Linchfield Road (SKPR-330), Market Deeping, Cambridgeshire

Rosconn Group

Flood Risk & Drainage Statement

August 2025

Document Control

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Contents

List of Figures and Tables

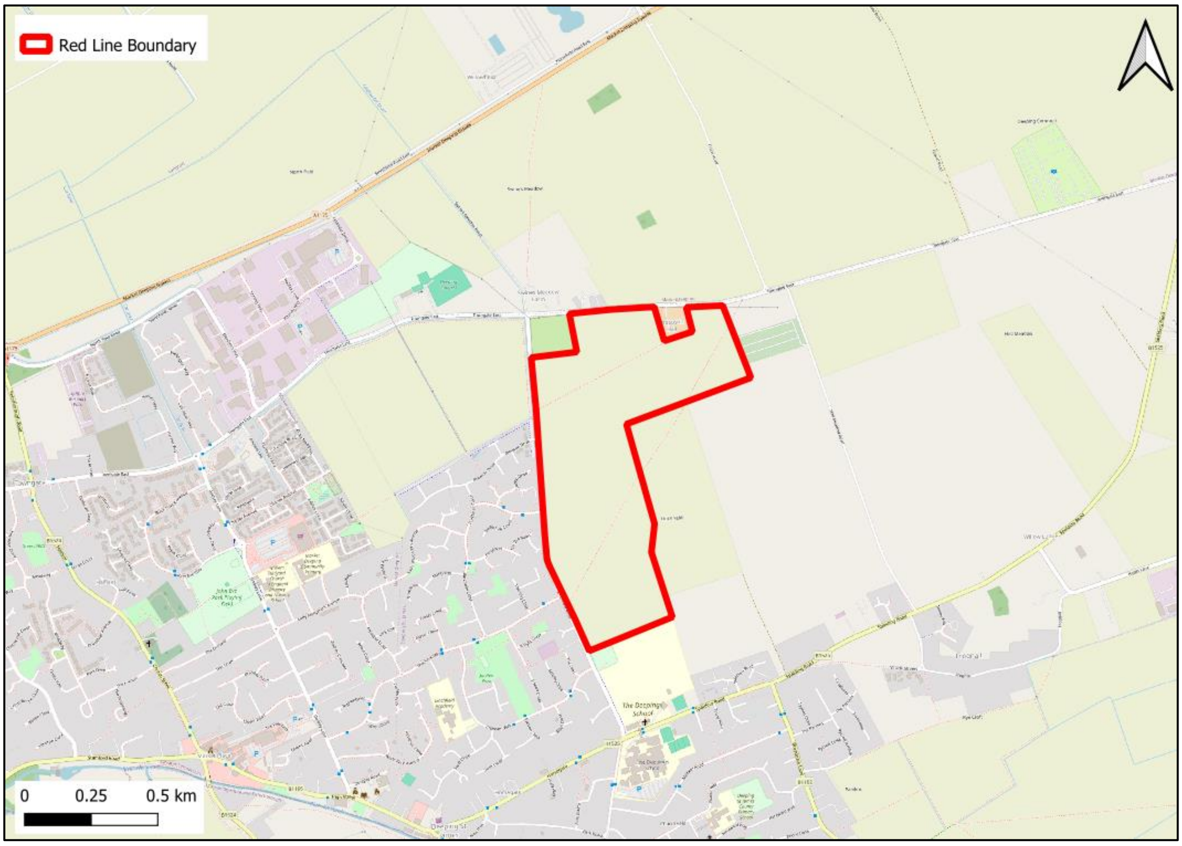
Appendices

1 Introduction

1.1 Rappor were appointed by Rosconn Group (the applicant) to produce Flood Risk & Drainage input to support the promotion of the land east of Linchfield Road through Regulation 18 consultation stage of the emerging South Kesteven Local Plan 2023 – 2043.

1.2 The site has been included as part of allocation 'SKPR-330: Land East of Linchfield Road, Market Deeping' in the Draft South Kesteven Local Plan. SKPR-330 is proposed as a new allocation of up to 840 homes to meet the minimum housing requirement for South Kesteven over the plan period.

1.3 The extent of the allocation site is shown in **Figure 1.1**.



(Source: OpenStreetMaps)

Figure 1.1 Site Location Plan

1.4 The site comprises undeveloped arable farmland, centred at grid coordinates E: 515139, N: 310555, with the nearest postcode PE6 8SQ.

1.5 The site is bordered to the north by Towngate East, to the east by arable farmland, to the south by Deeping Skate Park and arable farmland, and to the west by Linchfield Road.

2 Existing Site Conditions

Site Proposals

2.1 The proposal is for a new allocation of up to 840 dwellings. A copy of the sketch masterplan is included in **Appendix A**.

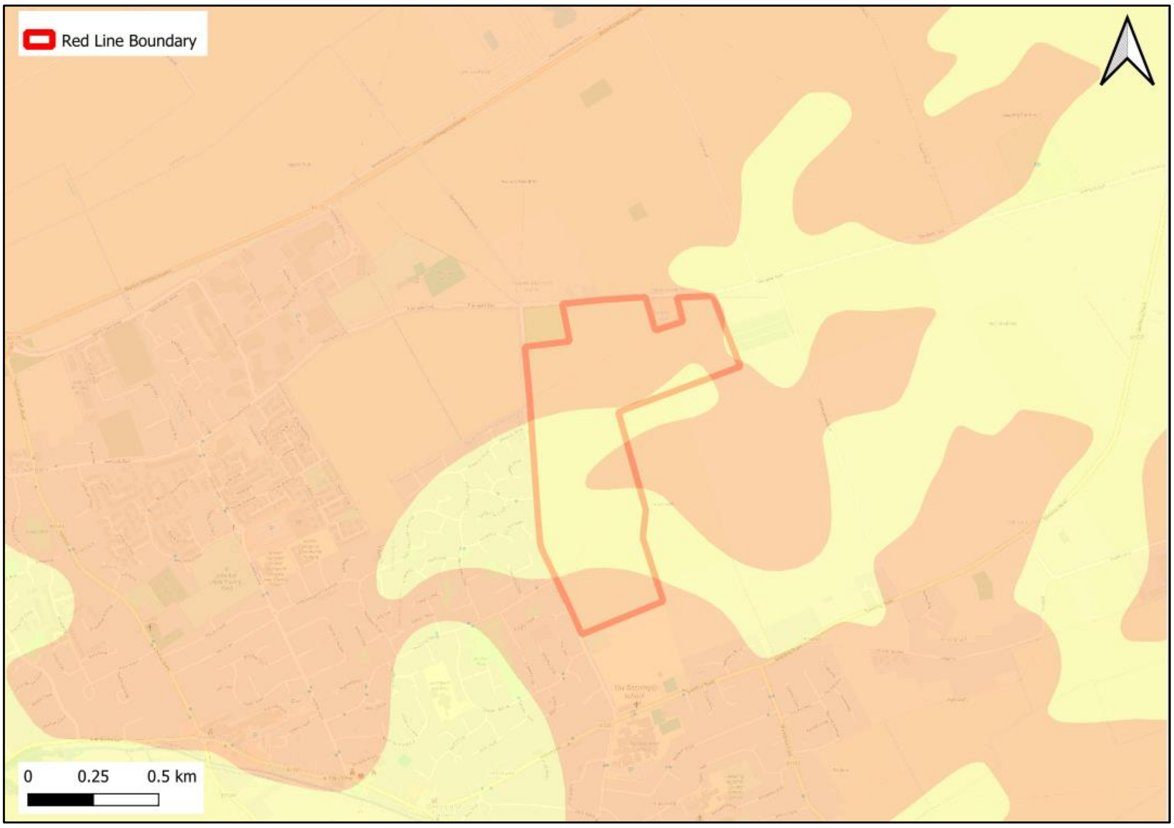
Topography

2.2 A topographical survey undertaken for the site indicates ground levels are generally flat, with a gentle fall towards the existing ditch network located at the northern and eastern site boundary. Grounds levels fall generally in a northeasterly direction from 5.69 metres Above Ordnance Datum (mAOD) to 3.71 mAOD. A copy of the survey is included in **Appendix B**.

Ground Conditions

2.3 Geological data held by the British Geological Survey (BGS)[1] shows that the bedrock geology underlying the site is Oxford Clay Formation - Mudstone.

2.4 There are two bands of Superficial deposits recorded for the site on BGS mapping, identified as River Terrace Deposits 1 – Sand and Gravel (orange area) and Alluvium – Clay Silt, Sand and Gravel (yellow area). Refer to **Figure 2.1**.



(Source: OpenStreetMaps/BGS)

Figure 2.1 Superficial Deposits

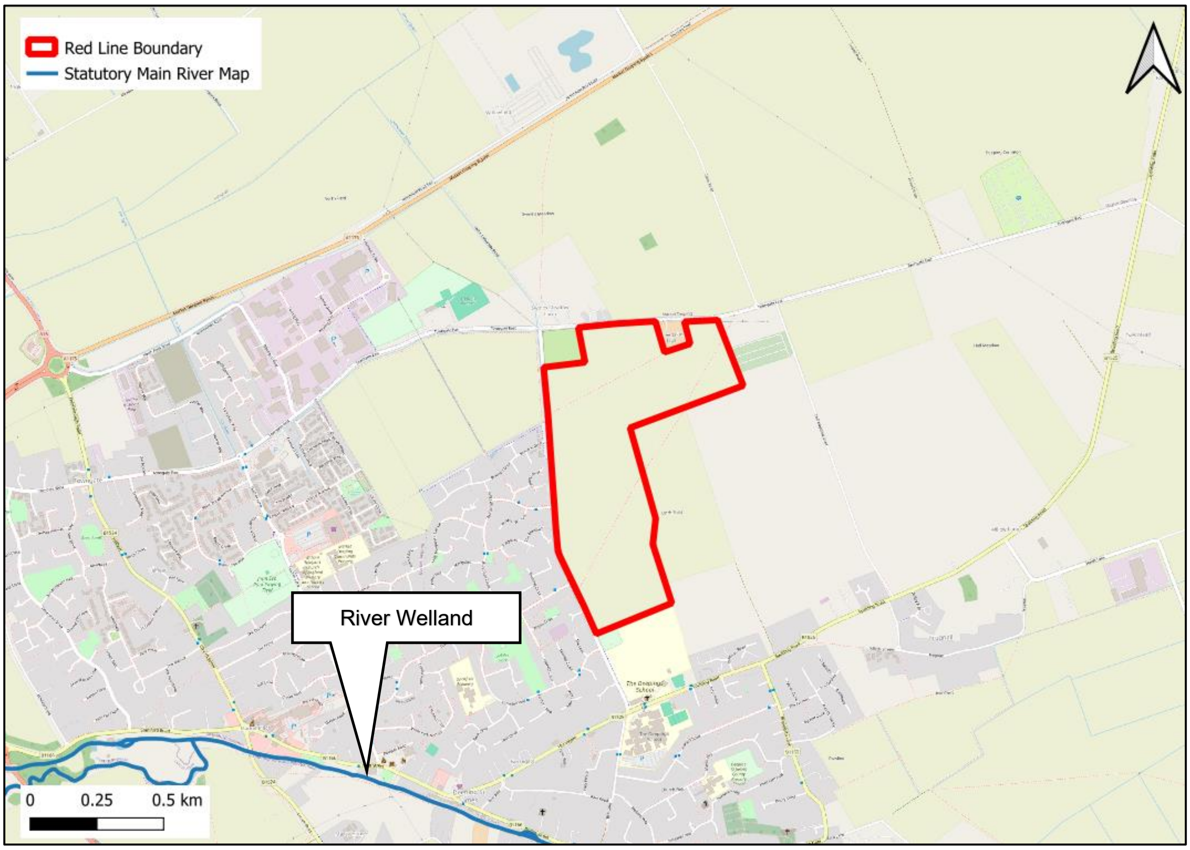
[1] https://geologyviewer.bgs.ac.uk/

2.5 Department for Environment, Food & Rural Affair (DEFRA) Magic Mapping Service Mapping[2] shows the site is not located in a groundwater Source Protection Zone (SPZ).

Existing Drainage & Hydrology

2.6 There are no Environment Agency designated 'Main Rivers' located within the site boundary. The nearest EA main river is located circa 730m south of site and is identified to be the River Welland. Refer to **Figure 2.2**.

2.7 A desk study review identifies an existing ditch network located along the site's northern and eastern boundary.



(Source: OpenStreetMaps/Environment Agency)

Figure 2.2 Existing Hydrology

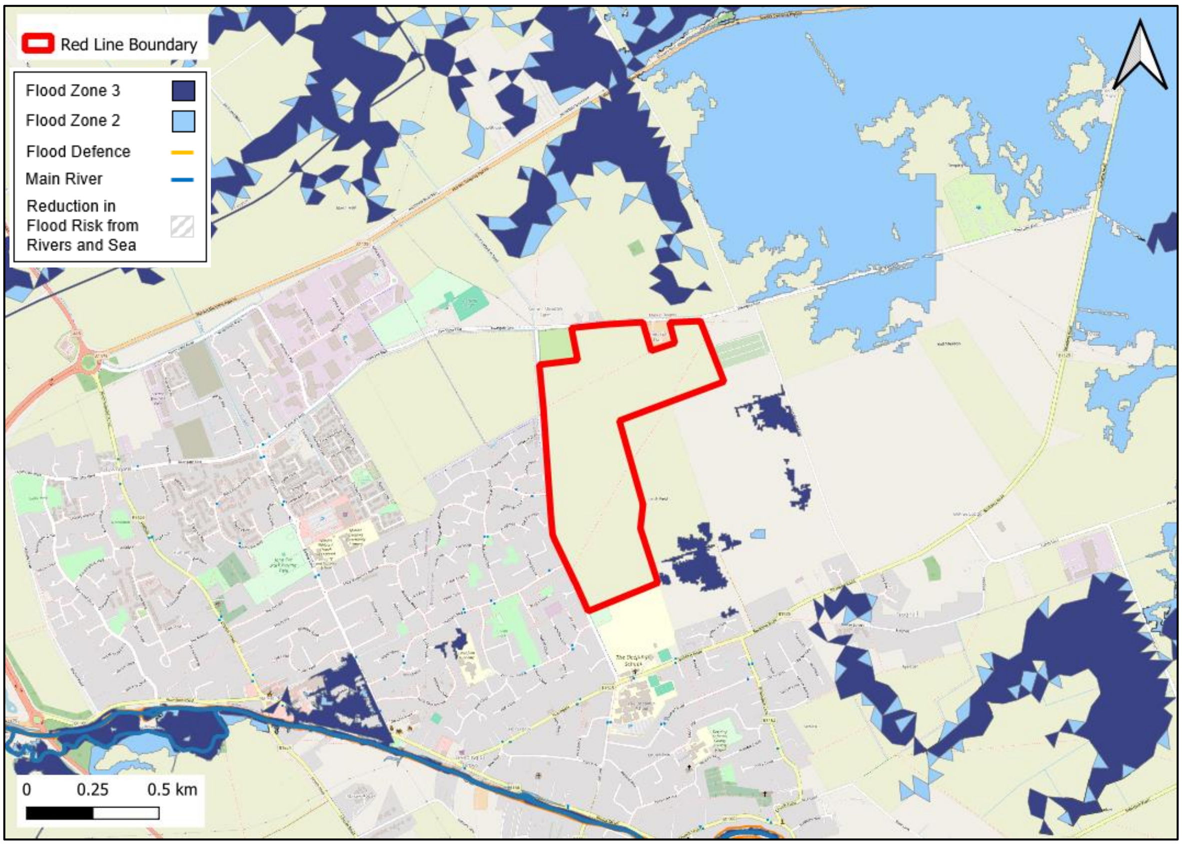
2.8 Anglian Water Asset Records indicate two Public Foul Rising Mains flow through the southern extent of site in a southeasterly direction. Records are included in **Appendix C**.

[2] https://magic.defra.gov.uk/magicmap.aspx

3 Flood Risk

Fluvial

3.1 The site is located within EA Flood Zone 1, classified as having a less than 1 in 1,000 year annual probability of fluvial flooding and is therefore at low risk, as shown in **Figure 3.1**.



(Source: OpenStreetMaps/Environment Agency)

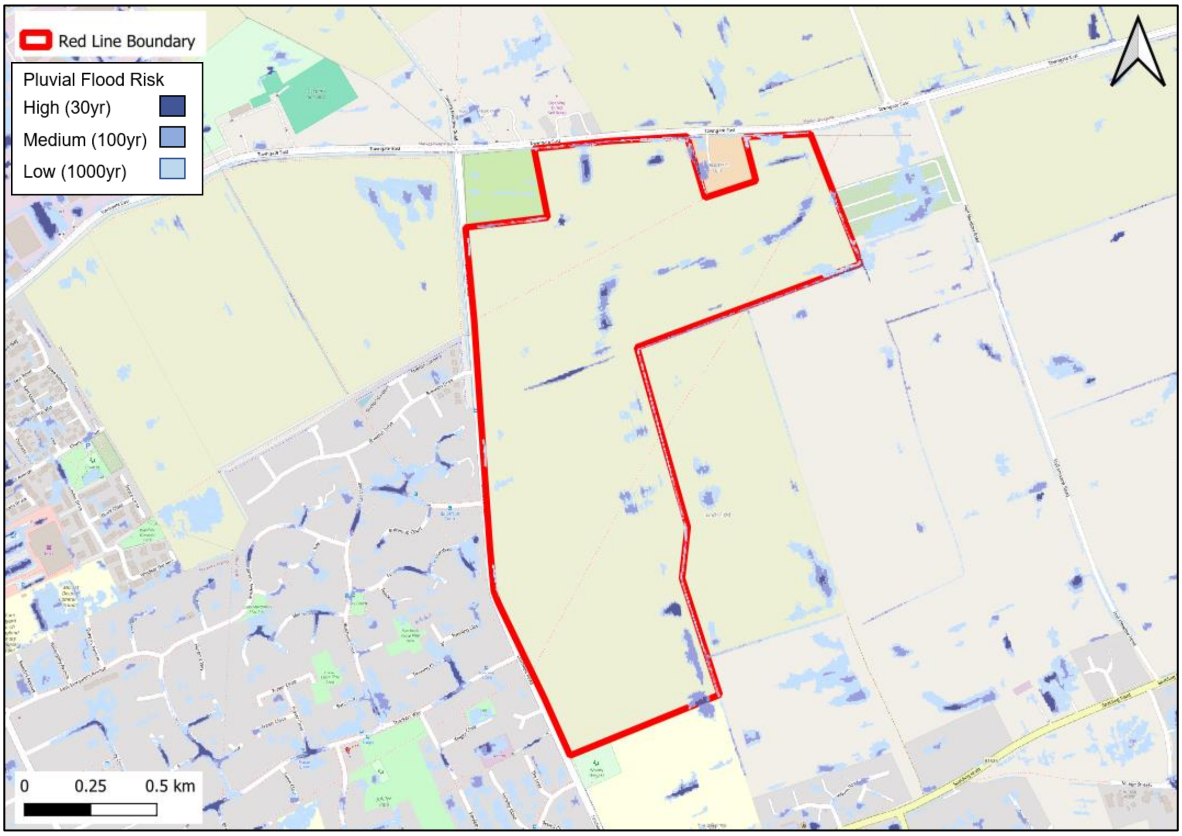
Figure 3.1 Environment Agency Flood Map for Planning

Pluvial

3.2 The Surface Water (Pluvial) Flood Map provided by the Environment Agency (see **Figure 3.2**) indicates the majority of the site is at low risk of pluvial flooding.

3.3 It is noted, however, there is a band of low-high risk which appears to be associated with the existing ditch network along the site's northern and eastern boundary. Areas of risk not associated with the ditch network are presumed to be associated with topographical depressions, as opposed to being part of the wider flow route, based on a desk study review.

3.4 Towngate East and Linchfield Road are identified to be at low risk.



(Source: OpenStreetMaps/Environment Agency)

Figure 3.2 Environment Agency Surface Water Flood Risk Extent

3.5 The illustrative masterplan indicates developable areas, and attenuation areas, are where possible being kept outside of this risk, proposing areas of risk are accommodated within green corridors and areas of public open space, where feasible.

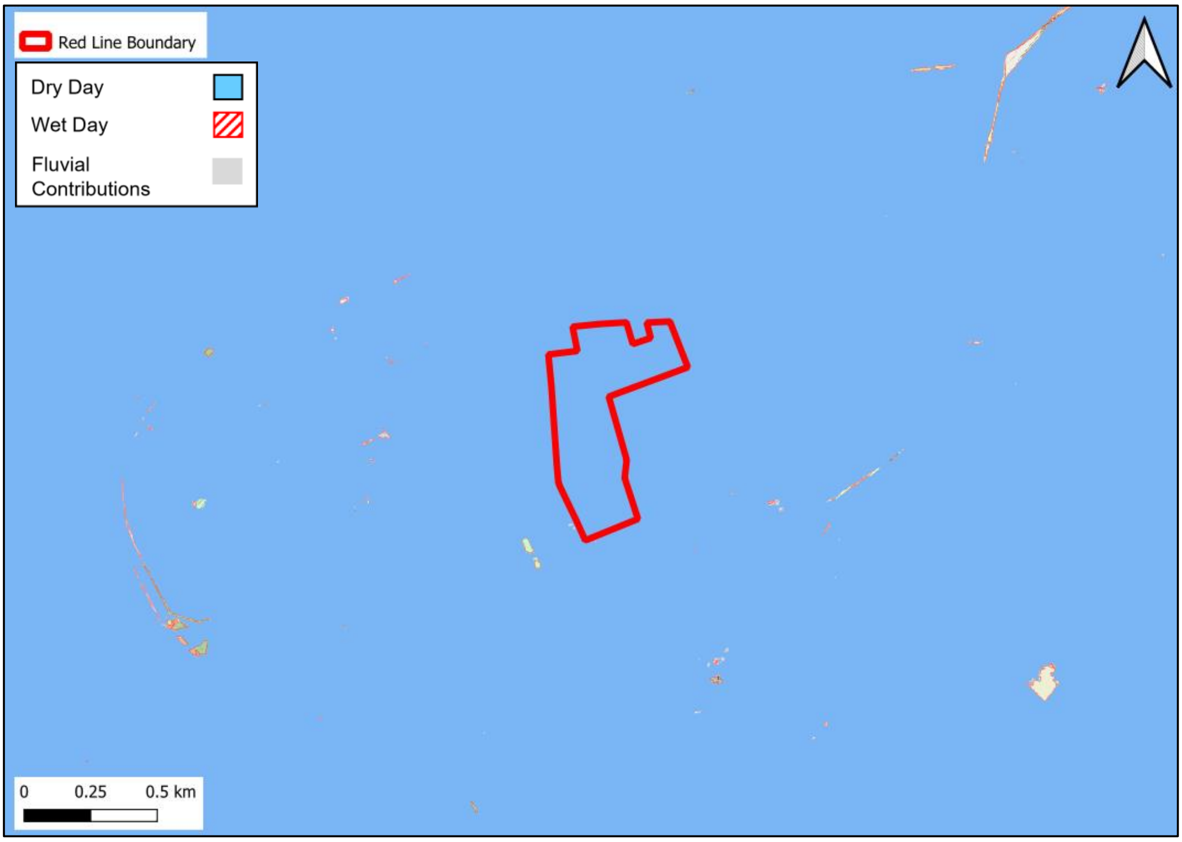
3.6 Overall, it is advised that a sequential approach should be taken in the design of the masterplan to ensure all forms of development are outside the areas deemed to be at risk.

Reservoirs

3.7 Flooding can occur from large waterbodies or reservoirs if they are impounded above the surrounding ground levels or are used to retain water in times of flood. Although unlikely, reservoirs and large waterbodies could overtop or breach leading to rapid inundation of the downstream floodplain.

3.8 To help identify this risk, reservoir failure flood risk mapping has been prepared[3], this shows the largest area that might be flooded if a reservoir were to fail and release the water it holds. The map displays a worst case scenario and is only intended as a guide, as shown in **Figure 3.3**.

[3] https://flood-warning-information.service.gov.uk/long-term-flood-risk/map



(Source: OpenStreetMap/Environment Agency)

Figure 3.3 Reservoir Flood Risk Mapping

3.9 The “dry day” mapping shows reservoir flooding extents in the event that they fail and release their water held on a day when local rivers are at normal levels. The “wet day” mapping shows flooding which would occur in the same situation as “dry day”, but local river levels have exceeded their banks.

3.10 The “Reservoir Flood Extents – Fluvial Contribution” shows the extent of flooding when river flooding is added to the reservoir model during the flooding, rather than following the reservoir flooding occurring and flooding the rivers which have already exceeded their banks as in the “wet day” scenario.

3.11 The mapping identifies the entirety of the site is at risk from this source in a “dry day” mapping scenario.

3.12 Reservoir flooding is extremely unlikely to happen. There has been no loss of life in the UK from reservoir flooding since 1925. All large reservoirs must be inspected and supervised by reservoir panel engineers. As the enforcement authority for the Reservoirs Act 1975 in England, the Environment Agency ensure that reservoirs are inspected regularly, and essential safety work is carried out.

3.13 Due to the high standards of inspection and maintenance required by legislation, and the role such a risk of flooding is considered to be low.

Infiltration Testing

3.14 Infiltration testing has not been undertaken at this stage as discharge to ground is considered unlikely to be feasible due to the geology.

4 Proposed Drainage Strategy

Introduction

4.1 Consideration of flood issues is not confined to the floodplain. This is recognised in the NPPF and associated guidance. The alteration of natural surface water flow patterns through developments can lead to problems elsewhere in a catchment, particularly flooding downstream; and replacing permeable vegetated areas with low permeability roofs, roads and other paved areas will increase the speed, volume and peak flow of surface water runoff.

4.2 A surface water management strategy for the development is proposed to manage and reduce the flood risk posed by surface water runoff from the site. The surface water drainage arrangements for any development site should be such that the volume and peak flow rates of surface water leaving a developed site are no greater than the rates prior to the proposed development unless specific off-site arrangements are made and result in the same net effect.

4.3 An assessment of the surface water runoff rates was undertaken to determine the surface water options and attenuation requirements for the site and is discussed below.

Existing Drainage

4.4 Due to the nature of the current site, runoff is considered to drain ultimately to the existing ditch network.

Surface Water Management

4.5 Sustainable drainage system measures (SuDS) should be used to control the surface water runoff from the proposed development site, thereby managing the flood risk to the site and surrounding areas from surface water runoff. These measures will also improve the quality of water discharged from the site.

4.6 Based on the latest National Standards for SuDS guidance[4], the SuDS hierarchy demands that surface water run off should be disposed of as high up the following list as practically possible:

a) Collected for non-potable use
b) Into the ground (infiltration) and re-use, or then;
c) To a surface water body, or then;
d) To a surface water sewer, highway drain or another drainage system, or then;
e) To a combined sewer.

Water Reuse

4.7 The proposed development provides an opportunity to reuse surface water throughout the provision of rainwater harvesting products.

[4] https://www.gov.uk/government/publications/national-standards-for-sustainable-drainage-systems/national-standards-for-sustainable-drainage-systems-suds

4.8 Rainwater butts should be provided at suitable locations where feasible, to reduce the volume of water entering the underground drainage system and the demand on the water supply network.

4.9 Harvested rainwater may be used for garden watering and other applications where a pressurised hose connection is not required. Stored rainwater also provides a source of clean water when hosepipe bans are in effect.

Infiltration Testing

4.10 Infiltration testing has not been undertaken and is deemed not viable for surface water management.

Proposed Drainage

4.11 The introduction of hardstanding associated with the proposed development will introduce an impermeable area, which will increase the amount of runoff generated and could increase flood risk elsewhere unless managed to local authority drainage requirements. The proposed drainage solution, however, shall mitigate this risk.

4.12 As infiltration has been deemed unsuitable for surface water disposal, the site will be expected to utilise an on-site attenuation system, with discharge to the existing ditch network at the Greenfield runoff rate.

4.13 As per principles outlined in the SuDS manual, effective management of surface water runoff entails utilising SuDS features close to source.

4.14 The development is recommended to progress utilising Tree Pits, Rainwater Gardens, Swales and Permeable Paving, all of which will capture and discharge residential buildings surface water runoff close to source. Surface water storage is primarily going to be provided in above ground attenuation basins. An indicative attenuation plan has been developed and is included in **Appendix D**.

Foul Water Management

4.15 It is proposed for Foul discharge to be directed ultimately to the Anglian Water asset.

4.16 It is likely that Foul will need to be pumped by a Type 3 Pumping Station.

4.17 Rappor are yet to consult Anglian Water in the form of a Developer Enquiry to understand the viable connection point and confirm capacity however, as the design progresses this consultation will be carried out.

Appendix A – Illustrative Masterplan

Key

29.07.2025

SKETCH 001.

0 50 100 m

nineteen47

CHARTERED TOWN PLANNERS & URBAN DESIGNERS

Project
Market Deeping

Drawing Title
Base Plan

Project Code	Drawing Nr	Rev
n2795		

Date	Drawing Scale
	1:2,500 @ A2

Appendix B – Topographical Survey

Symbol & Abbreviation Key.

BARBED WIRE FENCE
POST & RAIL FENCE
CLOSE BOARD FENCE
RAILINGS
CHAIN LINK FENCE
OTHER FENCE
KERB
DROPPED KERB
GULLY CHANNEL
TOP OF BANK
BOTTOM OF BANK
FOLIAGE
DITCH
VERGE
OVERHEAD CABLES
GATE
HEDGE
TREE - BROAD LEAVED
TREE - CONIFEROUS
BUSH
BUILDING
BOREHOLE
SURVEY STATION
ORDNANCE SURVEY BENCH MARK

A/C	AIR CONDITIONING UNIT	KO	KERB OFFLET
AV	AIR VALVE	LC	LIGHTING COLUMN
BOL	BOLLARD	LP	LAMP POST
BH	BOREHOLE	NP	NAME PLATE
BL	BED LEVEL	NB	NOTICE BOARD
BM	BENCH MARK	PR	PIPE RISER
BT	BRITISH TELECOM	RP	RODDING POINT
CTV	CABLE TV	RS	ROAD SIGN
CL	COVER LEVEL	SP	SIGN POST
CR	CABLE RISER	SV	STOP VALVE
DP	DOWN PIPE	TL	TRAFFIC LIGHT
ER	EARTH ROD	TP	TELEGRAPH POLE
EP	ELECTRICITY POLE	TOF	TOP OF FENCE
EM	ELECTRICITY MARKER	TOH	TOP OF HEDGE
FB	FUSE BOX	TOR	TOP OF RAILINGS
FH	FIRE HYDRANT	TOS	SERVICE LEVEL
FP	FENCE POST	TOW	TOP OF WALL
FL	FLOOR LEVEL	UTL	UNABLE TO LIFT
GV	GAS VALVE	VM	VALVE MARKER
GM	GAS MARKER	VP	VENT PIPE
GU	GULLY	WL	WATER LEVEL
HM	HYDRANT MARKER	WM	WATER MARKER
IL	INVERT LEVEL	WO	WASH OUT

General.

This survey has been prepared with a scaling accuracy for a plot at a scale of 1:200.

All tree heights and spreads are approximate. We have tried to identify tree types, however if tree species are critical specialist advice should be gained.

Drainage pipe sizes have been measured from the surface. Chamber access has not been gained for safety reasons, therefore sizes should be regarded as approximate.

Some detail may have been omitted due to parked vehicles.

Notes.

Results overlain on previous drawing reference 250272

Rev	Details of Revision	Drawn	Date

Surveyed	Drawn	Date	Checked	Date	Approved	Date
STM	STM	22/07/25	INITIALS	BLANK	INITIALS	BLANK

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Client.

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Title.

TOPOGRAPHICAL SURVEY

LINCHFIELD ROAD
PETERBOROUGH
PE6 8EP

Dwg No. **250559.1** Sheet **1 of 1**

Scale NTS A0 Sheet Rev. -

Appendix C – Sewer Records

Date: 08/08/25 | Scale: 1:1250 | Map Centre: 515058,310637 | Data updated: 01/07/25 | Our Ref: 1846251 - 1

Wastewater Plan A0
Powered by digdat

This plan is provided by Anglian Water pursuant its obligations under the Water Industry Act 1991 sections 198 or 199. It must be used in conjunction with any search results attached. The information on this plan is based on data currently recorded but position must be regarded as approximate. Service pipes, private sewers and drains are generally not shown. Users of this map are strongly advised to commission their own survey of the area shown on the plan before carrying out any works. The actual position of all apparatus MUST be established by trial holes. No liability whatsoever, including liability for negligence, is accepted by Anglian Water for any error or inaccuracy or omission, including the failure to accurately record, or record at all, the location of any water main, discharge pipe, sewer or disposal main or any item of apparatus. This information is valid for the date printed. This plan is produced by Anglian Water Services Limited (c) Crown copyright and database rights 2025 Ordnance Survey AC0000813445.This map is to be used for the purposes of viewing the location of Anglian Water plant only. Any other uses of the map data or further copies is not permitted. This notice is not intended to exclude or restrict liability for death or personal injury resulting from negligence.

Foul Sewer
Surface Sewer
Combined Sewer
Final Effluent
Rising Main*
Private Sewer*
Decommissioned Sewer*

Outfall*
Inlet*
Manhole*

Sewage Treatment Works
Public Pumping Station
Decommissioned Pumping Station

*(Colour denotes effluent type)

infadmin@rappor.co.uk
250435

love every drop
anglianwater

Manhole Reference	Easting	Northing	Liquid Type	Cover Level	Invert Level	Depth to Invert
0101	515030	310165	F	6.01	2.36	3.65
0103	515057	310157	F	6.12	4.15	1.97
0201	515094	310234	F	5.92	1.73	4.19
0202	515043	310208	F	6.17	2.17	4
0203	515034	310215	F	6.19	3.6	2.59
0204	515017	310259	F	6.14	4.18	1.96
0205	515024	310262	F	5.72	4.25	1.47
0301	515057	310321	F	5.92	2.02	3.9
0302	515030	310361	F	6.38	4.35	2.03
0303	515040	310360	F	6.3	2.22	4.08
0304	515039	310304	F	-	-	-
0401	515021	310401	F	6.36	2.31	4.05
3203	514382	310259	F	-	3.286	-
3301	514369	310391	F	-	5.31	-
3303	514352	310314	F	-	3.794	-
3304	514398	310332	F	-	4.196	-
3402	514366	310459	F	6.1	3.17	2.93
3403	514362	310423	F	-	3.4	-
3404	514380	310478	F	-	3.34	-
3406	514330	310475	F	-	-	-
3407	514336	310475	F	-	-	-
3408	514337	310481	F	-	-	-
3409	514339	310475	F	-	-	-
3410	514341	310478	F	-	-	-
3502	514341	310543	F	6.32	4.75	1.57
4101	514421	310183	F	-	3.553	-
4102	514453	310198	F	-	3.803	-
4102	515403	310172	F	-	-	-
4104	515466	310197	F	-	-	-
4105	515470	310187	F	-	-	-
4106	515452	310181	F	-	-	-
4107	515488	310193	F	-	-	-
4108	515458	310198	F	-	-	-
4109	515456	310197	F	-	-	-
4110	515455	310197	F	-	-	-
4111	515453	310196	F	-	-	-
4114	515439	310175	F	-	-	-
4117	515437	310181	F	-	-	-
4118	515436	310183	F	-	-	-
4119	515436	310185	F	-	-	-
4120	515435	310187	F	-	-	-
4121	515434	310189	F	-	-	-
4122	515432	310195	F	-	-	-
4123	515429	310195	F	-	-	-
4124	515428	310194	F	-	-	-
4125	515424	310193	F	-	-	-
4200	515469	310202	F	-	-	-
4201	514404	310212	F	-	2.888	-
4201	515471	310202	F	-	-	-
4202	514437	310291	F	-	3.776	-
4202	515472	310202	F	-	-	-
4203	514458	310276	F	-	3.924	-
4204	514488	310295	F	-	4.204	-
4204	515463	310201	F	-	-	-
4205	514483	310214	F	-	4.025	-
4205	515462	310205	F	-	-	-
4206	515461	310206	F	-	-	-
4207	515430	310201	F	-	-	-
4208	515430	310203	F	-	-	-
4209	515429	310205	F	-	-	-
4301	514463	310362	F	-	4.694	-
4302	514473	310357	F	-	-	-
4303	514469	310340	F	-	-	-
4401	514419	310494	F	-	3.6	-
4402	514434	310453	F	-	3.92	-
4403	514437	310424	F	6.1	4.1	2
4501	514442	310504	F	6.1	3.77	2.33
4502	514420	310558	F	-	4.17	-
4503	514428	310576	F	-	4.3	-
4504	514449	310586	F	-	-	-
4505	514458	310599	F	-	-	-
4600	514453	310604	F	-	-	-
4601	514452	310611	F	-	-	-
5101	514530	310153	F	-	4.525	-
5102	515580	310158	F	5.55	-0.2	5.75
5104	515557	310154	F	-	-	-
5105	515546	310188	F	-	-	-
5106	515539	310193	F	-	-	-
5107	515501	310199	F	-	-	-
5108	515512	310196	F	-	-	-
5200	515551	310213	F	-	-	-
5201	514522	310233	F	-	-	-
5201	515568	310220	F	-	-	-
5202	515577	310233	F	-	-	-
5202	514573	310269	F	-	-	-
5203	515586	310237	F	-	-	-
5203	514593	310227	F	-	-	-
5204	515589	310230	F	-	-	-
5301	514598	310355	F	-	-	-
5302	514533	310387	F	-	-	-
5303	514521	310349	F	-	-	-
5304	514513	310346	F	-	-	-
5305	514506	310343	F	-	-	-
5401	514552	310491	F	5.41	3.555	1.855
5402	514513	310497	F	5.48	3.845	1.635
5403	514506	310449	F	5.73	4.2	1.53
5404	514575	310472	F	5.54	4.05	1.49
5405	514576	310405	F	-	-	-
5406	514502	310477	F	-	4.01	-
5501	514523	310576	F	-	-	-
5502	514516	310551	F	-	-	-
5503	514554	310568	F	-	-	-
5504	514578	310584	F	-	-	-
5505	514582	310530	F	5.59	3.26	2.33
5506	514534	310505	F	5.35	3.715	1.635
5507	514529	310514	F	-	-	-
5508	514529	310520	F	-	-	-
5509	514520	310519	F	-	-	-
5510	514552	310563	F	-	-	-
5601	514567	310691	F	-	-	-
5602	514536	310677	F	-	-	-
5603	514516	310645	F	-	-	-
5604	514593	310616	F	-	-	-
5605	514576	310621	F	-	-	-
5700	514540	310749	F	-	-	-
5701	514599	310795	F	-	-	-
5702	514557	310760	F	-	-	-
5703	514570	310778	F	-	-	-
6101	515665	310181	F	5.23	-0.37	5.6
6102	515638	310183	F	-	-	-
6108	515636	310169	F	-	-	-
6109	515631	310159	F	-	-	-
6112	515635	310191	F	-	-	-
6201	514619	310291	F	-	-	-
6201	515662	310195	F	-	-	-
6202	514677	310277	F	-	-	-
6203	514680	310260	F	-	-	-
6204	514682	310247	F	-	-	-
6205	514642	310297	F	-	-	-
6206	514691	310269	F	-	-	-
6207	514691	310278	F	-	-	-
6208	514696	310279	F	-	-	-
6301	514606	310342	F	-	-	-
6302	514670	310303	F	-	-	-
6303	514678	310376	F	-	-	-
6304	514700	310340	F	-	-	-
6305	514694	310338	F	-	-	-
6401	514626	310491	F	5.485	3.95	1.535
6402	514636	310491	F	-	-	-
6403	514614	310447	F	-	-	-
6404	514619	310443	F	-	-	-
6405	514616	310448	F	-	-	-
6406	514622	310437	F	-	-	-
6407	514605	310430	F	-	-	-
6501	514692	310597	F	5.54	1.34	4.2
6502	514693	310577	F	5.47	1.495	3.975
6503	514684	310534	F	5.56	2.535	3.025
6504	514684	310515	F	5.71	3.925	1.785
6505	514635	310538	F	5.315	2.865	2.45
6506	514611	310542	F	5.325	3.03	2.295

Manhole Reference	Easting	Northing	Liquid Type	Cover Level	Invert Level	Depth to Invert
6601	514688	310654	F	-	-	-
6602	514639	310671	F	-	-	-
6603	514607	310686	F	-	-	-
6604	514619	310625	F	-	-	-
6605	514630	310613	F	-	-	-
6701	514619	310720	F	-	-	-
6702	514643	310725	F	-	-	-
6703	514699	310790	F	-	-	-
6800	514687	310817	F	-	-	-
6801	514628	310857	F	-	-	-
6802	514627	310807	F	-	-	-
6803	514669	310812	F	-	-	-
6804	514638	310836	F	-	-	-
6805	514642	310809	F	-	-	-
7103	514782	310154	F	-	-	-
7104	514770	310188	F	-	-	-
7105	514755	310187	F	-	-	-
7106	514761	310174	F	-	-	-
7113	514765	310153	F	-	-	-
7200	514801	310272	F	-	-	-
7201	515715	310211	F	5.05	0	5.05
7202	515767	310240	F	4.93	0.23	4.7
7301	514751	310334	F	-	-	-
7302	514727	310324	F	-	-	-
7303	514711	310318	F	-	-	-
7304	514724	310391	F	-	-	-
7305	514728	310335	F	-	-	-
7306	514723	310348	F	-	-	-
7307	514717	310346	F	-	-	-
7308	514709	310343	F	-	-	-
7309	514774	310391	F	-	-	-
7310	514776	310388	F	-	-	-
7401	514794	310428	F	5.9	4.47	1.43
7402	514715	310418	F	-	-	-
7403	514702	310463	F	-	-	-
7404	514740	310479	F	-	-	-
7405	514783	310424	F	-	-	-
7406	514783	310417	F	-	-	-
7407	514767	310410	F	-	-	-
7408	514768	310407	F	-	-	-
7409	514771	310400	F	-	-	-
7410	514793	310441	F	-	-	-
7411	514793	310445	F	-	-	-
7412	514790	310454	F	-	-	-
7413	514797	310457	F	-	-	-
7414	514782	310451	F	-	-	-
7415	514774	310447	F	-	-	-
7501	514725	310580	F	5.51	1.695	3.815
7502	514747	310589	F	5.5	1.85	3.65
7503	514770	310554	F	-	-	-
7601	514772	310613	F	5.25	2.065	3.185
7602	514794	310618	F	5.115	2.24	2.875
7603	514769	310684	F	-	-	-
7604	514749	310647	F	-	-	-
7605	514745	310649	F	-	-	-
7606	514740	310652	F	-	-	-
7607	514737	310654	F	-	-	-
7608	514733	310647	F	-	-	-
7700	514707	310707	F	-	-	-
7701	514793	310772	F	-	-	-
7702	514711	310754	F	-	-	-
7703	514786	310754	F	-	-	-
7800	514717	310830	F	-	-	-
7801	514777	310882	F	-	-	-
7802	514746	310848	F	-	-	-
7900	514799	310905	F	-	-	-
8201	514890	310209	F	5.92	4.38	1.54
8202	514898	310213	F	6.02	4.95	1.07
8203	514823	310294	F	-	-	-
8204	514827	310286	F	-	-	-
8205	514830	310279	F	-	-	-
8301	514879	310396	F	5.3	3.14	2.16
8302	514815	310357	F	5.72	3.58	2.14
8303	514888	310373	F	5.35	3.6	1.75
8304	514897	310348	F	5.76	4.56	1.2
8305	514833	310322	F	6.75	5.49	1.26
8306	514826	310319	F	-	-	-
8307	514817	310315	F	-	-	-
8308	514817	310310	F	-	-	-
8309	514819	310302	F	-	-	-
8401	514897	310408	F	5.35	3.07	2.28
8402	514884	310433	F	5.27	3.15	2.12
8403	514868	310463	F	5.35	3.34	2.01
8404	514857	310484	F	5.62	3.72	1.9
8405	514851	310455	F	5.46	3.5	1.96
8406	514824	310442	F	5.65	-	-
8407	514864	310496	F	5.61	3.78	1.83
8408	514802	310418	F	-	-	-
8409	514808	310404	F	-	-	-
8410	514829	310463	F	-	-	-
8411	514823	310460	F	-	-	-
8412	514820	310448	F	-	-	-
8413	514815	310457	F	-	-	-
8501	514854	310596	F	5.31	3.8	1.51
8502	514837	310525	F	5.82	4.37	1.45
8601	514829	310607	F	5.2	2.485	2.715
8602	514841	310637	F	5.34	2.7	2.64
8603	514854	310647	F	5.34	2.81	2.53
8604	514883	310654	F	5.225	3.005	2.22
8605	514897	310625	F	5.005	3.22	1.785
8606	514827	310695	F	-	-	-
8607	514803	310678	F	-	-	-
8608	514885	310663	F	-	-	-
8609	514888	310676	F	-	-	-
8700	514815	310792	F	-	-	-
8701	514867	310797	F	-	-	-
8702	514856	310726	F	-	-	-
8703	514836	310724	F	-	-	-
8800	514845	310834	F	-	-	-
8801	514849	310806	F	-	-	-
8900	514849	310932	F	-	-	-
8901	514823	310918	F	-	-	-
9103	514989	310153	F	5.87	2.46	3.41
9104	514977	310168	F	5.94	2.94	3
9107	514902	310185	F	6.15	3.84	2.31
9201	514968	310206	F	6.07	3.58	2.49
9202	514948	310235	F	5.87	3.94	1.93
9203	514937	310232	F	5.81	4.27	1.54
9204	514960	310235	F	-	-	-
9205	514971	310239	F	-	-	-
9301	514900	310329	F	5.9	4.85	1.05
9302	514995	310345	F	6.65	5	1.65
9401	514990	310465	F	6.43	2.6	3.83
9402	514971	310455	F	6.22	2.74	3.48
9403	514959	310431	F	-	-	-
9404	514965	310416	F	-	-	-
9405	514960	310413	F	-	-	-
9406	514953	310410	F	-	-	-
9501	514923	310522	F	-	-	-
9502	514914	310543	F	-	-	-
9503	514927	310511	F	-	-	-
9504	514943	310574	F	-	-	-
9505	514939	310598	F	-	-	-
9506	514928	310501	F	-	-	-
9507	514934	310501	F	-	-	-
9600	514904	310671	F	-	-	-
0151	515026	310176	S	6	4.82	1.18
0152	515062	310162	S	6.08	4.95	1.13
0154	515002	310163	S	5.96	4.83	1.13
0251	515040	310215	S	6.11	4.65	1.46
0252	515085	310238	S	6.03	4.92	1.11
0254	515028	310221	S	6.19	4.54	1.65
0351	515034	310366	S	6.32	4.26	2.06
0451	515006	310427	S	6.32	4.13	2.19
3551	514340	310580	S	6.1	5.2	0.9
5451	514572	310472	S	-	-	-
5452	514516	310495	S	-	-	-
5453	514509	310453	S	-	-	-
5454	514504	310475	S	-	-	-
5455	514553	310488	S	-	-	-

Manhole Reference	Easting	Northing	Liquid Type	Cover Level	Invert Level	Depth to Invert
5555	514581	310526	S	-	-	-
5556	514532	310502	S	-	-	-
5750	514519	310736	S	-	-	-
5751	514559	310774	S	-	-	-
5752	514533	310744	S	-	-	-
5753	514543	310755	S	-	-	-
5754	514558	310764	S	-	-	-
5850	514536	310814	S	-	-	-
6151	514679	310177	S	-	-	-
6252	514679	310201	S	-	-	-
6451	514628	310495	S	-	-	-
6551	514610	310539	S	-	-	-
6552	514637	310536	S	-	-	-
6553	514687	310531	S	-	-	-
6554	514689	310504	S	-	-	-
6555	514697	310572	S	-	-	-
6850	514627	310864	S	-	-	-
6851	514622	310862	S	-	-	-
6852	514684	310819	S	-	-	-
6853	514606	310801	S	-	-	-
6854	514671	310815	S	-	-	-
6855	514628	310809	S	-	-	-
7151	514782	310170	S	-	-	-
7152	514790	310153	S	-	-	-
7451	514798	310425	S	5.86	4.42	1.44
7551	514727	310578	S	-	-	-
7552	514747	310585	S	-	-	-
7553	514768	310554	S	-	-	-
7651	514793	310615	S	-	-	-
7652	514775	310611	S	-	-	-
7850	514784	310892	S	-	-	-
7851	514742	310847	S	-	-	-
7852	514713	310886	S	-	-	-
7853	514714	310832	S	-	-	-
7950	514778	310948	S	-	-	-
8251	514884	310233	S	5.88	-	-
8351	514835	310375	S	-	3.78	-
8353	514850	310300	S	-	-	-
8355	514886	310317	S	-	-	-
8451	514889	310408	S	5.39	3.93	1.46
8452	514876	310436	S	5.26	4.05	1.21
8453	514866	310455	S	5.32	4.1	1.22
8454	514820	310435	S	5.72	4.11	1.61
8455	514851	310484	S	5.61	4.42	1.19
8551	514832	310517	S	5.89	4.53	1.36
8552	514853	310594	S	-	-	-
8651	514897	310630	S	-	-	-
8652	514887	310652	S	-	-	-
8653	514855	310645	S	-	-	-
8654	514844	310636	S	-	-	-
8655	514831	310604	S	-	-	-
8950	514803	310909	S	-	-	-
8951	514829	310923	S	-	-	-
9151	514908	310182	S	6.19	4.16	2.03
9251	514940	310266	S	5.91	4.2	1.71
9252	514947	310250	S	5.84	4.43	1.41
9253	514971	310214	S	5.98	4.6	1.38
9254	514996	310299	S	5.57	4.37	1.2
9353	514995	310347	S	6.64	4.34	2.3
9451	514919	310426	S	5.77	3.78	1.99
9452	514967	310448	S	6.1	4.45	1.65
9653	514915	310606	S	-	-	-

Manhole Reference	Easting	Northing	Liquid Type	Cover Level	Invert Level	Depth to Invert

Manhole Reference	Easting	Northing	Liquid Type	Cover Level	Invert Level	Depth to Invert

Manhole Reference	Easting	Northing	Liquid Type	Cover Level	Invert Level	Depth to Invert

Appendix D – Indicative Attenuation Plan

Notes:

1. Do not scale from this drawing. All dimensions are in metres, unless stated otherwise.
2. This drawing is based on the Sketch Masterplan (n2795-SK001).
3. Drawing to be read in conjunction with all other drawings. Any discrepancies are to be reported to the engineer 5 working days in advance of undertaking any work.
4. This drawing is for information purposes only and is indicative at this stage.
5. Attenuation storage requirements have been based on 65% of the developable area becoming impermeable, which includes for a 10% urban creep allowance.
6. Surface water flows are to be restricted to Greenfield Runoff Rate - 33.9 l/s.
7. The attenuation basins have been sized conservatively through assuming all impermeable areas drain to them and not accounting for upstream SuDS features. The basins are designed with side slopes at 1:3 with depths ranging from 0.9 - 1.1m (including 300mm freeboard), with a 3m maintenance and access easement.
8. Infiltration is deemed unsuitable and therefore all basins are seeking a proposed Outfall to the existing ditch network located along the site's northern and eastern boundary, subject to detailed design. Exact levels to be confirmed as the site progresses.
9. As per principles outlined in the SuDS Manual, it is advised a SuDS Management Train is promoted throughout site, with effective management of surface water runoff utilising SuDS features close to source. Such features could include Swales, Tree Pits, Rainwater Gardens and Permeable Paving.
10. Potential need for level raising of developable areas to ensure gravity connection for surface water drainage, subjct to detailed design.
11. It is recommended for the development to take a sequential approach to locating areas of development outside areas of surface water risk.

Calculations
Approximate Impermeable Area - 15.863 Ha
Attenuation Storage Required (at maximum) - 18,000m^3
Attenuation Storage Provided - 18,471m^3

Q1 - 29.5 l/s
Q30 - 81.3 l/s
Q100 - 120.5 l/s
QBAR - 33.9 l/s

Rev	Date	Details	By	Chkd	Appd
P01	08/08/25	First Issue for Information	CG	SR	SR

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CLIENT:
Rosconn Group

PROJECT:
Linchfield Road (SKPR-330), Market Deeping, Cambridgeshire

TITLE:
Indicative Attenuation Plan

STATUS: For Information
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