



**Project No:** 23187

**Project:** Goodman Fold Farm,  
Chorley Road,  
Bolton,  
Lancashire,  
BL6 5LG

**Subject:** SuDS Drainage Statement

**Date:** 6<sup>th</sup> December 2023

**FLOOD FLOW LTD**

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## 1.0 GENERAL

This drainage statement has been prepared to support the retrospective planning application for a new storage building.

The site is currently featuring access road, dwelling, storage buildings, car parking and open expanse of land including shrubs and trees as shown below.



*Figure 1.1 – Original Site Location Plan*

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*Figure 1.2 – Existing Site Location Plan*

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## 2.0 DRAINAGE DESIGN

### 2.1 Surface Water Drainage

#### 2.1.1 Flood Risk

The site is less than 1.0 ha and lies wholly within the Zone 1 Flood Map. This means the land is assessed as having a low probability of flooding, which is less than 1 in 1000 (<0.1%). However, a site-specific Flood Risk Assessment may be required as the site is over 1ha. The proposed development site is also in area with critical drainage problems as notified by the Environment Agency.



Figure 2 – Flood Map for Planning

#### 2.1.2 Drainage Strategy

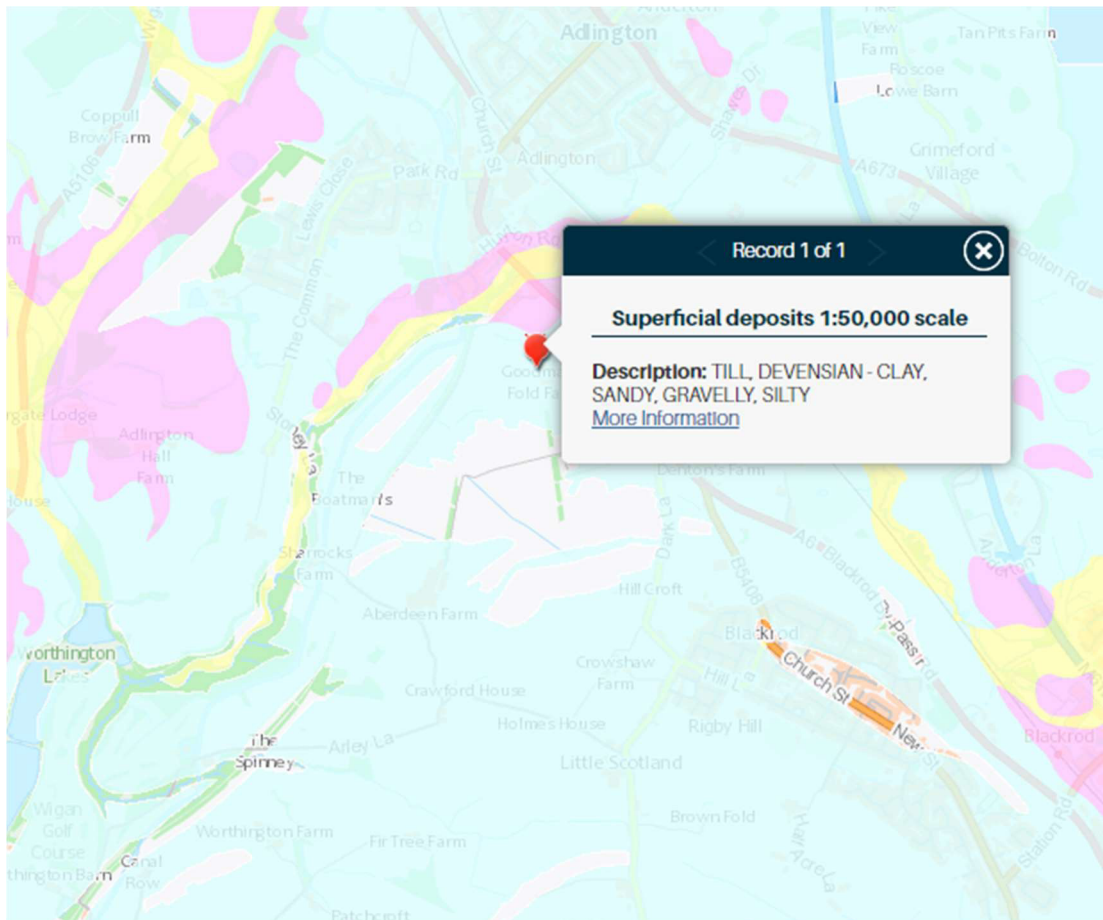
##### *1<sup>st</sup> Choice - Discharge to Soakaway*

In accordance with the Building Regulations hierarchy for the disposal of surface water drainage, the initial consideration will be for a soakaway system.

Percolation tests have not been carried out at the development site. From online soil data the site is “Restored soils mostly from quarry and opencast spoil” and the BGS website states Till, Devensian - Diamicton superficial deposits.

It is likely that there will be poor percolation results and therefore soakaways are not considered viable.





*Figure 3 – Superficial Deposits*

*2<sup>nd</sup> Choice - Discharge to Watercourse*

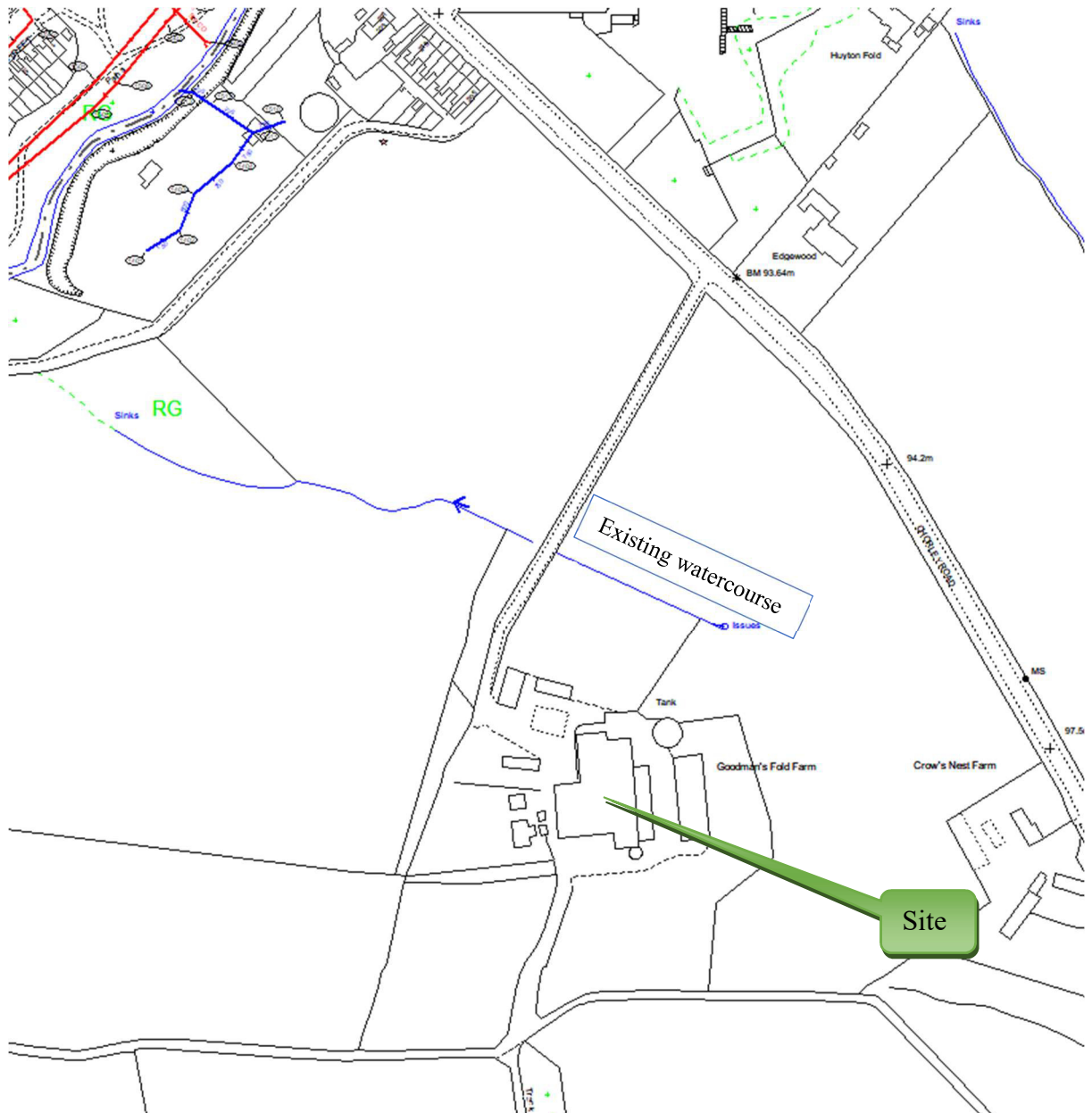
The second consideration is disposal of surface water to watercourses/ ditches. There is a ditch near the proposed development. This is the preferred discharge option for surface water and is the method used for both the original and existing surface water discharge.

*3<sup>rd</sup> Choice - Discharge to Surface Water Sewer*

The third option in the drainage hierarchy is to discharge into the existing surface water sewers. There are no existing surface water sewers recorded in close proximity of the development site, see Appendix A and Figure 4 below.

*4<sup>th</sup> Choice - Discharge to Combined Sewer*

The fourth option in the drainage hierarchy is to discharge into the existing combined sewers. There are no existing combined water sewers recorded in close proximity of the development site, see Appendix A and Figure 4 below.



*Figure 4 – Extract from United Utilities records*

The surface water runoff generated from the existing site has been calculated at  $Q=75.57/s$  based on an impermeable area of  $5437m^2$ , using the modified rational method and rainfall of  $50mm/hr$  (See Appendix B for further details).

The proposed impermeable area has been calculated at  $5437m^2$ , which is equal to the existing impermeable area. The flow rate proposed above has been used to restrict the flow and estimate the required attenuation. As the proposed impermeable area is equal to the existing, no attenuation is required.

### 2.1.3 Climate Change

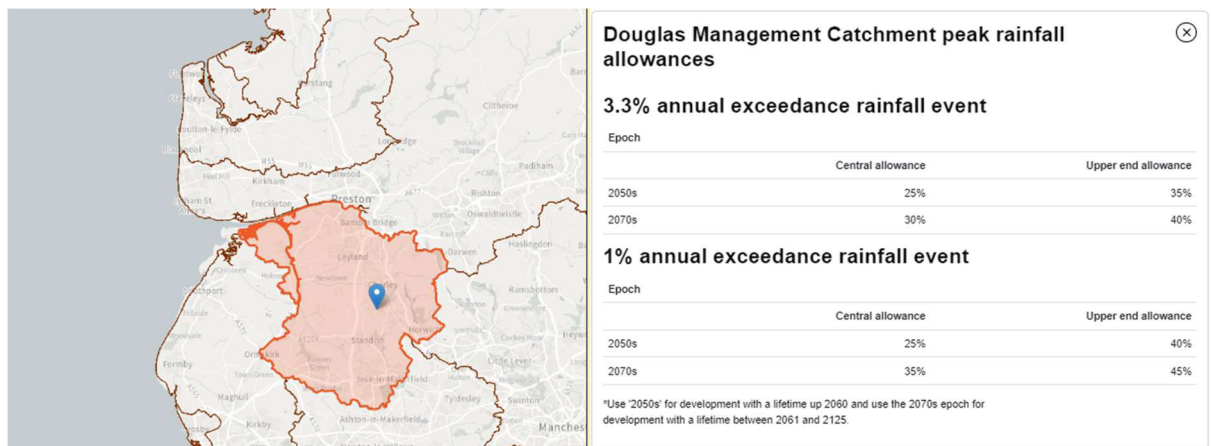


Figure 5 – Climate Change

The design criteria for network modelling to be used for the site is:

- 1 in 30 year no surcharging of the surface water network.
- 1 in 100 year (+ 45% climate change, see Figure 5 above) will be contained within the attenuation, and the volume has been indicated for the development site.
- The roof water for the proposed development will also enter the existing ditch.
- A bypass separator upstream of the proposed attenuation structure is not considered a requirement due to the limited number of parking bays for the proposed development.

### 2.2 Foul Drainage

The foul drainage for the existing development is connected into a sewage treatment plant.

## **Appendices**

- Appendix A - United Utilities Drainage Records
- Appendix B - Flood Flow Drawing Number 23187.001 – Drainage Layout.
- Appendix C - Flood Map for Planning

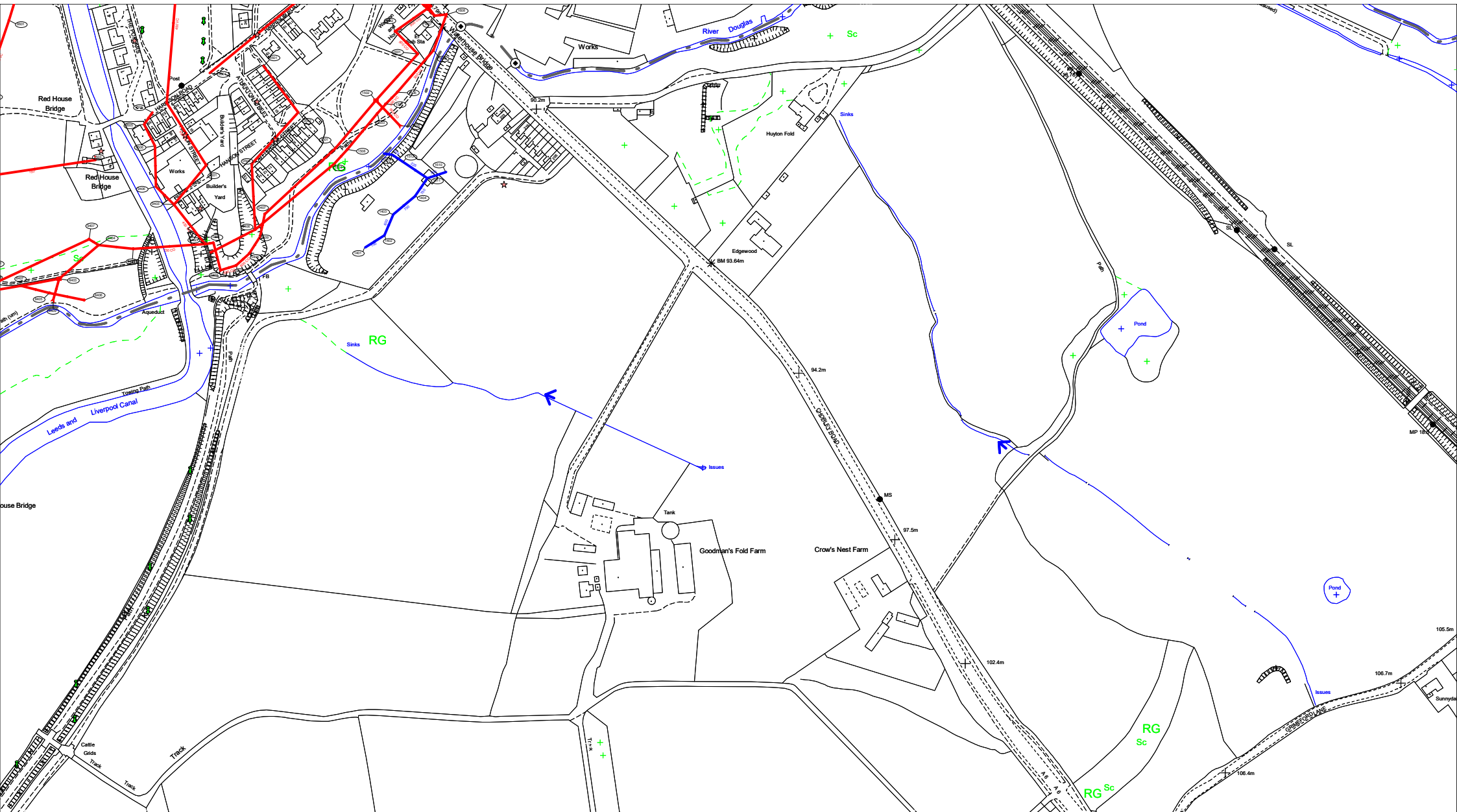
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## **APPENDIX A**





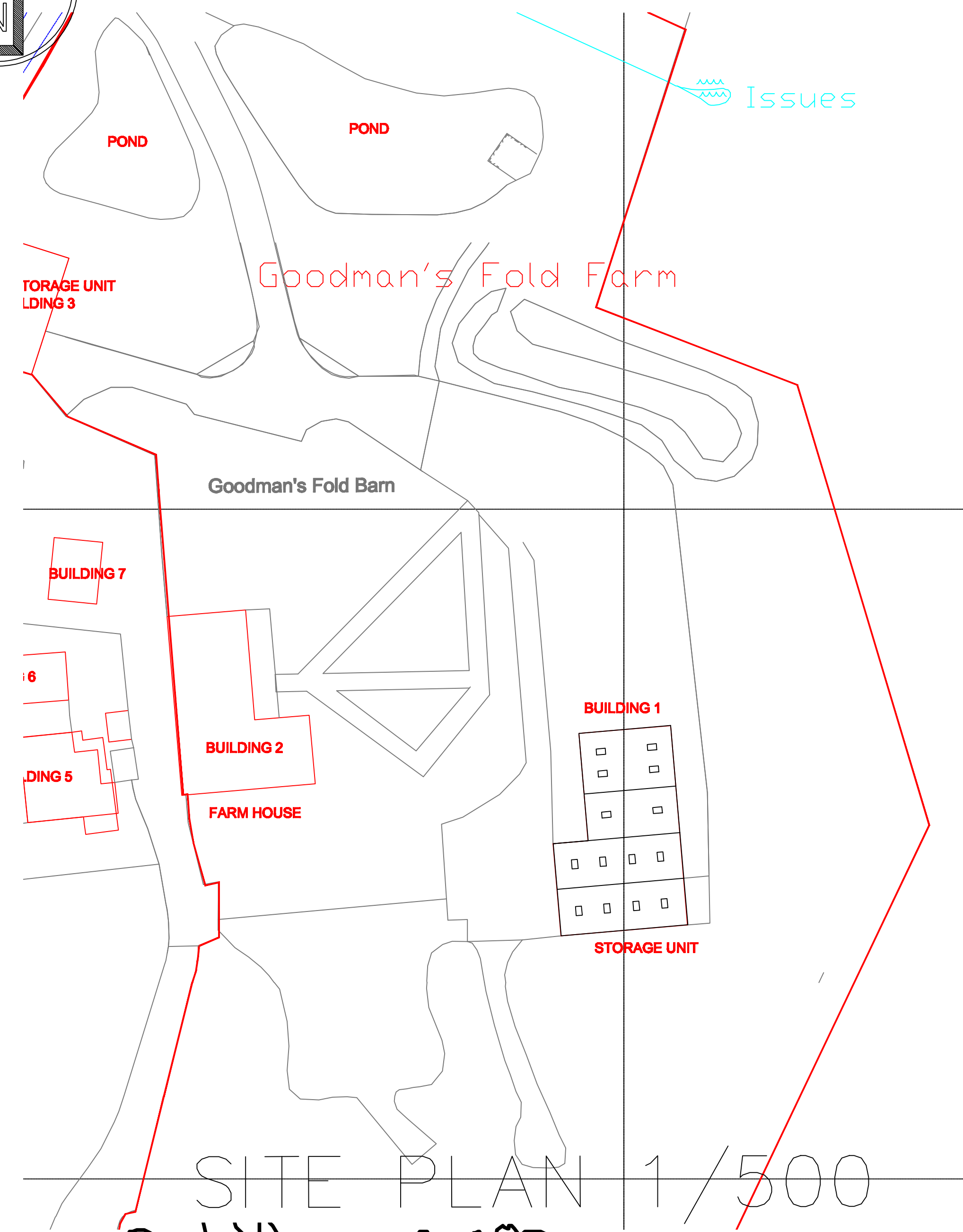
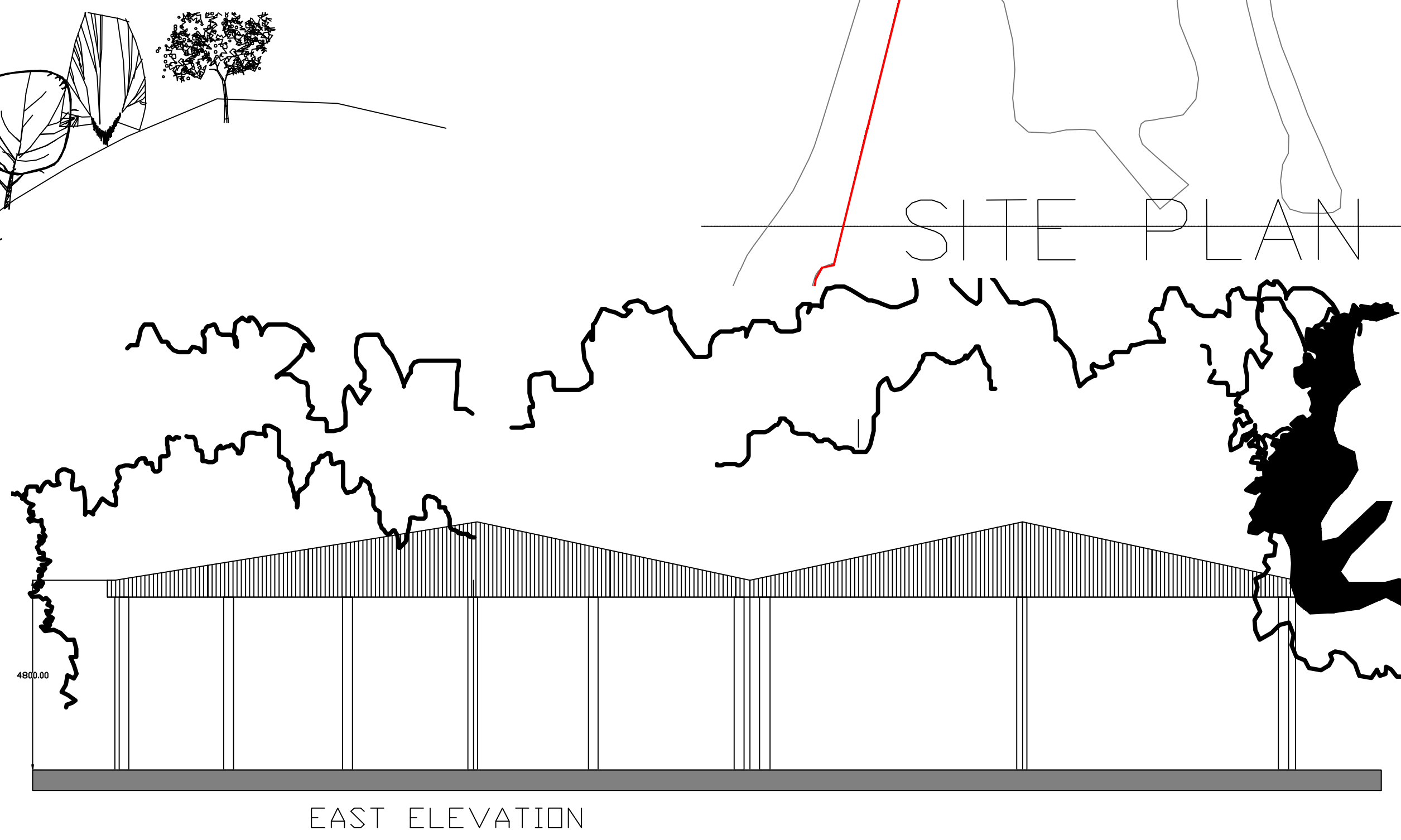
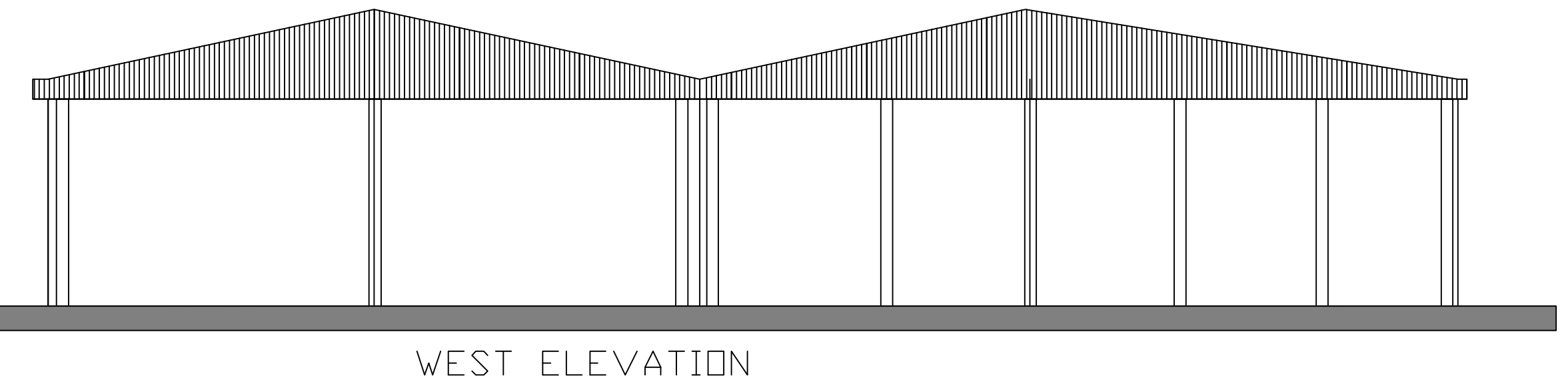
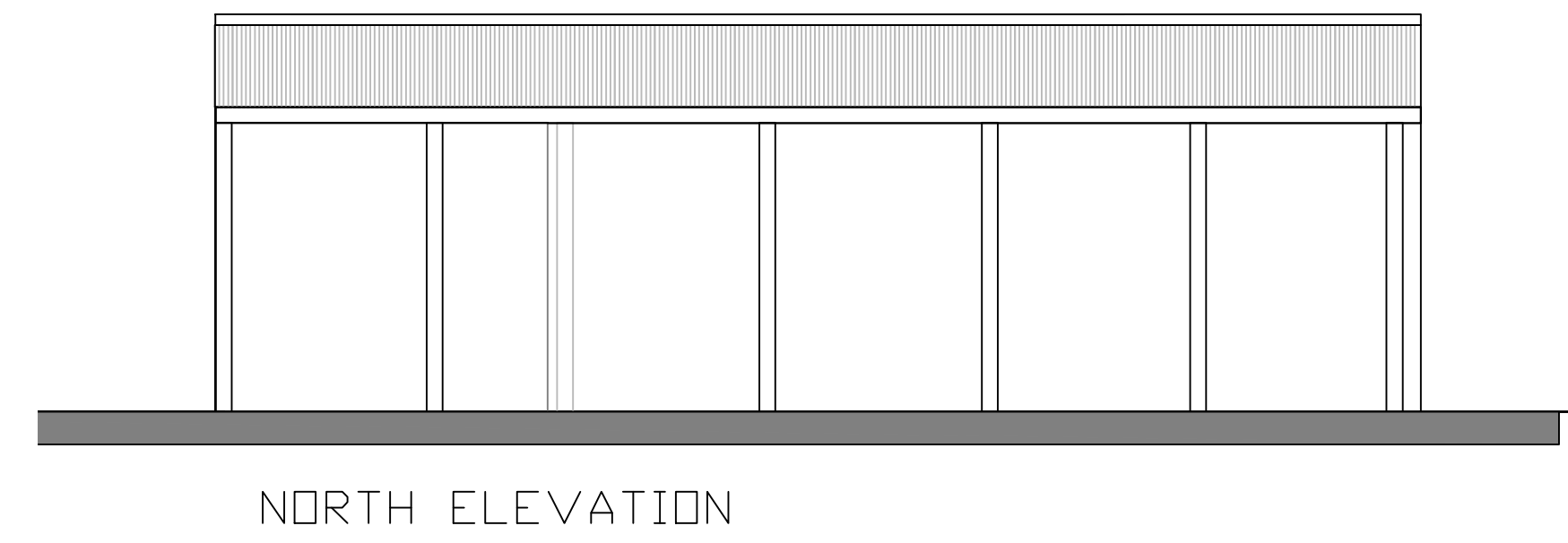
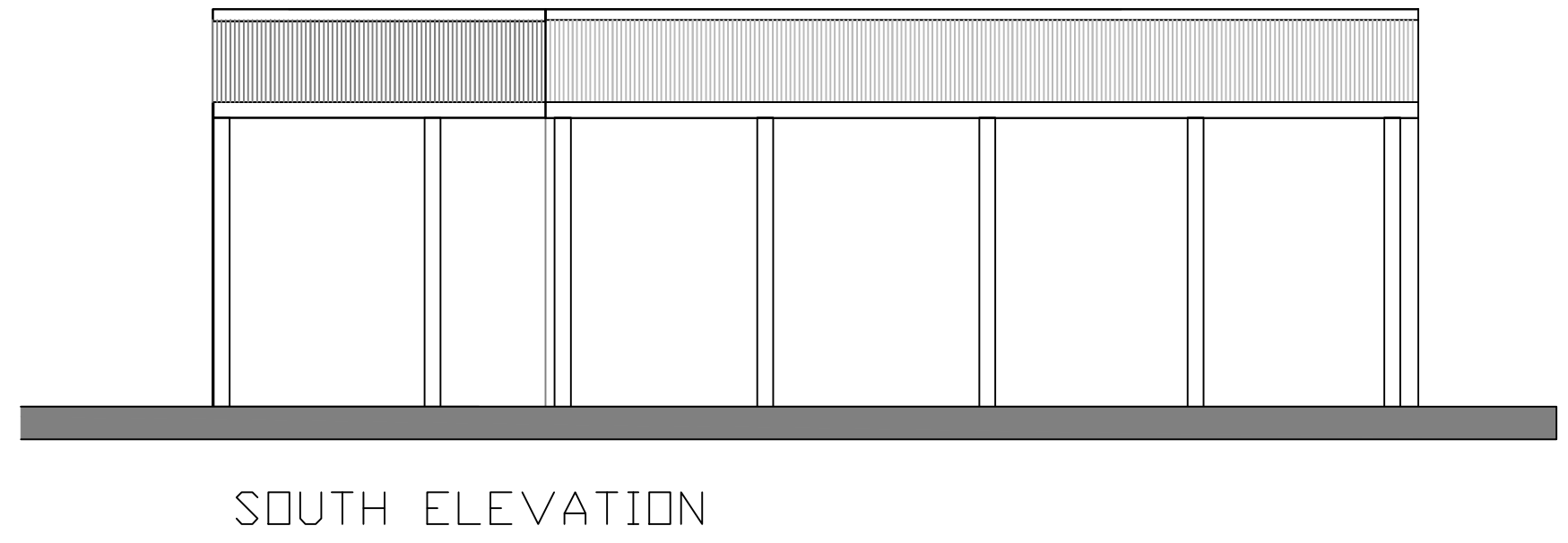
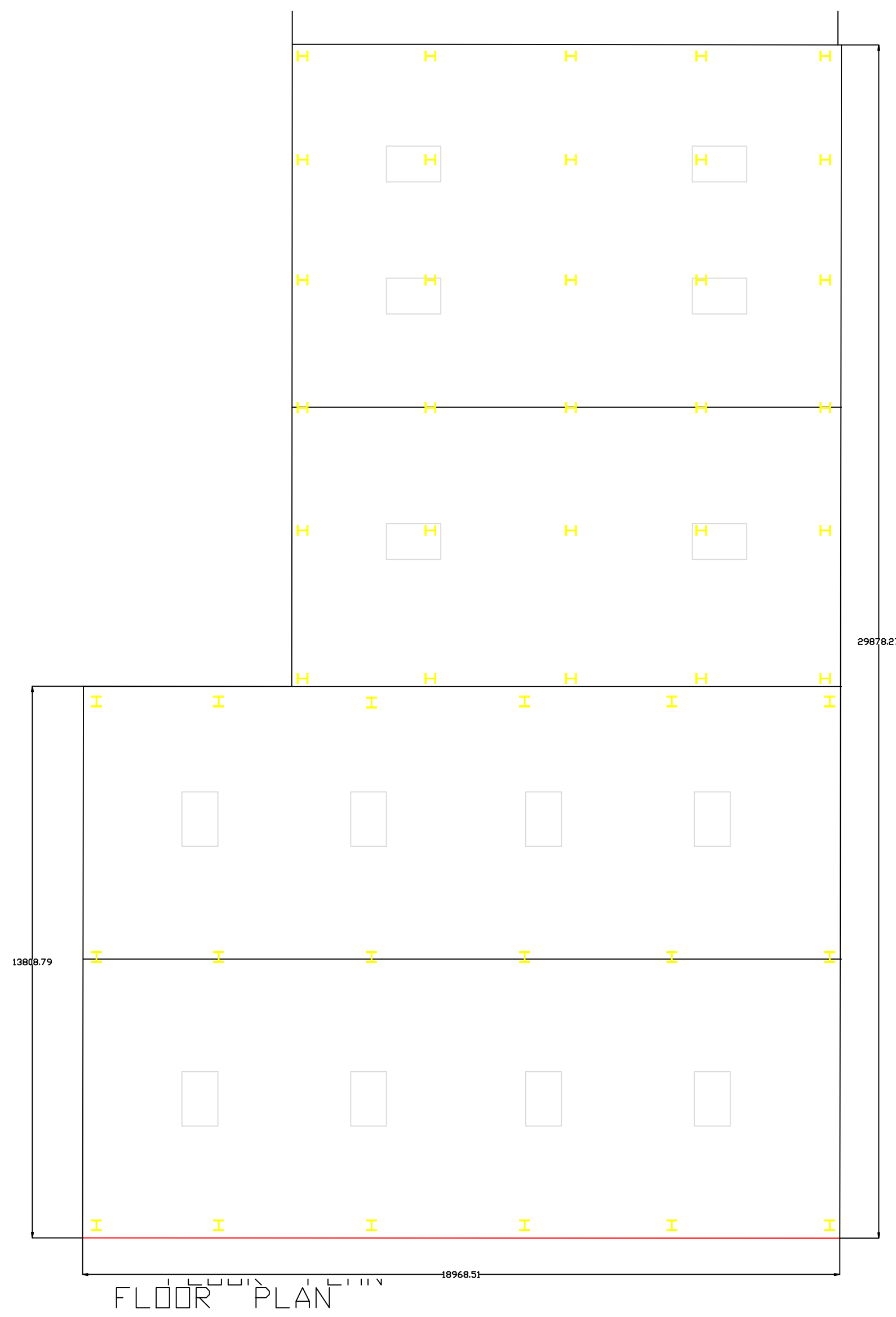
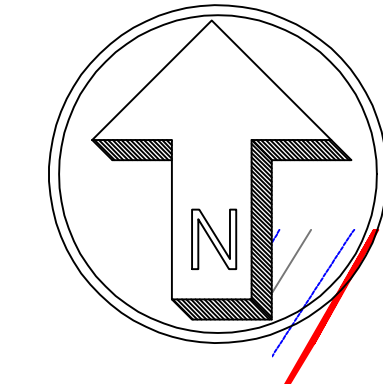


## **APPENDIX B**

GOODMAN FOLD FARM ORIGINAL BARN 1 IN 2012

NOTES ORIGINAL A1

DO NOT SCALE FROM THIS DRAWING.  
ALL DIMENSIONS TO BE CHECKED ON SITE.  
COPYRIGHT PROTECTED.



Issues

REVISIONS	SCALE	DATE	DRAWN	CHECKED
	1/500	OCT 2023		

CLIENT  
MR J DICKINSON

TITLE  
LAND AT GOODMAN FOLD FARM BLACKROD

PLANS BARN 1 IN YEAR 2012

DRAWING No. 01





## **APPENDIX C**



# Flood map for planning

Your reference  
**23187**

Location (easting/northing)  
**360371/412184**

Created  
**5 Dec 2023 9:27**

**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 than 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 2022 OS 100024198. <https://flood-map-for-planning.service.gov.uk/os-terms>

## Flood map for planning

Your reference  
**23187**

Location (easting/northing)  
**360371/412184**

Scale  
**1:2500**

Created  
**5 Dec 2023 9:27**

-  Selected area
-  Flood zone 3
-  Flood zone 2
-  Flood zone 1
-  Flood defence
-  Main river
-  Water storage area

