

FAO Case Officer - Gemma Parson

Essex County Council Development and
Flood Risk Environment and Climate
Action, C426 County Hall Chelmsford
Essex CM1 1QH

Our Ref:
TR/2404920/RevA
27th March 2025

Land North of Thaxted Road, Saffron Walden - Response to Essex County Council Comments

I am writing in response to comments received 28th February 2025 via email. This letter is to demonstrate how the concerns raised, or discrepancies have been addressed - Ardent comments below in **RED**. To support the responses below, the drainage strategy has been updated to suit and re-submitted for approval.

1. *Please provide a more detailed drainage plan which shows the connections to/from the property driveways and roofs and which demonstrates how these areas will receive treatment.*

All plots, driveways and other impermeable areas drain to the proposed sewer network. We have altered the leaders and notes on the plan to make this clearer. We are unable to provide the exact connections of above ground drainage as this is reserved for detailed design stage . Please see updated drainage strategy in **Appendix A**.

2. *Please provide a manhole schedule within the hydraulic model so we can see the system connectivity.*

The attenuation for the site has been designed using 'source control' storage estimates, using the approved discharge rates at Outline Stage (1l/s). As the attenuation is in the lowest area of the site, levels all falling towards the basins, with significant soft landscaping space around it, and the entire site passing through the online attenuation, we have not modelled manholes and pipes as we are confident the layout is deliverable. During detailed design, a network model will be produced to confirm the finer details such as accurate impermeable areas, plot drainage connections, pipe sizes and gradients, to ensure there is no increased flood risk on site. A detailed model (including manhole schedule) can be conditioned and submitted once detailed design has been undertaken.

Ardent recently had a meeting with the LLFA where this project was discussed, see **Appendix B** for the meeting minutes. We believe we have addressed the issues above, consider the strategy to be suitable for the development, accords with the outline permission and is policy compliant.

Kind regards,



Thomas Rayment - Principal Engineer

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Appendix A – Drainage Strategy

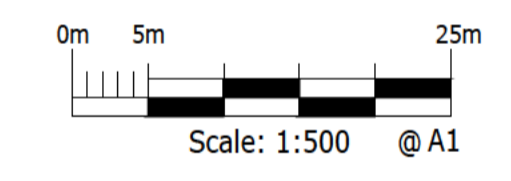
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- KEY
- ATTENUATION BASIN
 - SURFACE WATER SEWER AND MANHOLE
 - EMBANKMENT 1 IN 3
 - DEVELOPMENT CATCHMENT AREA
 - DIRECTIONAL FLOW ARROWS
 - FOUL WATER SEWERS AND MANHOLES
 - RISING MAIN ROUTE
 - INDICATIVE FINISHED FLOOR LEVEL
 - INDICATIVE GARAGE FLOOR LEVEL
 - INDICATIVE STRUCTURAL SLAB LEVEL
 - EXISTING FOUL WATER SEWERS AND MANHOLES
 - ROOT PROTECTION AREA



PRELIMINARY NOT YET APPROVED

C	LEADER NOTES UPDATED	JTM	TR	BB	27.03.25
B	DRAINAGE REVISED TO SUIT UPDATED LAYOUT & LEVELS	DR	TR	BB	13.12.24
A	FIRST ISSUE	TR	TR	BB	31.10.24
Rev	Description	Drn	Chk	App	Date

ARDENT CONSULTING ENGINEERS
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SSIP

Client: **VISTRY EASTERN COUNTIES**

Project Title: **THAXTED ROAD, SAFFRON WALDEN**

Drawing Title: **CONCEPT DRAINAGE STRATEGY**

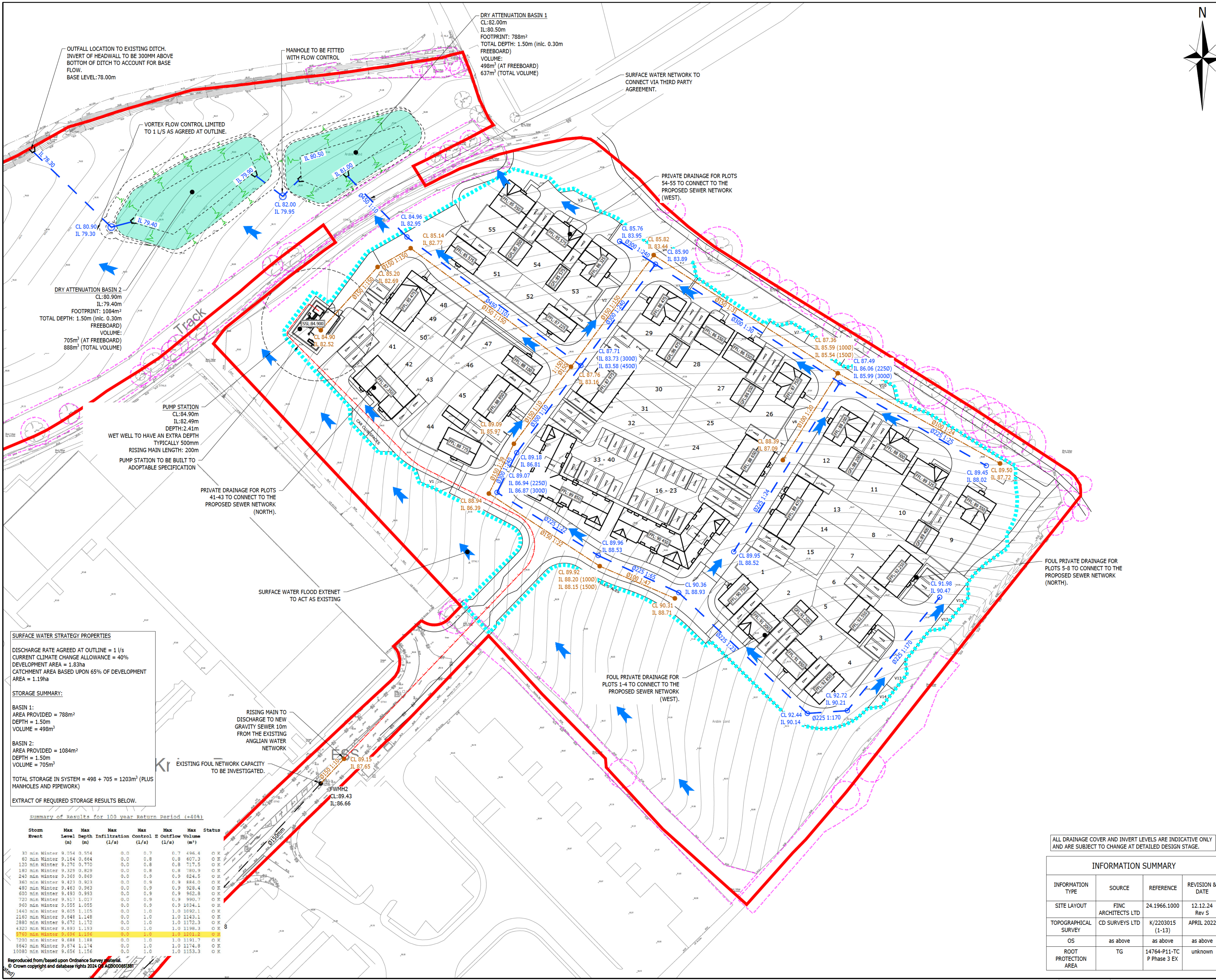
Drawn by: TR | Checked by: TR | Approved by: BB

A1 Scale: 1:500 | Date: OCT 2024 | Revision: C

Drawing Number: **2404920-ACE-XX-XX-DR-C-0151**

ALL DRAINAGE COVER AND INVERT LEVELS ARE INDICATIVE ONLY AND ARE SUBJECT TO CHANGE AT DETAILED DESIGN STAGE.

INFORMATION SUMMARY			
INFORMATION TYPE	SOURCE	REFERENCE	REVISION & DATE
SITE LAYOUT	FINC ARCHITECTS LTD	24.1966.1000	12.12.24 Rev 5
TOPOGRAPHICAL SURVEY	CD SURVEYS LTD	K/2203015 (1-13)	APRIL 2022
OS	as above	as above	as above
ROOT PROTECTION AREA	TG	14764-P11-TC P Phase 3 EX	unknown



SURFACE WATER STRATEGY PROPERTIES

DISCHARGE RATE AGREED AT OUTLINE = 1 l/s
CURRENT CLIMATE CHANGE ALLOWANCE = 40%
DEVELOPMENT AREA = 1.83ha
CATCHMENT AREA BASED UPON 65% OF DEVELOPMENT AREA = 1.19ha

STORAGE SUMMARY:

BASIN 1:
AREA PROVIDED = 788m²
DEPTH = 1.50m
VOLUME = 498m³

BASIN 2:
AREA PROVIDED = 1084m²
DEPTH = 1.50m
VOLUME = 705m³

TOTAL STORAGE IN SYSTEM = 498 + 705 = 1203m³ (PLUS MANHOLES AND PIPEWORK)

EXTRACT OF REQUIRED STORAGE RESULTS BELOW.

Summary of Results for 100 year Return Period (-40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Control (l/s)	Max Outflow (l/s)	Max Volume (m ³)	Status
30 min Winter	9.054	0.554	0.0	0.7	0.7	496.4	OK
60 min Winter	9.164	0.664	0.0	0.8	0.8	607.3	OK
120 min Winter	9.270	0.770	0.0	0.8	0.8	717.5	OK
180 min Winter	9.329	0.829	0.0	0.8	0.8	780.9	OK
240 min Winter	9.369	0.869	0.0	0.9	0.9	824.5	OK
360 min Winter	9.423	0.923	0.0	0.9	0.9	884.0	OK
480 min Winter	9.463	0.963	0.0	0.9	0.9	928.4	OK
600 min Winter	9.493	0.993	0.0	0.9	0.9	962.8	OK
720 min Winter	9.517	1.017	0.0	0.9	0.9	990.7	OK
960 min Winter	9.555	1.055	0.0	0.9	0.9	1034.1	OK
1440 min Winter	9.605	1.105	0.0	1.0	1.0	1092.1	OK
2160 min Winter	9.648	1.148	0.0	1.0	1.0	1143.1	OK
2880 min Winter	9.672	1.172	0.0	1.0	1.0	1172.3	OK
4320 min Winter	9.693	1.193	0.0	1.0	1.0	1198.3	OK
6780 min Winter	9.726	1.226	0.0	1.0	1.0	1203.2	OK
7200 min Winter	9.688	1.188	0.0	1.0	1.0	1191.7	OK
8640 min Winter	9.674	1.174	0.0	1.0	1.0	1174.8	OK
10980 min Winter	9.656	1.156	0.0	1.0	1.0	1153.3	OK

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Appendix B – LLFA Meeting Minutes

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MEETING AGENDA

DATE: March 2025

SUBJECT: ECC LLFA / Ardent Consulting Engineers – 2404920 Saffron Walden

VENUE: Video Call (Microsoft Teams)

THOSE PRESENT: Georgie Tuttle (GT) – Essex County Council (SuDS);
Jay Moriarty (JM) – Ardent Consulting Engineers;
Thomas Rayment (TR) – Ardent Consulting Engineers;
Andrew Wren (AW) - Ardent Consulting Engineers.

ITEM	NOTES	ACTION
1.0	<p>Saffron Walden, Thaxted Road</p> 	
1.1	<p>TR outlines the drainage strategy associated with the site. The site has recently been submitted for Reserved Matters and has received comments back from ECC.</p>	
1.2	<p>ECC comment 1: <i>"Please provide a more detailed drainage plan which shows the connections to/from the property driveways and roofs and which demonstrates how these areas will receive treatment."</i> GT explains this comment has most likely come from the leaders annotated on the drainage strategy which are not clear enough for this stage. TR to update drainage strategy to involve wording similar to <i>"all plots to drain into adoptable drainage network shown within the roads which will receive a two stage water quality treatment via the basins north of the site."</i> This should close out the comment.</p>	TR
1.3	<p>ECC comment 2: <i>"Please provide a manhole schedule within the hydraulic model so we can see the system connectivity."</i> TR to provide commentary on the response letter to the LLFA which will change the holding objection to an approval with a condition to be met at a detailed design stage. The designers response should involve the following;</p> <ul style="list-style-type: none"> • Exceedance/Overland flow routes, • Restricted flow rate (1 l/s), • Steep topography of the design and existing site, 	TR
1.4	<p>GT to speak with colleague (Gemma Parson) who wrote the comment mentioned in 1.3 to gain an agreement to move this forward with a condition.</p>	GT