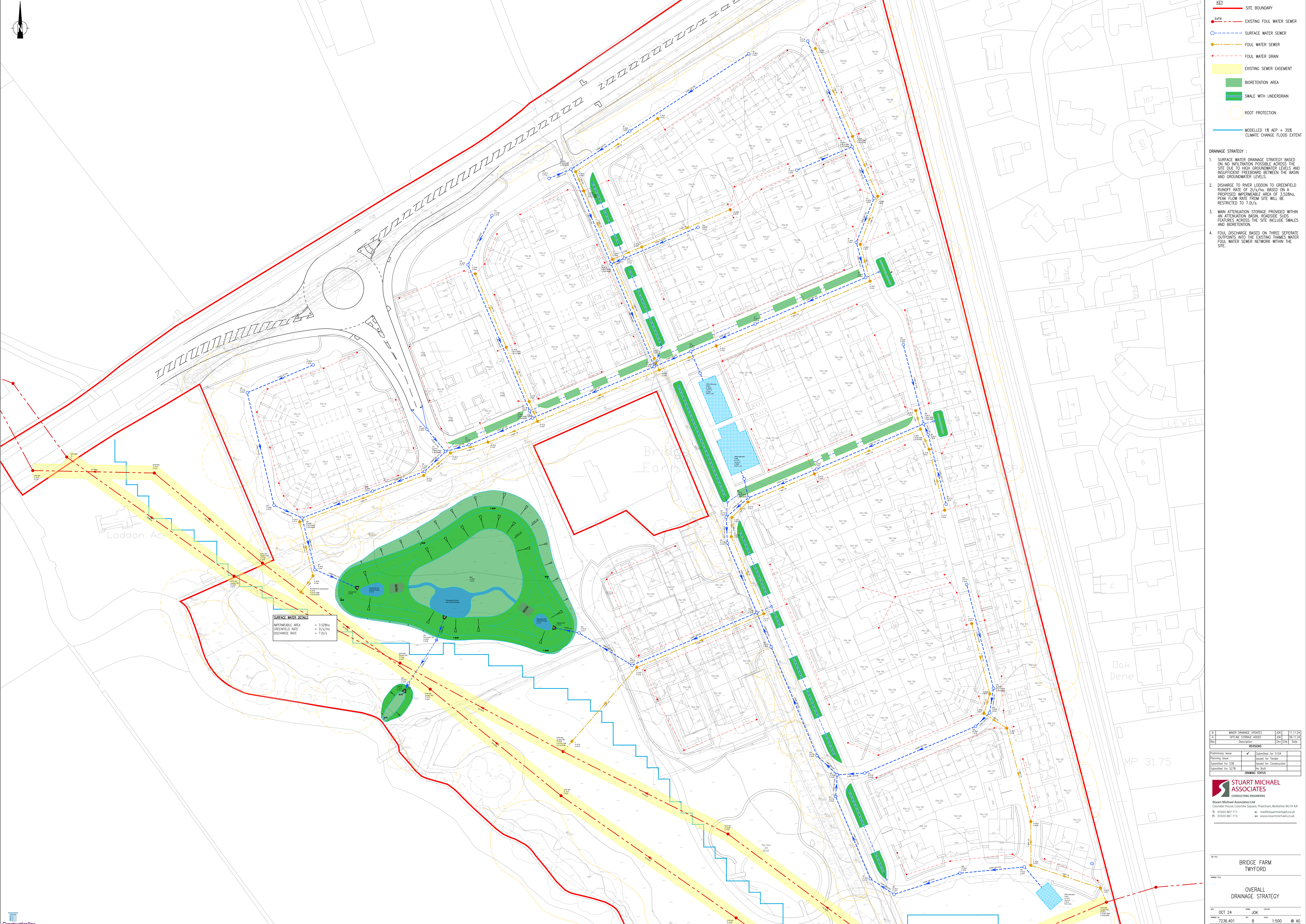




- KEY**
- SITE BOUNDARY
 - EXISTING FOUL WATER SEWER
 - SURFACE WATER SEWER
 - FOUL WATER SEWER
 - FOUL WATER DRAIN
 - EXISTING SEWER EASEMENT
 - BIORETENTION AREA
 - SWALE WITH UNDERGRAIN
 - ROOT PROTECTION
 - MODELLED 1% AEP + 35% CLIMATE CHANGE FLOOD EXTENT

- DRAINAGE STRATEGY :**
- SURFACE WATER DRAINAGE STRATEGY BASED ON NO INFILTRATION POSSIBLE ACROSS THE SITE DUE TO HIGH GROUNDWATER LEVELS AND INSUFFICIENT FREEBOARD BETWEEN THE BASIN AND GROUNDWATER LEVELS.
 - DISCHARGE TO RIVER LODDON TO GREENFIELD RUNOFF RATE OF 2l/s/ha, BASED ON A PROPOSED IMPERMEABLE AREA OF 3.528ha. PEAK FLOW RATE FROM SITE WILL BE RESTRICTED TO 7.0l/s.
 - MAIN ATTENUATION STORAGE PROVIDED WITHIN AN ATTENUATION BASIN. ROADSIDE SLOPS FEATURES ACROSS THE SITE INCLUDE SWALES AND BIORETENTION.
 - FOUL DISCHARGE BASED ON THREE SEPARATE OUTFALLS INTO THE EXISTING THAMES WATER FOUL WATER SEWER NETWORK WITHIN THE SITE.

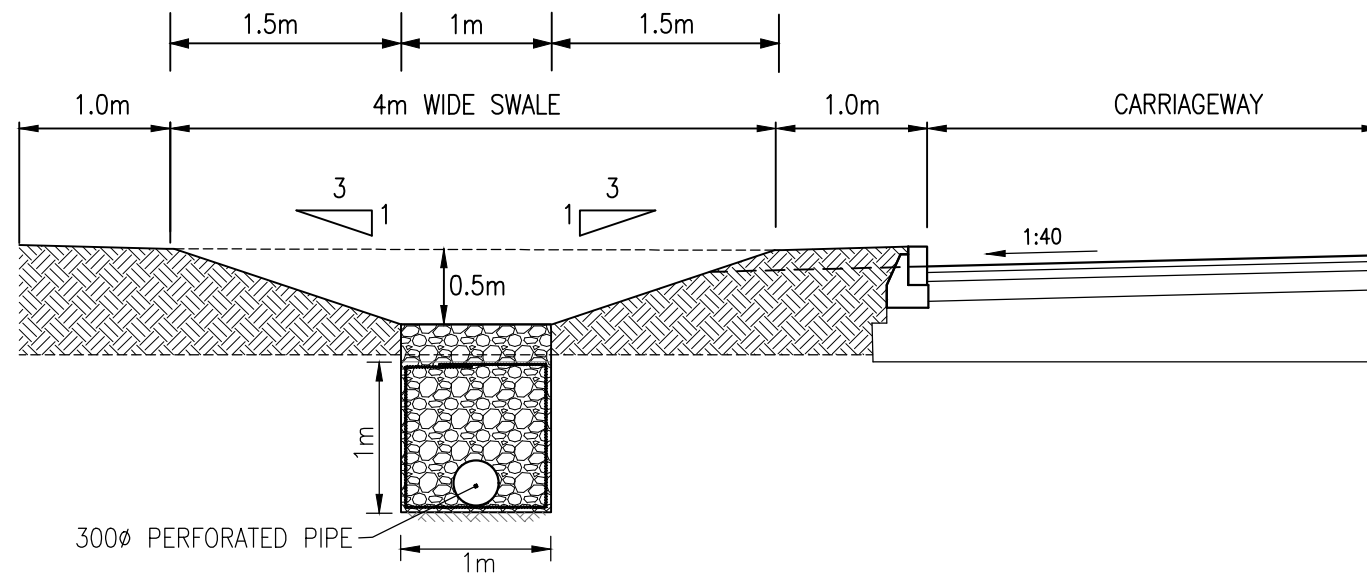
SURFACE WATER DETAILS
IMPERMEABLE AREA
= 3.528ha
GREENFIELD RATE
= 2l/s/ha
DISCHARGE RATE
= 7.0l/s

B	MINOR DRAINAGE UPDATES	JOK	11.11.24
A	OFFLINE STORAGE ADDED	JOK	10.11.24
Rev	Description	Rev	Date
REVISIONS:			
1	Submitted for S104		
2	Issued for tender		
3	Issued for construction		
4	As Built		
DRAWING STATUS			

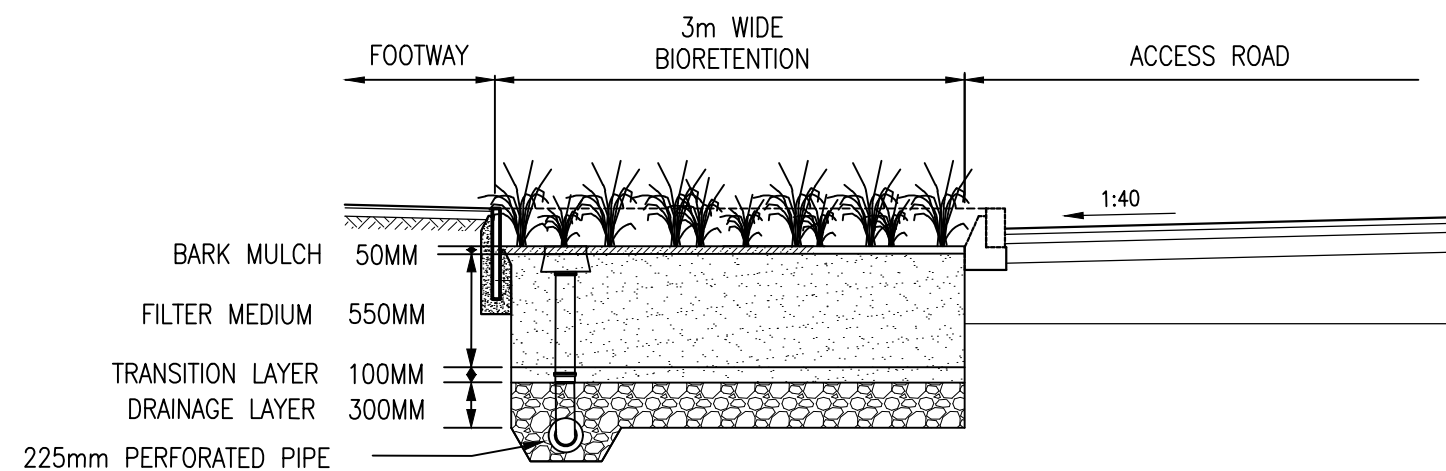
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BRIDGE FARM
TWYFORD

OVERALL
DRAINAGE STRATEGY



DRY SWALE DETAIL



BIORETENTION DETAIL



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JOB TITLE

BRIDGE FARM
TWYFORD

DRAWING TITLE

SUDS CONSTRUCTION DETAILS

Rev	Description	Drn	Chk	Date
REVISIONS				
Preliminary	✓	Approval	Tender	Const.
DRAWING STATUS				
DATE	OCT 24	DRAWN	JOK	CHECKED
DRAWING No.	7236.406	REV	SCALE	1:50 @ A3
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Appendix G

SuDS Maintenance Plan



KEY

SITE BOUNDARY

MAINTAINED BY PRIVATE MANAGEMENT COMPANY

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JOB TITLE

BRIDGE FARM
TWYFORD

ISSUED TITLE

SUDS FEATURES MAINTENANCE

A	UPDATED TO SUIT DRAINAGE STRATEGY	MLP	JOK	11.11.24		
Rev	Description	Dm	Chk	Date		
REVISIONS						
DATE	OCT 24	DRAWN	MLP	CHECKED	JOK	EDGE CHECKED
DRAWING No.	7236.403	REV	A	SCALE	1:1000	© A1
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Table 18.3 Operation and maintenance requirements for bioretention systems

Maintenance Schedule	Required action	Frequency
Regular Inspections	Inspect infiltration surfaces for sitting and ponding, record de-watering time of the facility and assess standing water levels in underdrain (if appropriate) to determine if maintenance is necessary.	Quarterly
	Check operation of underdrains by inspection of flows after rain.	Annually
	Assess plants for disease, infection, poor growth, invasive species etc and replace as necessary.	Quarterly
	Inspect inlets and outlets for blockage.	Quarterly
Regular maintenance	Remove litter and surface debris and weeds.	Quarterly (or more frequently for tardiness or aesthetic reasons)
	Reolace any plants, to maintain planting density.	As required
	Remove sediment, litter and debris build-up from around inlets or from forebays.	Quarterly to biannually
Occasional maintenance	Infill any holes or scour in the filter medium, improve erosion protection if required.	As required
	Repair minor accumulations of silt by raking away surface mulch, scarifying surface of medium and	As required.
Remedial actions	Remove and replace filter medium and vegetation above.	As required (but likely to be > 20 years)

Table 17.1 Operation and maintenance requirements for swales

Maintenance Schedule	Required action	Frequency
Regular maintenance	Remove litter and debris	Monthly (or as required).
	Cut 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 for > 48 hours	Monthly (or when required).
	Inspect vegetation coverage	Monthly (for 6 months, quarterly for 2 years, then half yearly)
	Inspect inlets and facility surface for silt accumulation, establish appropriate silt removal frequencies	Half yearly
Occasional maintenance	Re-seed areas of poor vegetation growth. Alter plant types to better suit conditions, if required.	As required or if bare soil is exposed over 10% or more of the swale treatment area
Remedial actions	Repair erosion or other damage by re-turfing or reseeding.	As required.
	Re-level 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 practices.	As required.

Table 22.1 Operation and maintenance requirements for detention basins

Maintenance Schedule	Required action	Frequency
Regular maintenance	Remove litter and debris.	Monthly.
	Cut 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 as required).
	Check any penstocks and 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.
Occasional maintenance	Re-seed areas of poor vegetation growth.	As required.
	Prune and trim 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 actions	Repair erosion or other damage by re-seeding or re-turfing.	As required.
	Realignment of rip-rap.	As required.
	Repair / rehabilitation of inlets, outlets and overflows.	As required.
	Re-level uneven surfaces and reinstate design levels.	As required.

Table 21.3 Operation and maintenance requirements for attenuation storage tanks

Maintenance Schedule	Required action	Frequency
Regular maintenance	Inspect and identify any areas that are not operating correctly. If required, take remedial action.	Monthly for 2 months, then annually
	Remove debris from the catchment surface (where it may cause risks to performance)	Monthly
	For systems where rainfall infiltrates into the tank	Annually
	Remove sediment from pre-treatment structures and/ or internal forebays.	Annually (or as required)
Remedial actions	Repair/rehabilitate inlets, outlets, overflows and vents.	As required
Monitoring	Inspect/check all inlets, outlets, vents and overflows to ensure that they are in good condition and	Annually
	Survey inside of tank for sediment build-up and remove if necessary.	Every 5 years or as required

Appendix H

Exceedance Flow Routes Drawing