



Flood Risk Assessment

Proposed Development

Former Friends School Fields, Saffron Waldon, Essex

Contents

1. Introduction
2. The Development
3. Fluvial Flooding
4. Surface Water Flood Risk
5. Other Flood Risks
6. Water Framework Directive

Executive summary

- ⇒ The development comprises the construction of 91 dwellings with associated infrastructure and landscaping, provision of playing field and associated clubhouse
- ⇒ The dwellings and their access will be located fully within flood zone 1.
- ⇒ The site is not considered to be at risk of surface water or groundwater flooding.
- ⇒ Site surface water runoff is being managed using Sustainable Drainage as set out in the separate report and designs by Infrastructure Design Ltd.

1 Introduction

- 1.1 Amazi Consulting Ltd has been instructed to prepare this Flood Risk Assessment (FRA) associated with the proposed residential development at former Friends School Fields, Mount Pleasant Road, Saffron Walden, Essex CB11 3EA.
- 1.2 This report has been prepared for the sole use of Chase New Homes to accompany the full planning application. Its contents cannot be copied or relied upon by others, except Government planning and drainage authorities, without the written authority of Amazi Consulting Ltd. Revision C of this report comprises correction to the site area in section 2.1.
- 1.3 This FRA has been prepared in accordance with National Planning Policy Framework (NPPF), December 2023, and its accompanying gov.uk Planning Practice Guidance (PPG): *Flood Risk and Coastal Change* (2022). It is expected that this report will be reviewed by the relevant authorities as part of the documentation submitted for outline planning permission, and the reader will have some understanding of the technical issues relating to development and flood risk.
- 1.4 This Assessment has been undertaken as a desk study and relies upon data produced by others. It focuses upon flood risks to the development. The flood data used is currently the best available for assessing flood risks at the site. This report does not attempt to comment upon insurance, or for flood events other than as stipulated by planning policy. There is always the risk, however small, that flooding could be different to that assessed.

2 The Development

2.1 This 6.95 hectare (ha) site is located at approximate Ordnance Survey (OS) national grid reference 554100 mE, 237550 mN, as shown in on Figure 2.1 and the attached location plan.

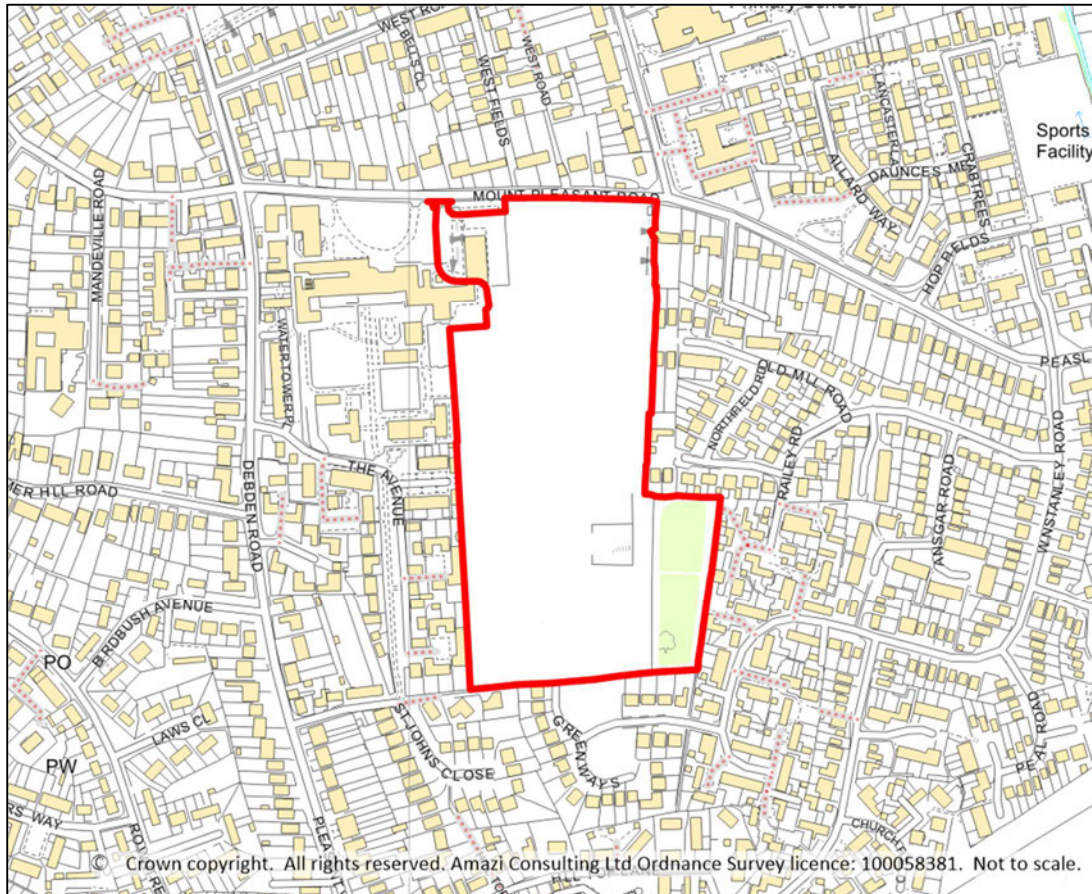


Figure 2.1 - Location

- 2.2 The attached GPS topographical survey of the site confirms existing ground levels fall quite steeply at the south of the site from east to west. And the north of the site falls to the north and west. Total fall from highest to lowest parts of the site is approximately 5 m.
- 2.3 The topography of the site is also illustrated on Figure 2.2, and Figure 2.3 shows contours in the wider area showing upstream topographical catchment and fall downhill of the site towards the Main River watercourse The Slade.

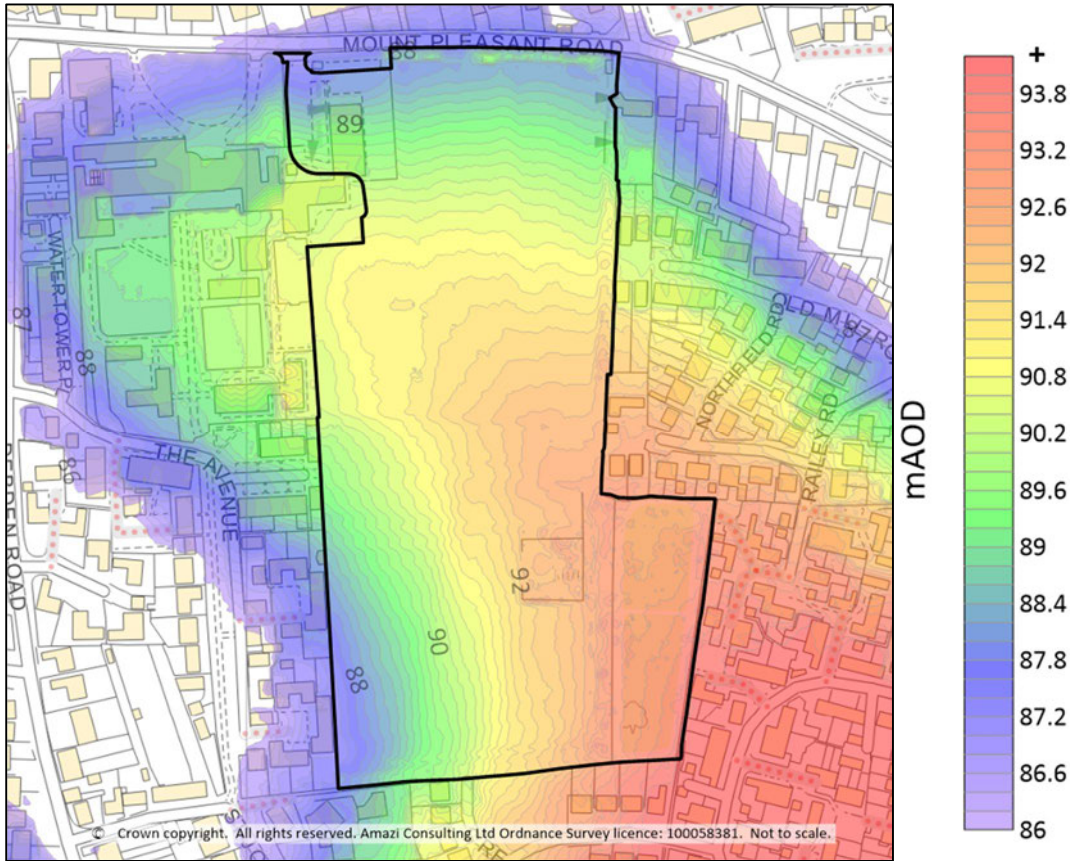


Figure 2.2 - Site contours (mAOD)

(Source: TL53nw.tif, 13 March 2024)

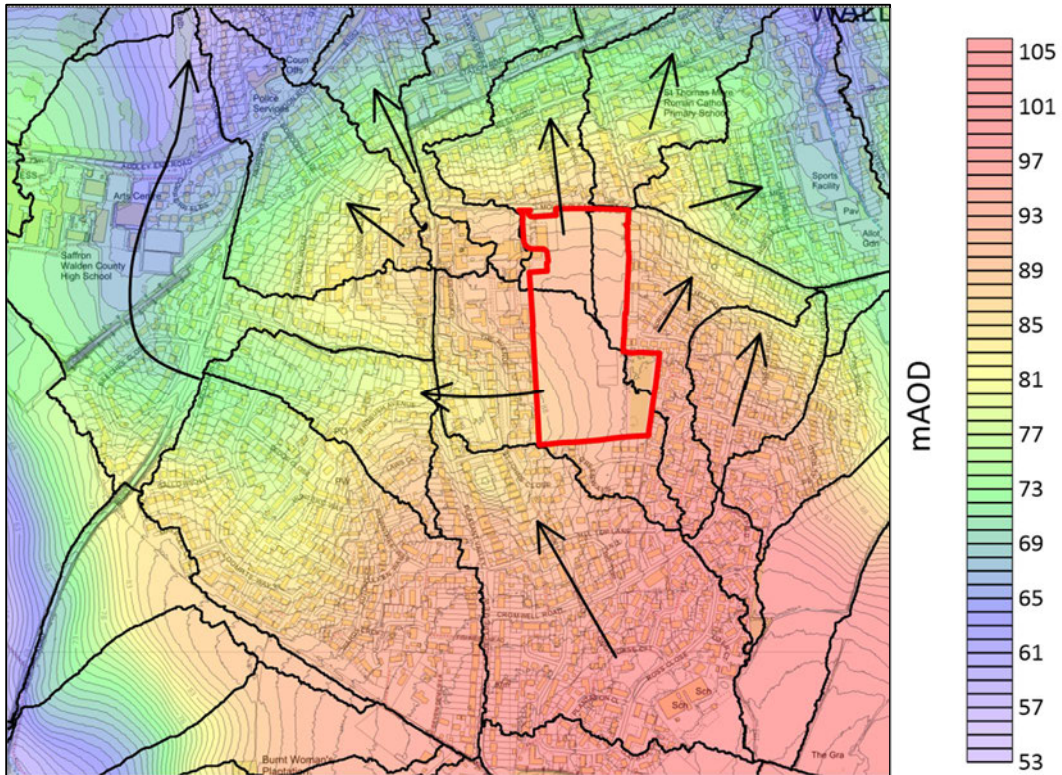


Figure 2.3 - Contours in wider area (mAOD)

(Source: TL53nw.tif, 13 March 2024)

Shows the approximate outline of topographical sub-catchments (outlined in black).

- 2.4 The proposed development comprises the construction of 91 dwellings with associated infrastructure and landscaping, provision of playing field and associated clubhouse. Refer to attached proposed site plan.
- 2.5 The proposed use is considered to be classified as *more vulnerable* in accordance with National Planning Policy Framework (NPPF, 2023) Annex 3.

3 Fluvial Flooding

3.1 The site is located fully within flood zone* 1 and is not at risk of flooding from significant watercourses. 3

* Refer to attached NPPF Table 1

4 Surface Water Flood Risk

- 4.1 Figure 4.1 shows the risk of flooding from surface water mapping near to the site. This indicates that the site is not identified at risk of surface water flooding. This mapping appears to indicate that there is not a flow path towards the site from higher land to the south east. Figure 2.3 does indicate a relatively small area that falls towards the direction of the site, but also no valley/flow path.

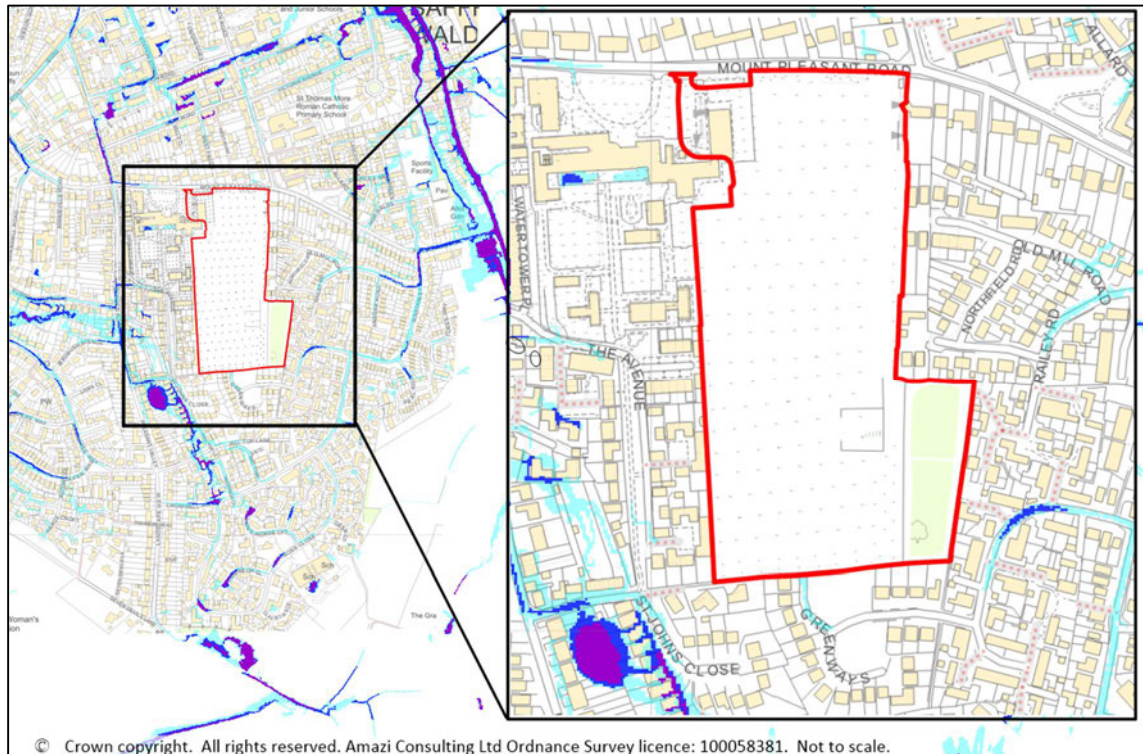


Figure 4.1 - Risk of Flooding from Surface Water

- High** ⇒ 1:30 year return period (3.3% average annual probability of exceedance)
Medium ⇒ 1:100 year return period (1% average annual probability of exceedance)
Low ⇒ 1:1,000 year return period (0.1% average annual probability of exceedance)

(Source: RoFSW_TL53_Extent_1in1000.shp, RoFSW_TL53_Extent_1in100.shp, RoFSW_TL53_Extent_1in30.shp)

- 4.2 The Risk of Flooding from Surface Water mapping is accompanied by the statement that it: 'should not be taken as definitive mapping of flood risk from these as the conveyance effect of ordinary watercourses or drainage channels is not explicitly modelled. Also, structures (such as bridges, culverts and weirs) and flood risk management infrastructure (such as defences) are not represented.' So the exact beneficial conveyance effects of the local surface water drainage systems are not accounted for in the modelling. As with all modelling, it has also not taken into account the full complexities of the landscape, e.g. kerbs, walls and other landscape features that will act to affect the flow routes. Future climate change is not included. The Government caveat on using this mapping states: 'This dataset is not suitable for identifying whether an individual property will flood'. 'Because of the way they have been produced and the fact that they are indicative, the maps are not appropriate to act as the sole evidence for any specific planning or regulatory decision or assessment of risk in relation to flooding at any scale without further supporting studies or evidence'.

5 Other Flood Risks

5.1 Groundwater Flood Risk

- 5.1.1 Figure 5.1 shows the Geosmart GW5 (v2.1) groundwater flood risk mapping which confirms that the site is in CLASS 4: NEGLIGIBLE RISK: *There is a negligible risk of groundwater flooding in this area and any groundwater flooding incidence has a chance of less than 1% annual probability of occurrence.*

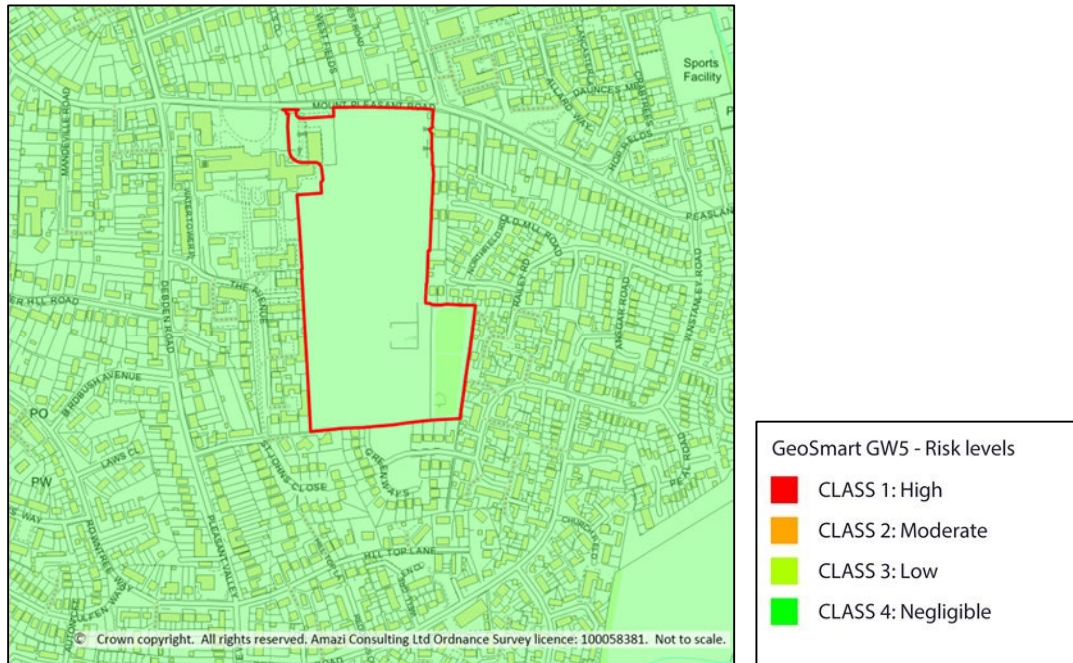


Figure 5.1 – Groundwater flood risk – GW5 v2.1

5.2 Sewers

- 5.2.1 The attached Anglian Water mapping indicates that there are surface water sewers to the east of the site which may intercept rainfall and convey it away from the site. Figure 2.3 shows that there is also very limited topographical catchment uphill of the site. So even if the sewers were to fail, there is not expected to be any significant overland flow towards the site.

6 Water Framework Directive

- 6.1 A Water Framework Directive assessment is not required for this development. As confirmed by the Environment Agency *'this site has no relevant constraints that would meet our remit for response and we wouldn't respond to this at planning. We note that the Uttlesford validation checklist mentions that WFD Assessment would be looked at by ourselves....I can confirm though that this wouldn't be relevant for ourselves for this particular site'* (Email 07 September 2023).

Prepared by Leigh Parratt
BEng (Hons) CEng MICE CWEM MCIWEM PCHEP FHEA



Attachments

- 23110 (D) 099B Site Location Plan
- Table 1 NPPF PPG
- DAT / 9.0C Topographical survey sheets 1 & 2
- 23110 (D) 004C Proposed Site Plan
- Anglian Water sewer map (257728, March 2018)