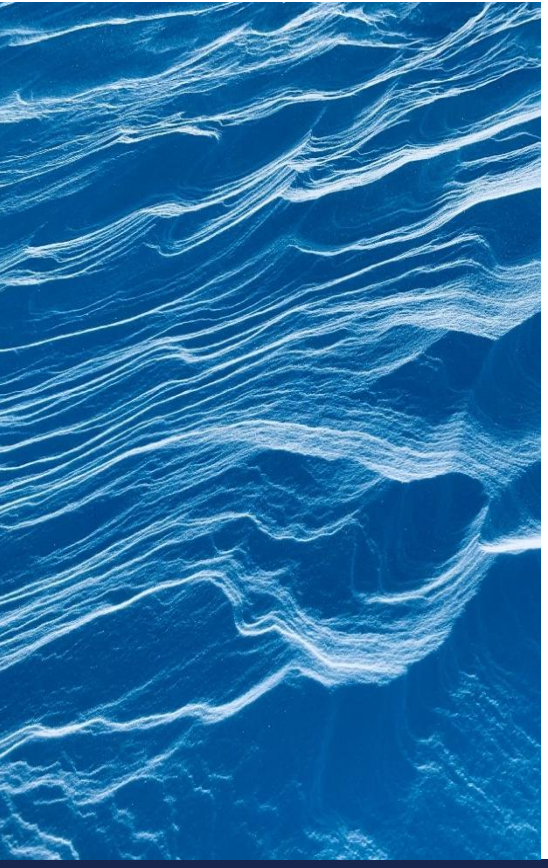
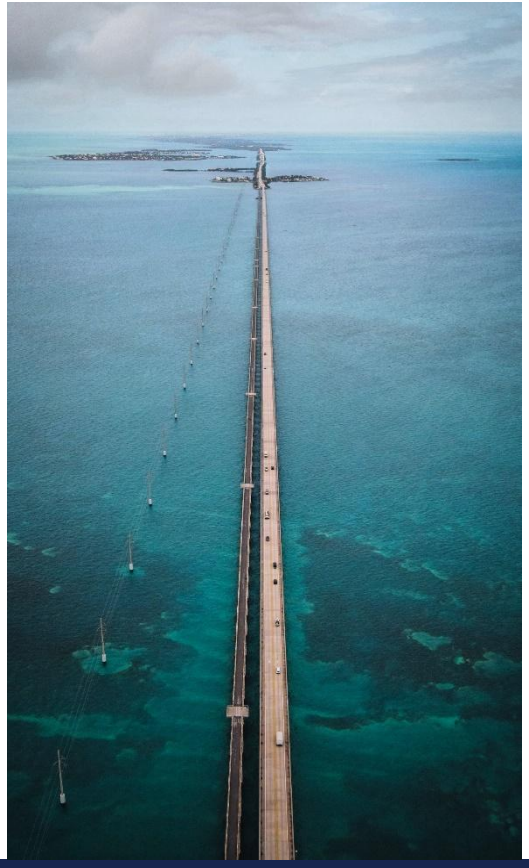




Drainage Strategy

AEG6874_BN5_Henfield_07

Site Address: 'The Slips'

West End Lane

Henfield

BN5 9RG

aegaea

water, civils and environment

UK Experts in Flood Modelling, Flood Risk Assessments, and Surface Water Drainage Strategies

aegaea

water, civils and environment

Document Issue Record

Project: Drainage Strategy

Prepared for: Manorwood Construction Limited

Reference: AEG6874_BN5_Henfield_07

Site Location: 'The Slips', West End Lane, Henfield, BN5 9RG

Issue	Date	Author	Check	Auth.	Comments
1	26/02/2025	Daniel Buciak	James Mahoney	James Mahoney	First issue
2	03/10/2025	Daniel Buciak	James Mahoney	James Mahoney	Updated to latest layout, surface water drainage strategy revised following failed infiltration tests

Please Note:

Table of Contents

1. Introduction

1.1. Aegaea were commissioned by the Client to prepare a Drainage Strategy to support a planning application associated with the proposed development on land at 'The Slips', West End Lane, Henfield, BN5 9RG.

1.2. The development proposals comprise the erection/stationing of 4 no. static caravans for residential purposes along with utility buildings, the formation of hardstanding and associated landscaping.

1.3. The proposed development layout drawings are contained within Appendix A.

Site Overview

1.4. The site of the proposed development is shown in the location plan, Figure 1, below.

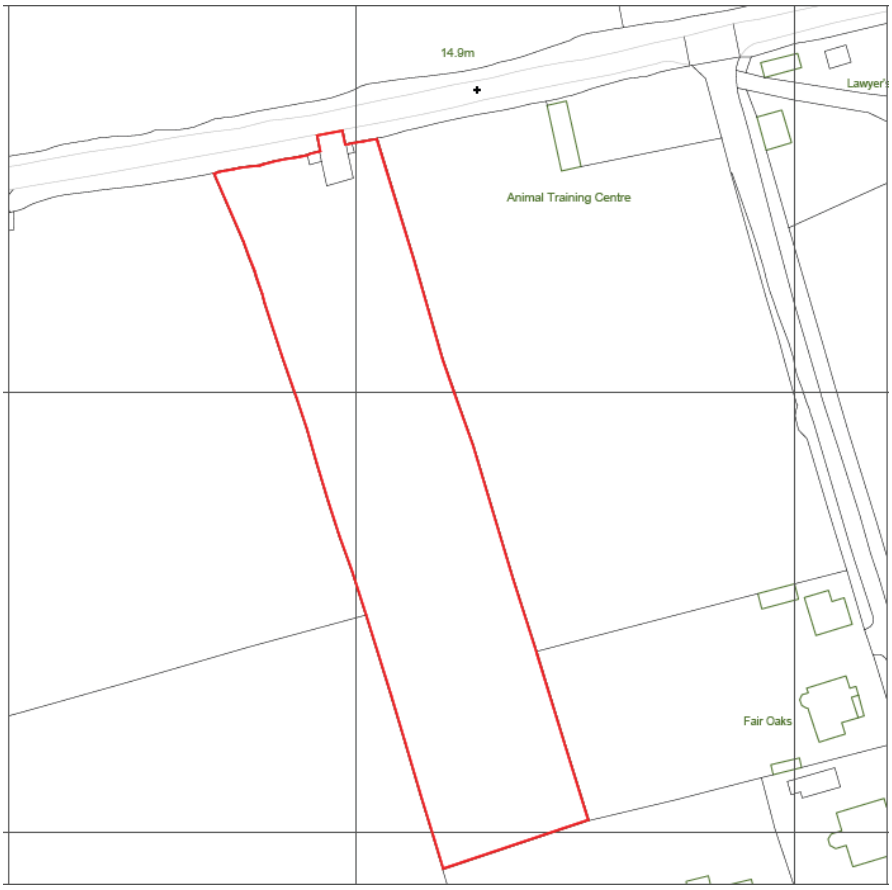


Figure 1: Site Location Plan

1.5. The site measures approximately 0.58 hectares and is currently a grassed field used for camping/pitch-up purposes. The site is bound by mixed vegetation of hedgerow and trees along the southern, eastern and western boundaries. Access into the site is via West End Lane which forms the northern boundary of the site.

1.6. The topography across the site generally falls northwards towards West End Lane, with steeper gradients exhibited adject to the southern boundary. A copy of the topographical survey is contained in Appendix B.

Existing Drainage Arrangements

1.7. There is a ditch/ordinary watercourse that runs west along West End Lane. It is understood this conveys flows towards a small watercourse, circa 200m west of the site, that acts a tributary to the River Adur.

1.8. No existing public sewers have been identified within the vicinity of the site. A copy of the public sewer records is contained in Appendix C.

2. Surface Water Drainage Strategy

Ground Conditions

2.1. A review of publicly available information (LandIS – Soilscapes) indicates that the site is located within an area of freely draining lime-rich loamy soils underlain by Lower Greensand Group – Sandstone bedrock formation.

2.2. Infiltration tests were conducted to BRE365 methodology on 27th September 2025. The trial pits failed to sufficiently drain, demonstrating the underlying ground was unsuitable for infiltration to occur. The findings are contained in Appendix D.

Proposed Drainage Strategy

2.3. Current guidance indicates that the following surface water disposal options should be considered, listed in order of preference:

i. **Disposal via on-site infiltration systems:** As discussed above, discharge to the ground has been discounted due to unfeasible ground conditions.

ii. **Disposal to a watercourse/surface water body:** It is proposed to discharge attenuated flows from the proposed development to the existing ditch located along the site's northern boundary.

iii. **Disposal to surface water sewer:** There are no public surface water sewers located within the vicinity of the site.

iv. **Disposal to combined sewer:** There are no public combined sewers located within the vicinity of the site.

2.4. The surface water runoff from the proposed development will be managed through a series of SuDS features comprising, rainwater harvesting tanks, filter drain and geocellular crates, prior to discharging at a controlled discharge rate into the existing ditch along the site's northern boundary.

2.5. Due to the root protection areas associated with the existing trees within the development, the hardstanding areas within the site will comprise a porous surface with a no-dig construction. The porous no-dig construction would therefore drain as in the pre-development scenario i.e. no change/increase to impermeable areas within its extents.

2.6. The proposed drainage features have been sized to accommodate surface water runoff from all proposed impermeable areas on site, including all modelled 1 in 100-year storm events with an appropriate allowance (45%) made for climate change.

2.7. The proposed drainage layout and details can be found in Appendix E. Supporting drainage calculations are contained within Appendix F.

3. Future Maintenance Strategy

General Maintenance

3.1. The surface water drainage network will be managed throughout the lifetime by the owners of the proposed development in accordance with details set out below.

3.2. All drainage, whether piped or SuDS require regular maintenance. The tables below provide an overview of general maintenance tasks and frequency of which they need to be undertaken.

Maintenance Schedule	Required Action	Typical frequency
Regular Maintenance	Inspect for sediment and debris in catchpit manholes and gullies. Clean out as required	Twice Annually
	Cleaning of gutters and any filters on downpipes	Annually (or as required based on inspections)
	Trimming any roots that may be causing blockages	Annually (or as required)
Occasional Maintenance	Remove sediment and debris in catchpits, gullies, attenuation devices and inside concrete manhole rings.	As required, based on inspections.
Remedial actions	Reconstruct and/or replace components, if performance deteriorates or failure/blockage occurs.	As required
	Replacement of clogged components (flow restriction)	As required
Monitoring	Inspect silt traps/gullies/catchpits and note rate of sediment accumulation.	Monthly in the first year and then annually
	Check attenuation devices	Annually

General maintenance for Surface Water Drainage Systems as per CIRIA C753.

3.3. The required maintenance for each component making up the drainage system is scheduled in the tables below, based on CIRIA report C753 – The SuDS manual.

Orifice Flow Control

Maintenance Schedule	Required Action	Typical frequency
Regular Maintenance	Remove sediment and debris from flow control chambers and upstream manholes	Monthly (for the first 12 months, then 6 monthly).
Remedial Actions	Replace or clean orifice plate if performance deteriorates or failure occurs.	As necessary.
Monitoring	Check flow control to ensure emptying is occurring.	Quarterly and post high intensity storm event.

Cellular Attenuation Tank

Maintenance Schedule	Required Action	Typical Frequency
Regular Maintenance	Inspect for sediment and debris in pre-treatment components and floor of inspection tube or chamber and inside of concrete manhole rings.	Annually
	Cleaning of gutters and any filters on downpipes	Annually (or as required based on inspections)
	Trimming any roots that may be causing blockages	Annually (or as required)
Occasional Maintenance	Remove sediment and debris in pre-treatment components and floor of inspection tube or chamber and inside of concrete manhole rings.	As required, based on inspections.
Remedial actions	Reconstruct tank and/or replace or clean void fill, if performance deteriorates or failure occurs	As required
	Replacement of clogged geotextile (will require reconstruction of tank)	As required
Monitoring	Inspect silt traps and note rate of sediment accumulation.	Monthly in the first year and then annually
	Check tank to ensure emptying is occurring	Annually

General maintenance for a Cellular Attenuation Tank as per CIRIA C753.

Filter Drains

Maintenance Schedule	Required Action	Typical frequency
Regular Maintenance	Remove Litter and debris from filter drain surface, access chambers and pre-treatment devices.	Monthly (or as required)
	Inspect filter drain surface, inlet/outlet pipework and control systems for blockages, clogging, standing water and structural damage.	Monthly
	Inspect pre-treatment systems, inlets and perforated pipework for silt accumulation, and establish appropriate frequencies	Six monthly
	Remove sediment from pre-treatment devices	Six monthly or as required
Occasional Maintenance	Remove or control tree roots where they are encroaching the sides of the filter drain using recommended methods (eg NJUG, 2007 or BS 3998:2010)	As required
	At locations with high pollution loads, remove surface geotextile and replace, and wash or replace overlaying filter medium.	Five yearly, or as required
	Clear perforated pipework of blockages	As required

Permeable Hardstanding Surface

Maintenance Schedule	Required Action	Typical Frequency
Regular Maintenance	Regular raking to ensure even spread and smooth surface, may require additional top up.	Once a year, after autumn leaf fall, or reduced frequency as required, based on site-specific observations of clogging or manufacturer's recommendations – pay particular attention to areas where water runs onto pervious surface from adjacent impermeable areas as this area is most likely to collect the most sediment.
Occasional Maintenance	Stabilise and mow contributing and adjacent areas	As required
	Removal of weeds or management using glyphosate applied directly into the weeds by an applicator rather than spraying.	As required – once per year on less frequently used pavements
Remedial Maintenance	Remediate any landscaping which, through vegetation maintenance or soil slip, has been raised to within 50mm of the level of the paving.	As required
	Remediate work to any depressions, rutting and cracked or broken blocks considered detrimental to the structural performance or a hazard to users, and replace lost jointing material.	As required
	Rehabilitation of surface and upper substructure by remedial sweeping	Every 10 to 15 years or as required (if infiltration performance is
Monitoring	Initial inspection	Monthly for three months after installation
	Inspect for evidence of poor operation and/or weed growth – if required, take remedial action.	Three-monthly, 48 hr after large storms in the first six months
	Inspect silt accumulation rates and establish appropriate brushing frequencies	Annually
	Monitor inspection chambers	Annually

4. Pollution Prevention & Water Quality Management

SuDS Mitigation Indices

4.1. Chapter 26 of the CIRIA C753 The SuDS Manual, provides design advice to meet water quality standards by adopting the SuDS train treatment mechanism and thereby reduce the risk of pollution by evaluating potential pollution hazards at the outset.

4.2. The proposed site layout provides the opportunity to introduce SuDS into the scheme to reduce potential contaminant risk further. Runoff from individual property driveways, residential car parks and low traffic roads are generally viewed as low risk (as per Table 26.2 of C753), shown in the tables below.

Land Use	Pollution Hazard Level	Total Suspended Solids (TSS)	Metals	Hydrocarbons
Residential Roofs	Very Low	0.2	0.2	0.05

Pollutant Hazard Indices

	Mitigation Indices				Indices for Calculation		
	TSS	Metals	Hydrocarbons		TSS	Metals	Hydrocarbons
Filter Drain	0.40	0.40	0.40	100%	0.40	0.40	0.40
Total Mitigation Indices score					0.40	0.40	0.40
Sufficiency of Pollution Mitigation Indices					Sufficient (No additional mitigation required)		

SuDS Mitigation Indices

4.3. The mitigation indices offered by the proposed SuDS features exceed the hazard indices from roof areas and therefore provides adequate mitigation. It is therefore considered that the proposed SuDS features on site are appropriate and acceptable in terms of water quality.

5. Foul Drainage Strategy

5.1. Southern Water's public sewer records contained in Appendix B show there are no public foul sewers within the vicinity of the site.

5.2. Discharge to ground, i.e. drainage field, has been considered however based on the failed infiltration test mentioned above discharge to ground has been discounted.

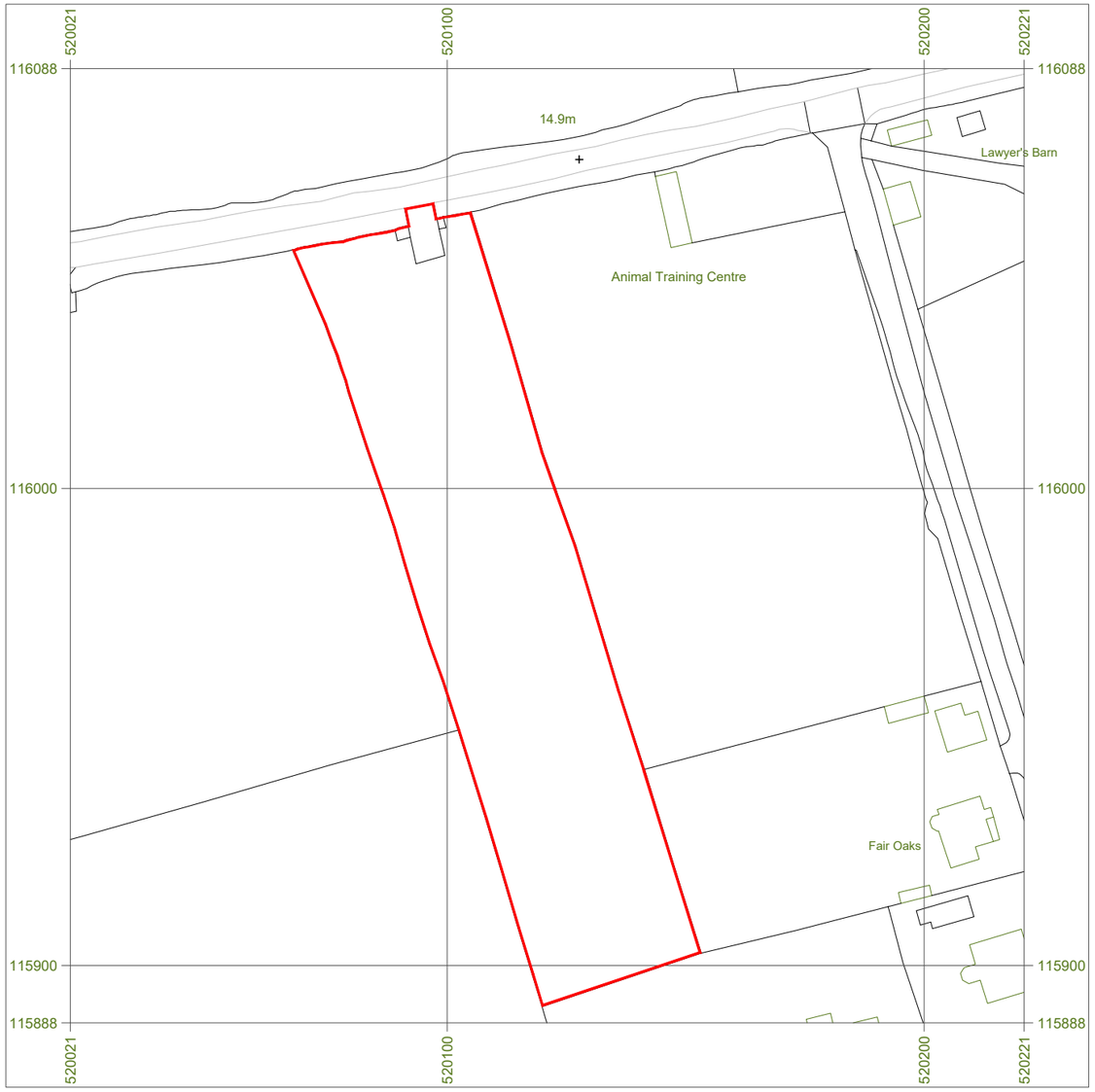
5.3. It is therefore proposed that foul flows arising from the proposed development are directed to a package treatment plant, prior to discharging treated flows into the existing ditch located along the site's northern boundary. Prior to any development, an Environmental Permit and Ordinary Watercourse Consent would need to be obtained.

5.4. If an Environmental Permit cannot be obtained the site would be served by individual cesspools serving each plot which would require regular emptying.

Appendix A - Site Layout Plans

Appendix D - Infiltration Tests

Ordnance Survey ®
UKmapcentre.com



Serial number: 299760

Location Plan

1:1250 | EXISTING

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Address	'The Slips', Wet End Lane, Henfield, BN5 9RG
Drawing No.	2412WE_R1_000
Scale @ A3	1:1250
Job No.	2412WE_R1
Drawn By	MD
Checked By	BK
Drawn On	05.09.2025
Issued On	05.09.2025
Status	Existing
Drawing	Location Plan
Submission	Planning
Revision	000

Application Area: 5851 m²

N

Indicative: 0.0°

1m @ 1:
50
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Animal Training Centre

Additional parking

Dayrooms for Plots 1+2

Surface flood risk area

Existing fences retained

Area not within private garden

Existing trees retained

Turning head

Enhanced grassland area

Existing hedges retained

1.2m post & rail between plots

All Plots:
Permeable hard standing with parking for vehicles and touring van. Bike & Bin store with EV charging and private garden area laid to lawn

New native hedging

14m ditch

520100

Day
Day
1
Static
2
Static
Day
3
Static
Day
4
Static

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Drawing No.	2412WE_R1_001
Scale @ A3	1:500
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Drawn By	MD
Checked By	BK
Drawn On	05.09.2025
Issued On	05.09.2025
Status	Proposed
Drawing	Block Plan
Submission	Planning
Revision	001

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Indicative: 0.0°

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Block Plan

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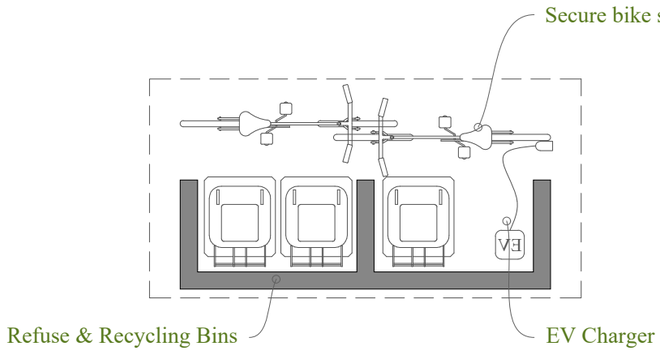

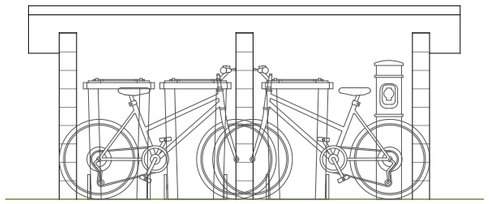

Bin & Bike Store

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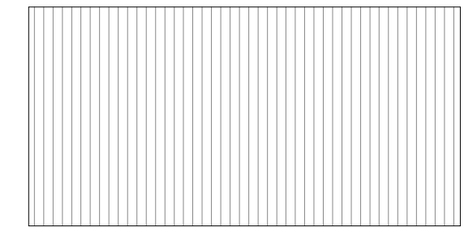

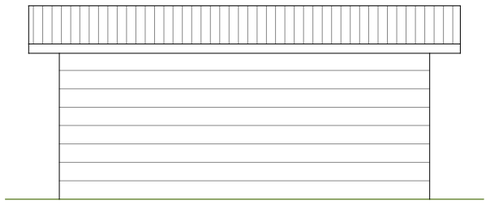

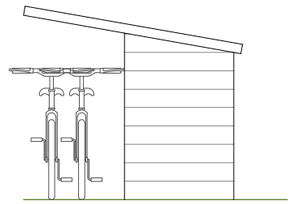

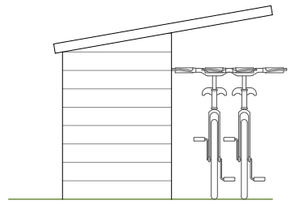

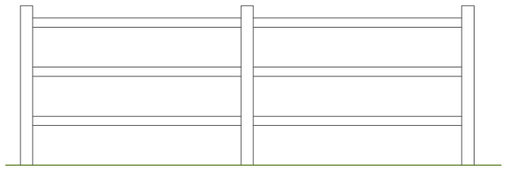

Typical 1.2m timber post & rail fence

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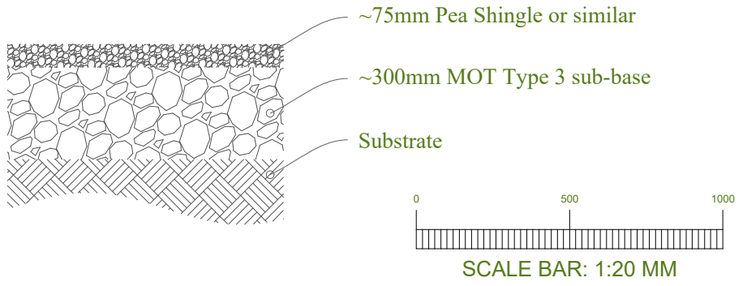

Typical permeable surfacing

1:20	PROPOSED

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Address	'The Slips', Wet End Lane, Henfield, BN5 9RG
Drawing No.	2412WE_R1_100
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Job No.	2412WE_R1
Drawn By	MD
Checked By	BK
Drawn On	05.09.2025
Issued On	05.09.2025
Status	Proposed
Drawing	Refuse, Boundary & Surfacing
Submission	Planning
Revision	000

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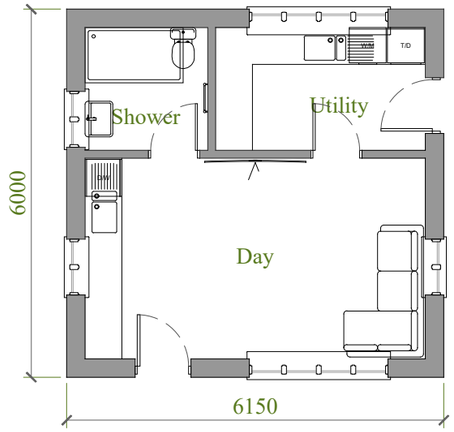

Ground Floor Plan

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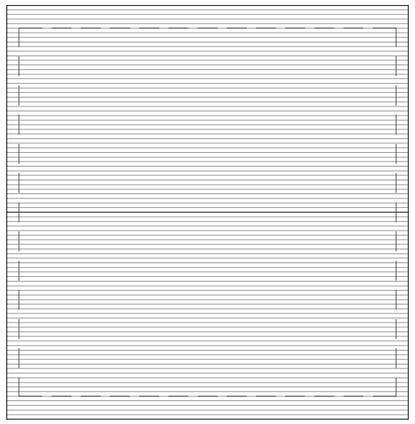

Roof Plan

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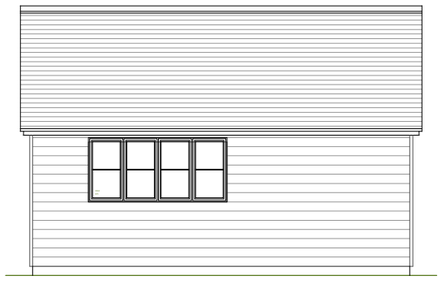

East

1:100 | PROPOSED

North

1:100 | PROPOSED

West

1:100 | PROPOSED

South

1:100 | PROPOSED

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Drawing No.	2412WE_R1_101
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Job No.	2412WE_R1
Drawn By	MD
Checked By	BK
Drawn On	05.09.2025
Issued On	05.09.2025
Status	Proposed
Drawing	Day Room
Submission	Planning
Revision	000

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Planting Specification for new boundary hedgerows

Plants to be between 80-90cm when planted

Main Matrix (Transplants/Quicks)
70% of planting stock

Hawthorn	Crataegus monogyna
Blackthorn	Prunus spinosa

Interplant (Whips/Transplants)
30% of planting stock

Hazel	Corylus avellana
Holly	Ilex aquifolium
Dog Rose	Rosa canina
Field Maple	Acer campestre
Dogwood	Cornus sanguinea
Spindle	Euonymous europaeus
Wild Privet	Ligustrum vulgare
Common Beach	Fagus sylvatica
Common Hornbeam	Carpinus betulus
Guelder rose	Viburnum opulus

Hedging should be planted in two staggered rows at a density of not less than 5 per metre, with approximately 450mm between plants in the same row, and 300-400mm between rows.

The interplant whips/transplants should be planted within this pattern in groups of 2/3.

Planting will be protected from grazing animals where applicable with a 1.5m high galvanised equine stock fence (or similar) erected 1m away from new plants.

All hedgerow planting should be carried out in accordance with BS4428:1989, Code of practice for general landscape operations.

Hedgerow shrubs should either be notch planted or trench planted.

Hedge trenches should be dug to a minimum depth of 400mm and width of 600mm, with the plants put into the ground at the same depth at which they had been previously grown in the nursery. All plants need to be well heeled in after planting and watered in during dry weather.

Hedges to be planted between November and March while plants are still dormant. Avoid planting in very cold or wet weather.

20 year Management Plan:

Plant new hedgerows during winter[3]
Connect them to other natural features to support wildlife spread[3]
Prune new hedgerows for the first 3-5 years to encourage dense, bushy growth[3]

Ongoing Management:
Manage hedgerows on a cycle to maintain their health and value for wildlife[2]
Gradually cut hedges higher and wider to prevent them from becoming 'leggy' or 'gappy'[2]
Rejuvenate hedges through laying or coppicing every 40+ years[2]

Protection Measures:
Establish or maintain green cover buffer strips adjacent to hedgerows[7]
Protect hedge nesting birds by avoiding cutting or trimming during their nesting period[7]
Hedgerows will be protected from damage by ensuring these measures are in place[7]

Long-Term Maintenance:
Aim for a balance of old and young hedgerow trees to support diverse wildlife[2]
Trim at the best time for nature, ideally late winter, to allow wildlife to feed on berries and fruits[2]

Environmental Benefits:
Hedgerows enhance biodiversity and provide habitat for a wide range of species[1]
They offer erosion control, water regulation, and carbon storage to combat climate change[1]
A new hedgerow can store 600 to 800 kilograms of carbon dioxide per year for up to 20 years[9]

By following these guidelines, hedgerows can be effectively managed and protected to ensure their ecological and environmental benefits are sustained over the long term. Consult with local wildlife trusts or experts for tailored advice and to comply with any specific regulations in your area.

Sources:
(1) Hedgerow management - Farming for Nature.
https://www.farmingfornature.ie/your-farm/resources/best-practice-guides/hedgerow-management/.
(2) Top tips for managing hedgerows - People's Trust for Endangered Species.
https://ptes.org/hedgerow/managing-hedgerows-top-tips/.
(3) The Management of Hedgerows (England) Regulations 2024 - Legislation.gov.uk.
https://www.legislation.gov.uk/ukdsi/2024/9780348260472/pdfs/ukdsiem_9780348260472_en_001.pdf.
(4) How to manage a hedgerow for wildlife | The Wildlife Trusts.
https://www.wildlifetrusts.org/wildlife/managing-land-wildlife/how-manage-hedgerow-wildlife.
(5) Hedges of Biodiversity - National Geographic Society.
https://education.nationalgeographic.org/resource/hedging-biodiversity/.
(6) How to establish, manage and rejuvenate hedgerows.
https://www.fwi.co.uk/arable/how-to-establish-manage-and-rejuvenate-hedgerows.
(7) Hedgerow planting: answers to 18 common questions - The Tree Council.
https://treecouncil.org.uk/wp-content/uploads/2020/05/Hedgerow-planting.pdf.
(8) A Guide to Hedgerows: Plantings That Enhance Biodiversity ....
https://extension.oregonstate.edu/catalog/pub/em8721.
(9) Hedgerow Regulations UK | Removing or Working on Hedges - UK Rules.
https://www.theukrules.co.uk/rules/legal/environment/countryside/hedgerow-regulations/.

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Address
'The Slips', Wet End Lane, Henfield, BN5 9RG

Drawing No.	400
Scale @ A3	NTS
Job No.	2412WE_R1
Drawn By	MD
Checked By	BK
Drawn On	05.09.2025
Issued On	05.09.2025
Status	Proposed
Drawing	Landscaping
Submission	Planning
Revision	000

.

N

Indicative: ##

1m @ 1:
50
100
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500
1250

Appendix B - Topographical Survey

NOTES
Survey accurate at time of site attendance. Do not scale from printed drawings except for planning purposes.

Grid is based on ordnance survey national grid fixed by GPS satellite active network.
Levels are related to the ordnance survey GPS active Network and transformed using the OSGM15 & OSTN15 model.

Drainage pipe sizes (where shown) have been gauged from the surface for safety reasons and should be regarded as approximate only.

Tree species (where shown) should be treated with caution and expert identification is advised.

Although this is a digital survey the accuracy and amount of detail shown is only commensurate with the graphical scale of mapping as specified. Care should be exercised when working to larger scales.

Visible features in the vicinity of the boundaries as shown above, may not represent the extent of legally conveyed ownership.

Whilst every effort has been made to achieve accuracy on this plan, CRUCIAL clearance dimensions, levels and invert levels should be checked prior to design and construction.

Areas of dense undergrowth cannot be surveyed in detail, these areas will be shown in outline only and marked as 'dense undergrowth' on the plan.

Kerb levels have been taken on the top of the channel.

ORDNANCE OVERLAY

Ordnance Survey Overlay
National Grid 1:2500 (Accuracy data) Surveying tolerances:
Distances up to 200 metres ±1 in100m
Distances 200 to1,000 metres ±2m
Distances over 1,000 metres ±1 in 500m

0 2 4 6 8 10 12
SCALE 1:250

Site plan 1:250

medlams surveys limited	project:	The Slips, West End Lane, Henfield, BN5 9RG	
www.medlams-surveys.co.uk info@medlams-surveys.co.uk 07717 205 388	client:	Manorwood	job ref: S3045
	title:	Level survey	scale 1:250 @A1
	date	January 2025	dwg no: Ex 01 rev:

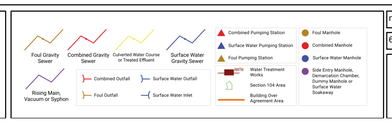
Appendix C - Sewer Records

(c) Crown copyright and database rights 2024 Ordnance Survey AC0000808122 | Date: 16/12/24 | Scale: 1:1250 | Map Centre: 520112,115976 | Data updated: 27/11/24 | Our Ref: 1643071 - 1 | Wastewater Plan A1 Powered by digdat

The positions of pipes shown on this plan are believed to be correct, but Southern Water Services Ltd accept no responsibility in the event of inaccuracy. The actual positions should be determined on site. This plan is produced by Southern Water Services Ltd (c) Crown copyright and database rights 2024 Ordnance Survey AC0000808122. This map is to be used for the purposes of viewing the location of Southern Water plant only. Any other uses of the map data or further copies is not permitted.

WARNING: BAC pipes are constructed of Bonded Asbestos Cement.

WARNING: Unknown (UNK) materials may include Bonded Asbestos Cement.



nick@aegaea.com
6874

WATER for LIFE from Southern Water.

Manhole Reference	Liquid Type	Cover Level	Invert Level	Depth to Invert
5001	F	0.00	0.00	
5002	F	0.00	0.00	
5003	F	0.00	0.00	
5801	F	13.22	0.00	
5802	F	13.12	0.00	
5902	F	0.00	0.00	
6001	F	19.79	17.94	
6101	F	19.73	18.64	
6151	S	0.00	0.00	

Manhole Reference	Liquid Type	Cover Level	Invert Level	Depth to Invert

Manhole Reference	Liquid Type	Cover Level	Invert Level	Depth to Invert

Manhole Reference	Liquid Type	Cover Level	Invert Level	Depth to Invert

Manhole Reference	Liquid Type	Cover Level	Invert Level	Depth to Invert

Manhole Reference	Liquid Type	Cover Level	Invert Level	Depth to Invert

Percolation tests to BRE365

Site location:

'The Slips',
West End Lane,
Henfield,
West Sussex
BN5 9RG

The test procedure:

Percolation tests were undertaken on 27th September 2025 to establish the suitability of the ground for infiltration.

A test hole was excavated in accordance with BRE 365 methodology at a locations to the north west and corners of the site.

The trial hole specifications were 600 mm w x 1500 mmm d x 1000 mm l

The trial hole was filled with a water bowser and left to drain overnight before conducting the BRE testing.

Results:

24 hours after the holes were filled the hole had drained to around 50% depth of the test hole and it was clear that the ground was not suitable for infiltration.

As a result, the tests were aborted.

Initial filling

After 24 hours

After 48 hours

Appendix E-Proposed Drainage Arrangements

GENERAL NOTES

1. THIS DRAWING IS INDICATIVE ONLY AND SUBJECT TO CHANGE DURING DETAILED DESIGN AND APPROVALS FROM RELEVANT STATUTORY BODIES.
2. POSITIONS OF EXISTING SERVICES/STATUTORY UNDERTAKERS APPARATUS ADJACENT TO OR CROSSING PROPOSED EXCAVATIONS ARE TO BE CONFIRMED PRIOR TO START ON SITE.
3. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH AND CHECKED AGAINST ALL, ENGINEERING DETAILS, SPECIFICATIONS, GEOTECHNICAL AND OTHER RELEVANT DOCUMENTATION PROVIDED.
4. THIS DRAWING IS SCHEMATIC FOR CLARITY ONLY, POSITIONS OF PIPE RUNS AND MANHOLES MAY VARY ON SITE DUE TO SITE CONDITIONS.
5. WHERE EXISTING OR PROPOSED TREES ARE ADJACENT TO ACCESS ROADS OR DRAINAGE, ROOT BARRIERS (TYPE TO BE APPROVED) ARE REQUIRED TO PREVENT STRUCTURAL DAMAGE.
6. ANY ANOMALY OR CONTRADICTIONS BETWEEN ANY OF THE ABOVE IS TO BE REPORTED IMMEDIATELY.
7. THE DESIGN IS TO COMPLY IN ALL ASPECTS WITH THE CURRENT BRITISH STANDARDS, BUILDING REGULATIONS AND BUILDING LEGISLATION ETC.
8. ALL PIPE SIZES, CHAMBER DEPTHS, SIZE & QUANTITY SUBJECT TO REVIEW AND DETAILED DESIGN. ALL ADOPTED PIPE WORK ROUTING AND ANY EASEMENTS SUBJECT TO FULL DESIGN REVIEW AND APPROVAL BY THE RELEVANT BODIES.
9. DRAINAGE DESIGN SUBJECT TO DETAILED LEVELS AND EXTERNAL WORKS DESIGN.
10. SUBJECT TO DETAILED DESIGN AND APPROVAL.

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DO NOT SCALE THIS DRAWING. USE FIGURED DIMENSIONS ONLY.
THE CONTRACTOR MUST CHECK & VERIFY ALL DIMENSIONS ON SITE.
ANY DISCREPANCIES MUST BE REPORTED IMMEDIATELY TO THE ENGINEER FOR CLARIFICATION BEFORE PROCEEDING.

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION
REFER TO THE RELEVANT CONSTRUCTION (DESIGN AND MANAGEMENT) DOCUMENTATION WHERE APPLICABLE.
IT IS ASSUMED THAT ALL WORKS ON THIS DRAWING WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR, WORKING WHERE APPROPRIATE TO AN APPROVED METHOD STATEMENT.

Drawing Status: PLANNING

Client: MANORWOOD CONSTRUCTION LIMITED

Project: 'THE SLIPS', WEST END LANE, HENFIELD

Title: PROPOSED DRAINAGE STRATEGY

Project No.	Dwg Id.	
AEG6874	CIV-001	
Scale @ A1	Date	Revision
1 : 250	FEB 2025	A02
Drawn	Checked	Approved
DB	JM	JM

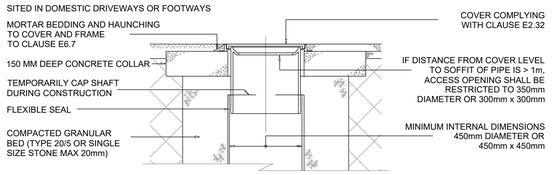
Rev	Date	Description	By
A02	08.10.2025	UPDATED TO LATEST LAYOUT, SW REVISED TO OUTFALL INTO DITCH FOLLOWING FAILED INFILTRATION TESTS	DB
A01	26.02.2025	FIRST ISSUE	DB

FIGURE B.19
TYPICAL INSPECTION CHAMBER DETAIL - TYPE D

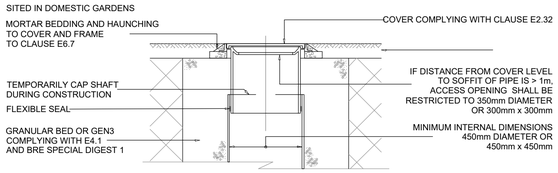
FLEXIBLE MATERIAL CONSTRUCTION ALTERNATIVE TOP DETAILS FOR USE IN AREAS OF LIGHT VEHICLE LOADING OR LANDSCAPED AREAS

PLASTIC CHAMBERS AND RINGS SHALL COMPLY WITH CLAUSE E2.31

SITED IN DOMESTIC DRIVEWAYS OR FOOTWAYS



SITED IN DOMESTIC GARDENS



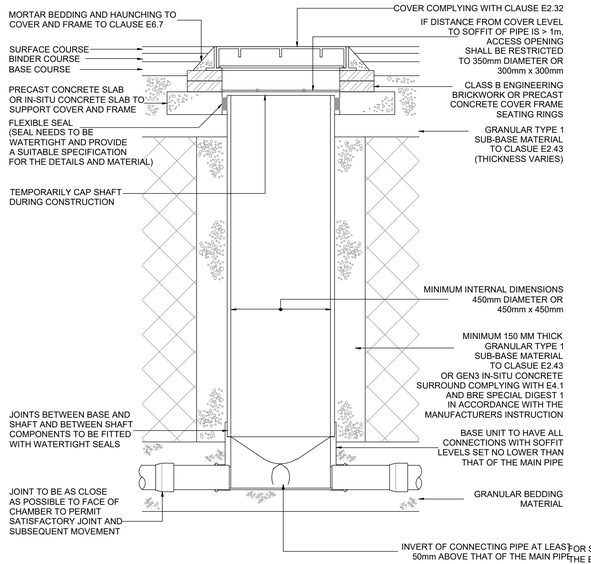
NOTE: WHERE THE ACCESS CHAMBER IS IN THE HIGHWAY (INCLUDING AND FOOTWAY), THE HIGHWAY AUTHORITY CAN HAVE SPECIFIC REQUIREMENTS

NOT TO SCALE

FIGURE B.18
TYPICAL INSPECTION CHAMBER DETAIL - TYPE D

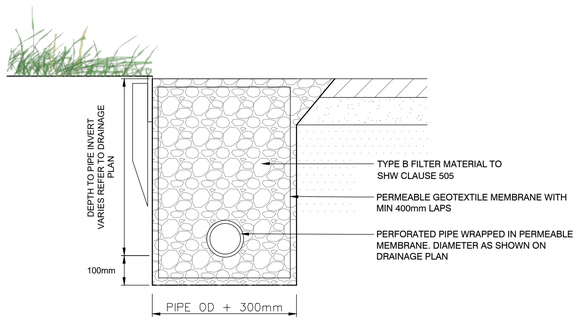
DEPTH FROM COVER LEVEL TO SOFFIT OF PIPE UP TO 3m
FLEXIBLE MATERIAL CONSTRUCTION FOR USE IN AREAS SUBJECT TO VEHICLE LOADING

PLASTIC CHAMBERS AND RINGS SHALL COMPLY WITH CLAUSE E2.31



NOTE: WHERE THE ACCESS CHAMBER IS IN THE HIGHWAY THE HIGHWAY AUTHORITY CAN HAVE SPECIFIC REQUIREMENTS

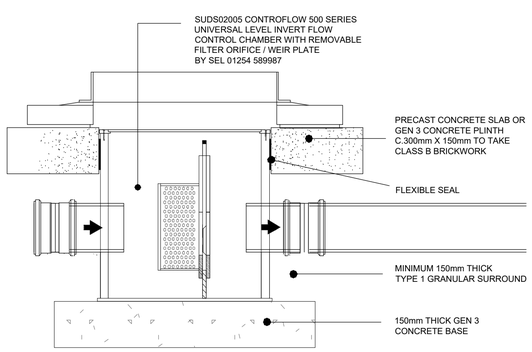
NOT TO SCALE



TYPICAL FILTER DRAIN DETAIL

(SCALE 1:10)

RODDING EYE DETAIL



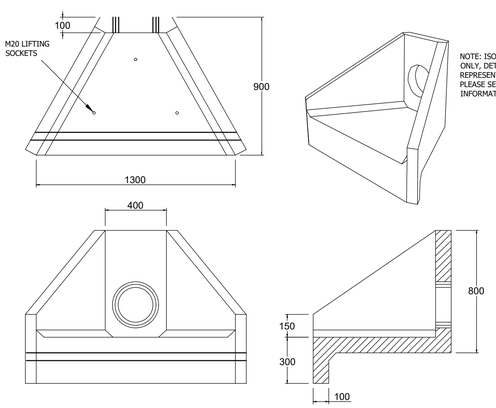
ORIFICE FLOW CONTROL CHAMBER SEL SUDS02005 (OSA)

NOTE: CLASS 'Z' BEDDING FOR USE WITH ALL ADOPTABLE DRAINAGE WITH COVER TO SOFFIT OF PIPE LESS THAN 1200mm.

CLASS 'Z' PIPE BEDDING

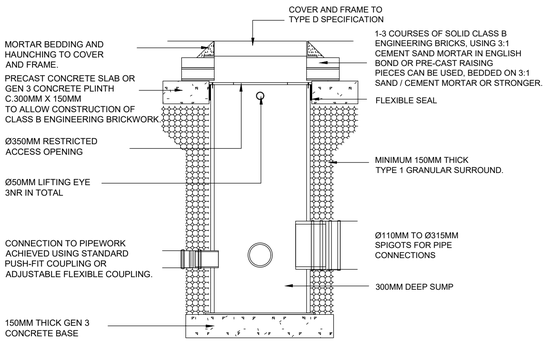
NOTE: CLASS 'S' BEDDING FOR USE WITH ALL ADOPTABLE DRAINAGE WITH COVER TO SOFFIT OF PIPE GREATER THAN 1200mm. PRIVATE DRAINAGE WITHIN LANDSCAPED AND OTHER NON-TRAFFICKED AREAS WITH COVER GREATER THAN 1000mm TO THE PIPE SOFFIT MAY USE PIPE BEDDING CLASS 'T' REFER TO DRAWING F1 (SHW) HIGHWAY CONSTRUCTION DETAILS.

CLASS 'S' PIPE BEDDING

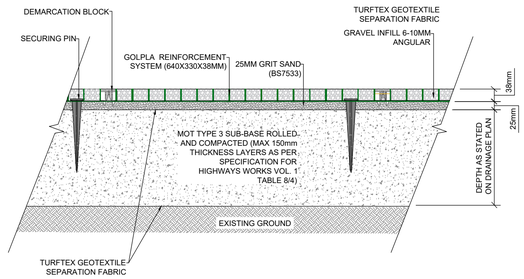


NOTE: ISOMETRIC DRAWING IS FOR REFERENCE ONLY, DETAILS MAY NOT ACCURATELY REPRESENT ACTUAL DESIGN - PLEASE SEE DETAILED VIEWS FOR TECHNICAL INFORMATION

OUTFALL HEADWALL DETAIL
ALTHON H3C HEADWALL



INSTALLATION DETAIL
WASP05100 SERIES
PREFABRICATED CATCHPIT CHAMBER
Ø600 UP TO 2.5M DEEP CHAMBER
BY SEL ENVIRONMENTAL TEL: 01254 589987



PROPOSED GRAVEL DRIVES
PERMEABLE SURFACE

DO NOT SCALE THIS DRAWING. USE FIGURED DIMENSIONS ONLY.
THE CONTRACTOR MUST CHECK & VERIFY ALL DIMENSIONS ON SITE.
ANY DISCREPANCIES MUST BE REPORTED IMMEDIATELY TO THE ENGINEER FOR CLARIFICATION BEFORE PROCEEDING.

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION
REFER TO THE RELEVANT CONSTRUCTION (DESIGN AND MANAGEMENT) DOCUMENTATION WHERE APPLICABLE.
IT IS ASSUMED THAT ALL WORKS ON THIS DRAWING WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR, WORKING WHERE APPROPRIATE TO AN APPROVED METHOD STATEMENT.

NOTES

1. ALL ADOPTABLE DRAINAGE WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE DESIGN AND CONSTRUCTION GUIDANCE FOR FOUL AND SURFACE WATER SEWERS (DCG).
2. LOCATION AND INVERT LEVELS OF DOWNSTREAM DRAINAGE CONNECTION POINTS ARE TO BE CONFIRMED.
3. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DRAWINGS/SPECIFICATIONS.
4. DO NOT SCALE FROM THIS DRAWING. USE FIGURED DIMENSIONS ONLY. ALL DIMENSIONS ARE IN METERS.
5. ALL THE ABOVE REQUIREMENTS SHALL APPLY UNLESS OTHERWISE STATED IN THE GENERAL ARRANGEMENT DRAWINGS/SPECIFICATION. IN THE EVENT OF A CONTRADICTION THE CONTRACT SPECIFIC DOCUMENTS SHALL BE DEEMED TO PREVAIL.
6. THE CONTRACTOR IS TO CHECK AND VERIFY ALL SITE DIMENSIONS AND LEVELS, INCLUDING EXISTING SEWER INVERT LEVELS AND UTILITIES, PRIOR TO START ON SITE.
7. POSITIONS OF EXISTING SERVICES/STATUTORY UNDERTAKERS APPARATUS ADJACENT TO OR CROSSING PROPOSED EXCAVATIONS ARE TO BE CONFIRMED PRIOR TO START ON SITE.
8. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH AND CHECKED AGAINST ALL, ENGINEERING DETAILS, SPECIFICATIONS, GEOTECHNICAL AND OTHER RELEVANT DOCUMENTATION PROVIDED.
9. THIS DRAWING IS SCHEMATIC FOR CLARITY ONLY. POSITIONS OF PIPE RUNS AND MANHOLES MAY VARY ON SITE DUE TO SITE CONDITIONS.
10. WHERE TREES ADJACENT TO DRAINAGE ARE PROPOSED, ROOT BARRIERS ARE REQUIRED TO PREVENT STRUCTURAL DAMAGE.
11. ANY ANOMALY OR CONTRADICTIONS BETWEEN ANY OF THE ABOVE IS TO BE REPORTED IMMEDIATELY.
12. THE CONTRACTOR IS TO COMPLY IN ALL ASPECTS WITH THE CURRENT BRITISH STANDARDS, BUILDING REGULATIONS AND BUILDING LEGISLATION ETC.
13. SUBJECT TO APPROVAL.

Rev	Date	Description	By
A02	08.10.25	REVISED IN ACCORDANCE WITH LATEST DRAINAGE STRATEGY	DB
A01	26.02.25	FIRST ISSUE	DB

Client
MANORWOOD CONSTRUCTION LIMITED

Project
'THE SLIPS',
WEST END LANE, HENFIELD

Title
DRAINAGE DETAILS

Project No.	Drawing No.	Revision
AEG6874	CIV-002	A02

Drawn	Checked	Approved	Date	Scale @ A1
DB	JM	JM	FEB 2025	1:200

Drawing Status
FOR PLANNING

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Appendix F - Proposed Drainage Calculations

Design Settings

Rainfall Methodology	FSR	Maximum Time of Concentration (mins)	30.00
Return Period (years)	5	Maximum Rainfall (mm/hr)	550.0
Additional Flow (%)	0	Minimum Velocity (m/s)	1.00
FSR Region	England and Wales	Connection Type	Level Soffits
M5-60 (mm)	20.000	Minimum Backdrop Height (m)	0.200
Ratio-R	0.400	Preferred Cover Depth (m)	0.600
CV	1.000	Include Intermediate Ground	✓
Time of Entry (mins)	5.00	Enforce best practice design rules	✓

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Node Type	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
5	0.000	5.00	14.800	Manhole	1200	520100.986	115999.712	0.459
6	0.009	5.00	14.660	Manhole	1200	520093.732	116026.632	0.399
3	0.015	5.00	15.125	Manhole	1200	520108.489	115986.406	0.675
2	0.012	5.00	15.420	Manhole	1200	520116.169	115963.781	0.700
7			14.650	Manhole	1200	520090.999	116038.659	0.424
1	0.012	5.00	15.890	Manhole	1200	520119.588	115950.995	0.700
8			14.860	Manhole	1200	520092.526	116053.665	0.755
8_OUT			14.860	Manhole	1200	520088.433	116053.993	0.825
4			14.800	Manhole		520103.691	115999.186	0.441

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	Link Type	T of C (mins)	Rain (mm/hr)
1.000	1	2	13.235	0.600	15.190	14.720	0.470	28.2	150	Circular	5.12	90.3
1.001	2	3	23.893	0.600	14.720	14.450	0.270	88.5	150	Circular	5.49	87.6
1.002	3	4	13.651	0.600	14.450	14.359	0.091	150.1	150	Circular	5.77	85.8
1.004	5	6	27.880	0.600	14.341	14.261	0.080	350.0	225	Circular	6.48	81.4
1.005	6	7	12.334	0.600	14.261	14.226	0.035	350.0	225	Circular	6.78	79.7
1.006	7	8	15.083	0.600	14.226	14.125	0.101	150.0	150	Circular	7.08	78.0
1.007	8	8_OUT	4.106	0.600	14.105	14.035	0.070	58.7	150	Circular	7.14	77.7
1.003	4	5	2.756	0.600	14.359	14.341	0.018	150.0	225	Circular	5.81	85.5

Name	US Node	DS Node	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)
1.000	1	2	1.904	33.7	3.9	0.550	0.550	0.012	0.0
1.001	2	3	1.069	18.9	7.6	0.550	0.525	0.024	0.0
1.002	3	4	0.818	14.5	12.1	0.525	0.291	0.039	0.0
1.004	5	6	0.693	27.6	11.5	0.234	0.174	0.039	0.0
1.005	6	7	0.693	27.6	13.8	0.174	0.199	0.048	0.0
1.006	7	8	0.818	14.5	13.5	0.274	0.585	0.048	0.0
1.007	8	8_OUT	1.315	23.2	13.5	0.605	0.675	0.048	0.0
1.003	4	5	1.065	42.3	12.0	0.216	0.234	0.039	0.0

Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
1.000	13.235	28.2	150	Circular	15.890	15.190	0.550	15.420	14.720	0.550
1.001	23.893	88.5	150	Circular	15.420	14.720	0.550	15.125	14.450	0.525
1.002	13.651	150.1	150	Circular	15.125	14.450	0.525	14.800	14.359	0.291
1.004	27.880	350.0	225	Circular	14.800	14.341	0.234	14.660	14.261	0.174
1.005	12.334	350.0	225	Circular	14.660	14.261	0.174	14.650	14.226	0.199
1.006	15.083	150.0	150	Circular	14.650	14.226	0.274	14.860	14.125	0.585
1.007	4.106	58.7	150	Circular	14.860	14.105	0.605	14.860	14.035	0.675
1.003	2.756	150.0	225	Circular	14.800	14.359	0.216	14.800	14.341	0.234

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	1	1200	Manhole	Adoptable	2	1200	Manhole	Adoptable
1.001	2	1200	Manhole	Adoptable	3	1200	Manhole	Adoptable
1.002	3	1200	Manhole	Adoptable	4		Manhole	Adoptable
1.004	5	1200	Manhole	Adoptable	6	1200	Manhole	Adoptable
1.005	6	1200	Manhole	Adoptable	7	1200	Manhole	Adoptable
1.006	7	1200	Manhole	Adoptable	8	1200	Manhole	Adoptable
1.007	8	1200	Manhole	Adoptable	8_OUT	1200	Manhole	Adoptable
1.003	4		Manhole	Adoptable	5	1200	Manhole	Adoptable

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections		Link	IL (m)	Dia (mm)
5	520100.986	115999.712	14.800	0.459	1200		1	1.003	14.341	225
							0	1.004	14.341	225
6	520093.732	116026.632	14.660	0.399	1200		1	1.004	14.261	225
							0	1.005	14.261	225

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
3	520108.489	115986.406	15.125	0.675	1200	1	1.001	14.450	150
									
						0	1.002	14.450	150
2	520116.169	115963.781	15.420	0.700	1200	1	1.000	14.720	150
									
						0	1.001	14.720	150
7	520090.999	116038.659	14.650	0.424	1200	1	1.005	14.226	225
									
						0	1.006	14.226	150
1	520119.588	115950.995	15.890	0.700	1200				
						0	1.000	15.190	150
8	520092.526	116053.665	14.860	0.755	1200	1	1.006	14.125	150
									
						0	1.007	14.105	150
8_OUT	520088.433	116053.993	14.860	0.825	1200	1	1.007	14.035	150
									
4	520103.691	115999.186	14.800	0.441		1	1.002	14.359	150
									
						0	1.003	14.359	225

Simulation Settings

Rainfall Methodology	FEH-22	Winter CV	1.000	Drain Down Time (mins)	240	Check Discharge Rate(s)	x
Rainfall Events	Singular	Analysis Speed	Normal	Additional Storage (m³/ha)	0.0	Check Discharge Volume	x
Summer CV	1.000	Skip Steady State	x	Starting Level (m)			

Storm Durations

15	30	60	120	180	240	360	480	600	720	960	1440

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)	Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
1	0	0	0	100	20	0	0
30	0	0	0	100	45	10	0
100	0	0	0				

Node 7 Online Orifice Control

Flap Valve	x	Invert Level (m)	14.226	Discharge Coefficient	0.600
Replaces Downstream Link	x	Diameter (m)	0.028		

Node 7 Link Surround Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	0.30	Link	1.005
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	14.226	Surround Shape	(Trench)
Safety Factor	2.0	Time to half empty (mins)		Diameter (mm)	800

Node 6 Link Surround Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	0.30	Link	1.004
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	14.261	Surround Shape	(Trench)
Safety Factor	2.0	Time to half empty (mins)		Diameter (mm)	800

Node 7 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	14.226
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	96.0	96.0	0.400	96.0	109.9	0.401	0.0	109.9

Other (defaults)

Entry Loss (manhole)	0.250	Entry Loss (junction)	0.000	Apply Recommended Losses	x
Exit Loss (manhole)	0.250	Exit Loss (junction)	0.000	Flood Risk (m)	0.300

Results for 1 year Critical Storm Duration. Lowest mass balance: 99.67%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	5	12	14.402	0.061	4.6	0.0687	0.0000	OK
15 minute summer	6	12	14.375	0.114	5.4	0.5278	0.0000	OK
15 minute summer	3	11	14.511	0.060	4.7	0.0684	0.0000	OK
15 minute summer	2	11	14.760	0.040	3.0	0.0447	0.0000	OK
600 minute summer	7	405	14.298	0.072	1.2	6.7342	0.0000	OK
15 minute summer	1	10	15.211	0.021	1.5	0.0243	0.0000	OK
600 minute summer	8	405	14.119	0.014	0.4	0.0156	0.0000	OK
600 minute summer	8_OUT	405	14.048	0.013	0.4	0.0000	0.0000	OK
15 minute summer	4	11	14.418	0.059	4.6	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	5	1.004	6	4.5	0.400	0.163	0.4029	
15 minute summer	6	1.005	7	7.7	1.131	0.280	0.1258	
15 minute summer	3	1.002	4	4.6	0.714	0.321	0.0891	
15 minute summer	2	1.001	3	2.9	0.567	0.153	0.1236	
600 minute summer	7	1.006	8	0.4	0.353	0.026	0.0163	
15 minute summer	1	1.000	2	1.5	0.578	0.044	0.0347	
600 minute summer	8	1.007	8_OUT	0.4	0.485	0.016	0.0032	9.3
15 minute summer	4	1.003	5	4.6	0.556	0.109	0.0231	

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.67%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	5	10	14.497	0.156	18.1	0.1765	0.0000	OK
15 minute summer	6	10	14.462	0.201	23.2	1.0586	0.0000	OK
15 minute summer	3	11	14.679	0.229	18.3	0.2592	0.0000	SURCHARGED
15 minute summer	2	10	14.803	0.083	11.4	0.0937	0.0000	OK
360 minute summer	7	288	14.415	0.189	4.6	17.8421	0.0000	FLOOD RISK
15 minute summer	1	10	15.232	0.042	5.7	0.0471	0.0000	OK
360 minute summer	8	288	14.123	0.018	0.7	0.0205	0.0000	OK
360 minute summer	8_OUT	288	14.053	0.018	0.7	0.0000	0.0000	OK
15 minute summer	4	11	14.508	0.149	18.0	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	5	1.004	6	19.1	0.683	0.693	0.9325	
15 minute summer	6	1.005	7	28.2	1.596	1.022	0.2370	
15 minute summer	3	1.002	4	18.0	1.020	1.242	0.2402	
15 minute summer	2	1.001	3	11.2	0.731	0.592	0.3294	
360 minute summer	7	1.006	8	0.7	0.417	0.046	0.0242	
15 minute summer	1	1.000	2	5.7	0.820	0.168	0.0924	
360 minute summer	8	1.007	8_OUT	0.7	0.569	0.029	0.0048	16.8
15 minute summer	4	1.003	5	18.1	0.712	0.429	0.0786	

Results for 100 year Critical Storm Duration. Lowest mass balance: 99.67%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	5	10	14.519	0.178	20.8	0.2010	0.0000	OK
15 minute winter	6	9	14.473	0.212	25.6	1.1311	0.0000	OK
15 minute summer	3	11	14.758	0.308	21.3	0.3479	0.0000	SURCHARGED
15 minute summer	2	11	14.903	0.183	14.4	0.2065	0.0000	SURCHARGED
360 minute summer	7	288	14.464	0.238	5.7	22.4857	0.0000	FLOOD RISK
15 minute summer	1	10	15.237	0.047	7.2	0.0532	0.0000	OK
360 minute summer	8	288	14.124	0.019	0.8	0.0218	0.0000	OK
360 minute summer	8_OUT	288	14.054	0.019	0.8	0.0000	0.0000	OK
15 minute summer	4	10	14.531	0.172	20.7	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	5	1.004	6	21.6	0.736	0.785	1.0025	
15 minute winter	6	1.005	7	29.9	1.635	1.084	0.2429	
15 minute summer	3	1.002	4	20.7	1.175	1.432	0.2403	
15 minute summer	2	1.001	3	12.8	0.800	0.680	0.4206	
360 minute summer	7	1.006	8	0.8	0.433	0.052	0.0264	
15 minute summer	1	1.000	2	7.2	0.862	0.213	0.1467	
360 minute summer	8	1.007	8_OUT	0.8	0.591	0.033	0.0053	19.5
15 minute summer	4	1.003	5	20.8	0.740	0.492	0.0914	

Results for 100 year +20% CC Critical Storm Duration. Lowest mass balance: 99.67%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	5	10	14.533	0.192	24.8	0.2169	0.0000	OK
480 minute summer	6	360	14.513	0.252	5.8	1.4025	0.0000	FLOOD RISK
15 minute summer	3	11	14.883	0.433	25.3	0.4892	0.0000	FLOOD RISK
15 minute summer	2	11	15.089	0.369	17.2	0.4174	0.0000	SURCHARGED
480 minute summer	7	360	14.513	0.287	5.2	27.1521	0.0000	FLOOD RISK
15 minute summer	1	10	15.242	0.052	8.6	0.0584	0.0000	OK
480 minute summer	8	360	14.125	0.020	0.8	0.0229	0.0000	OK
480 minute summer	8_OUT	360	14.055	0.020	0.8	0.0000	0.0000	OK
15 minute summer	4	10	14.548	0.189	24.8	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	5	1.004	6	25.3	0.771	0.918	1.0443	
480 minute summer	6	1.005	7	5.2	0.515	0.190	0.4905	
15 minute summer	3	1.002	4	24.8	1.407	1.714	0.2403	
15 minute summer	2	1.001	3	15.3	0.870	0.811	0.4206	
480 minute summer	7	1.006	8	0.8	0.446	0.058	0.0284	
15 minute summer	1	1.000	2	8.6	0.878	0.254	0.1520	
480 minute summer	8	1.007	8_OUT	0.8	0.608	0.036	0.0057	25.4
15 minute summer	4	1.003	5	24.8	0.728	0.586	0.0987	

Results for 100 year +45% CC +10% A Critical Storm Duration. Lowest mass balance: 99.67%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
600 minute summer	5	450	14.622	0.281	5.1	0.3182	0.0000	FLOOD RISK
600 minute summer	6	450	14.622	0.361	6.1	2.2206	0.0000	FLOOD RISK
15 minute summer	3	11	15.113	0.663	31.4	0.7496	0.0000	FLOOD RISK
15 minute summer	2	12	15.419	0.699	21.6	0.7907	0.0000	FLOOD RISK
600 minute summer	7	450	14.622	0.396	5.6	37.5073	0.0000	FLOOD RISK
15 minute summer	1	12	15.464	0.274	11.4	0.3094	0.0000	SURCHARGED
600 minute summer	8	450	14.127	0.022	1.0	0.0249	0.0000	OK
600 minute summer	8_OUT	450	14.056	0.021	1.0	0.0000	0.0000	OK
600 minute summer	4	465	14.625	0.266	5.2	0.0000	0.0000	FLOOD RISK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
600 minute summer	5	1.004	6	4.9	0.303	0.177	1.1088	
600 minute summer	6	1.005	7	5.6	0.510	0.205	0.4905	
15 minute summer	3	1.002	4	30.7	1.745	2.126	0.2403	
15 minute summer	2	1.001	3	18.7	1.064	0.991	0.4206	
600 minute summer	7	1.006	8	1.0	0.468	0.069	0.0320	
15 minute summer	1	1.000	2	10.7	0.894	0.318	0.2330	
600 minute summer	8	1.007	8_OUT	1.0	0.638	0.043	0.0064	34.9
600 minute summer	4	1.003	5	5.1	0.496	0.120	0.1096	