Flood Risk Assessment
Land off Wakefield Road, Dewsbury

For Whitshaws Builders

V1 – 19.11.2024

V2 – 26.11.2024

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Introduction:-
Clifford Engineering were appointed to carry out a Flood Risk Assessment of the site at Wakefield Road, Dewsbury on behalf of Whitshaws Builders.

The Site:-
The site measures approximately 0.12hectares and is roughly rectangular in shape.

There are existing trees on site, with Wakefield Road to the North and Park View to the East. The site doesnt have any buildings or hard standing, but grassland with some trees to the rear.

Existing Drainage:-
There is an existing 150mm Ø combined sewer crossing the site, West to East. This changes to a 225mmØ at the manhole in Park View.

There is also an existing 150mmØ Surface Water sewer crossing the site, West to East. This looks to outfall into the combined manhole in Park View, where it upsizes to 225mmØ.

Yorkshire water provided a pre planning enquiry where they advised a 450mm x 375mm culverted watercourse is located to the east of the site

The existing site lies within Flood Zone 1 and is not in a source protection zone, so no further measures are required.

The proposals:-
Whiltshaws Builders are proposing to construct 5 new residential dwellings, with associated driveways, paths and vehicular access.

It has been calculated that the proposed impermeable area, comes to 0.087Ha.

Yorkshire Water has provided a Pre Planning Enquiry, dated 18th November 2024, and confirmed that the foul can discharge into the existing 150mmØ combined sewer crossing the site.
Yorkshire Water advise that the Surface water may be able to discharge into the culverted watercourse to the East. An email has been sent to Kirklees LLFA, but no reply has been received at the time of writing this report, so it is assumed we can not connect onto the culverted watercourse.

Yorkshire Water advise as a last resort, the surface water can discharge into the 150mmØ Surface Water sewer crossing the site at a rate of 3.5L/S.

Soakaways:-
As there isn't a watercourse close to the site, the next method for the discharge of Surface Water is via infiltration through a soakaways. 3 soakaway tests were undertaken on the 8th, 9th and 10th January 2024 and the results are as follows:-

	Hole # 1		Test Date	Test #	Start Water Depth	Start Time	End Time	End Depth
Length	1800mm		08/01/2024	1	950mm	12:07	16:07	950mm
Width	700mm		09/01/2024	2	950mm	11:37	15:37	940mm
Depth	1500mm		10/01/2024	3	950mm	09:05	13:05	940mm

The results show that once the excavations were filled and left for around 4 hours, the water level hadn't moved on the 8th Jan. On the 9th and 10th, it had only dropped by 10mm in the same timeframe.
In conclusion, soakaways do not work on the site.

Attenuation:-
We are assuming the surface water is to discharge into the existing 150mmØ Surface Water Sewer crossing the site at a rate of 3.5L/S.

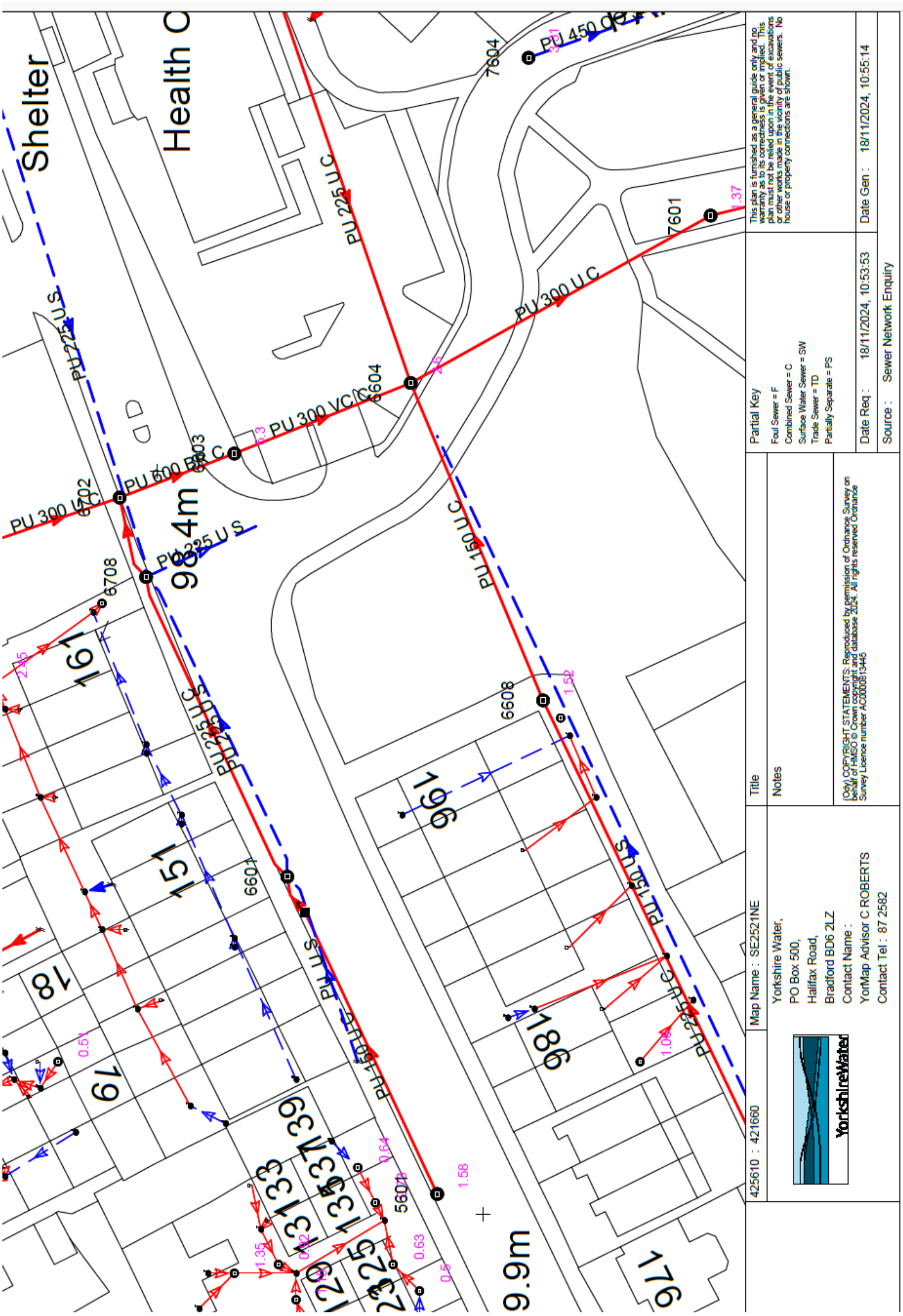
As such, with the impermeable area of 0.087Ha over the 0.12Ha site, it is calculated that the 1:100yr attenuation volume required is 29.5m³.

The Surface Water attenuation is proposed, in the form of crates situated under the new private drive. The new properties are proposed to discharge into the storage crates and to be throttled using a flow control system on the downstream manhole.

Conclusions:-

- Foul to discharge into existing 150mmØ combined crossing the site
- Soakaway test proveed that soakaways do not work
- Surface water is to discharge into existing 150mmØ Surface Water Sewer crossing the site at 3.5L/S
- Attenuation volume calculated to be 29.5m³

Yorkshire Water Drainage Map



Yorkshire Water Pre Planning Enquiry

YorkshireWater

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Email:
technical.sewerage@yorkshirewater.co.uk

Your Ref:
Our Ref: A005234

For telephone enquiries ring:
Chris Roberts on 0345 120 8482

18th November 2024

Dear Mr Tidmarsh,

411 - Wakefield Road, Dewsbury, WF12 8AH - Pre-Planning Sewerage Enquiry V662464

Thank you for your recent enquiry and remittance. Our official VAT receipt has been sent to you under separate cover. 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:

Existing Infrastructure

There is a 150 mm diameter public surface water sewer recorded crossing the site. No buildings, or other obstructions, are to be erected within 3 (three) metres is required at each side of the sewer centre-line, no trees planted within 5 (five) metres of this public sewer.

There is a 150 mm diameter public combined water sewer recorded crossing the site. No buildings, or other obstructions, are to be erected within 3 (three) metres is required at each side of the sewer centre-line, no trees planted within 5 (five) metres of this public sewer.

It may not be acceptable to raise or lower ground levels over the sewer, nor to restrict access to the manholes on the sewer. If you wish to have this sewer diverted under Section 185 of the Water Industry Act 1991 an application should be made in writing. To discuss this matter, please telephone 0345 120 84 82.

Foul Water

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.

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Foul water domestic waste can discharge to the 150 mm diameter public combined sewer recorded crossing the site.

Surface Water

The developer's attention is drawn to Requirement H3 of the Building Regulations 2010. This establishes a preferred hierarchy for surface water disposal. Consideration should firstly be given to discharge to soakaway, infiltration system and watercourse in that priority order.

Sustainable Drainage Systems (SuDS), for example the use of soakaways and/or permeable hardstanding etc, may be a suitable solution for surface water disposal appropriate in this situation. You are advised to seek comments on the suitability of SuDS in this instance from the appropriate authorities.

It is understood that a 450 x 375 mm culverted watercourse is located to the east of the site. This appears to be the obvious place for surface water disposal (if SuDS are not viable). Please note Yorkshire Water cannot provide plans of culverted watercourses or highway drains. To obtain plans please contact the Lead Local Flood Authority for more details.

As a last resort and subject to providing satisfactory evidence as to why the other methods of surface water disposal have been discounted, curtilage surface water may discharge to the 150 mm diameter public surface water sewer recorded crossing the site.

The surface water discharge from the site to be restricted to not greater than 3.5 (three point five) litres/second. This permission is not an acceptance in respect to any planning conditions imposed under the Grant of Planning Permission.

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

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/

An off-site foul and surface water sewer may be required which may be provided by the developer and considered for Code 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.

Prospectively adoptable sewers and pumping stations must be designed and constructed in accordance with the Code for Adoption 2023/24, pursuant to an agreement under Section 104 of the Water Industry Act 1991. We are happy to offer pre-development technical advice on any prospective sites that you would like to put forward for adoption, prior to submission of your adoption application.

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An application to enter into a Section 104 agreement must be made in writing prior to any works commencing on site. Please contact our Sewer Adoption, Diversion and Requisition (telephone 0345 120 84 82) or email technical.sewerage@yorkshirewater.co.uk or visit - https://www.yorkshirewater.com/developers/sewerage/sewer-adoptions/ for further information.

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
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EA Flood Map

Environment Agency

Flood map for planning

Your reference	Location (easting/northing)	Created
<Unspecified>	**425658/421661**	**19 Nov 2024 0:25**

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

You will need to do a flood risk assessment if your site is **any of the following:**

- bigger that 1 hectare (ha)
- **In an area with critical drainage problems as notified by the Environment Agency**
- identified as being at increased flood risk in future by the local authority's strategic flood risk assessment
- at risk from other sources of flooding (such as surface water or reservoirs) and its development would increase the vulnerability of its use (such as constructing an office on an undeveloped site or converting a shop to a dwelling)

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.

Flood risk data is covered by the Open Government Licence **which** sets out the terms and conditions for using government data. https://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/

Use of the address and mapping data is subject to Ordnance Survey public viewing terms under Crown copyright and database rights 2024 OS AC0000807064. https://flood-map-for-planning.service.gov.uk/os-terms

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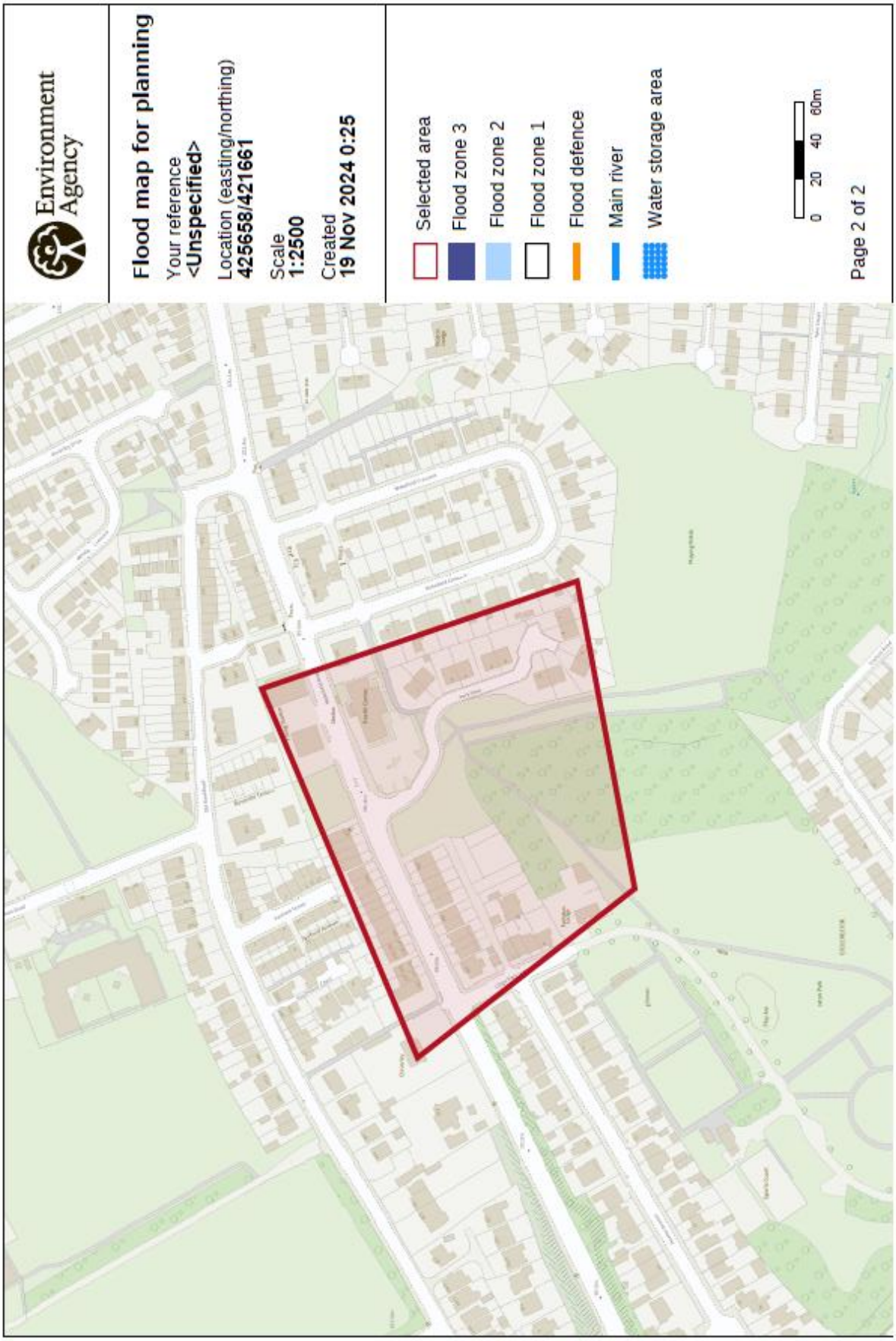

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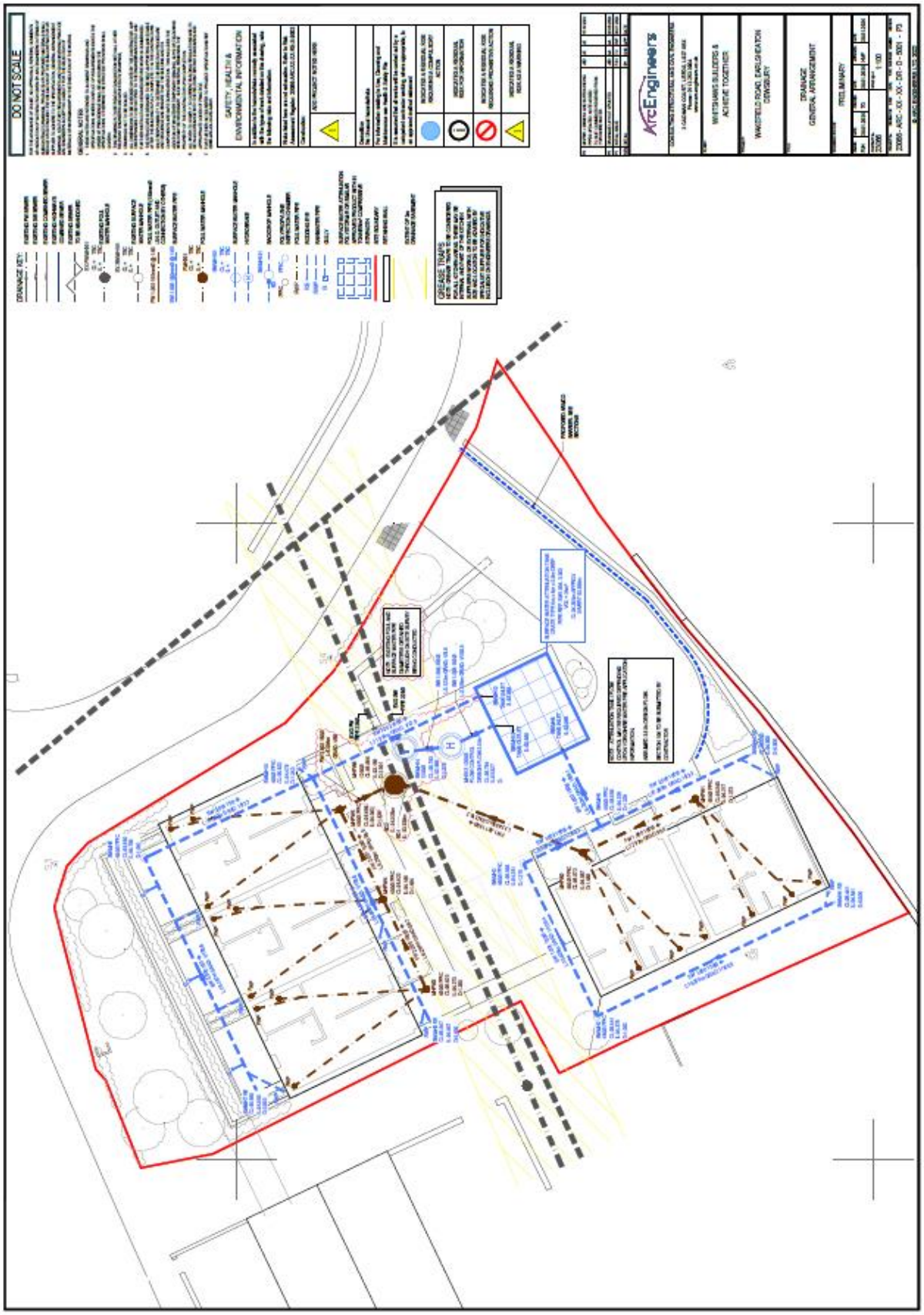
Proposed Drainage Plan