
Muller Dairy, Project Opera Foston, Derbyshire

Drainage Report

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Job Number: 29939

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Revision
1

Notes/Amendments/Issue Purpose
For Information

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Appendices:

Appendix A Drainage Strategy

Appendix B EA Flood report

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1 Introduction

Price & Myers have been commissioned to undertake a drainage strategy report for the proposed development at Muller Foston as part of the proposal to add extensions to the existing factory.

The NPPF states that an appropriate FRA will be required for all development proposals of 1 ha or greater in Flood Zone 1 and for any development within Flood Zones 2 or 3.

The EA's indicative floodplain map shows that the site is located in Flood Zone 1, with no discernible flood risk. Refer to the report in Appendix B

This report will also outline the proposed drainage strategy for the site including a SuDS assessment.

2 Site Description and Location

The site lies at the northern edge of Dove Valley Park. The factory was previously Dairy Crest, but is now to be developed by Muller.



Figure 2.1: Existing site

2.1 Existing Drainage

The surface water from the site is collected and runs out of the site at the south-east corner under the roundabout. There is no attenuation on the site. The whole of the Dove Valley Park industrial estate has its stormwater managed collectively in a series of open attenuation ponds.

On site stormwater is collected in separate roof and yard systems, only converging at the final manhole. Yard stormwater passes through a petrol interceptor before that convergence.

The foul water from the site takes a similar path, connected into local water authority sewers in the main estate infrastructure at the roundabout at the site entrance.

The trade effluent generated by the dairy runs to an on-site effluent treatment plant in the south west corner where it is treated to become of acceptable quality to discharge to the on-site foul sewer.

3 Development Proposal

The proposed is to add a number of extensions as Figure 3.1

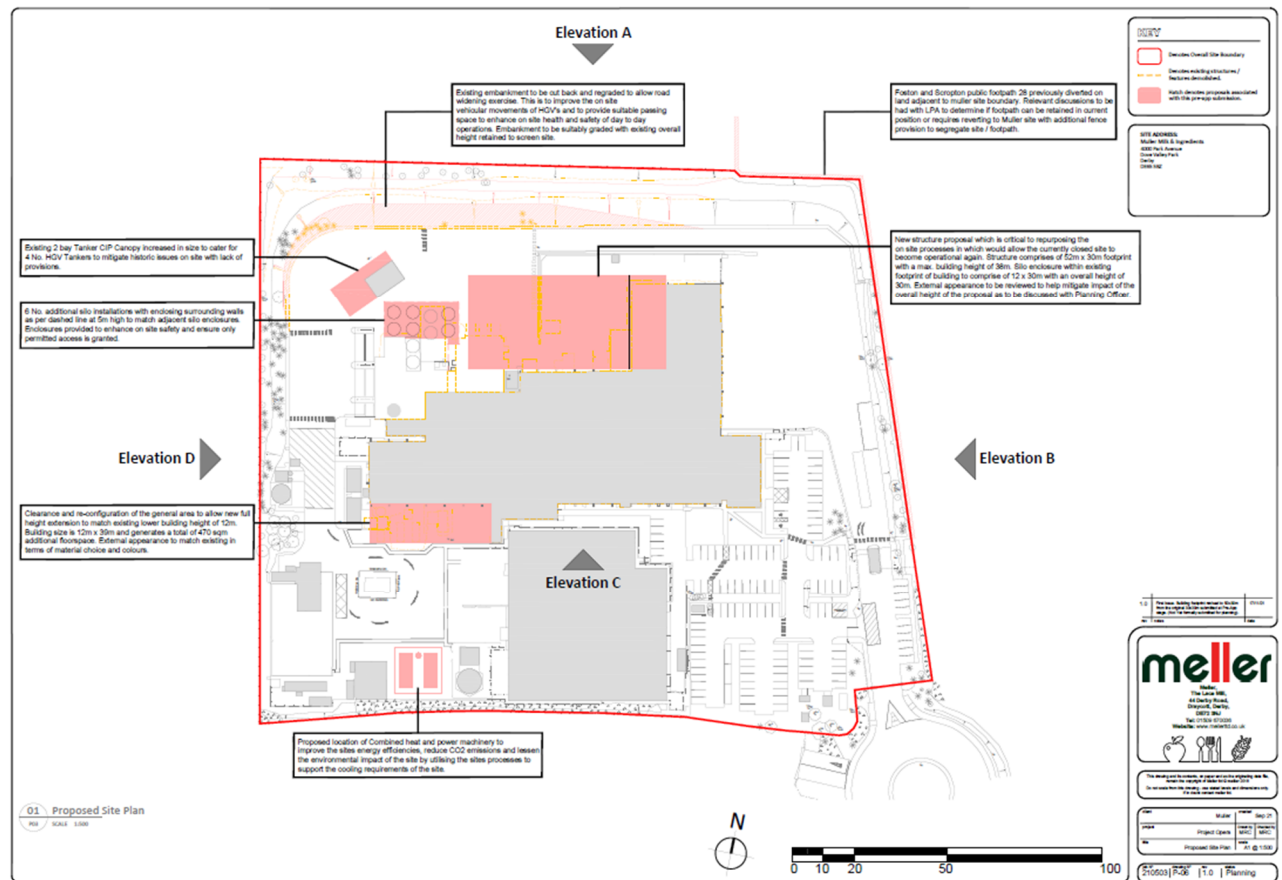


Figure 3.1: Proposed layout

All works are in areas that are already drained to the on-site system, apart from the minor yard-widening near the north boundary.

4 Storm Drainage Assessment

4.1 Increase in area

There will be a very small area of increase in impermeable yard when considered in proportion to the overall site. That apart, the proposed extensions will be constructed on existing hardstanding areas. Therefore, the run-off from the development mimics existing conditions.

4.2 Proposal

Refer to the proposed drainage plan in Appendix A

Attenuation will be included in the small yard-widening to reduce the flows from that small area to greenfield run-off.

5 Foul and Trade Effluent

5.1 Assessment

There will be new flows from the new process areas but all will run into the existing trade effluent system and into the existing Effluent Treatment Plant.

The capacity of that Plant, installed originally for the Dairy Crest works, to ensure that its capacity meets the requirements of the new Muller plant.

There will be no increase in domestic foul flows from the site when compared to the previous use by Dairy Crest.

6 Flood Risk

The site lies in EA Zone 1 with no discernible risk of flooding

Refer to EA report in Appendix B

7 SuDS Assessment

In accordance with the Local Plan, EA guidelines, the SFRA, and CIRIA documents, surface water run-off should be managed as close to its source as possible. The SuDS Guide states that all new developments should aim to reduce run-off to greenfield rates, utilising SuDs unless there are practical reasons for not doing so.

7.1 Implementation

The new yard-widening will incorporate buried attenuation with a throttled outlet to the existing stormwater system. Run-off will be restricted to greenfield rates.

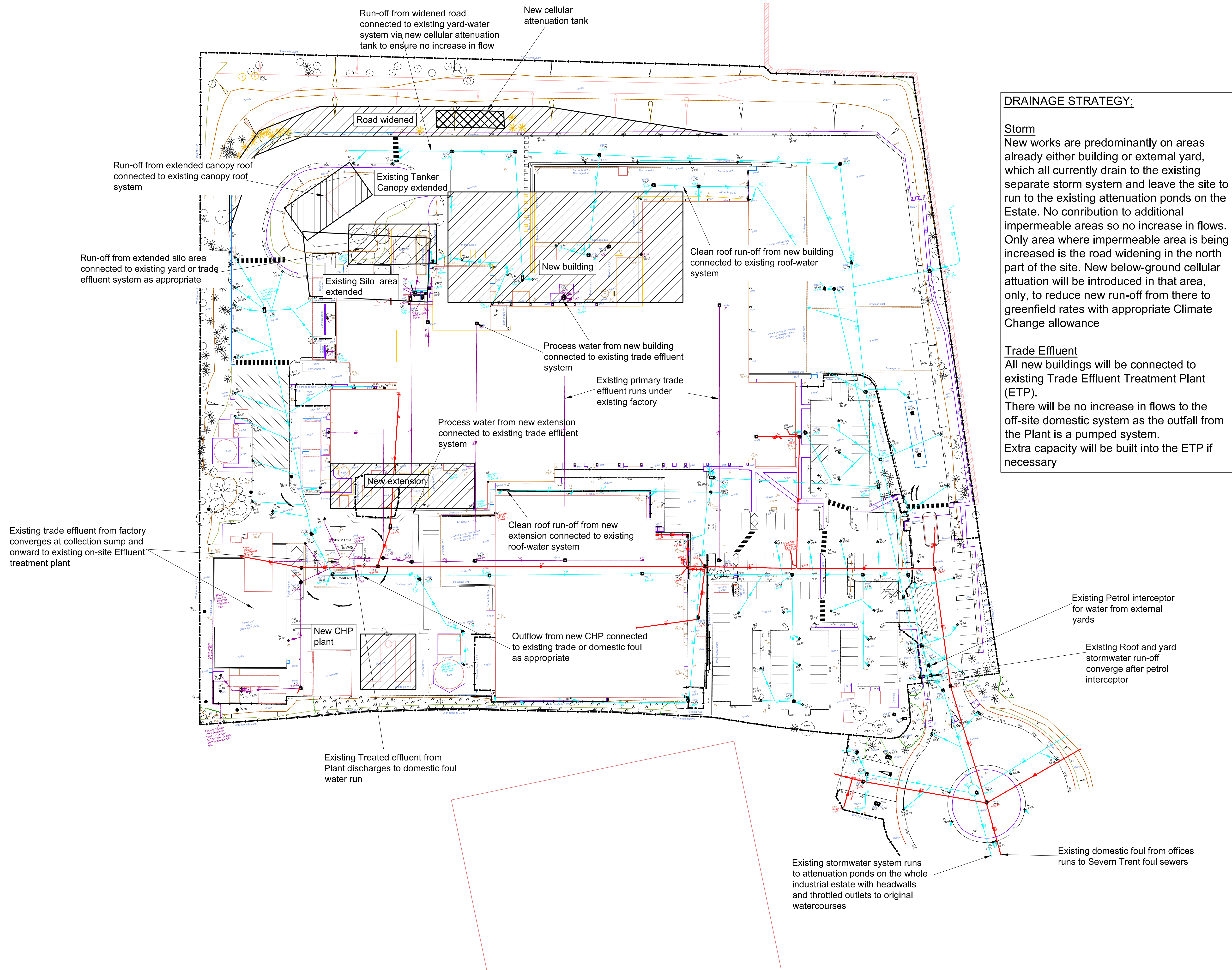
The development therefore will cause no increase in stormwater outflows.

8 Conclusions

- The EA's indicative floodplain map shows that the site is located in Flood Zone 1.
- The site has no discernible risk of flooding.
- The development will not increase the impermeable areas on site to any significant extent
- Therefore, the development has an acceptable flood risk within the terms and requirements of NPPF.

Appendix A

Drainage Strategy



DRAINAGE STRATEGY;

Storm
New works are predominantly on areas already either building or external yard, which all currently drain to the existing separate storm system and leave the site to run to the existing attenuation ponds on the Estate. No contribution to additional impermeable areas so no increase in flows. Only area where impermeable area is being increased is the road widening in the north part of the site. New below-ground cellular attunation will be introduced in that area, only, to reduce new run-off from there to greenfield rates with appropriate Climate Change allowance

Trade Effluent
All new buildings will be connected to existing Trade Effluent Treatment Plant (ETP). There will be no increase in flows to the off-site domestic system as the outfall from the Plant is a pumped system. Extra capacity will be built into the ETP if necessary

- NOTES :
1. This drawing is to be read in conjunction with all relevant Architect's, Engineer's and specialists' drawings and specifications.
 2. Do not scale from this drawing in either paper or digital form. Use written dimensions only. To check that this drawing has been printed to the intended scale this bar should be 50mm long @ A1 or 25mm long @ A3.
 3. Health & Safety : All specific drawing notes are to be read in conjunction with the project "Information Pack" and "Site Rules".
 4. For general notes refer to Drawing No.

P01	07.12.21	sm	sm	Draft issue for comments
Rev	Date	Drawn	Eng	Amendment

MULLER - PROJECT OPERA FOSTON

DRAINAGE STRATEGY

Status
FOR INFORMATION
NOT FOR CONSTRUCTION

Drawn	sm	Eng	sm
Scales	1:500 at A1	1:1000 at A3	
Drawing No	Rev		
29939 / 6000	P01		

Appendix B

EA Flood report

Flood map for planning

Your reference
Muller Foston

Location (easting/northing)
420396/332372

Created
28 Oct 2021 9:10

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.

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/>

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Flood map for planning

Your reference

Muller Foston

Location (easting/northing)

420396/332372

Scale

1:2500

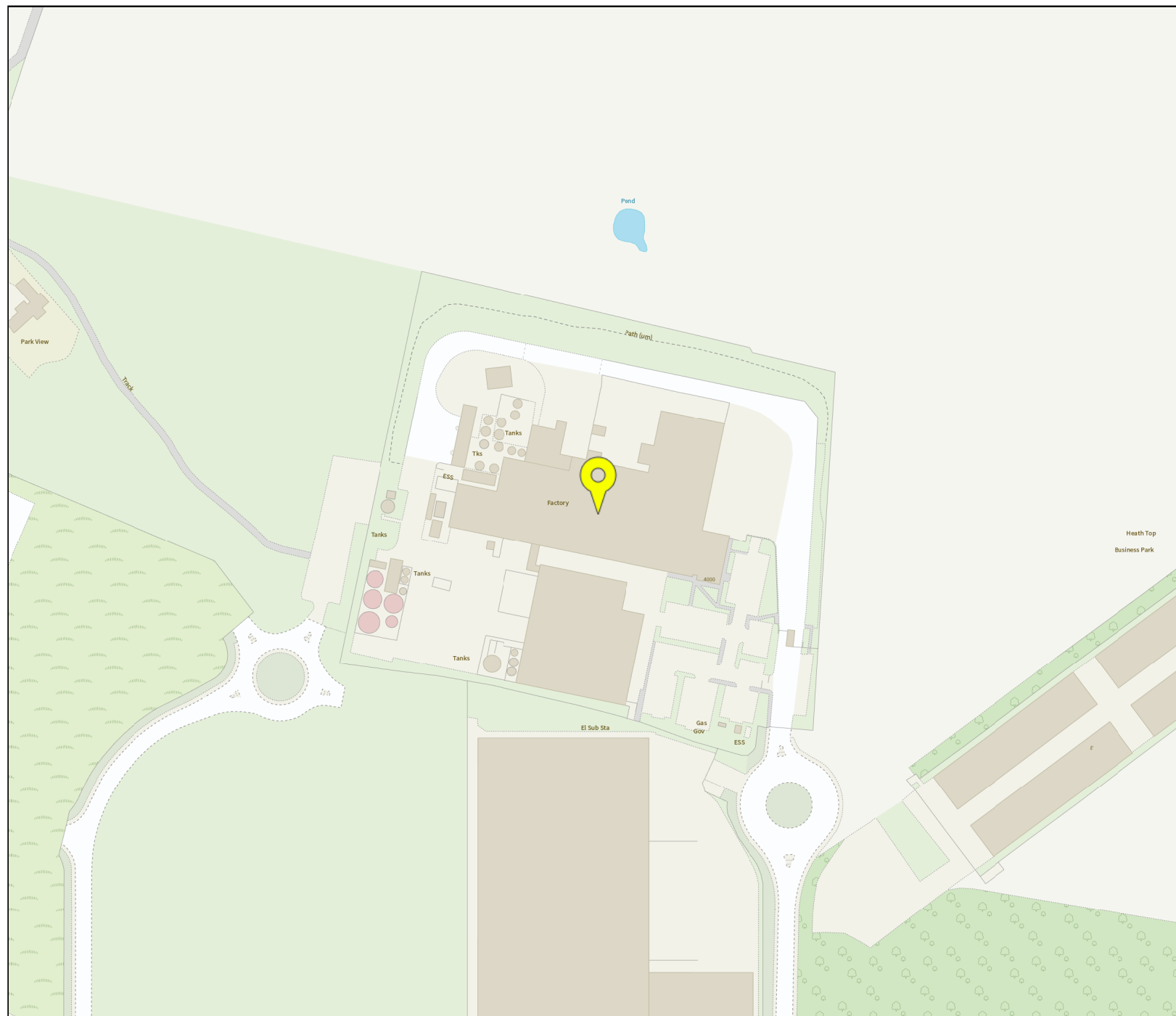
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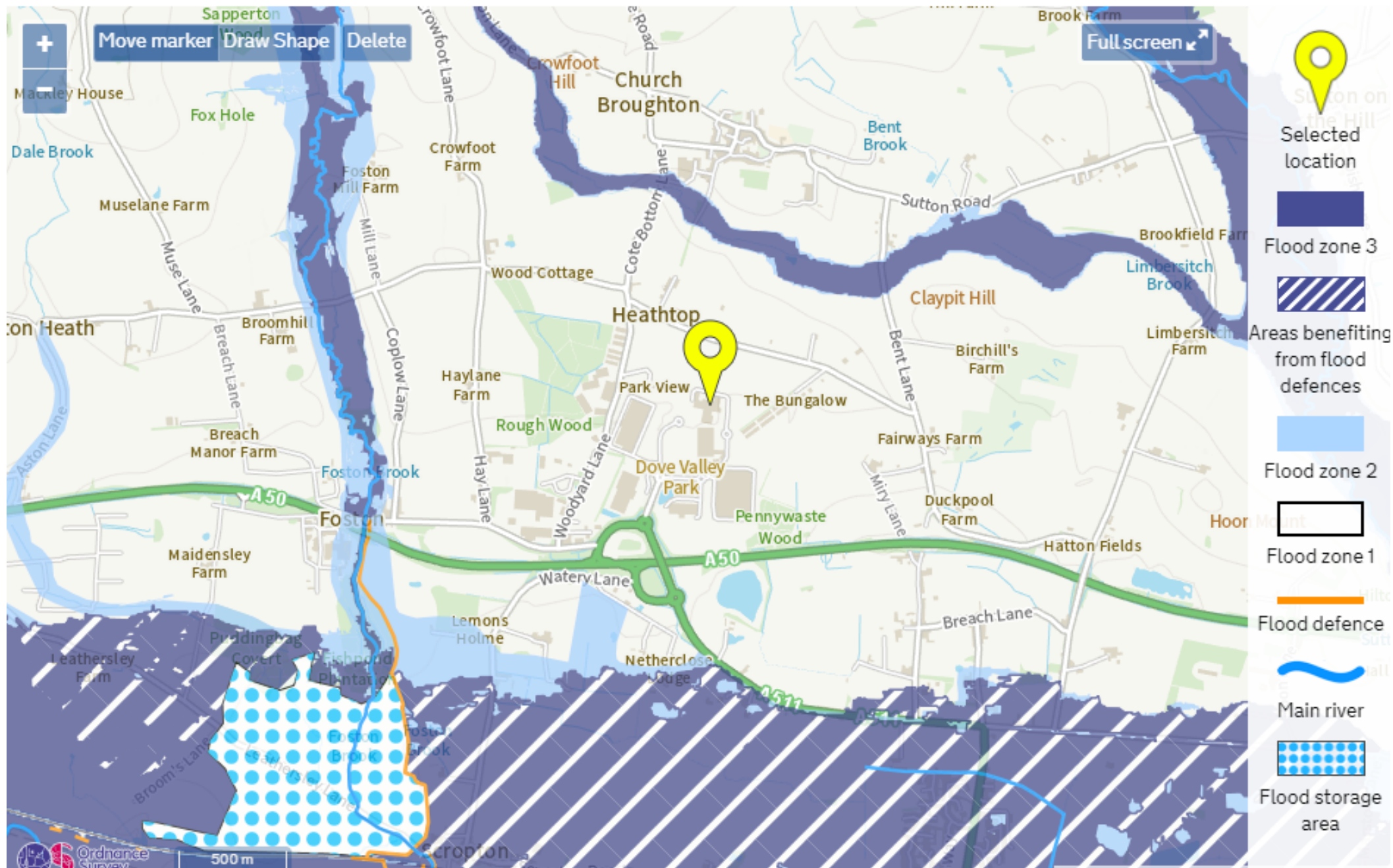
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-  Selected point
-  Flood zone 3
-  Flood zone 3: areas benefitting from flood defences
-  Flood zone 2
-  Flood zone 1
-  Flood defence
-  Main river
-  Flood storage area

0 20 40 60m

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WIDER CONTEXT SHOWING WATERCOURSES TO NORTH, WEST AND SOUTH