



degadea
water, civils and environment

Drainage Strategy AEG10782_RH10_TurnersHill_06

Site Address: Worth Hall Farmhouse
Turners Hill Road
Mid Sussex
West Sussex
RH10 4PE

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

degadea
water, civils and environment

Document Issue Record

Project: Drainage Strategy

Prepared for: Tulleys Entertainment Group Ltd

Reference: AEG10782_RH10_TurnersHill_06

Site Location: Worth Hall Farmhouse, Turners Hill Road, Mid Sussex, West Sussex, RH10 4PE

Issue	Date	Author	Check	Auth.	Comments
1.0	26/06/2026	Jack Allen	ML	OH	First Issue

Please Note:

This report has been prepared for the exclusive use of the commissioning party and may not be reproduced without prior written permission from Aegaea Limited. All work has been carried out within the terms of the brief using all reasonable skill, care, and diligence. No liability is accepted by Aegaea Limited for the accuracy of data or opinions provided by others in the preparation of this report, or for any use of this report other than for the purpose for which it was produced. Where reference has been made to probability events, or risk probability, it does not ensure that there is no risk or that there is no residual risk from an extreme, unlikely or unforeseen flood event over the lifetime of the development.

Table of Contents

- 1. Introduction.....1**
 - Site Overview..... 1
- 2. Surface Water Drainage Strategy.....4**
 - Ground Conditions 4
 - Nearby Watercourses..... 4
 - Existing Drainage Infrastructure 5
 - Greenfield Runoff Rates..... 5
 - Climate Change..... 6
 - InfoDrainage Modelling Criteria 6
 - Surface Water Drainage Strategy..... 6
 - InfoDrainage Modelling Results 8
 - Maintenance 9
 - Designing for Exceedance..... 11
 - Water Quality 11
 - Management During Construction 12
- 3. Conclusions.....14**
- Appendix A - Development Proposals.....17**
- Appendix B - Topographical Survey18**
- Appendix C - Surface Water Drainage Strategy Layout.....19**
- Appendix D - Construction Details.....20**
- Appendix E - InfoDrainage Calculations21**

1. Introduction

1.1. Aegaea were commissioned by Tulleys Entertainment Group Ltd to undertake a Drainage Strategy to discharge Condition 3 (DM/23/0611) attached to the planning permission for this development.

1.2. Condition 3 states;

Condition 3: The development hereby permitted shall not commence unless and until details of the proposed foul and surface water drainage and means of disposal have been submitted to and approved in writing by the local planning authority. The building shall not be occupied or brought into use, until all the approved drainage works have been carried out in accordance with the agreed details.

Reason: To ensure that the proposal is satisfactorily drained and to accord with the NPPF requirements and Policy DP41 of the District Plan (2018-2031).

1.3. This Drainage Strategy includes the details required to support the discharge of Condition 3.

Site Overview

1.4. The site of the proposed development is at the Worth Hall Farmhouse, Turners Hill Road, Mid Sussex, West Sussex, RH10 4PE (Figure 1). It is understood that the proposed development is for the siting of a primary substation – a copy of the development proposals can be found in Appendix A.

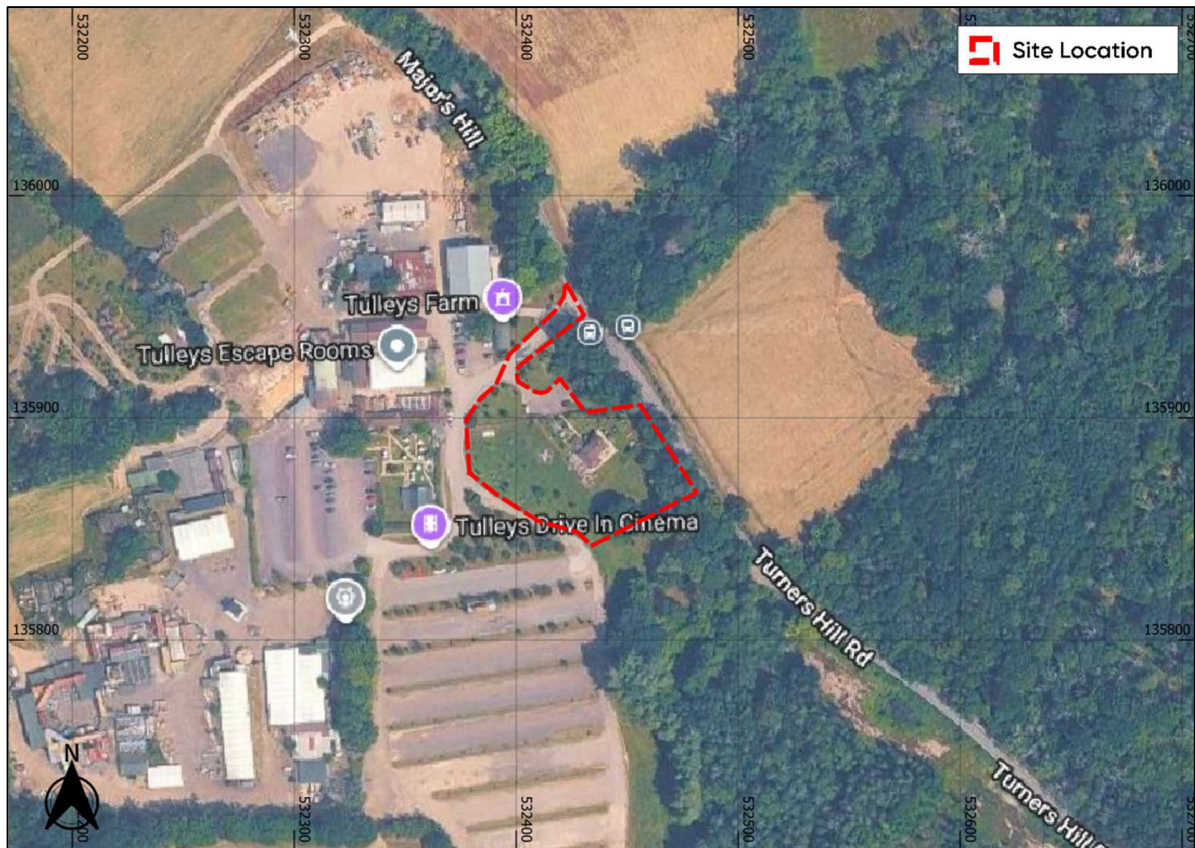


Figure 1: Site Location (Base map and data from Google Satellite Imagery ©)

- 1.5. A Topographical Survey has been provided by the client (conducted by Maltby Land Surveys in May 2026) and is included in this report as Appendix B. The Topographical Survey shows the ground elevations of the site vary between 135.76 metres Above Ordnance Datum (m AOD) in the northern part of the site, adjacent to the existing pond. The maximum recorded ground level of 141.04m AOD occur in the southwestern corner of the site.
- 1.6. Environment Agency (EA) Light Detection and Ranging (LiDAR) data Digital Terrain Model has been used to visualise the topography of the site (Figure 2).

2. Surface Water Drainage Strategy

- 2.1. With increasing urbanisation, the ability for precipitation to penetrate the hard paved surfaces to the groundwater below is inhibited. This results in increased flood risk, overstressed combined sewer infrastructure, and reduced ability to replenish aquifers. Sustainable Drainage Systems (SuDS) mitigate these issues by replicating natural processes to manage rainfall.

Ground Conditions

- 2.2. The British Geological Survey's (BGS) mapping shows no superficial deposits underlying the site. The bedrock underlying the site is Upper Tunbridge Wells Sand, Sandstone, and Siltstone.
- 2.3. Details from a publicly available soils data website suggests that the site location is underlain with '*Slightly acid loamy and clayey soils with impeded drainage.*'
- 2.4. The site geology and soil conditions indicate that infiltration is unlikely to be viable. The presence of a permanent pond within the site boundary is further indicative of a seasonally elevated groundwater table; under BRE 365 and CIRIA C753 guidance, infiltration is not appropriate where groundwater is within 1m of the soakaway base, a criterion unlikely to be met across this site. Infiltration has therefore been discounted in favour of a controlled discharge to the existing watercourse.
- 2.5. For the purpose of this strategy, infiltration is not deemed to be feasible.

Nearby Watercourses

- 2.6. The proposed surface water drainage strategy discharges directly to the existing on-site pond, which forms the ultimate receiving waterbody for all surface water drainage from the site. The existing surface water drainage channel crossing the site is formally terminated at the proposed driveway and conveyed via a new culvert discharging directly into the pond, ensuring a positive flow path to the receiving waterbody.
- 2.7. The topographic survey of the site confirms a consistent fall across the site from the southwestern corner (maximum recorded level approximately 141.04m AOD) toward the north and northeast (minimum recorded levels approximately 135.76m AOD adjacent to the pond), representing an overall level change of approximately 5.28m.

- 2.8. The topography therefore demonstrates that pre-development the site drains naturally toward the pond, and the proposed strategy does not alter this pre-existing flow regime.
- 2.9. The pond water level is recorded at approximately 136.32m AOD, with the proposed pipe outfall set at invert level 136.55m AOD, providing approximately 230mm of freeboard above the recorded water level and confirming a positive free-discharge arrangement under normal operating conditions. A flap valve fitted at the outfall prevents backflow during periods of elevated pond level.
- 2.10. The existing drainage channel on site appears to be man-made constructed for land drainage purposes. Notwithstanding this, the client should confirm with West Sussex Council and the LLFA whether an ordinary watercourse consent is required prior to commencement of these works.
- 2.11. The topographic survey confirms a positive outfall from the existing pond to a drainage channel adjacent to Turners Hill. This channel flows northeast into an unnamed ordinary watercourse located approximately 300m to the northeast of the site location.

Existing Drainage Infrastructure

- 2.12. Due to the rural nature of the site it is understood that there is no public or private sewerage assets currently serve the address.

Greenfield Runoff Rates

- 2.13. The total impermeable catchment area associated with this strategy is 0.081ha.
- 2.14. The greenfield runoff rate (Q_{BAR} rural) was calculated in InfoDrainage (v2025.2) using the ICP SuDS methodology. For sites smaller than 50ha, the IH124 method is applied and the results multiplied by a scale factor equal to the site area (in hectares) divided by 50. Q_{BAR} was calculated using the following formula (equation yields m³/s):

$$Q_{BAR_{rural}} = 0.00180 \times AREA^{0.89} \times SAAR^{1.17} \times SOIL^{2.17}$$

- 2.15. The greenfield runoff rate (Q_{BAR}) for the proposed impermeable catchment of 810m² (excluding urban creep) was calculated to be 0.5l/s.
- 2.16. Given the low greenfield rate, it is not possible to discharge runoff at this rate due to the increased risk of blockage associated with small diameter flow restriction devices which would be required. However, surface water runoff has been restricted as low as possible with a 25mm

orifice flow control, ultimately restricting flow to 0.7l/s for the 1 in 100 year (plus a 45% allowance for climate change) storm event.

Climate Change

- 2.17. The Environment Agency Peak Rainfall Climate Change Allowance guidance was reviewed and subsequently the Defra Peak Rainfall Allowances Map was assessed to determine appropriate climate change allowances to inform the surface water drainage strategy. The upper end allowances for the Mole Management Catchment have been used for both the 3.3% and 1% annual exceedance probability events for the 2070s epoch (35% and 40% respectively).

InfoDrainage Modelling Criteria

- 2.18. InfoDrainage Software (v2025.5) was used to calculate the indicative attenuation volumes from the development proposals area, the criteria shown in Table 1.

Table 1: Proposed Network – Simulation Criteria

Catchment Area Simulation Parameters	
Rainfall Data	FEH22
Return Periods	2, 30, 30+35CC, 100, 100+40CC
Storm Durations	15, 30, 60, 120, 240, 360, 480, 960, 1440, 2160, 2880, 4320 minute
Volumetric Runoff Co	1.0
Percentage Impervious	100%
Time of Concentration	5 minutes
Urban Creep (%)	10%

- 2.19. As mentioned above, given the small catchment size of the site, it is not possible to reduce runoff down to the greenfield runoff rate without serious increased risk of blockage. Instead, flows have been limited to as low as practicable (0.7 l/s maximum).

Surface Water Drainage Strategy

- 2.20. In accordance with the SuDS management train approach, the use of various SuDS measures to reduce and control surface water flows have been considered in detail for the development. The management of surface water has been considered in respect to the SuDS hierarchy below (Table 2), as detailed in the CIRIA 753 “The SuDS Manual” (section 3.2.3).

Table 2: SuDS Drainage Hierarchy

SuDS Drainage Hierarchy				
			Suitability	Comment
	1.	Collection for non-potable use	✓	Water butts shall be implemented beneath downpipes for water reuse across the site. These have not been included in the calculations to simulate a scenario where water butts are full.
	2.	Infiltration	x	The British Geological Survey's (BGS) mapping shows no superficial deposits underlying the site. The bedrock underlying the site is Upper Tunbridge Wells Sand, Sandstone, and Siltstone. Details from a publicly available soils data website suggests that the site location is underlain with '<i>Slightly acid loamy and clayey soils with impeded drainage</i>'. The site geology and soil conditions indicate that infiltration is unlikely to be viable. The presence of a permanent pond within the site boundary is further indicative of a seasonally elevated groundwater table; under BRE 365 and CIRIA C753 guidance, infiltration is not appropriate where groundwater is within 1m of the soakaway base, a criterion unlikely to be met across this site. Infiltration has therefore been discounted in favour of a controlled discharge to the existing watercourse. For the purposes of this strategy, infiltration is not deemed to be feasible.
	3.	Discharge to surface waters	✓	The proposed surface water drainage strategy discharges directly to the existing on-site pond, which forms the ultimate receiving waterbody for all surface water drainage from the site. The existing surface water drainage channel crossing the site is formally terminated at the proposed driveway and conveyed via a new culvert discharging directly into the pond, ensuring a positive flow path to the receiving waterbody. The topographic survey confirms a positive outfall from the existing pond to a drainage channel adjacent to Turners Hill. This channel flows northeast into an unnamed ordinary watercourse located approximately 300m to the northeast of the site location.
	4.	Discharge to surface water sewer, highway drain or similar	x	No public sewerage assets are understood to serve the site address.

	5.	Discharge to combined sewer		
--	----	-----------------------------	--	--

- 2.21. On review of the SuDS drainage hierarchy, and with reference to both national and local policy, surface water generated from the proposed development could be managed on site via a geocellular storage tank and permeable paving.
- 2.22. Surface water will be restricted to a maximum of 0.7 l/s by an orifice at the tank outlet.
- 2.23. The proposed Surface Water Drainage Layout is included as Appendix C and Construction Details will be included in this report as Appendix D.

InfoDrainage Modelling Results

- 2.24. A simplified surface water drainage model was built in InfoDrainage software (v 2025.5) which comprised of:
- 5no. contributing catchment areas across the proposed impermeable areas. A 10% urban creep allowance has been applied to all roof areas.
 - 1no. geocellular storage tank: Plan area of 116.64m², depth of 0.4m, total attenuation capacity of 44.923m³, and a 25mm orifice at the outlet.
 - 2 no. permeable paving.
 - Driveway: permeable tarmac construction. Plan area 240m², Subbase (clean crushed stone) depth 300mm, total attenuation 21.786m³. 150mm under drain included for conveyance with a 35mm orifice at the outlet prior to discharge into IC4.
 - Patio: permeable block paving construction. Plan area 250m², Subbase (clean crushed stone) depth 300mm, total attenuation 22.692m³. 150mm under drain included for conveyance with a 35mm orifice at the outlet prior to discharge into IC5.
- 2.25. The full calculation outputs can be found in Appendix E of this report although the 1 in 100 year +40% climate change results have been summarised below:
- The maximum flow rate to the existing pond would be 0.7 l/s for the critical storm event (2880 minute winter).

- The maximum resident volume in the geocellular storage tank (maximum available capacity: 44.923m³) would be 41.760m³ for the critical storm event (2880 min summer).
- The maximum resident volume in the driveway permeable paving subbase (maximum available capacity: 21.786m³) would be 20.296m³ for the critical storm event (1440 min summer).
- The maximum resident volume in the patio permeable paving subbase (maximum available capacity: 22.692m³) would be 21.430m³ for the critical storm event (1440 min summer).
- No flooding is observed in the critical storm event based on the InfoDrainage model.

2.26. As such, these results indicate that the runoff from the proposed development could be accommodated within a drainage system of the approximate size modelled.

Maintenance

2.27. Table 3 presents details regarding the maintenance requirements for the proposed SuDS included as part of the development, taken from the CIRIA C753 SuDS manual. All SuDS will be privately maintained. Each manufacturer will have bespoke requirements however the below should be used as a guide:

Table 3: Specific SuDS Maintenance Requirements (Source: CIRIA SuDS Manual)

Maintenance Schedule	Required Action	Typical Frequency
Permeable tarmac/ block paving		
Regular Maintenance	Brushing and vacuuming (standard cosmetic sweep over whole surface)	Once a year, after autumn leaf fall, or reduced frequency as required, based on site-specific observations of clogging or manufacturer's recommendations
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 a sprayer	As required
Remedial Actions	Remediate any landscaping which, through vegetation maintenance or soil slip, has been raised to within 50mm of the level of the paving	As required

	Remedial 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 structure by remedial sweeping	Every 10 to 15 years as required (if infiltration performance is reduced due to significant clogging)
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, 48hr after large storms in first six months
	Inspect silt accumulation rates and establish appropriate brushing frequencies	Annually
	Monitor inspection chambers	Annually
Geocellular Storage		
Regular Maintenance	Inspect and identify any area that are not operating correctly. If required, take remedial action	Monthly for 3 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 from above, check surface of filter for blockage by sediment, algae or other matter; remove and replace surface infiltration medium as necessary.	Annually
	Remove sediment from pre-treatment structures and/ or internal forebays	Annually, or as required
Remedial Actions	Repair/ rehabilitate inlets, outlet, overflows and vents	As required
Monitoring	Inspect/ check all inlets, outlets, vents and overflows to ensure that they are in good condition and operating as designed	Annually
	Survey inside of tank for sediment build-up and remove if necessary	Every 5 years or as required

2.28. Maintenance of the surface water drainage infrastructure within the bounds of the site curtilage should be the responsibility of the site owner or maintenance company appointed by the owner.

Designing for Exceedance

- 2.29. Periods of exceedance occur when the rate of surface water runoff exceeds the drainage system capacity. Conveyance beneath ground cannot, generally, be economically or sustainably constructed to the scale required for the most extreme rainfall events. This may result, on occasion, in the surface water runoff exceeding the capacity of the drainage network, with excess water (exceedance flow) being conveyed above ground.
- 2.30. For situations where extreme rainfall intensity exceeds inlet capacities, or for extreme storm events exceeding the design flood event considered for drainage design, surface water would flow toward the north of the site toward existing pond.
- 2.31. In addition, the geocellular storage tank has been design with an additional 7% storage capacity available during the 1 in 100 year plus climate change, event to manage exceedance flows.

Water Quality

- 2.32. A key element of SuDS is that they have the potential to improve the quality of surface water discharged from a site. In order to assess this, the “Pollution hazard indices for different land use classifications”, provided in the CIRIA SuDS Manual (C753) as table 26.2, has been reviewed (Table 5). The indices use four different methods of assessing pollution potential based on the hazard level, total suspended solids (TSS), Metals, and Hydrocarbons.
- 2.33. Runoff from roof areas is generally considered a very low contamination risk and does not usually warrant any significant treatment. However, silt traps should be installed beneath downpipes as a precautionary measure to prevent sedimentation in the geocellular tank.
- 2.34. The Pollution Hazard Indices are summarised in Table 4 below (with reference to table 26.2 in the CIRIA SuDS manual). The pollution hazard indices for “Low Trafficked Roads” have been used.
- 2.35. Table 4 shows that permeable paving will provide sufficient treatment for the hardstanding surfaces.

Table 4: Pollution Hazard Indices

Land Use	Pollution Hazard Level	Total Suspended Solids (TSS)	Metals	Hydrocarbons
Hazard				
Low trafficked road (parking areas)	Medium	0.5	0.4	0.4
Mitigation				
Permeable Paving		0.7	0.7	0.5

Management During Construction

Visual Inspection/Sweep

2.36. This should include a systematic review of the drainage infrastructure. Each element should be inspected to determine if remedial actions are needed. Where access chambers are provided, these should be used to access below ground infrastructure:

- Rodding eyes / inspection chambers are provided at both ends of all perforated pipes; these should be used to determine the level of silt within the system.
- Non-man entry inspection chambers are provided for the geo-cellular structure.
- Permeable paving should be inspected for vegetation / defects (rocking blocks), it should be swept clear of debris.

Surface Water Management During Construction

2.37. The surface water runoff generated during construction has the potential to have higher concentration of oils and sediments from heavy machinery and earthworks respectively. As such, it is necessary to devise appropriate surface water management plans tailored to specific construction activities and receptors of runoff. Specific considerations are:

- Provision of appropriate bunding/containment for potentially hazardous materials or chemicals.

- Re-fuelling of plant and equipment to take place only within designated areas, with suitable pollution containment.
- Good housekeeping on site to prevent accidental spillages, and spill kits to be provided as appropriate.
- Vehicle wash down areas / wheel cleaning to be located in areas with appropriate pollution control measures.
- If water/spray dust suppression is needed, the run-off should be directed to a temporary containment area and should not be allowed to discharge to the public sewer / infiltration devices.
- The installed surface water drainage network should be routinely inspected during construction, especially the infiltration devices; and,

Suitable protection measures should be in place during construction to protect the watercourse and groundwater resources.

3. Foul Water Drainage Strategy

Foul Drainage Hierarchy

3.1. Building Regulations Approved Document H and the Environment Agency's technical guidance establish a hierarchy for foul water disposal from new development;

- 1. Connection to the public sewer network;
- 2. Package treatment plant discharging to a watercourse or surface water body
- 3. Septic tank discharging to a drainage field or soakaway
- 4. Cesspool (storage only, no discharge — considered a last resort)

Public Sewer Connection

3.2. The site is located in a rural setting on Turner's Hill Road, Worth, and is not in proximity to the public sewer network. Southern Water's asset records confirm no public sewer is available within a reasonable distance of the site boundary. Connection to the public sewer is therefore not a feasible option and has been discounted at the top of the hierarchy.

Proposed Strategy — Package Treatment Plant

- 3.3. The proposed foul drainage strategy comprises a gravity foul drainage system conveying flows from the single dwelling to a package treatment plant (PTP) located on site. Treated effluent from the PTP will discharge to the existing on-site pond, which forms the ultimate receiving waterbody. This approach represents the second tier of the hierarchy and is considered the most appropriate solution given the site constraints.
- 3.4. The package treatment plant shall be designed and sized in accordance with the British Water Code of Practice for Flows and Loads (4th Edition) and BS EN 12566 and shall achieve a minimum secondary treatment standard prior to discharge.

Design Flow Estimation

- 3.5. For the purposes of establishing the design flow to the package treatment plant, the following calculations have been applied based on the British Water Code of Practice for Flows and Loads¹:
- Assumed occupancy: 5 persons (consistent with a single dwelling of this scale)
 - Design population equivalent: 6 PE (incorporating a standard allowance above calculated occupancy)
 - Per capita flow rate: 150 litres/person/day
 - Estimated average daily foul flow: $5 \times 150 = 750$ litres/day ($0.75\text{m}^3/\text{day}$)
 - Design flow to PTP (at 6 PE): $6 \times 150 = 900$ litres/day ($0.9\text{m}^3/\text{day}$)
- 3.6. Applying a peaking factor of 6:1 for a small residential population, the estimated peak flow rate is approximately 0.05 litres/second. A 100mm diameter foul drain laid at a minimum gradient of 1:40 provides a hydraulic capacity of approximately 4.1 litres/second, which is significantly in excess of the peak demand and confirms that 100mm pipework is appropriate throughout the foul system.
- 3.7. The estimated treated effluent discharge of $0.9\text{m}^3/\text{day}$ to the pond is a very low flow rate and represents a negligible input relative to the capacity of the receiving waterbody.

Regulatory Requirements

- 3.8. This foul discharge is subject to confirmation from the EA via an environmental permit.

¹ https://www.theseptic-tank-store.co.uk/wp-content/uploads/British_Water_flows_and_loads.pdf

4. Conclusions

- 4.1. Aegaea were commissioned by Tulleys Entertainment Group Ltd to undertake a Drainage Strategy to discharge Condition 3 (DM/23/0611) attached to the planning permission for this development.

Surface Water

- 4.2. The proposed surface water drainage strategy discharges directly to the existing on-site pond, which forms the ultimate receiving waterbody for all surface water drainage from the site. The existing surface water drainage channel crossing the site is formally terminated at the proposed driveway and conveyed via a new culvert discharging directly into the pond, ensuring a positive flow path to the receiving waterbody.
- 4.3. The topography therefore demonstrates that pre-development the site drains naturally toward the pond, and the proposed strategy does not alter this pre-existing flow regime.
- 4.4. The existing drainage channel on site appears to be man-made constructed for land drainage purposes. Notwithstanding this, the client should confirm with West Sussex Council and the LLFA whether an ordinary watercourse consent is required prior to commencement of these works.
- 4.5. On review of the SuDS drainage hierarchy, and with reference to both national and local policy, surface water generated from the proposed development could be managed on site via a geocellular storage tank and permeable paving.
- 4.6. Surface water will be restricted to a maximum of 0.7 l/s by an orifice at the tank outlet.

Foul Water

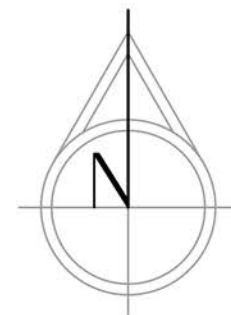
- 4.7. The proposed foul drainage strategy comprises a gravity foul drainage system conveying flows from the single dwelling to a PTP located on site. Treated effluent from the PTP will discharge to the existing on-site pond, which forms the ultimate receiving waterbody. This approach represents the second tier of the hierarchy and is considered the most appropriate solution given the site constraints.

Conclusion

- 4.8. This Drainage Strategy should be submitted as details to discharge Condition 3 (DM/23/0611) attached to the planning permission for this development.

Appendix A - Development Proposals

© This drawing, its contents, and all information contained therein is protected by copyright. It may be used once only for its intended purpose under a contract with T J Crump Oakwrights Ltd, but specifically not for any other use or purpose. This drawing is for Planning purposes and does not constitute a construction issue drawing. All setting out dimensions and levels are indicative and are subject to detailed site survey and site conditions. The Client and their agent are responsible for ensuring that Building Control and construction drawings are carried out. Do not scale from this drawing. All dimensions are to be checked on site.



PROPOSED SITE PLAN



T. J. CRUMP OAKWRIGHTS LTD
THE LAKES, SWAINSHILL,
HEREFORD, HR4 7PU
T: (01432) 353 353 E: enquiries@oakwrights.co.uk

OAKLAND VALE
BY DESIGN

Oakland Vale Ltd, Innovation Centre, Unit 65, Highfield Drive, Churchfields, St Leonards-on-Sea, East Sussex, TN38 9UH.
T: 01424 214411 E: info@oaklandvale.co.uk
W: www.oaklandvale.co.uk
Oakland Vale by design is a trading name of Oakland Vale Ltd.

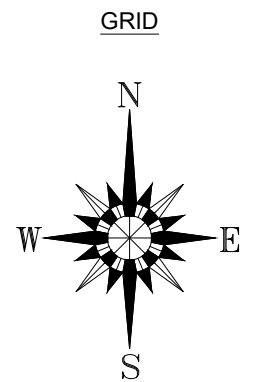
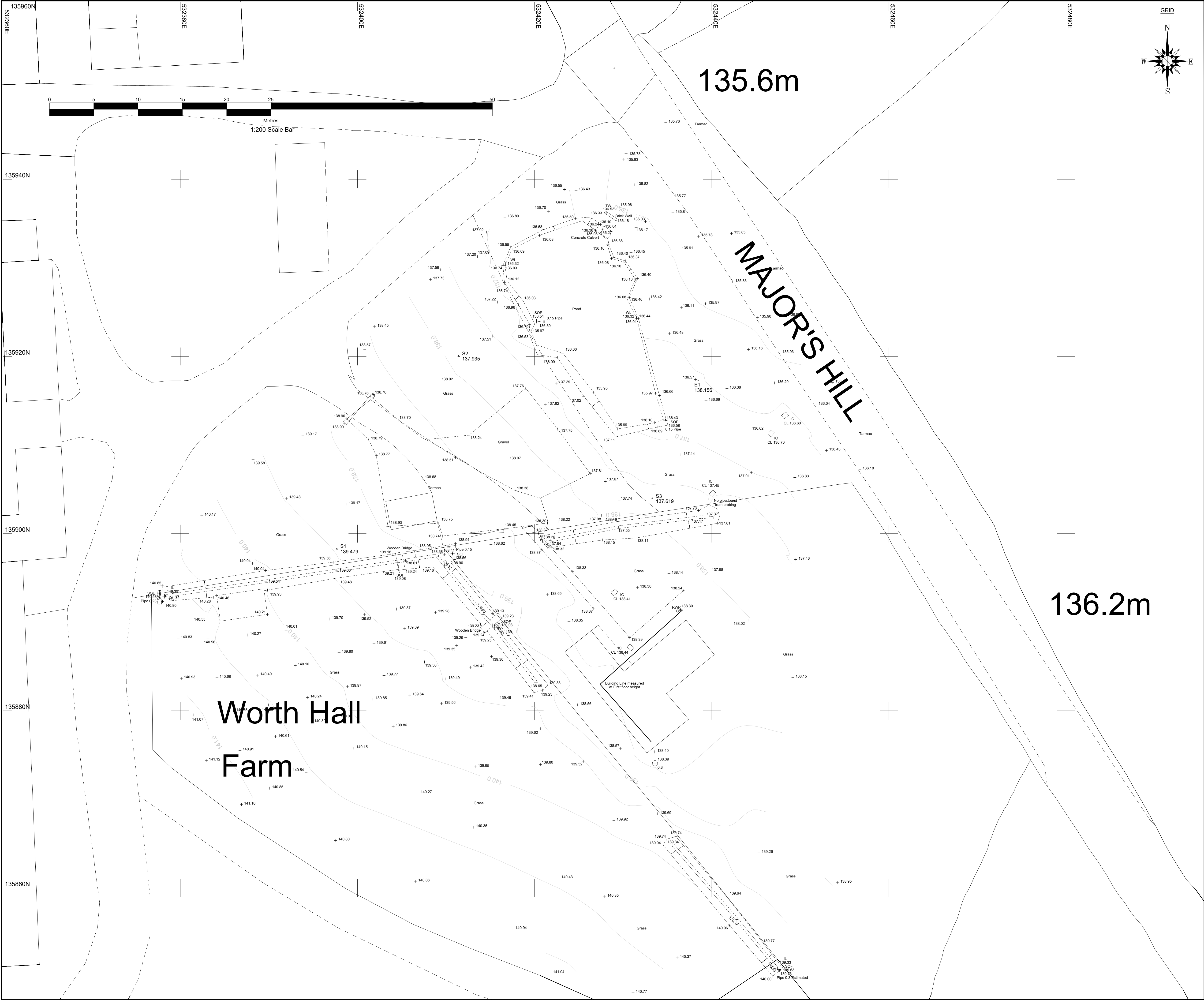
CLIENT/PROJECT
MR & MRS S. BEARE

SITE ADDRESS
NORTH HALL FARMHOUSE,
TURNERS HILL ROAD,
WORTH,
CRANLEY,
RH10 4PE

DATE
27/01/2023
DRAWN
DB
CHECKED

SCALE
1:200@A1
DRG. NO.
01/DB/SB/06
REV.
A

Appendix B - Topographical Survey



SHEET LAYOUT (where applicable)

LEGEND

BANKING: Top, Bottom

BUSHES & HEDGES: (Symbol)

TREES: (Symbol)

GATES: (Symbol)

WALL: (Symbol)

FENCES: (Symbol)

BUILDING: (Symbol)

OPEN SIDED BUILDING: (Symbol)

CONTOURS: (Symbol)

NOTE: SPREADS AND HEIGHTS ARE INDICATIVE ONLY

ABBREVIATIONS (WHERE APPLICABLE)

AHH	ARCH HEAD HEIGHT	FFL	FINISHED FLOOR LEVEL	RWP	RAIN WATER PIPE
AHL	ARCH HEAD LEVEL	FB	FLOWERBED	SV	SLUICE VALVE
ASH	ARCH SPRINGER HEIGHT	FH	FIRE HYDRANT	SC	STOP COCK
ASL	ARCH SPRINGER LEVEL	FL	FLOOR LEVEL	SOF	SOFFIT LEVEL
AV	AIR VALVE	FS	FLAG STAFF	SSL	STRUCTURAL SLAB LEVEL
B	BOLLARD	GP	GAS PIPE	ST	TREE STUMP
BB	BELUSHA BEACON	GV	GAS VALVE	SVP	SOIL AND VENT PIPE
BL	BED LEVEL	G	GULLY	THL	THRESHOLD LEVEL
BP	BRICK PIER	GS	GATE STOP	TP	TELEGRAPH POLE
BTB	BRITISH TELECOM BOX	IC	INSPECTION COVER	TCT	TELEPHONE CALL BOX
BTMH	BRITISH TELECOM MANHOLE	IL	INVERT LEVEL	TK	TOP OF KERB
BWVK	BRICKWORK	LP	LAMP POST	TS	TURNSTILE
BS	BUS STOP	MKR	MARKER	TL	TRAFFIC LIGHT
CATV	CABLE TV	MW	MONITORING WELL	TW	TOP OF WALL
CL	COVER LEVEL	NB	NOTICE BOARD	UTL	UNABLE TO LIFT
CM	CABLE MARKER	NP	NAME PLATE	UTS	UNABLE TO SURVEY
COL	COLUMN	OPW	OVERHEAD WIRES	VP	VENT PIPE
CP	CONCRETE POST	PM	PARKING METER	WM	WATER METER
EAV	EAVES LEVEL	RID	RIDGE LEVEL	WL	WATER LEVEL
ELEC	ELECTRICAL COVER	RL	ROOF LEVEL	WO	WASH OUT
ECB	ELECTRICITY CONTROL BOX	RS	ROAD SIGN	WP	WASTE PIPE
EP	ELECTRICITY POLE	RE	RODDING EYE	WT	WATER TANK
ER	EARTH ROD	RTW	RETAINING WALL	WV	WATER VALVE

FENCES

BWF	BARBED WIRE FENCE	IWF	INTERWOVEN FENCE	PIF	PICKET FENCE
CIF	CORRUGATED IRON FENCE	IRF	IRON RAILING FENCE	PRF	POST AND RAIL FENCE
CBF	CLOSE BOARD FENCE	LPF	LARCH LAP FENCE	PWF	POST AND WIRE FENCE
CLF	CHAIN LINK FENCE	MPF	METAL MAILING FENCE	SPF	SECURITY PALISADE FENCE
CPF	CHESTNUT PALING FENCE	PCF	POST AND CHAIN FENCE	TSRF	TUBULAR STEEL RAIL FENCE
FPO	FENCE POST				

Citation ISO Certification

Quality management | ISO 9001: 2015 | REGISTERED

Information security management | ISO 27001: 2022 | REGISTERED

Environmental management | ISO 14001: 2015 | REGISTERED

Occupational health and safety management | ISO 45001: 2018 | REGISTERED

RICS **THE SURVEY ASSOCIATION** **chartered**

REV.	NOTES	DWN	DATE
G	----	---	----
F	----	---	----
E	----	---	----
D	----	---	----
C	----	---	----
B	----	---	----
A	----	---	----

Notes: Grid and levels relate to OS GPS Active Network.
Sheet is North orientated unless stated.

MALTBY SURVEYS

MALTBY LAND SURVEYS LTD
2 QUEENS ROAD
HAYWARDS HEATH
WEST SUSSEX
RH16 1EB
Tel: 01444 416246
E-Mail: mls@maltbysurveys.com
WebSite: www.maltbysurveys.com

SURVEYED	EJ	SCALE
DRAWN	EJ	1/200 (A1 Sheet)
CHECKED	RAM	CLIENT
Tulley's Farm		
Tulley's Farm, Turner's Hill Road, Crawley, RH10 4PE		
TOPOGRAPHICAL SURVEY OF WORTH HALL FARMHOUSE		
Job No	Rev	Drawing Number
Tulleys/May26	-	Tulleys/May26-100-A
Date : May 2026		

Appendix C - Surface Water Drainage Strategy Layout

THE PROPOSED SURFACE WATER DRAINAGE OUTFALL DISCHARGES AT A RESTRICTED RATE OF 1.0l/s DIRECTLY INTO THE EXISTING POND AT INVERT LEVEL 136.55m AOD. THE OUTLET INVERT IS SET 230mm ABOVE THE RECORDED POND WATER LEVEL OF 136.32m AOD TO ENSURE FREE DISCHARGE UNDER NORMAL CONDITIONS. A FLAP VALVE SHALL BE FITTED AT THE OUTLET TO PREVENT BACKFLOW DURING HIGH WATER EVENTS.

THE EXISTING SURFACE WATER DRAINAGE CHANNEL CROSSING THE SITE IS FORMALLY TERMINATED AT THE PROPOSED BUILDING AND ALSO CONVEYED VIA CULVERT DISCHARGING DIRECTLY INTO THE POND. THE POND THEREFORE FORMS THE ULTIMATE RECEIVING WATERBODY FOR ALL SURFACE WATER DRAINAGE FROM THE SITE.

THE TOPOGRAPHIC SURVEY CONFIRMS THAT THE SITE NATURALLY DRAINS FROM SOUTH TO NORTH, FALLING APPROXIMATELY 4–5m FROM THE SOUTHERN BOUNDARY TO THE EXISTING POND AT THE NORTHERN EXTENT OF THE SITE. THE EXISTING SURFACE WATER DRAINAGE CHANNEL CROSSING THE SITE CONFIRMS THIS PRE-DEVELOPMENT FLOW PATH. THE PROPOSED DRAINAGE STRATEGY REPLICATES THIS EXISTING FLOW DIRECTION WHILST ATTENUATING AND RESTRICTING DISCHARGE TO 0.7l/s, WHICH REPRESENTS A REPLICATION OR BETTERMENT OF THE PRE-DEVELOPMENT DRAINAGE REGIME ON SITE.

THE EXISTING DRAINAGE CHANNEL APPEARS TO BE A MAN-MADE FEATURE CONSTRUCTED FOR LAND DRAINAGE PURPOSES. NOTWITHSTANDING THIS, THE APPLICANT SHALL CONFIRM WITH WEST SUSSEX COUNTY COUNCIL AS LEAD LOCAL FLOOD AUTHORITY WHETHER ORDINARY WATERCOURSE CONSENT IS REQUIRED PRIOR TO COMMENCEMENT OF THESE WORKS.

FOUL DRAINAGE FROM THE PROPOSED DWELLING SHALL BE CONVEYED VIA A GRAVITY FOUL DRAINAGE SYSTEM TO A PACKAGE TREATMENT PLANT LOCATED ON SITE.

THE PACKAGE TREATMENT PLANT SHALL BE SIZED FOR A MINIMUM OF 6 POPULATION EQUIVALENT (PE) IN ACCORDANCE WITH THE BRITISH WATER CODE OF PRACTICE FOR FLOWS AND LOADS AND MANUFACTURER'S RECOMMENDATIONS, AND SHALL COMPLY WITH BUILDING REGULATIONS PART H AND BS EN 12566.

TREATED EFFLUENT FROM THE PACKAGE TREATMENT PLANT SHALL DISCHARGE TO THE EXISTING ON-SITE POND.

THE PACKAGE TREATMENT PLANT MANUFACTURER SHALL CONFIRM THAT THE TREATED EFFLUENT QUALITY IS CAPABLE OF MEETING THE STANDARDS REQUIRED BY THE ENVIRONMENT AGENCY.

PROPOSED OUTFALL AT 0.7l/s DURING THE 1 IN 100 YEAR EVENT PLUS 40% CLIMATE CHANGE ALLOWANCE.

TOP OF BANK: 136.89m AOD
BASE OF BANK: 136.10m AOD
INVERT LEVEL OF PIPE: 136.55m AOD

THE PROPOSED OUTLET PIPE SHOULD BE FITTED WITH A FLAP VALVE TO PREVENT ANY BACKFLOW FROM THE POND. THE BANK FACE SHALL BE PROTECTED WITH 150-300mm GRADED STONE RIP-RAP (150–300mm GRADED STONE, 300mm MINIMUM DEPTH) EXTENDING 500mm EITHER SIDE OF THE PIPE, LAID OVER A NON-WOVEN GEOTEXTILE FILTER MEMBRANE PINNED TO THE BANK FACE.

PERMEABLE TARMAC CONSTRUCTION

EXCEEDANCE LEVEL: 139.0m AOD

PLAN AREA: 240m²
PAVING LAYER DEPTH: TBC BY MANUFACTURER.
SUBBASE DEPTH (CLEAN CRUSHED STONE): 300mm
TOTAL ATTENUATION PROVIDED: 21.786m³

150mm UNDER DRAIN FOR CONVEYANCE WITH A 35mm ORIFICE AT THE OUTLET DISCHARGING INTO IC4.

CULVERT TO CONVEY SURFACE WATER FROM THE EXISTING SURFACE WATER DRAINAGE CHANNEL BENEATH THE DRIVEWAY - THE CULVERT IS TO BE DESIGNED TO REPLICATE THE CAPACITY OF THE EXISTING DRAINAGE CHANNEL.

EXACT DIMENTIONS/ DIAMETER TO BE CONFIRMED PRIOR TO CONSTRUCTION.

CELLULAR STORAGE - AQUACELL OR SIMILAR CRATE STORAGE

EXCEEDANCE LEVEL: 138.69m AOD
INVERT LEVEL: 137.69m AOD
PLAN AREA: 116.64m²
ATTENUATION DEPTH: 0.4m
COVER DEPTH: 0.6m MINIMUM
TOTAL ATTENUATION PROVIDED: 44.923m³

25mm ORIFICE RESTRICTING FLOWS TO 0.7l/s DURING THE 1 IN 100 YEAR EVENT PLUS AN ALLOWANCE FOR CLIMATE CHANGE.

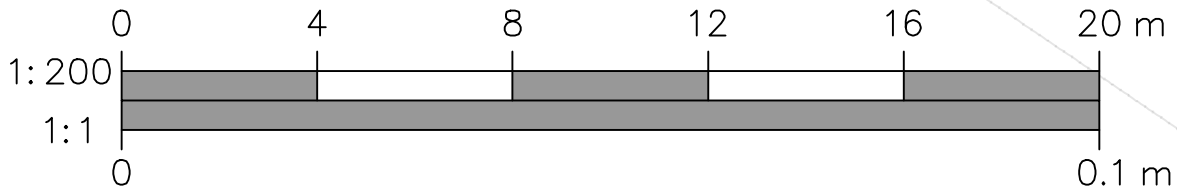
TANK SHOULD BE LINED AND WEIGHTED TO PREVENT THE INGRESS OF GROUNDWATER AND TO PREVENT THE TANK FROM BECOMING BUOYANT.

PERMEABLE PATIO

EXCEEDANCE LEVEL: 139.0m AOD

PLAN AREA: 250m²
PAVING LAYER DEPTH: TBC BY MANUFACTURER.
SUBBASE DEPTH (CLEAN CRUSHED STONE): 300mm
TOTAL ATTENUATION PROVIDED: 22.692m³

150mm UNDER DRAIN FOR CONVEYANCE WITH A 35mm ORIFICE AT THE OUTLET DISCHARGING INTO IC5.



discharging to existing
drainage ditch

Existing pond

turners hill road



DISCHARGE OF PLANNING CONDITION 3

LEGEND	
	SURFACE WATER DRAIN
	FOUL WATER DRAIN
	PROPOSED CULVERT
	GEOCELLULAR STORAGE
	PERMEABLE BLOCK PAVING
	PERMEABLE TARMAC
	CATCHMENT AREA
	RAINWATER DOWNPIPE
	INSPECTION CHAMBER
	PACKAGE TREATMENT PLANT
	EXCEEDANCE ARROW
	TERMINATED DRAINAGE CHANNEL

1.0	29/06/2026	FIRST ISSUE	JA		
Rev	Date	Description	By		
Client					
TULLEYS ENTERTAINMENT GROUP Ltd					
Project					
SURFACE AND FOUL WATER DRAINAGE LAYOUT					
Title					
WORTH HALL FARMHOUSE, TURNERS HILL ROAD, MID SUSSEX, RH10 4PE.					
Project No.	Drawing No.	Revision			
AEG10782	DR01	1.0			
Drawn	Checked	Approved	Date		
JA	JC	OH	29/06/2026		
Scale @ A1		SEE SCALE			
Drawing Status					
DISCHARGE OF PLANNING CONDITION 3					
					
water, civils and environment					

Appendix D - Construction Details

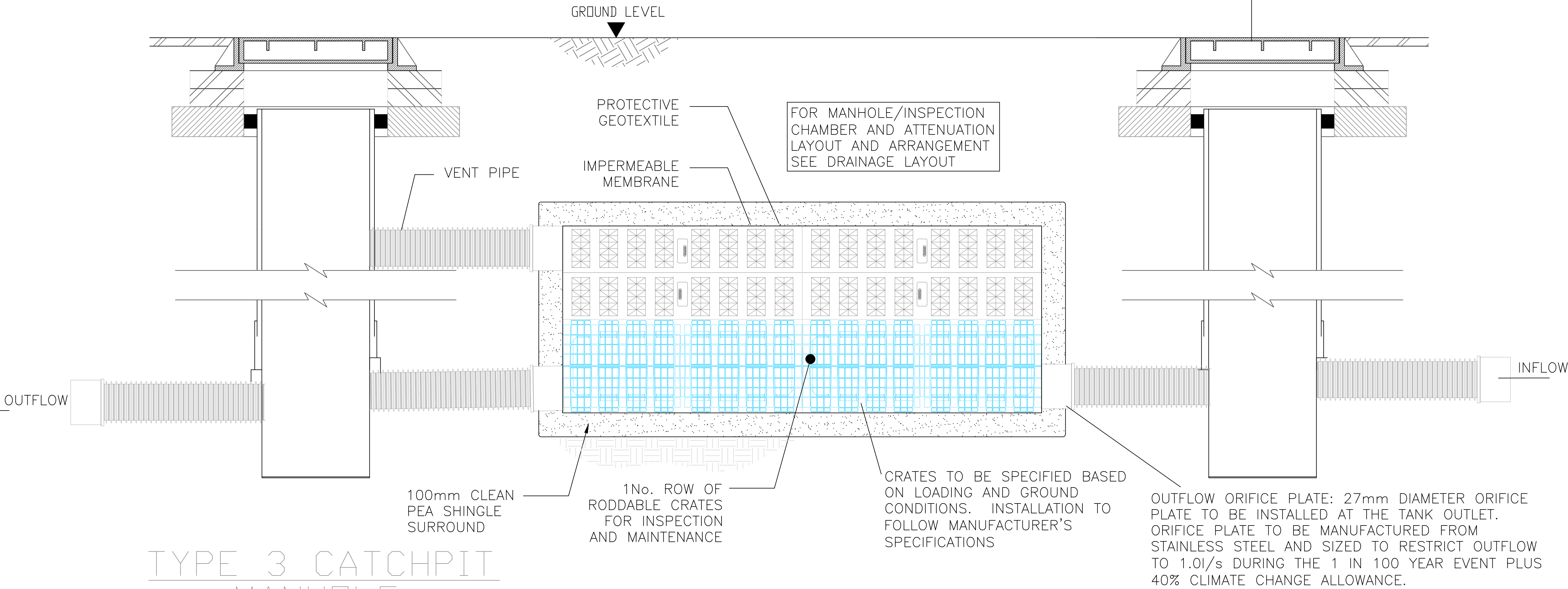


DO NOT SCALE THIS DRAWING. USE FIGURED DIMENSIONS ONLY.
THE CONTRACTOR MUST CHECK & VERIFY ALL DIMENSIONS ON SITE.
ANY DISCREPANCIES MUST BE REPORTED IMMEDIATELY TO THE ENGINEER
FOR CLARIFICATION BEFORE PROCEEDING.
THIS DRAWING IS COPYRIGHT AND OWNED BY AEGAEA.

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.

DRAFT

IN PEDESTRIAN AREAS, INSPECTION CHAMBER COVERS SHALL BE SPECIFIED TO A MINIMUM OF B125 LOADING IN ACCORDANCE WITH BS EN 124. ALL COVERS WITHIN OR ADJACENT TO VEHICULAR TRAFFICKING AREAS, INCLUDING DRIVEWAYS AND ACCESS ROUTES, SHALL BE SPECIFIED TO A MINIMUM OF D400 LOADING IN ACCORDANCE WITH BS EN 124. COVER LOADING CLASSIFICATION SHALL BE CONFIRMED BY THE CONTRACTOR ON SITE PRIOR TO INSTALLATION.

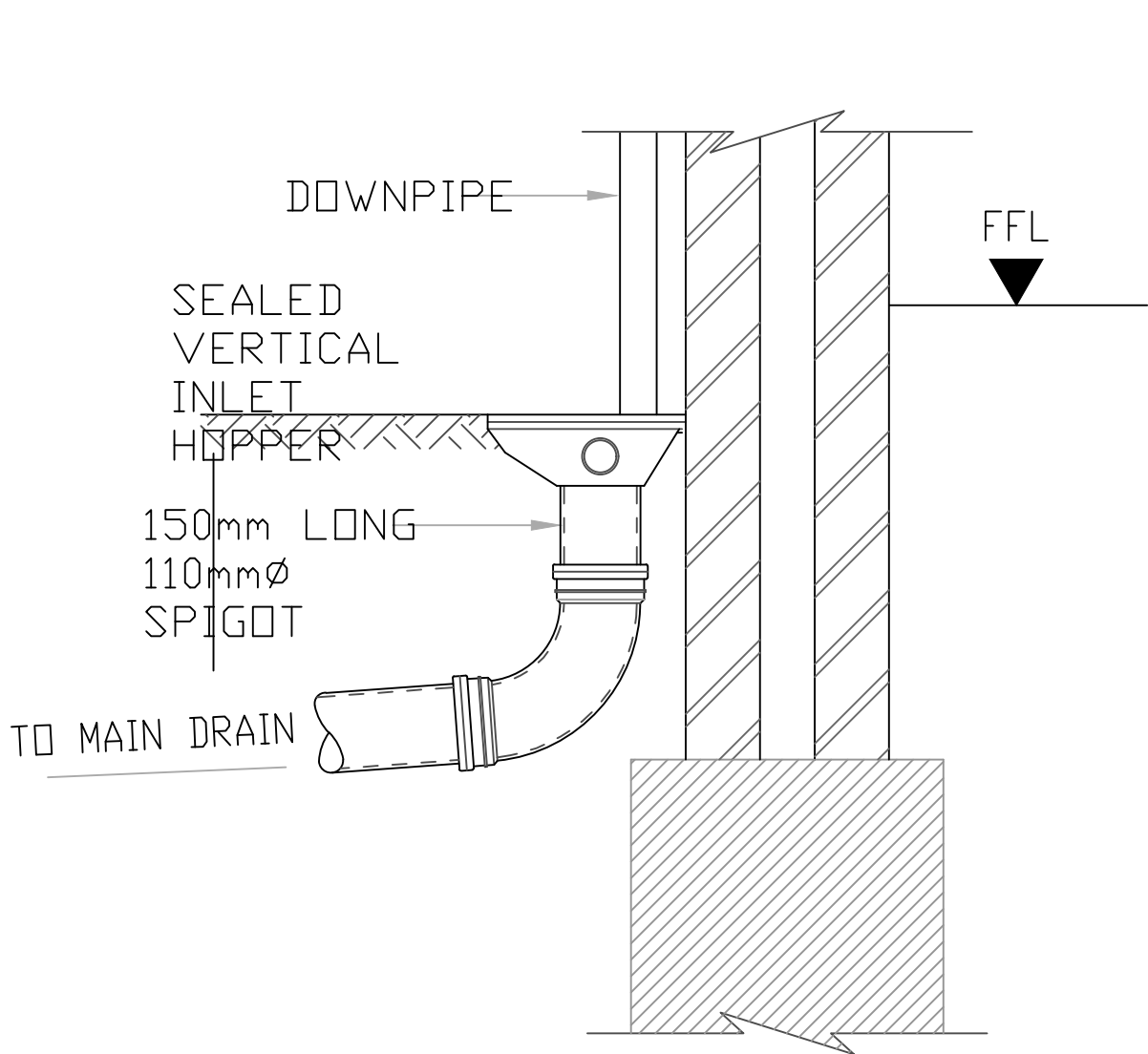


TYPE 3 CATCHPIT
MANHOLE.

(1:20)

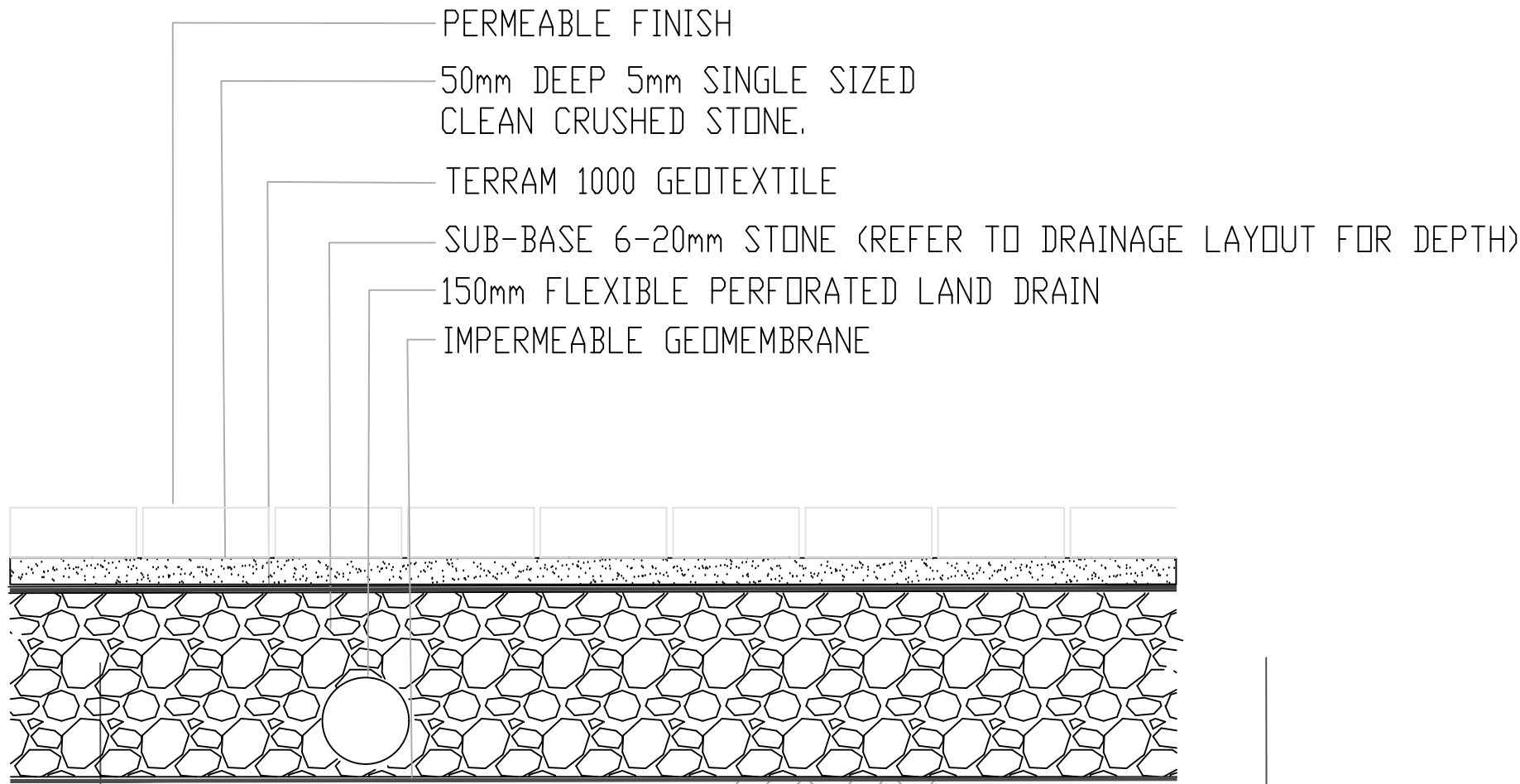
TYPICAL ATTENUATION TANK DETAILS

(ONLINE)
(1:20)



RWP
CONNECTION.

(1:20)



PERMEABLE
PAVING
(TYPE C)

1.0 26/06/2026 CONSTRUCTION DETAILS JA

Rev	Date	Description	By
-----	------	-------------	----

Client

TULLEYS ENTERTAINMENT GROUP Ltd

Project
WORTH HALL FARMHOUSE, TURNERS
HILL ROAD, MID SUSSEX, RH10 4PE.

Title
SURFACE WATER DRAINAGE
CONSTRUCTION DETAILS

Project No.	Drawing No.	Revision
AEG10782	DR02	1.0

Drawn	Checked	Approved	Date	Scale @ A1
JA	ML	OH	26/06/2026	-

Drawing Status
DISCHARGE OF CONDITION 3

aegaea
water, civils and environment

Appendix E - InfoDrainage Calculations

AEG10782_RH10_TurnersHill_06: Worth Hall Farmhouse (RH10 4PE) Tulleys Entertainment Group Ltd Surface Water Drainage Network		Date: 29/06/2026		 water, civils and environment	
Report Details: Type: Inflows Storm Phase: Phase		Designed by: JA	Checked by: ML		Approved By: OH
		Company Address: Aegaea			



Replacement Dwelling (1.01)

Type : Catchment Area

Area (ha)	0.012
-----------	-------

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100
Urban Creep (%)	10



Home Office

Type : Catchment Area

Area (ha)	0.008
-----------	-------

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100
Urban Creep (%)	10



Permeable Patio

Type : Catchment Area

Area (ha)	0.025
-----------	-------

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100
Urban Creep (%)	0

AEG10782_RH10_TurnersHill_06: Worth Hall Farmhouse (RH10 4PE) Tulleys Entertainment Group Ltd Surface Water Drainage Network		Date: 29/06/2026		 water, civils and environment	
Report Details: Type: Inflows Storm Phase: Phase		Designed by: JA	Checked by: ML		Approved By: OH
		Company Address: Aegaea			



Permeable Driveway

Type : Catchment Area

Area (ha)	0.024
-----------	-------

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100
Urban Creep (%)	0



Replacement Dwelling (1.0)

Type : Catchment Area

Area (ha)	0.012
-----------	-------

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100
Urban Creep (%)	10

AEG10782_RH10_TurnersHill_06:		Date:			
Worth Hall Farmhouse (RH10 4PE)		29/06/2026			
Tulleys Entertainment Group Ltd		Designed by:	Checked by:		
Surface Water Drainage Network		JA	ML	OH	
Report Details:		Company Address:			
Type: Junctions		Aegaea			
Storm Phase: Phase					

Name	Junction Type	Easting (m)	Northing (m)	Cover Level (m)	Depth (m)	Invert Level (m)	Chamber Shape	Diameter (m)
Pond Inlet	Manhole	532433.271	135912.328	136.890	0.340	136.550	Circular	1.200
IC1	Manhole	532432.013	135872.932	138.390	0.400	137.990	Circular	0.450
IC2	Manhole	532443.695	135884.068	138.390	0.490	137.900	Circular	0.450
IC3	Manhole	532436.348	135891.993	138.350	0.550	137.800	Circular	0.450
IC4	Manhole	532427.761	135890.560	138.370	0.640	137.730	Circular	0.600
IC5	Manhole	532423.322	135873.571	139.500	1.450	138.050	Circular	0.600
IC6	Manhole	532418.286	135869.491	140.000	2.000	138.000	Circular	0.450
IC7	Manhole	532413.505	135875.654	139.950	2.000	137.950	Circular	0.450
IC8	Manhole	532421.899	135882.899	139.330	1.480	137.850	Circular	0.450
IC9	Manhole	532422.620	135886.239	138.560	0.760	137.800	Circular	0.600
IC10	Manhole	532435.298	135899.211	138.000	0.750	137.250	Circular	0.450

Name	Lock
Pond Inlet	None
IC1	None
IC2	None
IC3	None
IC4	None
IC5	None
IC6	None
IC7	None
IC8	None
IC9	None
IC10	None

Inlets

Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
Pond Inlet	Inlet (1)	Pipe (8)	(None)	No Restriction
IC1	Inlet	Replacement Dwelling (1.01)	(None)	No Restriction
IC2	Inlet	1.000	(None)	No Restriction
IC3	Inlet	1.001	(None)	No Restriction
IC4	Inlet	Pipe (6)	(None)	No Restriction
	Inlet (1)	Pipe (4)	(None)	No Restriction
IC5	Inlet	Replacement Dwelling (1.0) Pipe (9)	(None)	No Restriction
IC6	Inlet (1)	Pipe	(None)	No Restriction
IC7	Inlet (1)	Pipe (1)	(None)	No Restriction
IC8	Inlet (1)	Pipe (2)	(None)	No Restriction
IC9	Inlet (2)	Pipe (3)	(None)	No Restriction
	Inlet (3)	Pipe (10)	(None)	No Restriction
IC10	Inlet	Pipe (7)	(None)	No Restriction

Outlets

Junction	Outlet Name	Outgoing Connection	Outlet Type
IC1	Outlet	1.000	Free Discharge
IC2	Outlet	1.001	Free Discharge
IC3	Outlet	Pipe (6)	Free Discharge
IC4	Outlet	Pipe (5)	Free Discharge
IC5	Outlet	Pipe	Free Discharge
IC6	Outlet	Pipe (1)	Free Discharge
IC7	Outlet	Pipe (2)	Free Discharge
IC8	Outlet	Pipe (3)	Free Discharge
IC9	Outlet	Pipe (4)	Free Discharge
IC10	Outlet	Pipe (8)	Free Discharge

AEG10782_RH10_TurnersHill_06: Worth Hall Farmhouse (RH10 4PE) Tulleys Entertainment Group Ltd Surface Water Drainage Network		Date: 29/06/2026		 water, civils and environment	
Report Details: Type: Stormwater Controls Storm Phase: Phase		Designed by: JA	Checked by: ML		Approved By: OH
		Company Address: Aegaea			



Porous Paving (Patio)

Type : Porous Paving

Dimensions

Exceedance Level (m)	139.900
Depth (m)	0.350
Base Level (m)	139.550
Paving Layer Depth (mm)	50
Membrane Percolation (m/hr)	3.0
Porosity (%)	30
Length (m)	15.810
Long. Slope (1:X)	2000.00
Width (m)	15.810
Total Volume (m³)	22.692

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	150
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Inlets

Inlet

Inlet Type	Lateral Inflow
Incoming Item(s)	Permeable Patio
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	Pipe (9)
Outlet Type	Orifice
Diameter (m)	0.035
Coefficient of Discharge	0.600
Invert Level (m)	139.550

Advanced

Conductivity (m/hr)	500.0
---------------------	-------

AEG10782_RH10_TurnersHill_06: Worth Hall Farmhouse (RH10 4PE) Tulleys Entertainment Group Ltd Surface Water Drainage Network		Date: 29/06/2026		 water, civils and environment	
Report Details: Type: Stormwater Controls Storm Phase: Phase		Designed by: JA	Checked by: ML		Approved By: OH
		Company Address: Aegaea			



Porous Paving (Driveway)

Type : Porous Paving

Dimensions

Exceedance Level (m)	139.000
Depth (m)	0.350
Base Level (m)	138.650
Paving Layer Depth (mm)	50
Membrane Percolation (m/hr)	3.0
Porosity (%)	30
Length (m)	15.490
Long. Slope (1:X)	2000.00
Width (m)	15.490
Total Volume (m³)	21.786

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	150
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Inlets

Inlet

Inlet Type	Lateral Inflow
Incoming Item(s)	Permeable Driveway
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	Pipe (10)
Outlet Type	Orifice
Diameter (m)	0.035
Coefficient of Discharge	0.600
Invert Level (m)	138.650

Advanced

Conductivity (m/hr)	500.0
---------------------	-------

AEG10782_RH10_TurnersHill_06: Worth Hall Farmhouse (RH10 4PE) Tulleys Entertainment Group Ltd Surface Water Drainage Network		Date: 29/06/2026		 water, civils and environment	
Report Details: Type: Stormwater Controls Storm Phase: Phase		Designed by: JA	Checked by: ML		Approved By: OH
		Company Address: Aegaea			



Cellular Storage

Type : Cellular Storage

Dimensions

Exceedance Level (m)	138.690
Depth (m)	0.400
Base Level (m)	137.690
Number of Crates Long	27
Number of Crates Wide	27
Number of Crates High	1
Porosity (%)	95
Crate Length (m)	0.4
Crate Width (m)	0.4
Crate Height (m)	0.4
Total Volume (m³)	44.923

Inlets

Inlet (4)

Inlet Type	Point Inflow
Incoming Item(s)	Home Office
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Pipe (5)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	Pipe (7)
Outlet Type	Orifice
Diameter (m)	0.025
Coefficient of Discharge	0.600
Invert Level (m)	137.690

AEG10782_RH10_TurnersHill_06:		Date:				
Worth Hall Farmhouse (RH10 4PE)		29/06/2026				
Tulleys Entertainment Group Ltd		Designed by:	Checked by:			Approved By:
Surface Water Drainage Network		JA	ML	OH		
Report Details:		Company Address:				
Type: Connections		Aegaea				
Storm Phase: Phase						

Name	Length (m)	Connection Type	Slope (1:X)	Manning's n	Colebrook-White Roughness (mm)	Diameter / Base Width (mm)	Upstream Cover Level (m)	Upstream Invert Level (m)
1.000	16.139	Pipe	179.326		0.6	150	138.390	137.990
1.001	10.806	Pipe	108.064		0.6	150	138.390	137.900
Pipe	6.481	Pipe	129.610		0.6	150	139.500	138.050
Pipe (1)	7.800	Pipe	156.008		0.6	150	140.000	138.000
Pipe (2)	11.089	Pipe	110.885		0.6	150	139.950	137.950
Pipe (3)	3.417	Pipe	68.339		0.6	150	139.330	137.850
Pipe (4)	6.716	Pipe	95.943		0.6	150	138.560	137.800
Pipe (5)	5.579	Pipe	139.475		0.6	150	138.370	137.730
Pipe (6)	8.706	Pipe	124.367		0.6	150	138.350	137.800
Pipe (7)	7.307	Pipe	16.607		0.6	100	138.690	137.690
Pipe (8)	13.274	Pipe	18.962		0.6	100	138.000	137.250
Pipe (9)	4.624	Pipe	3.083		0.6	100	139.908	139.550
Pipe (10)	7.624	Pipe	8.969		0.6	100	139.008	138.650

Name	Downstream Cover Level (m)	Downstream Invert Level (m)	Part Family	Lock	Flow Restriction (L/s)	Culvert Type	Culvert Entrance
1.000	138.390	137.900		None		(None)	(None)
1.001	138.350	137.800		None		(None)	(None)
Pipe	140.000	138.000		None		(None)	(None)
Pipe (1)	139.950	137.950		None		(None)	(None)
Pipe (2)	139.330	137.850		None		(None)	(None)
Pipe (3)	138.560	137.800		None		(None)	(None)
Pipe (4)	138.370	137.730		None		(None)	(None)
Pipe (5)	138.690	137.690		None		(None)	(None)
Pipe (6)	138.370	137.730		None		(None)	(None)
Pipe (7)	138.000	137.250		None	1.3	(None)	(None)
Pipe (8)	136.890	136.550		None		(None)	(None)
Pipe (9)	139.500	138.050		None	1.4	(None)	(None)
Pipe (10)	138.560	137.800		None	1.4	(None)	(None)

AEG10782_RH10_TurnersHill_06: Worth Hall Farmhouse (RH10 4PE) Tulleys Entertainment Group Ltd Surface Water Drainage Network		Date: 29/06/2026			
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: JA	Checked by: ML		Approved By: OH
		Company Address: Aegaea			

Name	Cover Level (m) Invert Level (m)		Connection Details				Type
Coordinates (m)	Depth (m)	Manhole Size (m)	Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
Pond Inlet	136.890 136.550	Diameter / Length: 1.200	{1} Pipe (8)	Pipe	136.550	Diam/Width:100	Manhole
E:532433.271	0.340						
N:135912.328							Not Applicable
IC1	138.390 137.990	Diameter / Length: 0.450					Manhole
E:532432.013	0.400						
N:135872.932			{a} 1.000	Pipe	137.990	Diam/Width:150	Not Applicable
IC2	138.390 137.900	Diameter / Length: 0.450	{1} 1.000	Pipe	137.900	Diam/Width:150	Manhole
E:532443.695	0.490						
N:135884.068			{a} 1.001	Pipe	137.900	Diam/Width:150	Not Applicable
IC3	138.350 137.800	Diameter / Length: 0.450	{1} 1.001	Pipe	137.800	Diam/Width:150	Manhole
E:532436.348	0.550						
N:135891.993			{a} Pipe (6)	Pipe	137.800	Diam/Width:150	Not Applicable
IC4	138.370 137.730	Diameter / Length: 0.600	{1} Pipe (6)	Pipe	137.730	Diam/Width:150	Manhole
E:532427.761	0.640		{2} Pipe (4)	Pipe	137.730	Diam/Width:150	
N:135890.560			{a} Pipe (5)	Pipe	137.730	Diam/Width:150	Not Applicable

AEG10782_RH10_TurnersHill_06: Worth Hall Farmhouse (RH10 4PE) Tulleys Entertainment Group Ltd Surface Water Drainage Network		Date: 29/06/2026			
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: JA	Checked by: ML		Approved By: OH
		Company Address: Aegaea			

Name	Cover Level (m) Invert Level (m)		Connection Details				Type
Coordinates (m)	Depth (m)	Manhole Size (m)	Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
IC5	139.500 138.050	Diameter / Length: 0.600	{1} Pipe (9)	Pipe	138.050	Diam/Width:100	Manhole
E:532423.322 N:135873.571	1.450		{a} Pipe	Pipe	138.050	Diam/Width:150	Not Applicable
IC6	140.000 138.000	Diameter / Length: 0.450	{1} Pipe	Pipe	138.000	Diam/Width:150	Manhole
E:532418.286 N:135869.491	2.000		{a} Pipe (1)	Pipe	138.000	Diam/Width:150	Not Applicable
IC7	139.950 137.950	Diameter / Length: 0.450	{1} Pipe (1)	Pipe	137.950	Diam/Width:150	Manhole
E:532413.505 N:135875.654	2.000		{a} Pipe (2)	Pipe	137.950	Diam/Width:150	Not Applicable
IC8	139.330 137.850	Diameter / Length: 0.450	{1} Pipe (2)	Pipe	137.850	Diam/Width:150	Manhole
E:532421.899 N:135882.899	1.480		{a} Pipe (3)	Pipe	137.850	Diam/Width:150	Not Applicable
IC9	138.560 137.800	Diameter / Length: 0.600	{1} Pipe (3)	Pipe	137.800	Diam/Width:150	Manhole
E:532422.620 N:135886.239	0.760		{2} Pipe (10)	Pipe	137.800	Diam/Width:100	
			{a} Pipe (4)	Pipe	137.800	Diam/Width:150	Not Applicable

AEG10782_RH10_TurnersHill_06: Worth Hall Farmhouse (RH10 4PE) Tulleys Entertainment Group Ltd Surface Water Drainage Network		Date: 29/06/2026			
		Designed by: JA	Checked by: ML		Approved By: OH
Report Details: Type: Manhole Schedule Storm Phase: Phase		Company Address: Aegaea			

Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
IC10	138.000 137.250	Diameter / Length: 0.450	{1} Pipe (7)	Pipe	137.250	Diam/Width:100	Manhole
E:532435.298 N:135899.211	0.750						
			{a} Pipe (8)	Pipe	137.250	Diam/Width:100	Not Applicable

AEG10782_RH10_TurnersHill_06: Worth Hall Farmhouse (RH10 4PE) Tulleys Entertainment Group Ltd Surface Water Drainage Network		Date: 29/06/2026		 water, civils and environment	
Report Details: Type: Inflow Summary Storm Phase: Phase		Designed by: JA	Checked by: ML		
		Company Address: Aegaea			

Inflow Label	Connected To	Flow (L/s)	Runoff Method	Area (ha)	Percentage Impervious (%)	Urban Creep (%)	Adjusted Percentage Impervious (%)	Area Analysed (ha)
Home Office	Cellular Storage		Time of Concentration	0.008	100	10	110	0.009
Permeable Driveway	Porous Paving (Driveway)		Time of Concentration	0.024	100	0	100	0.024
Permeable Patio	Porous Paving (Patio)		Time of Concentration	0.025	100	0	100	0.025
Replacement Dwelling (1.0)	IC5		Time of Concentration	0.012	100	10	110	0.013
Replacement Dwelling (1.01)	IC1		Time of Concentration	0.012	100	10	110	0.013
TOTAL		0.0		0.081				0.084

AEG10782_RH10_TurnersHill_06: Worth Hall Farmhouse (RH10 4PE) Tulleys Entertainment Group Ltd Surface Water Drainage Network		Date: 29/06/2026			
Report Details: Type: Network Design Criteria Storm Phase: Phase		Designed by: JA	Checked by: ML		Approved By: OH
		Company Address: Aegaea			

Flow Options

Peak Flow Calculation	(UK) Modified Rational Method
Min. Time of Entry (mins)	5
Max. Travel Time (mins)	30

Pipe Options

Lock Slope Options	None
Design Options	Minimise Excavation
Design Level	Level Soffits
Min. Cover Depth (m)	1.200
Min. Slope (1:X)	500.00
Max. Slope (1:X)	40.00
Min. Velocity (m/s)	1.0
Max. Velocity (m/s)	3.0
Use Flow Restriction	☐
Reduce Channel Depths	☐

Pipe Size Library

Default

Add. Increment (mm)	75
Max. Diameter (mm)	0

Diameter (mm)	Min. Slope (1:X)	Max. Slope (1:X)
100	0.00	0.00
150	0.00	0.00

AEG10782_RH10_TurnersHill_06: Worth Hall Farmhouse (RH10 4PE) Tulleys Entertainment Group Ltd Surface Water Drainage Network		Date: 29/06/2026			
Report Details: Type: Network Design Criteria Storm Phase: Phase		Designed by: JA	Checked by: ML		Approved By: OH
		Company Address: Aegaea			

Manhole Options

Apply Offset	☐
--------------	--------------------------

Manhole Size Library

Default

Diameter / Width

Connection (mm)	Diameter / Length (m)	Width (m)
0	1.200	0.000
375	1.350	0.000
500	1.500	0.000
750	1.800	0.000

Additional Sizing

Connection (mm)	900
Diameter / Length (m)	0.900
Width (m)	0.000

Depth

Depth (m)	Diameter / Length (m)	Width (m)
0.000	1.050	0.000
1.500	1.200	0.000

Access

Depth (m)	Ladder Protrusion (mm)
0.000	130
3.000	230

Benching Requirements

Landing Width (mm)	500
Benching Width (mm)	225

AEG10782_RH10_TurnersHill_06:		Date:	
Worth Hall Farmhouse (RH10 4PE)		29/06/2026	
Tulleys Entertainment Group Ltd		Designed by:	Checked by:
Surface Water Drainage Network		JA	ML
Report Title:		Approved By:	
Rainfall Analysis Criteria		OH	
		Company Address:	
		Aegaea	



Runoff Type	Dynamic
Output Interval (mins)	5
Time Step	Default
Urban Creep	Use Catchment Values
Junction Flood Risk Margin (mm)	300
Perform No Discharge Analysis	☐

Rainfall

FEH		Type: FEH
Site Location	GB 532438 135893 TQ 32438 35893	
Rainfall Version	2022	
Summer	☒	
Winter	☒	

Return Period

Return Period (years)	Increase Rainfall (%)
2.0	0.000
30.0	0.000
100.0	0.000
30.0	35.000
100.0	40.000

Storm Durations

Duration (mins)	Run Time (mins)
15	30
30	60
60	120
120	240
240	480
360	720
480	960
960	1920
1440	2880
2160	4320
2880	5760
4320	8640

AEG10782_RH10_TurnersHill_06: Worth Hall Farmhouse (RH10 4PE) Tulleys Entertainment Group Ltd Surface Water Drainage Network		Date: 29/06/2026			
Report Title: UK and Ireland Rural Runoff Calculator		Designed by: JA	Checked by: ML		Approved By: OH
		Company Address: Aegaea			

ICP SUDS / IH 124

Details

Method	ICP SUDS
Area (ha)	0.081
SAAR (mm)	879.0
Soil	0.47
Region	Region 6
Urban	0
Return Period (years)	0

Results

Region	QBAR Rural (L/s)	QBAR Urban (L/s)	Q 1 (years) (L/s)	Q 30 (years) (L/s)	Q 100 (years) (L/s)
Region 6	0.5	0.5	0.4	1.2	1.6

AEG10782_RH10_TurnersHill_06: Worth Hall Farmhouse (RH10 4PE) Tulleys Entertainment Group Ltd Surface Water Drainage Network		Date: 29/06/2026		 water, civils and environment	
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: JA	Checked by: ML		Approved By: OH
		Company Address: Aegaea			



FEH: 2 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Depth

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
Pond Inlet	FEH: 2 years: +0 %: 1440 mins: Summer	136.8 90	136.5 50	136.56 1	0.011	0.4	0.000	0.000	0.4	35.883	OK
IC1	FEH: 2 years: +0 %: 15 mins: Summer	138.3 90	137.9 90	138.03 8	0.048	2.8	0.008	0.000	2.7	1.205	OK
IC2	FEH: 2 years: +0 %: 15 mins: Summer	138.3 90	137.9 00	137.94 1	0.041	2.7	0.007	0.000	2.6	1.201	OK
IC3	FEH: 2 years: +0 %: 15 mins: Summer	138.3 50	137.8 00	137.84 0	0.040	2.6	0.006	0.000	2.5	1.198	OK
IC4	FEH: 2 years: +0 %: 1440 mins: Summer	138.3 70	137.7 30	137.79 8	0.068	0.8	0.019	0.000	0.8	33.095	OK
IC5	FEH: 2 years: +0 %: 15 mins: Summer	139.5 00	138.0 50	138.09 5	0.045	2.8	0.013	0.000	2.7	1.272	OK
IC6	FEH: 2 years: +0 %: 15 mins: Summer	140.0 00	138.0 00	138.04 6	0.046	2.7	0.007	0.000	2.6	1.262	OK
IC7	FEH: 2 years: +0 %: 15 mins: Summer	139.9 50	137.9 50	137.99 1	0.041	2.6	0.007	0.000	2.5	1.253	OK
IC8	FEH: 2 years: +0 %: 15 mins: Summer	139.3 30	137.8 50	137.88 7	0.037	2.5	0.006	0.000	2.5	1.245	OK
IC9	FEH: 2 years: +0 %: 15 mins: Summer	138.5 60	137.8 00	137.83 7	0.037	2.5	0.010	0.000	2.4	1.307	OK
IC10	FEH: 2 years: +0 %: 1440 mins: Summer	138.0 00	137.2 50	137.26 2	0.012	0.4	0.002	0.000	0.4	35.883	OK

AEG10782_RH10_TurnersHill_06: Worth Hall Farmhouse (RH10 4PE) Tulleys Entertainment Group Ltd Surface Water Drainage Network		Date: 29/06/2026		
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: JA	Checked by: ML	Approved By: OH
		Company Address: Aegaea		
		 water, civils and environment		



FEH: 30 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Depth

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
Pond Inlet	FEH: 30 years: +0 %: 1440 mins: Summer	136.8 90	136.5 50	136.56 3	0.013	0.5	0.000	0.000	0.5	60.181	OK
IC1	FEH: 30 years: +0 %: 15 mins: Summer	138.3 90	137.9 90	138.06 4	0.074	6.2	0.012	0.000	6.0	2.683	OK
IC2	FEH: 30 years: +0 %: 15 mins: Summer	138.3 90	137.9 00	137.96 4	0.064	6.0	0.010	0.000	5.8	2.679	OK
IC3	FEH: 30 years: +0 %: 1440 mins: Summer	138.3 50	137.8 00	137.88 4	0.084	0.5	0.013	0.000	0.5	10.180	OK
IC4	FEH: 30 years: +0 %: 1440 mins: Summer	138.3 70	137.7 30	137.88 4	0.154	1.3	0.044	0.000	1.3	56.836	Surcharged
IC5	FEH: 30 years: +0 %: 15 mins: Summer	139.5 00	138.0 50	138.12 2	0.072	6.2	0.020	0.000	6.1	2.831	OK
IC6	FEH: 30 years: +0 %: 15 mins: Summer	140.0 00	138.0 00	138.07 2	0.072	6.1	0.011	0.000	6.0	2.817	OK
IC7	FEH: 30 years: +0 %: 15 mins: Summer	139.9 50	137.9 50	138.01 4	0.064	6.0	0.010	0.000	5.8	2.805	OK
IC8	FEH: 30 years: +0 %: 15 mins: Summer	139.3 30	137.8 50	137.91 0	0.060	5.8	0.010	0.000	5.7	2.793	OK
IC9	FEH: 30 years: +0 %: 1440 mins: Summer	138.5 60	137.8 00	137.88 4	0.084	0.8	0.024	0.000	0.8	46.664	OK
IC10	FEH: 30 years: +0 %: 1440 mins: Summer	138.0 00	137.2 50	137.26 4	0.014	0.5	0.002	0.000	0.5	60.181	OK

AEG10782_RH10_TurnersHill_06: Worth Hall Farmhouse (RH10 4PE) Tulleys Entertainment Group Ltd Surface Water Drainage Network	Date: 29/06/2026		
	Designed by: JA	Checked by: ML	Approved By: OH
Report Details: Type: Junctions Summary Storm Phase: Phase	Company Address: Aegaea		



FEH: 100 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Depth

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
Pond Inlet	FEH: 100 years: +0 %: 2160 mins: Summer	136.890	136.550	136.564	0.014	0.6	0.000	0.000	0.6	92.420	OK
IC1	FEH: 100 years: +0 %: 15 mins: Summer	138.390	137.990	138.076	0.086	7.8	0.014	0.000	7.6	3.393	OK
IC2	FEH: 100 years: +0 %: 15 mins: Summer	138.390	137.900	137.974	0.074	7.6	0.012	0.000	7.3	3.389	OK
IC3	FEH: 100 years: +0 %: 2160 mins: Summer	138.350	137.800	137.950	0.150	0.5	0.024	0.000	0.4	14.744	OK
IC4	FEH: 100 years: +0 %: 2160 mins: Summer	138.370	137.730	137.950	0.220	1.3	0.062	0.000	1.3	83.821	Surcharged
IC5	FEH: 100 years: +0 %: 15 mins: Summer	139.500	138.050	138.134	0.084	7.9	0.024	0.000	7.7	3.568	OK
IC6	FEH: 100 years: +0 %: 15 mins: Summer	140.000	138.000	138.083	0.083	7.7	0.013	0.000	7.6	3.554	OK
IC7	FEH: 100 years: +0 %: 15 mins: Summer	139.950	137.950	138.024	0.074	7.6	0.012	0.000	7.4	3.540	OK
IC8	FEH: 100 years: +0 %: 2160 mins: Summer	139.330	137.850	137.950	0.100	0.7	0.016	0.000	0.7	42.489	OK
IC9	FEH: 100 years: +0 %: 2160 mins: Summer	138.560	137.800	137.950	0.150	0.9	0.042	0.000	0.8	69.084	OK
IC10	FEH: 100 years: +0 %: 2160 mins: Summer	138.000	137.250	137.265	0.015	0.6	0.002	0.000	0.6	92.420	OK

AEG10782_RH10_TurnersHill_06: Worth Hall Farmhouse (RH10 4PE) Tulleys Entertainment Group Ltd Surface Water Drainage Network		Date: 29/06/2026		
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: JA	Checked by: ML	Approved By: OH
		Company Address: Aegaea		
		 water, civils and environment		



FEH: 30 years: Increase Rainfall (%): +35: Critical Storm Per Item: Rank By: Max. Depth

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
Pond Inlet	FEH: 30 years: +35 %: 2160 mins: Summer	136.8 90	136.5 50	136.56 4	0.014	0.6	0.000	0.000	0.6	95.705	OK
IC1	FEH: 30 years: +35 %: 15 mins: Summer	138.3 90	137.9 90	138.07 9	0.089	8.3	0.014	0.000	8.1	3.618	OK
IC2	FEH: 30 years: +35 %: 15 mins: Summer	138.3 90	137.9 00	137.97 7	0.077	8.1	0.012	0.000	7.8	3.614	OK
IC3	FEH: 30 years: +35 %: 2160 mins: Summer	138.3 50	137.8 00	137.96 1	0.161	0.5	0.026	0.000	0.4	15.284	Surcharged
IC4	FEH: 30 years: +35 %: 2160 mins: Summer	138.3 70	137.7 30	137.96 1	0.231	1.3	0.065	0.000	1.3	86.762	Surcharged
IC5	FEH: 30 years: +35 %: 15 mins: Summer	139.5 00	138.0 50	138.13 8	0.088	8.4	0.025	0.000	8.2	3.801	OK
IC6	FEH: 30 years: +35 %: 15 mins: Summer	140.0 00	138.0 00	138.08 7	0.087	8.2	0.014	0.000	8.1	3.786	OK
IC7	FEH: 30 years: +35 %: 15 mins: Summer	139.9 50	137.9 50	138.02 7	0.077	8.1	0.012	0.000	7.8	3.773	OK
IC8	FEH: 30 years: +35 %: 2160 mins: Summer	139.3 30	137.8 50	137.96 1	0.111	0.7	0.018	0.000	0.7	43.925	OK
IC9	FEH: 30 years: +35 %: 2160 mins: Summer	138.5 60	137.8 00	137.96 1	0.161	0.9	0.046	0.000	0.9	71.485	Surcharged
IC10	FEH: 30 years: +35 %: 2160 mins: Summer	138.0 00	137.2 50	137.26 5	0.015	0.6	0.002	0.000	0.6	95.705	OK

AEG10782_RH10_TurnersHill_06: Worth Hall Farmhouse (RH10 4PE) Tulleys Entertainment Group Ltd Surface Water Drainage Network		Date: 29/06/2026		
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: JA	Checked by: ML	Approved By: OH
		Company Address: Aegaea		
		 water, civils and environment		



FEH: 100 years: Increase Rainfall (%): +40: Critical Storm Per Item: Rank By: Max. Depth

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
Pond Inlet	FEH: 100 years: +40 %: 2880 mins: Summer	136.8 90	136.5 50	136.56 6	0.016	0.7	0.000	0.000	0.7	141.763	OK
IC1	FEH: 100 years: +40 %: 15 mins: Summer	138.3 90	137.9 90	138.09 9	0.109	10.9	0.017	0.000	10.6	4.751	Flood Risk
IC2	FEH: 100 years: +40 %: 2880 mins: Summer	138.3 90	137.9 00	138.06 7	0.167	0.5	0.027	0.000	0.5	22.400	Surcharged
IC3	FEH: 100 years: +40 %: 2880 mins: Summer	138.3 50	137.8 00	138.06 7	0.267	0.5	0.042	0.000	0.5	22.397	Flood Risk
IC4	FEH: 100 years: +40 %: 2880 mins: Summer	138.3 70	137.7 30	138.06 7	0.337	1.5	0.095	0.000	1.4	127.560	Surcharged
IC5	FEH: 100 years: +40 %: 15 mins: Summer	139.5 00	138.0 50	138.15 7	0.107	11.1	0.030	0.000	10.8	4.971	OK
IC6	FEH: 100 years: +40 %: 15 mins: Summer	140.0 00	138.0 00	138.10 5	0.105	10.8	0.017	0.000	10.5	4.955	OK
IC7	FEH: 100 years: +40 %: 2880 mins: Summer	139.9 50	137.9 50	138.06 7	0.117	0.8	0.019	0.000	0.8	64.637	OK
IC8	FEH: 100 years: +40 %: 2880 mins: Summer	139.3 30	137.8 50	138.06 7	0.217	0.8	0.035	0.000	0.7	64.635	Surcharged
IC9	FEH: 100 years: +40 %: 2880 mins: Summer	138.5 60	137.8 00	138.06 7	0.267	1.0	0.076	0.000	1.0	105.169	Surcharged
IC10	FEH: 100 years: +40 %: 2880 mins: Summer	138.0 00	137.2 50	137.26 6	0.016	0.7	0.003	0.000	0.7	141.763	OK

AEG10782_RH10_TurnersHill_06: Worth Hall Farmhouse (RH10 4PE) Tulleys Entertainment Group Ltd Surface Water Drainage Network		Date: 29/06/2026		 water, civils and environment	
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Designed by: JA	Checked by: ML		
		Company Address: Aegaea			



FEH: 2 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Resident Volume

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Lost Volume (m³)	Total Discharge Volume (m³)	Percentage Available (%)	Status
Porous Paving (Patio)	FEH: 2 years: +0 %: 960 mins: Summer	139.637	139.637	0.079	0.087	0.7	6.198	0.000	0.2	0.000	9.184	72.686	OK
Porous Paving (Driveway)	FEH: 2 years: +0 %: 960 mins: Summer	138.735	138.735	0.077	0.085	0.7	5.863	0.000	0.2	0.000	8.879	73.090	OK
Cellular Storage	FEH: 2 years: +0 %: 1440 mins: Summer	137.798	137.798	0.108	0.108	1.0	12.000	0.000	0.4	0.000	35.892	73.287	OK

AEG10782_RH10_TurnersHill_06: Worth Hall Farmhouse (RH10 4PE) Tulleys Entertainment Group Ltd Surface Water Drainage Network		Date: 29/06/2026		 water, civils and environment	
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Designed by: JA	Checked by: ML		
		Company Address: Aegaea			



FEH: 30 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Resident Volume

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Lost Volume (m³)	Total Discharge Volume (m³)	Percentage Available (%)	Status
Porous Paving (Patio)	FEH: 30 years: +0 %: 960 mins: Summer	139.704	139.704	0.146	0.154	1.2	11.242	0.000	0.2	0.000	15.414	50.459	OK
Porous Paving (Driveway)	FEH: 30 years: +0 %: 960 mins: Summer	138.802	138.802	0.144	0.152	1.1	10.665	0.000	0.2	0.000	15.005	51.047	OK
Cellular Storage	FEH: 30 years: +0 %: 1440 mins: Summer	137.884	137.884	0.194	0.194	1.6	21.507	0.000	0.5	0.000	60.200	52.125	OK

AEG10782_RH10_TurnersHill_06: Worth Hall Farmhouse (RH10 4PE) Tulleys Entertainment Group Ltd Surface Water Drainage Network		Date: 29/06/2026		 water, civils and environment	
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Designed by: JA	Checked by: ML		
		Company Address: Aegaea			



FEH: 100 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Resident Volume

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Lost Volume (m³)	Total Discharge Volume (m³)	Percentage Available (%)	Status
Porous Paving (Patio)	FEH: 100 years: +0 %: 1440 mins: Summer	139.749	139.749	0.192	0.199	1.1	14.662	0.000	0.3	0.000	23.826	35.388	OK
Porous Paving (Driveway)	FEH: 100 years: +0 %: 960 mins: Summer	138.847	138.847	0.189	0.197	1.4	13.901	0.000	0.3	0.000	18.436	36.193	OK
Cellular Storage	FEH: 100 years: +0 %: 2160 mins: Summer	137.950	137.950	0.260	0.260	1.6	28.778	0.000	0.6	0.000	92.430	35.940	OK

AEG10782_RH10_TurnersHill_06: Worth Hall Farmhouse (RH10 4PE) Tulleys Entertainment Group Ltd Surface Water Drainage Network				Date: 29/06/2026		
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase				Designed by: JA	Checked by: ML	Approved By: OH
				Company Address: Aegaea		
				 water, civils and environment		



FEH: 30 years: Increase Rainfall (%): +35: Critical Storm Per Item: Rank By: Max. Resident Volume

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Lost Volume (m³)	Total Discharge Volume (m³)	Percentage Available (%)	Status
Porous Paving (Patio)	FEH: 30 years: +35 %: 960 mins: Summer	139.762	139.763	0.205	0.213	1.6	15.637	0.000	0.3	0.000	19.742	31.087	OK
Porous Paving (Driveway)	FEH: 30 years: +35 %: 960 mins: Summer	138.860	138.860	0.202	0.210	1.5	14.853	0.000	0.3	0.000	19.347	31.825	OK
Cellular Storage	FEH: 30 years: +35 %: 2160 mins: Summer	137.961	137.961	0.271	0.271	1.6	30.015	0.000	0.6	0.000	95.715	33.185	OK

AEG10782_RH10_TurnersHill_06: Worth Hall Farmhouse (RH10 4PE) Tulleys Entertainment Group Ltd Surface Water Drainage Network		Date: 29/06/2026		 water, civils and environment	
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Designed by: JA	Checked by: ML		
		Company Address: Aegaea			



FEH: 100 years: Increase Rainfall (%): +40: Critical Storm Per Item: Rank By: Max. Resident Volume

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Lost Volume (m³)	Total Discharge Volume (m³)	Percentage Available (%)	Status
Porous Paving (Patio)	FEH: 100 years: +40 %: 1440 mins: Summer	139.840	139.840	0.282	0.290	1.6	21.430	0.000	0.3	0.000	32.431	5.562	OK
Porous Paving (Driveway)	FEH: 100 years: +40 %: 1440 mins: Summer	138.936	138.936	0.278	0.286	1.5	20.296	0.000	0.3	0.000	31.529	6.839	OK
Cellular Storage	FEH: 100 years: +40 %: 2880 mins: Summer	138.067	138.067	0.377	0.377	1.8	41.760	0.000	0.7	0.000	141.768	7.040	OK

AEG10782_RH10_TurnersHill_06: Worth Hall Farmhouse (RH10 4PE) Tulleys Entertainment Group Ltd Surface Water Drainage Network		Date: 29/06/2026		 water, civils and environment	
Report Details: Type: Connections Summary Storm Phase: Phase		Designed by: JA	Checked by: ML		Approved By: OH
		Company Address: Aegaea			



FEH: 2 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Flow

Connection	Storm Event	Connection Type	From	To	Upstream Cover Level (m)	Max. US Water Level (m)	Max. Flow Depth (m)	Discharge Volume (m³)	Max. Velocity (m/s)	Flow / Capacity	Max. Flow (L/s)	Status
1.000	FEH: 2 years: +0 %: 15 mins: Summer	Pipe	IC1	IC2	138.390	138.038	0.044	1.205	0.6	0.2	2.7	OK
1.001	FEH: 2 years: +0 %: 15 mins: Summer	Pipe	IC2	IC3	138.390	137.941	0.040	1.201	0.7	0.15	2.6	OK
Pipe	FEH: 2 years: +0 %: 15 mins: Summer	Pipe	IC5	IC6	139.500	138.095	0.046	1.272	0.6	0.17	2.7	OK
Pipe (1)	FEH: 2 years: +0 %: 15 mins: Summer	Pipe	IC6	IC7	140.000	138.046	0.043	1.262	0.6	0.19	2.6	OK
Pipe (2)	FEH: 2 years: +0 %: 15 mins: Summer	Pipe	IC7	IC8	139.950	137.991	0.039	1.253	0.7	0.15	2.5	OK
Pipe (3)	FEH: 2 years: +0 %: 15 mins: Summer	Pipe	IC8	IC9	139.330	137.887	0.037	1.245	0.7	0.11	2.5	OK
Pipe (4)	FEH: 2 years: +0 %: 15 mins: Summer	Pipe	IC9	IC4	138.560	137.837	0.048	1.307	0.5	0.13	2.4	OK
Pipe (5)	FEH: 2 years: +0 %: 15 mins: Summer	Pipe	IC4	Cellular Storage	138.370	137.789	0.035	2.492	1.5	0.31	4.7	OK
Pipe (6)	FEH: 2 years: +0 %: 15 mins: Summer	Pipe	IC3	IC4	138.350	137.840	0.050	1.198	0.5	0.16	2.5	OK
Pipe (7)	FEH: 2 years: +0 %: 1440 mins: Summer	Pipe	Cellular Storage	IC10	138.690	137.798	0.011	35.888	0.8	0.03	0.4	Surcharged
Pipe (8)	FEH: 2 years: +0 %: 1440 mins: Summer	Pipe	IC10	Pond Inlet	138.000	137.262	0.011	35.883	0.8	0.03	0.4	OK
Pipe (9)	FEH: 2 years: +0 %: 960 mins: Summer	Pipe	Porous Paving (Patio)	IC5	139.908	139.633	0.011	9.182	0.5	0	0.2	OK
Pipe (10)	FEH: 2 years: +0 %: 960 mins: Summer	Pipe	Porous Paving (Driveway)	IC9	139.008	138.731	0.012	8.876	0.4	0.01	0.2	OK

AEG10782_RH10_TurnersHill_06:		Date:		
Worth Hall Farmhouse (RH10 4PE)		29/06/2026		
Tulleys Entertainment Group Ltd		Designed by:	Checked by:	Approved By:
Surface Water Drainage Network		JA	ML	OH
Report Details:		Company Address:		
Type: Connections Summary		Aegaea		
Storm Phase: Phase				



aegaea
water, civils and environment



FEH: 30 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Flow

Connection	Storm Event	Connection Type	From	To	Upstream Cover Level (m)	Max. US Water Level (m)	Max. Flow Depth (m)	Discharge Volume (m³)	Max. Velocity (m/s)	Flow / Capacity	Max. Flow (L/s)	Status
1.000	FEH: 30 years: +0 %: 15 mins: Summer	Pipe	IC1	IC2	138.390	138.064	0.069	2.683	0.8	0.46	6.0	OK
1.001	FEH: 30 years: +0 %: 15 mins: Summer	Pipe	IC2	IC3	138.390	137.964	0.064	2.679	0.8	0.34	5.8	OK
Pipe	FEH: 30 years: +0 %: 15 mins: Summer	Pipe	IC5	IC6	139.500	138.122	0.072	2.831	0.7	0.39	6.1	OK
Pipe (1)	FEH: 30 years: +0 %: 15 mins: Summer	Pipe	IC6	IC7	140.000	138.072	0.068	2.817	0.8	0.42	6.0	OK
Pipe (2)	FEH: 30 years: +0 %: 15 mins: Summer	Pipe	IC7	IC8	139.950	138.014	0.062	2.805	0.8	0.34	5.8	OK
Pipe (3)	FEH: 30 years: +0 %: 15 mins: Summer	Pipe	IC8	IC9	139.330	137.910	0.061	2.793	0.8	0.26	5.7	OK
Pipe (4)	FEH: 30 years: +0 %: 15 mins: Summer	Pipe	IC9	IC4	138.560	137.861	0.077	2.934	0.6	0.31	5.5	OK
Pipe (5)	FEH: 30 years: +0 %: 15 mins: Summer	Pipe	IC4	Cellular Storage	138.370	137.824	0.059	5.580	1.7	0.72	10.8	OK
Pipe (6)	FEH: 30 years: +0 %: 15 mins: Summer	Pipe	IC3	IC4	138.350	137.865	0.079	2.675	0.6	0.35	5.6	OK
Pipe (7)	FEH: 30 years: +0 %: 1440 mins: Summer	Pipe	Cellular Storage	IC10	138.690	137.884	0.013	60.191	0.9	0.04	0.5	Surcharged
Pipe (8)	FEH: 30 years: +0 %: 1440 mins: Summer	Pipe	IC10	Pond Inlet	138.000	137.264	0.013	60.181	0.8	0.04	0.5	OK
Pipe (9)	FEH: 30 years: +0 %: 960 mins: Summer	Pipe	Porous Paving (Patio)	IC5	139.908	139.700	0.014	15.410	0.6	0.01	0.2	Surcharged
Pipe (10)	FEH: 30 years: +0 %: 960 mins: Summer	Pipe	Porous Paving (Driveway)	IC9	139.008	138.798	0.044	15.000	0.3	0.01	0.2	Surcharged

AEG10782_RH10_TurnersHill_06:				Date:		
Worth Hall Farmhouse (RH10 4PE)				29/06/2026		
Tulleys Entertainment Group Ltd				Designed by:	Checked by:	Approved By:
Surface Water Drainage Network				JA	ML	OH
Report Details:				Company Address:		
Type: Connections Summary				Aegaea		
Storm Phase: Phase						



FEH: 100 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Flow

Connection	Storm Event	Connection Type	From	To	Upstream Cover Level (m)	Max. US Water Level (m)	Max. Flow Depth (m)	Discharge Volume (m³)	Max. Velocity (m/s)	Flow / Capacity	Max. Flow (L/s)	Status
1.000	FEH: 100 years: +0 %: 15 mins: Summer	Pipe	IC1	IC2	138.390	138.076	0.080	3.393	0.8	0.58	7.6	OK
1.001	FEH: 100 years: +0 %: 15 mins: Summer	Pipe	IC2	IC3	138.390	137.974	0.075	3.389	0.8	0.43	7.3	OK
Pipe	FEH: 100 years: +0 %: 15 mins: Summer	Pipe	IC5	IC6	139.500	138.134	0.084	3.568	0.8	0.5	7.7	OK
Pipe (1)	FEH: 100 years: +0 %: 15 mins: Summer	Pipe	IC6	IC7	140.000	138.083	0.079	3.554	0.8	0.53	7.6	OK
Pipe (2)	FEH: 100 years: +0 %: 15 mins: Summer	Pipe	IC7	IC8	139.950	138.024	0.072	3.540	0.9	0.44	7.4	OK
Pipe (3)	FEH: 100 years: +0 %: 15 mins: Summer	Pipe	IC8	IC9	139.330	137.920	0.071	3.528	0.9	0.33	7.2	OK
Pipe (4)	FEH: 100 years: +0 %: 15 mins: Summer	Pipe	IC9	IC4	138.560	137.872	0.092	3.696	0.6	0.39	7.0	OK
Pipe (5)	FEH: 100 years: +0 %: 15 mins: Summer	Pipe	IC4	Cellular Storage	138.370	137.841	0.071	7.025	1.7	0.93	14.0	OK
Pipe (6)	FEH: 100 years: +0 %: 15 mins: Summer	Pipe	IC3	IC4	138.350	137.876	0.094	3.384	0.6	0.44	7.1	OK
Pipe (7)	FEH: 100 years: +0 %: 2160 mins: Summer	Pipe	Cellular Storage	IC10	138.690	137.950	0.014	92.425	0.9	0.04	0.6	Surcharged
Pipe (8)	FEH: 100 years: +0 %: 2160 mins: Summer	Pipe	IC10	Pond Inlet	138.000	137.265	0.014	92.420	0.9	0.04	0.6	OK
Pipe (9)	FEH: 100 years: +0 %: 1440 mins: Summer	Pipe	Porous Paving (Patio)	IC5	139.908	139.745	0.015	23.824	0.6	0.01	0.3	Surcharged
Pipe (10)	FEH: 100 years: +0 %: 960 mins: Summer	Pipe	Porous Paving (Driveway)	IC9	139.008	138.843	0.073	18.431	0.2	0.01	0.3	Surcharged

AEG10782_RH10_TurnersHill_06: Worth Hall Farmhouse (RH10 4PE) Tulleys Entertainment Group Ltd Surface Water Drainage Network		Date: 29/06/2026		
Report Details: Type: Connections Summary Storm Phase: Phase		Designed by: JA	Checked by: ML	Approved By: OH
		Company Address: Aegaea		
		 water, civils and environment		



FEH: 30 years: Increase Rainfall (%): +35: Critical Storm Per Item: Rank By: Max. Flow

Connection	Storm Event	Connection Type	From	To	Upstream Cover Level (m)	Max. US Water Level (m)	Max. Flow Depth (m)	Discharge Volume (m³)	Max. Velocity (m/s)	Flow / Capacity	Max. Flow (L/s)	Status
1.000	FEH: 30 years: +35 %: 15 mins: Summer	Pipe	IC1	IC2	138.390	138.079	0.083	3.618	0.8	0.61	8.1	OK
1.001	FEH: 30 years: +35 %: 15 mins: Summer	Pipe	IC2	IC3	138.390	137.977	0.078	3.614	0.8	0.46	7.8	OK
Pipe	FEH: 30 years: +35 %: 15 mins: Summer	Pipe	IC5	IC6	139.500	138.138	0.087	3.801	0.8	0.53	8.2	OK
Pipe (1)	FEH: 30 years: +35 %: 15 mins: Summer	Pipe	IC6	IC7	140.000	138.087	0.082	3.786	0.8	0.57	8.1	OK
Pipe (2)	FEH: 30 years: +35 %: 15 mins: Summer	Pipe	IC7	IC8	139.950	138.027	0.075	3.773	0.9	0.47	7.8	OK
Pipe (3)	FEH: 30 years: +35 %: 15 mins: Summer	Pipe	IC8	IC9	139.330	137.923	0.074	3.760	0.9	0.36	7.7	OK
Pipe (4)	FEH: 30 years: +35 %: 15 mins: Summer	Pipe	IC9	IC4	138.560	137.875	0.096	3.936	0.6	0.41	7.5	OK
Pipe (5)	FEH: 30 years: +35 %: 15 mins: Summer	Pipe	IC4	Cellular Storage	138.370	137.846	0.075	7.478	1.7	1.01	15.2	OK
Pipe (6)	FEH: 30 years: +35 %: 15 mins: Summer	Pipe	IC3	IC4	138.350	137.880	0.098	3.609	0.6	0.47	7.5	OK
Pipe (7)	FEH: 30 years: +35 %: 2160 mins: Summer	Pipe	Cellular Storage	IC10	138.690	137.961	0.014	95.710	0.9	0.04	0.6	Surcharged
Pipe (8)	FEH: 30 years: +35 %: 2160 mins: Summer	Pipe	IC10	Pond Inlet	138.000	137.265	0.015	95.705	0.9	0.04	0.6	OK
Pipe (9)	FEH: 30 years: +35 %: 960 mins: Summer	Pipe	Porous Paving (Patio)	IC5	139.908	139.759	0.016	19.737	0.6	0.01	0.3	Surcharged
Pipe (10)	FEH: 30 years: +35 %: 960 mins: Summer	Pipe	Porous Paving (Driveway)	IC9	139.008	138.856	0.081	19.341	0.2	0.01	0.3	Surcharged

AEG10782_RH10_TurnersHill_06:		Date:		
Worth Hall Farmhouse (RH10 4PE)		29/06/2026		
Tulleys Entertainment Group Ltd		Designed by:	Checked by:	Approved By:
Surface Water Drainage Network		JA	ML	OH
Report Details:		Company Address:		
Type: Connections Summary		Aegaea		
Storm Phase: Phase				



aegaea
water, civils and environment



FEH: 100 years: Increase Rainfall (%): +40: Critical Storm Per Item: Rank By: Max. Flow

Connection	Storm Event	Connection Type	From	To	Upstream Cover Level (m)	Max. US Water Level (m)	Max. Flow Depth (m)	Discharge Volume (m³)	Max. Velocity (m/s)	Flow / Capacity	Max. Flow (L/s)	Status
1.000	FEH: 100 years: +40 %: 15 mins: Summer	Pipe	IC1	IC2	138.390	138.099	0.101	4.751	0.8	0.81	10.6	Flood Risk
1.001	FEH: 100 years: +40 %: 15 mins: Summer	Pipe	IC2	IC3	138.390	137.993	0.096	4.747	0.9	0.6	10.3	OK
Pipe	FEH: 100 years: +40 %: 15 mins: Summer	Pipe	IC5	IC6	139.500	138.157	0.106	4.971	0.8	0.69	10.8	OK
Pipe (1)	FEH: 100 years: +40 %: 15 mins: Summer	Pipe	IC6	IC7	140.000	138.105	0.099	4.955	0.9	0.74	10.5	OK
Pipe (2)	FEH: 100 years: +40 %: 15 mins: Summer	Pipe	IC7	IC8	139.950	138.042	0.091	4.940	0.9	0.61	10.3	OK
Pipe (3)	FEH: 100 years: +40 %: 15 mins: Summer	Pipe	IC8	IC9	139.330	137.940	0.092	4.927	0.9	0.47	10.0	OK
Pipe (4)	FEH: 100 years: +40 %: 15 mins: Summer	Pipe	IC9	IC4	138.560	137.894	0.113	5.138	0.7	0.54	9.9	OK
Pipe (5)	FEH: 100 years: +40 %: 15 mins: Summer	Pipe	IC4	Cellular Storage	138.370	137.862	0.096	9.771	1.8	1.29	19.3	OK
Pipe (6)	FEH: 100 years: +40 %: 15 mins: Summer	Pipe	IC3	IC4	138.350	137.900	0.116	4.742	0.7	0.62	9.9	OK
Pipe (7)	FEH: 100 years: +40 %: 2880 mins: Summer	Pipe	Cellular Storage	IC10	138.690	138.067	0.016	141.766	0.9	0.05	0.7	Surcharged
Pipe (8)	FEH: 100 years: +40 %: 2880 mins: Summer	Pipe	IC10	Pond Inlet	138.000	137.266	0.016	141.763	0.9	0.05	0.7	OK
Pipe (9)	FEH: 100 years: +40 %: 1440 mins: Summer	Pipe	Porous Paving (Patio)	IC5	139.908	139.836	0.017	32.427	0.7	0.01	0.3	Surcharged
Pipe (10)	FEH: 100 years: +40 %: 1440 mins: Summer	Pipe	Porous Paving (Driveway)	IC9	139.008	138.932	0.100	31.525	0.3	0.01	0.3	Surcharged