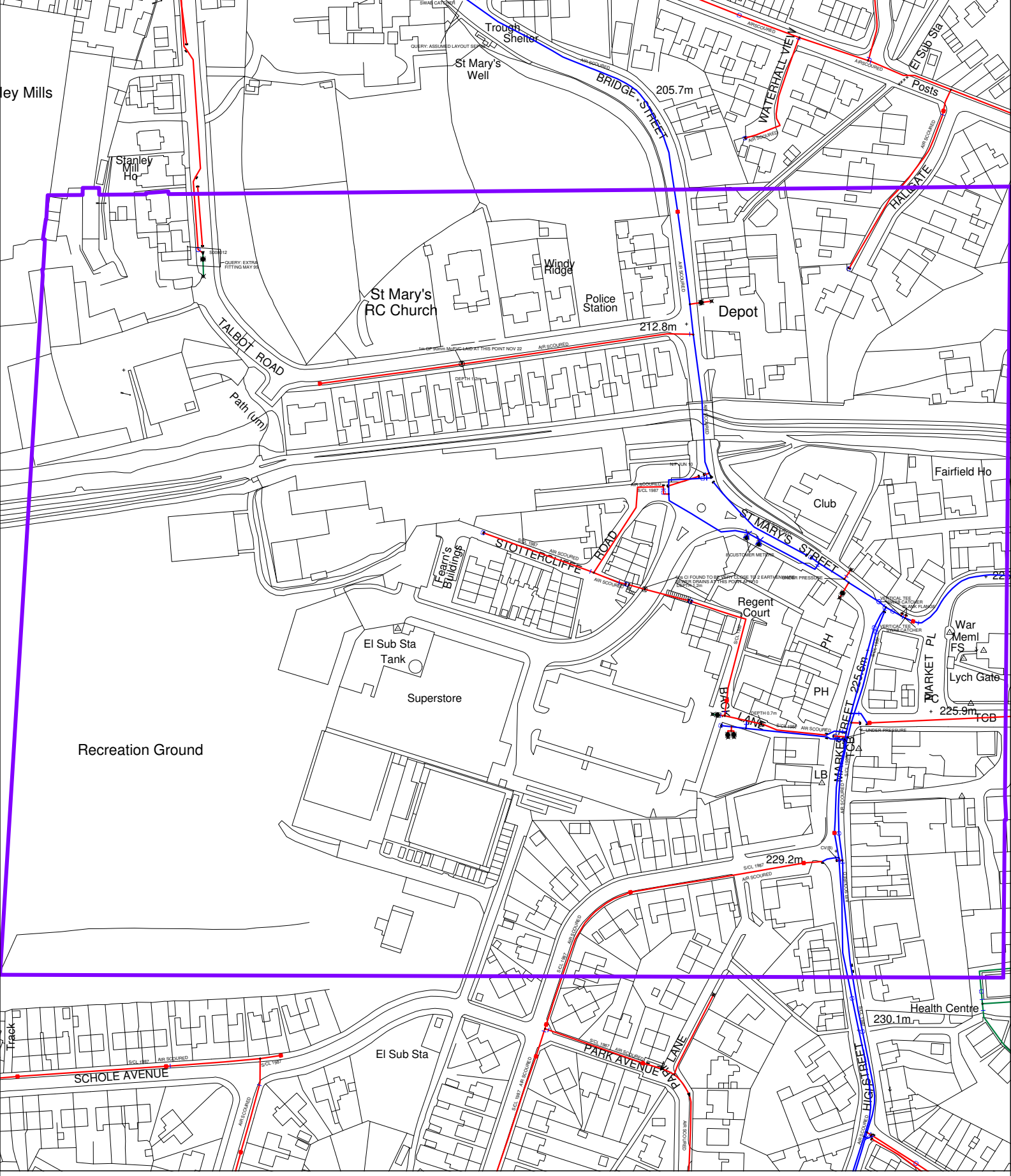
Sewer Legend

	Combined Sewer		S24 Combined Sewer
	Surface Water Sewer		S24 Surface Water Sewer
	Foul Sewer		S24 Foul Sewer
	Section 104 Sewer		Rising Main
	Overflow Sewer		Abandoned Sewer
	Syphone Sewer & Vacuum Sewer		
	Pumping Station		Public Sewer Treatment Works

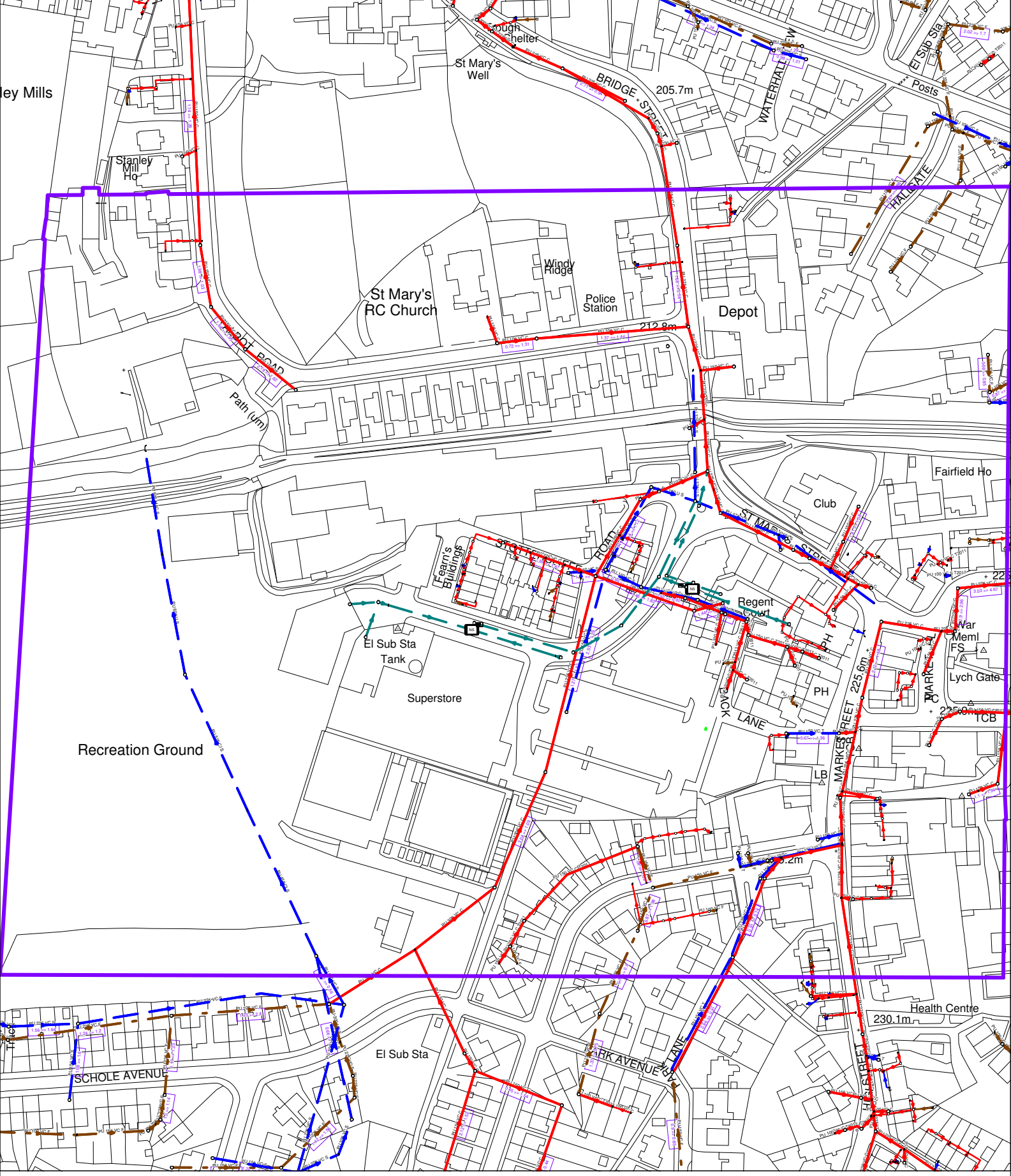
Please note that the direction of flow arrows may not always appear depending on the scale of the map.

Water Legend

	Water Main 4" and below
	Water Main 4" and above
	Raw Water Main
	Private Water Main
	Fire Hydrant
	Pumping Station
	The assets in this area are the responsibility of another Water Undertaker



Public Clean Water Network 16/08/2024 09:05:47 OS Grid Coordinates: 424184 : 403078 Map Name : SE2403SW svcGISSafeMovePD



Public Waste Water Network 16/08/2024 09:05:51 OS Grid Coordinates: 424184 : 403078 Map Name : SE2403SW svcGISSafeMovePD



YorkshireWater

**Mr I Hopkinson
Eastwood Consulting Engineers
St. Andrews House
23 Kingfield Road
Sheffield
S11 9AS**

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

Tel: 0345 120 8482

**Your Ref:
Our Ref: A003985**

**Email:
technical.sewerage@yorkshirewater.co.uk**

**For telephone enquiries ring:
Chris Roberts on 0345 120 8482**

20th August 2024

Dear Mr I Hopkinson,

Old Coal Drops, Stottercliffe Road, Penistone, S36 6DT – Pre-Planning Sewerage Enquiry V595828

Thank you for your recent enquiry. Our charge of £195.00 plus VAT will be added to your account with us, reference EPL039. 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:

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 225 mm diameter public combined sewer recorded in Stottercliffe Road, at a point to the east of the site.

Foul water from kitchens and/or food preparation areas of any restaurants and/or canteens etc. must pass through a fat and grease trap of adequate design before any discharge to the public sewer network.

This permission is not an acceptance in respect to any planning conditions imposed under the Grant of Planning Permission.



Surface Water

It is accepted that soakaways will not be suitable at this location.

The proposed surface water discharge is unacceptable without evidence proving existing positive connectivity.

Curtilage surface water discharges to the public sewer will be restricted to the level of run-off - i.e. same rate of discharge - to that from the existing use of the site less a 30% reduction in the existing discharge. Any discharge of surface water from the site should discharge to similar points of connection to that of the existing use of the site. You will need to demonstrate positive drainage, based on a 1 in 1 year storm, to the public sewer to Yorkshire Water by means of investigation and calculation carried out at your expense.

To do this, Yorkshire Water requires to see existing and proposed drainage layouts with pipe sizes, gradients, gullies, downpipes and connection points, measured impermeable areas of the present and proposed use of the site, along with the calculations that show the existing and proposed discharge rate from the site to the public sewer.

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.

Surface water run-off from communal parking (greater than 800 sq metres or more than 50 car parking spaces) and hardstanding must pass through an oil, petrol and grit interceptor/separator of adequate design before any discharge to the public sewer network. Roof water should not pass through the traditional 'stage' or full retention type of interceptor/separator. It is good drainage practice for any interceptor/separator to be located upstream of any on-site balancing, storage or other means of flow attenuation that may be required.

Surface water run-off from areas of vehicular parking and/or hardstanding etc. must pass through an oil, petrol and grit interceptor/separator of adequate design before any discharge to the public sewer network. Roof water should not pass through the traditional 'stage' or full retention type of interceptor/separator.

It is imperative, however that surface water run-off from the forecourt of petrol stations, areas used for the delivery of fuel, areas used for and immediately adjacent to vehicle washing facilities and/or other similar areas where detergent is likely to be used is not discharged to any public surface water sewer network. Surface water from such areas must pass through an oil, petrol and grit interceptor/separator of adequate design before discharge to the public foul or combined sewer network. A trade effluent consent - that may be conditional and, amongst other things, place a restriction on the rate of discharge to public sewer - may be required for such discharges. The developer is advised to contact Yorkshire Water's Industrial Waste Section (telephone 0345 1242424) about any such proposal.

It is good drainage practice for any interceptor/separator to be located upstream of any on-site balancing, storage or other means of flow attenuation that may be required.



YorkshireWater

Other Observations

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 - <https://www.yorkshirewater.com/developers/sewerage/sewerage-connections/>

Under the provisions of section 111 of the Water Industry Act 1991 it is unlawful to pass into any public sewer (or into any drain or private sewer communicating with the public sewer network) any items likely to cause damage to the public sewer network interfere with the free flow of its contents or affect the treatment and disposal of its contents. Amongst other things this includes fat, oil, nappies, bandages, syringes, medicines, sanitary towels and incontinence pants. Contravention of the provisions of section 111 is a criminal offence.

Yorkshire Water's Trade Effluent team must be consulted in respect of any proposed trade effluent discharge to the public sewer. Please visit - <https://www.yorkshirewater.com/business/trade-effluent/>

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



YorkshireWater

Chris Roberts

Town Planning Technician
Land & Property

For any Pre-Planning correspondence please email - technical.sewerage@yorkshirewater.co.uk

For any Planning correspondence please email - planningconsultation@yorkshirewater.co.uk

APPENDIX 5

Calculated by: Ian Hopkinson

Site name: Old Coal Drops

Site location: Penistone

Site Details

Latitude: 53.52671° N

Longitude: 1.63316° W

Reference: 1880651392

Date: Jan 27 2025 13:51

This is an estimation of the greenfield runoff rates that are used to meet normal best practice criteria in line with Environment Agency guidance "Rainfall runoff management for developments", SC030219 (2013), the SuDS Manual C753 (Ciria, 2015) and the non-statutory standards for SuDS (Defra, 2015). This information on greenfield runoff rates may be the basis for setting consents for the drainage of surface water runoff from sites.

Runoff estimation approach: IH124

Site characteristics

Total site area (ha): 0.34

Methodology

Q_{BAR} estimation method: Calculate from SPR and SAAR

SPR estimation method: Calculate from SOIL type

Notes

(1) Is $Q_{BAR} < 2.0$ l/s/ha?

When Q_{BAR} is < 2.0 l/s/ha then limiting discharge rates are set at 2.0 l/s/ha.

Soil characteristics

	Default	Edited
SOIL type:	2	2
HOST class:	N/A	N/A
SPR/SPRHOST:	0.3	0.3

(2) Are flow rates < 5.0 l/s?

Where flow rates are less than 5.0 l/s consent for discharge is usually set at 5.0 l/s if blockage from vegetation and other materials is possible. Lower consent flow rates may be set where the blockage risk is addressed by using appropriate drainage elements.

Hydrological characteristics

	Default	Edited
SAAR (mm):	906	906
Hydrological region:	3	3
Growth curve factor 1 year:	0.86	0.86
Growth curve factor 30 years:	1.75	1.75
Growth curve factor 100 years:	2.08	2.08
Growth curve factor 200 years:	2.37	2.37

(3) Is $SPR/SPRHOST \leq 0.3$?

Where groundwater levels are low enough the use of soakaways to avoid discharge offsite would normally be preferred for disposal of surface water runoff.

Greenfield runoff rates

	Default	Edited
Q_{BAR} (l/s):	0.84	0.84
1 in 1 year (l/s):	0.72	0.72
1 in 30 years (l/s):	1.47	1.47
1 in 100 year (l/s):	1.74	1.74
1 in 200 years (l/s):	1.99	1.99

This report was produced using the greenfield runoff tool developed by HR Wallingford and available at www.uksuds.com. The use of this tool is subject to the UK SuDS terms and conditions and licence agreement, which can both be found at www.uksuds.com/terms-and-conditions.htm. The outputs from this tool are estimates of greenfield runoff rates. The use of these results is the responsibility of the users of this tool. No liability will be accepted by HR Wallingford, the Environment Agency, CEH, Hydrosolutions or any other organisation for the use of this data in the design or operational characteristics of any drainage scheme.

EASTWOOD CONSULTING ENGINEERS LTD

Project: 49192	Sheet	1.00
location Old Coal Drops	Job No.	49192
town Penistone	Date	31.01.25
Subject: Surface Water Drainage Storage Estimates	Designed	IH
	Checked	-
	Revision	P02

Site Details :

Information From Wallingford Maps :

Location :	Penistone	M5-60	14.0 mm
Grid Ref :	424400, 403395	r	0.20
		SAAR	906 mm
Total Site Area	0.340 ha	UCWI	97 (Fig. 9.7)
Deduct areas to soakaways	<u>0.000</u> ha	Soil Type	2
Effective Drainage Area	0.340 ha	SOIL	0.3 (Section 7.4)

Total Impermeable	0.324 ha	95%	assumed impermeable area
Allow for Urban Creep	<u>0.000</u> ha		
Total Impermeable	0.324 ha		

PIMP	95.3%	
PR	<u>73.4</u>	Equation 7.3
Cv	<u>0.77</u>	Equation 7.21
Default Cv	1.00	Designer to insert to override calculated Cv

Design Return Period	100 Years	Max. Branch Length	200 metres
		Approx. Time of Flow	3.3 mins

Percentage Increase For Climate Change: **40%**

Details of Restricted Discharge :

Maximum Permitted Rate of Flow from the System	3.5 Litres/sec
Assumed Average Flow as a Proportion (Estimate)	90 %
Average Rate of Flow	3.2 Litres/sec

Calculation of Critical Duration and Storage Volume Required :

Trial Durations (mins)	240	360	480	720	1440	2160	2880
Average Point Intensity (mm/hr)	13.0	10.1	8.4	6.5	4.1	3.1	2.6
Volume of Run-off for the period = Area x Cv x i x D (m3)	168.4	195.6	217.3	251.1	317.9	362.6	396.9
With climate change	235.8	273.9	304.2	351.5	445.1	507.7	555.7
Volume of Out-flow for the period = Ave. flow x (D+Tf)(m3)	46.0	68.7	91.4	136.7	272.8	408.9	545.0
Storage Volume for this Duration (m3)	190	205	213	215	172	99	11

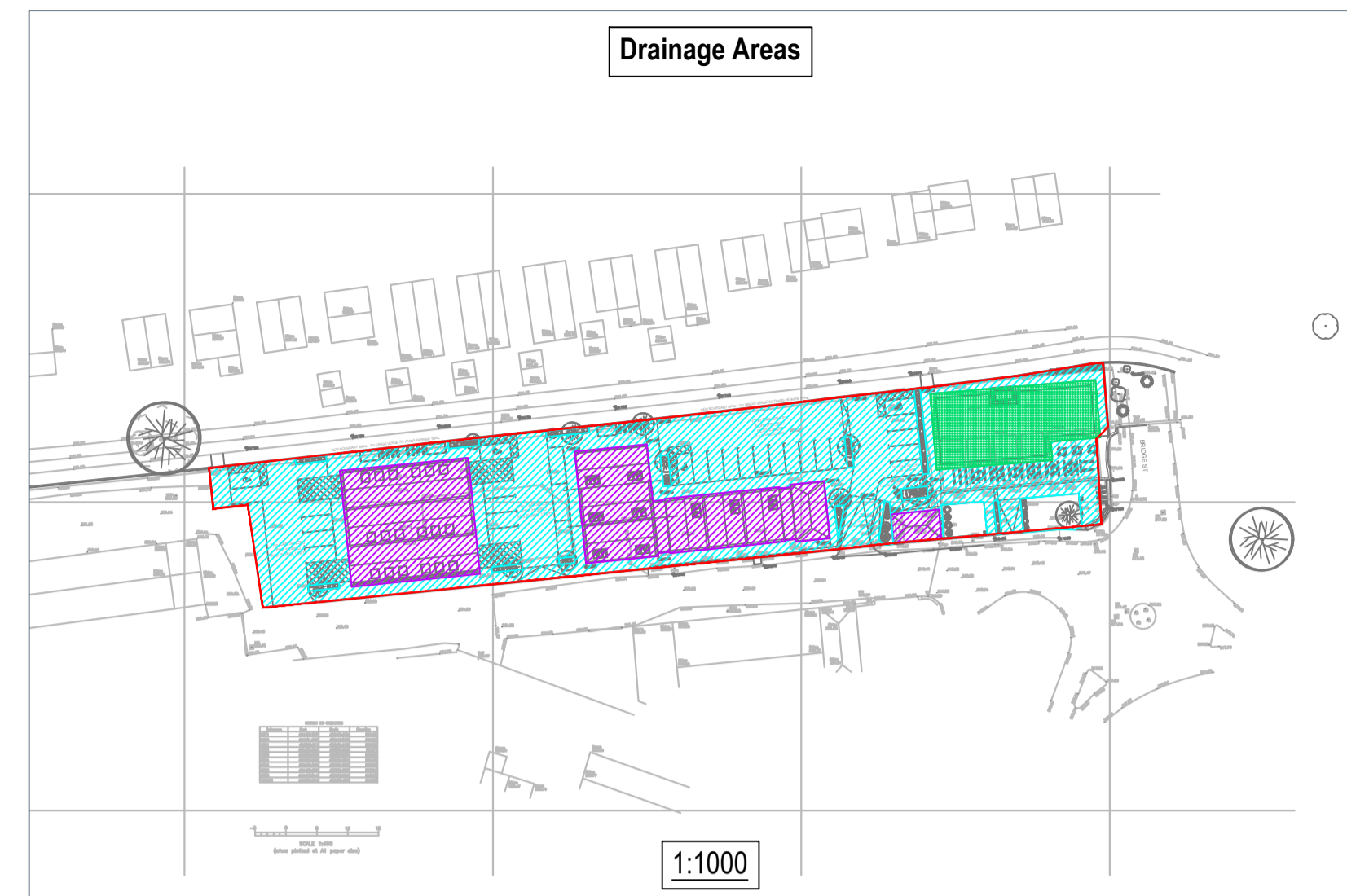
Storage Volume Required for

100 Year Return Period = **215 m³**
 Is this the worst case (ie. Critical Duration)? 1 (1 = Yes, 0 = No)

SUDS Type	SUDS Technique	Description	Suitable	Comments
Source Control	Green roof	Vegetated roof that reduces runoff volume and rate	Yes	A green roof is proposed for the restaurant.
	Rain garden / bio retention area	Small depressions in the ground that can act as infiltration points.	Possible	Small rain gardens may be suitable subject to layout.
	Rainwater harvesting / rainwater butts	Rainwater is stored and re-used	Possible	Water butts may be suitable.
	Permeable paving	Paving which allows inflow of rainwater into underlying construction/soil	Yes	Likely that external areas including parking, vehicle access and paths could be surfaced in Type C (sealed) permeable paving / resin bound material to allow infiltration into the underlying sub-base which would be drained by perforated pipework.
Infiltration	Soakaway	Pit or trench which stores and disposes of water to the ground	No	Expected shallow groundwater table and potential for infiltration to compromise the structural integrity of the foundations associated with the Bridge Street bridge east of the site.
	Filter Drain	Trench which conveys and/or disposes of water to the ground.	No	“
	Infiltration Basin	Shallow basin which stores and disposes of water to the ground	No	“ and lack of suitable open space.
Conveyance	Swale	Shallow vegetated depression which conducts and retains water	No	Lack of suitable space.
Detention	Subsurface storage	Traditional underground pipes, tank storage, or modular systems	Yes	Subject to finalised layout.
	Detention Basin	Normally dry but may have small permanent water pools at the inlet and outlet. They can function as POS	No	Lack of suitable open space.

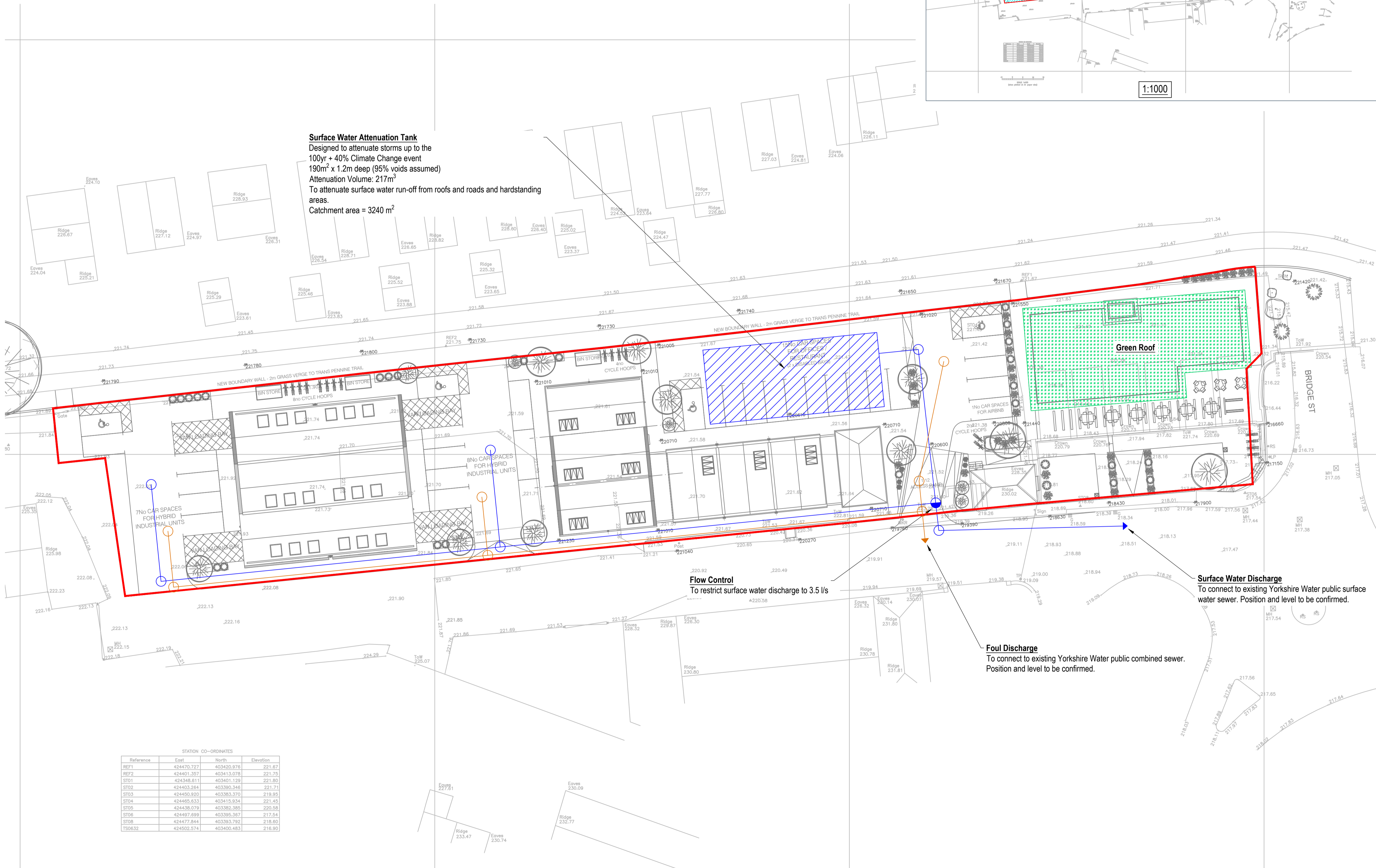
Old Coal Drops, Penistone
SuDS Checklist

	Pond	Permanent body of water	No	Lack of suitable open space. Unsuitable for small sites.
	Wetland	Permanent body of shallow water or marsh	No	



- KEY**
- Site boundary - 0.34 ha
 - Green Roof - 0.03 ha
 - Roofs - 0.09 ha
 - Hardstanding - 0.20 ha
- Total drained area - 0.32 ha**
- Surface water attenuation tank
 - Proposed surface water drainage with manholes
 - Proposed surface water flow control
 - Proposed Private Foul Water Drainage

Surface Water Attenuation Tank
 Designed to attenuate storms up to the 100yr + 40% Climate Change event
 190m² x 1.2m deep (95% voids assumed)
 Attenuation Volume: 217m³
 To attenuate surface water run-off from roofs and roads and hardstanding areas.
 Catchment area = 3240 m²



Reference	East	North	Elevation
REF1	424470.727	403420.076	221.62
REF2	424401.307	403413.078	221.75
ST01	424348.611	403401.129	221.80
ST02	424403.264	403390.348	221.71
ST03	424400.001	403393.370	218.95
ST04	424465.633	403415.934	221.43
ST05	424438.079	403382.385	220.58
ST06	424497.099	403396.387	217.54
ST08	424477.844	403393.792	218.60
TS0632	424502.574	403400.483	216.90



REV	DESCRIPTION	IH	AM	DATE
P01	First issue.			31.01.2025

FAIRBANK INVESTMENTS

OLD COAL DROPS, PENISTONE

DRAINAGE STRATEGY

St Andrew's House
 23 Kingfield Road
 Sheffield, S11 9AS

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 E: mail@eastwoodce.com
 eastwoodce.com

ECE PROJECT No	SCALE AT A1	STATUS	SUITABLE FOR
49192	1:250	S0	Initial

DRAWING NUMBER	REV
49192 - ECE - XX - XX - DR - C - 0001	P01

Project Originator Zone Level Type Role Number

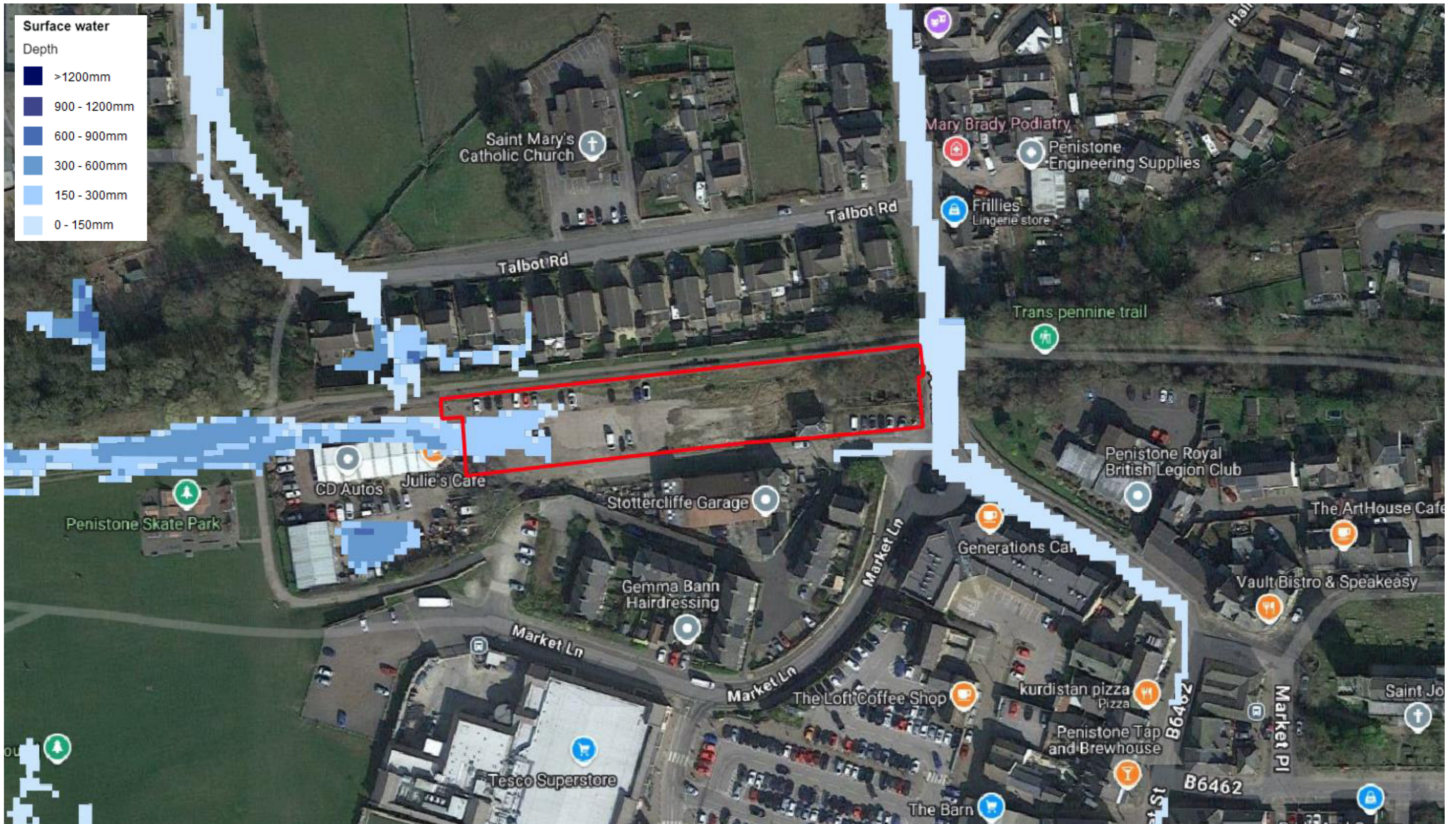
APPENDIX 6



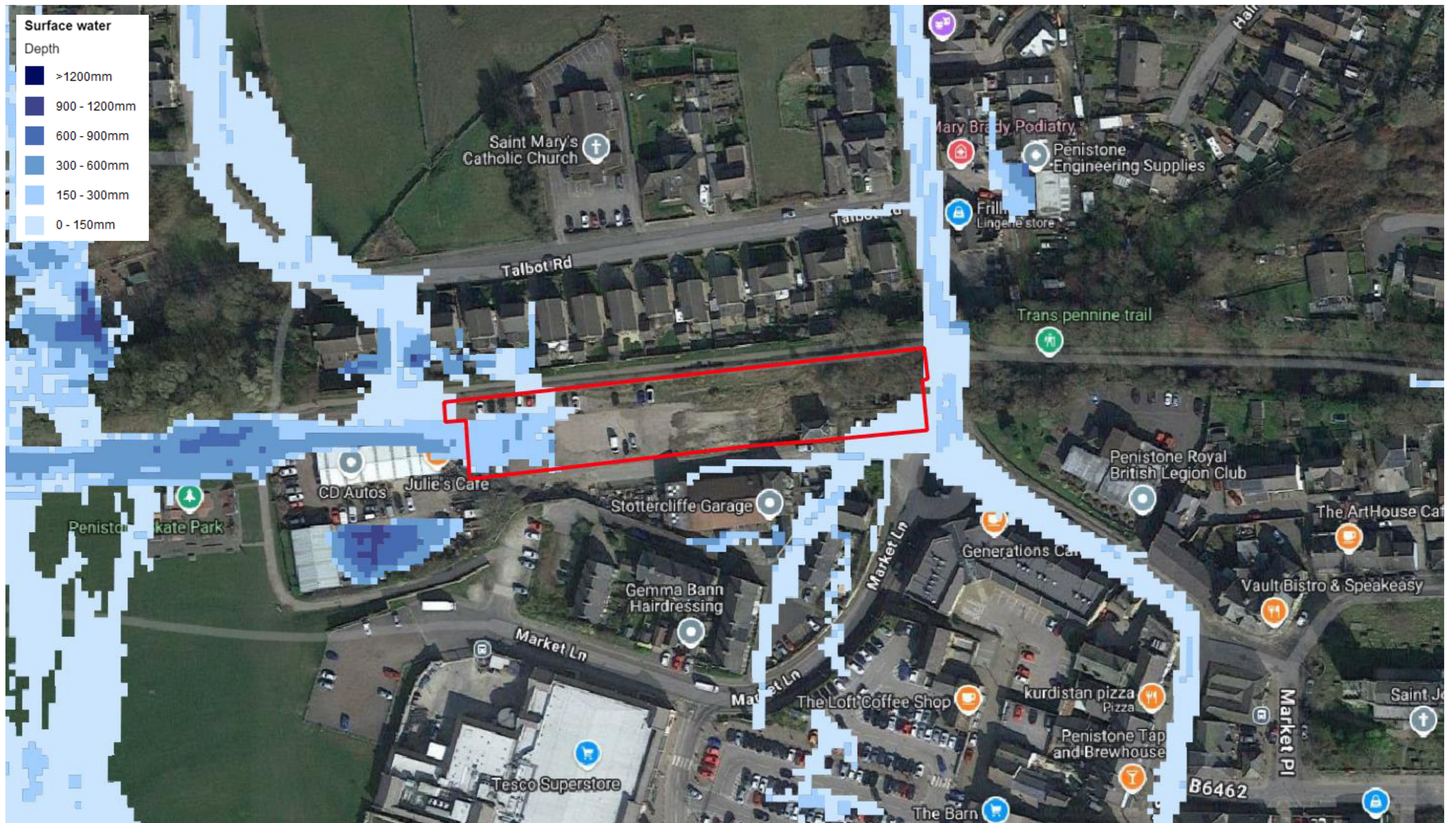
Environment Agency – Surface Water Flood Risk



Environment Agency – Surface Water Flood Depth – High Risk Scenario (1 in 30 year event)



Environment Agency – Surface Water Flood Depth – Medium Risk Scenario (1 in 100 year event)



Environment Agency – Surface Water Flood Depth – Low Risk Scenario (1 in 1000 year event)



Eastwood

CONSULTING ENGINEERS

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