GENERAL NOTES

1. The location, size, depth and identification of existing services that may be shown or referred to on this drawing have been assessed from non intrusive observations , record drawings or the like. The contractor shall safely carry out intrusive investigations, trial holes or soundings prior to commencing work to satisfy himself that it is safe to proceed and that the assessments are accurate. any discrepancies shall be notified to gta prior to works commencing.

2. Tender or billing drawings shall not be used for construction or the ordering of materials.

3. Do not scale. All dimensions and levels to be site confirmed.

4. This drawing shall be read in conjunction with all relevant architects, consultants drawings and specifications, together with H&S plan requirements

5. Copyright : This drawing must not be copied, amended nor reproduced without the prior written agreement of gta.

6. All drawings specifications and recommendations made by gta are subject to Local Authority and other relevant Statutory Authorities approval. Any works or services made abortive due to the client proceeding prior to these approvals is considered wholly at the Clients risk. gta hold no responsibility for resulting abortive works or costs.

KEY

- Existing Foul Sewer
- Private surface water drain
- Private foul drain
- Private foul sewer
- Private foul pump main
- Private filter drain
- Existing ditch
- ExFSMH — Existing foul sewer manhole
- FWMH — Proposed foul sewer manhole
- FMH — Proposed private foul manhole
- SMH — Proposed surface water manhole
- RG — Road gully
- DT — Distribution block

PERMEABLE PAVING
LINED SYSTEM WITH SUB-BASE STORAGE

LINED PERMEABLE PAVING SYSTEM USED FOR ATTENUATION STORAGE 1 IN 100 YEAR+40%

ABBREVIATIONS

CL	COVER LEVEL
DT	DISTRIBUTION BLOCK
ExFSMH	EXISTING FOUL SEWER MANHOLE
FSMH	FOUL SEWER MANHOLE
FWD	FOUL DRAIN
FWS	FOUL SEWER
IL	INVERT LEVEL
PP	PERMEABLE PAVING
RG	ROAD GULLY
SL	SUMP LEVEL
SMH	SURFACE WATER MANHOLE
SWD	SURFACE WATER DRAIN

ExFSMH 930D
CL 11.520
IL 9.600

175mmø VC Foul Sewer

ExFSMH 9201
CL 10.880
IL 9.340

FOUL SEWER CONNECTION
VIA EXISTING SEWER MANHOLE.
REQUIRES SECTION 106 CONSENT FROM SOUTHERN WATER.

ExFSMH 9202
CL 10.730
IL 9.190

ExFSMH 9203
CL 11.680
IL 9.640

ExFSMH 8201
CL 11.740
IL 9.860

ExFSMH 0201
CL 10.710
IL 9.07

FSMH
CL 11.190
IL 9.285

FWS 150mmø 10.73m 1:150

SCP
DT
FFL 11.700

DT
CL 11.450
IL 10.900

HOUSES TO LINED PP SYSTEM

FWS 150mmø 64.24m 1:150

FILTER DRAIN

SWD 150mm 1:150

FFL 11.600

DT
CL 11.400
IL 10.800

HOUSES TO LINED PP SYSTEM

SWD 225mm 1:150

FFL 11.400

DT
CL 11.280
IL 10.570

FSMH
CL 11.200
IL 9.715

FILTER DRAIN
ROAD TO DRAIN TO FILTER DRAIN FOR TREATMENT AND STORAGE

FWS 150mmø 74m 1:150

FFL 11.500

SMH

LINED PP SYSTEM
ALL HOUSES TO DRAIN TO LINED PP SYSTEM WITH DEEP SUB-BASE VIA DISTRIBUTION BLOCKS

Extra protection required over foul sewer under road at upstream end - cover = <1.2m.

DT
CL 11.200
IL 10.700

DT
CL
IL 10.300

FSMH
CL 11.300
IL 10.530

SWD 150mm 1:150

FWS 150mmø 42.27m 1:150

FFL 11.500

DT
CL 11.300
IL 10.300

FFL 11.400

FSMH
CL 11.100
IL 10.210

FOUL PUMP STATION
CL 10.700
IL 8.020
SL TBC

FWS 150mmø 1:150

FILTER DRAIN

Foul pump main

FSMH
CL 11.050
IL 10.250

FMH
CL 10.800
IL 9.450

SWD 300mm 1:300

EXISTING DITCH

FWD 150mmø 45.36m 1:51
RG

FMH
CL 10.755
IL 8.490

FWD 150mmø 14.19m 1:30

SWD 150mmø SWD 2.25m 1:64

FWD 150mmø 1:64

FMH
CL 10.685
IL 8.190

FFL 11.150

FWD 150mmø 32.43m 1:60

SWD 225mmø

FMH
CL 10.430
IL 8.730
RG

FFL 11.000

FWD 100mmø 20.87m 1:80

FFL 10.900

FFL 10.800

LINED PP SYSTEM
ALL HOUSES TO DRAIN TO LINED PP SYSTEM VIA DISTRIBUTION BLOCKS, SUB-BASE BASE SIZED FOR THE 1 IN 30 YEAR EVENT.
REQUIRES 278m.cu OF STORAGE PROVIDED BY 640mm DEPTH OF STONE SUB-BASE WITH 30% VOID RATIO.
DEPTH OF SUB-BASE WILL BE DEEPER IN SOME AREAS DUE TO VARIATIONS IN GROUND LEVELS.
TOP OF STORAGE LAYER 10.380
BASE OF STORAGE LAYER 9.740

FMH
CL 10.450
IL 9.450

FWD 100mmø 40.17m 1:80

DT
IL 9.855

FFL 10.600

FWD 100mmø 36.88m 1:82

FFL 10.750

HEADWALL INLET
IL 9.650

HEADWALL OUTLET
IL 8.600

DT
CL 10.490
IL 9.740

SCP
CL 10.600
IL 9.700
SL 8.010

SCP
CL 10.600
IL 8.500
SL 8.000

HOUSES TO LINED PP SYSTEM

SWD 225mmø

ATTENUATION POND
BANK LEVEL 10.600
BASE LEVEL 8.600
DEPTH 2m
SIDES 1/3
VOLUME 349.8m.cu
Max water level 1 in 100 year + 40% event = 10.505

SWD 300mmø 1:268

SWD 300mmø 1:268

SWALE
BANK LEVEL 10.600
BASE LEVEL 9.850
SIDES 1/3
LENGTH 17m
VOLUME 41.4m.cu
FUNCTIONS AS STORAGE AND POLLUTION CONTROL

CONTROL MANHOLE
CL 10.600
IL 8.400
Hydrobrake at 1.6 l/s

HEADWALL OUTFALL
TO EXISTING DITCH WATERCOURSE
BANK LEVEL 10.62
BED LEVEL 7.97
REQUIRES ORDINARY WATERCOURSE CONSENT FROM LLFA

EXISTING DITCH

DESIGN SUMMARY

FOUL

FOUL DRAINAGE FROM DWELLINGS A1 - A25 TO GRAVITATE TO EXISTING PUBLIC SEWER ALONG BARNHAM ROAD.

FOUL DRAINAGE FROM DWELLINGS A26 - A44 TO PUMPING STATION WITH PUMPED CONNECTION TO GRAVITY SEWER SERVING DWELLINGS A1 - A26.

SURFACE WATER

ALL IMPERMEABLE SURFACES TO DRAIN TO DITCH ON SOUTHERN BOUNDARY AT RESTRICTED RATE OF 1.6 l/s. ATTENUATION STORAGE SIZED UP TO THE 1 IN 100 YEAR EVENT +40% FOR CLIMATE CHANGE IS PROVIDED WITHIN LINED PERMEABLE PAVING SYSTEM IN SOUTHERN HALF OF SITE (i.e. SOUTH OF SPINE ROAD) + POND + SWALE.

POLLUTION CONTROL PROVIDED BY FILTER DRAIN AND SWALE.

NOTE: THE HIGH LEVEL SURFACE WATER STRATEGY HAS BEEN PRODUCED WITHOUT SOAKAGE TESTING DATA. IT IS RECOMMENDED THAT SHALLOW INFILTRATION TESTS TO BRE 365 ARE UNDERTAKEN IN THE CLAY/GRAVEL/SAND GEOLOGY TO DETERMINE WHETHER LIMITED AMOUNTS OF INFILTRATION AT SHALLOW DEPTH MAY BE FEASIBLE.

Rev	Amendments	Date	Dsn	Chk
P8	PROPOSED TREE PLAN ADDED	11/11/2020	JR	MR
P7	REVISED TO CLIENT'S COMMENTS 28/10	02/11/2020	JR	MR
P6	SUDS AMENDED TO MISS EXISTING TREES	01/09/2020	JR	
P5	REVISED TO LATEST SITE LAYOUT	17/08/2020	JR	MR
P4	REVISED TO LATEST SITE LAYOUT. MORE DETAIL ADDED TO STORM SYSTEM INCLUDING STORAGE SIZING.	11/08/2020	JR	
P3	REVERSION BACK TO POND AND SWALE WITH PP SYSTEMS RETAINED	10/07/2020	JR	MR
P2	POND REPLACED BY TANK SWALE REPLACED BY TRENCH PP SYSTEMS SHOWN LINED	10/07/2020	JR	MR
P1	INITIAL ISSUE	09/07/2020	JR	MR

Status: PLANNING

Client: LANDACRE (EASTERGATE) LTD.

Architect: ECE ARCHITECTURE

Project: WARWICK NURSERY EASTERGATE

Title: DRAINAGE STRATEGY

Date: JULY 2020

Scale @ A1: 1 : 500

Clients Ref.

Project Ref.: 10635

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