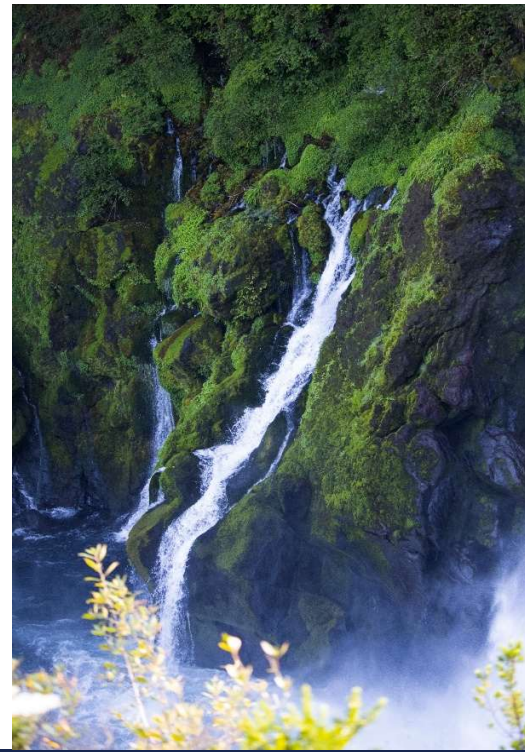




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Drainage Strategy AEG10782_RH10_TurnersHill_06

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

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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	29/06/2026	Jack Allen	ML	OH	First Issue
2	26/08/2026	Jack Allen	NDD		Second Issue

Second Issue

Following the Council's consultation response dated 21 July 2026 (ref. DM/26/1638), which identified insufficient information to discharge Condition 3 of planning permission DM/23/0611, this Drainage Strategy has been updated to address the matters raised by the Council's drainage consultant.

- Infiltration testing and groundwater monitoring have since been undertaken, the results of which confirm that infiltration is not a suitable method of surface water disposal at this site, and the drainage strategy has therefore been retained as a positive discharge to the receiving waterbody.
- The proposed discharge rate has been set at a minimum of 1.0 l/s, in line with the Council's requirement to minimise the risk of blockage within the drainage network, with the attenuation tank resized accordingly to accommodate this reduced outflow.
- Further detail has also been provided on the receiving watercourse: surface water now discharges directly into the existing on-site pond, which forms the ultimate receiving waterbody. This is supported by topographic survey data confirming a consistent fall across the site of approximately 5.28m, from the southwestern corner (141.04m AOD) down to the pond in the north/northeast (135.76m AOD), together with site photographs from a landowner walkover (Appendix D) confirming a formal, engineered brick-built outfall chamber and a dry, free-draining pond at the time of inspection.

Please Note:

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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 demolition of the existing dwelling to erect a replacement dwelling and four bay garage with studio above – a copy of the development proposals can be found in Appendix A.

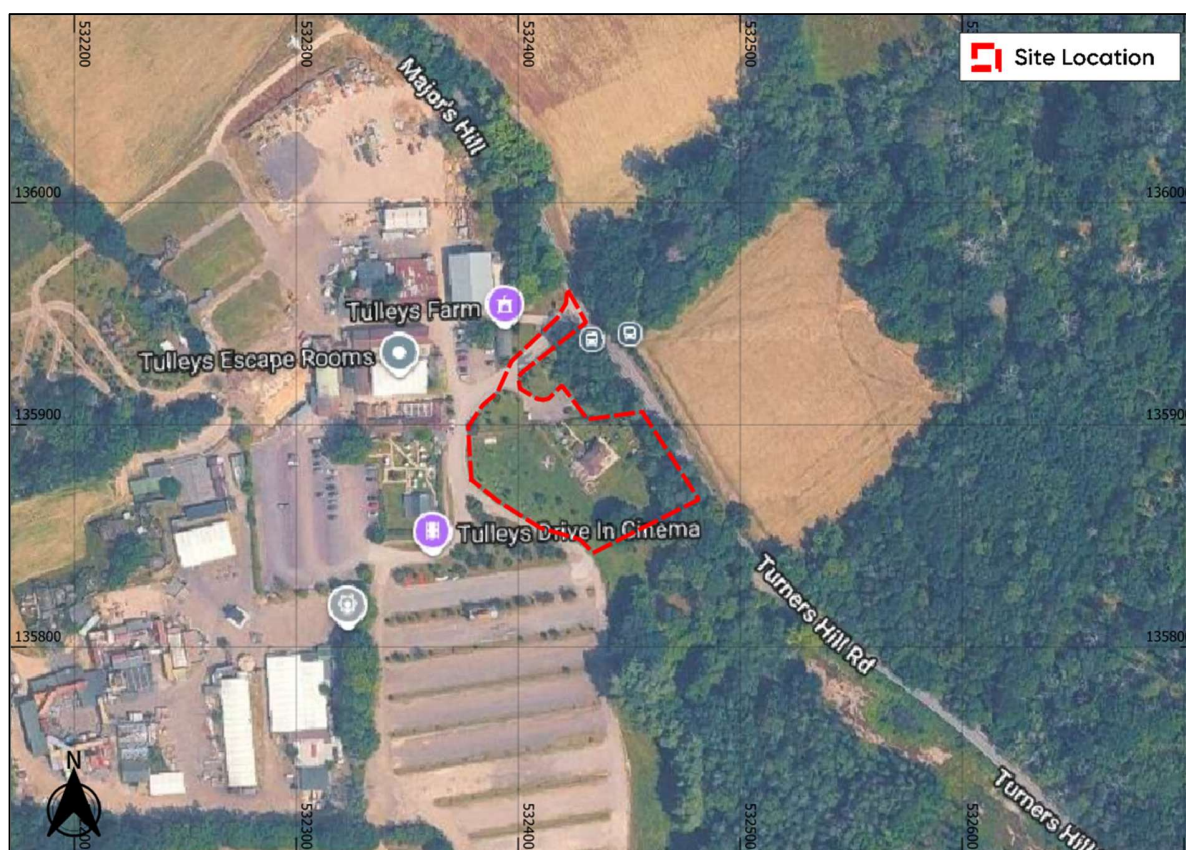


Figure 1: Site Location (Base map and data from Google Satellite Imagery ©)

- 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 occurs 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. Infiltration testing (Appendix C) was undertaken at the site by Clear Environmental Ltd in accordance with BRE Digest 365, comprising three trial pits (TP01–TP03) excavated across the proposed development area.
- 2.5. Following filling, drawdown at all three locations was insufficient for the water level to fall between the 75% and 25% effective depths within the monitoring period, meaning a valid infiltration rate could not be calculated at any test location in accordance with BRE 365 guidance, and all three tests are recorded as having failed.
- 2.6. On this basis infiltration is not considered a viable means of surface water disposal.

Nearby Watercourses

- 2.7. 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.
- 2.8. 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.

- 2.9. Site photographs (Appendix D) obtained during a landowner walkover confirm that the pond is served by a formal, engineered outfall structure, comprising a brick-built chamber, rather than an informal arrangement. The walkover also recorded the pond as dry at the time of inspection, which is considered indicative of a free-draining, functioning outfall.

Existing Drainage Infrastructure

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

Greenfield Runoff Rates

- 2.11. The total impermeable catchment area associated with this strategy is 0.081ha.
- 2.12. 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):

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

- 2.13. The greenfield runoff rate (Q_{BAR}) for the proposed impermeable catchment of 810m² (excluding urban creep) was calculated to be 0.5l/s.
- 2.14. 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 29mm orifice flow control, ultimately restricting flow to 1.0l/s for the 1 in 100 year (plus a 45% allowance for climate change) storm event.

Climate Change

- 2.15. 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

- 2.16. 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 minute
Volumetric Runoff Co	1.0
Percentage Impervious	100%
Time of Concentration	5 minutes
Urban Creep (%)	10%

- 2.17. 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 (1.0 l/s maximum).

Surface Water Drainage Strategy

- 2.18. 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	Infiltration testing (Appendix C) was undertaken at the site by Clear Environmental Ltd in accordance with BRE Digest 365, comprising three trial pits (TP01-TP03) excavated across the proposed development area. Following filling, drawdown at all three locations was insufficient for the water level to fall between the 75% and 25% effective depths within the monitoring period, meaning a valid infiltration rate could not be calculated at any test location in accordance with BRE 365 guidance, and all three tests are recorded as having failed. On this basis infiltration is not considered a viable means of surface water disposal.
	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 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. Site photographs (Appendix D) obtained during a landowner walkover confirm that the pond is served by a formal, engineered outfall structure, comprising a brick-built chamber, rather than an informal arrangement. The walkover also recorded the pond as dry at the time of inspection, which is considered indicative of a free-draining, functioning outfall.
	4.	Discharge to surface water sewer,	x	No public sewerage assets are understood to serve the site address.

		highway drain or similar		
	5.	Discharge to combined sewer		

- 2.19. 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.
- 2.20. Surface water will be restricted to a maximum of 1.0 l/s by an orifice at the tank outlet.
- 2.21. The proposed Surface Water Drainage Layout is included as Appendix E and Construction Details will be included in this report as Appendix F.

InfoDrainage Modelling Results

- 2.22. 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 76.16m², depth of 0.4m, total attenuation capacity of 29.541m³, and a 29mm 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.
- 2.23. The full calculation outputs can be found in Appendix G 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 1.0 l/s for the critical storm event (1,440 minute summer).

- The maximum resident volume in the geocellular storage tank (maximum available capacity: 29.541m³) would be 28.264m³ for the critical storm event (1,440 min summer).
- The maximum resident volume in the driveway permeable paving subbase (maximum available capacity: 21.786m³) would be 20.297m³ 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 21.431m³ for the critical storm event (1440 min summer).
- No flooding is observed in the critical storm event based on the InfoDrainage model.

2.24. 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

2.25. 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 areas 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

2.26. 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

- 2.27. 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.
- 2.28. 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 the existing pond.
- 2.29. In addition, the geocellular storage tank has been designed with an additional 4% storage capacity available during the 1 in 100 year plus climate change, event to manage exceedance flows.

Water Quality

- 2.30. 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.
- 2.31. 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.
- 2.32. 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.
- 2.33. 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

2.34. 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

2.35. 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-tankstore.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. Infiltration testing (Appendix C) was undertaken at the site by Clear Environmental Ltd in accordance with BRE Digest 365, comprising three trial pits (TP01–TP03) excavated across the proposed development area.
- 4.3. Following filling, drawdown at all three locations was insufficient for the water level to fall between the 75% and 25% effective depths within the monitoring period, meaning a valid infiltration rate could not be calculated at any test location in accordance with BRE 365 guidance, and all three tests are recorded as having failed.
- 4.4. 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.
- 4.5. 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.
- 4.6. Site photographs (Appendix D) and video footage obtained during a landowner walkover confirm that the pond is served by a formal, engineered outfall structure, comprising a brick-built chamber, rather than an informal arrangement. The walkover also recorded the pond as dry at the time of inspection, which is considered indicative of a free-draining, functioning outfall.
- 4.7. 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.

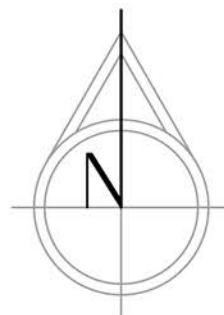
Foul Water

- 4.8. 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

- 4.9. 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



Oakwrights planning

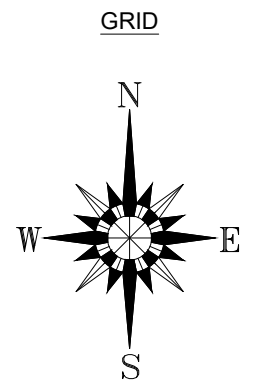
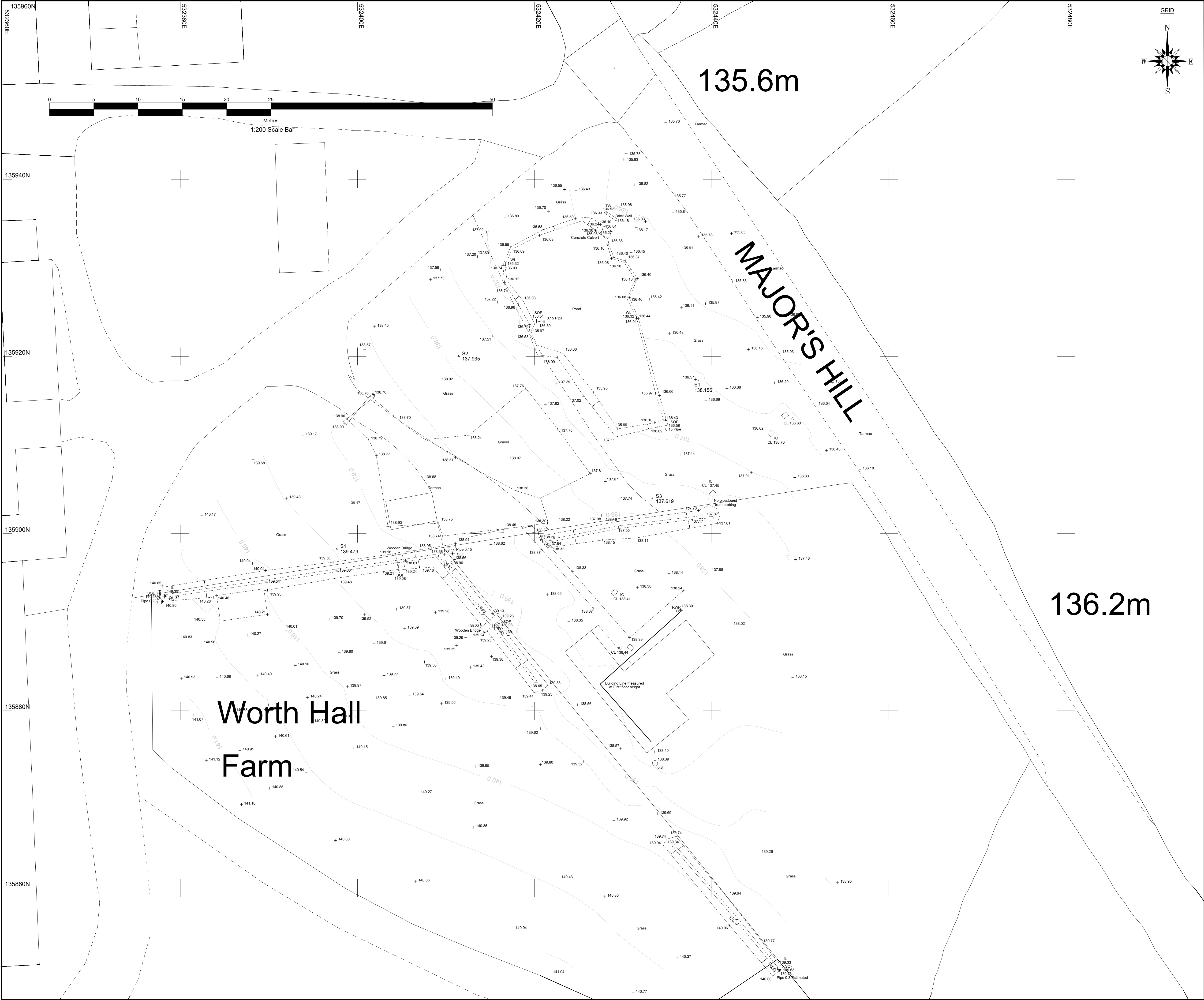
© This drawing, its contents, and all information contained therein is protected by copyright. It may be used once only for its intended purpose under a contract with T J Crump Oakwrights Ltd, but specifically not for any other use or purpose. This drawing is for Planning purposes and does not constitute 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

 OAKWRIGHTS®	T. J. CRUMP OAKWRIGHTS LTD THE LAKES, SWAINSHILL, HEREFORD, HR4 7PU T: (01432) 353 353 E: enquiries@oakwrights.co.uk	 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 WORTH HALL FARMHOUSE, TURNERS HILL ROAD, WORTH, CRAMLEY, RH10 4PE	A PATIO STEPS REMOVED		02/08/2023	
						DATE 27/01/2023	SCALE 1:200@A1		
						DRAWN DB	DRG. NO. 01/DB/SB/06	REV. A	
						CHECKED			

Appendix B - Topographical Survey



SHEET LAYOUT (where applicable)

LEGEND

BANKING

BUSHES & HEDGES

TREES

GATES

Top

Bottom

MT / ST / 0.2 / 6

NOTE: SPREADS AND HEIGHTS ARE INDICATIVE ONLY

WALL

FENCES

BUILDING

OPEN SIDED BUILDING

CONTOURS

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
BWKK	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	MRF	METAL RAILING FENCE	SPRF	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

Citation ISO Certification

Information security management | ISO 27001: 2022

REGISTERED

Citation ISO Certification

Environmental management | ISO 14001: 2015

REGISTERED

Citation ISO Certification

Occupational health and safety management | ISO 45001: 2018

REGISTERED

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 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 - Infiltration Tests

Our Ref: 260714

18 August 2026

Tulleys Entertainment Group Ltd,

Tulleys Farm,
Turners Hill Rd,
Crawley
RH10 4PE

BRE 365 Soakaway Assessment – Worth Hall Farmhouse, Turners Hill Road, Mid Sussex, West Sussex, RH10 4PE

Scope and Objectives

Clear Environmental Limited (Clear) was commissioned by Tulleys Entertainment Group Ltd (the 'Client') to undertake a BRE 365 Soakaway Assessment at Worth Hall Farmhouse, Turners Hill Road, Mid Sussex, West Sussex, RH10 4PE (hereafter referred to as the 'site').

Purpose of Works

The purpose of this report is to provide information on the underlying ground conditions, infiltration rates and groundwater regime to assess the viability of infiltration and to inform future drainage design.

Scope of Works

- ≡ Progression of 3No. mechanically excavated trial pits to a maximum depth of 1.20m below ground level (bgl);
- ≡ Undertake 3No. Soakaway Tests in general accordance with BRE 365 guidance.
- ≡ Provision of a factual and interpretive report providing the calculated infiltration rates and records of ground conditions.

Limitations

This report presents Clear's observations, findings, and conclusions based on the information available and site conditions as understood at the time of reporting. These findings may be subject to change should material new information become available following the date of issue.

This report has been prepared specifically for the Client. It may not be relied upon by any other party without Clear's prior written agreement, which will typically require the execution of a reliance letter incorporating our standard terms and conditions. Where reliance has been granted to third parties, this will be noted in the report.

Site Constraints

Soakaway testing was undertaken in general accordance with BRE Digest 365. Trial pits were excavated and filled with water to assess the infiltration rates.

Results reflect conditions at the test locations only and may not represent the wider site. Variations in soil type, groundwater or compaction could affect soakaway performance and should be considered in design.

Due to the slow observed drawdown, three repeat tests could not be completed at TP01–TP03 in accordance with BRE Digest 365. Following the initial fill, insufficient drainage occurred to permit further repeat filling within the test period.

The trial pits were terminated at depths of 1.05–1.20 m bgl following excavation refusal on competent rock, which prevented further progression.

Site Location

A site location plan is presented below.

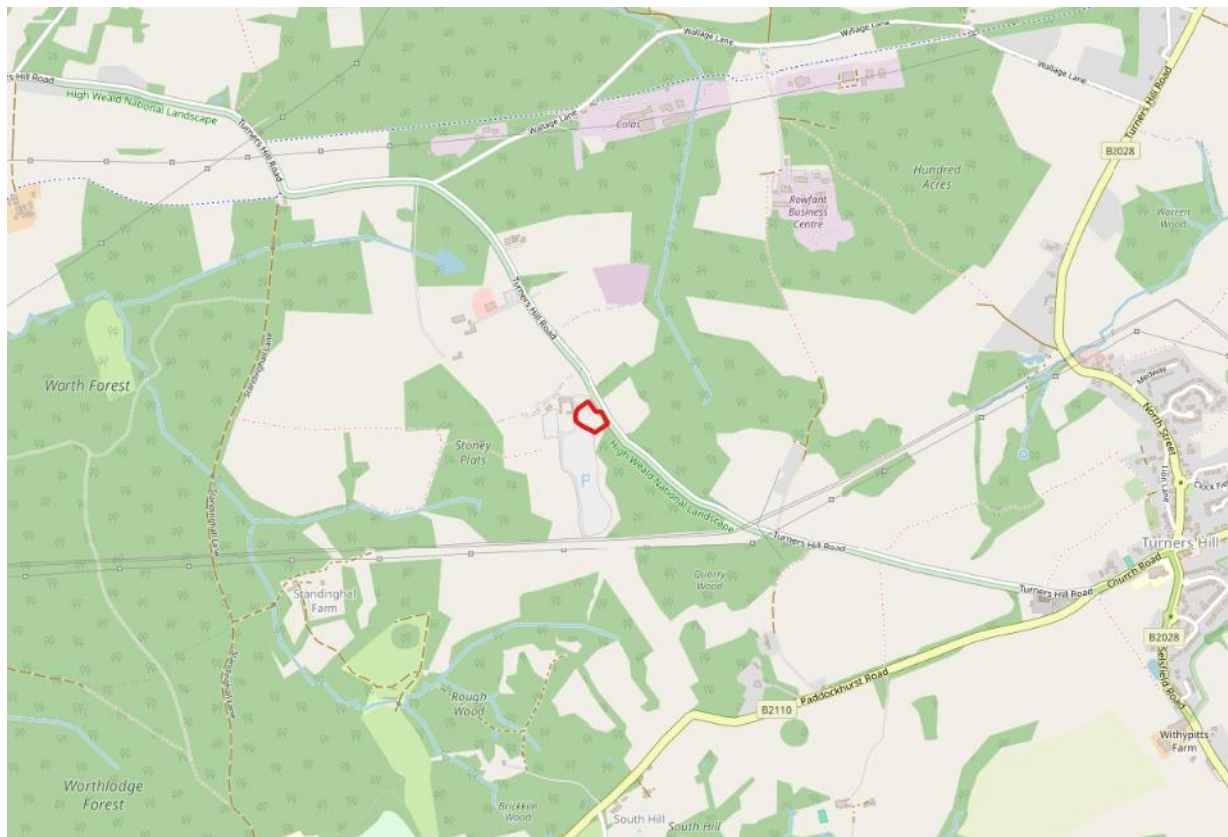


Figure 1: Site Location Plan

Ground Conditions

Ground Conditions Encountered

The ground conditions encountered during the excavation of the trial pits are summarised below. An Exploratory Hole Location Plan is presented in Enclosure I.

Trial Pit Logs are presented in Enclosure II.

Strata Description	Top Depth (m bgl)	Bottom Depth (m bgl)	Thickness (m)
Topsoil (TP01 only)	Ground Level	0.30	0.30
Made Ground (TP02 and TP03)	Ground Level	0.40	0.40
Completely weathered Upper Tunbridge Wells Sand	0.30 – 0.40	>1.05–1.20	>0.70– >0.80 (base not proven)

Topsoil and Made Ground

Topsoil was encountered from ground level in TP01 and extended to a depth of approximately 0.30m below ground level (bgl). The Topsoil comprised brown silty fine to coarse sand with a grass cover.

Made Ground was encountered from ground level in TP02 and TP03 and extended to a depth of approximately 0.40m bgl. The Made Ground generally comprised brown silty gravelly fine to coarse sand, with gravel consisting of sandstone, siltstone, pottery, glass and brick.

Bedrock Deposits

Deposits interpreted as completely weathered Upper Tunbridge Wells Sand were encountered beneath the Topsoil and Made Ground in all three trial pits.

The deposits generally comprised greyish brown to orangish brown, locally grey mottled, clayey slightly gravelly sandy silt with gravel comprising angular to sub-rounded sandstone and siltstone.

Within TP02 and TP03, a medium cobble content was recorded within the weathered deposits from approximately 0.70m and 0.80m bgl respectively to the base of the trial pits. The cobbles comprised sub-angular sandstone approximately 20mm to 200mm in size.

Groundwater

No groundwater was encountered during progression of the trial pits.

Soakaway Testing Results

Soakaway testing was completed in general accordance with BRE 365.

The table below summarises the results, which are also contained as Enclosure III.

Location	Infiltration Rate (m/s)	Infiltration Rate for Design	Comments
TP01	Test 1 N/A	Fail	
	Test 2 N/A		
	Test 3 N/A		
TP02	Test 1 N/A	Fail	The water level did not fall between the 75% and 25% effective depth during the test period. As such, an infiltration rate cannot be calculated in accordance with BRE 365 guidance, and the tests are considered to have failed.
	Test 2 N/A		
	Test 3 N/A		
TP03	Test 1 N/A	Fail	
	Test 2 N/A		
	Test 3 N/A		

Closing Remarks

Given the results, infiltration drainage is not considered to be a viable solution at this site.

The results of the testing should be passed to a drainage engineer to design a suitable scheme.



Ben Lawry BSc(Hons) FGS

Director

For and on behalf of Clear Environmental Ltd

Mobile: 07769178244

Email: ben@clearenviro.co.uk

Enclosure I – Exploratory Hole Location Plan



Legend

- Trial Pits 
- Site Boundary 

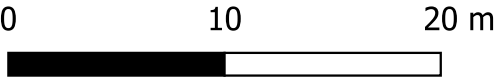
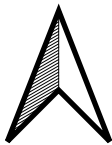


Figure Title Indicative Exploratory Hole Location Plan	
Site Location Worth Hall Farmhouse, Turners Hill Road, Mid Sussex, West Sussex, RH10 4PE	
Job Number 260714	Figure Number 260714.01
Prepared By BJL	Date 18/08/2026
Client Tulleys Entertainment Group Ltd	

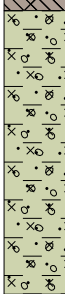
Enclosure II – Exploratory Hole Logs



TP01
Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
TP				1:20
Project Name		Project No.	Start Date	End Date
Worth Hall Farmhouse		260714	2026-08-13	2026-08-13

Client	Consultant	Contractor
Tulleys Entertainment Group Ltd	Clear Environmental Limited	

Inst/ Backfill		Water Levels	Samples and Tests		Level (m)	Strata			
			Depth (m)	Type/ Ref		Results	Depth (thickness) (m)		Legend
						(0.30)		Grass overlay. Brown silty SAND. Sand is fine to coarse. [TOPSOIL]	0.5
						0.30		Greyish brown clayey slightly gravelly sandy SILT. Sand is fine to medium. Gravel is angular to sub-rounded sandstone and siltstone. [Completely weathered UPPER TUNBRIDGE WELLS SAND]	
						(0.75)			1.0
						1.05			
								End of Trial Pit at 1.05m	1.5
									2.0
									2.5
									3.0
									3.5
									4.0

Remarks

- 1) All recorded strengths and densities based on visual observations of ease of excavation.
- 2) No direct visual or olfactory evidence of mobile contamination.
- 3) Groundwater was not encountered.
- 4) In-situ soakaway test undertaken in pit.
- 5) On completion, the trial pit was backfilled with arisings and made safe at the surface.
- 6) Excavation refusal on apparent competent rock at the pit base ...

Method, Plant, Stability, Dimensions

0.00 - 1.05m	TP
Stable	

$$L = 1.40\text{m}$$
$$W = 0.55m$$

Logger

BL

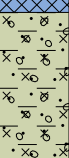
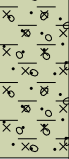
Checked By: BL Approved By: BL

[illegible]

Checked By: BL Approved By: BL		
SPT N60 = N(raw) * (Hammer Energy Ratio / 60) to nearest whole number		Created using Pebble Geo

Hole Type TP	Easting	Northing	Ground Level (m)	Scale 1:20
Project Name Worth Hall Farmhouse	Project No. 260714	Start Date 2026-08-13	End Date 2026-08-13	

Client Tulleys Entertainment Group Ltd	Consultant Clear Environmental Limited	Contractor
---	---	------------

Inst/ Backfill	Water Levels	Samples and Tests			Level (m)	Depth (m) (thickness)	Strata	
		Depth (m)	Type/ Ref	Results			Legend	Description
						(0.40)		Grass overlay. Brown silty gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-rounded sandstone, siltstone, pottery, glass and brick. [MADE GROUND]
						0.40		Orangish brown mottled grey clayey slightly gravelly sandy SILT. Sand is fine to medium. Gravel is angular to sub-rounded sandstone and siltstone. [Completely weathered UPPER TUNBRIDGE WELLS SAND]
						(0.80)		Medium cobble content of 20mm - 200mm subangular sandstone. (0.80 - 1.20m)
						1.20	End of Trial Pit at 1.20m	
								

Remarks 1) All recorded strengths and densities based on visual observations of ease of excavation. 2) No direct visual or olfactory evidence of mobile contamination. 3) Groundwater was not encountered. 4) In-situ soakaway test undertaken in pit. 5) On completion, the trial pit was backfilled with arisings and made safe at the surface. 6) Excavation refusal on apparent competent rock at the pit bas ...	Method, Plant, Stability, Dimensions 0.00 - 1.20m TP Stable L = 1.50m W = 0.55m	Logger BL

260714



Enclosure III – BRE 365 Soakaway Test Results

PROJECT & TEST DETAILS	
Project number	260714
Project name	Worth Hall Farmhouse
Test location	TP01
Test date	13/08/2026

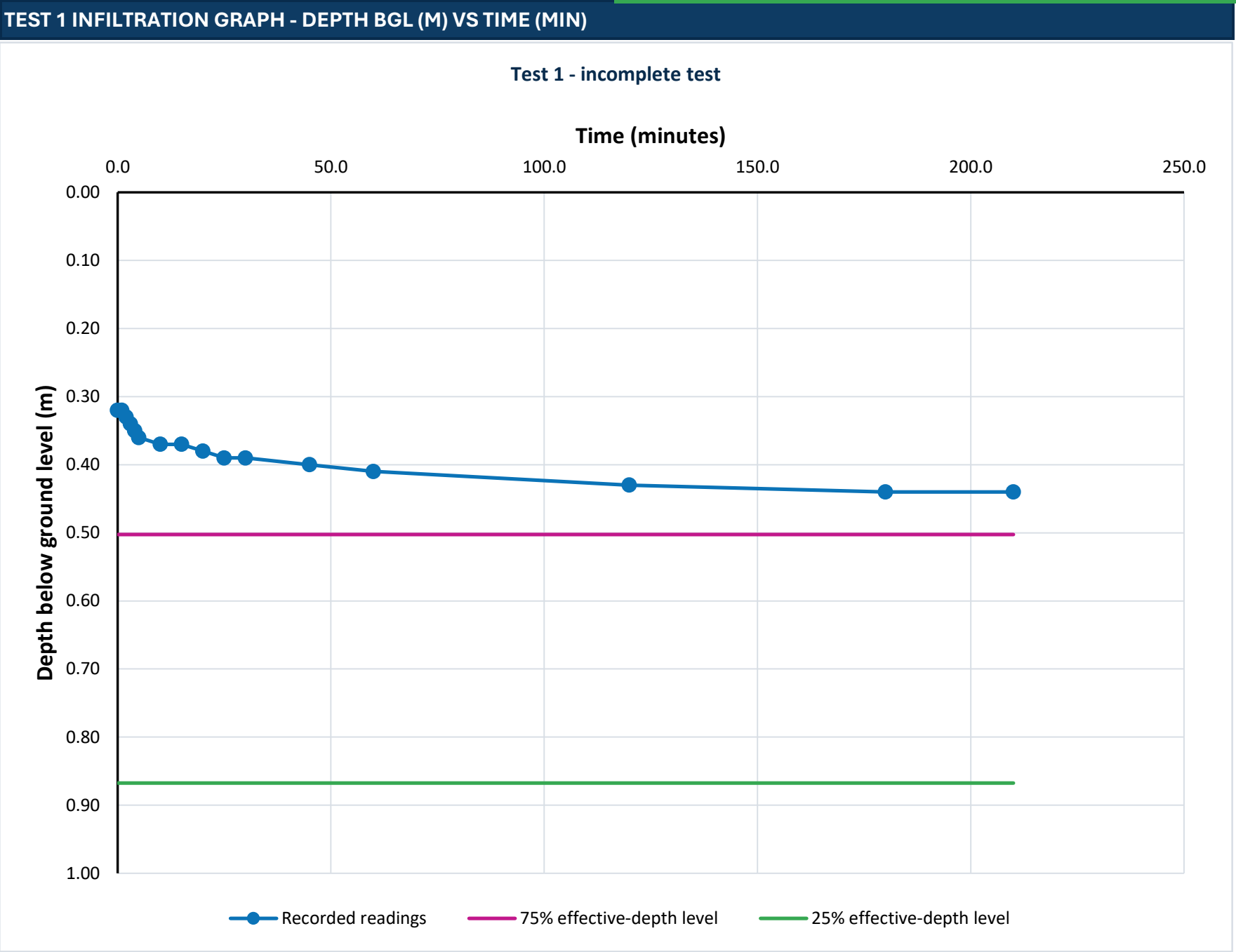
PIT DIMENSIONS		CALCULATED INFILTRATION RATES (m/s)	
Pit length (m)	1.400	Test 1	Incomplete test
Pit width (m)	0.550	Test 2	Incomplete test
Pit depth bgl (m)	1.050	Test 3	Incomplete test
Enter measured internal pit dimensions in metres.		Design Infiltration Rate	
		Incomplete test	

WATER-LEVEL READINGS				
Reading	Time (min)	Test 1 water level bgl (m)	Test 2 water level bgl (m)	Test 3 water level bgl (m)
1	0.000	0.320		
2	1.000	0.320		
3	2.000	0.330		
4	3.000	0.340		
5	4.000	0.350		
6	5.000	0.360		
7	10.000	0.370		
8	15.000	0.370		
9	20.000	0.380		
10	25.000	0.390		
11	30.000	0.390		
12	45.000	0.400		
13	60.000	0.410		
14	120.000	0.430		
15	180.000	0.440		
16	210.000	0.440		
17				
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19				
20				
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22				
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NOTES

Soakaway testing was undertaken in general accordance with BRE Digest 365. A trial pit was excavated and filled with water to assess the infiltration rates.

Results reflect conditions at the test location only and may not represent the wider site. Variations in soil type, groundwater or compaction could affect soakaway performance and should be considered in design.



PROJECT & TEST DETAILS	
Project number	260714
Project name	Worth Hall Farmhouse
Test location	TP02
Test date	13/08/2026

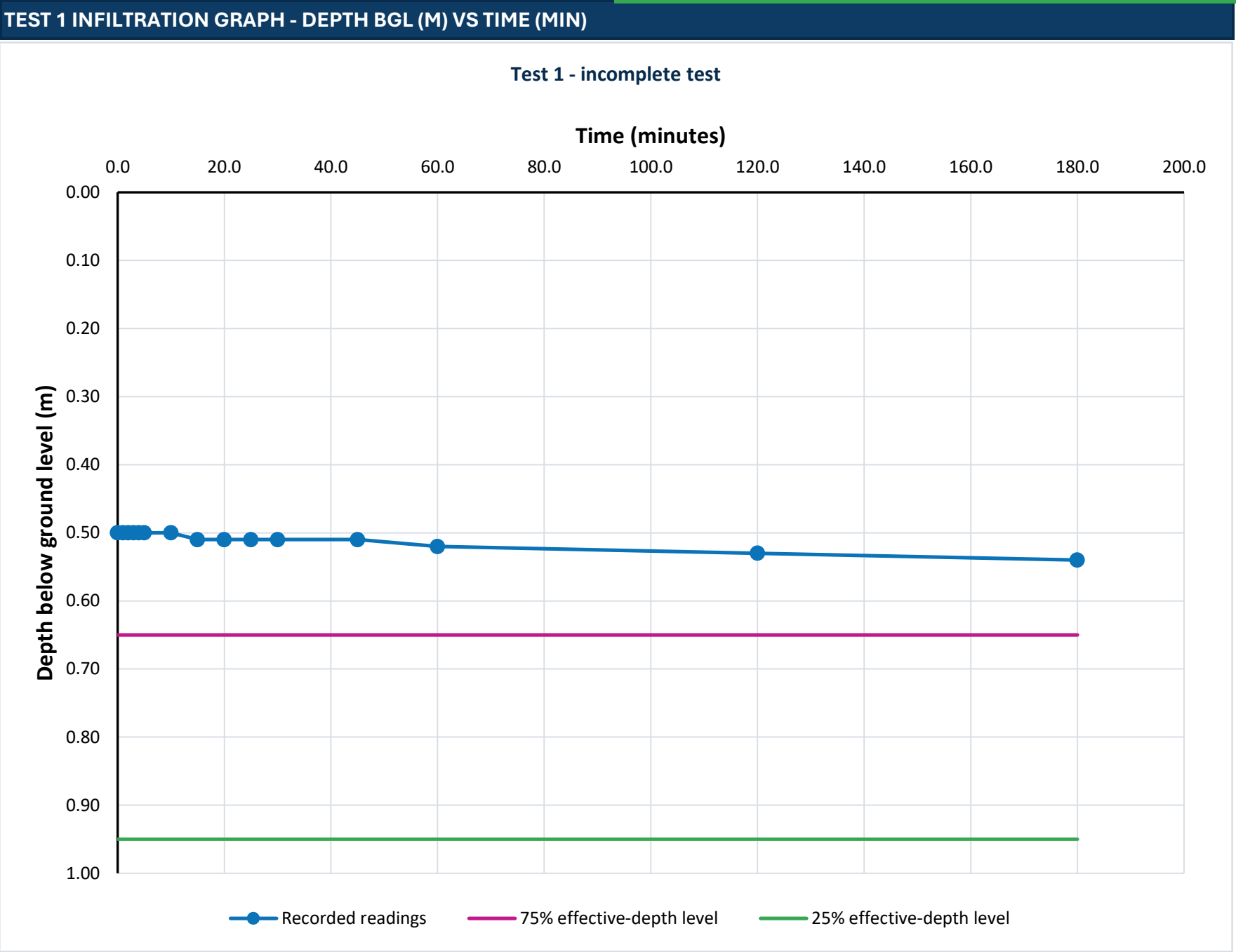
PIT DIMENSIONS		CALCULATED INFILTRATION RATES (m/s)	
Pit length (m)	1.500	Test 1	Incomplete test
Pit width (m)	0.550	Test 2	Incomplete test
Pit depth bgl (m)	1.100	Test 3	Incomplete test
Enter measured internal pit dimensions in metres.		Design Infiltration Rate	
		Incomplete test	

WATER-LEVEL READINGS				
Reading	Time (min)	Test 1 water level bgl (m)	Test 2 water level bgl (m)	Test 3 water level bgl (m)
1	0.000	0.500		
2	1.000	0.500		
3	2.000	0.500		
4	3.000	0.500		
5	4.000	0.500		
6	5.000	0.500		
7	10.000	0.500		
8	15.000	0.510		
9	20.000	0.510		
10	25.000	0.510		
11	30.000	0.510		
12	45.000	0.510		
13	60.000	0.520		
14	120.000	0.530		
15	180.000	0.540		
16				
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NOTES

Soakaway testing was undertaken in general accordance with BRE Digest 365. A trial pit was excavated and filled with water to assess the infiltration rates.

Results reflect conditions at the test location only and may not represent the wider site. Variations in soil type, groundwater or compaction could affect soakaway performance and should be considered in design.



PROJECT & TEST DETAILS	
Project number	260714
Project name	Worth Hall Farmhouse
Test location	TP03
Test date	13/08/2026

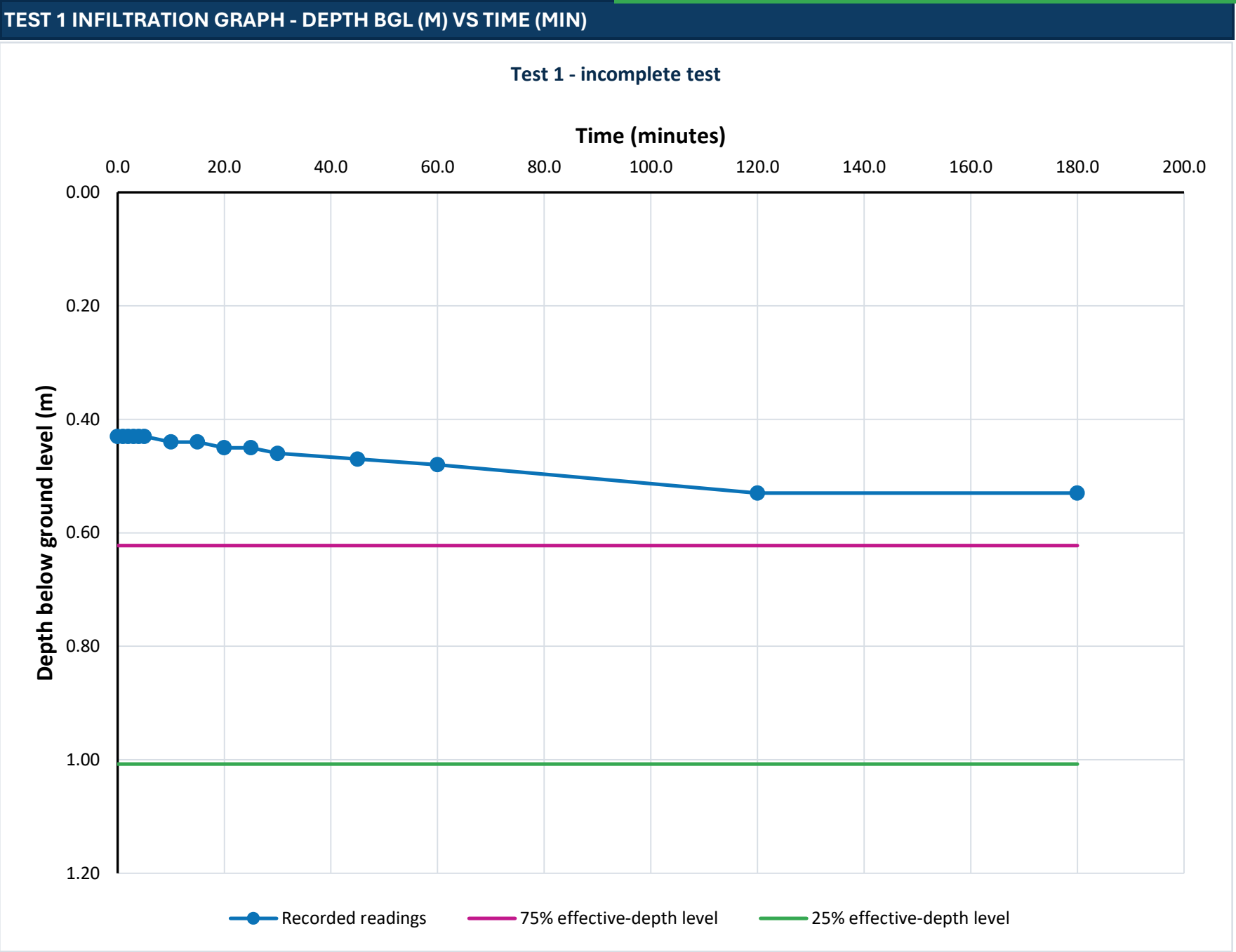
PIT DIMENSIONS		CALCULATED INFILTRATION RATES (m/s)	
Pit length (m)	1.500	Test 1	Incomplete test
Pit width (m)	0.550	Test 2	Incomplete test
Pit depth bgl (m)	1.200	Test 3	Incomplete test
Enter measured internal pit dimensions in metres.		Design Infiltration Rate	
		Incomplete test	

WATER-LEVEL READINGS				
Reading	Time (min)	Test 1 water level bgl (m)	Test 2 water level bgl (m)	Test 3 water level bgl (m)
1	0.000	0.430		
2	1.000	0.430		
3	2.000	0.430		
4	3.000	0.430		
5	4.000	0.430		
6	5.000	0.430		
7	10.000	0.440		
8	15.000	0.440		
9	20.000	0.450		
10	25.000	0.450		
11	30.000	0.460		
12	45.000	0.470		
13	60.000	0.480		
14	120.000	0.530		
15	180.000	0.530		
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NOTES

Soakaway testing was undertaken in general accordance with BRE Digest 365. A trial pit was excavated and filled with water to assess the infiltration rates.

Results reflect conditions at the test location only and may not represent the wider site. Variations in soil type, groundwater or compaction could affect soakaway performance and should be considered in design.



Guidance / Limitations

Soakaway testing is undertaken in accordance with BRE Digest 365 (2016). Testing typically comprises the excavation of a trial pit to the proposed formation level, followed by controlled filling and monitoring of water levels over time to calculate the infiltration rate.

Where boreholes are utilised, permeability testing (falling head or rising head) is carried out in accordance with BS 5930 to provide supporting geotechnical data.

If infiltration drainage is progressed, the following key design and risk considerations should be addressed:

- ≡ **Ground contamination:** Soakaways should not discharge through potentially contaminated Made Ground. This must be assessed at the site investigation stage to avoid mobilising contaminants and creating a controlled waters risk.
- ≡ **Environment Agency requirements:** In some settings, soakaways may need to operate as sealed systems accepting roof water only.
- ≡ **Highway drainage:** Interceptors are typically required for highway runoff. The adopting authority should be consulted at an early stage to confirm acceptance of infiltration proposals.
- ≡ **Groundwater protection:** The base of the soakaway must not be located below the highest recorded groundwater level. As good practice, a minimum of 1m of unsaturated soil should be maintained beneath the soakaway base to provide attenuation and protect underlying aquifers.
- ≡ **Building proximity:** Soakaways should not be located within 5m of buildings. Where chalk is present, this should increase to a minimum of 10m. Where dissolution features are known to the present, this should increase to a minimum of 20m or preferably alternative drainage methods to soakaways be considered.
- ≡ **Topography and levels:** Site levels and slopes must be considered to prevent ponding or uncontrolled down-slope discharge.
- ≡ **Regulatory compliance:** Construction must comply with current Building Regulations Part H and associated guidance.

Limitations

This report has been prepared solely for the named Client and for the specific site and purpose described. It should not be relied upon for any other use without written agreement from Clear Environmental Limited.

The assessment is based on information available at the time of writing, including site investigation data, desk study information and third-party records. We cannot guarantee the accuracy or completeness of third-party data.

Ground conditions are inherently variable. Observations and test results relate only to the specific locations and depths investigated. Conditions between or beyond these points may differ.

Infiltration rates derived from BRE 365 testing represent conditions at the time of testing only and may vary due to seasonal groundwater fluctuations, soil moisture conditions, weather patterns or future site disturbance.

Groundwater levels recorded during the investigation reflect conditions at the time of measurement only. No long-term monitoring has been undertaken unless explicitly stated.

The report does not constitute a detailed contamination risk assessment unless expressly stated. If unexpected contamination, Made Ground, groundwater or unusual ground conditions are encountered during construction, works should cease and specialist advice sought.

Recommendations are based on the proposed development layout and levels provided at the time of instruction. Changes to site levels, formation depths, drainage layout or building design may require reassessment.

Final approval of drainage proposals remains subject to acceptance by the relevant statutory bodies (e.g. Local Planning Authority, Lead Local Flood Authority, Environment Agency or Highway Authority where applicable).

This report provides geotechnical and/or environmental parameters for design purposes only. Detailed structural design, sizing calculations and construction methodology remain the responsibility of the appointed designer and contractor.

No warranty is provided that the investigation has identified all potential subsurface obstructions, buried services, voids or anomalous features. Service searches and appropriate safe digging practices remain the responsibility of the contractor.

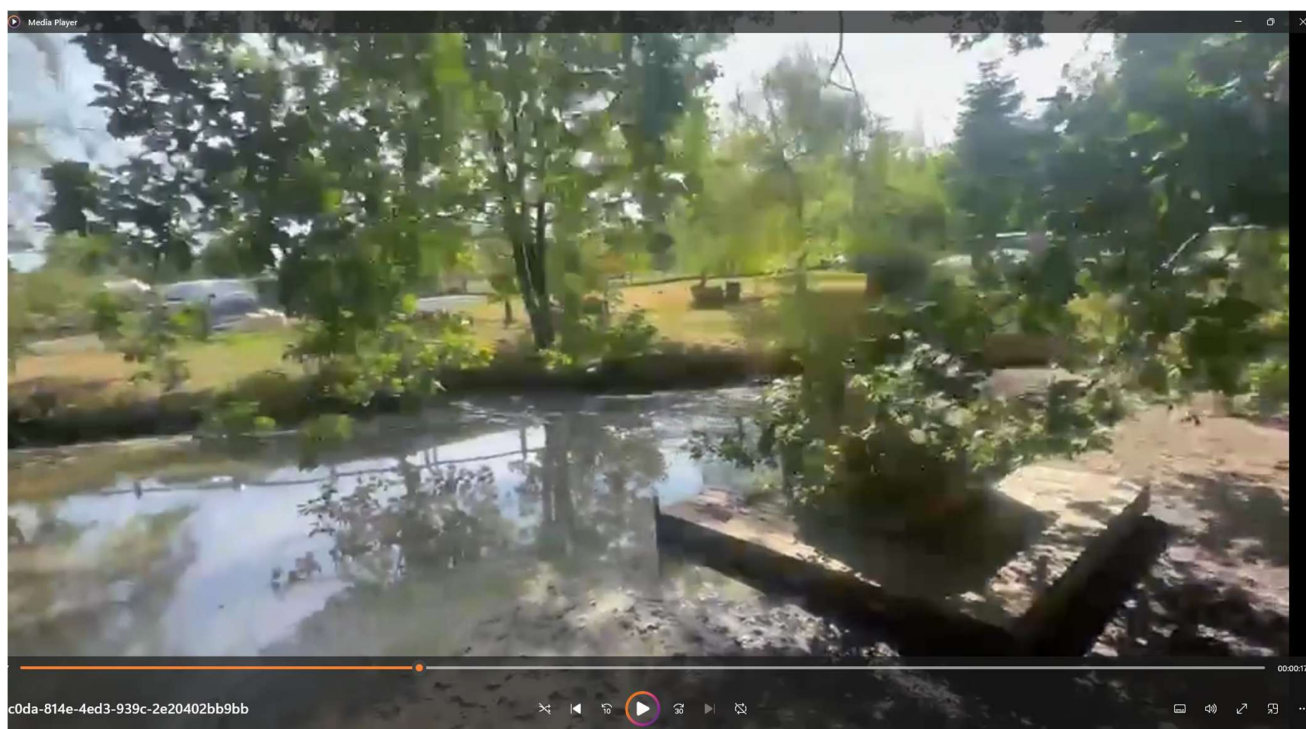
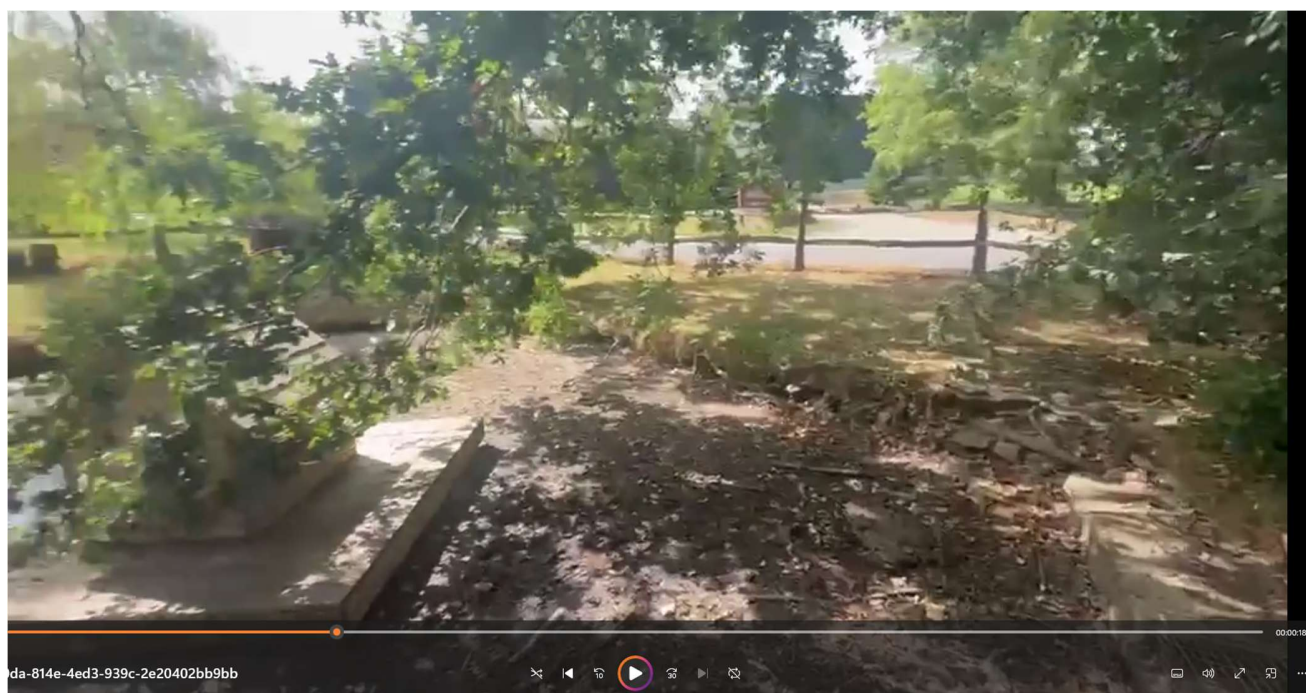
Clear Environmental Limited accepts no liability for use of this report by third parties unless expressly agreed in writing.

This report does not constitute verification of the suitability, design, construction or performance of any existing soakaway system.

Appendix D – Site Photographs









Appendix E - Surface Water Drainage Strategy Layout

SITE PHOTOGRAPHY SUPPLIED BY THE CLIENT (INCLUDED AS APPENDIX D)



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

2.0 26/08/2026 SECOND ISSUE JA

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 2.0

Drawn Checked Approved Date Scale @ A1

JA JC OH 26/08/2026 SEE SCALE

Drawing Status

DISCHARGE OF PLANNING CONDITION 3

aegaea
water, civils and environment

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 1.0l/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: 76.16m²
ATTENUATION DEPTH: 0.4m
COVER DEPTH: 0.6m MINIMUM
TOTAL ATTENUATION PROVIDED: 29.541m³

29mm ORIFICE RESTRICTING FLOWS TO 1.0l/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

POND INLET
TOP OF BANK: 136.69m AOD
BASE OF BANK: 136.10m AOD
INVERT LEVEL OF PIPE: 136.55m AOD

IC10
COVER LEVEL: 138.0m AOD
INVERT LEVEL: 137.25m AOD
0.450

IC4
COVER LEVEL: 138.37m AOD
INVERT LEVEL: 137.73m AOD
0.60

IC9
COVER LEVEL: 138.56m AOD
INVERT LEVEL: 137.90m AOD
0.60

IC8
COVER LEVEL: 139.33m AOD
INVERT LEVEL: 137.85m AOD
0.450

IC5
COVER LEVEL: 138.59m AOD
INVERT LEVEL: 138.05m AOD
0.60

IC1
COVER LEVEL: 138.39m AOD
INVERT LEVEL: 137.99m AOD
0.450

IC6
COVER LEVEL: 140.0m AOD
INVERT LEVEL: 138.0m AOD
0.450

IC3
COVER LEVEL: 138.30m AOD
INVERT LEVEL: 137.80m AOD
0.450

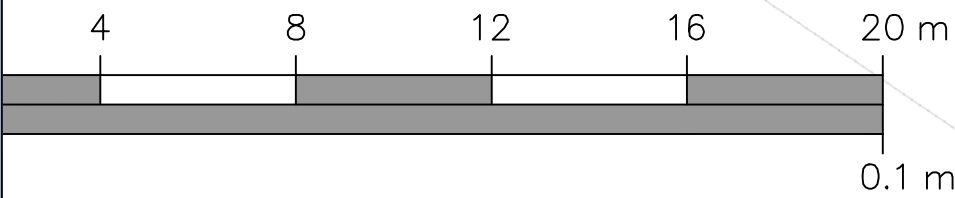
IC2
COVER LEVEL: 138.39m AOD
INVERT LEVEL: 137.90m AOD
0.450

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.



Appendix F - Construction Details

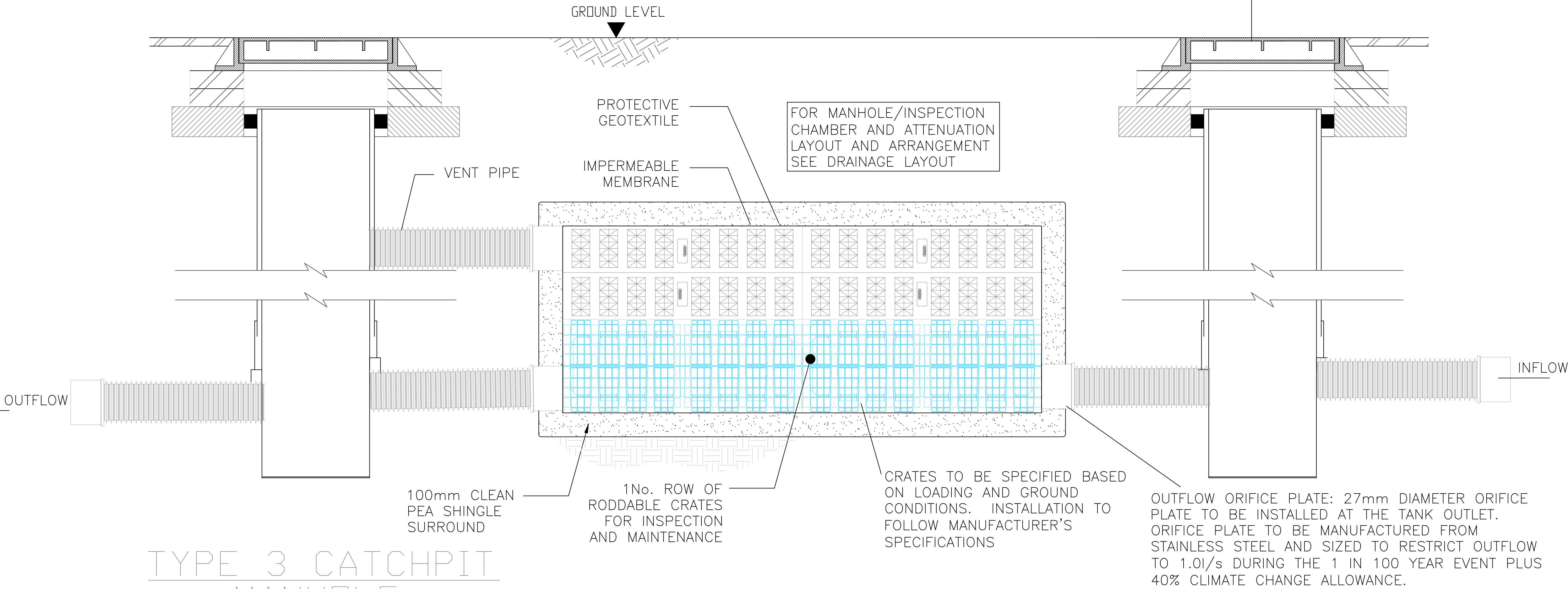


DO NOT SCALE THIS DRAWING. USE FIGURED DIMENSIONS ONLY.
THE CONTRACTOR MUST CHECK & VERIFY ALL DIMENSIONS ON SITE.
ANY DISCREPANCIES MUST BE REPORTED IMMEDIATELY TO THE ENGINEER
FOR CLARIFICATION BEFORE PROCEEDING.
THIS DRAWING IS COPYRIGHT AND OWNED BY AEGAEA.

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.

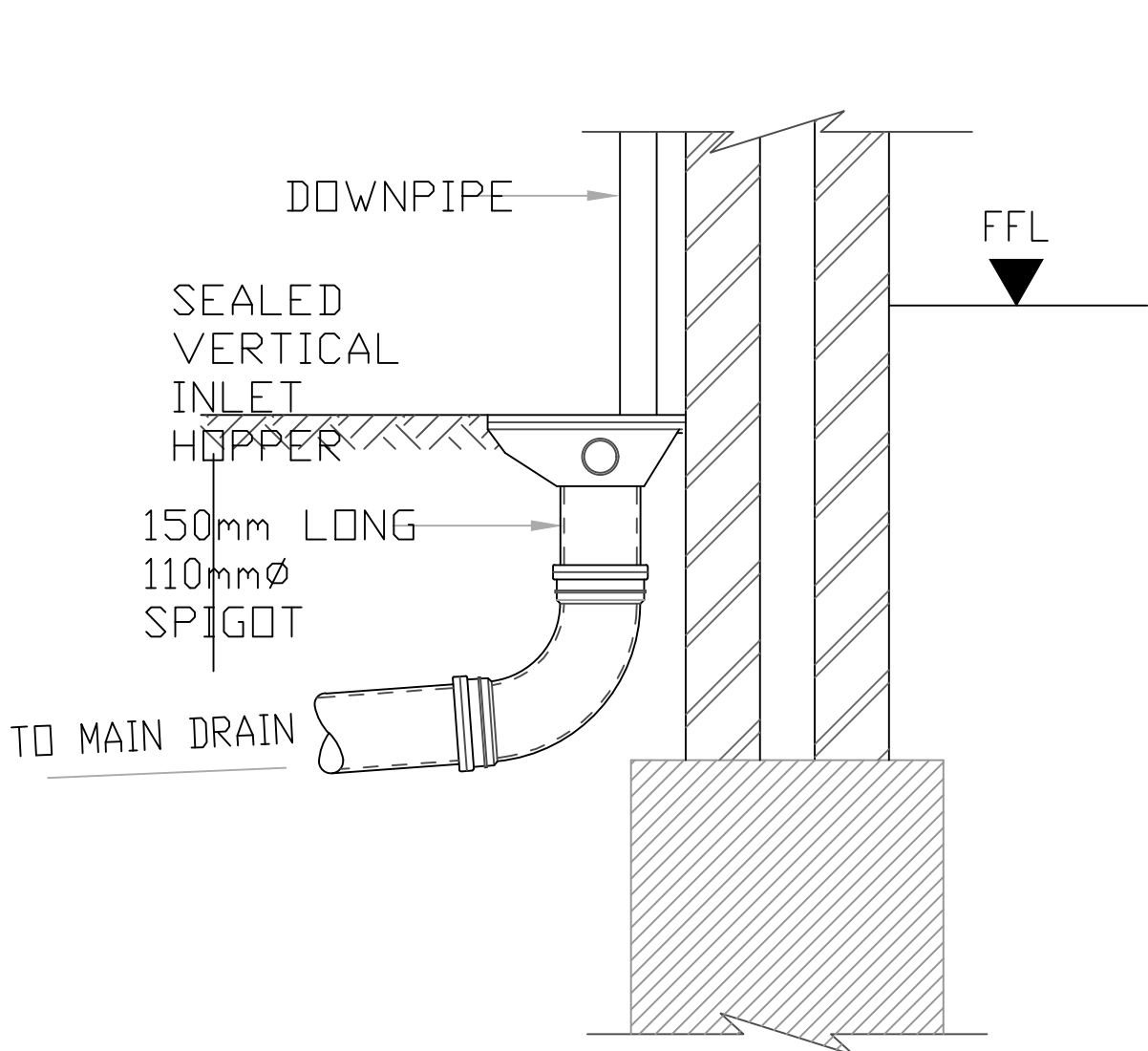


TYPE 3 CATCHPIT
MANHOLE.

(1:20)

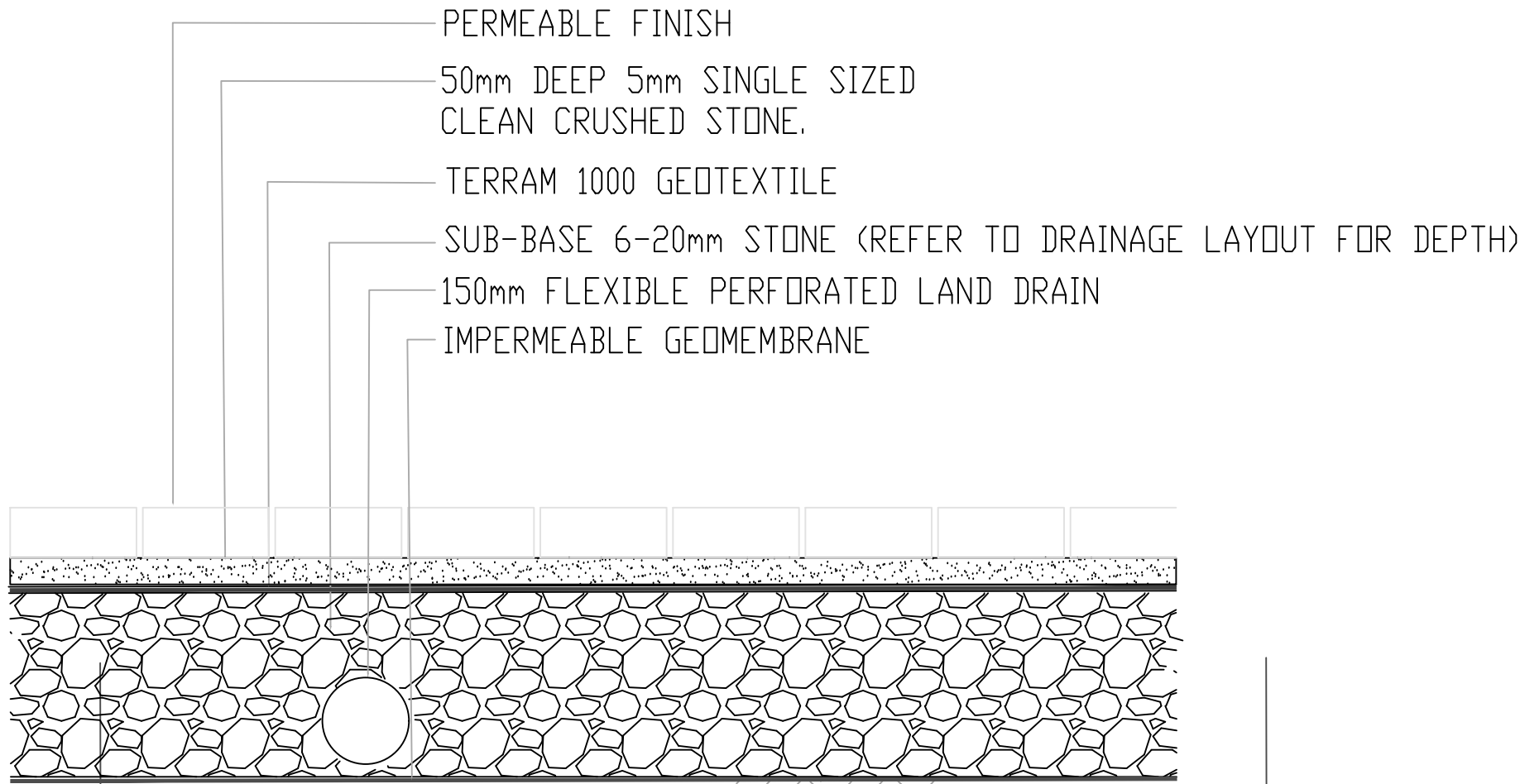
TYPICAL ATTENUATION TANK DETAILS

(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 G - InfoDrainage Calculations

AEG10782_RH10_TurnersHill_06: Worth Hall Farmhouse (RH10 4PE) Tulleys Entertainment Group Ltd Surface Water Drainage Network		Date: 26/08/2026		 water, civils and environment
Report Details: Type: Inflows Storm Phase: Phase		Designed by: JA	Checked by: NDD	
Company Address: Aegaea V2				



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: 26/08/2026		 water, civils and environment
Report Details: Type: Inflows Storm Phase: Phase		Designed by: JA	Checked by: NDD	
Company Address: Aegaea V2				



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)		26/08/2026			
Tulleys Entertainment Group Ltd		Designed by:	Checked by:		
Surface Water Drainage Network		JA		NDD	
Report Details:		Company Address:			
Type: Junctions		Aegaea			
Storm Phase: Phase		V2			

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: 26/08/2026		 water, civils and environment	
Report Details: Type: Stormwater Controls Storm Phase: Phase		Designed by: JA	Checked by:		Approved By: NDD
		Company Address: Aegaea V2			



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: 26/08/2026		 water, civils and environment	
Report Details: Type: Stormwater Controls Storm Phase: Phase		Designed by: JA	Checked by:		Approved By: NDD
		Company Address: Aegaea V2			



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: 26/08/2026		 water, civils and environment
Report Details: Type: Stormwater Controls Storm Phase: Phase		Designed by: JA	Checked by:	
		Approved By: NDD		
		Company Address: Aegaea V2		



Cellular Storage

Type : Cellular Storage

Dimensions

Exceedance Level (m)	138.690
Depth (m)	0.400
Base Level (m)	137.690
Number of Crates Long	17
Number of Crates Wide	28
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)	29.541

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)	0.029
Coefficient of Discharge	0.600
Invert Level (m)	137.690

AEG10782_RH10_TurnersHill_06:		Date:			
Worth Hall Farmhouse (RH10 4PE)		26/08/2026			
Tulleys Entertainment Group Ltd		Designed by:	Checked by:		
Surface Water Drainage Network		JA		NDD	
Report Details:		Company Address:			
Type: Connections		Aegaea			
Storm Phase: Phase		V2			

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)	8.289	Pipe	18.838		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	1.7	(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:		Date:			
Worth Hall Farmhouse (RH10 4PE)		26/08/2026			
Tulleys Entertainment Group Ltd		Designed by:	Checked by:	Approved By:	
Surface Water Drainage Network		JA		NDD	
Report Details:		Company Address:			
Type: Manhole Schedule		Aegaea			
Storm Phase: Phase		V2			



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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: 26/08/2026		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: JA	Checked by: NDD	
Company Address: Aegaea V2				

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
IC5	139.500 138.050	Diameter / Length: 0.600	{1} Pipe (9)	Pipe	138.050	Diam/Width:100	Manhole
E:532423.322	1.450						
N:135873.571			{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	2.000						
N:135869.491			{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	2.000						
N:135875.654			{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	1.480						
N:135882.899			{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	0.760		{2} Pipe (10)	Pipe	137.800	Diam/Width:100	
N:135886.239			{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: 26/08/2026		
		Designed by: JA	Checked by: NDD	
Report Details: Type: Manhole Schedule Storm Phase: Phase		Company Address: Aegaea V2		

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:		Date:	
Worth Hall Farmhouse (RH10 4PE)		26/08/2026	
Tulleys Entertainment Group Ltd		Designed by:	Checked by:
Surface Water Drainage Network		JA	NDD
Report Details:		Approved By:	
Type: Inflow Summary		NDD	
Storm Phase: Phase		Company Address:	
		Aegaea	
		V2	



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: 26/08/2026		
Report Details: Type: Network Design Criteria Storm Phase: Phase		Designed by: JA	Checked by: NDD	
		Approved By: NDD		
		Company Address: Aegaea V2		

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: 26/08/2026			
Report Details: Type: Network Design Criteria Storm Phase: Phase		Designed by: JA	Checked by:		Approved By: NDD
		Company Address: Aegaea V2			

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: Worth Hall Farmhouse (RH10 4PE) Tulleys Entertainment Group Ltd Surface Water Drainage Network		Date: 26/08/2026		
Report Details: Type: Rainfall Analysis Criteria		Designed by: JA	Checked by:	
		Approved By: NDD		
		Company Address: Aegaea V2		

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

AEG10782_RH10_TurnersHill_06: Worth Hall Farmhouse (RH10 4PE) Tulleys Entertainment Group Ltd Surface Water Drainage Network		Date: 26/08/2026		 water, civils and environment	
Report Details: Type: UK and Ireland Rural Runoff Calculator		Designed by: JA	Checked by:		Approved By: NDD
		Company Address: Aegaea V2			

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: 26/08/2026		 water, civils and environment
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: JA	Checked by: NDD	
		Company Address: Aegaea V2		



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 %: 960 mins: Summer	136.890	136.550	136.563	0.013	0.5	0.000	0.000	0.5	31.081	OK
IC1	FEH: 2 years: +0 %: 15 mins: Summer	138.390	137.990	138.038	0.048	2.8	0.008	0.000	2.7	1.205	OK
IC2	FEH: 2 years: +0 %: 15 mins: Summer	138.390	137.900	137.941	0.041	2.7	0.007	0.000	2.6	1.201	OK
IC3	FEH: 2 years: +0 %: 15 mins: Summer	138.350	137.800	137.840	0.040	2.6	0.006	0.000	2.5	1.198	OK
IC4	FEH: 2 years: +0 %: 960 mins: Summer	138.370	137.730	137.805	0.075	1.0	0.021	0.000	1.0	28.635	OK
IC5	FEH: 2 years: +0 %: 15 mins: Summer	139.500	138.050	138.095	0.045	2.8	0.013	0.000	2.7	1.272	OK
IC6	FEH: 2 years: +0 %: 15 mins: Summer	140.000	138.000	138.046	0.046	2.7	0.007	0.000	2.6	1.262	OK
IC7	FEH: 2 years: +0 %: 15 mins: Summer	139.950	137.950	137.991	0.041	2.6	0.007	0.000	2.5	1.253	OK
IC8	FEH: 2 years: +0 %: 15 mins: Summer	139.330	137.850	137.887	0.037	2.5	0.006	0.000	2.5	1.245	OK
IC9	FEH: 2 years: +0 %: 15 mins: Summer	138.560	137.800	137.837	0.037	2.5	0.010	0.000	2.4	1.307	OK
IC10	FEH: 2 years: +0 %: 960 mins: Summer	138.000	137.250	137.264	0.014	0.5	0.002	0.000	0.5	31.081	OK

AEG10782_RH10_TurnersHill_06: Worth Hall Farmhouse (RH10 4PE) Tulleys Entertainment Group Ltd Surface Water Drainage Network		Date: 26/08/2026		 water, civils and environment
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: JA	Checked by: NDD	
		Company Address: Aegaea V2		



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 %: 480 mins: Winter	136.890	136.550	136.565	0.015	0.7	0.000	0.000	0.7	30.710	OK
IC1	FEH: 30 years: +0 %: 15 mins: Summer	138.390	137.990	138.064	0.074	6.2	0.012	0.000	6.0	2.683	OK
IC2	FEH: 30 years: +0 %: 15 mins: Summer	138.390	137.900	137.964	0.064	6.0	0.010	0.000	5.8	2.679	OK
IC3	FEH: 30 years: +0 %: 480 mins: Winter	138.350	137.800	137.899	0.099	0.7	0.016	0.000	0.7	7.820	OK
IC4	FEH: 30 years: +0 %: 480 mins: Winter	138.370	137.730	137.899	0.169	1.7	0.048	0.000	1.7	33.412	Surcharged
IC5	FEH: 30 years: +0 %: 15 mins: Summer	139.500	138.050	138.122	0.072	6.2	0.020	0.000	6.1	2.831	OK
IC6	FEH: 30 years: +0 %: 15 mins: Summer	140.000	138.000	138.072	0.072	6.1	0.011	0.000	6.0	2.817	OK
IC7	FEH: 30 years: +0 %: 15 mins: Summer	139.950	137.950	138.014	0.064	6.0	0.010	0.000	5.8	2.805	OK
IC8	FEH: 30 years: +0 %: 15 mins: Summer	139.330	137.850	137.910	0.060	5.8	0.010	0.000	5.7	2.793	OK
IC9	FEH: 30 years: +0 %: 480 mins: Winter	138.560	137.800	137.899	0.099	1.0	0.028	0.000	1.0	25.697	OK
IC10	FEH: 30 years: +0 %: 480 mins: Winter	138.000	137.250	137.266	0.016	0.7	0.003	0.000	0.7	30.710	OK

AEG10782_RH10_TurnersHill_06: Worth Hall Farmhouse (RH10 4PE) Tulleys Entertainment Group Ltd Surface Water Drainage Network		Date: 26/08/2026		
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: JA	Checked by:	Approved By: NDD
		Company Address: Aegaea V2		



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 %: 1440 mins: Summer	136.890	136.550	136.567	0.017	0.8	0.000	0.000	0.8	80.586	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 %: 1440 mins: Summer	138.350	137.800	137.961	0.161	0.6	0.026	0.000	0.6	13.184	Surcharged
IC4	FEH: 100 years: +0 %: 1440 mins: Summer	138.370	137.730	137.961	0.231	1.5	0.065	0.000	1.5	73.134	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	3.553	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 %: 1440 mins: Summer	139.330	137.850	137.961	0.111	0.8	0.018	0.000	0.8	36.992	OK
IC9	FEH: 100 years: +0 %: 1440 mins: Summer	138.560	137.800	137.961	0.161	1.0	0.046	0.000	1.0	59.960	Surcharged
IC10	FEH: 100 years: +0 %: 1440 mins: Summer	138.000	137.250	137.267	0.017	0.8	0.003	0.000	0.8	80.586	OK

AEG10782_RH10_TurnersHill_06: Worth Hall Farmhouse (RH10 4PE) Tulleys Entertainment Group Ltd Surface Water Drainage Network		Date: 26/08/2026		
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: JA	Checked by:	Approved By: NDD
		Company Address: Aegaea V2		



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 %: 480 mins: Winter	136.890	136.550	136.567	0.017	0.9	0.000	0.000	0.9	37.341	OK
IC1	FEH: 30 years: +35 %: 15 mins: Summer	138.390	137.990	138.079	0.089	8.3	0.014	0.000	8.1	3.618	OK
IC2	FEH: 30 years: +35 %: 480 mins: Winter	138.390	137.900	137.979	0.079	0.9	0.013	0.000	0.9	10.568	OK
IC3	FEH: 30 years: +35 %: 480 mins: Winter	138.350	137.800	137.979	0.179	0.9	0.028	0.000	0.9	10.484	Surcharged
IC4	FEH: 30 years: +35 %: 480 mins: Winter	138.370	137.730	137.979	0.249	2.2	0.070	0.000	2.1	42.708	Surcharged
IC5	FEH: 30 years: +35 %: 15 mins: Summer	139.500	138.050	138.138	0.088	8.4	0.025	0.000	8.2	3.801	OK
IC6	FEH: 30 years: +35 %: 15 mins: Summer	140.000	138.000	138.087	0.087	8.2	0.014	0.000	8.1	3.786	OK
IC7	FEH: 30 years: +35 %: 15 mins: Summer	139.950	137.950	138.027	0.077	8.1	0.012	0.000	7.8	3.773	OK
IC8	FEH: 30 years: +35 %: 480 mins: Winter	139.330	137.850	137.979	0.129	1.1	0.021	0.000	1.1	21.564	OK
IC9	FEH: 30 years: +35 %: 480 mins: Winter	138.560	137.800	137.979	0.179	1.3	0.051	0.000	1.3	32.435	Surcharged
IC10	FEH: 30 years: +35 %: 480 mins: Winter	138.000	137.250	137.267	0.017	0.9	0.003	0.000	0.9	37.341	OK

AEG10782_RH10_TurnersHill_06: Worth Hall Farmhouse (RH10 4PE) Tulleys Entertainment Group Ltd Surface Water Drainage Network		Date: 26/08/2026			
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: JA	Checked by:		
		Company Address: Aegaea V2			



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 %: 1440 mins: Summer	136.890	136.550	136.568	0.018	1.0	0.000	0.000	1.0	109.898	OK
IC1	FEH: 100 years: +40 %: 15 mins: Summer	138.390	137.990	138.099	0.109	10.9	0.017	0.000	10.6	4.751	Flood Risk
IC2	FEH: 100 years: +40 %: 1440 mins: Summer	138.390	137.900	138.081	0.181	0.8	0.029	0.000	0.8	18.373	Surcharged
IC3	FEH: 100 years: +40 %: 1440 mins: Summer	138.350	137.800	138.081	0.281	0.8	0.045	0.000	0.8	18.370	Flood Risk
IC4	FEH: 100 years: +40 %: 1440 mins: Summer	138.370	137.730	138.081	0.351	2.0	0.099	0.000	2.0	100.637	Flood Risk
IC5	FEH: 100 years: +40 %: 15 mins: Summer	139.500	138.050	138.157	0.107	11.1	0.030	0.000	10.8	4.971	OK
IC6	FEH: 100 years: +40 %: 15 mins: Summer	140.000	138.000	138.105	0.105	10.8	0.017	0.000	10.5	4.955	OK
IC7	FEH: 100 years: +40 %: 1440 mins: Summer	139.950	137.950	138.081	0.131	1.1	0.021	0.000	1.1	50.777	OK
IC8	FEH: 100 years: +40 %: 1440 mins: Summer	139.330	137.850	138.081	0.231	1.1	0.037	0.000	1.1	50.769	Surcharged
IC9	FEH: 100 years: +40 %: 1440 mins: Summer	138.560	137.800	138.081	0.281	1.3	0.080	0.000	1.3	82.281	Surcharged
IC10	FEH: 100 years: +40 %: 1440 mins: Summer	138.000	137.250	137.269	0.019	1.0	0.003	0.000	1.0	109.898	OK

AEG10782_RH10_TurnersHill_06: Worth Hall Farmhouse (RH10 4PE) Tulleys Entertainment Group Ltd Surface Water Drainage Network		Date: 26/08/2026		 water, civils and environment	
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Designed by: JA	Checked by:		
		Company Address: Aegaea V2			



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 %: 960 mins: Summer	137.805	137.805	0.115	0.115	1.2	8.287	0.000	0.5	0.000	31.093	71.949	OK

AEG10782_RH10_TurnersHill_06:		Date:		
Worth Hall Farmhouse (RH10 4PE)		26/08/2026		
Tulleys Entertainment Group Ltd		Designed by:	Checked by:	Approved By:
Surface Water Drainage Network		JA		NDD
Report Details:		Company Address:		
Type: Stormwater Controls Summary		Aegaea		
Storm Phase: Phase		V2		



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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	50.458	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	51.046	OK
Cellular Storage	FEH: 30 years: +0 %: 480 mins: Winter	137.899	137.899	0.209	0.209	2.1	15.094	0.000	0.7	0.000	30.741	48.906	OK

AEG10782_RH10_TurnersHill_06:		Date:		
Worth Hall Farmhouse (RH10 4PE)		26/08/2026		
Tulleys Entertainment Group Ltd		Designed by:	Checked by:	Approved By:
Surface Water Drainage Network		JA		NDD
Report Details:		Company Address:		
Type: Stormwater Controls Summary		Aegaea		
Storm Phase: Phase		V2		



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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	14.661	0.000	0.3	0.000	23.826	35.389	OK
Porous Paving (Driveway)	FEH: 100 years: +0 %: 960 mins: Summer	138.847	138.847	0.189	0.197	1.4	13.900	0.000	0.3	0.000	18.436	36.196	OK
Cellular Storage	FEH: 100 years: +0 %: 1440 mins: Summer	137.961	137.961	0.271	0.271	1.9	19.587	0.000	0.8	0.000	80.600	33.695	OK

AEG10782_RH10_TurnersHill_06: Worth Hall Farmhouse (RH10 4PE) Tulleys Entertainment Group Ltd Surface Water Drainage Network		Date: 26/08/2026		 water, civils and environment	
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Designed by: JA	Checked by:		
		Company Address: Aegaea V2			



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	139.762	0.205	0.212	1.6	15.637	0.000	0.3	0.000	19.742	31.091	OK
Porous Paving (Driveway)	FEH: 30 years: +35 %: 960 mins: Summer	138.860	138.860	0.202	0.210	1.5	14.852	0.000	0.3	0.000	19.346	31.829	OK
Cellular Storage	FEH: 30 years: +35 %: 480 mins: Winter	137.979	137.979	0.289	0.289	2.7	20.879	0.000	0.9	0.000	37.376	29.323	OK

AEG10782_RH10_TurnersHill_06: Worth Hall Farmhouse (RH10 4PE) Tulleys Entertainment Group Ltd Surface Water Drainage Network		Date: 26/08/2026		 water, civils and environment	
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Designed by: JA	Checked by:		
		Company Address: Aegaea V2			



**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	21.431	0.000	0.3	0.000	32.432	5.556	OK
Porous Paving (Driveway)	FEH: 100 years: +40 %: 1440 mins: Summer	138.936	138.936	0.278	0.286	1.5	20.297	0.000	0.3	0.000	31.529	6.833	OK
Cellular Storage	FEH: 100 years: +40 %: 1440 mins: Summer	138.081	138.081	0.391	0.391	2.6	28.264	0.000	1.0	0.000	109.921	4.322	OK

AEG10782_RH10_TurnersHill_06: Worth Hall Farmhouse (RH10 4PE) Tulleys Entertainment Group Ltd Surface Water Drainage Network		Date: 26/08/2026		 water, civils and environment	
Report Details: Type: Connections Summary Storm Phase: Phase		Designed by: JA	Checked by:		
		Company Address: Aegaea V2			



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	0.039	2.493	1.4	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 %: 960 mins: Summer	Pipe	Cellular Storage	IC10	138.690	137.805	0.014	31.087	0.8	0.04	0.5	Surcharged
Pipe (8)	FEH: 2 years: +0 %: 960 mins: Summer	Pipe	IC10	Pond Inlet	138.000	137.264	0.013	31.081	0.8	0.04	0.5	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:		 water, civils and environment	
Worth Hall Farmhouse (RH10 4PE)		26/08/2026			
Tulleys Entertainment Group Ltd		Designed by:	Checked by:		
Surface Water Drainage Network		JA		NDD	
Report Details:		Company Address:			
Type: Connections Summary		Aegaea			
Storm Phase: Phase		V2			



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	0.078	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	0.076	5.533	1.5	0.72	10.8	OK
Pipe (6)	FEH: 30 years: +0 %: 15 mins: Summer	Pipe	IC3	IC4	138.350	137.865	0.079	2.674	0.6	0.35	5.6	OK
Pipe (7)	FEH: 30 years: +0 %: 480 mins: Winter	Pipe	Cellular Storage	IC10	138.690	137.899	0.016	30.725	0.9	0.05	0.7	Surcharged
Pipe (8)	FEH: 30 years: +0 %: 480 mins: Winter	Pipe	IC10	Pond Inlet	138.000	137.266	0.016	30.710	0.9	0.05	0.7	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	0.053	15.001	0.4	0.01	0.2	Surcharged

AEG10782_RH10_TurnersHill_06:		Date:		 water, civils and environment	
Worth Hall Farmhouse (RH10 4PE)		26/08/2026			
Tulleys Entertainment Group Ltd		Designed by:	Checked by:		
Surface Water Drainage Network		JA		NDD	
Report Details:		Company Address:			
Type: Connections Summary		Aegaea			
Storm Phase: Phase		V2			



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	3.553	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	0.091	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	0.099	6.953	1.4	0.92	13.7	OK
Pipe (6)	FEH: 100 years: +0 %: 15 mins: Summer	Pipe	IC3	IC4	138.350	137.876	0.094	3.379	0.6	0.45	7.1	OK
Pipe (7)	FEH: 100 years: +0 %: 1440 mins: Summer	Pipe	Cellular Storage	IC10	138.690	137.961	0.017	80.593	1.0	0.06	0.8	Surcharged
Pipe (8)	FEH: 100 years: +0 %: 1440 mins: Summer	Pipe	IC10	Pond Inlet	138.000	137.267	0.017	80.586	1.0	0.06	0.8	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	0.084	18.430	0.4	0.01	0.3	Surcharged

AEG10782_RH10_TurnersHill_06: Worth Hall Farmhouse (RH10 4PE) Tulleys Entertainment Group Ltd Surface Water Drainage Network		Date: 26/08/2026		 water, civils and environment	
Report Details: Type: Connections Summary Storm Phase: Phase		Designed by: JA	Checked by:		
		Company Address: Aegaea V2			



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	3.613	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	0.095	3.932	0.6	0.41	7.5	OK
Pipe (5)	FEH: 30 years: +35 %: 15 mins: Summer	Pipe	IC4	Cellular Storage	138.370	137.845	0.107	7.391	1.4	0.94	14.2	OK
Pipe (6)	FEH: 30 years: +35 %: 15 mins: Summer	Pipe	IC3	IC4	138.350	137.880	0.097	3.594	0.6	0.47	7.5	OK
Pipe (7)	FEH: 30 years: +35 %: 480 mins: Winter	Pipe	Cellular Storage	IC10	138.690	137.979	0.017	37.358	1.0	0.06	0.9	Surcharged
Pipe (8)	FEH: 30 years: +35 %: 480 mins: Winter	Pipe	IC10	Pond Inlet	138.000	137.267	0.017	37.341	1.0	0.06	0.9	OK
Pipe (9)	FEH: 30 years: +35 %: 960 mins: Summer	Pipe	Porous Paving (Patio)	IC5	139.908	139.758	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	0.093	19.340	0.4	0.01	0.3	Surcharged

AEG10782_RH10_TurnersHill_06:		Date:		 water, civils and environment	
Worth Hall Farmhouse (RH10 4PE)		26/08/2026			
Tulleys Entertainment Group Ltd		Designed by:	Checked by:		
Surface Water Drainage Network		JA		NDD	
Report Details:		Company Address:			
Type: Connections Summary		Aegaea			
Storm Phase: Phase		V2			



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	0.46	10.0	OK
Pipe (4)	FEH: 100 years: +40 %: 15 mins: Summer	Pipe	IC9	IC4	138.560	137.894	0.115	5.089	0.7	0.54	9.8	OK
Pipe (5)	FEH: 100 years: +40 %: 15 mins: Summer	Pipe	IC4	Cellular Storage	138.370	137.866	0.146	9.557	1.5	1.27	19.0	OK
Pipe (6)	FEH: 100 years: +40 %: 15 mins: Summer	Pipe	IC3	IC4	138.350	137.900	0.118	4.675	0.7	0.62	9.8	OK
Pipe (7)	FEH: 100 years: +40 %: 1440 mins: Summer	Pipe	Cellular Storage	IC10	138.690	138.081	0.019	109.910	1.0	0.07	1.0	Surcharged
Pipe (8)	FEH: 100 years: +40 %: 1440 mins: Summer	Pipe	IC10	Pond Inlet	138.000	137.269	0.018	109.898	1.0	0.07	1.0	OK
Pipe (9)	FEH: 100 years: +40 %: 1440 mins: Summer	Pipe	Porous Paving (Patio)	IC5	139.908	139.836	0.019	32.428	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	0.4	0.01	0.3	Surcharged