



GEDA CONSTRUCTION

LAND OFF FLEET ROAD, HOLBEACH,
SPALDING, LINCOLNSHIRE
PE12 8NZ

SUDS MAINTENANCE AND MANAGENMENT STATEMENT

APRIL 2022

FW1947_SMMS_001 V1

REVISION HISTORY

Revision	Reason for Issue	Author	Checker	Approved	Date
v1	First Issue.	OP	MC	JD	22.04.2022

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1.0 INTRODUCTION

1.1 BRIEF

1.1.1 Farrow Walsh have been commissioned by Geda Construction, the applicant, to undertake the SuDS Maintenance and Management appraisal to accompany the S38 and S104 technical applications for the proposed residential development on land adjacent to Fleet Road, Holbeach, Lincolnshire, PE12 8NZ. The purpose of this document is to provide guidance on the maintenance of a Sustainable Drainage System and outlines who will be responsible for the maintenance.

1.1.2 This report has been prepared using the following guidance documentation:

- Ciria C753 – The SUDs Manual
- Sewerage Sector Guidance
- Lincolnshire Sustainable Drainage Design and Evaluation Guide
- Anglian Water Sustainable Drainage Systems (SUDS) adoption Manual.

1.1.3 Any comments and opinions expressed in this report, including any conclusions are based on the information available to Farrow Walsh Consulting Ltd at the time of writing. The conclusions therefore could differ if the information is found to be inaccurate, incomplete, or misleading. Farrow Walsh Consulting Ltd. Accepts no liability should this be proven to be the case, or, if additional information is made available with respect to this site.

2.0 SITE DETAILS

2.1 SITE LOCATION

- 2.1.1 The development is situated in land south of Fleet Road, Holbeach, PE12 8NZ.
- 2.1.2 The proposed development site is located in the village of Holbeach, located approximately 11 km East of Spalding and approximately 25.5km West of King's Lynn. The site is bound to the North by residential properties which front onto Fleet Road. To the South, East and West the site is bound by agricultural land that is also within the Client's ownership.
- 2.1.3 Please refer to Appendix A, for the site location plan.

2.2 SUDS MANAGEMENT AND MAINTENANCE RESPONSIBILITIES

- 2.2.1 Anglian Water will be responsible for the under-drained elements of the swales, manholes, catchpits, headwalls in accordance with the approved S104 drawings.
- 2.2.2 Lincolnshire County Council will be responsible for the conveyance features including the swales, filter strips and embankments in accordance with the S38 approved drawings.
- 2.2.3 Platform Housing Group will be responsible for the maintenance of the drainage located outside of each plot's boundary.

2.3 OPERATION AND MAINTENANCE

- 2.3.1 The SuDS manual Ciria C753 states that there are 3 types of maintenance activities associated with SuDS:
- Regular maintenance activities
 - Occasional maintenance activities
 - Remedial maintenance activities
- 2.3.2 A copy of the SuDS maintenance schedules can be found within Appendix C.

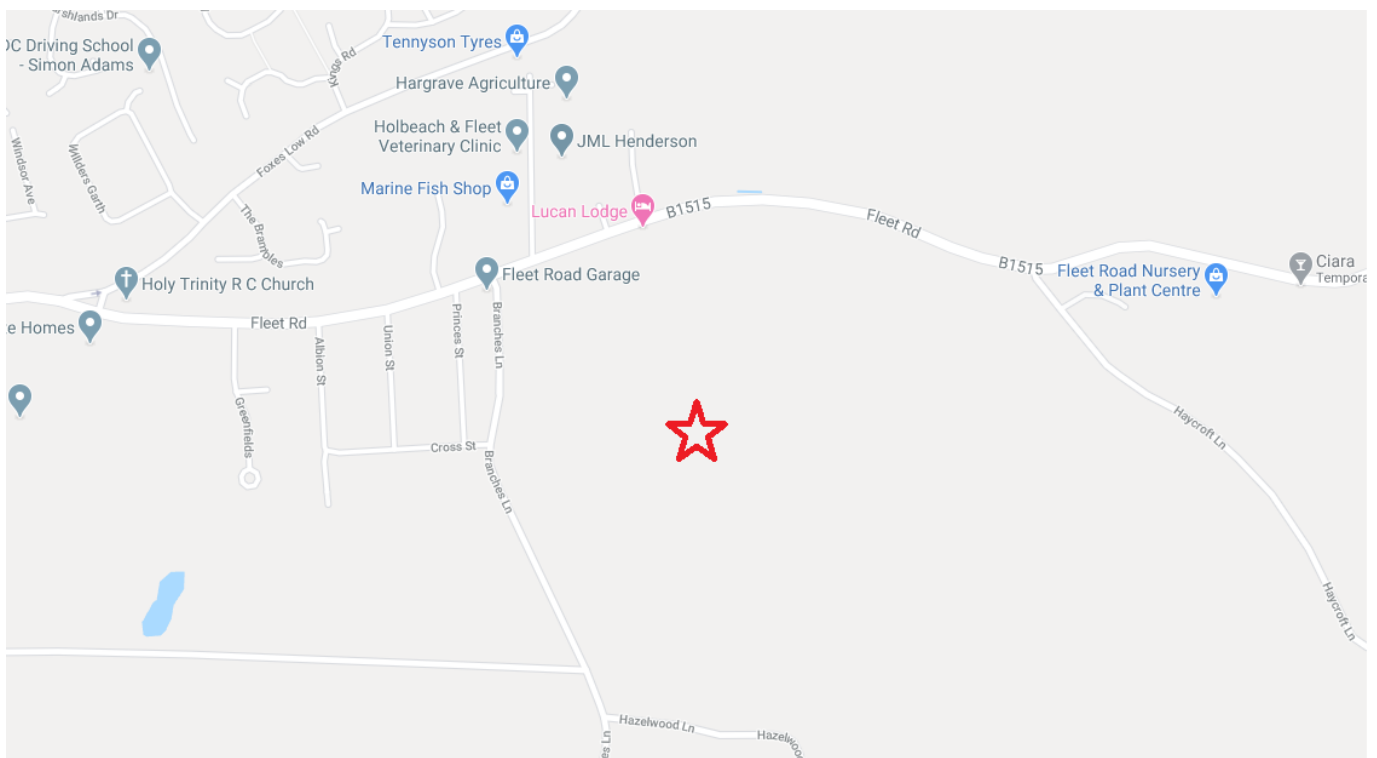
APPENDICES

APPENDIX A – SITE LOCATION PLAN

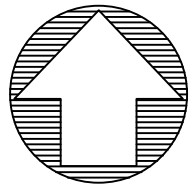
Site Location – Aerial Photograph



Site Location – Road Map



APPENDIX B – DRAINAGE MAINTENANCE PLAN



Drainage Feature	Responsible for Maintenance	Specification
S104 foul water sewer and chambers	Anglian Water	Plastic pipework, Concrete chambers
S104 surface water sewer, chambers and headwalls	Anglian Water	Plastic and Concrete pipework, Concrete Chambers & headwalls
Existing sewers	Anglian Water	As per existing
S38 Highway Drainage	Lincolnshire County Council	Clay and Concrete Pipework, Concrete Chambers, Concrete gully pots
Above ground SuDS feature	Lincolnshire County Council	150mm topsoil with grass seed
Above ground SuDS feature	Anglian Water	150mm topsoil with grass seed
Private surface water drainage connections	Platform Housing Group	Plastic pipework, Plastic chambers
Private foul water drainage connections	Platform Housing Group	Plastic pipework, Plastic chambers
Shared surface permeable paving	Platform Housing Group	Concrete Block Paviours with Voided Stone Below

- General Notes
- DO NOT SCALE.
 - This drawing is to be read in conjunction with all other relevant drawings and details.
 - Should there be any conflict between the details indicated on this drawing and those on other drawings the Engineer should be informed PRIOR to construction on site.
 - Until technical approval has been obtained from the relevant Authority, it should be understood that all drawings issued are Preliminary and NOT for construction. Should the Contractor commence site work prior to such approval being given it is entirely at their own risk.
 - Sketch proposals are for illustrative purposes only and as such are subject to detailed site investigation including ground conditions / contaminants, drainage, design and planning / density negotiations.
 - All dimensions are in millimetres unless otherwise stated.
 - The Farrow Walsh Consulting Designers Risk Assessments for this project must be reviewed PRIOR to the commencement of any works on site.

NOTES

- Information shown is FOR APPROVAL only and subject to detailed design.

LEGEND

Development Boundary

A2	Drawing updated to suit the drainage design	MC	OP	JD	13.14.22
A1	Issued for Approval.	OP	DM	JD	09.11.21
Rev	Description of updates	Drawn	Checked	App'd	Date

Revision Schedule

62 Highcross Street, Leicester LE1 4NN
321 Bradford Street, Birmingham B5 6ET
0330 100 0363
www.farrowwalsh.com

FOR APPROVAL

Client:
Kaplan Property Group

Project:
Fleet Road,
Holbeach

Title:
SuDS Maintenance Plan
Sheet 1 of 2

Drawn: OP
Checked: DM
Approved: JD
Date: November 2021

Scale:
1:250 @ A1

Drawing No.
FW1947-D-401-01

Revision:

A2



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 - All dimensions are in millimetres unless otherwise stated.
 - The Farrow Walsh Consulting Designers Risk Assessments for this project must be reviewed PRIOR to the commencement of any works on site.

NOTES

- Information shown is FOR APPROVAL only and subject to detailed design.
- This drawing to be read in conjunction with all other relevant Engineers and Architect's details.
- All work is to be carried out in accordance with the current British Standards, codes of practice, building regulations and with Sewers for Adoption 6th Edition guidance.
- The exact position, level, size and use of existing sewers to be confirmed on site. Any discrepancies to be reported to the engineer prior to commencement of works.
- All uncovered and shallow pipework to be protected against construction traffic as part of the contractors temporary works requirements.
- Cover levels shown are approximate only, subject to the Architect's external works and landscaping scheme.
- All connections to road gullies and channels shall be 150mm nominal bore pipework.
- All pipework to be U-PVC type in accordance with WIS 4-35-01 unless otherwise noted.
- All pipes connecting to adopted manholes up to and including 300mm dia. to be U-PVC.
- All pipes connecting to adopted manholes greater than 300mm dia. to be Concrete.
- All pipework entering and exiting manholes to be connected with pipe soffits level.

LEGEND



	Drainage Feature	Responsible for Maintenance	Specification
	S104 foul water sewer and chambers	Anglian Water	Plastic pipework, Concrete chambers
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FOR APPROVAL

Client:
Kaplan Property Group

Project:
Fleet Road,
Holbeach

Title:
SuDS Maintenance Plan
Sheet 2 of 2

Drawn: OP	Checked: DM	Approved: JD	Date: November 2021
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Scale:
1:250 @ A1

Drawing No.
FW1947-D-401-02

Revision:
A2

APPENDIX C – DRAINAGE MAINTENANCE SCHEDULES

Maintenance schedule	Suds Components	
	Underdrained Swale (Filter Drain)	
	Required Action	Frequency
Regular Maintenance	Remove litter and debris	Monthly or as required
	Inspect inlet / outlet pipework control systems for blockages, clogging, standing water and structural damages	Monthly
	Inspect pre-treatment systems, inlets and perforated pipework for silt accumulation and establish appropriate silt removal frequencies	Six Montly
Ocasional Maintenance	Remove or control tree roots where they are encroaching the sides of the filder drain, using recommended methods (egNJUG,2007 or BS 3998:2010	As required
	At locations with high pollution loads, remove surface geotextile and replace and wash or replace overlying filter medium	Five early or as required
	Clear perforated pipework of blockages	As required

Maintenance schedule	Suds Components	
	Filter Strip	
	Required Action	Frequency
Regular Maintenance	Remove litter and debris	Monthly or as required
	Cut the grass - to retain grass height within specified design range	Monthly (during growing season), or as required
	Manage other vegetation and remove nuisance plants	Monthly (at start, then half early)
	Inspect filter strip Surface to identify evidence of erosion, poor vegetation growth, compaction, ponding, sedimentation and contamination	Monthly (at start, then half early)
	Check flow spreader and filter strip surface for even gradients	Monthly (at start, then half early)
	Inspect gravel flow spreader upstream of filter strip for clogging	Monthly (at start, then half early)
	Inspect silt accumulation rates and establish appropriate removal frequencies	Monthly (at start, then half early)
Ocasional Maintenance	Reseed areas of poor vegetation growth; alter plant types to better suit conditions if required	As required or if bare soils is exposed over >10% of the filter strip area
Remedial Maintenance	Repair erosion or other damage by re-turfing or reseeding	As required
	Relevel uneven surfaces and reinstate design levels	As required
	Scarify and spike topsoil layer to improve infiltration performance, break up silt deposits and prevent compaction of the soil surface	As required
	Remove build-up of sediment on upstream gravel trench, flow spreader or at top of filter strip	As required
	Remove and dispose of oils or petrol residues using safe standard practice	As required

Maintenance schedule	Suds Components	
	Swale	
	Required Action	Frequency
Regular Maintenance	Remove litter and debris	Monthly or as required
	Cut the grass - to retain grass height within specified design range	Monthly (during growing season), or as required
	Manage other vegetation and remove nuisance plants	Monthly (at start, then as required)
	Inspect inlets, outlets and overflows for blockages and clear if required	Monthly
	Inspect infiltration surfaces for ponding, compaction, silt accumulation, record areas where water is ponding >48h	Monthly or when required
	Inspect vegetation coverage	Monthly for 6 months, quarterly for 2 years, then half early
	Inspect inlets and facility surface for silt accumulation, establish appropriate silt removal frequencies	Half early
Ocasional Maintenance	Reseed areas of poor vegetation growth; alter plant types to better suit conditions if required	As required or if bare soils is exposed over >10% of the swale treatment area
Remedial Maintenance	Repair erosion or other damage by re-turfing or reseeding	As required
	Relevel uneven surfaces and reinstate design levels	As required
	Scarify and spike topsoil layer to improve infiltration performance, break up silt deposits and prevent compaction of the soil surface	As required
	Remove build-up of sediment on upstream gravel trench, flow spreader or at top of filter strip	As required
	Remove and dispose of oils or petrol residues using safe standard practice	As required

Maintenance schedule	Suds Components	
	Swale	
	Required Action	Frequency
Regular Maintenance	Remove litter and debris	Monthly
	Cut the grass for spillways and access routes	Monthly (during growing season), or as required
	Cut grass - meadow grass in and around basin	Half yearly (spring - before nesting season and autumn)
	Manage other vegetation and remove nuisance plants	Monthly (at start, then as required)
	Inspect inlets, outlets and overflows for blockages and clear if required	Monthly
	Inspect banksides, structures, pipework etc for evidence of physical damage	Monthly
	Inspect inlets and facility surface for silt accumulation. Establish appropriate silt removal frequencies	Monthly (for first year), then annually or as required
	Check any pentstocks or other mechanical devices	Annually
	Tidy all dead growth before start of growing season	Annually
	Remove sediment from inlets, outlet and forebay	Annually (or as required)
	Manage wetland plants in outlet pool - where provided	Annually (as set out in Chapter 23)
Occasional Maintenance	Reseed areas of poor vegetation growth	As required
	Prune and trim any trees and remove cuttings	Every 2 years or as required
	Remove sediment from inlets, outlets, forebay and main basin when required	Every 5 years, or as required (likely to be minimal requirements where effective upstream source control is provided)
Remedial Maintenance	Repair erosion or other damage by re-turfing or reseed	As required
	Realign of rip-rap	As required
	Repair / rehabilitation of inlets, outlets and overflows	As required
	Relevel uneven surfaces and reinstate design levels	As required