



West House Farm
Henfield Road, Albourne, Hassocks, West
Sussex

Flood Warning and Emergency Plan

For

Pyxis Land Limited

Document Control Sheet

West House Farm

Henfield Road, Albourne, Hassocks, West Sussex

Pyxis Land Limited

This document has been issued and amended as follows:

Date	Issue	Prepared by	Approved by
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1.0 Introduction

- 1.1 West House Farm, which is on Henfield Road in Hassocks, West Sussex, comprises a mix of modern farm buildings, a barn, and stables. Environment Agency's Flood Map for Planning shows the site to be in Flood Zone 1, which means it is outside the 1 in 1,000-year flood event outline. However, the Flood Risk Assessment (FRA) supporting the planning application for West House Farm places the access to the site within the low, medium and high surface water risk category (areas between the 1 in 30- year return period and the 1 in 1000-year return period).
- 1.2 Consequently, it is important that the users of West House Farm are aware of the flood risks that can potentially affect the site, so residents and visitors therein are able to prepare, react to and recover from a flood event. This Flood Warning and Evacuation Plan (FWEP) summaries the flood risk and provides all relevant information and procedures necessary to achieve the above.
- 1.3 This FWEP is a living document and West House Farm is responsible for its ownership, maintenance and implementation. All stakeholders are to inform West House Farm of any changes of circumstances that may materially affect the FWEP content and require it to be reviewed and updated.
- 1.4 This FWEP should be reviewed:
 - ▶ Following receipt of the document;
 - ▶ Every three years thereafter;
 - ▶ As a result of lessons learned after drills and events;
 - ▶ Following changes of management or modification of the premises, and;
 - ▶ Following changes to the flood warning process.
- 1.5 Motion acknowledges that this FWEP is suitable for the purposes set out in the National Planning Policy Framework (NPPF) and the Planning Practice Guidance (PPG). This FWEP, however, is the sole responsibility of West House Farm and/or their representatives. Motion cannot accept any responsibility for any omission or error contained in any such plan, or for loss, damage or inconvenience that may result from the FWEP's implementation.

2.0 Objectives

2.1 This FWEP has been produced with the following objectives:

- a) To highlight how flooding can occur;
- b) To outline the flood warning process, including how to receive alerts and understand the different flood warning codes;
- c) To give recommendations on how to take action in a flood event and what mechanisms need to be in place to ensure that action can happen safely and in a co-ordinated manner;
- d) To establish robust procedures to move residents to a place of safety, including establishing a safe evacuation route to a place of refuge;
- e) To make recommendations for things that can be done to ensure a swift recovery from flooding, and;
- f) To establish clear procedures for the implementation and maintenance of this plan.

3.0 Situation

- 3.1 West House Farm is a residential dwelling located off Henfield Road in Hassocks. The grid reference for West House Farm is TQ 25744 16882. A site location plan of West House Farm can be seen in **Appendix A**.
- 3.2 The site currently comprises a mix of modern farm buildings, a barn, and stables. A small cluster of trees are located to the southwestern corner of the site, while the northern and northeastern areas consist of greenfield land and an access path. To the south of the site is an existing ditch, and immediately northwest of the site lies West House Farm.
- 3.3 The proposal is for the demolition of modern farm buildings. Extension and conversion of existing barn to dwelling house. Conversion of existing stable building to ancillary accommodation. Construction of replacement stables, games room outbuilding, and a bike, bin and storage outbuilding.
- 3.4 Pedestrian and vehicular access and egress are achieved via a long access track running from the site to Henfield Road.

4.0 Flood Risk

- 4.1 In 2026 Motion carried out an Flood Risk Assessment (FRA) for West House Farm (**Appendix B**), and further details regarding access and egress were later provided in a technical note (TN) (**Appendix C**). The FRA explores the flood risk from all sources and the key points from the FRA and TN are summarised below. However, should more information be required, please refer to the original documents.
- 4.2 The EA's Flood Map for planning shows that the site is within Flood Zone 1, which means it is outside the 1 in 1,000-year flood event outline and is not at risk of tidal or fluvial flooding.
- 4.3 The EA's Risk of Flooding from Surface Water (RoFSW) map shows that most of the site is in the very low surface water flood risk category (areas less than the 1 in 1000-year return period). However, there is a small area along the entrance of the site which falls into the low, medium and high surface water risk category (areas between the 1 in 30- year return period and the 1 in 1000-year return period) which is where the ordinary watercourse is culverted below the existing site access road.
- 4.4 The technical note prepared by Motion includes the results of hydraulic modelling undertaken for the culverted watercourse. Modelling by Ardent shows that flooding would only affect a short section of the access road (about 25 m) in an extreme event, with shallow depths and very low risk elsewhere.
- 4.5 Surveyed levels along the access route range from 24.91 m to 24.95 m AOD, while the adjacent watercourse bed level is 23.068 m AOD. Ardent has confirmed that the levels used within the hydraulic model were, in part, lower than the surveyed ground levels. Specifically, the model utilised levels between 24.63 m and 24.95 m AOD, resulting in a maximum discrepancy of 0.28 m. Consequently, the predicted peak flood depth of 0.37 m is likely to be overestimated, and actual flood depths on site would be shallower by up to 0.28 m. On this basis, the modelled scenario is considered conservative, and safe access is expected to be maintained.
- 4.6 Accordingly, flood depths and associated hazard along the access route are likely to be lower than those indicated by the model, resulting in safer and more resilient access conditions.
- 4.7 The site is not in an area with any indicators of groundwater flooding and not in an area with potential for groundwater flooding to occur. Due to this and being in an area of 'negligible' risk, it can be seen that the development site is at very low groundwater flood risk.
- 4.8 The 2009 Strategic Flood Risk Assessment (SFRA) for West Sussex County Council includes a map identifying areas more prone to flooding from sewers, which shows that the site is not affected.
- 4.9 The site is considered to be at very low risk of sewer flooding, is not at risk of reservoir flooding or any other artificial sources, and with no recorded history of past flooding.

5.0 Preparing for Flooding

- 5.1 There are many ways in which West House Farm can prepare for flooding. By planning a response to a flood event, it will not only ensure that West House Farm and people within can respond quickly and effectively to flooding, but also recover with as little disruption as possible.
- 5.2 The following recommendations are not exhaustive. However, they provide a good basis for planning for flooding and suggest ways to respond robustly and efficiently to a flood event.
- 5.3 As discussed above, this FWEP should be a living document. West House Farm is encouraged to add and amend this section as their understanding of how to plan for and react in a flood event evolves. This may be during a 'lessons learned' workshop following drills or after an actual flood event.

Command and Control

- 5.4 A key factor in providing a timely and co-ordinated response to flooding is to ensure all residents are clear on their roles and responsibilities. Therefore, it is recommended that West House Farm has nominated flood warden(s).
- 5.5 The flood warden(s) should:
 - ▶ Be intimately familiar with this document's recommendations and procedures so that, in a flood event, all necessary actions can be executed in a timely and co-ordinated manner.
 - ▶ Understand and utilise the flood warning information available and ensure that they stay informed of weather conditions.
 - ▶ Understand and be able to interpret the flood warning codes (discussed later in this document) and know when to act.
 - ▶ Communicate flood warnings to other people.
 - ▶ Delegate tasks to other people so that they can assist in a flood event.
 - ▶ Develop a prioritised response to flooding so that in the event that there is a short lead-in between a flood warning being issued and the onset of flooding occurring, the most important tasks and most vulnerable people can be dealt with first.
 - ▶ Decide whether it is better to remain on the premises (following advice from emergency services) or evacuate during a flood event.
 - ▶ Schedule and lead practice evacuations and drills.
 - ▶ Know the cut-off points for gas, electricity and water within the building.
 - ▶ Liaise with emergency responders and the LPA as and when necessary.
 - ▶ Ensure that this document is updated and amended as per the above schedule, or as and when necessary.
- 5.6 The flood warden's role should be updated and reviewed on a regular basis.

Communication & Contacts

- 5.7 A list of information and service providers that may need to be contacted in a flood event needs to be assembled. This may include (but not be limited to) the below, which are not in any specific order of importance:
 - ▶ The Environment Agency Floodline

- ▶ The emergency services
- ▶ The electricity supplier (inc. the meter number)
- ▶ The gas supplier (inc. the meter number)
- ▶ Southern Water (inc. the account number)
- ▶ The telephone provider
- ▶ Mid Sussex District Council emergency planning
- ▶ The contents and building insurance company's 24-hour number (and the policy number)
- ▶ The local radio station for news alerts and weather updates

5.8 It also recommended that the Flood Warden compiles contact details of companies that may be able to help after flooding has receded and it is time to return to normal business. These companies should be considered in advance and are a key part of the recovery plan. It is recommended that companies are chosen who are local to West House Farm, but not in areas that may also be impacted by flooding. The companies that may be able to help after a flood include:

- ▶ Electricians
- ▶ Plumbers
- ▶ Builders
- ▶ Equipment repair/suppliers
- ▶ IT suppliers
- ▶ Security services
- ▶ Water pumping services
- ▶ Emergency power suppliers
- ▶ Cleaning contractors
- ▶ Cleaning contractors

5.9 The table in **Appendix D** of this FWEPP has been provided so that a list of the above contacts can be gathered and recorded in advance of a flood event.

Flood Warning Services

5.10 It is imperative that West House Farm prepares for flooding by signing up to the Environment Agency's Flood Warning service. In areas of high flood risk, the Environment Agency offers a service called Floodline. It is a free service that sends automated flood warnings by telephone, SMS text or email. This service operates 24-hours a day, 365 days a year.

5.11 To receive this service, call Floodline on 0345 988 1188 or visit <https://www.gov.uk/sign-up-for-floodwarnings>.

5.12 There are several flood warning 'codes'. Each code represents a different level of warning according to the current likelihood of flooding and recommends an action to take. The flood warning codes can be issued in any order, usually ending with an 'all clear' once the risk of flooding has passed.

5.13 Flood warnings are triggered by particular weather events and the current situation on rivers. Flood Warnings are issued as far in advance as possible, which should allow for a timely and co-ordinated

response. Notwithstanding this, it should be borne in mind that flood warnings may not always be possible to issue too far in advance where the onset of flooding is rapid. In this scenario, where time to react and prepare for flooding is limited, a system of prioritisation will be necessary. This should have been covered as part of the flood warden's responsibilities and flood response plan.

- 5.14 A guide to the Environment Agency's flood warning codes can be found in **Appendix E**. The flood warden and residents should familiarise themselves with these codes and the recommended actions.
- 5.15 The Environment Agency Flood Warning Service provides alerts primarily for fluvial and tidal flooding and does not cover surface water flooding, which is typically rapid-onset and managed through rainfall forecasting and local authority processes.
- 5.16 Therefore, the client should also regularly monitor Met Office severe weather warnings to stay informed of forecast rainfall events that may give rise to surface water flooding. This should involve checking the Met Office website or app for yellow, amber, or red rainfall warnings, particularly during periods of prolonged or intense rainfall, and enabling notifications where possible to ensure timely updates are received.

Familiarisation & Practice

- 5.17 The successful implementation of this FWEP is dependent on the flood warden and other residents being familiar with its contents and recommendations, which follow the latest guidance from the NPPF and its supporting PPG. It is also recommended that all residents have rehearsed, where possible, the procedures contained within this FWEP, much like a fire drill is practiced. This should be rehearsed at regular intervals.
- 5.18 Consideration should be given to the fact that evacuations may have to take place while visitors are in the building, some of whom may have disabilities, mobility problems or issues with communication, and while the weather is inclement. Practice evacuations should simulate this.

Key Locations

- 5.19 It is imperative that the flood warden knows the location of cut-off points for gas, electricity and water. Ideally, these should be marked on a floor plan, and this should be stored with this FWEP. The production and maintenance of this plan is the responsibility of the flood warden.
- 5.20 Space for the storage of this plan has been provided in **Appendix F**.
- 5.21 The location of any materials or chemicals on site that may contaminate flood water should also be known and marked on the same plan.

Insurance

- 5.22 The buildings and contents insurance policies need to be up-to-date and reflect the fact that West House Farm is in an area of medium to high surface water flood risk. Failure to do so could leave West House Farm uninsured. It is worth knowing what information the buildings and contents insurer will need to support a claim and in what timescale this must be submitted to be valid. This should be done in advance and be reviewed by the flood warden and/or the building management team.

6.0 Taking Action

- 6.1 With the above preparation measures in place, it should allow West House Farm and the designated flood warden to plan for and react to a flood. The following actions, in addition to those recommended in the Environment Agency's Flood Warning information in **Appendix E**, should be carried out in response to a flood event when action is necessary.
- 6.2 Not all the following actions can be carried out by an individual and, therefore, a co-ordinated team response may be necessary. The flood warden should lead the response and delegate responsibilities as required.

Sound the Alarm

- 6.3 During a flood event the flood warden should be in close contact with the Environment Agency, either in person or through the automated flood warning services. The flood warden should also be monitoring weather forecasts.
- 6.4 When a 'Flood Alert' is sounded, the flood warden should start preparing for flooding.
- 6.5 If a 'Flood Warning' or 'Severe Flood Warning' is issued, it is time to act.
- 6.6 The first action to take is to communicate the flood warning to residents and start preparing for evacuation.

Resident Evacuation

- 6.7 Evacuation should only be carried out if it is safe to do so and it has been instructed by the emergency services.
- 6.8 If access/egress routes from the building are threatened by flooding then it is important to stay in a safe, dry place that requires no intervention or rescue from the outside. The emergency services will be at full-stretch during a flood event and all efforts should be taken to avoid placing an additional burden on them at this time. The FRA concluded that the buildings at West House Farm are not affected by surface water flooding, with the risk limited to the access only. As such, it may be safer for occupant to remain within the property, which is expected to remain dry during a flood event.
- 6.9 If evacuation is possible, instructed and necessary, as soon as the 'flood warning' code is received the first priority must be to evacuate the residents. Residents should be informed in a calm and confident manner and prompted to leave the building via the access/egress routes specified later in this FWEP to the specified muster point.
- 6.10 There may also be individuals who have disabilities, mobility problems or issues with communication. Special support and assistance should be made available to these individuals.
- 6.11 Those arriving in vehicles should be allowed to depart in their cars if it is safe to do so. Upon departing they should be given clear instruction not to drive through floodwater. It is suggested the vehicles should go west along the access track to Henfield Road.
- 6.12 Pedestrians should be escorted from the building to a muster point that is safely outside of the high-risk flood area. The escorting person should be nominated by the flood warden and should be familiar with the FWEP. The suggested pedestrian egress route is out the front of the building and go west along the access track to Henfield Road.
- 6.13 A map of this route can be seen in **Appendix G**.
- 6.14 An evacuation is only possible when there is sufficient time between a warning being issued and the onset of flooding. During a rapid onset flood event, there may be insufficient time to evacuate, which is

typically the case with surface water flooding. In these circumstances it is may be possible to remain on site and all persons should move to the upper floors.

- 6.15 If it is decided that it would be safer to remain within the building, a risk assessment should be completed. It should evaluate how many people can be accommodated and the resources/equipment that are necessary to sustain them for the expected duration of the flood. The emergency services should also be informed and involved in this decision at the earliest convenience.
- 6.16 Any supplies should be taken to the upper floors, which might include food, water and facilities that can substitute to a WC should one not be available.

Protective Actions

- 6.17 Identify stock, equipment and possessions that may need special protective measures. Computers should be properly shut down and any important data should be backed up. Other electrical items should be switched off and moved to a safe location.
- 6.18 Gas, electricity and water supplies should be switched off. Any materials or chemicals on site that may contaminate flood water should be stored safely away from flood water and other sources of damage.
- 6.19 Prior to leaving the site, any demountable flood barriers should be installed to prevent ingress of floodwaters.

Key Contacts

- 6.20 Review the prepared list of key contacts (**Appendix D**) as prompted by the list in Paragraph 5.8 of this FWEP and make only essential calls. Retain the list of key contacts to take off-site during the evacuation.

Security

- 6.21 Once the building has been evacuated, the flood warden should carry out a floor check to ensure that there are no remaining persons within the building. Once it is confirmed that the building is empty, all windows and doors need to be locked and the intruder alarm set. The flood warden and any remaining assistants should then stay together and make their way to the safe, dry refuge via the evacuation routes outlined in Paragraph 6.12.

7.0 During Flooding

- 7.1 During the flood event, the flood warden should keep up to date with weather and flood conditions. They should stay in contact with the emergency services, weather forecasts, the Environment Agency's Flood Warning service and local television and radio broadcasts for the latest information.
- 7.2 The flood warden and residents should stay away from West House Farm and should only be allowed to re-enter the building once it has been cleared to do so by the emergency services and the Environment Agency's Flood Warning service has issued an 'all clear' notice.

8.0 Recovery

- 8.1 Recovery will be co-ordinated by Mid Sussex District Council, The Environment Agency and the emergency services.
- 8.2 If there's been a serious flood, Mid Sussex District Council may have chosen a place like the town hall as a 'flood hub' from which to organise recovery efforts. There may be a nearby community flood warden or flood action group. Contact the **National Flood Forum** for help in finding local support on **01299 403055**.
- 8.3 The re-opening of West House Farm will be reliant on a number of factors. This includes:
- ▶ The duration of the flood event and when flooding is likely to recede;
 - ▶ Presence of environmental hazards such as contaminated floodwater and sewage;
 - ▶ Loss of utilities;
 - ▶ Building damage;
 - ▶ Damage to equipment/infrastructure;
 - ▶ Cleaning/renovating needs, and;
 - ▶ The risk of more flooding due to subsequent weather conditions;
- 8.4 With the above factors in mind, the emergency services must give their go-ahead prior to the building being reoccupied. The flood warden should keep in touch with the emergency services and follow their advice during and after the flood event. People should only re-enter the building when the emergency services say it is safe to do so.
- 8.5 Drains fitted with non-return valves need to be checked following a flood to ensure that they are not blocked open by silt or other debris. Failure to do this risks them not functioning properly in a future flood event.

Cleaning Up

- 8.6 Once the area and building are safe to access, it may be necessary to do some cleaning up on site depending on the level of the flood event and how much floodwater ingress has taken place. In this circumstance photographs must be taken to document damage and to record the flood water height. The insurer should be contacted before discarding items that cannot be cleaned.
- 8.7 Mid Sussex District Council should help with collecting large flood damaged items. They will be able to provide information on where to put them and when they may be collected.
- 8.8 Items can be discarded by the usual means if they are not polluted. Mid Sussex District Council should be contacted if skips or extra rubbish collections are required.
- 8.9 Flood water may contain sewage, chemicals and animal waste, which can cause disease. Personnel cleaning either in or around the property after a flood event should always wear gloves, a face mask and sturdy PPE footwear.
- 8.10 The colour, taste and smell of tap water should be monitored and, if it changes, it should be stopped being used immediately and Southern Water should be informed.

Repairs

- 8.11 The buildings and contents insurers should be contacted before any repairs or replacements of damaged items commences. Most repair work after flooding will need to be done by approved traders appointed by your insurer.
- 8.12 If heaters or dehumidifiers are used to dry out the buildings, there must be good ventilation. Petrol or diesel-powered generators should never be used indoors; their exhaust gases contain potentially lethal carbon monoxide.

9.0 Recommendations

9.1 This FWEP has made a number of recommendations, which are summarised here for easy reference.

- ▶ Appoint a flood warden and allow for their training and familiarisation with this FWEP. They must be familiar and prepared for their role during a flood event.
- ▶ Populate the essential contacts list in **Appendix D** of this FWEP and add any additional contacts as necessary.
- ▶ Make a floor plan of utility cut-off points and store it within **Appendix F** this FWEP.
- ▶ Schedule and practice flood evacuations, much like a fire drill.
- ▶ Treat this FWEP like a living document that needs to be regularly reviewed and updated. West House Farm is encouraged to add and amend this document as their understanding of how to react in a flood event evolves.
- ▶ Make copies of this FWEP accessible to all.
- ▶ Print off the Flood Warning information in **Appendix E**.
- ▶ Familiarise all residents with the contents and procedures of this document and why it exists.

10.0 Useful Sources of Information

Environment Agency Flood Map for Planning:

<https://flood-map-for-planning.service.gov.uk/>

How to plan ahead for flooding:

<https://check-for-flooding.service.gov.uk/plan-ahead-for-flooding>

Sign up for flood warnings:

<https://www.gov.uk/sign-up-for-flood-warnings>

Flood Warnings for England:

<https://check-for-flooding.service.gov.uk/?location=+>

River and sea levels in England:

<https://check-for-flooding.service.gov.uk/river-and-sea-levels>

Prepare for flooding:

<http://www.environment-agency.gov.uk/business/topics/flooding/32358.aspx>

Prepare your business for flooding:

<https://www.gov.uk/government/publications/preparing-your-business-for-flooding>

What to do in a flood:

<https://check-for-flooding.service.gov.uk/what-to-do-in-a-flood>

How to recover after a flood:

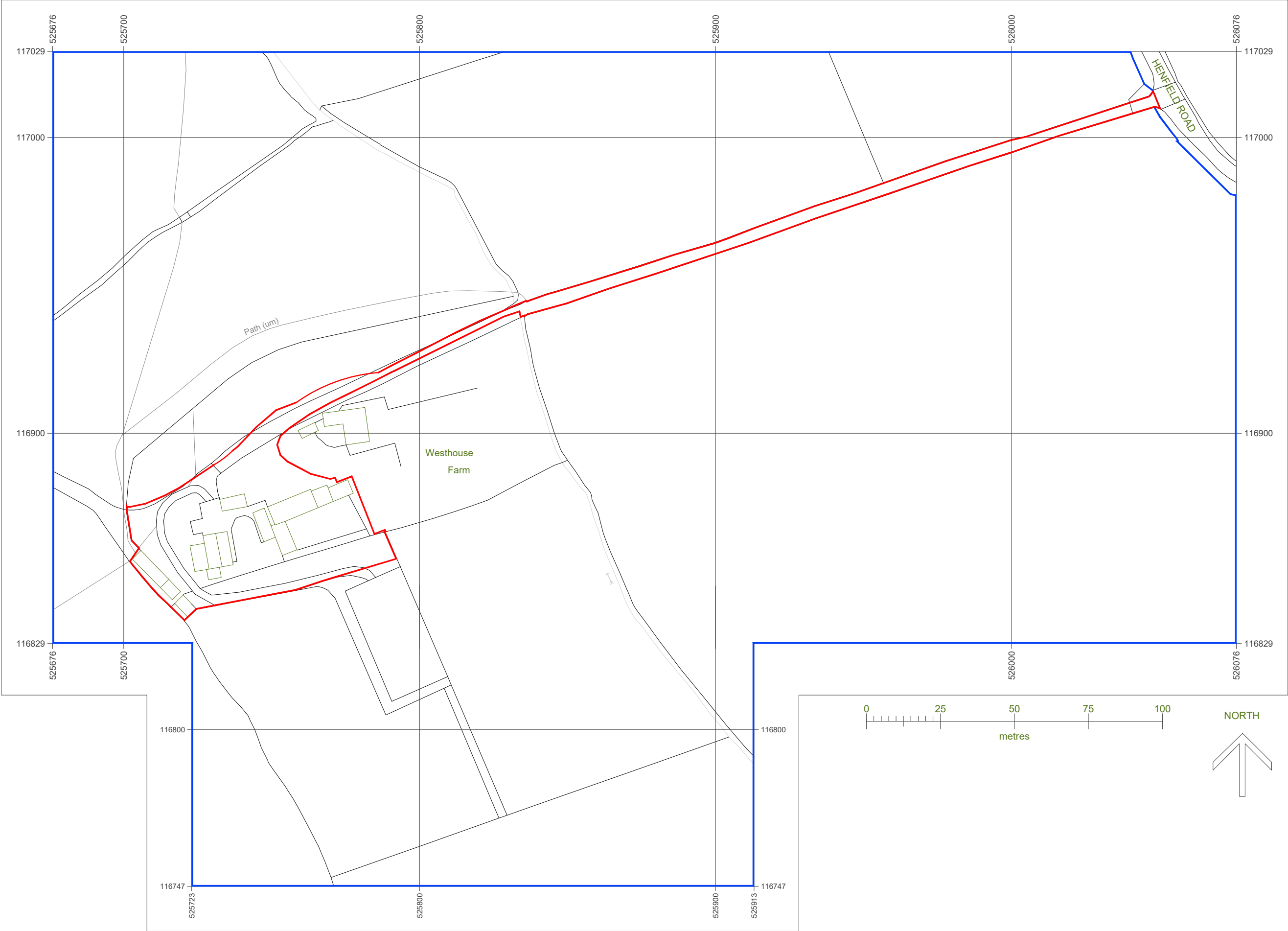
<https://check-for-flooding.service.gov.uk/recovering-after-a-flood>

The National Flood Forum:

<https://nationalfloodforum.org.uk/>

Appendix A

Site Location Plan



Serial number: 299595 + 319218

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Location Plan

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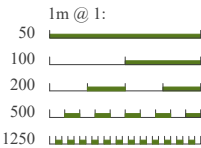
Drawing Location Plan

Submission Planning

Application Area: 4770 m²



Indicative: 0.0°



Appendix B

Motion: Flood Risk Assessment



West House Farm
Henfield Road, Albourne, Hassocks, West
Sussex

**Flood Risk Assessment and Surface Water
Drainage Strategy**

For

Pyxis Land Limited

Document Control Sheet

West House Farm

Henfield Road, Albourne, Hassocks, West Sussex

Pyxis Land Limited

This document has been issued and amended as follows:

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D EA’s RoFSW Mapping

E Topographical Survey

F Southern Water Asset Records

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H Envirocheck FSR: Historic

I Existing and Proposed Impermeable areas drawings

J FEH QMED Calculation

K Proposed Drainage Strategy Layout

L Rainwater Harvesting Calculation

1.0 Introduction

- 1.1 This Flood Risk Assessment (FRA) and Drainage Strategy has been produced by Motion on behalf of their client, Pyxis Land Limited. It supports the planning application for the demolition of modern farm buildings, extension and conversion of the existing barn to a dwelling house, conversion of existing stable building to ancillary accommodation, construction of replacement stables, games room outbuilding, and a bike, bin and storage outbuilding for West House Farm, Henfield Road, Albourne, Hassocks, West Sussex. A site location plan and red line boundary of the proposed development can be seen in **Appendix A**.
- 1.2 The proposed development will provide a dwelling house, ancillary accommodation, stables, a games room, and a bike and bin storage outbuilding. The proposed development layout can be seen in **Appendix B**.
- 1.3 The 0.4590 hectares (ha) site is located within Flood Zone 1 according to the Environment Agency's (EA's) Flood Map for Planning (**Appendix C**) and is at Very Low Risk from surface water flooding.
- 1.4 With reference to the EA's risk of Flooding from Surface Water (RoFSW) map in **Appendix D**, most of the site is in the very low surface water flood risk category (areas less than the 1 in 1000-year return period). However, there is a small area along the entrance of the site which falls into the low, medium and high surface water risk category (areas between the 1 in 30- year return period and the 1 in 1000-year return period) which is where the ordinary watercourse flows below the existing access road to the site from Henfield Road.
- 1.5 A drainage strategy is required to demonstrate how the development will manage and discharge surface water generated in all rainfall events up to and including the 1 in 100-year + 45% storm.
- 1.6 Therefore, this FRA and drainage strategy has been produced to discuss the flood risks to the proposed development, from all sources. This FRA and drainage strategy will also define how the development will manage its surface water and foul sewage so that the development does not increase flood risk in the area or to neighbouring properties/land over the existing situation.
- 1.7 This FRA and drainage strategy follows the guidance set out in:
 - ▶ West Sussex LLFA Policy for the Management of Surface Water (November 2018)
 - ▶ National Planning Policy Framework (NPPF)
 - ▶ Planning Practice Guidance (PPG) to the National Planning Policy Framework
 - ▶ CIRIA SuDS Manual 2015 (C753)
 - ▶ Environment Agency Rainfall Runoff Management for Developments
 - ▶ The New National Standards for SuDS (July 2025)
- 1.8 This FRA and drainage strategy report pertains only to the drainage strategy for the development. It does not provide details of how the site will be drained during the construction phase. This report is also not a drainage verification report, which can only be produced post-construction.
- 1.9 Similarly, this report does not provide information on how the drainage infrastructure will be protected during the construction phase of the project. The provision of this information is the responsibility of the appointed contractor.

2.0 Site Description

Table 2.1 – Site Summary

Site Name	West House Farm
Location	Henfield Road, Albourne, Hassocks, West Sussex
Grid Reference	525744, 116882
Site Area	Red-line boundary: 4,590m ² (0.4590 ha) Developable area: 3,586m ² (0.3586 ha)
Development Type	A dwelling house, ancillary accommodation, stables, games room, and a bike and bin storage outbuilding
Flood Zone	Flood Zone 1
Surface Water Flood Risk	Very Low Risk
Local Water Authority	Southern Water
Local Planning Authority	Mid Sussex District Council (MSDC)
Lead Local Flood Authority	West Sussex County Council (WSCC)

Site Location and Description

- 2.1 The red-line boundary of the site measures 0.4590 ha, with the developable area being 0.3586 ha. The site is currently accessed from Henfield Road. The site location can be seen in the plan in **Appendix A**.
- 2.2 The site currently comprises a mix of modern farm buildings, a barn, and stables. A small cluster of trees are located to the southwestern corner of the site, while the northern and northeastern areas consist of greenfield land and an access path. To the south of the site is an existing ditch, and immediately northwest of the site lies West House Farm

Topography

- 2.3 With reference to the Topographical Survey of the site in **Appendix E**, the site levels range from around 30.97 metres Above Ordnance Datum (mAOD) in the southwest of the site, to around 26.2 mAOD to the northeast of the site. The overall site gradient is estimated to be around 1 in 21.

Geology

- 2.4 The British Geological Survey (BGS) online 1:50,000 GeoIndex¹ mapping does not record any superficial deposits on the site² and the underlying solid geology is Weald Clay Formation-Mudstone, which is Dark grey thinly-bedded mudstones and mudstones with subordinate siltstones, fine- to medium-grained sandstones, including calcareous sandstone, shelly limestones and clay ironstones³.

¹ https://mapapps2.bgs.ac.uk/geoindex/home.html?_ga=2.225054234.1281457246.1660057743-1245338023.1660057743

² https://mapapps2.bgs.ac.uk/geoindex/home.html?_ga=2.225054234.1281457246.1660057743-1245338023.1660057743

³ <https://webapps.bgs.ac.uk/lexicon/lexicon.cfm?pub=WC>

- 2.5 Defra's Magic Map application⁴ lists the soil as being 'Slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils'.
- 2.6 The nearest available BGS borehole record is from around 880m west of the site (TQ21NW8/B⁵). The borehole log shows Weald Clay to 18m. The layers were as follows:
- ▶ Mottled clay down to 12 feet (ft) 6 inches (in)
 - ▶ Black stone from 12 ft 6 in, down to 15 ft
 - ▶ Clay from 15 ft, down to 25 ft 6 in
 - ▶ Hard brown shale from 25 ft 6 in, down to 29 ft 6 in
 - ▶ Blue clay from 29 ft 6 in, down to 31 ft 3 in
 - ▶ Hard brown shale from 31 ft 3 in, down to 41 ft 6 in
 - ▶ Hard clay from 41 ft 6 in, down to 44 ft
 - ▶ Green shale from 44 ft, down to 56 ft 6 in
 - ▶ Clay from 56 ft 6 in, down to 59 ft 6 in

Hydrogeology

- 2.7 Groundwater Source Protection Zones (SPZ's) are defined around groundwater abstraction sources such as wells, boreholes and springs that are used for public drinking water supply.
- 2.8 SPZ's show the risk of contamination to groundwater from any activities that might cause pollution in the area. The closer the activity to the source of abstraction, the greater the risk. The maps show three main zones; inner – Zone 1; outer – Zone 2; and total catchment – Zone 3.
- 2.9 Defra's Magic Map was reviewed to see where the site is located in relation to the Groundwater SPZ's, and the site is not located in a SPZ.
- 2.10 Defra's Magic Map application lists the bedrock geology as 'unproductive' aquifer, and the Groundwater Vulnerability Map (England) classification is unproductive.

Infiltration Potential

- 2.11 The desk based geology information in the section above indicates that infiltration will not be feasible at the site due to the clay-based geology (Weald Clay Formation-Mudstone).
- 2.12 Therefore, infiltration cannot be considered a viable means of surface water discharge for the development.

Existing Drainage Regime

- 2.13 An asset location plan was obtained from Southern Water, and this can be seen in **Appendix F**. This shows that there are no public surface water or foul sewers within the site or in the immediate vicinity of the site boundary. The closest public foul sewer is located to the southeast of the site along the B2116 located next to Inholmes Farm with the manhole reference of 2801.

⁴ <https://magic.defra.gov.uk/MagicMap.html>

⁵ <https://api.bgs.ac.uk/sobi-scans/v1/borehole/scans/items/584196>

Hydrology

- 2.14 The EA Statutory Main River Map⁶ shows that the nearest Main River is approximately 1.3km west, southwest of the site.
- 2.15 An ordinary watercourse flowing north is located approximately 121 metres east of the site. The culverted watercourse passes beneath the site entrance and appears to originate from the area around Albourne Green.

⁶ <https://www.arcgis.com/apps/webappviewer/index.html?id=17cd53dfc524433980cc333726a56386>

3.0 Flood Risk Legislative and Policy Framework

- 3.1 LLFA's including WSCC have a responsibility under the FWMA to develop, maintain, apply and monitor the application of a strategy for local flood risk in their area. Local flood risk is defined as flood risk arising from local sources, such as surface water run-off, groundwater and ordinary watercourses (i.e. non main rivers). The EA plays a role in managing the watercourses designated as 'main rivers'.
- 3.2 West Sussex often delegates their LLFA responsibilities to Local Planning Authorities. It is often the case that MSDC consult on local flood risk and drainage matters, and this may be the case for the current application.

The National Planning Policy Framework

- 3.3 The NPPF sets out the Government's national policies on different aspects of land use planning in England in relation to flood risk. The Planning Practice Guidance (PPG) to the NPPF provides further information on the policies set out in the NPPF. It encourages development to take place in areas of lower flood risk wherever possible and stresses the importance of preventing increases in flood risk off-site to the wider catchment area. This includes ensuring that flood risk is considered at all stages of the planning process, avoiding inappropriate development in areas at risk of flooding and directing development away from those areas where risks are highest.
- 3.4 The process of directing development away from those areas where risks are highest is the Sequential Test. It covers all forms of flooding, and this is covered in Paragraphs 23 and 24 of the NPPF. Following the December 2024 update to the NPPF, Paragraph 175 was added that states that development can be appropriate on sites with flood risk *"in situations where a site-specific flood risk assessment demonstrates that no built development within the site boundary, including access or escape routes, land raising or other potentially vulnerable elements, would be located on an area that would not be at risk of flooding from any source, now and in the future"*. This essentially means that if a sequential approach is applied within the site boundary, and areas of flood risk now and in the future are avoided, that flood risk should not prevent the development coming forward and that the Sequential Test is not required.

The Environment Agency Flood Map for Planning

- 3.5 The updated Environment Agency's Flood Map for Planning was released on 25th March 2025. This updated and new National Flood Risk Assessment (NaFRA) uses both existing detailed local information and improved national data, includes the potential impact of climate change on flood risk, based on UK Climate Projections (UKCP18) and shows potential flood depths. This allows the Flood Map for Planning to provide much higher resolution maps that make it easier to see where there is risk
- 3.6 The New NaFRA Flood Map for Planning remains split into 'Flood Zones', which demarcate the extent of flooding from rivers or the sea for different return periods.
- 3.7 Table 3.1, on the next page, lists the flood zone categories and explains the flood risk probabilities they represent.

Table 3.1 – Flood Zone Categories

Flood Zone	Definition
Zone 1 Low Probability	Land having a less than 1 in 1,000 annual probability of river or sea flooding. (Shown as 'clear' on the Flood Map – all land outside Zones 2 and 3)
Zone 2 Medium Probability	Land having between a 1 in 100 and 1 in 1,000 annual probability of river flooding; or land having between a 1 in 200 and 1 in 1,000 annual probability of tidal flooding. (Land shown in light blue on the Flood Map)
Zone 3a High Probability	Land having a 1 in 100 or greater annual probability of river flooding; or Land having a 1 in 200 or greater annual probability of tidal flooding. (Land shown in dark blue on the Flood Map)
Zone 3b The Functional Floodplain	This zone comprises land where water must flow or be stored in times of flood, which is typically the 1 in 30-year flood event or greater. Local planning authorities should identify in their SFRAs areas of functional floodplain and its boundaries accordingly, in agreement with the Environment Agency. (Not separately distinguished from Zone 3a on the Flood Map, but may be distinguished in Product 4 information, for example)

- 3.8 A site-specific FRA is required for proposals of 1ha or greater in Flood Zone 1, all proposals for development in Flood Zones 2 and 3, or in an area within Flood Zone 1 that has critical drainage problems (as notified to the local planning authority by the EA). There are areas of surface water flood risk on the boundaries of the site, thus flood risk from all sources will be reviewed for the completeness of the application.
- 3.9 An FRA should identify and assess the risks of all forms of flooding and demonstrate how these flood risks will be managed so that a development remains safe throughout its lifetime, taking climate change into account.
- 3.10 Within each Flood Zone, a key factor in determining planning applications for development is the flood risk vulnerability of a development. Table 2 of the PPG to the NPPF categorises different development types according to their vulnerability to flooding. These categories are:
- ▶ Essential infrastructure;
 - ▶ Highly vulnerable development;
 - ▶ More vulnerable development;
 - ▶ Less vulnerable development, and;
 - ▶ Water-compatible development.
- 3.11 Within the different Flood Zones each of the above development categories are considered appropriate or not permissible. The Technical Guidance to the NPPF lists these as:

Flood Zone 1:

- ▶ All the development categories listed above are appropriate.

Flood Zone 2:

- ▶ Water-compatible, less vulnerable development, more vulnerable development and essential infrastructure is appropriate in this zone.

Flood Zone 3a:

- ▶ Water-compatible and less vulnerable development is appropriate in this zone. Highly vulnerable development should not be permitted in this zone.

Flood Zone 3b:

- ▶ Only water-compatible development and essential infrastructure that must be there should be permitted in this zone.

- 3.12 The above information sets out the basis by which developments must be assessed in terms of flood risk.
- 3.13 The development will be reviewed against the Flood Zone in which it is located, and an assessment will be made of the appropriateness of the proposed development, as per the advice within the PPG to the NPPF, taking account of the proposed site layout for the development shown in **Appendix B**.

The New National Standards for SuDS

- 3.14 On 19 June 2025 the UK government published its new National Standards for Sustainable Drainage Systems (SuDS). The new standards are a minor evolution of industry standards and current best practice, many of which practitioners and design engineers had already been actively incorporating in recent years. Therefore, while the New National Standards do not fundamentally change current standards, they are a welcome step in clarifying points that had previously been uncertain and has enshrined them in a single piece of guidance.
- 3.15 The standards emphasise how sustainable drainage and flood risk should be considered in developments, and the importance of site appraisal and early, integrated design with the site's natural features and proposed infrastructure.
- 3.16 The New National Standards for SuDS outline that;
- ▶ SuDS are a mandatory for major developments and drainage strategies must conform with the new national criteria and LLFA guidance.
 - ▶ There is a stronger emphasis on the 'four pillars' of SuDS. Drainage strategies must demonstrate benefits for water quantity and quality as well as amenity, and biodiversity. This pushes designers to incorporate more surface level SuDS and rely less on below-ground attenuation.
 - ▶ There is more clarity on long-term adoption & maintenance of SuDS system and LPA's will expect clearer maintenance and management strategies for drainage systems and require stronger evidence of deliverability.
- 3.17 As stated before, this is a minor evolution of the current approach to drainage design, but there are subtle differences in the design factors, which could lead to an increase in size of attenuation features. In addition to the above overarching principles of the New National Standards for SuDS, there are seven core standards that are to be achieved in drainage design. These are:

Standard 1 – Runoff destinations (Drainage hierarchy)

- 3.18 Surface water runoff must be discharged following a strict five-tier sustainability hierarchy, prioritising solutions that keep water close to where it falls:

Priority 1: Collected for non-potable reuse (e.g. rainwater harvesting)

Priority 2: Infiltrated to ground

Priority 3: Discharged to an above-ground surface water body

Priority 4: Discharged to a surface water sewer or piped system

Priority 5: Discharged to a combined sewer

- 3.19 Use of lower-priority options must be robustly justified.

Standard 2 – Management of everyday rainfall (interception)

3.20 SuDS must manage frequent, small rainfall events at source, with the key points being:

- ▶ The first 5mm of rainfall should be intercepted within the development.
- ▶ Interception should prevent runoff for most rainfall events, across both summer and winter seasons.
- ▶ Interception can typically be delivered through features like green roofs, rain gardens, permeable paving, and bioretention.

Standard 3 – Management of extreme rainfall and flooding

3.21 SuDS must manage intense and extreme rainfall events to reduce flood risk:

- ▶ Control surface water runoff rates and volumes to greenfield runoff rates.
- ▶ Safely manage exceedance flows without negative impact on third party land.
- ▶ Ensure flooding (where unavoidable) is shallow, slow, and low-hazard.
- ▶ Prevent flooding of buildings and critical infrastructure.

Standard 4 – Water quality

3.22 SuDS must protect and improve water quality:

- ▶ Designs must be based on a site-specific water quality risk assessment.
- ▶ Drainage features should treat runoff according to the pollution risks of the proposed land use and this should be in accordance with Chapter 26 of the CIRIA SuDS Manual (C753).
- ▶ Multiple treatment stages are expected where risks are high (discharge to protected waters, for example)

Standard 5 – Amenity

3.23 SuDS must deliver positive placemaking outcomes, not just drainage quantity benefits:

- ▶ Contribute to attractive, usable, and safe spaces.
- ▶ Support recreation, wellbeing, and visual quality.
- ▶ Be integrated into landscaping and public realm design.

Standard 6 – Biodiversity

3.24 SuDS must enhance the natural environment:

- ▶ Deliver biodiversity benefits, aligned with Biodiversity Net Gain ambitions.
- ▶ Use vegetated, nature-based solutions wherever possible.
- ▶ Support habitats for plants, invertebrates, and wildlife.

Standard 7 – Design for construction, operation, maintenance, and structural integrity

3.25 SuDS must be designed for their whole lifecycle:

- ▶ They should be safe and effective to construct.
- ▶ They should include clear, deliverable maintenance and management plans.
- ▶ They must remain structurally sound over their design life.

- ▶ They should allow for decommissioning or adaptation (if required).

3.26 The specific points below should be borne in mind by designers and included in any drainage strategies:

- ▶ Standard 2 provides explicit guidance on the management of everyday rainfall. The first 5mm of rainfall (the 'first flush') must be managed by interception and should not leave the site. Instead, it should either be collected for reuse, infiltrated into the ground, or else captured, conveyed, and stored within SuDS features (but there are specific criteria that make this last point acceptable).
- ▶ The latest standards now formalise that the minimum permissible infiltration rate for discharging surface water via a 'System A' (Total Infiltration) solution. The minimum infiltration coefficient that can support an infiltration-based drainage solution is 1.0×10^{-6} m/sec. Additionally, the standards now add that the half drain in the 3.3% AEP event should be less than 24 hours.
- ▶ A 'relaxation factor' should instead be applied to the target greenfield runoff rates on brownfield site. It defines that the maximum relaxation factor for runoff rates should be no greater than five times the greenfield rates. This allows for easier implementation on heavily developed urban sites, especially where LLFA's previously demanded greenfield runoff rates.
- ▶ The New National Standards confirm a previous 'grey area' by stating that SuDS features should be included in the contributing catchment area. It also notes that there is no requirement to provide attenuation for external overland flows entering the site, but these flows should be considered for capacity of the pipe network.
- ▶ Standard 3 of the New National Standards for SuDS clarifies the expectations with regards to urban creep. It says "within developments an urban creep uplift factor shall be applied by adding a percentage increase *to the calculated area of the impermeable area within the property curtilages. This shall be 10% for all developments unless there are no external private permeable spaces, for example, flats and apartments, when it shall be 0%.*"

3.27 The proposed development at West House Farm acknowledges the requirements of the New National Standards for SuDS and will deliver them through the drainage strategy, where they are achievable alongside the competing technical and regulatory constraints.

4.0 Current Flood Risk

- 4.1 Flooding can arise from a variety or combination of sources. These may be natural or artificial and may be affected by climate change. These are discussed, below, in the following two sections and summarised in Table 6.1. The probability of any likely impacts is also assessed, where necessary.

Flooding from Rivers and the Sea

- 4.2 The 0.49 ha site is wholly located within Flood Zone 1 according to the EA's Flood Map for Planning (**Appendix C**). This means in any year the site has a less than 1 in 1,000-year (0.1%) chance of flooding from rivers or the sea.
- 4.3 There will be no increased risk of flooding from rivers or the sea on site post development, or as a result of climate change (this is discussed in Section 5, below).

Flood Risk and Appropriateness of the Proposed Development

- 4.4 According to the classifications in the NPPF the site is considered to be 'more vulnerable'.
- 4.5 Table 3 of the PPG to the NPPF (see below) states that 'more vulnerable' development is appropriate in Flood Zone 1, thus the proposed development is appropriate in this location. This is supported by the fact that the site is bordered on the northeast by a residential property.

Table 3 of the NPPF – Flood Risk Vulnerability and Flood Zone Compatibility

Flood Zones	Flood Risk Vulnerability Classification				
	Essential infrastructure	Highly vulnerable	More vulnerable	Less vulnerable	Water compatible
Zone 1	✓	✓	✓	✓	✓
Zone 2	✓	Exception Test required	✓	✓	✓
Zone 3a †	Exception Test required †	x	Exception Test required	✓	✓
Zone 3b *	Exception Test required *	x	x	x	✓*

Key:

✓ Development is appropriate

x Development should not be permitted.

Surface Water Flooding

- 4.6 Surface water, or pluvial flooding, results from rainfall-generated overland flow, where rainwater has not yet reached a watercourse or sewer and where the local drainage systems become overwhelmed. Pluvial flooding often occurs during short, very intense storms, but can also occur during longer periods of rainfall when the ground is already saturated, or where land has low permeability due to development.
- 4.7 In these conditions surface water can build up where the topography allows it to converge or pond. Where it gathers it will travel down prevailing gradients. Pluvial flooding then occurs at locations where

significant surface water flow paths converge, at localised low points and/or due to overland obstructions. In urban areas pluvial flooding often occurs where the built environment channels overland flow routes (down roads that are bounded by kerbs, for example) or where there are obstacles to the natural overland flow routes. Boundary walls and buildings are often the main causes and, hence, the likelihood of pluvial flooding to impact property and built-up areas.

- 4.8 Pluvial flooding is exacerbated in many cases by the mistreatment or failure of the below ground infrastructure (including partial or full blockages of gullies and/or within the combined sewers and the accumulation of fats, oils and greases within the sewer networks).
- 4.9 With reference to the EA's risk of Flooding from Surface Water (RoFSW) map in **Appendix D** most of the site is in the very low surface water flood risk category (areas less than the 1 in 1000-year return period). However, there is a small area along the entrance of the site which falls into the low, medium and high surface water risk category (areas between the 1 in 30- year return period and the 1 in 1000-year return period) which is where the ordinary watercourse is culverted below the existing site access road.
- 4.10 According to the RoFSW maps in **Appendix D**, all surface water flooding predicted on the site is expected to remain at depths of 600 mm or less, with the predominant flooding depth occurring at 300 mm or less.
- 4.11 As the above assessment of surface water flood risk has shown, occupants of the building would experience minimal flood depths and, should they require access/egress from the building, they would be subject to minimal flood hazard and it would be possible for all users to safely make their way to a muster point, including the elderly and the infirm. This is shown in the above discussion of Flood Hazard and is supported by the R&D Technical Report FD2320/TR2, which was a joint publication between Defra and the EA. It provides a framework and guidance for assessing and managing flood risk for new development and, more specifically, presents simple methods for assessing the conditions that constitute safe access and egress, which can be applied at the site-specific scale, i.e. as part of an FRA.
- 4.12 FD2320/TR2 considers a safe access or egress route to be one that is safe for use by occupiers without the intervention of the emergency services or others.
- 4.13 A dry route is safe for all, including people and vehicles. However, FD2320/TR2 states that "*if a dry route for people is not possible, a route for people where the flood hazard (in terms of depth and velocity of flooding) is low and should not cause a risk to people*" would constitute a safe access.
- 4.14 It is in this context that the access and egress to the West House Farm has been assessed and, as recommended by FD2320/TR2, the 'Intermediate Approach' to the assessment of Flood Hazard has been used, which is required where access and egress may not be dry.
- 4.15 The 'Intermediate Approach' to Flood Hazard is laid out within FD2321/TR1 'The Flood Risks to People Methodology' and discussed in the Supplementary Note to Operating Authorities. The method for calculating Flood Hazard is:

Flood Hazard

The Flood Hazard rating is calculated using the following equation:

$$HR = d \times (v + 0.5) + DF$$

Where,

HR = (flood) hazard rating;
d = depth of flooding (m);
v = velocity of floodwaters (m/sec); and
DF = debris factor calculated using Table A.1

Table A.1 Guidance on debris factors for different flood depths, velocities and dominant land uses

Depths	Pasture/Arable	Woodland	Urban
0 to 0.25 m	0	0	0
0.25 to 0.75 m	0	0.5	1
d>0.75 m and/or v>2	0.5	1	1

Ref: FD2321/TR1 Table 3.1

4.16 If this calculation is applied to the proposed site, the values for **d**, **v**, and **DF** are:

- ▶ **d** = 0.6 (max)
- ▶ **v** = Assumed at 1.0 m/s, although this is probably too high noting the shallow flood depths.
- ▶ **DF** = 0 (zero) as per Table A.1 for Pasture/Arable where flooding is than 0.25m to 0.75m deep.

4.17 Thus, the hazard calculation (HR) for the proposed site is:

$$HR = 0.6 \times (1.0 + 0.5) + 0$$

$$HR = 0.9$$

4.18 This HR value can be applied to Figure 4.1, which is the categorisation of Flood Hazard.

Figure 4.1- Categorisation of Flood Hazard

Flood Hazard Rating (HR)	Colour Code	Hazard to People Classification
Less than 0.75		Very low hazard - Caution
0.75 to 1.25		Danger for some – includes children, the elderly and the infirm
1.25 to 2.0		Danger for most – includes the general public
More than 2.0		Danger for all – includes the emergency services

4.19 Figure 4.1 confirms that an HR value of 0.9 represents a danger for some. However, this calculation is based on a water depth of 0.6 metres. When reviewing the RoFSW maps in the **Appendix D**, only a small area is shown to be affected by a depth of 0.6 metres, rather than an entire section of the road. In proportion to the overall surface water flooding of the area, this is not sufficient to block the road, as most of the flooding occurs at depths of 200–300 mm.

4.20 On the basis that the surface water flooding depth of 600mm is not proportionate, using a depth of 200 or 300mm would be deemed appropriate and indicates that the HR value would be classified as very low. As such, the flood hazard to the proposed site's access/egress route is very low and only caution needs to be expressed. This accords with FD2320/TR2 and the fact that "a route for people where the flood hazard (in terms of depth and velocity of flooding) is low and should not cause a risk to people" would constitute a safe access.

4.21 Additional precaution can be allowed for the 600 mm depth of flooding, as no flooding is shown at the location of the proposed house. The danger posed to the elderly, infirm, and children can be mitigated by ensuring that those at risk remain inside the property during a 600 mm flood event—which would be short-lived due to the limited extent of flooding or by relocating vulnerable individuals before the flooding occurs.

4.22 On the basis that the development will manage and discharge surface water generated in line with appropriate guidance, there will be no increased risk of surface water flooding on site post development.

4.23 Therefore, the site can be seen to be at low to medium risk of surface water flooding.

Groundwater Flooding

4.24 The risk of groundwater flooding is dependent on local geological and hydrogeological conditions at any given time. Groundwater levels rise during wet winter months and fall again in the summer when rainfall is low and extractions are higher. In very wet winters, rising groundwater levels can reactivate flow in ephemeral streams that only flow for part of the year or even lead to the flooding of normally dry land.

4.25 There are no flood risk maps for groundwater, as stated by the Environment Agency in their 2011 guidance note 'flooding from groundwater'. Mapping products currently available only show areas where

the geological and hydrological conditions may combine to cause groundwater flooding, but they should not be considered as groundwater flood risk maps. They only show susceptibility to groundwater flooding.

- 4.26 There are several mapping products that depict areas that may be susceptible to groundwater flooding, but they are not comparable in detail to the risk maps developed for fluvial, tidal and surface water, such as those used by practitioners and risk management authorities to support planning decisions. The mapping does not show the likelihood of groundwater flooding occurring and can only be considered as a hazard, but not a risk-based dataset.
- 4.27 As such, the mapping products can be viewed as indicative at best and should only be used as a prompt to review site-based information to determine whether groundwater is a risk factor that should be considered. Indeed, the Environment Agency state that:
- 4.28 "The susceptibility data should not be used on its own to make planning decisions at any scale and, in particular, should not be used to inform planning decisions at the site scale. The susceptibility data cannot be used on its own to indicate risk of groundwater flooding."
- 4.29 This FRA will review the groundwater flooding susceptibility mapping available, which has been supplied in the Envirocheck Landmark Flood Studies Report (FSR) and can be seen in **Appendix G**.

BGS Geological Indicators of Flooding

- 4.30 The BGS Geological Indicators of flooding map shows that the site is not in an area with indicators of groundwater flooding.

BGS Groundwater Flooding Susceptibility

- 4.31 The BGS Groundwater Flooding Susceptibility map shows that the site is not in an area where there is potential for groundwater flooding to occur.

Geosmart Information Groundwater Flood Map

- 4.32 The Geosmart Information Groundwater Flood Map places the site in an area of 'negligible' risk.

Groundwater Flood Risk Summary

- 4.33 The site is not in an area with any indicators of groundwater flooding and not in an area with potential for groundwater flooding to occur. Due to this and being in an area of 'negligible' risk, it can be seen that the development site is at very low groundwater flood risk.

Flooding from Infrastructure

- 4.34 Sewer flooding can occur when the capacity of the infrastructure is exceeded by excessive flows, or because of a reduction in capacity due to collapse, siltation, blockage, or if the downstream system becomes surcharged. This can lead to the sewers flooding onto the surrounding ground via manholes and gullies, which can generate overland flows.
- 4.35 Typically, sewer systems are constructed to accommodate rainstorms with a 30-year return period or less, depending on their age. Consequently, rainstorm events greater than 1 in 30-years would be expected to result in surcharging of some parts of the sewer system. In fact, due to most gullies being poorly maintained and often partially blocked with silt, leaves and other debris, their capacity is often estimated to be closer to the 1 in 10-year storm.
- 4.36 The 2009 Strategic Flood Risk Assessment (SFRA) for West Sussex County Council includes a map identifying areas more prone to flooding from sewers, with the site not affected.
- 4.37 Looking forward, the development's drainage must be designed in accordance with Sewers for Adoption, The Design and Construction Guidance (DCG), Building Regulations Approved Document Part H and BS EN 752. This will minimise the future risk of flooding due infrastructure failure.

- 4.38 Therefore, it is concluded that the proposed development site is at low risk of flooding from infrastructure failure.

Flooding from Artificial sources

- 4.39 The EA provides a map showing the maximum potential flood extent should all reservoirs with a capacity of greater than 25,000 cubic metres fail and release the water they hold.
- 4.40 The map shows that the site would not experience flooding in this scenario.
- 4.41 There are no other artificial sources of flooding (such as canals) in the vicinity of the site that could cause flooding.

Historic Flooding

- 4.42 The Envirocheck Landmark FSR includes a map showing recorded flood outlines, which can be seen in **Appendix H**.
- 4.43 This map shows that the site has no record of flooding in the past. Thus the Historic Flood Map supports this report's conclusion that the site is at low risk of flooding and that the proposed development is appropriate in this location.

5.0 Future Flood Risk & Climate Change

- 5.1 The NPPF and its supporting PPG sets out how flood risk should be considered over the lifetime of a development. This requires an increase in flood risk due to climate change to be taken into account. Both peak river flows and rainfall intensity should be assessed.

Peak River Flows

- 5.2 The EA's NaFRA2 Flood Map for Planning incorporates climate change allowances for the 2080s epoch (covering 2070–2125), which reflects the expected lifespan of a residential development.
- 5.3 With this allowance applied, the site remains at very low risk of fluvial flooding, as shown in Figure 5.1 below. As the site lies within Flood Zone 1, future fluvial flood risk does not require further assessment.

Figure 5.1 – Future fluvial flood risk (2070 to 2115)



Peak Rainfall Intensity and Climate Change

- 5.4 The proposed development site is within the Adur and Ouse Management Catchment⁷. The peak rainfall climate change allowances are as follows in Table 5.1, below:

Table 5.1 – Climate Change Predictions for Adur and Ouse Management Catchment

1 in 30-year Rainfall Event	Central Allowance	Upper End Allowance
2050's epoch	20%	35%
2070's epoch	20%	40%
1 in 100-year Rainfall Event	Central Allowance	Upper End Allowance
2050's epoch	20%	45%
2070's epoch	25%	45%

⁷ <https://environment.data.gov.uk/hydrology/climate-change-allowances/rainfall>

- 5.5 **Appendix D** has included the future surface water flood risk dataset with climate change allowances applied. This identifies that, while the overall extent at risk remains broadly similar with some individual risk bands increasing slightly, there is an increase in surface water to the north of the access road, as well as a small isolated area of risk where a proposed outbuilding is located to the west of the site.

6.0 Summary of Residual Flood Risk

- 6.1 Historic, current and future flood risk, from all sources, has been reviewed in the context of the proposed development at West House Farm. A summary of these flood risks is summarised in Table 6.1, below. The allocation of overall flood risk shows the residual flood risk once the site-specific conditions have been taken into account.

Table 6.1 - Summary of Flood Risk

Flood Source	Risk Level				Comment
	High	Medium	Low	Very Low	
Fluvial				X	The site is at very low risk of fluvial flooding
Tidal				X	The site is not at risk of tidal flooding
Groundwater				X	The site is in an area where susceptibility to groundwater is thought to be low
Surface Water		X	X		Most of the site is at Very Low risk of surface water flooding. Small amount of low, medium and high risk of surface water flooding along the watercourse.
Canals				X	There are no canals in the vicinity.
Reservoirs				X	There are no reservoirs in the vicinity.
Infrastructure Failure			X		The risk of infrastructure failure will be made negligible through drainage systems designed to accord with Building Regulations and adoptable standards.
Increase due to Climate Change			X		Climate change will only affect surface water flood risk, predominantly influencing the level of risk, with two small additional areas of extent identified to the north of the access road and to the west of the site.

7.0 Surface Water Drainage Strategy

Sustainable Drainage Overview

- 7.1 Current planning policy and EA guidance require developments to employ SuDS (Sustainable Drainage Systems) techniques wherever feasible.
- 7.2 The key benefits of SuDS are as follows:
- ▶ Improving water quality over a conventional piped system by removing pollutants from diffuse pollutant sources (e.g., roads);
 - ▶ Improving amenity through the provision of open green space;
 - ▶ Improving biodiversity through increased areas for wildlife habitat; and
 - ▶ Enabling a natural drainage regime that recharges groundwater (where possible).
- 7.3 SuDS provide a flexible approach to drainage, with a wide range of components from soakaways to large-scale basins or ponds. The individual techniques should be used where possible in a management train that mimics the natural pre-developed pattern of drainage.

Site Area

- 7.4 The site areas to undergo development are to be assessed as follows in Table 7.1:

Table 7.1 – Site Areas

Breakdown of Site Areas	Existing (ha)	Proposed (ha)	Difference (ha)
Buildings	0.0570	0.0521	- 0.0049
Hardstanding	0.0615	0.1496	+ 0.0881
Total	0.1185	0.2017	+ 0.0832

- 7.5 The difference in existing and proposed areas can be seen in **Appendix I**. The current access point to the proposed site will remain unchanged and has not been included within the site's designated developable areas.
- 7.6 The proposed hardstanding areas will use compacted shingle, which complements the rural landscape. Shingle is self-draining due to its natural voids and remains one of the most permeable ground surfacing materials as it is essentially coarse gravel. Therefore the proposed hardstanding is permeable and will drain at a greenfield rate and not be included within the calculations.
- 7.7 The roof areas of the buildings in the proposed development will decrease by 49m², resulting in a reduction of impermeable surfaces. This change represents an improvement over the existing impermeable areas. Additionally, the proposal includes implementing rainwater harvesting measures to further enhance drainage performance and meet current SuDS standards.

Greenfield Runoff Rate

- 7.8 The greenfield runoff rates have been calculated using the QMED value, which is the index flood in the Flood Estimation Handbook (FEH). QMED has been calculated for rural and urban values in MicroDrainage using the catchment descriptors methodology, which includes the following input variables:
- ▶ Site Location
 - ▶ SAAR – Standard Average Annual Rainfall 1961 – 1990 (mm)

- ▶ SPR Host - Standard percentage runoff derived from HOST soils data
- ▶ URBEXT - The extent of urban and suburban cover
- ▶ BFIHOST - Baseflow index derived from Hydrology of Soil Types (HOST) soils data
- ▶ FARL - Index of flood attenuation due to reservoirs and lakes

7.9 The QMED calculation sheet from MicroDrainage can be seen in **Appendix J**, and is expressed as a runoff rate per hectare. This is summarised in Table 7.2, below.

Table 7.2 - QMED Rural/Urban

QMED Rural (l/s)	QMED Urban (l/s)
12.7 l/s	13.0 l/s

- 7.10 The calculated QMED Rural value of 12.7 l/s is equivalent to a rate of 0.66 l/s over the 0.0521 ha impermeable area of the proposed buildings. This is not achievable as a discharge rate due to the very small-aperture flow controls that would be needed, which would be subject to an unsustainable blockage risk. No structures exist that can restrict flow to such fractions of a litre per second.
- 7.11 In line with this, it is proposed that a surface water discharge of 1.0 l/s will be used for this site.

Drainage Strategy Overview

- 7.12 As discussed in Sections 2 of this report, the desk-based geology information indicates that infiltration will not be feasible at the site due to the clay-based geology (Weald Clay). Therefore, infiltration cannot be considered a viable means of surface water discharge for the development.
- 7.13 The drainage strategy for the site has been developed on the premise that infiltration of surface water is not possible.
- 7.14 As stated above, the proposed hardstanding areas will use compacted shingle, which complements the rural landscape. Shingle is self-draining due to its natural voids and remains one of the most permeable ground surfacing materials as it is essentially coarse gravel.
- 7.15 The roof areas of the buildings in the proposed development will be reduced, resulting in a decrease in impermeable surfaces. Even though this change represents an improvement over the existing drainage rate, the development proposals include the incorporation of rainwater harvesting measures to further enhance drainage performance.
- 7.16 Therefore, the drainage strategy for the development will incorporate rainwater harvesting systems on all buildings, with excess water discharged to the adjacent drainage ditch at the QMED greenfield rate of 1.0 l/s.
- 7.17 The proposed site layout of the drainage strategy can be seen in **Appendix K** of this report.
- 7.18 This outlines the proposed drainage strategy for the development. The design criteria achieved by the proposed drainage strategy, and how it has been developed in accordance with the sequential check of the drainage hierarchy, is discussed below.

The Drainage Hierarchy

- 7.19 The NPPF states that opportunities to reduce overall flood risk should be sought and achieved through sustainable development and careful drainage design. This can be achieved through the layout and form of development, including green infrastructure and the appropriate application of sustainable drainage

systems (SuDS). SuDS are designed to control surface water runoff close to where it falls and mimic natural drainage as closely as possible. They provide opportunities to:

- ▶ Reduce the causes and impacts of flooding;
- ▶ Remove pollutants from urban run-off at source;
- ▶ Combine water management with green space with benefits for amenity, recreation and biodiversity.

7.20 To deliver SuDS benefits and ensure that a development reduces overall flood risk, there is an established hierarchy of surface water drainage methods that should be considered. The most preferable and sustainable are at the top and the least preferable and least sustainable at the bottom.

7.21 The drainage hierarchy is a sequential check that intends to ensure that all practical and reasonable measures are taken to manage surface water as high up the hierarchy (with '1' being the highest) as possible, and that the amount of surface water managed at the bottom of the hierarchy is minimised. The Planning Practice Guidance to the National Planning Policy Framework (NPPF) states that "*Generally, the aim should be to discharge surface run off as high up the following hierarchy of drainage options as reasonably practicable*".

7.22 The drainage hierarchy presented in the NPPF presents only four tiers of drainage options. This has been expanded on and adopted by others and now can be viewed as the following:

1. Store rainwater for later use
2. Use infiltration techniques, such as porous surfaces in non-clay areas
3. Attenuate rainwater in ponds or open water features for gradual release
4. Attenuate rainwater by storing in tanks or sealed water features for gradual release
5. Discharge rainwater direct to a watercourse
6. Discharge rainwater to a surface water sewer/drain
7. Discharge rainwater to the combined sewer
8. Discharge rainwater to the foul sewer

7.23 The first two tiers of the drainage hierarchy ensure that surface water is retained within the site boundary and does not increase flood risk to others. This is always the most preferable method of surface water management.

7.24 The next six tiers of the hierarchy provide regional control, but with decreasing levels of pollution removal and reduced potential for amenity and habitat creation.

7.25 Within the lower six tiers of the drainage hierarchy, there must be some form of flow restriction, so that off-site surface water discharge resembles greenfield runoff rates, as much as is reasonably practicable. This requires on-site storage facilities, which may include ponds, swales, subsurface storage tanks and System C (non-infiltration) permeable pavements with flow control devices. Again, methods that provide the most potential for amenity and pollution removal should be favoured.

7.26 With regards to the proposed development and its drainage strategy, the tiers of the drainage hierarchy that have been achieved are summarised in Table 7.3, on the next page:

Table 7.3 - Compliance with the Drainage Hierarchy

Tier	Discharge Method	Used?	Notes
1	Store rainwater for later use	✓	Rainwater Harvesting has been proposed as part of the development.
2	Use infiltration techniques	✗	Infiltration is not viable at the site due to clay soils.
3	Attenuate rainwater in ponds or open water features	✗	SuDS basins and open features cannot be used as there is no space for a pond.
4	Attenuate rainwater by storing in tanks or sealed water features	✗	This tier of the drainage hierarchy will not be required.
5	Discharge rainwater direct to a watercourse	✓	The overflow from the attenuating rainwater harvesting tanks will outfall into the nearby drainage ditch.
6	Discharge rainwater to a surface water sewer/drain	✗	This tier of the drainage hierarchy will not be required.
7	Discharge rainwater to the combined sewer	✗	This tier of the drainage hierarchy will not be required.
8	Discharge rainwater to the foul sewer	✗	This tier of the drainage hierarchy will not be required.

Tier 1 – Store rainwater for later use

- 7.27 Water re-use systems can rarely manage 100% of the surface water discharged from a development. This requires the surface water yield from the building and hardstanding areas to balance perfectly with the demand from the proposed development; too much demand will result in a lack of water supply, whilst too little demand will cause the storage systems to become overwhelmed and could result in flooding when the next rainfall event happens. Consequently, even if there are opportunities and a need for rainwater recycling systems, further solutions for attenuating and discharging surface water will almost always be required.
- 7.28 There is likely to be a moderate rainwater yield from the roof areas of the development that could be used for domestic non-potable uses. Additionally, the proposed development includes landscaping that may benefit from having a supply of recycled rainwater for the watering of gardens, flowerbeds, etc.
- 7.29 The opportunity for water re-use and recycling on site has been explored, and therefore it is proposed that a rainwater harvesting tank is installed at the site. This will be installed to attenuate rainwater from the proposed roof areas, in order to achieve the requirements for intercepting surface water as set out in the New National Standards for SuDS. The water collected by the rainwater harvesting system will then be utilised for external uses, such as watering of gardens, washing of cars and drinking water for the horses.
- 7.30 The site has an estimated 5% annual rainwater yield of approximately 15,835 litres. Therefore, rainwater harvesting tanks will provide a total storage volume of around 16,000 litres for the development site, which equates to 16 m³ of storage as part of the proposed development. A table calculating the rainwater

yield for the overall development site and total rainwater harvesting tank storage volume is provided in **Appendix L**.

Tier 5 - Discharge rainwater direct to a watercourse

- 7.31 The drainage strategy will have an overflow outfall to the nearby drainage ditch, located along the southern edge of the site, at a rate of 1.0 l/s.

Surface Water Runoff Quality

- 7.32 The NPPF states that development should not have a detrimental impact on the environment, including the water environment. The technical guidance to the NPPF provides further advice on the benefits of ensuring runoff quality is to an appropriate standard.
- 7.33 The CIRIA SuDS Manual provides guidance on the treatment of surface water runoff. With regards to the proposed development, Table 4.3 of the CIRIA SuDS Manual rates the pollution hazard from roof water runoff as 'very low'. The only requirement for roof water runoff is the removal of gross solids and sediments.
- 7.34 The rainwater harvesting system enhances water quality by filtering out sediment, debris, and other pollutants through a combination of leaf guards, pre-tank filtration, and first-flush diversion, which prevent coarse solids and organic matter from entering the tank. Fine particles are further removed via sedimentation and flotation within the storage tank, ensuring that only cleaner, higher-quality water is supplied for reuse.

Management and Maintenance

- 7.35 A rainwater harvesting system requires a structured and ongoing management approach to ensure long-term performance, water quality, and system reliability. A formal maintenance plan should be in place for the lifetime of the development, outlining responsibilities, inspection frequencies, and the required competency of those undertaking maintenance. All activities must follow relevant health and safety legislation, including the CDM Regulations 2015, which require that maintenance tasks be carried out by a competent person with appropriate knowledge of the system. Regular monitoring is essential, as timely and adequate maintenance will prolong the lifespan of the system, whereas insufficient upkeep can significantly reduce efficiency and lead to operational issues.
- 7.36 Routine maintenance involves inspections and cleaning across all major components of the system, including roofs, gutters, filters, first-flush devices, pumps, overflows, and storage tanks. Gutters and downpipes should be inspected and cleared at least twice a year and after major storms, while filters and leaf guards require periodic cleaning in line with manufacturer guidance. Storage tanks must be checked to ensure inlets and outlets are sealed, that no debris is entering the system, and that overflow routes are functioning correctly. Sedimentation and floating debris should be removed at the recommended intervals, and pump systems should be maintained to guarantee reliable operation. Collectively, these tasks ensure the system continues to function efficiently, protect water quality, and provide a dependable non-potable water source over the long term.

8.0 Compliance with the National Standards for SuDS

- 8.1 The seven core standards for SuDS, as laid out in the National Standards for SuDS, were presented in Section 3 of this report.
- 8.2 This section will review how the drainage strategy has attained the seven core standards for SuDS, which is presented below.

Standard 1 – Runoff destinations (Drainage hierarchy)

- 8.3 With regards to the proposed development and its drainage strategy, the tiers of the drainage hierarchy that have been achieved are outlined in Table 8.1, below. These are the highest available tiers, as demonstrated by the discussion of the geoenvironmental characteristics and constraints discussed in Section 2 of this report.

Table 8.1 - Compliance with Standard 1 and the Drainage Hierarchy

Tier	Discharge Method	Used?	Notes
1	Collected for non-potable use	✓	Rainwater Harvesting has been proposed as part of the development.
2	Use infiltration techniques	✗	Infiltration is not viable on this site due to the geology of the site.
3	Discharged to an above ground surface water body	✓	The overflow from the attenuating rainwater harvesting tanks will outfall into the nearby drainage ditch.
4	Discharged to a surface water sewer, or another piped surface water drainage system	✗	This tier of the drainage hierarchy will not be required.
5	Discharged to a combined sewer	✗	This tier of the drainage hierarchy will not be required.

Standard 2 – Management of everyday rainfall (interception) - ✓

- 8.4 Rainwater harvesting will be installed on every roof throughout the site.
- 8.5 Therefore adequate interception, as required by Standard 2 of the National Standards for SuDS, has been provided.

Standard 3 – Management of extreme rainfall and flooding - ✓

- 8.6 Rainwater harvesting retains surface water for non-potable use, but they also release a proportion of surface water but at a restricted rate. Therefore, extreme rainfall will informally managed through betterment, attenuation and the slow release of surface water.

Standard 4 – Water quality- ✓

- 8.7 The rainwater harvesting system enhances water quality by filtering out sediment, debris, and other pollutants through a combination of leaf guards, pre-tank filtration, and first-flush diversion, which prevent coarse solids and organic matter from entering the tank. Fine particles are further removed via

sedimentation and flotation within the storage tank, ensuring that only cleaner, higher-quality water is supplied for reuse.

- 8.8 This source-control filtration improves runoff quality before it enters the wider drainage network, supporting compliance with Standard 4 – Water Quality of the National SuDS Standards and the CIRIA SuDS Manual.

Standard 5 – Amenity- ✓

- 8.9 The proposed development will use compacted shingle, which complements the rural landscape, for all hardstanding areas. This choice of material not only blends visually with the surrounding countryside, maintaining the site's natural character, but also supports sustainable drainage objectives. By selecting compacted shingle, the project aligns with SuDS principles, enhancing both aesthetic and functional aspects of the landscape, and providing a robust solution for everyday access and vehicular movement.

Standard 6 – Biodiversity - ✓

- 8.10 Rainwater harvesting supports biodiversity by reducing stormwater runoff, which in turn lowers erosion, sedimentation, and pollution in nearby watercourses, helping to protect sensitive aquatic habitats. It also promotes healthier vegetation by supplying naturally soft, chemical-free water that supports stronger plant growth and improves habitat quality for pollinators, birds, and other wildlife, while enhancing local ecological resilience.

Standard 7 – Design for construction, operation, maintenance, and structural integrity- ✓

- 8.11 By using surface-level SuDS in the drainage strategy, a system that is safe to construct and is sustainable to use and maintain, and safely integrates into the development, has been specified.
- 8.12 Routine maintenance for the rainwater harvesting system includes inspecting and cleaning key system components such as roofs, gutters, filters, first-flush devices, pumps, overflows, and storage tanks. Gutters and downpipes should be cleared at least twice a year and after major storms, while filters and leaf guards are cleaned periodically. Storage tanks must be checked for sealed inlets, outlets, debris, and proper overflow operation. Regular removal of sediment and maintenance of pumps ensure efficient system performance and reliable water quality over time.

9.0 Proposed Foul Water Drainage

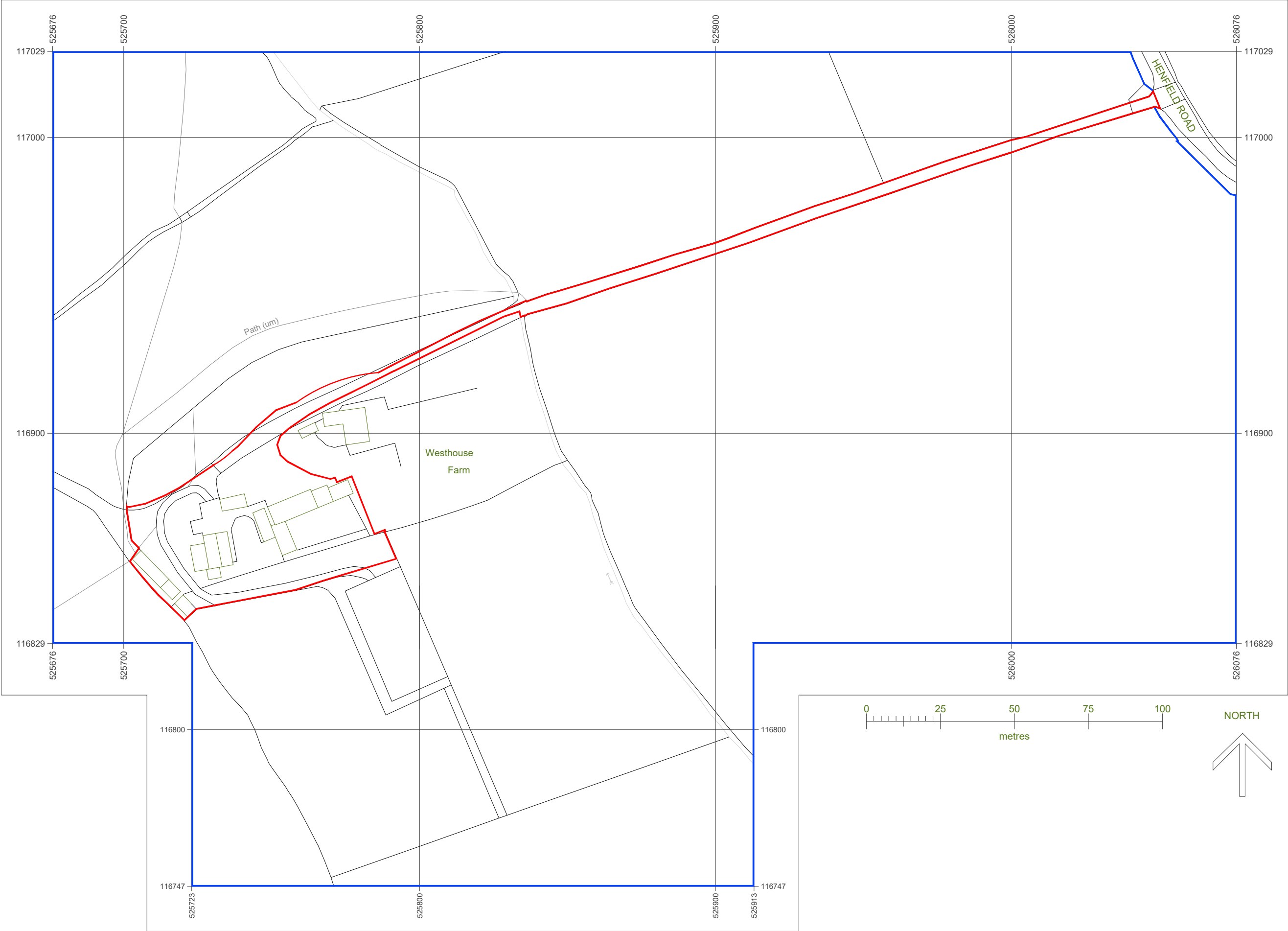
- 9.1 An asset location plan was obtained from Southern Water, and this can be seen in **Appendix F**. This shows that there are no public surface water or foul sewers within the site or in the immediate vicinity of the site boundary.
- 9.2 The proposed development will be served by a private on-site foul water drainage system, as connection to the public foul sewer network is not available or practicable at this location. Foul effluent generated by the development will be collected via a separate foul drainage system and conveyed to a package sewage treatment plant.
- 9.3 The sewage treatment plant will be sized in accordance with British Water – Flows and Loads and will comply with BS EN 12566 for small wastewater treatment systems. Treated effluent will either discharge to a drainage field via infiltration to ground or to a nearby watercourse. The final specification of the sewage treatment plant, discharge location, and method of discharge will be confirmed at the detailed design stage, with full details to be secured by planning condition.
- 9.4 The foul water drainage system will be designed and installed to comply with the Environment Agency's General Binding Rules for Small Sewage Discharges. If necessary, an application for an Environmental Permit will be submitted.
- 9.5 The sewage treatment plant and associated drainage infrastructure will be installed, operated and maintained in accordance with the manufacturer's recommendations. A long-term management and maintenance regime will be implemented for the lifetime of the development, with responsibility resting with the site owner or an appointed management company.
- 9.6 Overall, the proposed foul water drainage strategy is considered acceptable in principle, with the detailed design of the sewage treatment plant, discharge arrangements, and evidence of compliance with the Environment Agency's General Binding Rules to be secured through appropriately worded planning conditions

10.0 Summary and Conclusion

- 10.1 This FRA and Drainage Strategy has been produced by Motion on behalf of their client, Pyxis Land Limited. It supports the planning application at West House Farm, Henfield Road, Albourne, Hassocks, West Sussex.
- 10.2 The EA's Flood Map for Planning shows that the site is located within Flood Zone 1 (less than 1 in 1,000 annual probability of flooding from rivers or the sea).
- 10.3 West House Farm is predominantly at very low risk of surface water flooding, with only a minor area near the site entrance falling into higher risk categories. Flood depths are expected to remain shallow, and the calculated hazard level indicates minimal risk for occupants, including vulnerable individuals, with safe access and egress achievable. The site's flood risk will not increase post-development, provided surface water is managed in accordance with guidance. Therefore, the proposed development is considered appropriate, with overall surface water flood risk classified as low to medium.
- 10.4 The site is not in an area with any indicators of groundwater flooding and not in an area with potential for groundwater flooding to occur. Due to this and being in an area of 'negligible' risk, it can be seen that the development site is at very low groundwater flood risk.
- 10.5 The site is considered to be at very low risk of sewer flooding, is not at risk of reservoir flooding or any other artificial sources, and with no recorded history of past flooding.
- 10.6 As discussed in Section 2 of this report, the desk-based geology information indicates that infiltration will not be feasible at the site due to the clay-based geology (Weald Clay).
- 10.7 The proposed development will reduce the total roof area by 49m², decreasing impermeable surfaces and supporting improved site drainage. Therefore, the drainage strategy proposes that rainwater harvesting will be implemented across all buildings, with surplus water discharged to a nearby drainage ditch at a controlled rate of 1.0 l/s. The proposed development will feature compacted shingle hardstanding, which is highly permeable and will allow drainage at a greenfield rate, therefore not contributing to impermeable area calculations. The proposed surface water drainage strategy is also able to mitigate all pollution hazards created on site using SuDS features and no further pollution mitigation is needed.
- 10.8 The proposed development fully complies with all seven of the new national standards for SuDS, ensuring a robust and sustainable approach to surface water management across the site.
- 10.9 The development will be served by a private on-site foul water drainage system comprising a package sewage treatment plant. Treated effluent will discharge either to a drainage field or a nearby watercourse, with detailed design, compliance with the Environment Agency's General Binding Rules, and long-term maintenance arrangements to be secured by planning condition.
- 10.10 In conclusion, this drainage strategy has shown that the proposed development is at a very low residual risk of flooding, and this makes it appropriate in this location. Similarly, the drainage strategy has shown that the development can manage its surface water sustainably. Therefore, flood risk and surface water management should not form an impediment to the progress of this application.

Appendix A

Site Location Plan



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Location Plan

1:1250 | EXISTING

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 and safety risks.

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 the full extent of residual risks will be
 identified during the detailed Building
 Regulations or construction design
 Status and prior to construction works
 commencing on site.

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Drawing No. 2412WE_R2_000

Scale @ A3 1:1250

Job No. 2412WE_R2

Drawn By MD

Checked By BK

Drawn On 24.11.2025

Issued On 25.11.2025

Status Existing

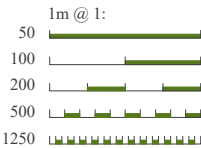
Drawing Location Plan

Submission Planning

Application Area: 4770 m²



Indicative: 0.0°



Appendix B

Proposed Site Plan



Proposed Ancillary
Refer to sheet 209

Proposed Bike &
Bin Store
Refer to sheet 210

Proposed Stables
Refer to sheet 210

Proposed Games Room
Refer to sheet 211

ASHP for Barn

Proposed Barn Conversion
Refer to sheet 203-208

Proposed Boundary

Site

1:500 PROPOSED

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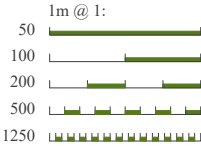
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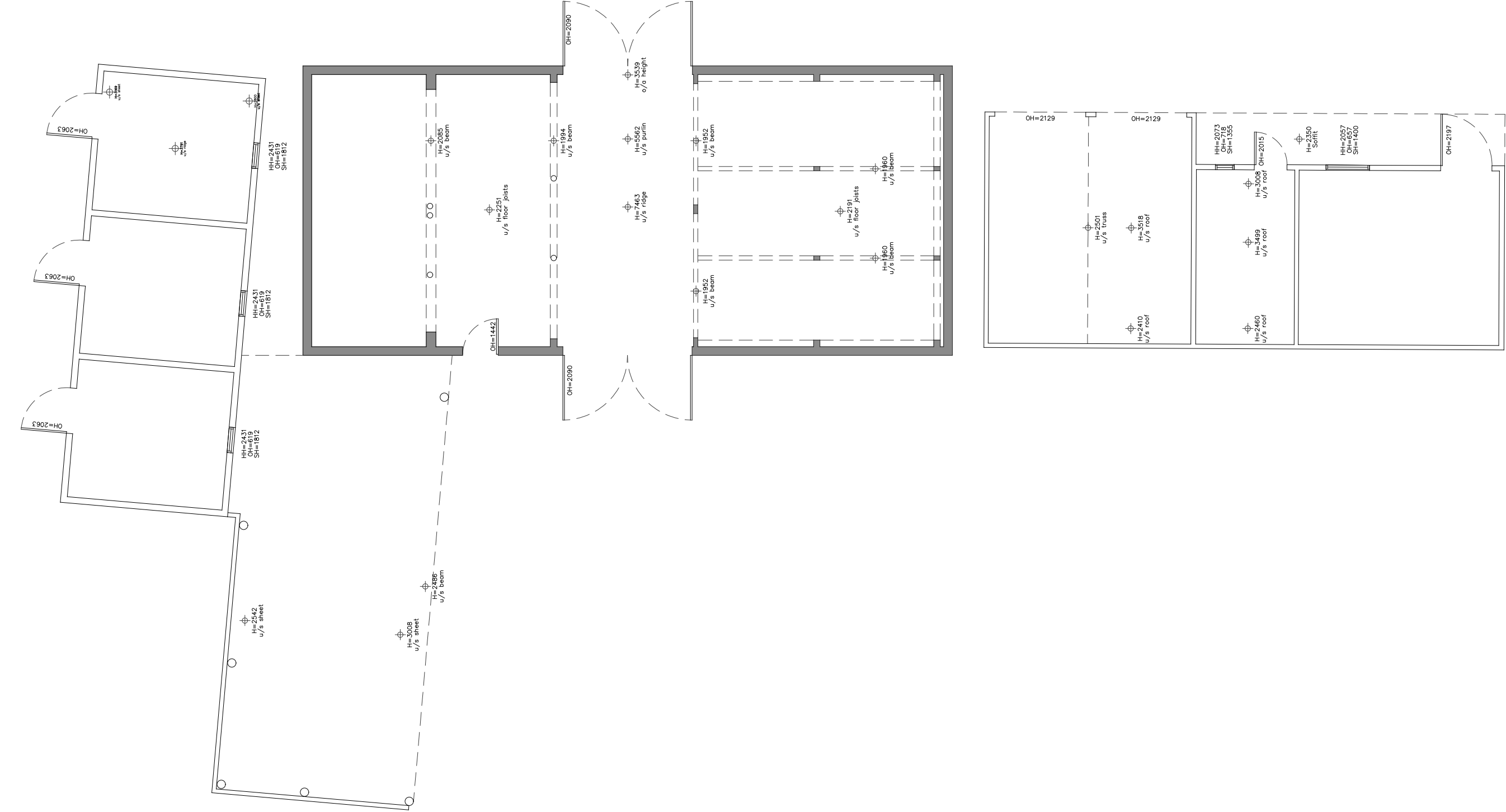
Drawing Site

Submission Planning



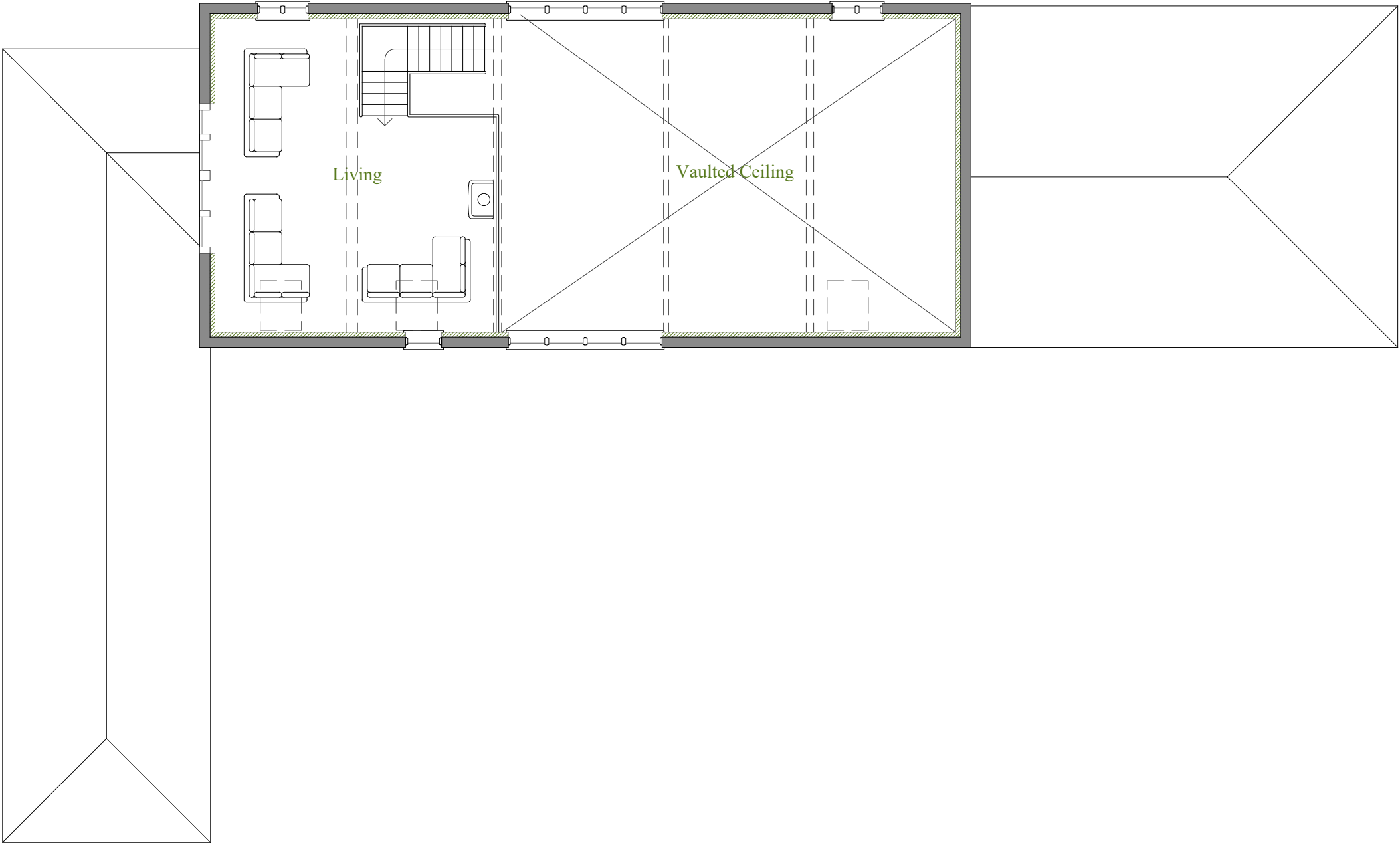
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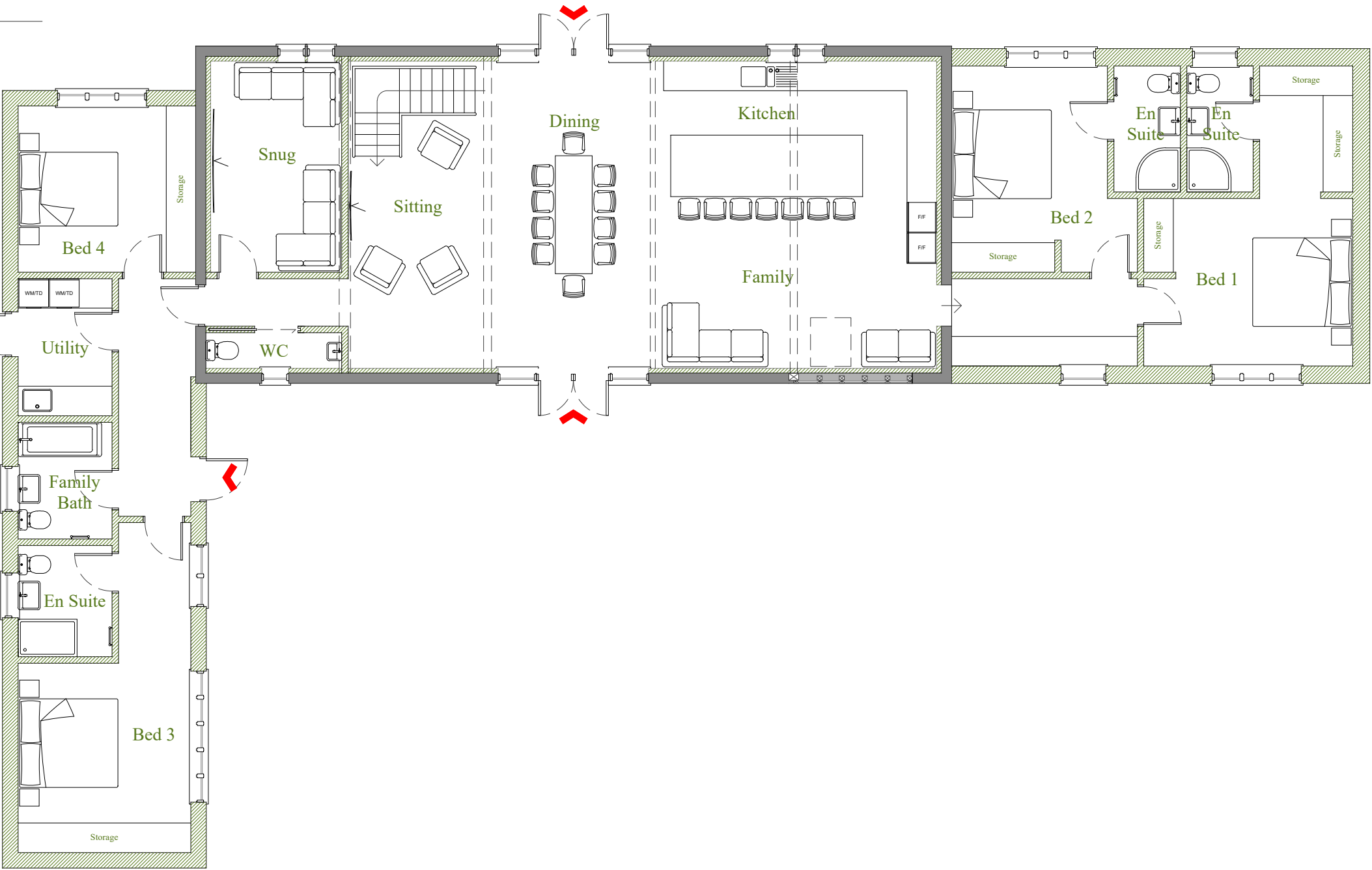
Ground Floor Plan

1:100 EXISTING



First Floor Plan

1:100 PROPOSED



Ground Floor Plan

1:100 PROPOSED

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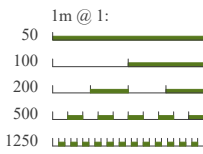
Drawing Ground Floor Plan

Submission Planning

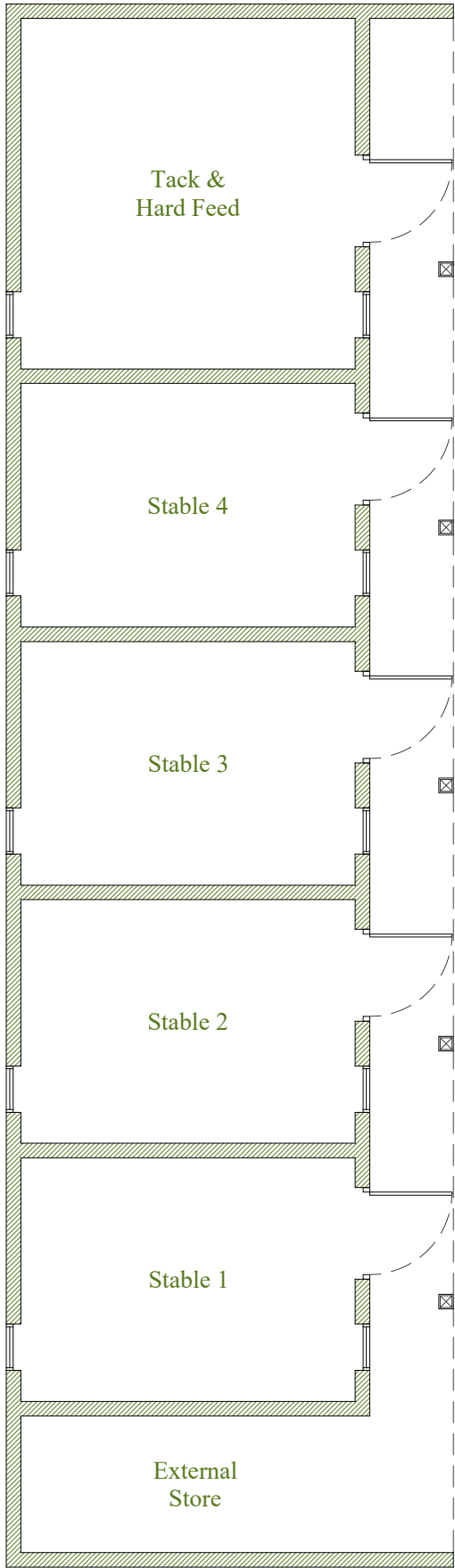
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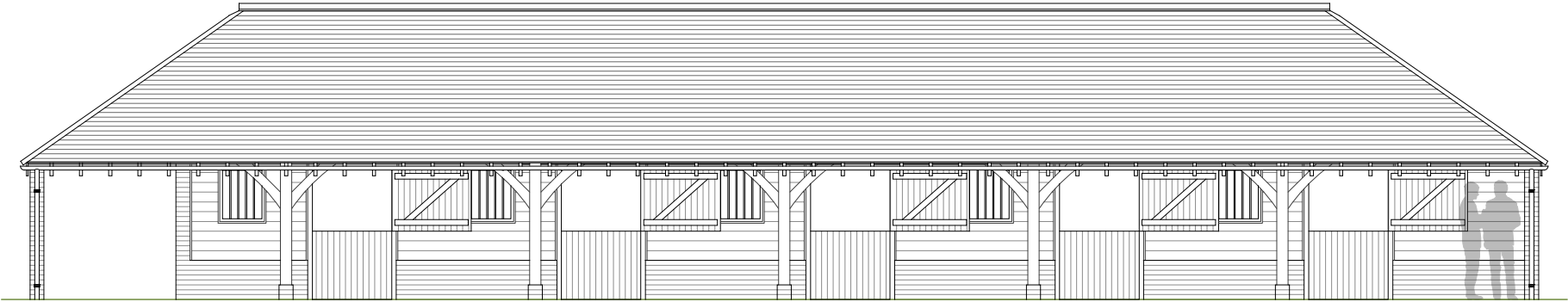
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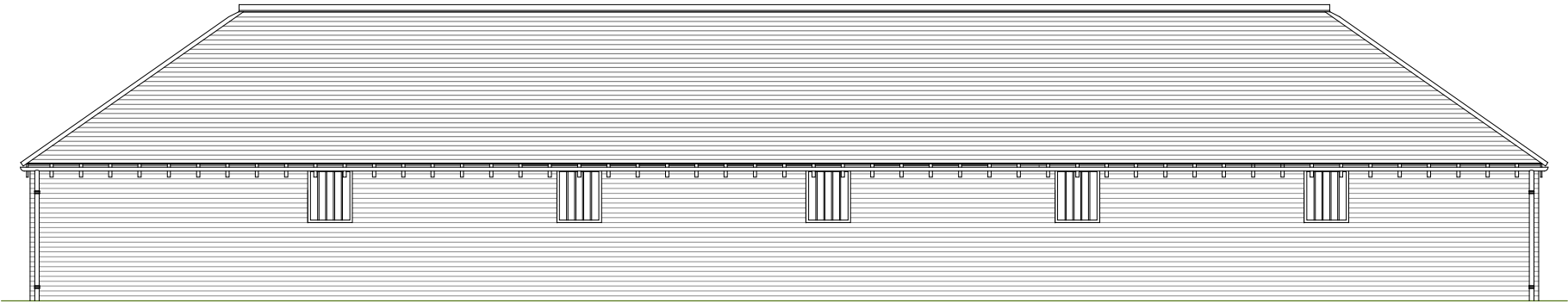




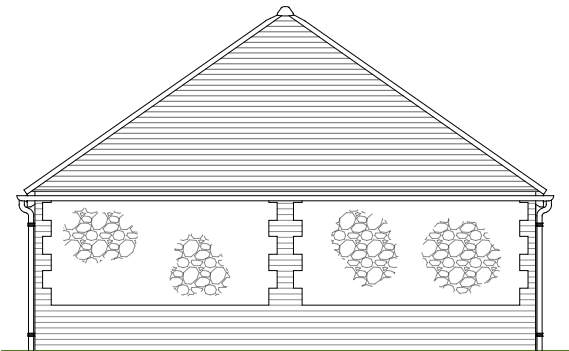
Ground Floor Plan
1:100 | PROPOSED



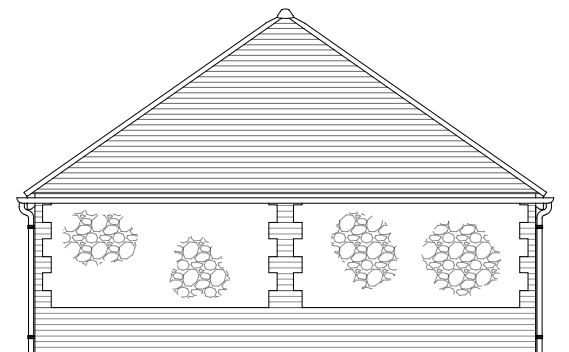
East
1:100 | PROPOSED



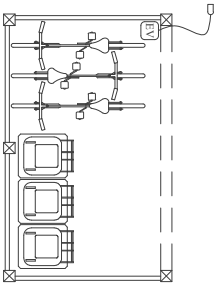
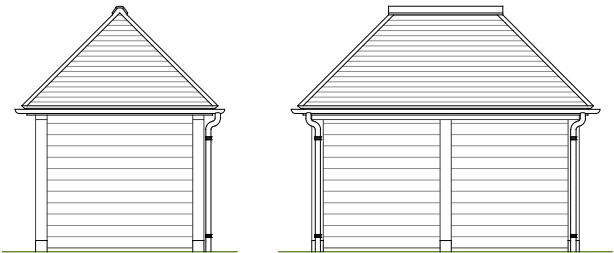
East
1:100 | PROPOSED



North
1:100 | PROPOSED



South
1:100 | PROPOSED



Bike & Bin Store
1:100 | PROPOSED

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This information can be provided on request; however, it is anticipated that the full extent of residual risks will be identified during the detailed Building Regulations or construction design Status and prior to construction works commencing on site.

All responsibilities and duties of Principle Designer as stated within the above regulations now revert to the client unless Manorwood are appointed to undertake Building Regulations or construction drawings.



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26 The Hornet
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web: www.manorwood.co.uk

Address

Westhouse Farm, Henfield Road,
Albourne, Hassocks, West
Sussex, BN6 9DE

Drawing No. 2412WE_210

Scale @ A3 1:100

Job No. 2412WE

Drawn By MD

Checked By BK

Drawn On 20.10.2025

Issued On 30.10.2025

Status Proposed

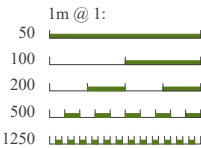
Drawing Stables + B&BS

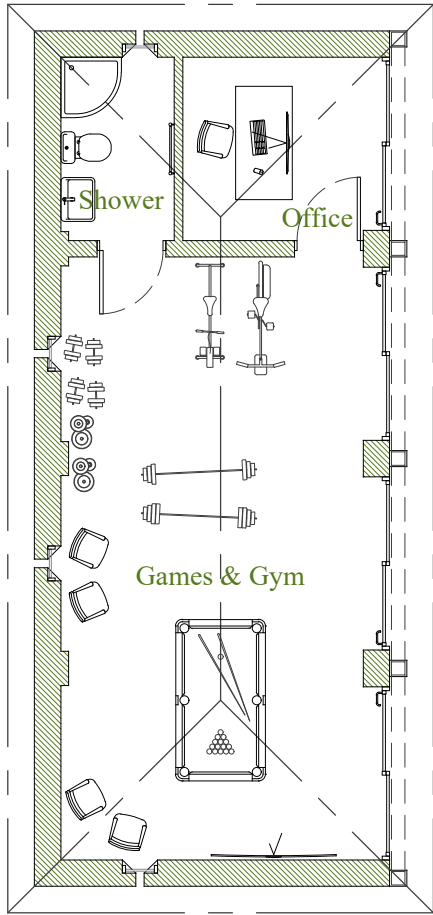
Submission Planning

Revision 000

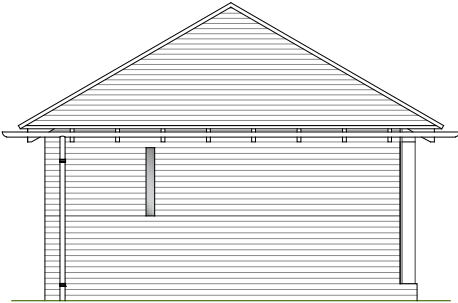


Indicative: 316.0°

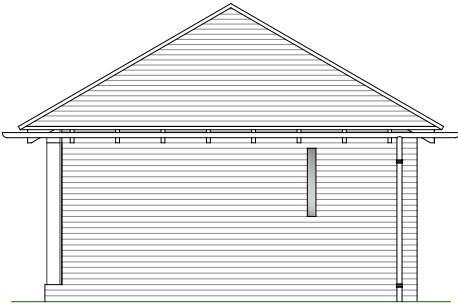




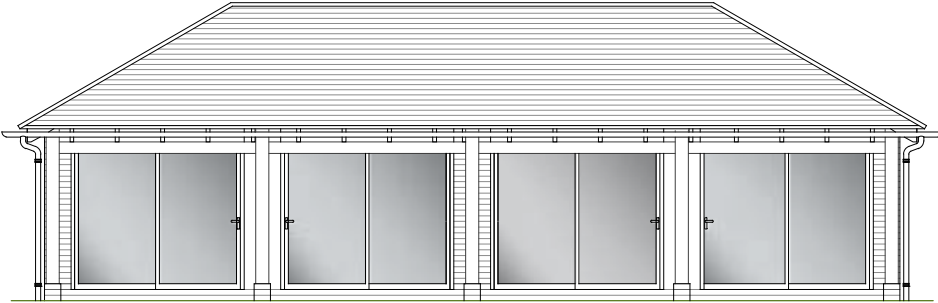
Ground Floor Plan
1:100 PROPOSED



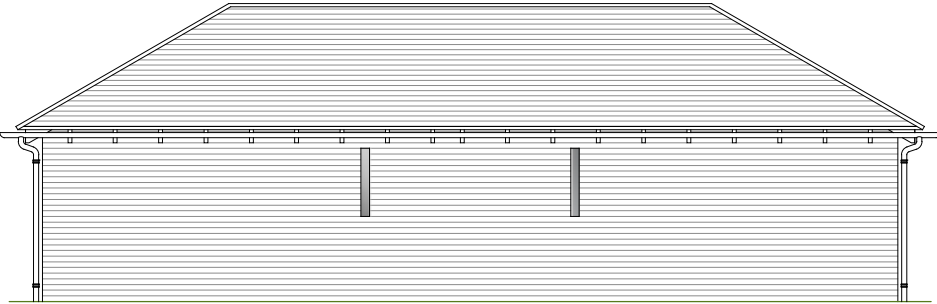
South
1:100 PROPOSED



North
1:100 PROPOSED



East
1:100 PROPOSED



West
1:100 PROPOSED

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Construction (Design and Management) Regulations 2015

This drawing is intended for Planning purposes only and as such does not highlight residual design related health and safety risks.

This information can be provided on request; however, it is anticipated that the full extent of residual risks will be identified during the detailed Building Regulations or construction design Status and prior to construction works commencing on site.

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Address

Westhouse Farm, Henfield Road,
Albourne, Hassocks, West
Sussex, BN6 9DE

Drawing No. 2412WE_211

Scale @ A3 1:100

Job No. 2412WE

Drawn By MD

Checked By BK

Drawn On 20.10.2025

Issued On 30.10.2025

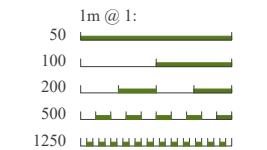
Status Proposed

Drawing Games & Carport

Submission Planning

Revision 001

.



Appendix C

EA's Flood Map for Planning

Flood map for planning

Your reference
Unspecified

Location (easting/northing)
525788/116860

Created
4 March 2026 16:09

Your selected location is in flood zone 1, an area with a low probability of flooding.

You will need to do a flood risk assessment if your site is **any of the following**:

- bigger than 1 hectare (ha)
- in an area with critical drainage problems as notified by the Environment Agency
- identified as being at increased flood risk in future by the local authority's strategic flood risk assessment
- at risk from other sources of flooding (such as surface water or reservoirs) and its development would increase the vulnerability of its use (such as constructing an office on an undeveloped site or converting a shop to a dwelling)

Notes

The flood map for planning shows river and sea flooding data only. It doesn't include other sources of flooding. It is for use in development planning and flood risk assessments.

This information relates to the selected location and is not specific to any property within it. The map is updated regularly and is correct at the time of printing.

Flood risk data is covered by the Open Government Licence which sets out the terms and conditions for using government data. <https://www.nationalarchives.gov.uk/doc/open-government-licence/version/3>

Use of the address and mapping data is subject to Ordnance Survey public viewing terms under Crown copyright and database rights 2026 AC0000807064. <https://flood-map-for-planning.service.gov.uk/os-terms>



Flood map for planning

Your reference

Unspecified

Location (easting/northing)

525788/116860

Scale

1:2,500

Created

4 Mar 2026 16:09

-  Selected area
-  Flood zone 3
-  Flood zone 2
-  Flood zone 1
-  Flood defence
-  Main river
-  Water storage area

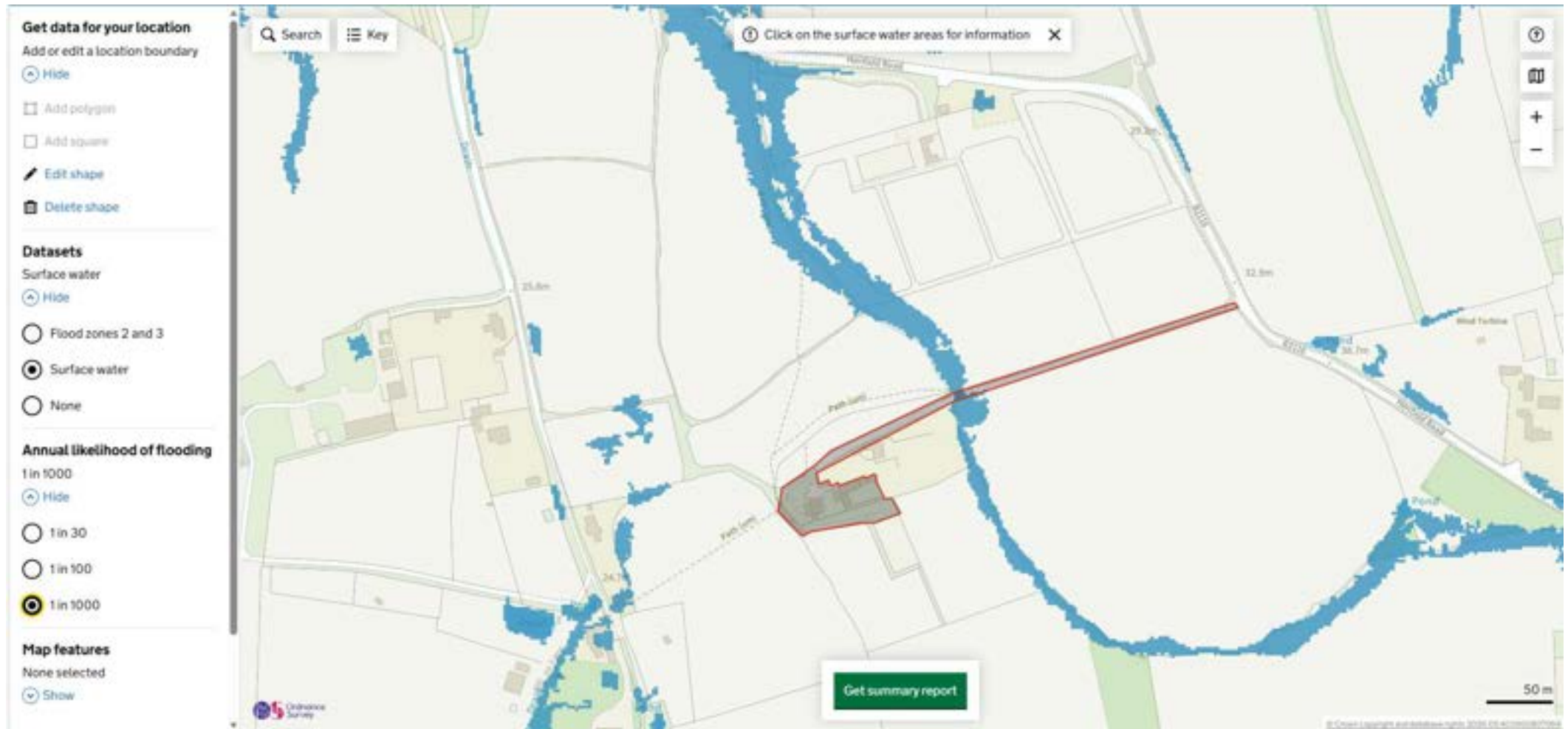


0 20 40 60m

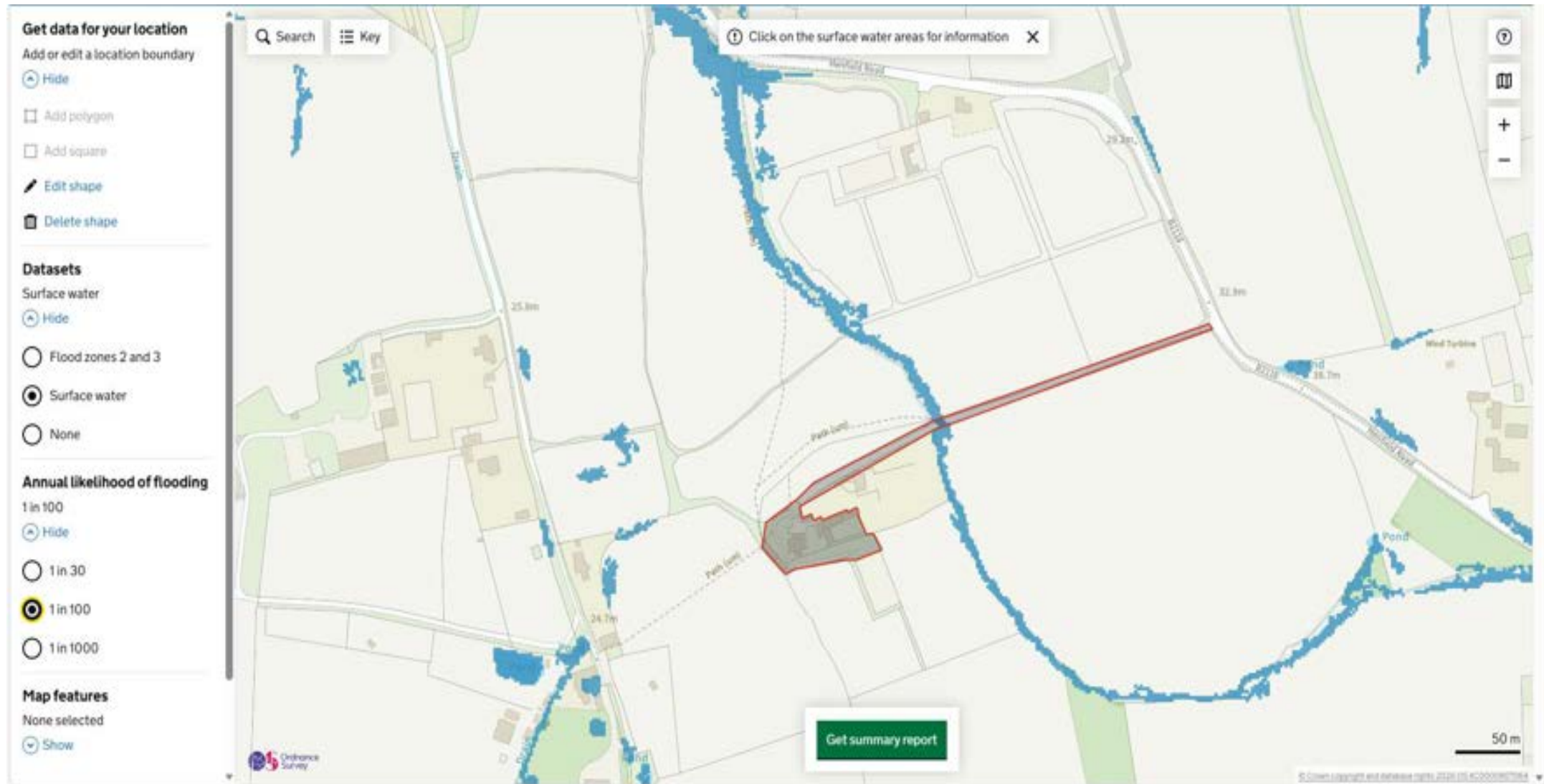
Appendix D

EA's RoFSW Mapping

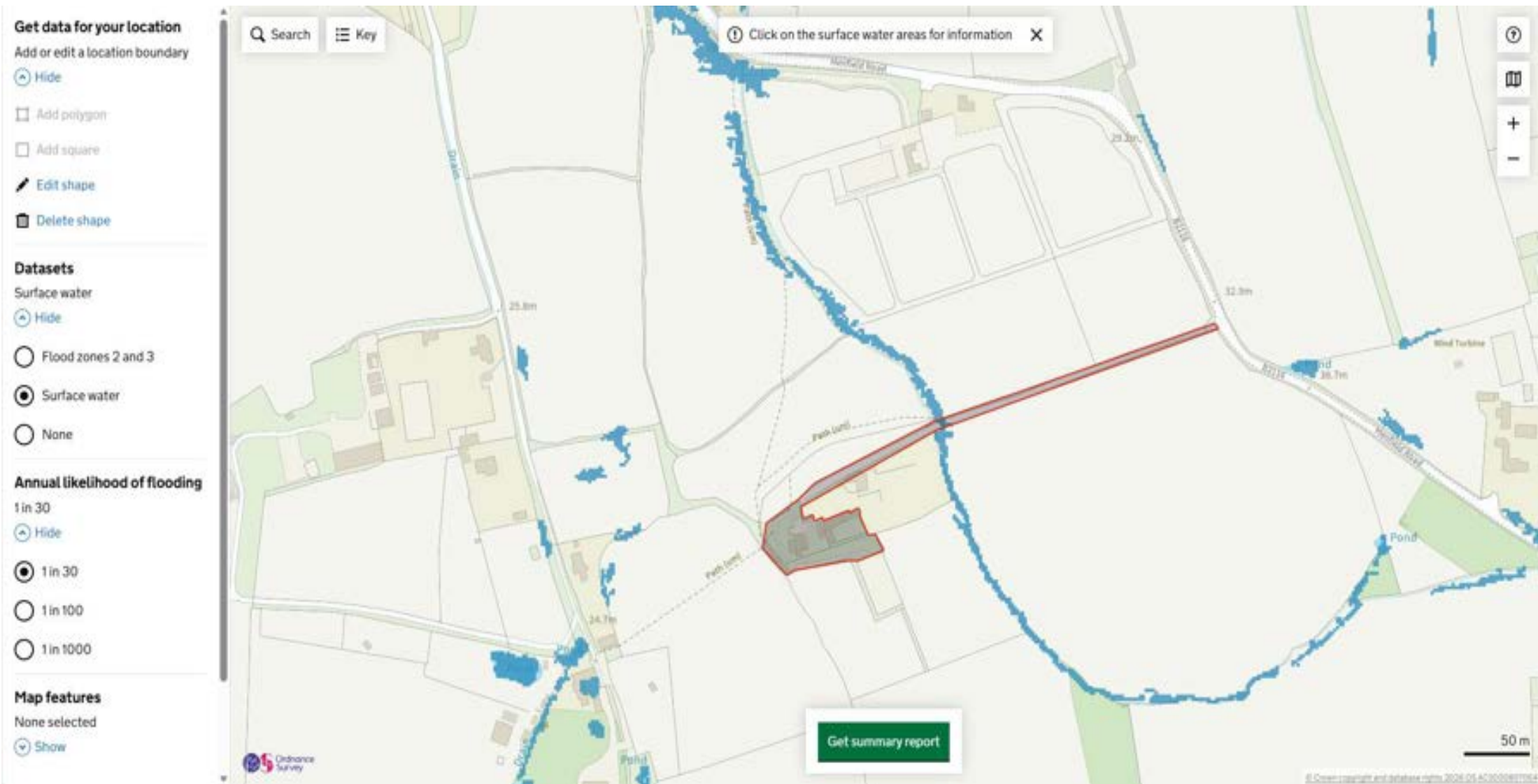
1 in 1000 Surface Water Flood Risk



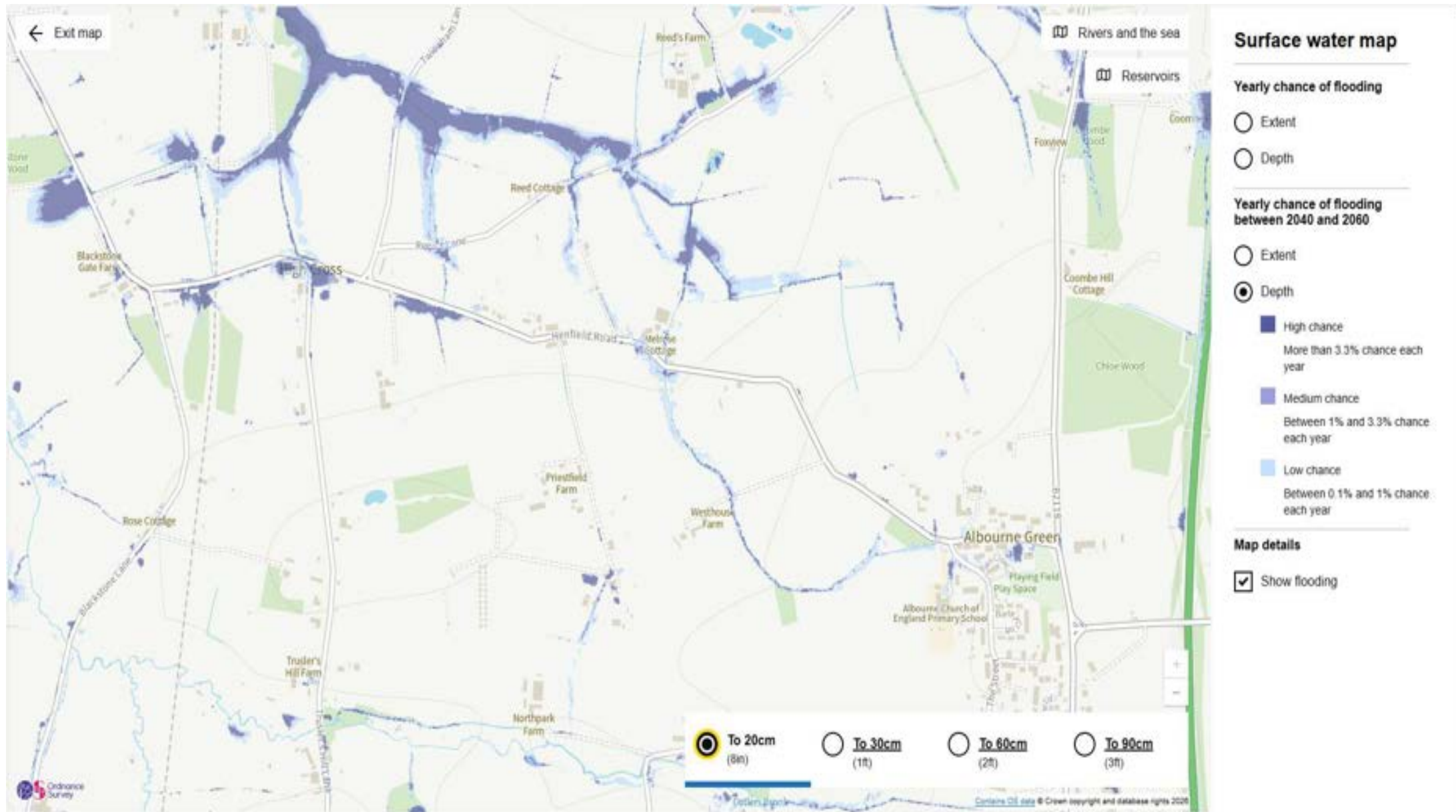
1 in 100 Surface Water Flood Risk



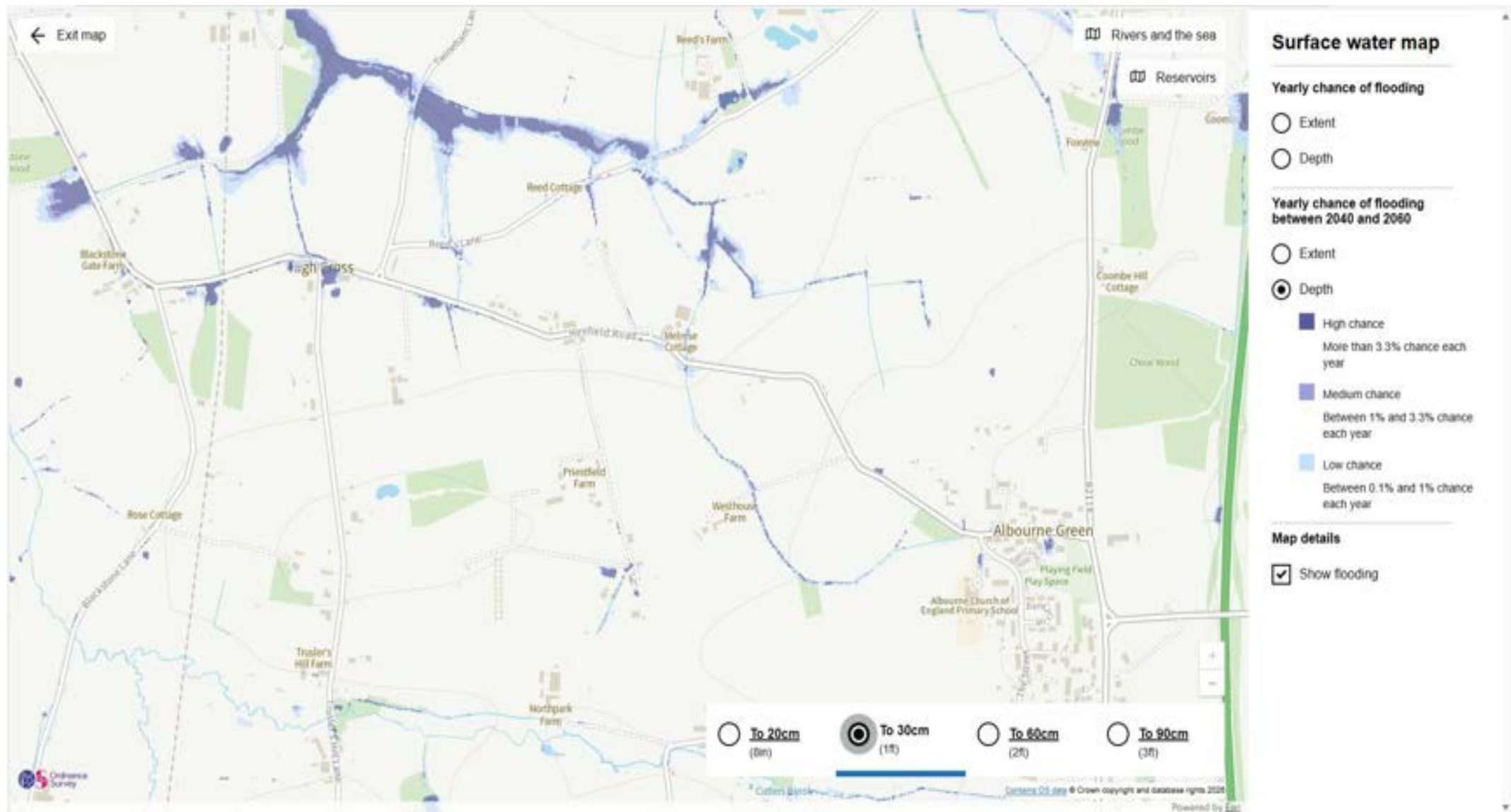
1 in 30 Surface Water Flood Risk



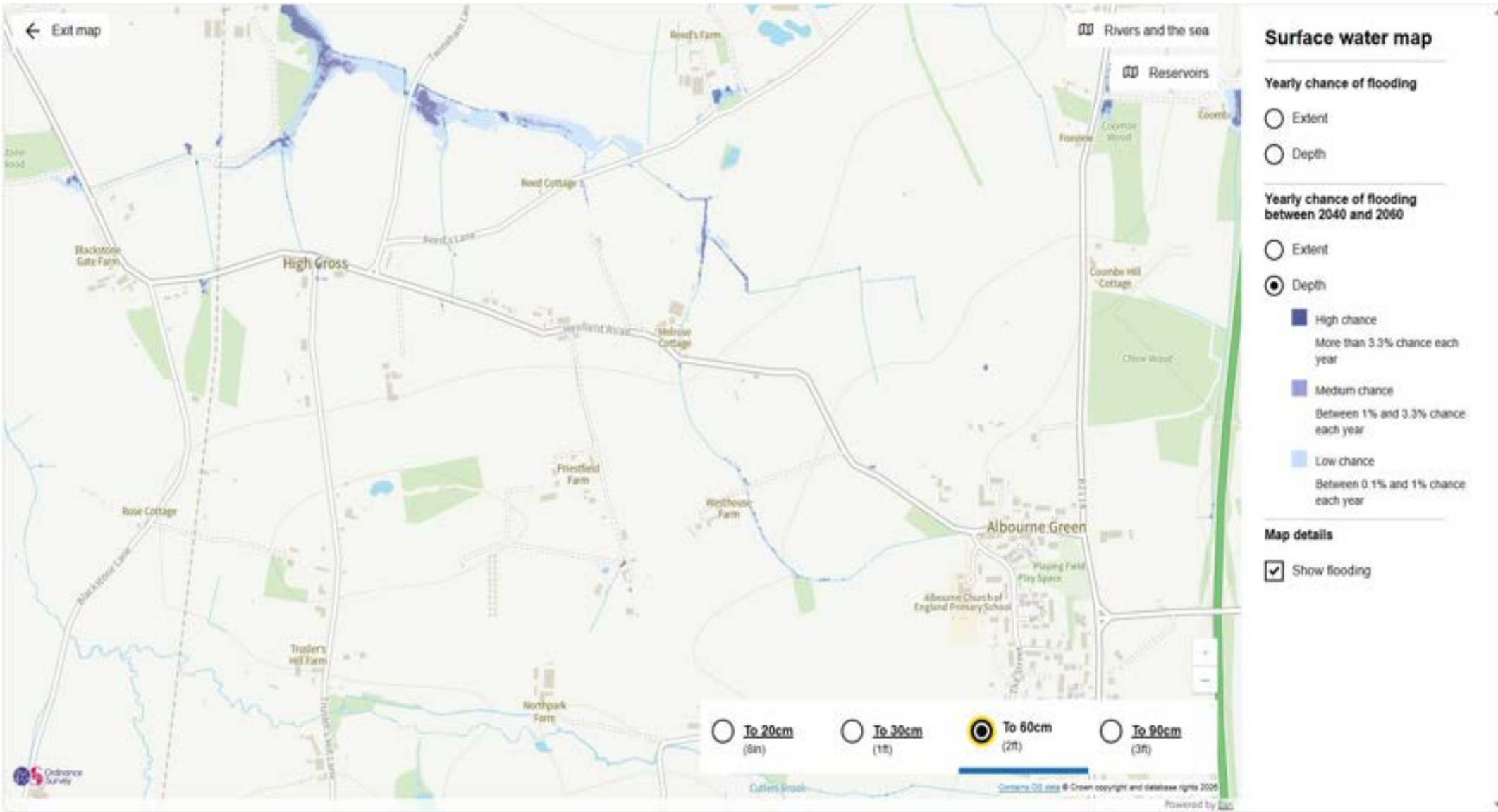
SW Flooding 20cm Depth



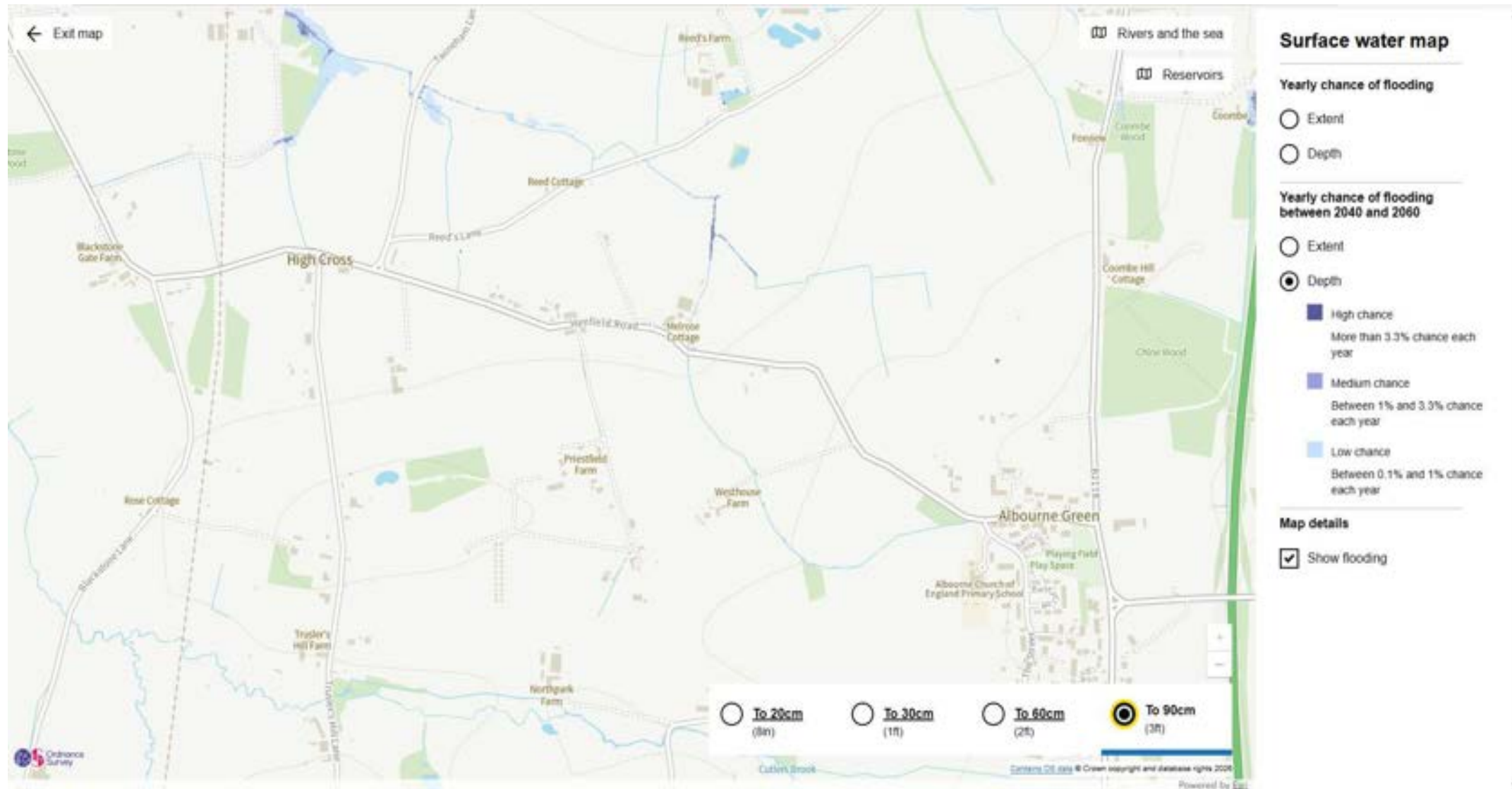
SW Flooding 30 cm Depth



SW Flooding 60cm Depth



SW Flooding 90cm Depth



Appendix E

Topographical Survey

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

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

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

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

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

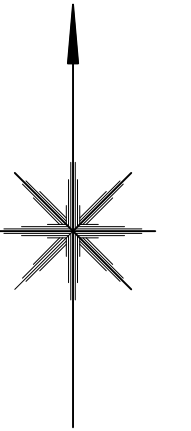
Visible features in the vicinity of the boundaries as shown above, may not represent the extent of legally conveyed ownership.

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

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

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

0 2 4 6 8 10
SCALE 1:200



partial site plan 1:200

medlams
surveys limited
www.medlams-surveys.co.uk
info@medlams-surveys.co.uk
07717 205 388

project: Westhouse Farm, Sayers Common, BN6 9DE
client: Manorwood job ref: S3051
title: Topographic survey scale 1:50 & 1:100 @A1
date February '25 dwg no: EX01 rev:

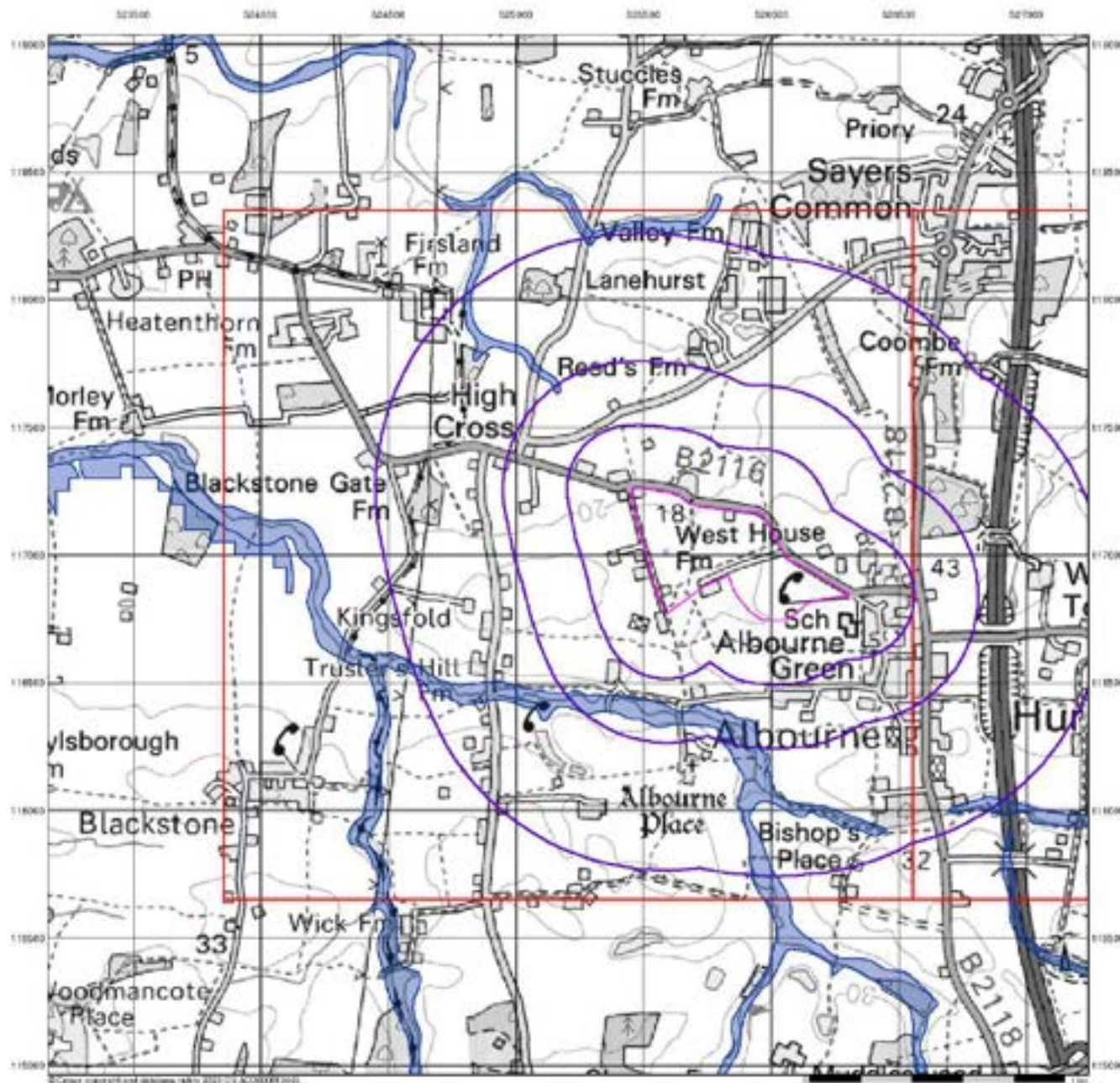
Appendix F

Southern Water Asset Records



Appendix G

Envirocheck FSR: Groundwater



motion BGS Flood Data (1:50,000)

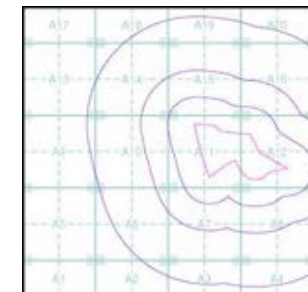
General

-  Specified Site
-  Specified Buffer(s)
-  Bearing Reference Point
-  Slice
-  Map ID

BGS Geological Indicators of Flooding

-  Coastal
-  Inland
-  Bodies of Water

BGS Flood Data Map - Slice A



Order Details

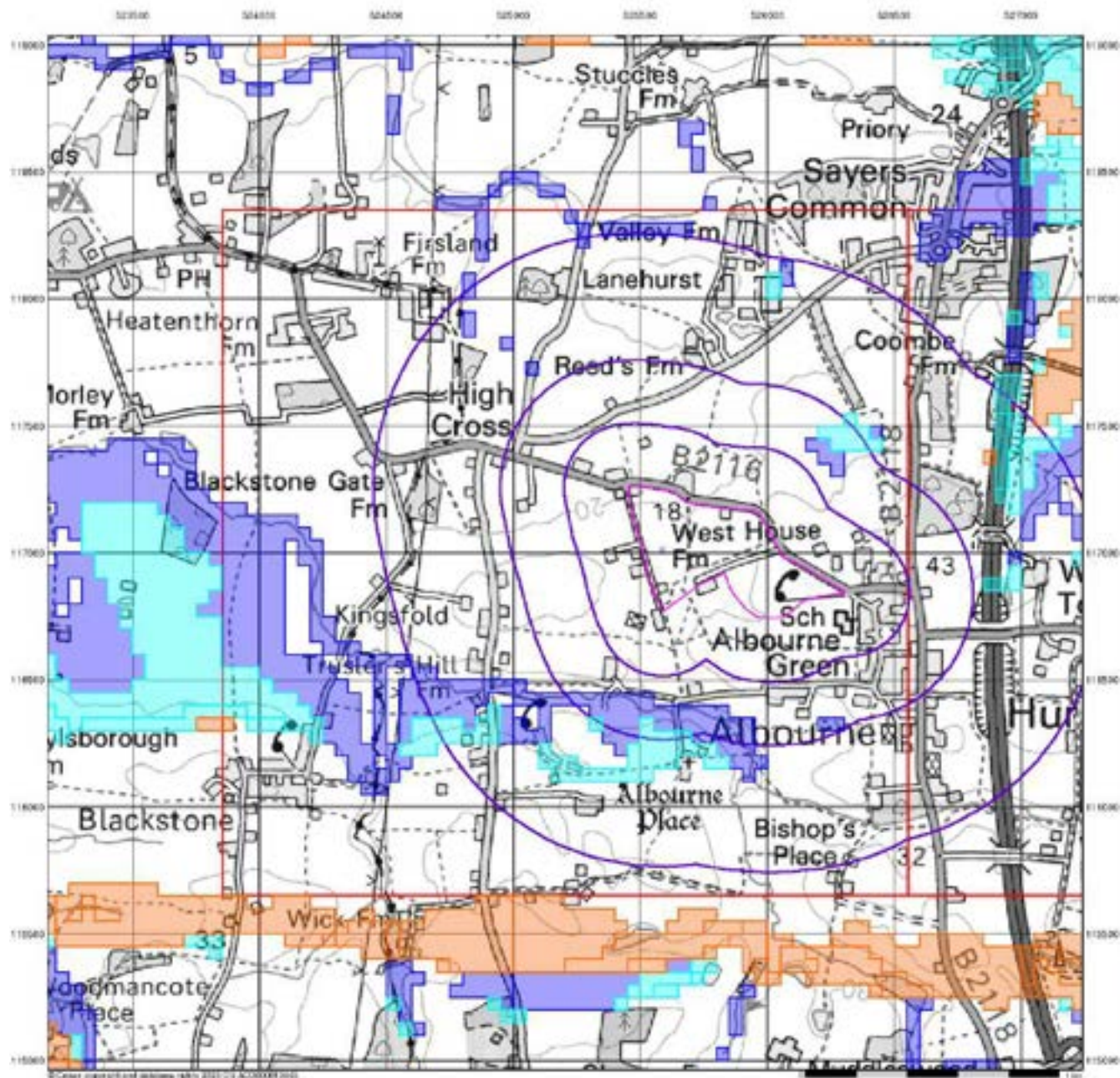
Order Number: 389812734_1_1
 Customer Ref: 1Pysay2509069
 National Grid Reference: 525580, 117010
 Slice: A
 Site Area (Ha): 22.96
 Search Buffer (m): 1000

Site Details

Amberley, Henfield Road, Albourne, HASSOCKS, BN6 9DS

Landmark
 INFORMATION GROUP

Tel: 0844 844 9952
 Fax: 0844 844 9951
 Web: www.envirocheck.co.uk



BGS Flood Data (1:50,000)

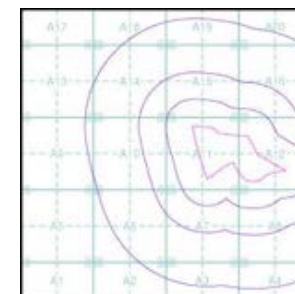
General

-  Specified Site
-  Specified Buffer(s)
-  Bearing Reference Point
-  Slice
-  Map ID

BGS Groundwater Flooding Susceptibility

-  Potential for Groundwater Flooding to Occur at Surface
-  Potential for Groundwater Flooding of Property Situated Below Ground Level
-  Limited Potential for Groundwater Flooding to Occur

BGS Flood Data Map - Slice A



Order Details

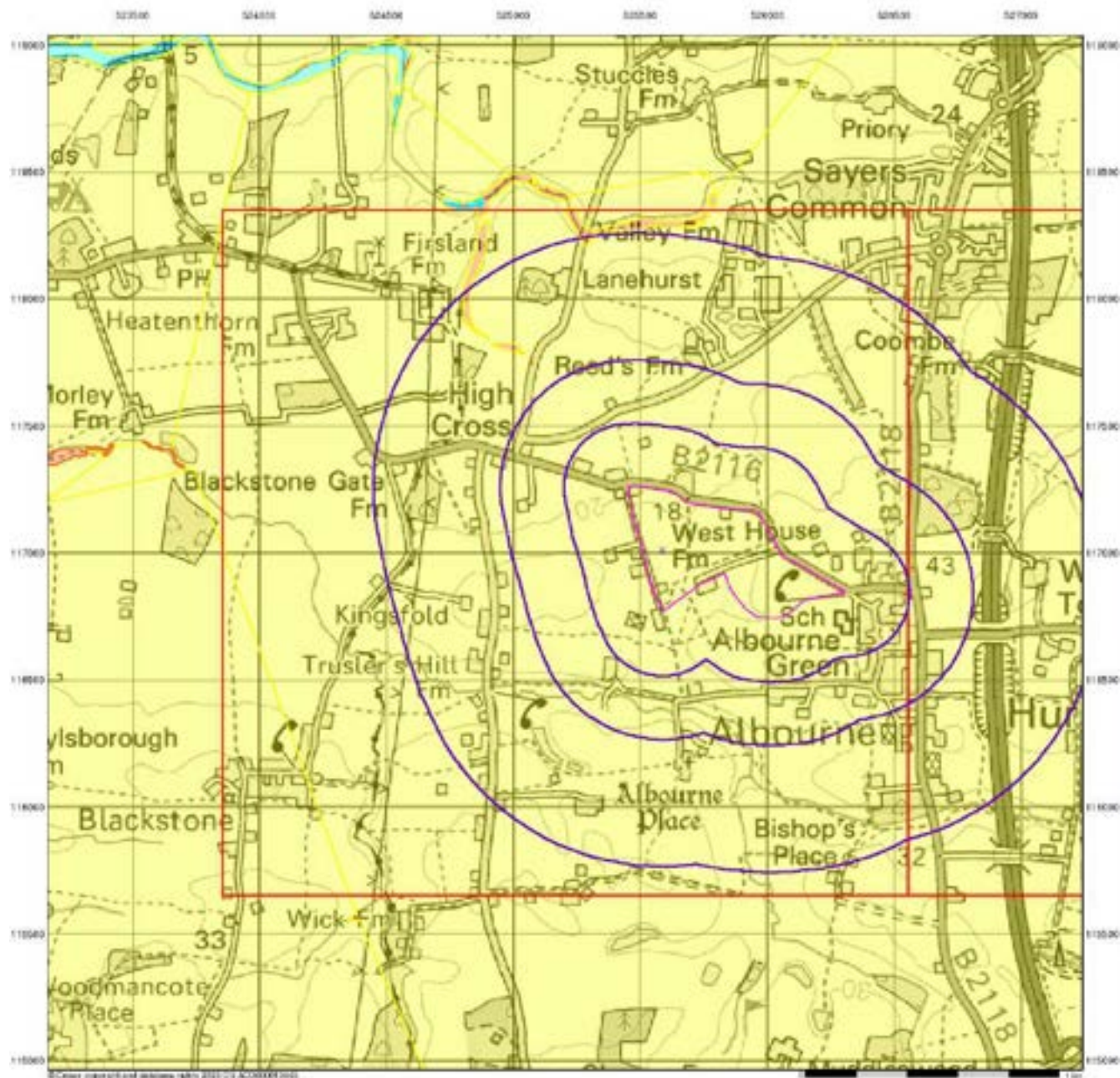
Order Number: 389812734_1_1
 Customer Ref: 1Pysay2509069
 National Grid Reference: 525580, 117010
 Slice: A
 Site Area (Ha): 22.96
 Search Buffer (m): 1000

Site Details

Amberley, Henfield Road, Albourne, HASSOCKS, BN6 9DS

Landmark
 INFORMATION GROUP

Tel: 0844 844 9952
 Fax: 0844 844 9951
 Web: www.envirocheck.co.uk



GeoSmart Information Groundwater Flood Map (1:50,000)

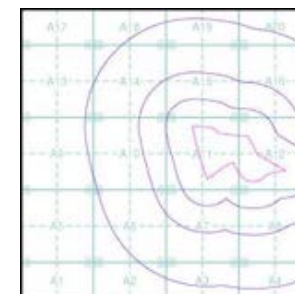
General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice

GeoSmart Information Groundwater Flooding Risk

- High Risk
- Moderate Risk
- Low Risk
- Negligible Risk

GeoSmart Information Groundwater Flood Map - Slice A



Order Details

Order Number: 389812734 1 1
 Customer Ref: 1Pysay2509069
 National Grid Reference: 525580, 117010
 Slice: A
 Site Area (Ha): 22.96
 Search Buffer (m): 1000

Site Details

Amberley, Henfield Road, Albourne, HASSOCKS, BN6 9DS



Tel: 0844 844 9952
 Fax: 0844 844 9951
 Web: www.envirocheck.co.uk

Appendix H

Envirocheck FSR: Historic

motion

EANRW Historic Flood Map (1:10,000)

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID

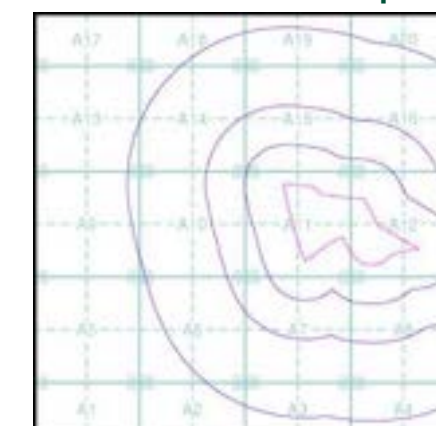
Historic Flood Events Data

- | | |
|--|--|
| Channel Capacity Exceeded (no raised defences) | Obstruction/Blockage - Culvert |
| Channel Capacity Exceeded /Surface Water | Obstruction/Blockage - Debris Screen |
| Groundwater/High Water Table | Operational Failure/ Breach of Defence |
| Local Drainage/Surface Water | Other |
| Mechanical Failure | Overtopping of Defences |
| Obstruction/Blockage - Bridge | Surface Water |
| Obstruction/Blockage - Channel | Unknown |
| Historical Flood Liabilities | |

Contours (height in metres)

- Standard Contour 105 Mean Low Water
- Master Contour 100 Mean High Water
- Spot Height 107.8

EA/NRW Historic Flood Map - Slice A



Order Details

Order Number: 389812734_1_1
 Customer Ref: 1Pysay2509069
 National Grid Reference: 525580, 117010
 Slice: A
 Site Area (Ha): 22.96
 Search Buffer (m): 1000

Site Details

Amberley, Henfield Road, Albourne, HASSOCKS, BN6 9DS

Landmark
 INFORMATION GROUP

Tel: 0844 844 9952
 Fax: 0844 844 9951
 Web: www.envirocheck.co.uk

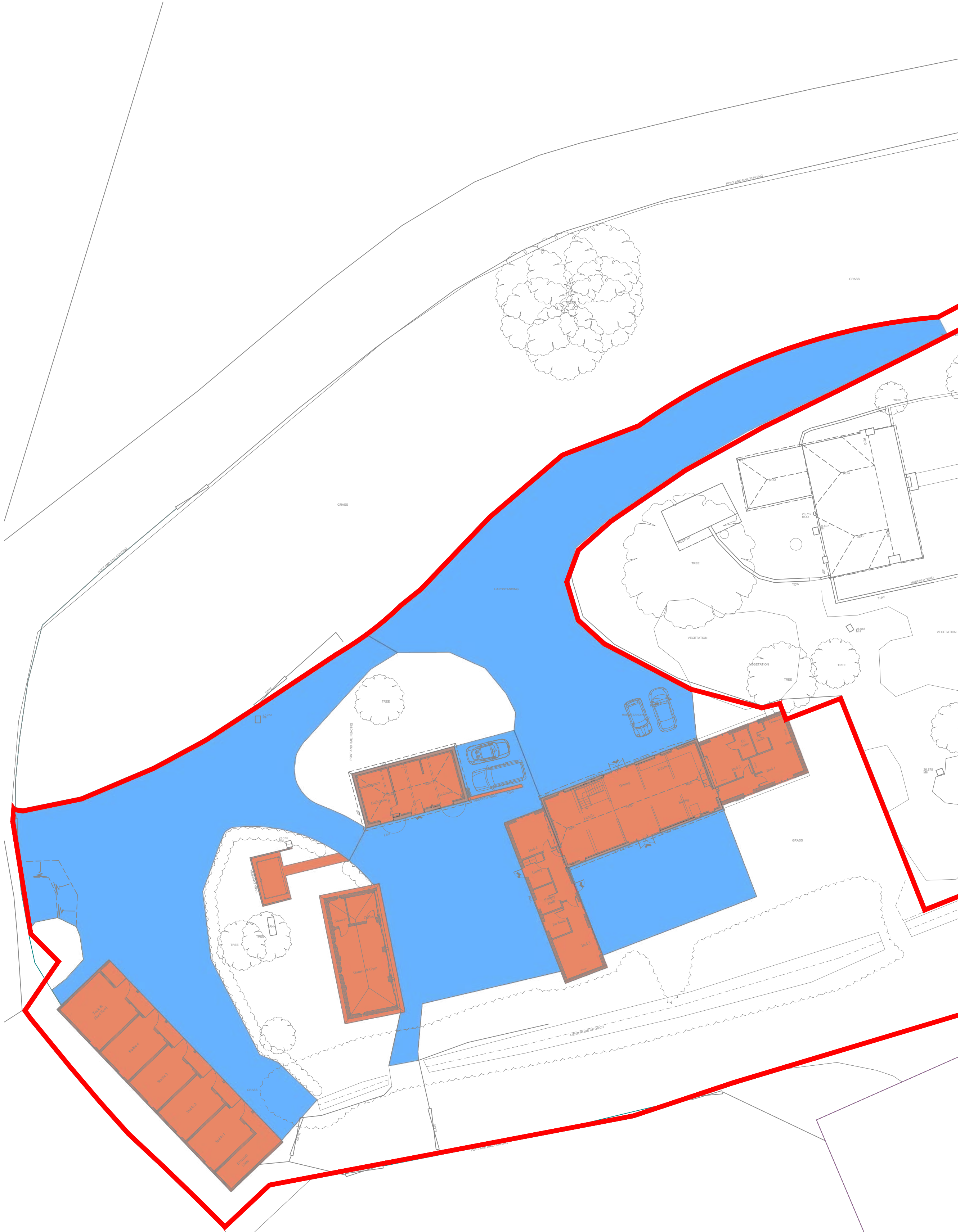
Appendix I

Existing and Proposed Impermeable areas drawings

Existing



Proposed



Notes

- All levels and dimensions are to be checked on site before any work commences. All dimensions are in metres unless stated otherwise.
- This drawing has been based upon survey information supplied by other companies and Motion cannot guarantee the accuracy of the data provided.
- Any discrepancies should be reported to the architect and/or engineer immediately, so that clarification can be sought prior to the commencement of works.
- This drawing should be read in conjunction with all other relevant architect and engineering details, drawings and specification.

Legend

- Site Boundary
- Building
- Hardstanding (Impermeable)
- Hardstanding (Permeable)

Site Areas	Existing (sqm)	Proposed (sqm)	Difference (sqm)
Building	570m ²	521m ²	-49m ²
Hardstanding	615m ²	1,496m ²	881m ²
Total	1,185m ²	2,017m ²	832m ²

P01 First Issue	AM	LJ	JM	19/03/2026
Rev. Description	Drm	Chk	App	Date

Drawing Status:

FOR PLANNING
NOT FOR CONSTRUCTION

motion

Guildford - Reading - London
www.motion.co.uk

Client:
Pyxis Land Limited

Project:
West House Farm, Henfield Road, Albourne

Title:
Permeable and Impermeable Areas

Scale: 1:250 (@ A1)

Drawing:
2509069-0900

Revision:
P01

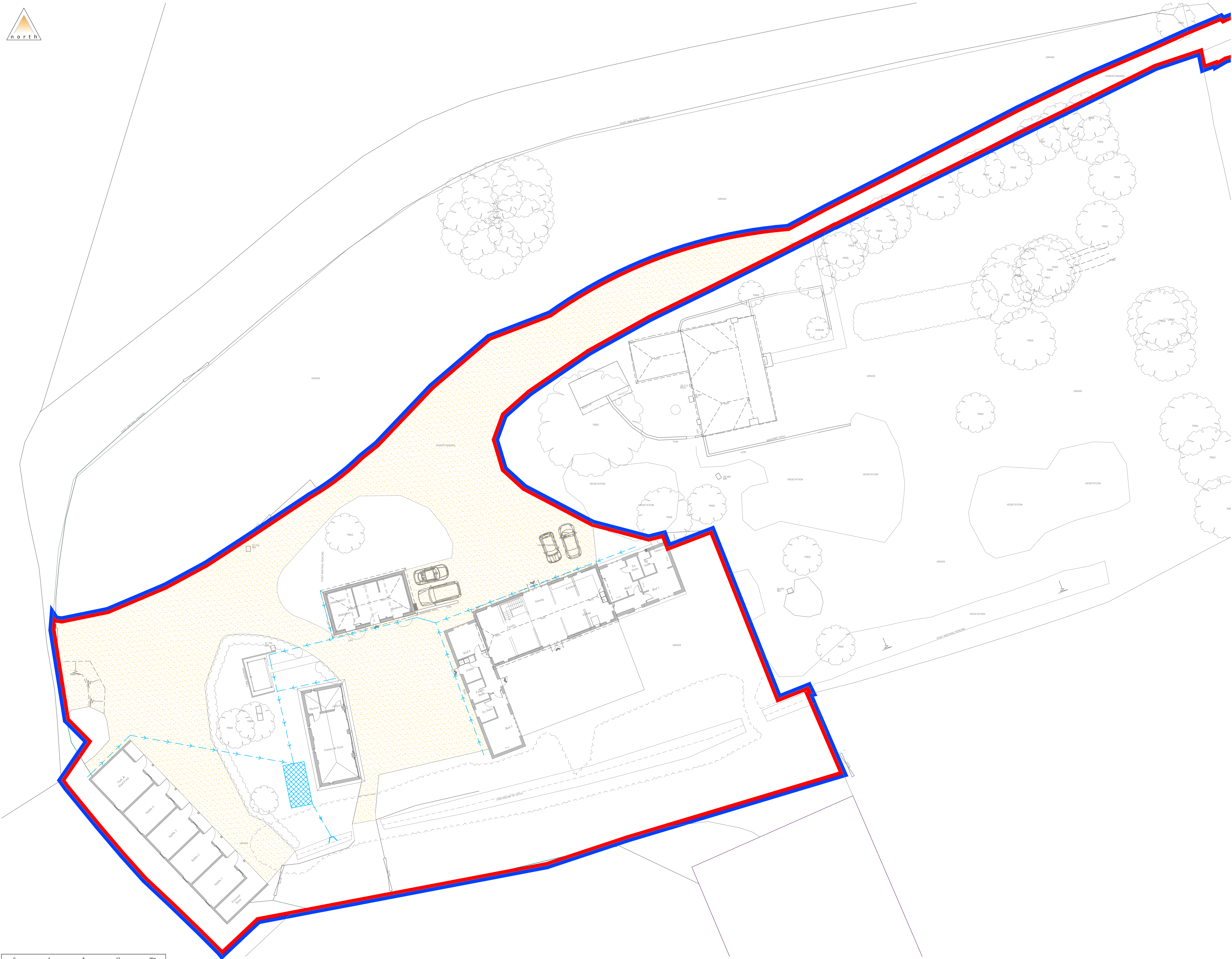
Appendix J

FEH QMED Calculation

Motion		Page 1																		
84 North Street																				
Guildford																				
Surrey GU1 4AU																				
Date 12/03/2026 11:38	Designed by commonuser																			
File	Checked by																			
Innovyze	Source Control 2020.1.3																			
<u>FEH Mean Annual Flood</u> Input <table> <tr> <td>QMED Method</td> <td>2008</td> <td>SAAR (mm)</td> <td>828</td> <td>BFIHOST</td> <td>0.314</td> </tr> <tr> <td>Site Location</td> <td>GB 525400 117400 TQ 25400 17400</td> <td>URBEXT (1990)</td> <td>0.0228</td> <td>FARL</td> <td>1.000</td> </tr> <tr> <td>Area (ha)</td> <td>1.000</td> <td>SPRHOST</td> <td>45.200</td> <td></td> <td></td> </tr> </table> Results QMED Rural (l/s) 12.7 QMED Urban (l/s) 13.0			QMED Method	2008	SAAR (mm)	828	BFIHOST	0.314	Site Location	GB 525400 117400 TQ 25400 17400	URBEXT (1990)	0.0228	FARL	1.000	Area (ha)	1.000	SPRHOST	45.200		
QMED Method	2008	SAAR (mm)	828	BFIHOST	0.314															
Site Location	GB 525400 117400 TQ 25400 17400	URBEXT (1990)	0.0228	FARL	1.000															
Area (ha)	1.000	SPRHOST	45.200																	
©1982-2020 Innovyze																				

Appendix K

Proposed Drainage Strategy Layout



- Notes**
1. All levels and dimensions are to be checked on site before any work commences. All dimensions are in metres unless stated otherwise.
 2. Any discrepancies shall be reported to the engineer immediately, so that clarification can be sought prior to the commencement of works.
 3. This drawing shall be read in conjunction with all other relevant engineering details, drawings and specification.
 4. The contractor is to keep a record of any variations made on site, including the relocation of sewers or drains, for their "as built" drawings to be prepared upon project completion.
 5. The exact location of all private rainwater pipes are to be confirmed with the architect details prior to works commencing.
 6. All works to the private drainage system to be in accordance with the Building Regulations Approved Document Part "H" 2015 edition.
 7. 350mm min cover to the pipe crown to be provided for private pipes laid in soft/paved areas. 900mm min cover to be provided for private pipes laid beneath roads/driveways unless not practicable. Where unachievable, shallow private drains may require protection using concrete surround or paving slabs bridging the trench, subject to the NHBC inspector's requirements.
 8. All pipes shall be laid soffit to soffit with outgoing pipes unless otherwise stated.
 9. Manholes situated within areas accessible to motor vehicles are to be fitted with suitable strength covers and frames. Please refer to the manhole schedule for guidance on this.
 10. Adjacent areas of hardstanding will comply with building regulations and divert water away from the proposed dwellings.
 11. The proposed dwellings will have FFL(s) a minimum of 150mm above adjacent external ground levels.
 12. The top surface of the pervious pavement should finish at least 150mm below any adjoining DPC level. Advice should always be sought from the manufacturer.

Legend

- Red Line Boundary
- Proposed Unmade Self-drain Gravel Driveway
- Proposed Rainwater Harvesting Tank
- Proposed Rainwater Supply
- Proposed Overflow Pipe
- Proposed Overflow Headwall

P01	First Issue	LJ	JM	JM	19/03/2026
Rev.	Description	Drm	Chk	App	Date

Drawing Status:

DRAFT
NOT FOR CONSTRUCTION

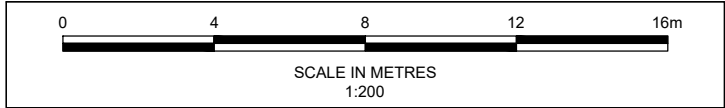


Client:
Pyxis Land Limited

Project:
West House Farm, Henfield Road, Albourne

Title:
Surface Water Drainage Strategy

Scale:	1:200	(@ A1)
Drawing:	2509069-0501	Revision:
		P01



Appendix L

Rainwater Harvesting Calculation

Rainwater Harvesting System (BS EN 16941-1:2024 - Intermediate

AAR	858.7	Average Annual Rainfall
e	0.8	Yield Coefficient
h	0.9	Hydraulic Filter Efficiency

Unit	Roof Area	5% Annual Rainwater Yield (litres)	Tank Size (litres)
Dwelling	221.608	6,851	6,900
Games Room	67.636	2,091	2,100
Stables	153.465	4,744	4,800
Bike & Bin Storage	17.82	551	600
Ancillary	51.722	1,599	1,600
Totals	512.251	15,835	16,000

Appendix C

Motion: Technical Note

Technical Note 1: LPA Comment Response

Site: West House Farm, Hassocks
Prepared by: Laura Jagiela
Approved by: Jason Morgans
Date: 22 May 2026

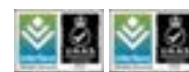
motion
84 North Street
Guildford
GU1 4AU
Tel: 01483 531300
www.motion.co.uk

1.0 Introduction

- 1.1 This technical note has been produced by Motion in response to the Local Planning Authority (LPA) response, following the submission of DM/25/3028, which is for the 'Proposed demolition of modern farm buildings. Extension and conversion of existing barn to dwelling house. Conversion of existing stable building to ancillary accommodation. Construction of replacement stables, games room outbuilding, and a bike, bin and storage outbuilding', at West House Farm, Henfield Road, Albourne, Hassocks, West Sussex, BN6 9DE.
- 1.2 The key points from the LPA's comments are as per the following:
- ▶ Safe access/egress not demonstrated, with site access at high surface water flood risk linked to a culverted watercourse.
 - ▶ Insufficient information to show a compliant SuDS strategy, including lack of attenuation, discharge details, and exceedance routing.
 - ▶ No evidence that a receiving watercourse is suitable or has capacity, and consent may be required.
 - ▶ Proposed gravel construction is not justified or demonstrated to be permeable or policy compliant.
 - ▶ Feasibility of the proposed treatment plant and discharge option has not been demonstrated.
- 1.3 The full comment can be found in **Appendix A**.
- 1.4 This technical note will review the comments received and outline any amendments made in response.

2.0 Safe Access and Egress

- 2.1 With reference to the EA's risk of Flooding from Surface Water (RoFSW) map most of the site is in the very low surface water flood risk category (areas less than the 1 in 1000-year return period). However, there is a small area along the entrance of the site which falls into the low, medium and high surface water risk category (areas between the 1 in 30- year return period and the 1 in 1000-year return period) which is where the ordinary watercourse is culverted below the existing site access road.
- 2.2 The client is currently pursuing a planning application for the land surrounding this development site. As part of the process, Ardent was commissioned to model the drainage ditch across the broader area, this includes the section culverted beneath the access road to the site. Ardent has prepared a dedicated report for West House Farm to assess flood depths and associated hazards affecting the access road, details of which are provided in **Appendix B**.
- 2.3 Hydraulic modelling for the 1% AEP event including a 45% climate change allowance indicates that flooding is limited to a short section of the proposed access road (approximately 25m in length) in the vicinity of the existing culvert, where localised depths of up to 0.369m are predicted. Flood hazard across the majority of the access route is classified as 'very low', with a localised increase in hazard in the immediate vicinity of the culvert.
- 2.4 However, it is noted that ground levels in this area have been underestimated within the model due to interpolation artefacts, and therefore both predicted flood depths and hazard are considered to be conservative and likely overestimated. On this basis, and given the limited spatial extent of flooding, the access is considered to remain passable during the design event and is acceptable for the proposed development in accordance with relevant planning and flood risk guidance.



3.0 Proposed Surface Water Drainage Strategy

Site Areas

- 3.1 The site areas to undergo development are to be assessed as follows in Table 3.1:

Table 3.1 – Impermeable Areas

Breakdown of Site Areas	Existing (ha)	Proposed (ha)	Difference (ha)
Buildings	0.0570	0.0500	- 0.0070
Hardstanding	0.0615	0.1489	+ 0.0874
Total	0.1185	0.1989	+ 0.0804

Brownfield Runoff Rate

- 3.2 The site currently comprises of a mix of modern farm buildings, a barn, and stables. Therefore, to understand the existing runoff rates from the site, the brownfield runoff rates have been calculated using the Modified Rational Method with rainfall intensities for different return periods extracted from Table 1(a) of the Transport and Road Research Laboratory Report – Estimated Rainfall for Drainage Calculations in the United Kingdom (TRRL Report LR 595) by C. P. Young.
- 3.3 The Modified Rational Method Equation is:

$$Q_n = 2.78CiA$$

Where:

C = Runoff Coefficient (which is assumed to be '1' in this case to represent impermeable areas)

i_n = Rainfall intensity for a ***n*** return period (mm/hr) as prescribed by Table 1(a) of TRRL LR 595

A = Impermeable Area

Q_n = Runoff for ***n*** return period

The rainfall intensities for different return periods extracted from Table 1(a) of TRRL Report LR 595 are:

i₁ = 50.8 mm/hr

i₃₀ = 113.02 mm/hr

i₁₀₀ = 143.9 mm/hr

- 3.4 Using the above calculation and inputs, the brownfield runoff rate for the existing impermeable area of 0.1185 ha are as follows in Table 3.2.

Table 3.2 – Brownfield Runoff Rate From Existing Impermeable Areas

Return Period	1 in 1	1 in 30	1 in 100
Discharge Rate (l/s)	16.74 l/s	37.23 l/s	47.41 l/s

- 3.5 These brownfield runoff rates are substantial. Even the existing 1 in 1-year runoff rate from the site is 16.74 l/s. The development at West House Farm will look to offer a betterment over the existing runoff rates outlined above.

Greenfield Runoff Rate

- 3.6 The greenfield runoff rates have been calculated using the Flood Estimation Handbook (FEH) 2025 statistical method. The QMED and QBar calculation uses the following catchment descriptors and variables:

- ▶ Site Location
- ▶ SAAR9120 – Standard Average Annual Rainfall 1991 – 2020 (mm)
- ▶ SPR Host - Standard percentage runoff derived from HOST soils data
- ▶ URBEXT - The extent of urban and suburban cover
- ▶ BFIHOST19scaled - Baseflow index derived from Hydrology of Soil Types (HOST) soils data
- ▶ FARL - Index of flood attenuation due to reservoirs and lakes (=1.0)
- ▶ Catchment Area – Hectares

- 3.7 The QMED calculation sheet for the proposed impermeable area is included in **Appendix C**. This is summarised in Table 3.3 below

Table 3.3 – QMED Runoff Rate

Impermeable Area (ha)	QMED (l/s)	QBar (l/s)
0.1989	1.5	1.7

- 3.8 The QMED value is the peak rate of flow from a catchment for the median annual flood (a return period of 1:2 years) which has been used in the drainage strategy as the desired flow restriction rate.
- 3.9 The development site also has significant existing surface water runoff rates, as calculated above. It is proposed to establish a discharge rate that provides betterment over the 1 in 1-year brownfield runoff rate of 16.74 l/s.
- 3.10 By providing betterment, the development's overall discharge rate will be reduced by 64% of the existing 1 in 1-year rainfall event for all storms, going from 16.74 l/s down to 6.0 l/s. The betterment will therefore increase with the return period of the rainfall event (i.e. in the 1 in 100-year rainfall event the runoff rate for the site will not increase beyond 64% of the 1 in 1-year brownfield runoff rate, thus the benefit increases as the intensity of rainfall increases).

Proposed Surface Water Drainage Strategy

- 3.11 The desk-based geology information indicates that infiltration will not be feasible at the site due to the clay-based geology (Weald Clay). Therefore, infiltration cannot be considered a viable means of surface water discharge for the development.
- 3.12 Therefore, the drainage strategy for the development will look to use System C 'non-infiltration' pervious surface with the discharge of surface water at a controlled rate to the existing ditch, which is culverted beneath the site access road. The watercourse continues north beneath Henfield Road, before turning northwest and ultimately joining the main river, the River Adur.
- 3.13 The proposed development will include the incorporation of rainwater harvesting measures to further enhance drainage performance.

- 3.14 The revised MicroDrainage calculations can be seen in **Appendix D**, and the corresponding updates are reflected in the proposed surface water drainage strategy drawing in **Appendix E**.
- 3.15 It is intended to use a permeable surface for the driveway. The design features of the permeable surface is as follows:
- ▶ Total Area: 1,358m²
 - ▶ 300mm MOT type 3 (nominal porosity = 30%)
 - ▶ Separating Geotextile
- 3.16 The total depth of the permeable surface is 300mm. Surface water falling directly onto the permeable surface will drain towards the flow control and be discharged into the existing drainage ditch, which is culverted beneath the site access road, at a rate of 6.0 l/s.
- 3.17 An Ordinary Watercourse Consent (OWC) will be obtained, if required.

Design Criteria

- 3.18 This ensures that the current drainage strategy accords with local policy requirements (as well as those of the NPPF). In brief, this includes:
- ▶ Using FEH Annual Maximum Catchment data rather than FSR data. It should be noted that FEH 2022 has been used, although MicroDrainage does not acknowledge this dataset and assumes that it is 2013 and labels it as such.
 - ▶ Using a runoff coefficient (CV) value of 1.0 in all hydraulic modelling (for both summer and winter storms, both of which have been assessed in the model).
 - ▶ The full suite of rainfall events has been used (up to the 5,760-minute storm, which is maximum allowable when using FEH data).

Surface Water Runoff Quality

- 3.19 The NPPF states that development should not have a detrimental impact on the environment, including the water environment. The technical guidance to the NPPF provides further advice on the benefits of ensuring runoff quality is to an appropriate standard.
- 3.20 The CIRIA SuDS Manual provides guidance on the treatment of surface water runoff. With regards to the proposed development, Table 4.3 of the CIRIA SuDS Manual rates the pollution hazard from roof water runoff as 'very low'. The only requirement for roof water runoff is the removal of gross solids and sediments, which would be achieved using catchpits and silt traps throughout the drainage network and upstream of where permeable surfacing is used.
- 3.21 With regards to the driveway, Table 4.3 of the CIRIA SuDS Manual rates the pollution hazard from residential car parking and low traffic roads as 'low'. To mitigate a 'low' pollution hazard, the CIRIA SuDS Manual recommends using a simple index approach in line with Section 26.7.1. This is discussed, below.
- 3.22 Table 26.2 of the CIRIA SuDS Manual provides pollution hazard indices for different land use classifications. The land use classifications that require consideration for the proposed development site are in Table 3.4, on the next page.

Table 3.4: Excerpt from Table 26.2 of CIRIA SuDS Manual

Land Use	Pollution Hazard Level	Total Suspended Solids (TSS)	Metals	Hydro-Carbons
Individual property driveways, residential car parks, low traffic roads (e.g. cul-de-sacs, home zones and general access roads) with less than 300 traffic movements per day.	Low	0.5	0.4	0.4

- 3.23 To deliver adequate pollution treatment and mitigation, the CIRIA SuDS Manual recommends using a SuDS component that has a total pollution mitigation index (for each contaminant type) that equals or exceeds the pollution hazard index (for each contaminant type).
- 3.24 Table 26.3 of the CIRIA SuDS Manual provides indicative SuDS mitigation indices for each SuDS type when discharging to surface waters. Table 3.5, below, which is an excerpt from Table 26.3, shows the mitigation indices for permeable pavements.

Table 3.5: Pollution Mitigation Indices for Permeable Pavements

Type of pollution removal component	Total Suspended Solids (TSS)	Metals	Hydro-Carbons
Permeable Pavements	0.7	0.6	0.7

- 3.25 The mitigation indices for a permeable pavement exceed or match the highest pollution hazard index figures from Table 3.4, which shows how the permeable surfaces ensure all pollution hazards are completely mitigated.

Residual Risk and Infrastructure Maintenance

- 3.26 Whilst the drainage strategy for the site has been designed to current standards, there would remain a small residual risk of flooding due to blockage or failure of on-site infrastructure. Therefore, appropriate and regular maintenance of the drainage infrastructure should be undertaken by the site management company or their agents (and the residents, where applicable).
- 3.27 To assist with this process, a Drainage Management and Maintenance plan has been prepared, which sets out the principles for the long-term management and maintenance of the proposed surface water drainage system on the development. The Drainage Management and Maintenance Plan can be seen in [Appendix F](#).
- 3.28 The purpose of this document is to ensure that those responsible for site maintenance have a robust inspection and maintenance plan going forwards. This will help ensure the optimum operation of the surface water drainage system and that it will be regularly maintained for the lifetime of the development. This will contribute to reducing the risk of surface water flooding both on- and off-site.

Exceedance Events

- 3.29 Exceedance events are those greater than the design rainfall event (i.e., greater than the 1 in 100-year rainfall event plus 45% for climate change).
- 3.30 Any rainfall events greater than the design rainfall event may cause flooding due to them 'exceeding' the capacity of the drainage system. In this situation it is imperative to check whether flooding would occur and,

if so, whether it needs to be contained on site. Exceedance flows should not ingress into any properties on site and should not cause nuisance to any neighbouring sites or buildings.

- 3.31 Should an exceedance event cause the drainage system to surcharge, the topography of the site and the road network would direct surface water flows and, using these factors as a guide, a high-level plan of exceedance flows has been produced to show the pathway that exceedance flows would take across the site. This can be seen in **Appendix G**.
- 3.32 The receptor for exceedance would be the area to the north, which is also within the same land ownership of the site, and thereafter there are no properties or infrastructure that could be affected. Therefore, exceedance would not impact any infrastructure or third-party land.

New SuDS Standards

- 3.33 How the surface water drainage strategy meets the new national standards for SuDS is outlined in Table 3.6, on the next page.

Table 3.6 - Compliance with the New National Standards for SuDS

Standard	Method	Compliance
1	Runoff Destinations	The site complies with Priority 1 in the collection and reuse of water within the rainwater harvesting system. The site also complies with Priority 3 with the proposed discharge of surface water runoff to the nearby drainage ditch.
2	Management of Everyday Rainfall (Interception)	The proposed surface water drainage strategy will provide interception by utilising the following SuDS: Rainwater Harvesting and Permeable surface.
3	Management of Extreme Rainfall And Flooding	The hydraulic modelling carried out in MicroDrainage shows that the proposed development can manage all surface water (with inclusions for climate change) can be attenuated and discharged at 64% of the Brownfield runoff rate for the existing 1 in 1-year rainfall event for all storms.
4	Water Quality	The rainwater harvesting system enhances water quality by filtering out sediment, debris, and other pollutants through a combination of leaf guards, pre-tank filtration, and first-flush diversion, which prevent coarse solids and organic matter from entering the tank. Fine particles are further removed via sedimentation and flotation within the storage tank, ensuring that only cleaner, higher-quality water is supplied for reuse. This source-control filtration improves runoff quality before it enters the wider drainage network, supporting compliance with Standard 4 – Water Quality of the National SuDS Standards and the CIRIA SuDS Manual.
5	Amenity	The proposed development will use compacted shingle, which complements the rural landscape, for all hardstanding areas. This choice of material not only blends visually with the surrounding countryside, maintaining the site's natural character, but also supports sustainable drainage objectives. By selecting compacted shingle, the project aligns with SuDS principles, enhancing both aesthetic and functional aspects of the landscape, and providing a robust solution for everyday access and vehicular movement.
6	Biodiversity	Rainwater harvesting supports biodiversity by reducing stormwater runoff, which in turn lowers erosion, sedimentation, and pollution in nearby watercourses, helping to protect sensitive aquatic habitats. It also promotes healthier vegetation by supplying naturally soft, chemical-free water that supports stronger plant growth and improves habitat quality for pollinators, birds, and other wildlife, while enhancing local ecological resilience.
7	Design of Drainage for Construction, Operation, Maintenance, Decommissioning and Structural Integrity	By using surface-level SuDS in the drainage strategy, a system that is safe to construct and is sustainable to use and maintain, and safely integrates into the development, has been specified. A clear and detailed management and maintenance plan has been produced, which specifies how the drainage system should be maintained in perpetuity.

4.0 Foul Water Drainage

- 4.1 The proposed development will be served by a private on-site foul water drainage system, as connection to the public foul sewer network is not available or practicable at this location. Foul effluent generated by the development will be collected via a separate foul drainage system and conveyed to a package sewage treatment plant.

- 4.2 The sewage treatment plant will be sized in accordance with British Water – Flows and Loads and will comply with BS EN 12566 for small wastewater treatment systems. Treated effluent will either discharge to a drainage field via infiltration to ground or to a nearby watercourse. The final specification of the sewage treatment plant, discharge location, and method of discharge will be confirmed at the detailed design stage, with full details to be secured by planning condition.
- 4.3 The foul water drainage system will be designed and installed to comply with the Environment Agency's General Binding Rules for Small Sewage Discharges. If necessary, an application for an Environmental Permit will be submitted.
- 4.4 The sewage treatment plant and associated drainage infrastructure will be installed, operated and maintained in accordance with the manufacturer's recommendations. A long-term management and maintenance regime will be implemented for the lifetime of the development, with responsibility resting with the site owner or an appointed management company.
- 4.5 The location of the package sewage treatment plan can be seen in the proposed surface water drainage strategy plan in **Appendix E**. The sewage treatment plant will be positioned a minimum of 7 m from the building in accordance with Building Regulations guidance.
- 4.6 Overall, the proposed foul water drainage strategy is considered acceptable in principle, with the detailed design of the sewage treatment plant, discharge arrangements, and evidence of compliance with the Environment Agency's General Binding Rules to be secured through appropriately worded planning conditions.

5.0 Summary and Conclusions

- 5.1 This technical note has reviewed the LPA's comments following the submission of DM/25/3028, which is for the proposed development at West House Farm, Henfield Road, Albourne, Hassocks, West Sussex, BN6 9DE.
- 5.2 The EA mapping shows the site is mostly at very low surface water flood risk, with a small higher-risk area at the entrance where the culvert is located. Modelling by Ardent shows that flooding would only affect a short section of the access road (about 25 m) in an extreme event, with shallow depths and very low risk elsewhere. As the model is likely to overestimate flooding, the access should still be usable and is considered acceptable.
- 5.3 The drainage strategy will use a non-infiltration permeable surface, with surface water discharged at a controlled rate to the existing ditch beneath the access road, which ultimately drains to the River Adur. Rainwater harvesting will also be included to improve performance, and runoff will pass through a 300 mm deep permeable layer before being discharged at 6.0 l/s. An Ordinary Watercourse Consent (OWC) will be obtained if required.
- 5.4 The development will be served by a private foul drainage system, with effluent treated by a package sewage treatment plant designed in accordance with British Water standards and BS EN 12566, located at least 7 m from any building in line with Building Regulations. Treated flows will discharge to ground or a nearby watercourse in compliance with the Environment Agency's General Binding Rules, with an Environmental Permit obtained if required. The system will be installed and maintained in accordance with manufacturer guidance, with details secured at the detailed design stage; overall, the strategy is considered acceptable in principle.

Appendix A

LPA Comments

From: drainage <drainage@midsussex.gov.uk>
Sent: 21 April 2026 10:59:09 UTC+01:00
To: "Katherine Williams" <Katherine.Williams@midsussex.gov.uk>
Cc: "drainage" <drainage@midsussex.gov.uk>
Subject: 2026.04.21 DM/25/3028 - West House Farm Henfield Road Albourne Hassocks
West Sussex BN6 9DE

Dear Katherine,

Thank you for reconsulting the Flood Risk and Drainage Team on the above application.

We have reviewed the Flood Risk Assessment and Surface Water Drainage Strategy by Motion (dated 23/03/2026) and have the following comments:

Flood risk

The applicant has confirmed that the site is located within Flood Zone 1 with an area of the site (in the vicinity of the proposed games room) shown to be at low risk of surface water flooding.

The proposed access and escape route (along the driveway/site access) is located within an area identified as being at high surface water flood risk, both for the present day and when accounting for climate change, which is understood to be associated with an ordinary watercourse which is culverted beneath the site access road.

Safe escape and egress

The applicant has failed to demonstrate that safe access and egress can be achieved throughout the lifetime of the development.

In the absence of bespoke surface water flood modelling (including the ordinary watercourse which is culverted beneath the driveway/ site access), we would expect the applicant to utilise the Environment Agency's Risk of Flooding from Surface Water hazard mapping, including climate change scenarios, to assess the flood hazard rating along the proposed access and escape route.

In particular, the assessment should consider the 1 in 1000 year plus climate change event (Low risk, 2040–2060 epoch), with the corresponding flood hazard mapping clearly overlain onto the site's proposed layout plans and proposed escape routes. This would allow us to determine if safe access and egress can be achieved during the design event, which has a maximum hazard rating of 0.75.

Alternatively, the applicant could carry out bespoke surface water flood modelling (including the ordinary watercourse which is culverted beneath the driveway/ site access), to demonstrate that the site access is safe for the modelled 1:100 year plus climate change for the lifetime of the development scenario.

On this basis, it has not been demonstrated that safe access and egress can be achieved.

Surface water

The BGS infiltration potential map shows the site to be in an area with low infiltration potential. Therefore, the use of infiltration drainage, such as permeable paving or soakaways, is unlikely to be possible on site.

The applicant proposes to manage surface water runoff in part by reducing the total roof area by approximately 49m², thereby reducing impermeable area and improving site drainage. While this reduction is noted, it does not substitute the need to provide sufficient attenuation for surface water runoff. Given the scale we would advise the applicant that the development is considered new build in terms of drainage potential.

The inclusion of rainwater harvesting is welcomed; however, this alone is not sufficient to manage runoff for the design storm event. The applicant must demonstrate that there is sufficient attenuation storage on site, with discharge rates restricted as close as reasonably practicable to the greenfield runoff rate.

Further information is required to demonstrate that the proposed drainage strategy complies with SuDS principles, including:

- Evidence of feasible discharge destination in accordance with the drainage hierarchy
- Indicative calculations to demonstrate sufficient attenuation storage
- Details of exceedance flow routing

If discharge to a watercourse is proposed, the applicant must demonstrate that:

- A watercourse is present and hydraulically connected to the wider catchment
- The channel has sufficient capacity
- Invert levels and outfall details support the proposed discharge

As a new discharge to an ordinary watercourse may be required, Ordinary Watercourse Consent (OWC) is likely to be needed.

In addition, the applicant refers to the use of compacted gravel within the drainage strategy. Further details are required to demonstrate that this element of the design is appropriate and policy compliant. In particular, the applicant must confirm that the proposed gravel surface is permeable and designed in accordance with SuDS principles, including suitable sub-base construction and infiltration characteristics. At present, insufficient information has been provided to confirm that the proposed arrangement will provide adequate permeability or pollution control.

Foul water Drainage

The development is proposed to be served by a package sewage treatment plant, with discharge to either a drainage field or nearby watercourse.

At this stage, the applicant must demonstrate that one of these options is feasible in principle.

Further information should be provided to confirm:

- Either confirm compliance with the Environment Agency's General Binding Rules or that a permit will be obtained

- A plan that demonstrates the minimum offset distances from buildings, boundaries, and water features can be achieved
- That the proposed system is suitable for the site conditions (e.g. a suitable infiltration rate or that the watercourse is suitable to connect into)

Advisory

Ordinary Water course consent:

The applicant is advised that if new surface / foul water discharge points are proposed into the ordinary watercourse, it is therefore important that any requirement for Ordinary Watercourse Consent (OWC) is fully considered before works are undertaken. OWC application details, including a link to guidance as to what classifies as a consentable structure/activity can be found here: [Ordinary watercourse land drainage consent - West Sussex County Council](#)

Upon receipt of this further information, we will review and give further comment.

Best Wishes

Flood Risk and Drainage Team
Estate Services and Building Control
Mid Sussex District Council
drainage@midsussex.gov.uk

Appendix B

Ardent Modelling Report

Riverdale Development Ltd

Sayers Common - West Lane Farm

Modelling Technical Note

**REPORT REF.
2603190-ACE-XX-XX-RP-C-0321**

May 2026

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Modelling Technical Note

May 2026

Document Control Sheet

REV	ISSUE PURPOSE	AUTHOR	CHECKED	APPROVED	DATE
-	DRAFT	GA	LY	DRAFT	May 2026
-	FINAL	GA	LY	GA	May 2026

Distribution

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1. Introduction

1.1. Ardent Consulting Engineers (hereafter referred to as Ardent) has been instructed by Riverdale Development Ltd to produce a Modelling Technical Note to support a proposed development at Henfield Road, Albourne.

1.2. The site location is shown in **Figure 1-1**. The site is situated west of the village of Albourne and to the west of Henfield Road. A ditch is located to the east of the site, flowing south to north. The ditch is culverted under the proposed access road.

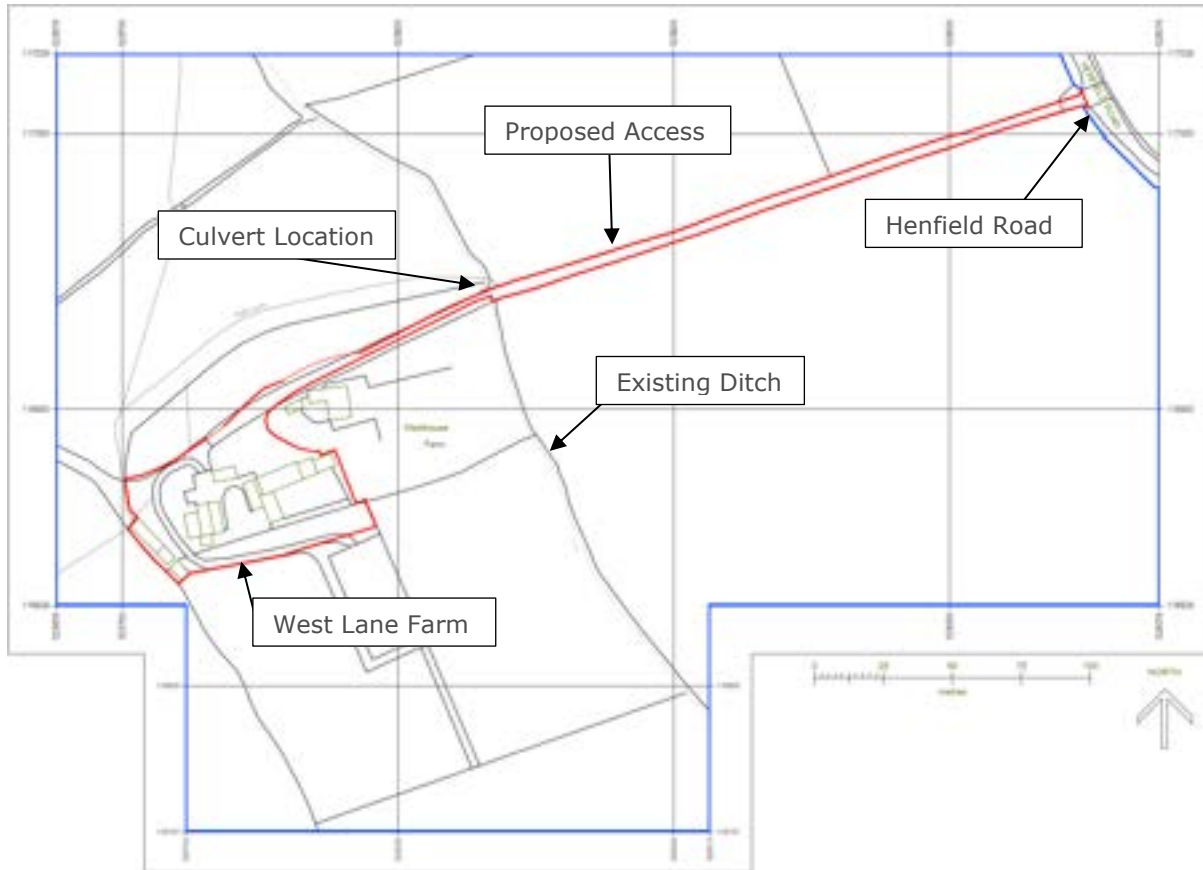


Figure 1-1: Site location plan

1.3. Ardent has undertaken site specific hydraulic 1D-2D linked direct rainfall-runoff model for the site located directly to the north. The model domain includes the West Lane Farm site and the ditch running to the east of it.

1.4. Ground levels at the Site have been informed by a topographic survey collected in November 2025 by Motion (see **Appendix A**). Elevations across the wider catchment were derived from the 2022 EA 1m LIDAR DTM.

1.5. A 1m grid size is applied within the vicinity of the Site.

2. Baseline modelling results

2.1. Predicted model flood depths for the design event (1% AEP + 45% CC) are shown in **Figure 2-1** below. Model results have been filtered to remove depths below 0.050m.

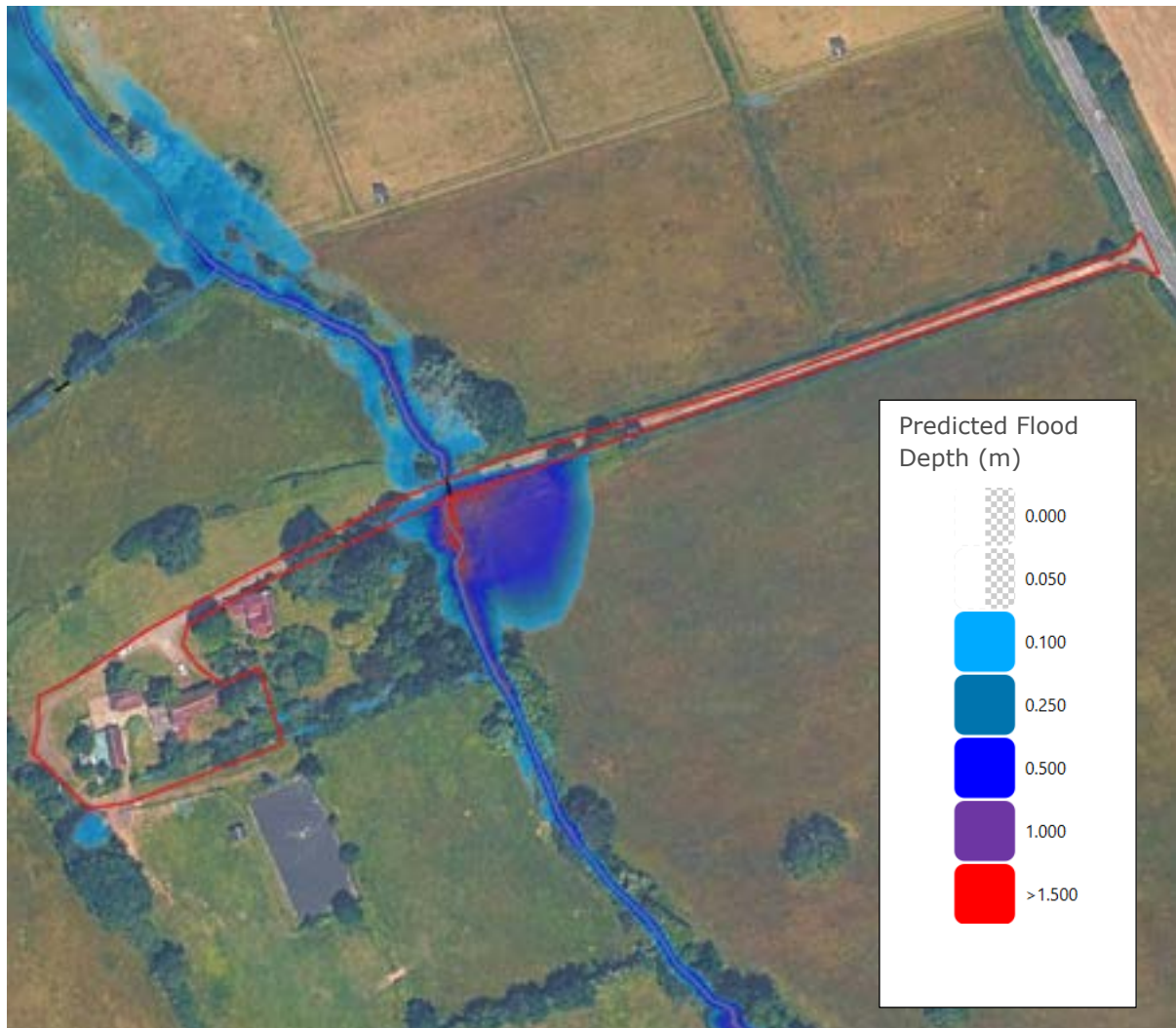


Figure 2-1: Peak modelled depths – 1% AEP +45% climate change

2.2. The only area affected by flood risk is part of the access road. The length of flooding is approx. 25m. As shown in **Figure 2-2**, the max depth is 369mm near the culvert location. Flood depths are generally below 150mm either side of the culvert.

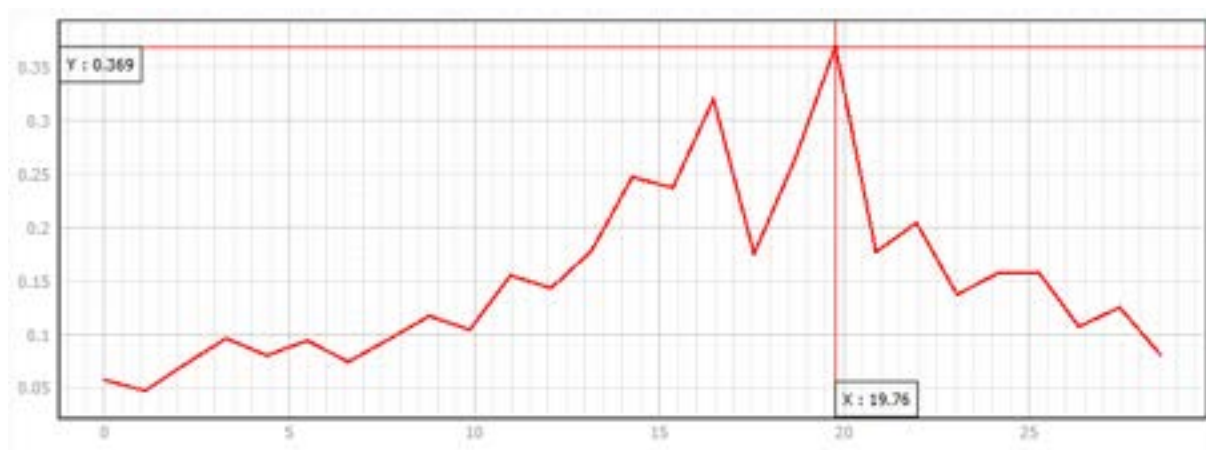


Figure 2-2: Peak modelled depths across the access road– 1% AEP +45% climate change

2.3. Predicted flood hazard is very low on site. However, the access road is within higher hazard classification near the existing culvert as shown in **Figure 2-3**.



Figure 2-3: Peak modelled hazard– 1% AEP +45% climate change

2.4. The model shows that the northern part of the road is within very low hazard. At the location of the culvert, there is only 1 grid cell that remains within very low hazard and that distance is 1m as shown in **Figure 2-4**.

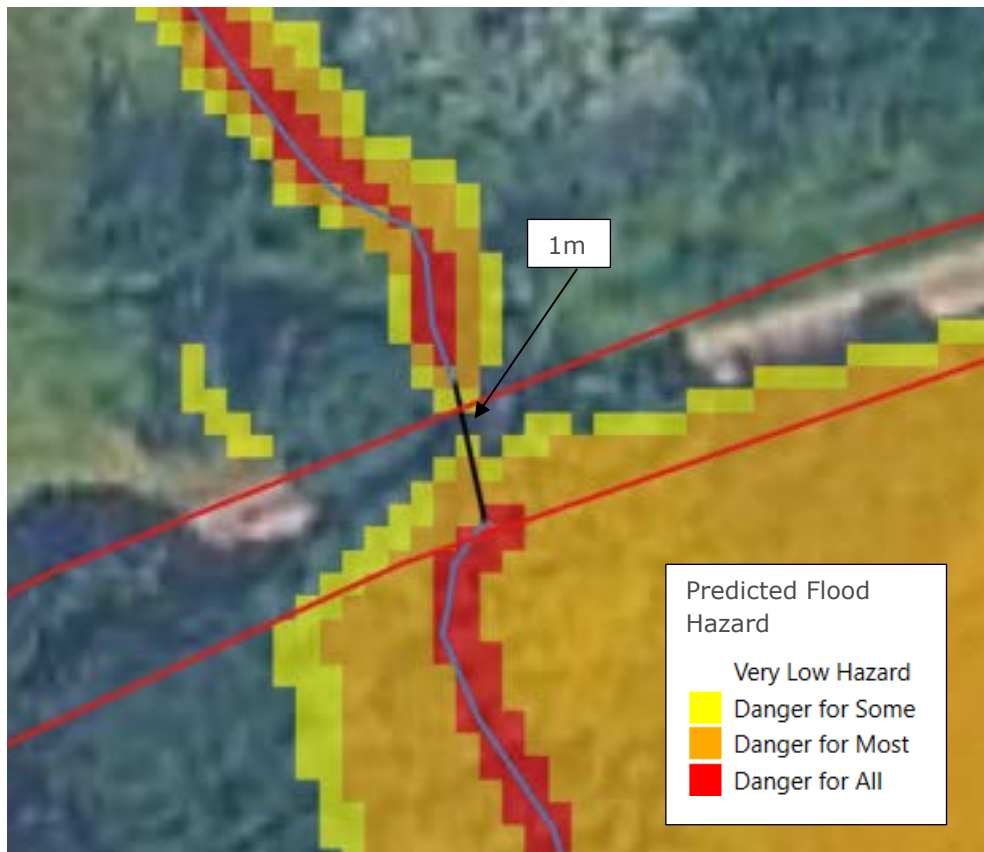


Figure 2-4: Peak modelled hazard across the access road – 1% AEP +45% climate change

- 2.5. The model was build for the site to the north and therefore the model verification and validation were focused on areas within another site. Levels at this particular crossing were not previously checked in detail.
- 2.6. The surveyed levels were compared with those used by the model to generate the ground surface. While the survey data were successfully imported into the model, the spacing between survey points resulted in interpolation artefacts, leading to some unrealistic ground levels at the southern part of the access road, near the culvert entrance.

- 2.7. Surveyed levels within the road are shown in black below and vary between 24.91m AOD and 24.95m AOD either side of the culvert. Levels to the south of the road are slightly lower (24.69-24.91m AOD) and the bed level of the watercourse is 23.068m AOD as shown in **Figure 2-5**.

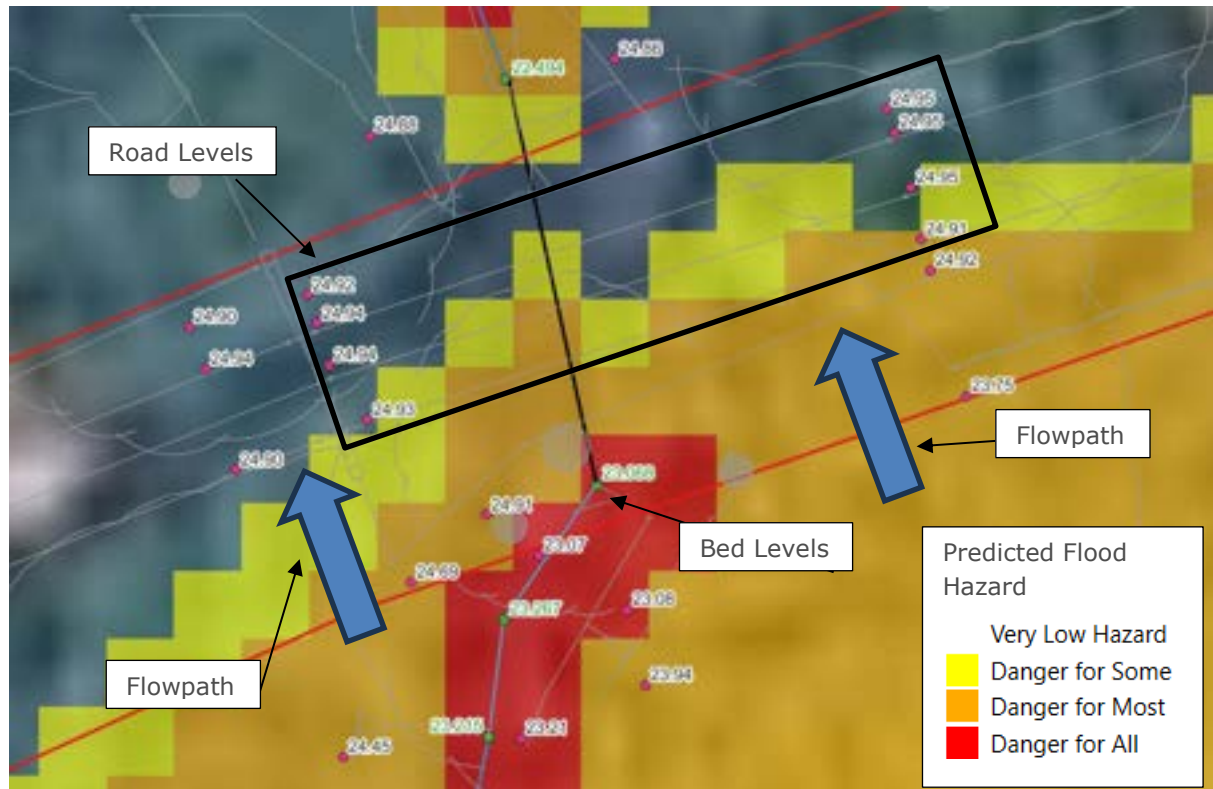


Figure 2-5: Surveyed Levels

- 2.8. Based on the above, the levels of the ground at and around the access road are between 24.91 and 24.95m AOD. However, as shown in **Figure 2-6** below, the levels used by the model to generate the ground surface are much lower at the southern part as the 23.068m AOD bed level was wrongfully used in the interpolation process. Therefore the levels to the south of the road are shown to be as low as 24.15m AOD in stead of 24.91m AOD.

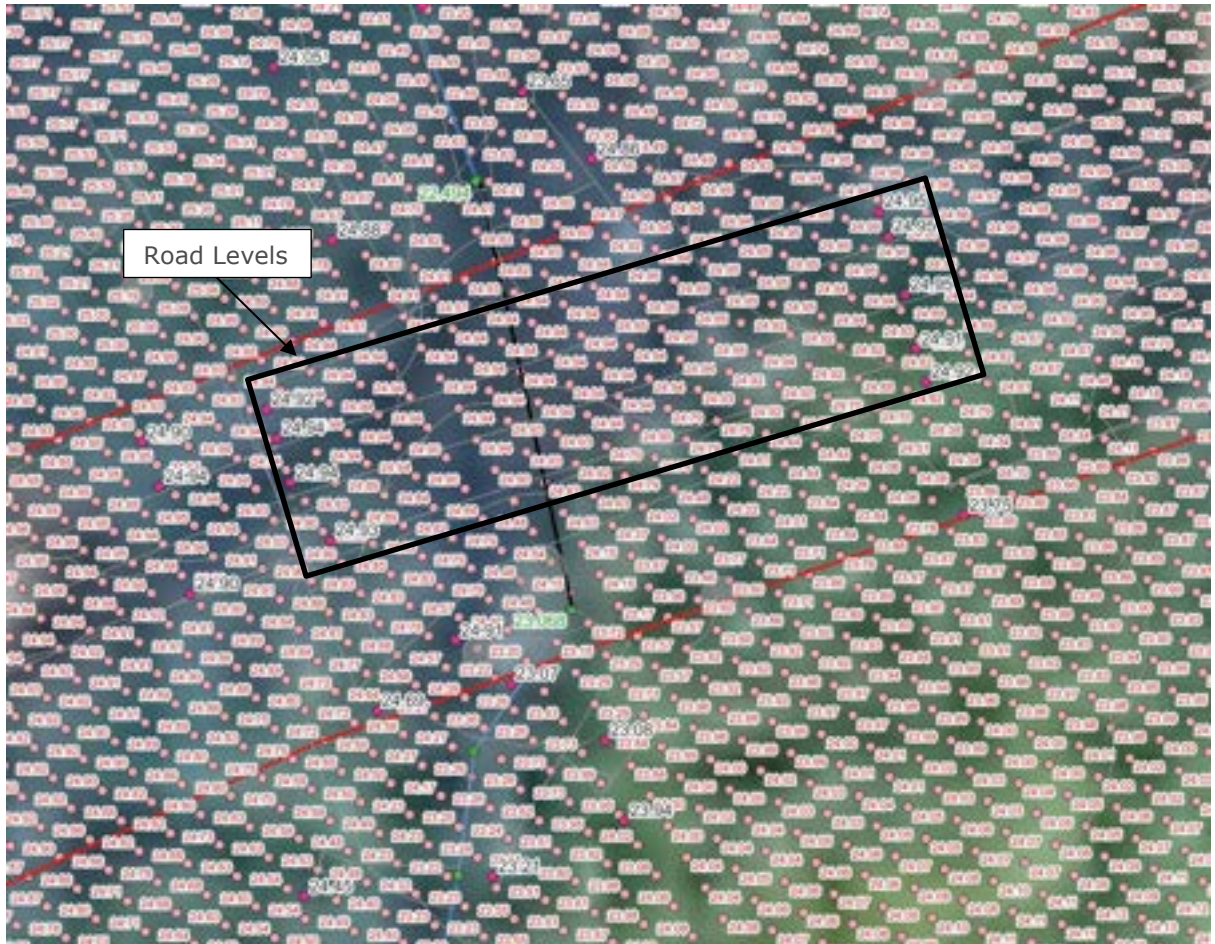


Figure 2-6: Model Levels

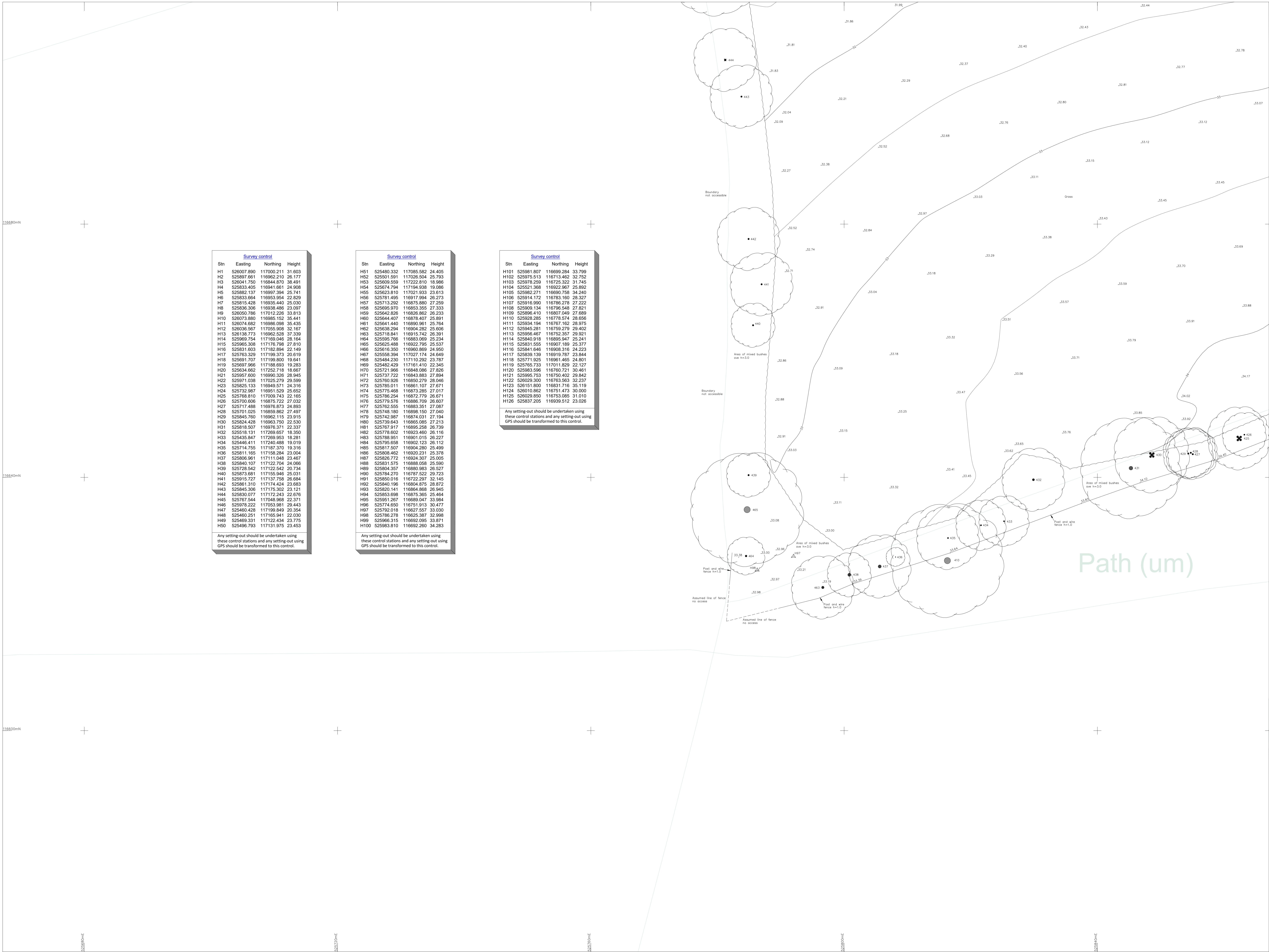
- 2.9. The ground levels in the southern part of the model have not been accurately interpolated. In reality, elevations across the southern side of the road are higher than those represented in the model. As a result, while the current model shows water overtopping the road from the south, the actual volume of overtopping is likely to be lower. This is because the higher ground levels upstream of the culvert would reduce both flood depths and flow velocities going across the road. Consequently, the flood hazard classification in this area is expected to be lower than what is currently indicated by the model.

3. Summary

- 3.1. Ardent Consulting Engineers has been instructed by Riverdale Development Ltd to produce a Modelling Technical Note to support a proposed development at Henfield Road, Albourne.
- 3.2. Ardent has undertaken site specific hydraulic 1D-2D linked direct rainfall-runoff model for the site located directly to the north. The model domain includes the West Lane Farm site and the ditch running to the east of it.
- 3.3. The only area affected by flood risk is part of the access road. The length of flooding is approx. 25m and max depth is 369mm near the culvert location. Flood depths are generally below 150mm either side of the culvert. Predicted flood hazard is also very low on site. However, the access road is within higher hazard classification near the existing culvert.
- 3.4. The model shows that the northern part of the road is within very low hazard. At the location of the culvert, there is only 1 grid cell that remains within very low hazard and that distance is 1m.
- 3.5. Surveyed levels within the road are shown in black below and vary between 24.91m AOD and 24.95m AOD either side of the culvert. Levels to the south of the road are slightly lower (24.69-24.91m AOD) and the bed level of the watercourse is 23.068m AOD.
- 3.6. Based on the above, the levels of the ground at and around the access road are between 24.91 and 24.95m AOD. However, the levels used by the model to generate the ground surface are much lower at the southern part as the 23.068m AOD bed level was wrongfully used in the interpolation process. Therefore, the levels to the south of the road are shown to be as low as 24.15m AOD instead of 24.91m AOD.
- 3.7. The ground levels in the southern part of the model have not been accurately interpolated. In reality, elevations across the southern side of the road are higher than those represented in the model. As a result, while the current model shows water overtopping the road from the south, the actual volume of overtopping is likely to be lower. This is because the higher ground levels upstream of the culvert would reduce both flood depths and flow velocities going across the road. Consequently, the flood hazard classification in this area is expected to be lower than what is currently indicated by the model.

Appendices

Appendix A – Site topographic survey



Survey control			
Stn	Easting	Northing	Height
H1	526007.890	117000.211	31.603
H2	525997.661	116992.210	26.177
H3	526041.750	116844.760	38.491
H4	525833.405	116941.661	24.906
H5	525982.137	116997.394	25.741
H6	525833.664	116953.954	22.829
H7	525815.428	116935.440	25.030
H8	525836.306	116938.486	23.097
H9	526050.796	117012.226	33.813
H10	526073.880	116985.152	35.441
H11	526074.682	116986.098	35.435
H12	526036.507	117055.908	32.167
H13	526136.773	116962.528	37.339
H14	525960.754	117169.040	28.164
H15	525965.308	117176.798	27.810
H16	525831.603	117182.894	22.149
H17	525763.329	117199.373	20.619
H18	525691.707	117199.800	19.641
H19	525997.966	117188.693	19.283
H20	525634.662	117252.718	18.667
H21	525997.600	116990.326	28.945
H22	525971.038	117025.279	29.589
H23	525825.133	116949.571	24.316
H24	525732.987	116951.529	25.652
H25	525768.810	117009.743	22.165
H26	525700.606	116875.722	27.032
H27	525717.458	116976.873	24.893
H28	525701.025	116959.862	27.497
H29	525845.760	116962.115	23.915
H30	525824.428	116963.750	22.530
H31	525818.507	116976.371	22.337
H32	525518.131	117269.657	18.350
H33	525435.947	117269.953	18.281
H34	525446.411	117240.488	19.019
H35	525714.755	117187.370	19.316
H36	525811.165	117158.284	23.004
H37	525806.961	117111.048	23.467
H38	525840.107	117122.704	24.066
H39	525726.542	117122.542	20.734
H40	525873.681	117155.946	25.031
H41	525915.727	117137.758	26.684
H42	525861.310	117174.424	23.683
H43	525845.306	117175.302	23.121
H44	525830.077	117172.243	22.676
H45	525767.544	117046.968	22.371
H46	525978.222	117053.981	29.443
H47	525460.428	117199.849	20.354
H48	525460.251	117165.941	22.030
H49	525469.331	117122.434	23.775
H50	525496.793	117131.975	23.455

Any setting-out should be undertaken using these control stations and any setting-out using GPS should be transformed to this control.

Survey control			
Stn	Easting	Northing	Height
H51	525480.332	117085.582	24.405
H52	525501.591	117026.504	25.793
H53	525909.959	117222.810	18.986
H54	525674.794	117194.938	19.086
H55	525623.810	117021.933	23.613
H56	525781.495	116917.994	26.273
H57	525713.292	116875.880	27.259
H58	525696.970	116853.355	27.333
H59	525642.826	116826.862	26.233
H60	525644.407	116878.407	25.891
H61	525641.440	116890.961	25.784
H62	525638.294	116904.282	25.606
H63	525718.841	116915.742	26.391
H64	525595.765	116853.069	25.234
H65	525625.488	116922.795	25.537
H66	525616.350	116960.869	24.950
H67	525558.394	117027.174	24.649
H68	525484.230	117110.292	23.787
H69	525482.429	117161.410	22.345
H70	525721.966	116848.086	27.826
H71	525737.722	116843.883	27.894
H72	525760.926	116850.278	28.046
H73	525785.011	116861.107	27.671
H74	525775.468	116873.285	27.017
H75	525786.254	116872.778	26.671
H76	525779.576	116886.709	26.607
H77	525762.555	116883.351	27.067
H78	525746.180	116898.150	27.040
H79	525742.987	116874.031	27.194
H80	525739.643	116865.085	27.213
H81	525767.917	116895.258	26.739
H82	525778.602	116923.460	26.116
H83	525788.951	116901.015	26.227
H84	525795.658	116902.123	26.112
H85	525817.507	116904.280	25.499
H86	525808.462	116920.231	25.378
H87	525826.772	116924.307	25.005
H88	525831.575	116888.058	25.590
H89	525804.357	116890.983	26.527
H90	525784.270	116787.522	29.723
H91	525850.016	116722.297	32.145
H92	525840.196	116804.875	28.872
H93	525820.141	116864.868	26.945
H94	525853.698	116875.365	25.464
H95	525951.267	116689.047	33.984
H96	525774.650	116751.913	30.477
H97	525792.018	116627.557	33.030
H98	525786.278	116625.387	32.998
H99	525966.315	116692.095	33.871
H100	525983.810	116692.260	34.283

Any setting-out should be undertaken using these control stations and any setting-out using GPS should be transformed to this control.

Survey control			
Stn	Easting	Northing	Height
H101	525981.807	116699.284	33.799
H102	525975.513	116713.462	32.752
H103	525978.259	116725.322	31.745
H104	525521.389	116922.987	25.802
H105	525982.271	116680.759	34.240
H106	525914.172	116783.160	28.327
H107	525916.990	116786.278	27.222
H108	525909.154	116796.548	27.821
H109	525896.410	116807.049	27.689
H110	525928.285	116776.574	28.656
H111	525934.194	116767.162	28.975
H112	525945.281	116759.279	29.402
H113	525966.467	116752.357	29.921
H114	525940.918	116895.947	25.241
H115	525831.555	116907.189	25.377
H116	525841.646	116908.316	24.223
H117	525839.139	116919.787	23.644
H118	525771.925	116991.465	24.801
H119	525785.733	117011.829	22.127
H120	525983.596	116760.721	30.461
H121	525985.753	116750.402	28.842
H122	526029.300	116763.563	32.237
H123	526151.800	116831.716	35.119
H124	526010.862	116751.473	30.000
H125	526028.850	116753.085	31.010
H126	525837.205	116939.512	23.026

Any setting-out should be undertaken using these control stations and any setting-out using GPS should be transformed to this control.

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Topographical Survey Legend

Hedge		Telephone line	
Undergrowth		Power line	
Tree		Banking	
Bush		Contour line	
Building		Survey Station	
Glass Building		Gate	
Open Building		Level	
Ordnance Survey Benchmark			
Foul Drainage			
Storm Drainage			

Abbreviations

Animal Settle	Settle
Air Valve	AV
Borehole	BH
Bus Stop	BS
Cover Level	CL
Earth Rod	ER
Electricity Pole	EP
Fire Hydrant	FH
Inspection Cover	IC
Invert Level	IL
Lamp Post	LP
Manhole	MH
Marker	MK
Name Plate	NP
Power Pole	PP
Rain water Pipe	RWP
Road Sign	RS
Rodding Eye	RE
Reinforced Steel Joint	RSJ
Soil Vent Pipe	SVP
Stop Valve	SV
Survey Station	STN
Telegraph Pole	TP
Tree Stump	TS
Trial Hole	TH
Unable To Lift	UTL
Vent Pipe	VP
Water Valve	WV

Notes

All trees are identified where possible. Species, spread, height and girth are indicative only.

Drainage has been surveyed where found, and traced where possible.

Eaves and ridge heights of surrounding buildings have been surveyed where possible.

Ordnance Survey Digital Data added and shown in green, pen colour 117.

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Sheet Layout

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HOOK SURVEY
Land & Building Surveyors
www.hooksurvey.com

Project: Land at West House Farm & Gunners, Albourne, Hassocks BN6 9DE

Client: Riverdale Developments Ltd.

Drawing title: Topographical Survey

Job No.: S25/10594	Dwg No.: S25/10594/01	Revision: -
Scale: 1:200	Date: September 2025	Drawn by: W.M.

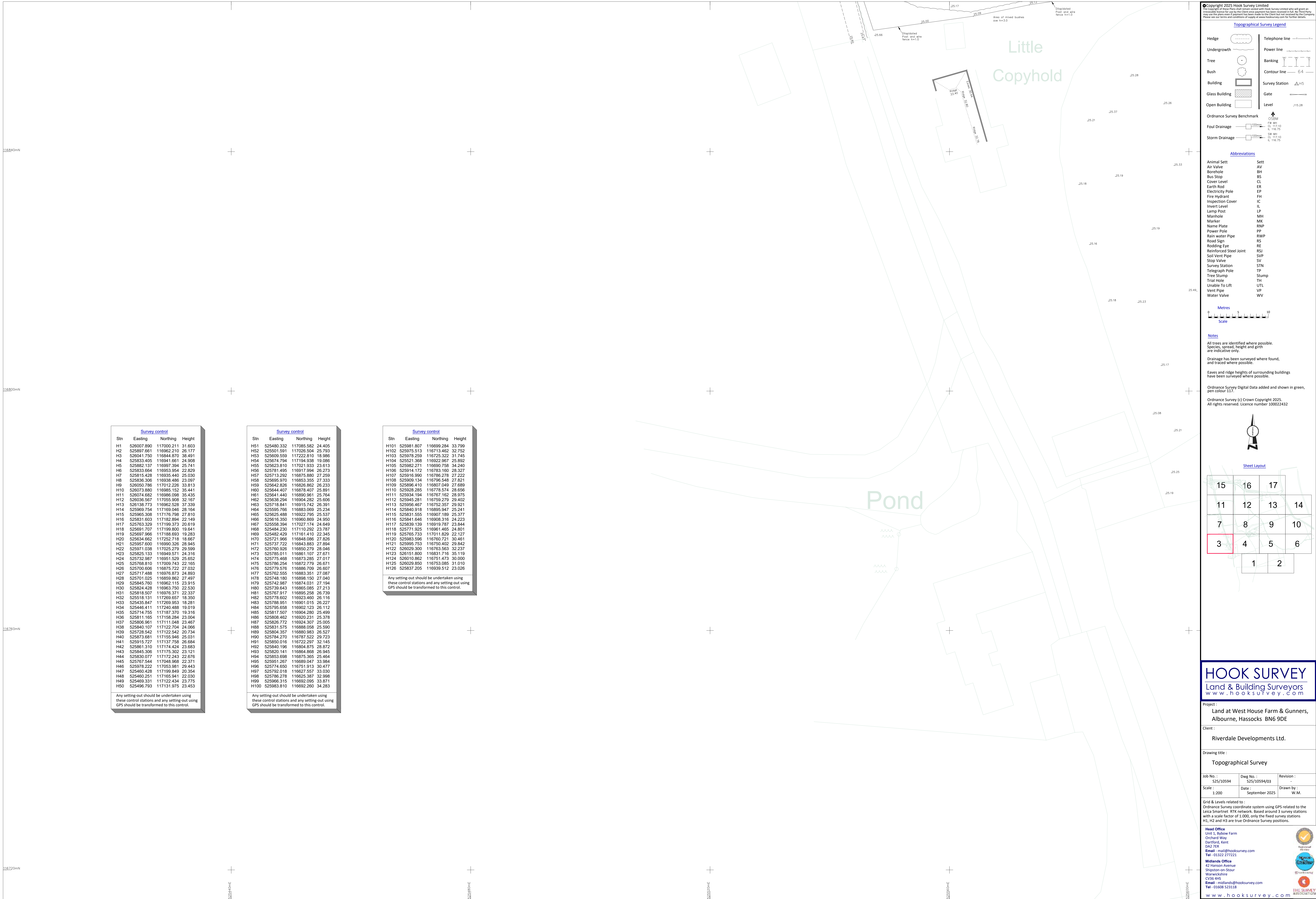
Grid & Levels related to: Ordnance Survey coordinate system using GPS related to the Leica Smartnet RTK network. Based around 3 survey stations with a scale factor of 1.000, only the fixed survey stations H1, H2 and H3 are true Ordnance Survey positions.

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THE SURVEY ASSOCIATION

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Tel - 01608 523118
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Survey control				
Stn	Easting	Northing	Height	
H1	526007.890	117000.211	31.603	
H2	525897.661	116962.210	26.177	
H3	526041.750	116944.870	38.401	
H4	525833.405	116941.661	24.908	
H5	525882.137	116997.394	25.741	
H6	525933.664	116933.954	22.929	
H7	525815.428	116935.440	25.030	
H8	525836.306	116938.486	23.097	
H9	526030.786	117012.226	33.813	
H10	526073.880	116985.152	35.441	
H11	526074.682	116986.098	35.435	
H12	526036.567	117055.908	32.167	
H13	526138.773	116962.528	37.339	
H14	525989.754	117169.046	28.164	
H15	525965.308	117176.798	27.810	
H16	525931.603	117182.894	22.149	
H17	525763.329	117199.373	20.619	
H18	525691.707	117199.800	19.641	
H19	525697.966	117188.693	19.283	
H20	525634.662	117292.716	18.667	
H21	525957.600	116990.326	28.945	
H22	525971.038	117025.279	29.599	
H23	525825.133	116949.571	24.316	
H24	525732.987	116951.529	25.652	
H25	525768.810	117009.743	22.165	
H26	525700.606	116976.722	27.032	
H27	525717.488	116976.873	24.893	
H28	525701.025	116959.862	27.497	
H29	525845.760	116962.115	23.915	
H30	525824.428	116963.750	22.530	
H31	525818.507	116976.371	22.337	
H32	525518.131	117269.657	18.350	
H33	525435.847	117269.953	18.281	
H34	525446.411	117240.488	19.019	
H35	525714.755	117187.370	19.316	
H36	525811.165	117158.264	23.004	
H37	525806.961	117111.045	23.467	
H38	525840.107	117122.704	24.066	
H39	525728.542	117122.542	20.734	
H40	525873.681	117155.946	25.031	
H41	525915.727	117137.758	26.684	
H42	52581.310	117174.424	23.683	
H43	525845.306	117175.302	23.121	
H44	525930.077	117172.243	22.676	
H45	525767.544	117048.968	22.371	
H46	525978.222	117053.981	29.443	
H47	525460.428	117199.849	20.354	
H48	525460.251	117165.941	22.030	
H49	525469.331	117122.434	23.775	
H50	525496.793	117131.975	23.453	

Any setting-out should be undertaken using these control stations and any setting-out using GPS should be transformed to this control.

Survey control				
Stn	Easting	Northing	Height	
H51	525480.332	117085.582	24.405	
H52	525501.591	117026.804	25.793	
H53	525600.559	117222.810	18.986	
H54	525674.794	117194.938	19.086	
H55	525623.810	117021.933	23.613	
H56	525781.495	116917.994	26.273	
H57	525713.292	116875.880	27.259	
H58	525695.970	116853.355	27.333	
H59	525642.820	116826.862	26.233	
H60	525644.407	116878.407	25.891	
H61	525641.440	116860.961	25.764	
H62	525638.294	116904.232	26.906	
H63	525718.841	116915.742	26.391	
H64	525995.769	116893.069	25.234	
H65	525625.488	116922.795	25.537	
H66	525616.350	116960.869	24.850	
H67	525598.394	117027.174	24.649	
H68	525484.230	117110.292	23.787	
H69	525482.429	117161.410	22.345	
H70	525721.969	116848.096	27.926	
H71	525737.722	116843.883	27.894	
H72	525760.926	116850.279	26.046	
H73	525765.011	116861.107	27.071	
H74	525775.468	116873.285	27.017	
H75	525786.254	116872.719	26.671	
H76	525779.576	116886.709	26.607	
H77	525762.555	116883.351	27.087	
H78	525746.180	116898.150	27.040	
H79	525742.987	116874.031	27.194	
H80	525739.643	116865.085	27.213	
H81	525767.917	116895.258	26.739	
H82	525776.602	116923.460	26.116	
H83	525788.951	116901.015	26.227	
H84	525785.658	116902.123	26.112	
H85	525817.507	116904.280	25.499	
H86	525808.462	116920.231	25.378	
H87	525820.772	116924.307	25.005	
H88	525831.575	116888.058	25.590	
H89	525804.357	116893.863	26.327	
H90	525784.270	116767.522	29.723	
H91	525850.016	116722.297	32.145	
H92	525840.196	116804.875	28.972	
H93	525820.141	116864.868	26.945	
H94	525853.098	116875.365	25.464	
H95	525951.267	116889.047	33.984	
H96	525774.650	116751.913	30.477	
H97	525792.018	116627.557	33.030	
H98	525786.278	116625.387	32.998	
H99	525666.315	116602.095	33.871	
H100	525983.810	116692.260	34.263	

Any setting-out should be undertaken using these control stations and any setting-out using GPS should be transformed to this control.

Survey control				
Stn	Easting	Northing	Height	
H101	525981.807	116699.284	33.799	
H102	525975.513	116713.462	32.752	
H103	525978.259	116725.322	31.746	
H104	525521.368	116922.967	25.892	
H105	525982.271	116690.758	34.240	
H106	525914.172	116763.160	26.327	
H107	525916.990	116786.278	27.222	
H108	525909.134	116796.548	27.821	
H109	525986.410	116807.049	27.689	
H110	525928.285	116778.574	26.656	
H111	525934.194	116767.102	26.975	
H112	525945.281	116769.279	29.402	
H113	525956.467	116752.357	29.921	
H114	525940.918	116895.947	25.241	
H115	525931.555	116907.189	25.377	
H116	525841.646	116908.316	24.223	
H117	525839.139	116919.787	23.844	
H118	525771.925	116961.465	24.801	
H119	525765.733	117011.829	22.127	
H120	525983.596	116760.721	30.461	
H121	525995.753	116750.402	28.842	
H122	526029.300	116763.563	32.237	
H123	526151.800	116831.716	35.119	
H124	526010.862	116751.473	30.000	
H125	526029.850	116753.085	31.010	
H126	525837.205	116939.512	23.026	

Any setting-out should be undertaken using these control stations and any setting-out using GPS should be transformed to this control.

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Topographical Survey Legend

Hedge	Telephone line
Undergrowth	Power line
Tree	Banking
Bush	Contour line
Building	Survey Station
Glass Building	Gate
Open Building	Level
Ordnance Survey Benchmark	
Foul Drainage	
Storm Drainage	

Abbreviations

Animal Sett	Sett
Air Valve	AV
Borehole	BH
Bus Stop	BS
Cover Level	CL
Earth Rod	ER
Electricity Pole	EP
Fire Hydrant	FH
Inspection Cover	IC
Invert Level	IL
Lamp Post	LP
Manhole	MH
Marker	MK
Name Plate	NP
Power Pole	PP
Rain water Pipe	RWP
Road Sign	RS
Rodding Eye	RE
Reinforced Steel Joint	RSJ
Soil Vent Pipe	SVP
Stop Valve	SV
Survey Station	STN
Telegraph Pole	TP
Tree Stump	Stump
Trail Hole	TH
Unable To Lift	UTL
Vent Pipe	VP
Water Valve	WV

Notes

All trees are identified where possible. Species, spread, height and girth are indicative only.

Drainage has been surveyed where found, and traced where possible.

Eaves and ridge heights of surrounding buildings have been surveyed where possible.

Ordnance Survey Digital Data added and shown in green, pen colour 117.

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Scale

0 3 10 Metres

Sheet Layout

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HOOK SURVEY
Land & Building Surveyors
www.hooksurvey.com

Project:
Land at West House Farm & Gunners, Albourne, Hassocks BN6 9DE

Client:
Riverdale Developments Ltd.

Drawing title:
Topographical Survey

Job No.: S25/10594
Dwg No.: S25/10594/03
Revision:

Scale: 1:200
Date: September 2025
Drawn by: W.M.

Grid & Levels related to:
Ordnance Survey coordinate system using GPS related to the Leica Smartnet RTK network. Based around 3 survey stations with a scale factor of 1.000, only the fixed survey stations H1, H2 and H3 are true Ordnance Survey positions.

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Topographical Survey Legend

Hedge	Telephone line
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Glass Building	Gate
Open Building	Level
Ordnance Survey Benchmark	
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Storm Drainage	

Abbreviations

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Bus Stop	BS
Cover Level	CL
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Fire Hydrant	FH
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Invert Level	IL
Lamp Post	LP
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Marker	MR
Name Plate	NBP
Power Pole	PP
Rain water Pipe	RWP
Road Sign	RS
Rodding Eye	RE
Reinforced Steel Joint	RJ
Soil Vent Pipe	SVP
Stop Valve	SV
Survey Station	STN
Telegraph Pole	TP
Tree Stump	TS
Trial Hole	TH
Unable To Lift	UTL
Vent Pipe	VP
Water Valve	WV

Notes

All trees are identified where possible. Species, spread, height and girth are indicative only.

Drainage has been surveyed where found, and traced where possible.

Exes and ridge heights of surrounding buildings have been surveyed where possible.

Ordnance Survey Digital Data added and shown in green, pen colour 117.

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HOOK SURVEY
Land & Building Surveyors
www.hooksurvey.com

Project : Land at West House Farm & Gunners, Albourne, Hassocks BN6 9DE

Client : Riverdale Developments Ltd.

Drawing title : Topographical Survey

Job No. : S25/10594 Dwg No. : S25/10594/04 Revision : -

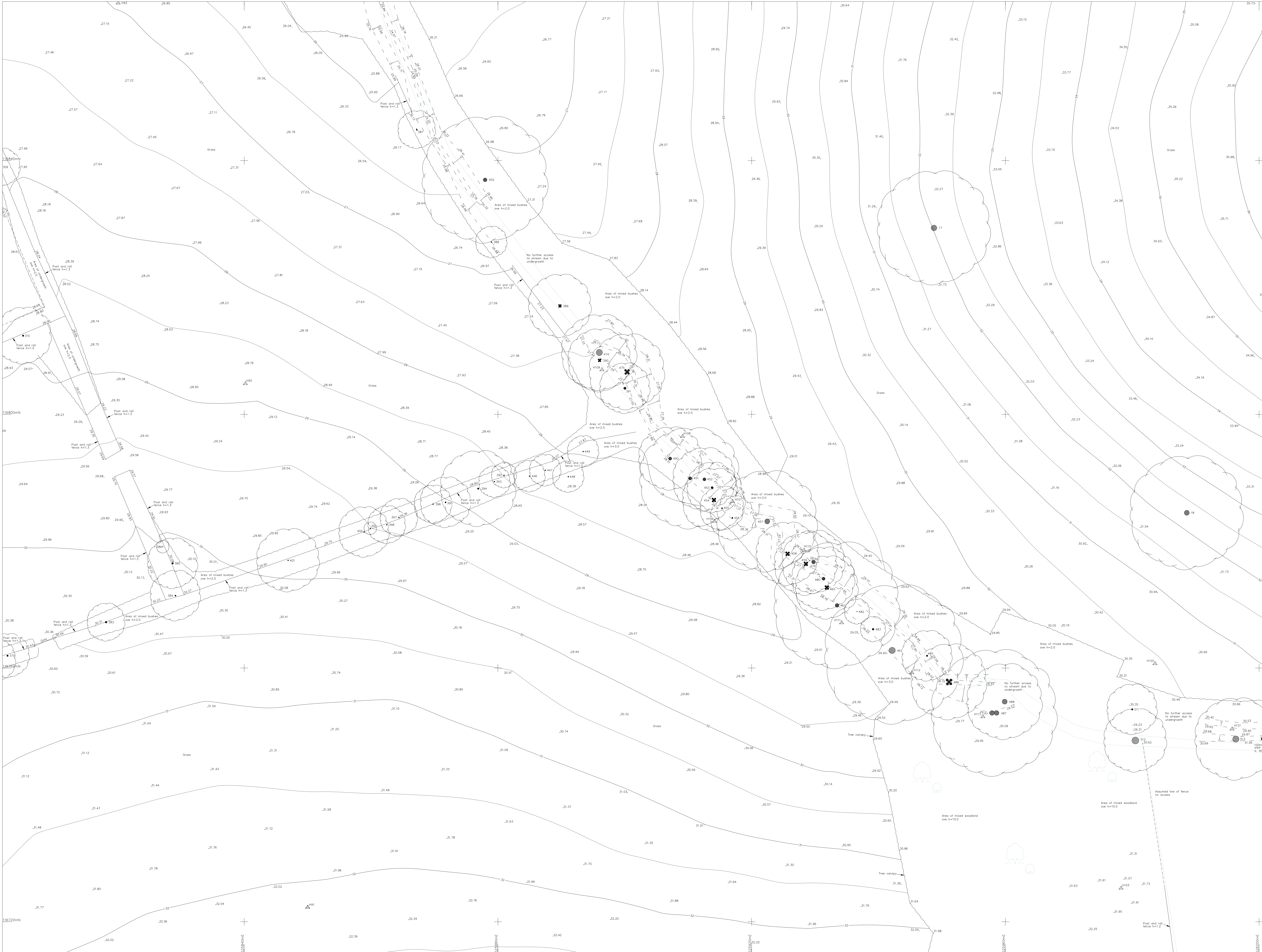
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Grid & Levels related to :
Ordnance Survey coordinate system using GPS related to the Leica Smartnet RTK network. Based around 3 survey stations with a scale factor of 1.000, only the fixed survey stations H1, H2 and H3 are true Ordnance Survey positions.

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Topographical Survey Legend

Hedge		Telephone line	
Undergrowth		Power line	
Tree		Banking	
Bush		Contour line	
Building		Survey Station	
Glass Building		Gate	
Open Building		Level	
Ordnance Survey Benchmark			
Foul Drainage			
Storm Drainage			

Abbreviations

Animal Set	Sett
Air Valve	AV
Borehole	BH
Bus Stop	BS
Cover Level	CL
Earth Rod	ER
Electricity Pole	EP
Fire Hydrant	FH
Inspection Cover	IC
Invert Level	IL
Lamp Post	LP
Manhole	MH
Marker	MA
Name Plate	RNP
Power Pole	PP
Rain water Pipe	RWP
Road Sign	RS
Rodding Eye	RE
Reinforced Steel Joint	RSJ
Soil Vent Pipe	SVP
Stop Valve	SV
Survey Station	STN
Telegraph Pole	TP
Tree Stump	TH
Trial Hole	UTL
Unable To Lift	VP
Vent Pipe	VP
Water Valve	WV

Notes

All trees are identified where possible. Species, spread, height and girths are indicative only.

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Eaves and ridge heights of surrounding buildings have been surveyed where possible.

Ordnance Survey Digital Data added and shown in green, pen colour 117.

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HOOK SURVEY
Land & Building Surveyors
www.hooksurvey.com

Project: Land at West House Farm & Gunners, Albourne, Hassocks BN6 9DE

Client: Riverdale Developments Ltd.

Drawing title: Topographical Survey

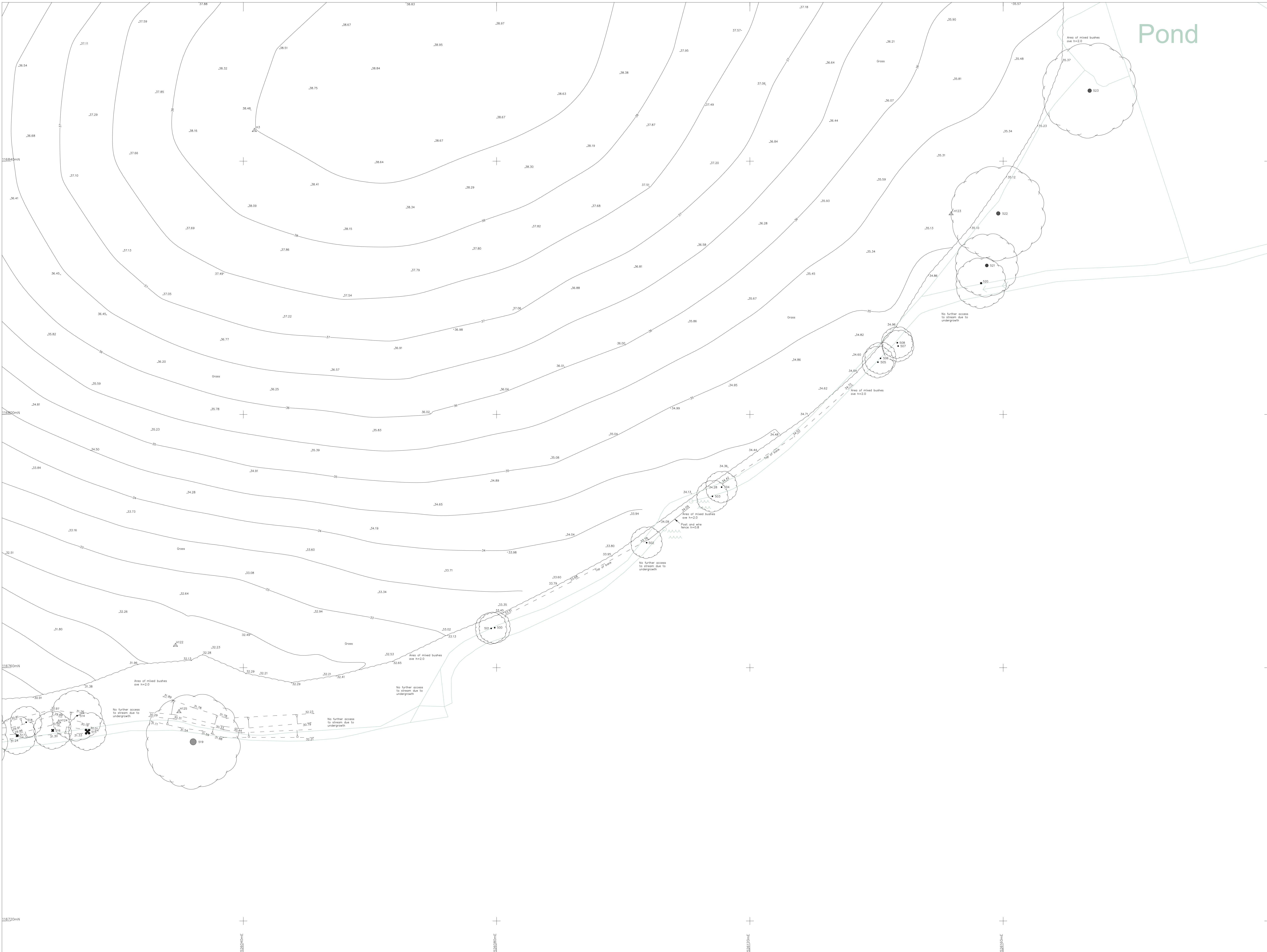
Job No.: S25/10594	Dwg No.: S25/10594/05	Revision:
Scale: 1:200	Date: September 2025	Drawn by: W.M.

Grid & Levels related to:
Ordnance Survey coordinate system using GPS related to the Leica Smartnet RTK network. Based around 3 survey stations with a scale factor of 1.000, only the fixed survey stations H1, H2 and H3 are true Ordnance Survey positions.

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Topographical Survey Legend

Hedge	Telephone line
Undergrowth	Power line
Tree	Banking
Bush	Contour line 6.4
Building	Survey Station
Glass Building	Gate
Open Building	Level
Ordnance Survey Benchmark	OSBM
Foul Drainage	100m
Storm Drainage	100m

Abbreviations

Animal Settle	Settle
Air Valve	AV
Borehole	BH
Bus Stop	BS
Cover Level	CL
Earth Road	ER
Electricity Pole	EP
Fire Hydrant	FH
Inspection Cover	IC
Invert Level	IL
Lamp Post	LP
Manhole	MH
Marker	MK
Name Plate	RNP
Power Pole	PP
Rain water Pipe	RWP
Road Sign	RS
Roadside Eye	RE
Reinforced Steel Joint	RSJ
Soil Vent Pipe	SVP
Stop Valve	SV
Survey Station	STN
Telegraph Pole	TP
Trees Slump	TS
Trial Hole	TH
Unable To Lift	UTL
Vent Pipe	VP
Water Valve	WV

Metres
0 5 10
Scale

Notes
All trees are identified where possible. Species, spread, height and girth are indicative only.
Drainage has been surveyed where found, and traced where possible.
Eaves and ridge heights of surrounding buildings have been surveyed where possible.

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	1	2

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Project: Land at West House Farm & Gunners, Albourne, Hassocks BN6 9DE
Client: Riverdale Developments Ltd.

Drawing title: Topographical Survey

Job No.: S25/10594	Dwg No.: S25/10594/06	Revision:
Scale: 1:200	Date: September 2025	Drawn by: W.M.

Grid & Levels related to:
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THE SURVEY ASSOCIATION



Survey control			
Stn	Eastings	Northing	Height
H1	526007.890	117000.211	31.603
H2	525897.661	116962.210	26.177
H3	526041.750	116844.870	38.491
H4	525853.405	116941.061	24.908
H5	525882.137	116997.394	25.741
H6	525833.864	116953.954	22.829
H7	525815.428	116935.440	25.030
H8	525836.306	116938.496	23.097
H9	526050.796	117012.226	33.813
H10	526073.880	116985.152	35.441
H11	526074.682	116986.098	35.435
H12	526036.567	117055.908	32.167
H13	526138.773	116962.526	37.339
H14	525969.754	117169.046	25.164
H15	525965.308	117176.796	27.810
H16	525831.603	117182.894	22.149
H17	525763.329	117199.373	20.619
H18	525951.707	117189.800	19.641
H19	525697.966	117188.693	19.283
H20	525634.862	117252.716	16.607
H21	525957.600	116960.326	28.945
H22	525971.038	117025.279	29.599
H23	525825.133	116949.571	24.316
H24	525732.987	116951.529	25.652
H25	525768.810	117009.743	22.165
H26	525700.698	116876.722	27.032
H27	525717.488	116976.873	24.893
H28	525701.025	116859.862	27.497
H29	525845.760	116962.115	23.915
H30	525824.428	116963.750	22.530
H31	525818.507	116976.371	22.337
H32	525818.151	117269.657	16.350
H33	525435.847	117269.953	16.281
H34	525446.411	117240.496	19.019
H35	525714.755	117187.370	19.316
H36	525811.165	117158.294	23.004
H37	525836.961	117111.048	23.467
H38	525840.107	117122.704	24.066
H39	525728.542	117122.542	20.734
H40	525873.681	117155.946	25.031
H41	525915.727	117137.756	26.684
H42	525861.310	117174.424	23.683
H43	525845.308	117175.302	23.121
H44	525830.077	117172.243	22.676
H45	525767.544	117048.968	22.371
H46	525978.222	117033.081	29.443
H47	525460.428	117199.849	20.354
H48	525460.251	117195.941	22.030
H49	525469.331	117122.434	23.775
H50	525496.793	117131.975	23.453

Any setting-out should be undertaken using these control stations and any setting-out using GPS should be transformed to this control.

Survey control			
Stn	Eastings	Northing	Height
H51	525480.332	117085.582	24.405
H52	525501.591	117026.504	25.793
H53	525609.559	117222.810	18.986
H54	525874.794	117184.038	19.986
H55	525623.810	117021.933	23.613
H56	525781.496	116917.894	26.273
H57	525713.252	116876.880	27.259
H58	525695.970	116853.355	27.333
H59	525642.826	116826.862	26.233
H60	525644.407	116878.407	25.891
H61	525641.440	116890.961	25.764
H62	525638.294	116904.282	25.906
H63	525718.841	116915.742	26.391
H64	525695.766	116883.069	25.234
H65	525625.468	116922.795	25.537
H66	525616.350	116960.869	24.950
H67	525588.394	117027.174	24.649
H68	525484.230	117110.292	23.187
H69	525482.429	117161.410	22.345
H70	525721.966	116848.088	27.526
H71	525737.722	116843.983	27.894
H72	525760.926	116850.279	28.046
H73	525785.011	116861.107	27.671
H74	525775.468	116873.285	27.017
H75	525786.254	116872.779	26.671
H76	525773.576	116886.709	26.607
H77	525762.555	116883.351	27.087
H78	525748.180	116898.150	27.040
H79	525742.987	116874.031	27.194
H80	525739.643	116865.085	27.213
H81	525767.917	116895.258	26.739
H82	525773.602	116923.460	26.116
H83	525788.951	116901.015	26.227
H84	525795.698	116902.123	26.112
H85	525817.507	116904.280	25.499
H86	525808.462	116920.231	25.378
H87	525826.772	116924.307	25.305
H88	525831.575	116888.058	25.590
H89	525804.357	116880.983	26.527
H90	525784.270	116787.522	29.723
H91	525850.016	116722.297	32.145
H92	525840.196	116804.875	28.872
H93	525801.141	116864.868	26.945
H94	525853.698	116875.365	25.464
H95	525961.267	116889.047	33.984
H96	525774.650	116751.913	30.477
H97	525792.018	116627.557	33.030
H98	525796.278	116625.367	32.998
H99	525966.315	116692.095	33.871
H100	525983.810	116692.260	34.283

Any setting-out should be undertaken using these control stations and any setting-out using GPS should be transformed to this control.

Survey control			
Stn	Eastings	Northing	Height
H101	525981.807	116698.284	33.799
H102	525975.513	116713.462	32.752
H103	525978.259	116725.322	31.745
H104	525921.368	116929.967	25.892
H105	525982.271	116690.758	34.240
H106	525914.172	116763.160	26.327
H107	525916.990	116768.278	27.222
H108	525909.134	116796.548	27.821
H109	525996.410	116807.049	27.689
H110	525928.285	116778.574	26.656
H111	525934.194	116767.162	26.975
H112	525945.281	116759.279	29.402
H113	525956.467	116752.357	29.921
H114	525840.918	116895.947	25.241
H115	525831.555	116907.189	25.377
H116	525841.646	116908.316	24.223
H117	525839.139	116919.787	23.844
H118	525771.925	116901.465	24.901
H119	525765.733	117011.829	22.127
H120	525983.598	116760.721	30.461
H121	525995.753	116750.402	29.842
H122	526029.300	116763.563	32.237
H123	526151.800	116831.716	35.119
H124	526010.862	116751.473	30.000
H125	526029.850	116753.085	31.010
H126	525937.205	116939.512	23.026

Any setting-out should be undertaken using these control stations and any setting-out using GPS should be transformed to this control.

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Topographical Survey Legend

Hedge	Telephone line
Undergrowth	Power line
Tree	Banking
Bush	Contour line 6:4
Building	Survey Station
Glass Building	Gate
Open Building	Level
Ordnance Survey Benchmark	
Foul Drainage	
Storm Drainage	

Abbreviations

Animal Set	Sett
Air Valve	AV
Borehole	BH
Bus Stop	BS
Cover Level	CL
Earth Rod	ER
Electricity Pole	EP
Fire Hydrant	FH
Inspection Cover	IC
Invert Level	IL
Lamp Post	LP
Manhole	MH
Marker	MK
Name Plate	RNP
Power Pole	PP
Rain water Pipe	RWP
Road Sign	RS
Rodding Eye	RE
Reinforced Steel Joint	RSJ
Soil Vent Pipe	SVP
Stop Valve	SV
Survey Station	STN
Telegraph Pole	TP
Tree Stump	TS
Triumph	TH
Unable To Lift	UTL
Vent Pipe	VP
Water Valve	WV

Notes

All trees are identified where possible. Species, spread, height and girth are indicative only.

Drainage has been surveyed where found, and traced where possible.

Eaves and ridge heights of surrounding buildings have been surveyed where possible.

Ordnance Survey Digital Data added and shown in green, pen colour 117.

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Sheet Layout

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Land & Building Surveyors
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Project:
Land at West House Farm & Gunners, Albourne, Hassocks BN6 9DE

Client:
Riverdale Developments Ltd.

Drawing title:
Topographical Survey

Job No.: S25/10594	Dwg No.: S25/10594/07	Revision:
Scale: 1:200	Date: September 2025	Drawn by: W.M.

Grid & Levels related to:
Ordnance Survey coordinate system using GPS related to the Leica Smartnet RTK network. Based around 3 survey stations with a scale factor of 1.000, only the fixed survey stations H1, H2 and H3 are true Ordnance Survey positions.

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Topographical Survey Legend

Hedge	Telephone line
Undergrowth	Power line
Tree	Banking
Bush	Contour line
Building	Survey Station
Glass Building	Gate
Open Building	Level
Ordnance Survey Benchmark	Level
Foul Drainage	Level
Storm Drainage	Level

Abbreviations

Animal Settle	Sett
Air Valve	AV
Borehole	BH
Bus Stop	BS
Cover Level	CL
Earth Rod	ER
Electricity Pole	EP
Fire Hydrant	FH
Inspection Cover	IC
Invert Level	IL
Lamp Post	LP
Manhole	MH
Marker	MK
Name Plate	NRP
Power Pole	PP
Rain water Pipe	RWP
Road Sign	RS
Rodding Eye	RE
Reinforced Steel Joint	RSJ
Soil Vent Pipe	SVP
Stop Valve	SV
Survey Station	STN
Telegraph Pole	TP
Tree Stump	TS
Trial Hole	TH
Unable To Lift	UTL
Vent Pipe	VP
Water Valve	WV

Notes

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PROJECT:
Land at West House Farm & Gunners, Albourne, Hassocks BN6 9DE

Client:
Riverdale Developments Ltd.

Drawing title:
Topographical Survey

Job No.: 525/10594
Dwg No.: 525/10594/08
Revision:

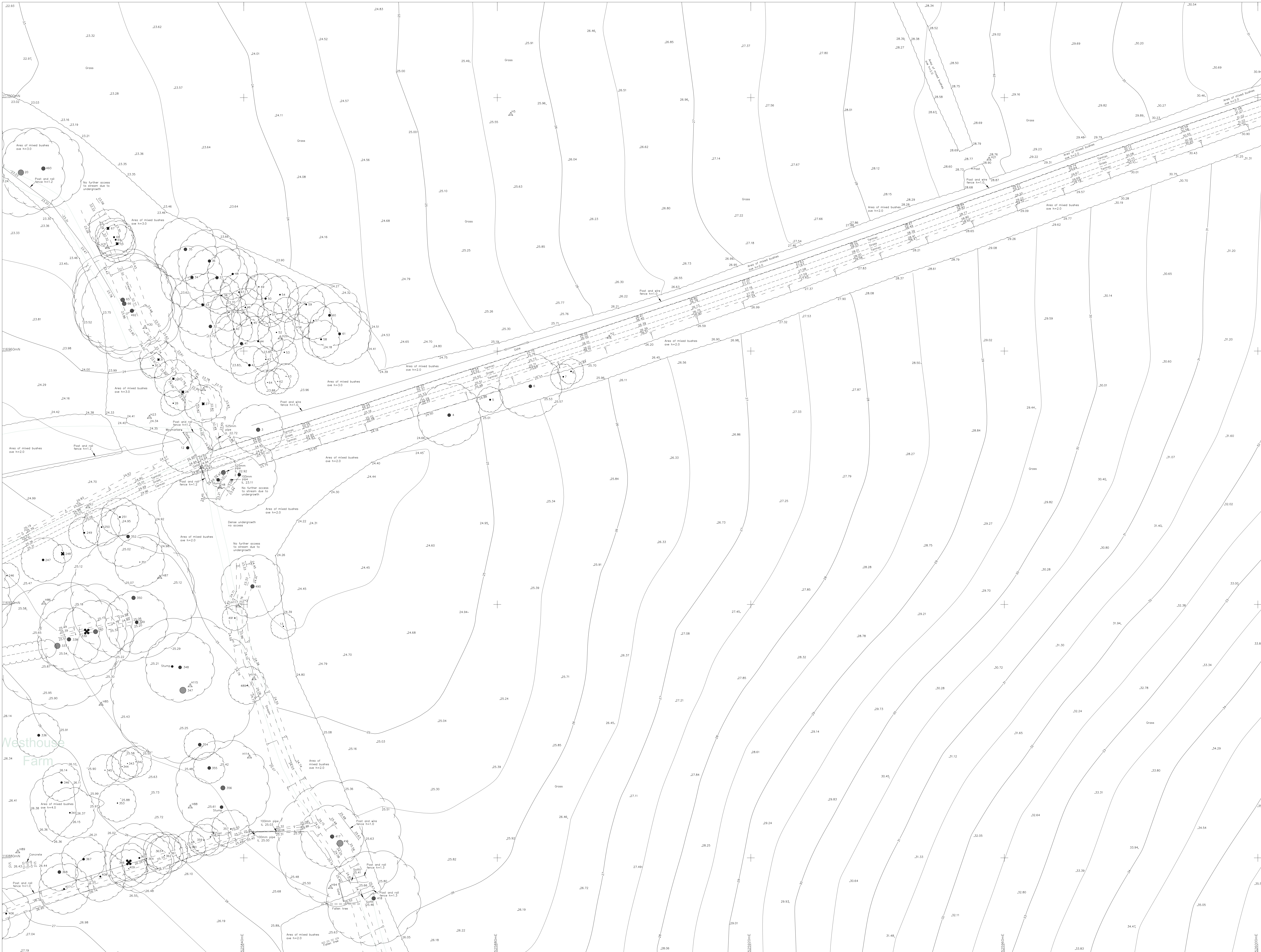
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Drawn by: W.M.

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Topographical Survey Legend

Hedge		Telephone line	
Undergrowth		Power line	
Tree		Banking	
Bush		Contour line	
Building		Survey Station	
Glass Building		Gate	
Open Building		Level	
Ordnance Survey Benchmark			
Foul Drainage			
Storm Drainage			

Abbreviations

Animal Settle	Sett
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Electricity Pole	EP
Fire Hydrant	FH
Inspection Cover	IC
Invert Level	IL
Lamp Post	LP
Manhole	MH
Marker	MS
Name Plate	RNP
Power Pole	RWP
Rain water Pipe	RWP
Road Sign	RS
Rodding Eye	RE
Reinforced Steel Joint	RSJ
Soil Vent Pipe	SVP
Stop Valve	SV
Survey Station	STN
Telegraph Pole	TP
Tree Stump	TS
Triable Hole	TH
Unable To Lift	UTL
Vent Pipe	VP
Water Valve	WV

Notes
All trees are identified where possible. Species, spread, height and girth are indicative only.
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Scale
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Project: Land at West House Farm & Gunners, Albourne, Hassocks BN6 9DE
Client: Riverdale Developments Ltd.
Drawing title: Topographical Survey
Job No.: S25/10594
Dwg No.: S25/10594/09
Scale: 1:200
Date: September 2025
Revision: -
Drawn by: W.M.
Grid & Levels related to: Ordnance Survey coordinate system using GPS related to the Leica Smartnet RTK network. Based around 3 survey stations with a scale factor of 1.000, only the fixed survey stations H1, H2 and H3 are true Ordnance Survey positions.
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[Topographical Survey Legend](#)

Hedge		Telephone line	
Undergrowth		Power line	
Tree		Banking	
Bush		Contour line 6.4	
Building		Survey Station	
Glass Building		Gate	
Open Building		Level	
Ordnance Survey Benchmark			
Foul Drainage			
Storm Drainage			

[Abbreviations](#)

Animal Settle	Sett
Air Valve	AV
Borehole	BH
Bus Stop	BS
Cover Level	CL
Earth Rod	ER
Electricity Pole	EP
Fire Hydrant	FH
Inspection Cover	IC
Invert Level	IL
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Telegraph Pole	TP
Tree Stump	TS
Trial Hole	TH
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Vent Pipe	VP
Water Valve	WV

0 1 2 3 4 5 6 7 8 9 10
Metres
Scale

[Notes](#)

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Project :
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Albourne, Hassocks BN6 9DE

Client :
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Drawing title :
Topographical Survey

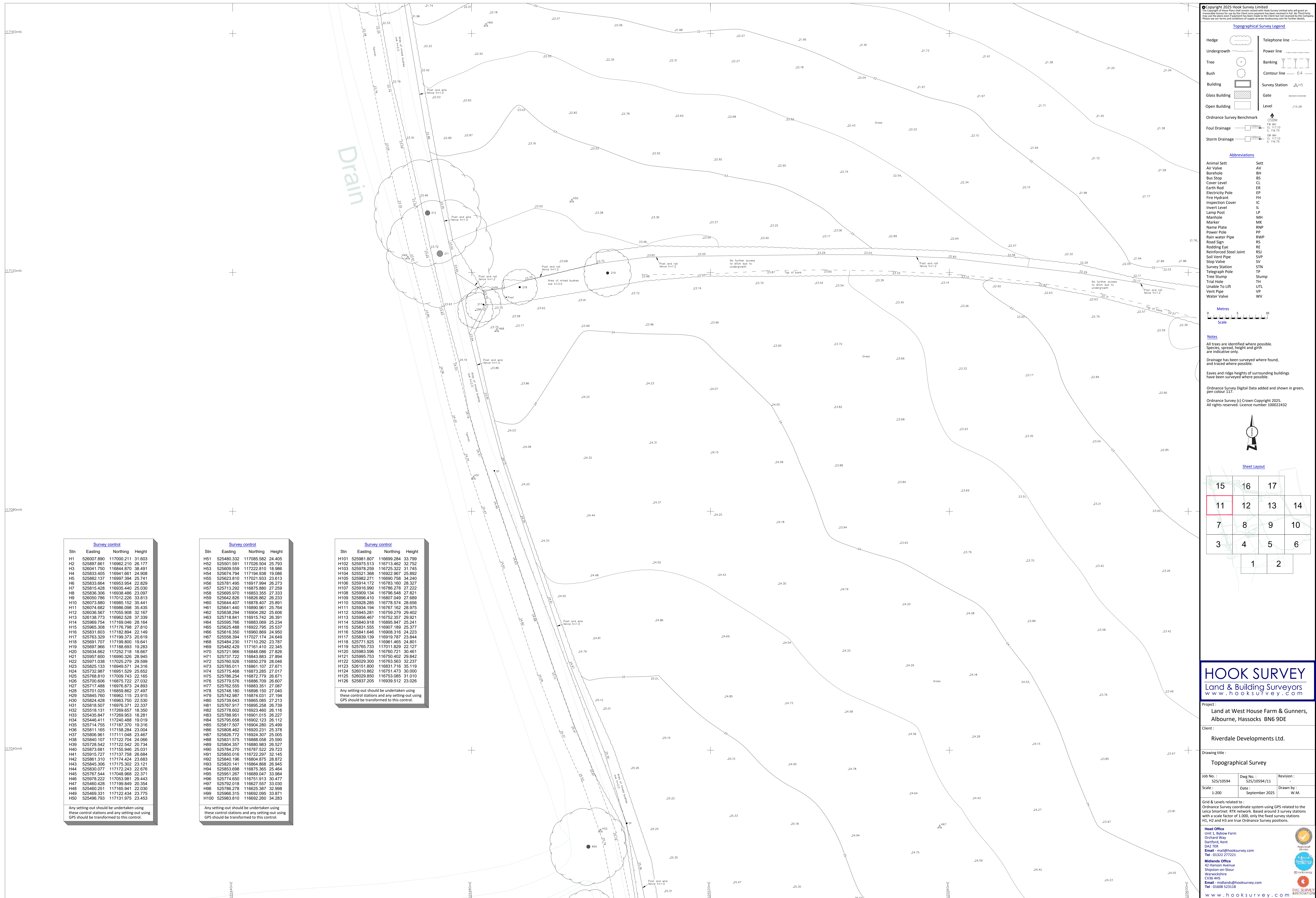
Job No. : S25/10594	Dwg No. : S25/10594/10	Revision : W.M.
Scale : 1:200	Date : September 2025	Drawn by : W.M.

Grid & Levels related to :
Ordnance Survey coordinate system using GPS related to the
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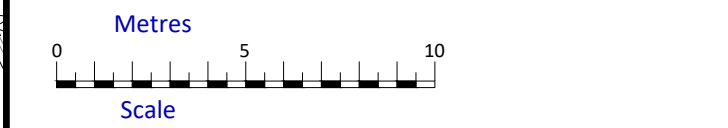
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[illegible]

<u>Abbreviations</u>	
Animal Sest	Sest
Air Valve	AV
Borehole	BS
Bus Stop	BS
Cover Level	CL
Earth Rod	ER
Electricity Pole	EP
Fire Hydrant	HC
Inspection Cover	IC
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Trial Hole	TH
Unable To Lift	U/L
Verm Pipe	VP
Water Valve	WV



Notes

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Project :
Land at West House Farm & Gunners,
Albourne, Hassocks BN6 9DE

Client :
Riverdale Developments Ltd.

Drawing title :
Topographical Survey

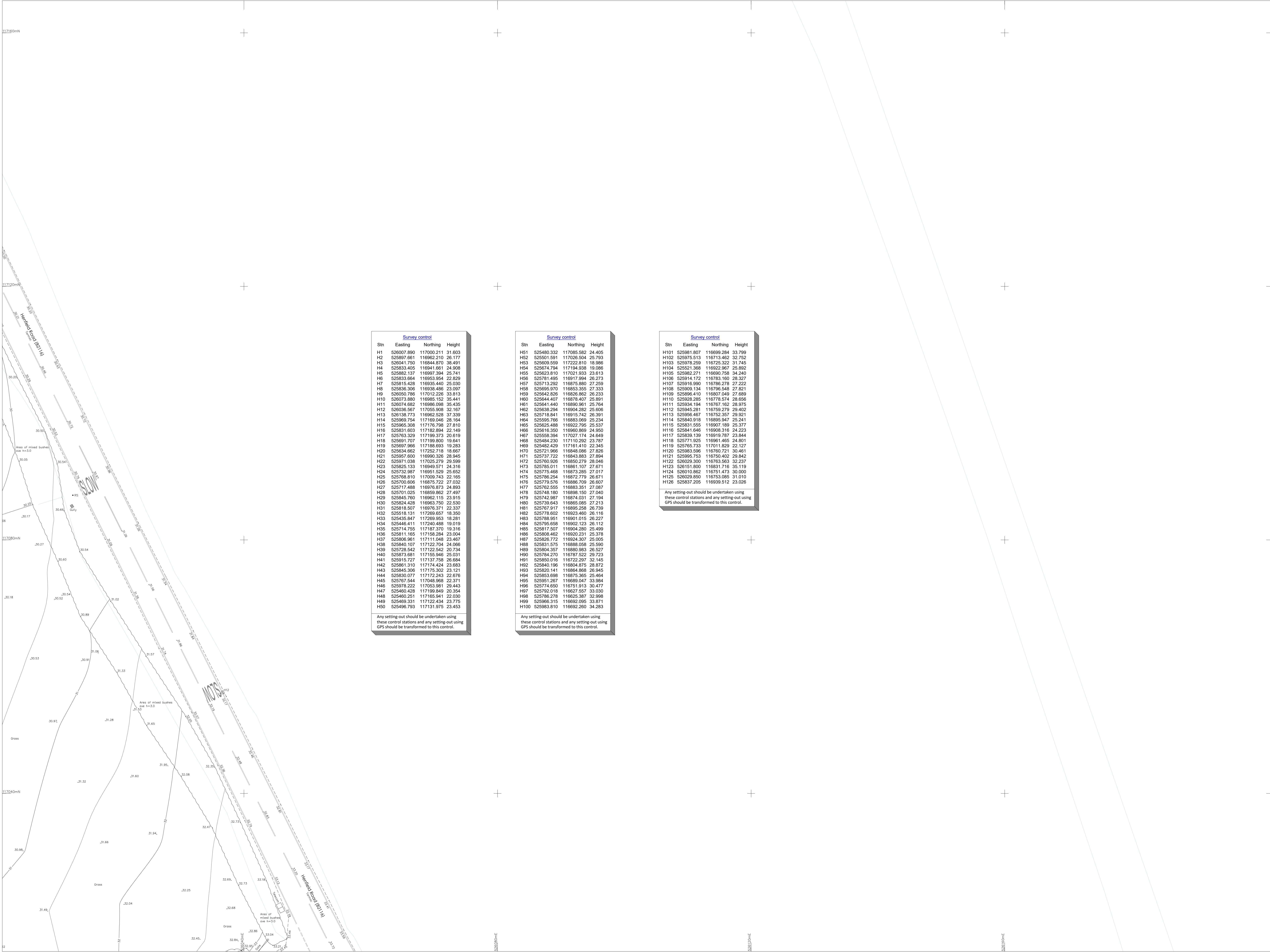
Job No. : S25/10594	Dwg No. : S25/10594/13	Revision : -
Scale : 1:200	Date : September 2025	Drawn by : W.M.

Grid & Levels related to :
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Topographical Survey Legend

Hedge		Telephone line	
Undergrowth		Power line	
Tree		Banking	
Bush		Contour line	
Building		Survey Station	
Glass Building		Gate	
Open Building		Level	

Ordnance Survey Benchmark

Foul Drainage

Storm Drainage

Abbreviations

Animal Sett	Sett
Air Valve	AV
Borehole	BH
Bus Stop	BS
Cover Level	CL
Earth Rod	ER
Electricity Pole	EP
Fire Hydrant	PH
Inspection Cover	IC
Invert Level	IL
Lamp Post	LP
Manhole	MH
Marker	MK
Name Plate	NRP
Power Pole	PP
Rain water Pipe	RWP
Road Sign	RS
Rodding Eye	RE
Reinforced Steel Joint	RSJ
Soil Vent Pipe	SVP
Stop Valve	SV
Survey Station	STN
Telegraph Pole	TP
Tree Stump	STump
Trial Hole	TH
Unable To Lift	UTL
Vent Pipe	VP
Water Valve	WV

Notes

All trees are identified where possible. Species, spread, height and girth are indicative only.

Drainage has been surveyed where found, and traced where possible.

Eaves and ridge heights of surrounding buildings have been surveyed where possible.

Ordnance Survey Digital Data added and shown in green, point colour 137.

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Sheet Layout

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1	2	

HOOK SURVEY
Land & Building Surveyors
www.hooksurvey.com

Project:
Land at West House Farm & Gunners, Albourne, Hassocks BN6 9DE

Client:
Riverdale Developments Ltd.

Drawing title:
Topographical Survey

Job No.: 525/10594	Dwg No.: 525/10594/14	Revision:
Scale: 1:200	Date: September 2025	Drawn by: W.M.

Grid & Levels related to:
Ordnance Survey coordinate system using GPS related to the Leica Smartnet RTK network. Based around 3 survey stations with a scale factor of 1.000, only the fixed survey stations H1, H2 and H3 are true Ordnance Survey positions.

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Topographical Survey Legend

Hedge	Telephone line
Undergrowth	Power line
Tree	Banking
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Building	Survey Station
Glass Building	Gate
Open Building	Level
Ordinance Survey Benchmark	
Foul Drainage	
Storm Drainage	

Abbreviations

Animal Sett	Sett
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Fire Hydrant	FH
Inspection Cover	IC
Invert Level	IL
Lamp Post	LP
Manhole	MH
Marker	MK
Name Plate	NAP
Power Pole	PP
Rain water Pipe	RWP
Road Sign	RS
Rodding Eye	RE
Reinforced Steel Joint	RSJ
Soil Vent Pipe	SVP
Stop Valve	SV
Survey Station	STN
Telegraph Pole	TP
Tree Stump	TS
Trial Hole	TH
Unable To Lift	UTL
Vent Pipe	VP
Water Valve	WV

Notes
All trees are identified where possible. Species, spread, height and girths are indicative only.
Drainage has been surveyed where found, and traced where possible.
Eaves and ridge heights of surrounding buildings have been surveyed where possible.
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1	2		

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Project:
Land at West House Farm & Gunners, Albourne, Hassocks BN9 9DE

Client:
Riverdale Developments Ltd.

Drawing title:
Topographical Survey

Job No.: S25/10594
Dwg No.: S25/10594/15
Revision:

Scale: 1:200
Date: September 2025
Drawn by: W.M.

Grid & Levels related to:
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Survey control			
Stn	Easting	Northing	Height
H1	526007.890	117000.211	31.603
H2	525897.661	116962.210	26.177
H3	526041.750	116944.870	38.491
H4	525833.405	116941.661	24.908
H5	525882.137	116997.394	25.741
H6	525833.664	116955.954	22.829
H7	525815.428	116935.440	25.030
H8	525836.306	116938.486	23.097
H9	526050.786	117012.229	33.813
H10	526073.880	116985.152	35.441
H11	526074.682	116986.096	35.435
H12	526038.587	117035.908	32.161
H13	526138.773	116962.528	37.339
H14	525989.754	117169.046	28.164
H15	525965.308	117176.798	27.810
H16	525831.603	117182.894	22.149
H17	525763.329	117199.373	20.619
H18	525691.707	117199.800	19.641
H19	525697.866	117188.093	19.283
H20	525634.662	117222.718	19.861
H21	525957.600	116990.326	28.945
H22	525971.038	117025.279	29.599
H23	525825.133	116946.571	24.316
H24	525732.987	116951.529	26.652
H25	525768.810	117006.743	22.105
H26	525700.606	116975.722	27.032
H27	525717.488	116976.873	24.893
H28	525701.025	116899.862	27.407
H29	525845.760	116962.115	23.915
H30	525824.428	116963.750	22.530
H31	525818.507	116976.371	22.337
H32	525518.131	117269.657	18.350
H33	525435.847	117269.953	18.281
H34	525446.411	117240.488	19.019
H35	525714.755	117187.370	19.316
H36	525811.165	117138.284	23.004
H37	525805.861	117111.045	23.461
H38	525840.107	117122.704	24.066
H39	525728.542	117122.542	20.734
H40	525873.681	117155.946	25.031
H41	525915.727	117137.758	26.684
H42	525861.310	117174.424	23.883
H43	525845.306	117175.302	23.121
H44	525830.077	117172.243	22.676
H45	525757.544	117048.988	22.371
H46	525978.222	117053.981	29.443
H47	525460.428	117199.849	20.354
H48	525460.251	117165.941	22.030
H49	525469.331	117122.434	23.775
H50	525496.793	117131.975	23.453

Any setting out should be undertaken using these control stations and any setting out using GPS should be transformed to this control.

Survey control			
Stn	Easting	Northing	Height
H51	525480.332	117085.582	24.405
H52	525501.591	117026.504	25.793
H53	525600.559	117222.810	18.986
H54	525674.794	117194.938	19.086
H55	525623.810	117021.933	23.613
H56	525781.485	116917.994	26.273
H57	525713.292	116875.880	27.259
H58	525695.970	116853.355	27.333
H59	525942.826	116826.862	26.233
H60	525644.407	116878.407	25.891
H61	525641.440	116890.961	25.794
H62	525638.294	116904.292	25.606
H63	525718.841	116915.742	26.391
H64	525595.786	116883.989	25.234
H65	525625.488	116922.795	25.537
H66	525616.350	116960.869	24.950
H67	525593.394	117027.174	24.649
H68	525484.230	117110.292	23.787
H69	525482.429	117161.410	22.345
H70	525721.966	116848.086	27.926
H71	525737.722	116843.883	27.894
H72	525780.526	116850.279	28.046
H73	525785.011	116861.107	27.871
H74	525775.468	116873.285	27.017
H75	525786.254	116872.779	26.671
H76	525779.576	116886.709	26.607
H77	525762.555	116883.351	27.087
H78	525748.180	116898.150	27.040
H79	525742.987	116874.031	27.194
H80	525739.643	116865.085	27.213
H81	525767.917	116895.258	26.739
H82	525778.602	116923.460	26.116
H83	525788.951	116901.015	26.227
H84	525795.658	116902.123	26.112
H85	525817.507	116904.280	25.499
H86	525808.462	116920.231	25.378
H87	525825.772	116924.307	25.005
H88	525831.575	116888.058	25.590
H89	525804.357	116900.983	26.527
H90	525784.270	116787.522	29.723
H91	525850.016	116722.297	32.145
H92	525840.196	116804.975	29.872
H93	525820.141	116864.868	26.945
H94	525853.698	116875.365	25.464
H95	525951.267	116689.047	33.984
H96	525774.650	116751.913	30.477
H97	525792.018	116627.557	33.030
H98	525786.278	116625.387	32.998
H99	525966.315	116692.095	33.871
H100	525983.810	116692.260	34.263

Any setting out should be undertaken using these control stations and any setting out using GPS should be transformed to this control.

Survey control			
Stn	Easting	Northing	Height
H101	525981.807	116699.284	33.799
H102	525975.513	116713.462	32.752
H103	525978.259	116725.322	31.745
H104	525521.368	116922.967	25.892
H105	525982.271	116990.758	34.240
H106	525914.172	116763.160	26.327
H107	525916.990	116786.278	27.222
H108	525909.134	116796.548	27.821
H109	525986.410	116807.049	27.689
H110	525928.285	116778.574	28.656
H111	525934.194	116787.162	28.975
H112	525945.281	116759.279	29.402
H113	525956.467	116752.357	29.921
H114	525940.918	116855.947	25.241
H115	525831.555	116907.189	25.377
H116	525841.646	116908.316	24.223
H117	525839.139	116919.787	23.844
H118	525771.925	116961.465	24.801
H119	525765.733	117011.829	22.127
H120	525983.596	116760.721	30.461
H121	525995.753	116750.402	29.842
H122	526029.300	116763.563	32.237
H123	526151.800	116831.716	35.119
H124	526010.862	116751.473	30.000
H125	526029.850	116753.085	31.010
H126	525837.205	116939.512	23.026

Any setting out should be undertaken using these control stations and any setting out using GPS should be transformed to this control.

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Topographical Survey Legend

Hedge Undergrowth Tree Bush Building Glass Building Open Building Ordnance Survey Benchmark Foul Drainage Storm Drainage

Telephone line Power line Banking Contour line Survey Station Gate Level

Abbreviations

Animal Settle Air Valve Borehole Bus Stop Cover Level Earth Rod Electricity Pole Fire Hydrant Inspection Cover Invert Level Lamp Post Manhole Marker Name Plate Rain Pole Road Sign Rodding Eye Reinforced Steel Joint Soil Vent Pipe Stop Valve Survey Station Telegraph Pole Tree Stump Trial Hole Unable To Lift Vent Pipe Water Valve

Sett AV BH BS CL ER EP FH IC IL LP MH MK RNP PP RWP RS RJ SVP SV STN TP TH UTL VP WV

Metres Scale

Notes

All trees are identified where possible. Species, spread, height and girths are indicative only.

Drainage has been surveyed where found, and traced where possible.

Eaves and ridge heights of surrounding buildings have been surveyed where possible.

Ordnance Survey Digital Data added and shown in green, pen colour 117.

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Sheet Layout

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Project : Land at West House Farm & Gunners, Albourne, Hassocks BN6 9DE

Client : Riverdale Developments Ltd.

Drawing title : Topographical Survey

Job No. : S25/10594 Dwg No. : S25/10594/J6 Revision : Scale : 1:200 Date : September 2025 Drawn by : W.M.

Grid & Levels related to : Ordnance Survey coordinate system using GPS related to the Leica Smartnet RTK network. Based around 3 survey stations with a scale factor of 1.000, only the fixed survey stations H1, H2 and H3 are true Ordnance Survey positions.

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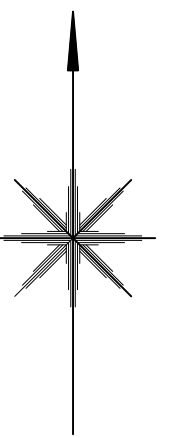
Midlands Office 42 Harrison Avenue Shipton-on-Stour Warwickshire CV36 4HS Email : midlands@hooksurvey.com Tel : 01608 523118

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



Appendix C

FEH QMED Calculation

This is an estimation of the greenfield runoff rates that are used to meet normal best practice criteria in line with Environment Agency guidance “Rainfall runoff management for developments”, SC030219 (2013), the SuDS Manual C753 (CIRIA, 2015) and the non-statutory standards for SuDS (Defra, 2015). This information on greenfield runoff rates may be the basis for setting consents for the drainage of surface water runoff from sites.

Project details

Date	19/05/2026
Calculated by	Laura Jagiela
Reference	1pysay/2509069
Model version	2.2.3

Location

Site name	West House Farm
Site location	Hassocks



Site easting (British National Grid)	525749
Site northing (British National Grid)	116856

Site details

Total site area (ha)	0.1989	ha
----------------------	-------------------------------------	----

Greenfield runoff

Method

Method	FEH statistical (2025)
--------	------------------------

FEH statistical (2025)

	<u>My value</u>	<u>Map value</u>
SAAR9120 (mm)	867	mm
BFIHOST19scaled	0.298	
QMed-QBar conversion	1.136	1.136
QMed (l/s)	1.5	l/s
QBar (FEH statistical 2025) (l/s)	1.7	l/s

Growth curve factors

	<u>My value</u>	<u>Map value</u>
Hydrological region	7	7
1 year growth factor	0.85	
2 year growth factor	0.88	
10 year growth factor	1.62	
30 year growth factor	2.3	
100 year growth factor	3.19	
200 year growth factor	3.74	

Results

Method	FEH statistical (2025)
Flow rate 1 year (l/s)	1.5
Flow rate 2 year (l/s)	1.5
Flow rate 10 years (l/s)	2.8
Flow rate 30 years (l/s)	4.0
Flow rate 100 years (l/s)	5.5
Flow rate 200 years (l/s)	6.4

Please note runoff estimation is subject to significant uncertainty. Results are therefore normally reported to only 1 decimal place. Where 2 decimal places are provided, this does not indicate accuracy to this level, it has been adopted to prevent ‘zero’ figures from being reported. Outputs less than 0.01 l/s are reported as 0.01 l/s.

Disclaimer

This report was produced using the Greenfield runoff rate estimation tool (2.2.3) developed by HR Wallingford and available at uksuds.com (<https://www.uksuds.com/>). The use of this tool is subject to the UK SuDS terms and conditions and licence agreement, which can both be found at uksuds.com/terms-conditions (<https://www.uksuds.com/terms-conditions>). The outputs from this tool have been used to estimate Greenfield runoff rates. The use of these results is the responsibility of the users of this tool. No liability will be accepted by HR Wallingford, the Environment Agency, Centre for Ecology and Hydrology, Wallingford Hydrosolutions or any other organisation for the use of these data in the design or operational characteristics of any drainage scheme.

Appendix D

MicroDrainage Modelling Results

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Date 19/05/2026 15:03 File Microdrainage Source Con...	Designed by Commonuser Checked by	
Innovyze	Source Control 2020.1.3	

Rainfall Details

Rainfall Model	FEH	Winter Storms	Yes
Return Period (years)	100	Cv (Summer)	1.000
FEH Rainfall Version	2013	Cv (Winter)	1.000
Site Location	GB 525400 117400 TQ 25400 17400	Shortest Storm (mins)	15
Data Type	Catchment	Longest Storm (mins)	5760
Summer Storms	Yes	Climate Change %	+45

Time Area Diagram

Total Area (ha) 0.199

Time (mins)	Area (ha)	Time (mins)	Area (ha)	Time (mins)	Area (ha)
From:	To:	From:	To:	From:	To:
0	4	4	8	8	12
0.066	0.066	0.066	0.066	0.066	0.066

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Motion		Page 4
84 North Street Guildford Surrey GU1 4AU		
Date 19/05/2026 15:03 File Microdrainage Source Con...	Designed by Commonuser Checked by	
Innovyze	Source Control 2020.1.3	

Model Details

Storage is Online Cover Level (m) 27.000

Porous Car Park Structure

Infiltration Coefficient Base (m/hr)	0.00000	Width (m)	19.4
Membrane Percolation (mm/hr)	1000	Length (m)	70.0
Max Percolation (l/s)	377.2	Slope (1:X)	0.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	26.700	Cap Volume Depth (m)	0.300

Hydro-Brake® Optimum Outflow Control

Unit Reference	MD-SHE-0121-6000-0580-6000	Sump Available	Yes
Design Head (m)	0.580	Diameter (mm)	121
Design Flow (l/s)	6.0	Invert Level (m)	26.700
Flush-Flo™	Calculated	Minimum Outlet Pipe Diameter (mm)	150
Objective	Minimise upstream storage	Suggested Manhole Diameter (mm)	1200
Application	Surface		

Control Points	Head (m)	Flow (l/s)	Control Points	Head (m)	Flow (l/s)
Design Point (Calculated)	0.580	6.0	Kick-Flo®	0.423	5.2
Flush-Flo™	0.199	6.0	Mean Flow over Head Range	-	5.0

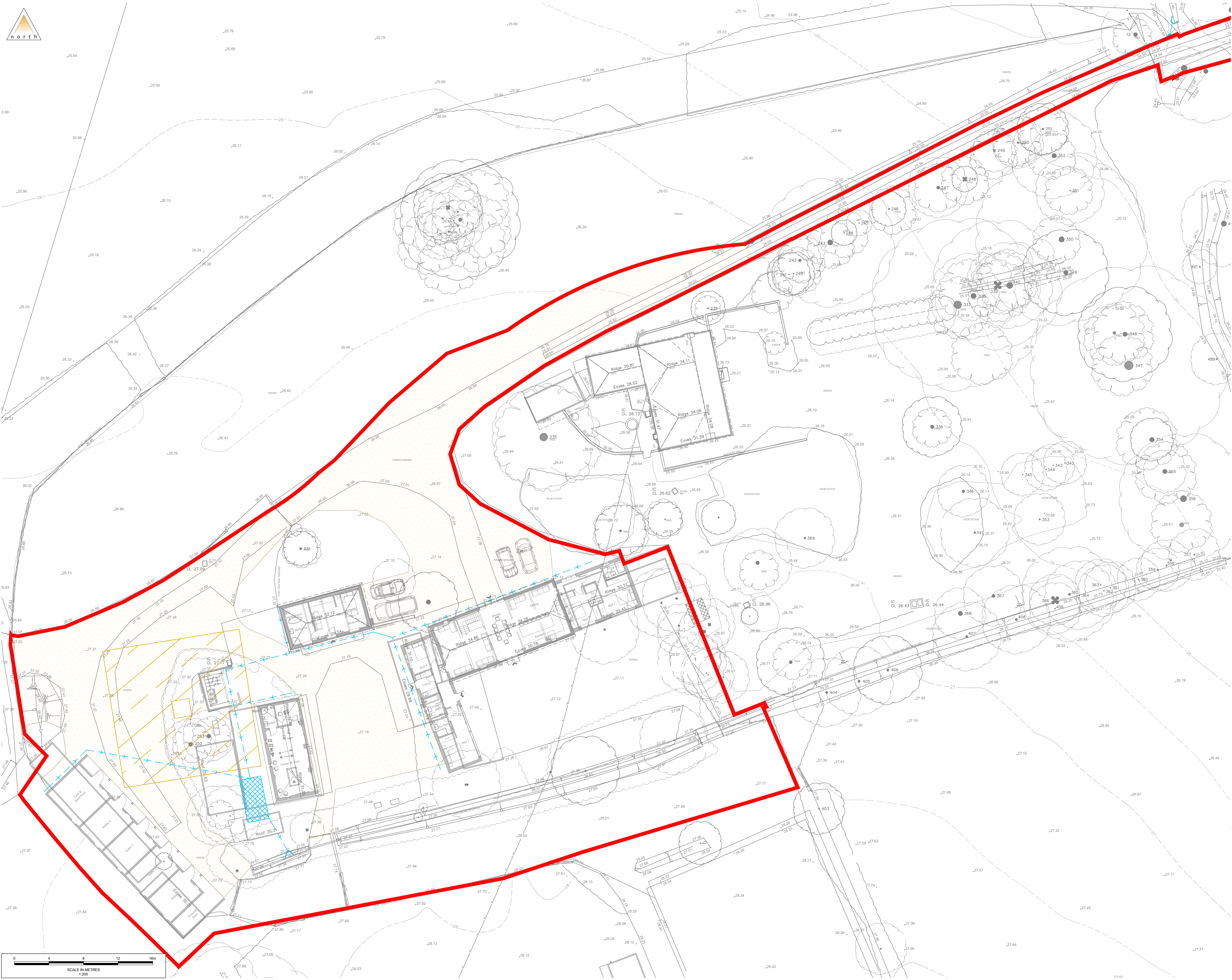
The hydrological calculations have been based on the Head/Discharge relationship for the Hydro-Brake® Optimum as specified. Should another type of control device other than a Hydro-Brake Optimum® be utilised then these storage routing calculations will be invalidated

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	4.3	0.800	7.0	2.000	10.7	4.000	14.9	7.000	19.5
0.200	6.0	1.000	7.7	2.200	11.2	4.500	15.8	7.500	20.2
0.300	5.8	1.200	8.4	2.400	11.7	5.000	16.6	8.000	20.9
0.400	5.4	1.400	9.1	2.600	12.1	5.500	17.4	8.500	21.5
0.500	5.6	1.600	9.7	3.000	13.0	6.000	18.0	9.000	22.1
0.600	6.1	1.800	10.2	3.500	14.0	6.500	18.8	9.500	22.7

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Appendix E

Proposed Drainage Strategy Layout



- Notes
1. All levels and dimensions are to be checked on site before any work commences. All dimensions are in metres unless stated otherwise.
 2. This drawing shall be read in conjunction with all other relevant engineering details, drawings and specification.
 3. The exact location of all private rainwater pipes are to be confirmed with the architect details prior to works commencing.
 4. All works to the private drainage system to be in accordance with the Building Regulations Approved Document Part 'H' 2015 edition.
 5. All pipes shall be laid soffit to soffit with outgoing pipes unless otherwise stated.
 6. Manholes situated within areas accessible to motor vehicles are to be fitted with suitable strength covers and frames. Please refer to the manhole schedule for guidance on this.
 7. Adjacent areas of hardstanding will comply with building regulations and divert water away from the proposed dwellings.
 8. The proposed dwellings will have FFL(s) a minimum of 150mm above adjacent external ground levels.
 9. The top surface of the pervious pavement should finish at least 150mm below any adjoining DPC level. Advice should always be sought from the manufacturer.

- Legend
- Red Line Boundary
 - Type C Sub-Base Unbound Gravel Surface - Total Depth 300mm
 - Proposed Surface Water Gravity Pipe
 - Proposed Flow Control Structure - 6 l/s
 - Proposed Headwall
 - Proposed Manhole
 - Proposed Rainwater Harvesting Tank
 - Proposed Rainwater Supply
 - Proposed Package Sewage Treatment Plant with 7m buffer from habitable buildings

P04	Fourth Issue	LJ	JM	JM	22/05/2026
P03	Third Issue	LJ	JM	JM	21/05/2026
P02	Second Issue	LJ	PA	PA	15/05/2026
P01	First Issue	LJ	JM	JM	19/03/2026
Rev.	Description	Drm	Chk	App	Date

Drawing Status:

FOR PLANNING
NOT FOR CONSTRUCTION



Client:
Pyxis Land Limited

Project:
West House Farm, Henfield Road, Albourne

Title:
Surface Water Drainage Strategy

Scale: 1:200 (@ A1)

Drawing:
2509069-0501

Revision:
P04

Appendix F

Drainage Management and Maintenance Plan



West House Farm
Henfield Road, Albourne, Hassocks, West
Sussex

**Sustainable Drainage Management and
Maintenance Plan**

For

Pyxis Land Limited

Document Control Sheet

West House Farm

Henfield Road, Albourne, Hassocks, West Sussex

Pyxis Land Limited

This document has been issued and amended as follows:

Date	Issue	Prepared by	Approved by
20/05/2026	Final	Laura Jagiela	Jason Morgans



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Contents

1.0 Introduction 1

2.0 Maintenance Categories 2

3.0 The Sustainable Surface Water Drainage System 3

4.0 General Maintenance Principles 4

5.0 Inspection and Maintenance Frequency of Components 6

1.0 Introduction

- 1.1 This document sets out the principles for the long-term management and maintenance of the proposed sustainable drainage system at the West House Farm.
- 1.2 The purpose of this document is to ensure that the site management company or their agents have a robust inspection and maintenance plan going forwards. This ensures the optimum operation of the sustainable surface water drainage system and that it will be continually maintained for the lifetime of the development. This will contribute to reducing the risk of surface water flooding both on- and off-site.
- 1.3 All those responsible for maintenance should follow relevant health and safety legislation for all activities listed within this report (including lone working, if relevant). Method statements and risk assessments should always be undertaken and made available, if requested.
- 1.4 This document has been produced by Motion on behalf of their client, Pyxis Land Limited. This document describes the typical management and maintenance tasks that are known at the design stage (maintenance frequencies and typical tasks, for example). These have been drawn from industry guidance such as CIRIA C753 - The SuDS Manual – and manufacturer's own guidance.
- 1.5 Maintenance is considered as a construction activity under the CDM Regulations 2015. Under the CDM Regulations, it is a requirement that a competent person be appointed to carry out a required role. CDM defines a competent person as an individual with sufficient knowledge of the specific tasks to be undertaken, as well as sufficient experience and ability to carry out their duties in relation to the task in a way that secures health and safety on site.
- 1.6 In recognition of the requirements of the CDM Regulations 2015, this sustainable drainage management and maintenance plan expects that the maintenance work will be carried out by a competent person who must have prior knowledge of the drainage components and SuDS systems on site.
- 1.7 There are limitations on what this document can prescribe at this time. At this stage this document cannot name the specific individuals who will carry out the maintenance and what equipment is to be used. Related to this, this document is unable to provide method statements for exactly how maintenance practices will be carried out. These can only be determined at the time of the maintenance being carried out and the exact maintenance need. Therefore, this is to be the responsibility of the site management company and/or the individuals carrying out the work. We urge those who are carrying out the maintenance to record this information and make it available to the Local Planning Authority (LPA), if required to do so. This drainage management and maintenance plan needs to be a living document that is owned and maintained by the adopting site management company.

2.0 Maintenance Categories

2.1 There are three categories of maintenance activities referred to in this report. These are:

Regular maintenance (including inspections and monitoring)

- ▶ Regular maintenance consists of basic tasks done on a frequent and predictable schedule, including inspections, vegetation management, and litter, silt and debris removal.

Occasional maintenance

- ▶ Occasional maintenance comprises tasks that are likely to be required periodically, but on a much less frequent and predictable basis than the routine tasks (sediment removal is an example).

Remedial maintenance

- ▶ Remedial maintenance comprises of intermittent tasks that may be required to rectify faults associated with the system. The likelihood of faults can be minimised by correct installation, regular inspection and timely maintenance. Where remedial work is found to be necessary, it is likely to be due to site-specific characteristics or unforeseen events and, as such, timings are difficult to predict.
- ▶ This document should be read in conjunction with the design drawings of the sustainable drainage system, so that the location and type of each feature can be recognised and understood.

3.0 The Sustainable Surface Water Drainage System

- 3.1 The proposed sustainable surface water drainage system is made up of a number of components. These include:
- ▶ Permeable Paving
 - ▶ Catchpit manholes/silt traps
 - ▶ Manholes
 - ▶ Pipes
 - ▶ HydroBrake Chamber
 - ▶ Rainwater Harvesting
- 3.2 All components should be installed in accordance with the manufacturer's instructions and to the levels/arrangement as defined on the designer's drawings. Not doing so will invalidate any warranty provided by the manufacturer.
- 3.3 All maintenance and cleaning must be carried out in accordance with manufacturer's recommendations and by competent and suitably qualified staff, as defined in the CDM regulations 2015.

4.0 General Maintenance Principles

- 4.1 All surface water drainage systems, whether piped gravity systems or Sustainable Drainage Systems (SuDS), require regular maintenance to keep them working at optimum efficiency and capacity. The maintenance of the sustainable surface water drainage system on the development should be carried out alongside other regular maintenance tasks on site.
- 4.2 Timely and adequate maintenance will increase the lifespan of all the drainage components. Inadequate maintenance will do the reverse. Therefore, the projected lifespan and anticipated replacement date of each drainage component cannot be forecast at the time of this document being produced.
- 4.3 The site management company and/or their agents are responsible for the maintenance of the sustainable surface water drainage system.
- 4.4 Construction activities can create and discharge significant quantities of sediment that will quickly clog the sustainable surface water drainage system. Therefore, construction-stage sediment removal is required immediately post-construction. This may require several cleans of the system during the first year after installation. The construction site manager should assess this and carry out cleaning as necessary.
- 4.5 Catchpit manholes/silt traps will be specified upstream of the attenuation storage and permeable paving. They will remove gross solids and the majority of silts. It is important that any debris build-up in the catchpit manholes/silt traps is removed at regular intervals. This will reduce the risk of the permeable paving becoming silted up. It will maintain its design capacity and function.
- 4.6 Cleaning should also take place after large storms when there have been increased surface water flows and visible entrainment and deposition of debris.
- 4.7 An increased frequency of inspection and maintenance should be programmed into the autumn and winter months in acknowledgement that:
 - ▶ Leaf fall from deciduous trees in autumn will result in an increased amount of leaf litter and an elevated blockage risk of drainage infrastructure.
 - ▶ Increased rainfall during winter months will result in greater quantities of water moving through the drainage system and a greater input of silt and other debris.
- 4.8 Table 4.1, below, gives an overview of typical maintenance tasks and the frequency with which they need to be undertaken. Section 5 – Inspection and Maintenance Frequency of Components – will assign typical maintenance frequencies and tasks to the specific components used within the sustainable surface water drainage system used on the development.

Table 4.1: Typical maintenance tasks and frequencies

Activity	Indicative Frequency	Typical Tasks
Routine/regular maintenance	Monthly to annually	▶ Litter picking ▶ Silt removal ▶ Inspection of all inlets, outlets and control structures ▶ Weed removal and invasive plant control
Occasional maintenance	Annually up to 25 years	▶ Silt control around components ▶ Vegetation management around components ▶ Sweeping of pavement areas to remove surface silt ▶ Silt removal from catchpits, cellular storage structures
Remedial maintenance	As required	▶ Inlet/outlet repairs ▶ Erosion repairs ▶ Reinstatement of edgings ▶ Reinstatement following pollution ▶ Removal of silt build-up and leaf litter after storms ▶ Repair of vandalism ▶ Replacement of any blocked filter membranes/materials

5.0 Inspection and Maintenance Frequency of Components

- 5.1 Table 5.1 below lists each of the components used within the site's sustainable surface water drainage system. It suggests an indicative maintenance frequency for each component and ascribes typical maintenance tasks to them.
- 5.2 This list is not exhaustive, nor is it prescriptive. As mentioned in Section 3, additional, unscheduled maintenance may be required following adverse weather conditions or after autumn leaf falls. Additional maintenance tasks may be required to adequately clean and maintain individual components.
- 5.3 The list of components should be cross-referenced with the designer's drawings so that the location of each component can be identified.
- 5.4 It is the responsibility of the site management company and/or their agents to ensure that all necessary maintenance activities are carried out in a timely manner and that the design performance of each drainage component is preserved.
- 5.5 If there is any uncertainty regarding the correct and safe methods of cleaning, or what equipment should be used, the manufacturer should be consulted.

Table 5.1: Maintenance Frequency and Task for Drainage Components

Activity	Indicative Frequency	Anticipated Tasks
Pipes	As required	▶ Identify any pipes that may not be operating properly and employ a competent, qualified contractor to inspect using CCTV. ▶ If the pipe is blocked with silt or debris, the pipe should be jetted clean from an upstream access point. All silt and debris should be captured and removed at a downstream access point. ▶ Inspect once clean. ▶ If any other defects are encountered (cracks, displaced joints, root ingress), appropriate solutions should be discussed with a competent and qualified contractor. These services are usually provided by the same companies that offer CCTV surveys and pipe jetting services.
Manholes	Annually	▶ Inspect/identify any damage or areas that are not operating correctly ▶ Remove silt, litter, leaves and other detritus. ▶ Inspect once clean.
Catchpit Manholes/Silt Traps	Twice a year, before and after autumn/winter	▶ Inspect/identify any damage or areas that are not operating correctly ▶ Remove silt, litter, leaves and other detritus. ▶ Inspect once clean.
HydroBrake Chamber	Every three months for the first year, then annually thereafter	▶ Contact manufacturer for instruction on approved and safe inspection and maintenance practices. ▶ Inspect Hydrobrake and check functionality. ▶ Remove any detritus as required. ▶ Inspect once clean.

Permeable Paving	Once a year after autumn leaf fall, or reduced frequency as required, based on site-specific observations of clogging or manufacturer's recommendations.	▶ Agitate surface by means of mechanical sweeping or vacuuming to ensure no vegetation or moss is allowed to establish and grow in the joints. ▶ Mechanical sweeping of pavements and refilling of joints with the correct aggregate need only be carried out at intervals of 5 years or so ▶ Remove weeds from the surface through the application of glyphosate-based weed killers ▶ Stabilise and mow contributing and adjacent areas. ▶ Inspect once clean. ▶ See Table 20.15 of CIRIA C753 for more information. ▶ Permeable paving has a nominal 25 year lifespan, if correctly and regularly maintained. ▶ When subjected to low level oil drips permeable pavements can continue to biodegrade hydrocarbons indefinitely. ▶ Major oil spills have the potential to contaminate the surface and the underlying crushed stone. In the event of a major oil spill, the area of block pavements and crushed stone that is affected should be removed, cleaned and reinstalled.
Rainwater Harvesting for the watering of gardens, beds, washing cars etc	Annually, Quarterly (cleaning and/or replacement of any filters) or as required (repair/replace)	▶ Inspect the tank for debris and sediment build-up and clean. ▶ Inspect inlet/outlet and withdrawal devices and clean. ▶ Inspect filter, pump and gutters/roof drains and clean. ▶ Check pump operation. ▶ Repair overflow erosion damage or damage to tank. ▶ Repair/replace pump.

5.6 Upon completion of maintenance activities, a record should be kept of the work carried out. This should be retained and an annual maintenance report should be compiled, which should include the following:

- ▶ Observations resulting from inspections
- ▶ Maintenance and operation activities undertaken during the year
- ▶ Recommendations for inspections and maintenance programmes for the following year

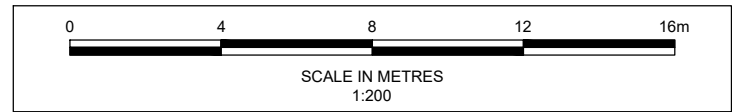
5.7 On the last page of this document is a table with suggested information should be recorded and included with the maintenance plan. As mentioned in the introduction to this document, this should be a living document and regularly updated, as required.

5.8 The Local Planning Authority (Horsham District Council) may request to check and sign off any maintenance activities. Therefore, it is the recommendation that the LPA is contacted prior to any scheduled routine maintenance. The table mentioned above and on the next page, as well as the annual maintenance report, should be offered to the LPA for their records and approval.

Date	Component requiring maintenance	Issues prompting maintenance	Scheduled maintenance (Y/N)	Maintenance carried out	Additional works required (Y/N). If yes, please detail	Next scheduled date of inspection and maintenance

Appendix G

Exceedance Plan



- Notes**
1. All levels and dimensions are to be checked on site before any work commences. All dimensions are in metres unless stated otherwise.
 2. This drawing has been based upon survey information supplied by other companies and Motion cannot guarantee the accuracy of the data provided.
 3. Any discrepancies should be reported to the architect and/or engineer immediately, so that clarification can be sought prior to the commencement of works.
 4. This drawing should be read in conjunction with all other relevant architect and engineering details, drawings and specification.

- Legend**
- Site Boundary
 - Exceedance Route - Direction of Flow

P02	Second Issue	LJ	LJ	JM	21/05/2026
P01	First Issue	AM	LJ	NJ	20/05/2026
Rev.	Description	Drm	Chk	App	Date

Drawing Status:

FOR PLANNING
NOT FOR CONSTRUCTION



Client:
Pyxis Land Limited

Project:
West Lane Farm

Title:
Exceedance Plan

Scale: 1:200 (@ A1)

Drawing:
2509069-9001

Revision:
P02

Appendix D

List of Useful Contacts

[illegible]

Appendix E

Environment Agency Flood Warning Codes and What They Mean

Flood Warnings

A guide to the Environment Agency's flood warning codes



A User Guide for Emergency Responders
Version 1.0 – November 2012

We are the Environment Agency. We protect and improve the environment and make it a better place for people and wildlife.

We operate at the place where environmental change has its greatest impact on people's lives. We reduce the risks to people and properties from flooding; make sure there is enough water for people and wildlife; protect and improve air, land and water quality and apply the environmental standards within which industry can operate.

Acting to reduce climate change and helping people and wildlife adapt to its consequences are at the heart of all that we do.

We cannot do this alone. We work closely with a wide range of partners including government, business, local authorities, other agencies, civil society groups and the communities we serve.

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or our National Customer Contact Centre:
T: 03708 506506

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What counts in a flood is good information you can act on...

Whether we like it or not, floods happen. Over the years, forecasting techniques have improved, giving us more time to prepare for flooding. The Environment Agency is here to help. We are responsible for issuing flood warnings throughout England and Wales. However, after 1 April 2013, the Environment Agency will issue warnings for England and Natural Resources Wales will issue warnings for Wales.

We help by:

- Building and maintaining flood defences.
- Issuing flood warnings.
- Working with partners on multi-agency flood response.
- Sharing accurate flood risk information and advice.

What is this user guide for?

This user guide has been prepared with the aim of increasing our partners' awareness and understanding of the flood warning codes used when we issue flood warnings. In turn, this will improve how we all prepare for flooding. This material should be referred to on a regular basis to ensure responding organisations are fully aware of what the flood codes mean and know what actions to consider when a warning is issued for a particular area of interest. This user guide can also be used to find out how the warnings are issued.

This document has been developed as part of the Joint Responder Training Project 2012. It is intended to be used by strategic, tactical and operational responders as self-taught guidance material.

Our flood warning codes – an overview

The Environment Agency provides a free flood warning service throughout England and Wales in areas at risk of flooding from rivers or the sea. In some parts of England we also provide a flood warning service for flooding from groundwater. Using the latest available technology, our staff monitor rainfall totals, river levels and sea conditions 24 hours a day and use this information to forecast the possibility of flooding. We issue warnings using the following three different codes:

- Flood Alert;
- Flood Warning;
- Severe Flood Warning.

Each warning type is triggered by particular weather, river or sea conditions which cause flooding. Emergency responders need to understand our flood warnings and know how to respond when they receive them.

During an event, responders should not assume that a Flood Alert will always be upgraded to a Flood Warning, and this in turn upgraded to a Severe Flood Warning.

It is important to note that after 1 April 2013, the Environment Agency will issue warnings for England and Natural Resources Wales will issue warnings for Wales.

How are warnings issued?

Flood warnings are available to emergency responders, media organisations and the public. There are a number of ways in which this information can be received, including the following:

- **Direct to you** - receive warnings by phone, text, email or fax. Sign up for our free Floodline Warnings Direct service by calling Floodline on 0845 988 1188 or by visiting our website;
- **On our website** - view up-to-date flood information, monitor the river or sea levels in your area and check our latest flood risk forecast for your area by visiting our website www.environment-agency.gov.uk/flood;
- **By calling Floodline on 0845 988 1188** – listen to recorded information on the latest warnings and predictions or speak to an operator for more general information 24 hours a day. Our operators can also provide a quickdial number which gives you faster access to information for your area. Responders can also contact their local Environment Agency [Flood Resilience team](#) for further information and advice by calling 03708 506 506;
- **Through the media** - you may see or hear our warnings on television and in radio broadcasts;
- **Flood Wardens** - in some areas Flood Wardens are there to alert and support their local community when a flood warning is issued. Contact your local Environment Agency [Flood](#)

[Resilience team](#) for to find out if this service is available in your area or for further information and advice by calling 03708 506 506;

- **Sirens/loudhailers** - in some areas we use loudhailer or siren systems to warn people that a flood warning has been issued. Contact your local Environment Agency [Flood Resilience team](#) to find out if this service is available in your area or for further information and advice by calling 03708 506 506;
- **Flood warning feeds** - Flood warning (RSS) feeds shows national and regional flood warnings in force and are updated every 15 minutes. The feeds contain a brief summary and link to the full information on our website;
- **Targeted Flood Warning Service** – The Targeted Flood Warning Service (TFWS) is a web-based flood warning service to provide Category 1 and 2 responders with a more targeted and efficient service. This service provides email notifications and displays flood warnings relating to relevant assets stored within the system. Category 1 responders are able to get this service for free and at a low cost for Category 2 responders. You can register by calling the Environment Agency on 03708 506 506 or by speaking to your [local Environment Agency Flood Resilience team](#);
- **Flood Warnings For Infrastructure** – The Flood Warnings For Infrastructure (FWFI) service has been set up to make it as easy and flexible as possible for organisations to access our data and information and for tailored flood warning products, applications and services to be developed. Individuals or organisations are licensed to access our live flood warning data and Geographical Information System (GIS) data / polygons. For further information or to register your interest in accessing our data, visit our 'FWFI' webpage, email commercial.services@environment-agency.gov.uk or call 03708 506 506;
- **Social media / Smartphone Apps** – Flood warning updates can also be received using a number of social media sources, such as Facebook (www.facebook.com/environmentagency) and Twitter (@EnvAgency). Various Smartphone Apps are now available to provide flood alerts for a specific location. These services are largely intended to be used by the public, providing access to live flood warning information;
- **Live Flood Warning map** – This is a map-based view of live flood warnings and is available on [our website](#). Users can zoom into a specific location of interest to see which flood alerts and warnings have been issued.

Know your flood warning codes

The following table provides information on the flood warning codes for emergency responders and for each it details:

- What it means;
- When it's used;
- Triggers;
- Impact on the ground;
- Advice to the public/media;
- Advice to operational organisations and emergency responders.

 FLOOD ALERT	 FLOOD WARNING	 SEVERE FLOOD WARNING	Warning no longer in force
What it means Flooding is possible. Be prepared.	What it means Flooding is expected. Immediate action required.	What it means Severe flooding. Danger to life.	What it means No further flooding is currently expected for your area.
When it's used Two hours to two days in advance of flooding.	When it's used Half an hour to one day in advance of flooding.	When it's used When flooding poses a significant risk to life or significant disruption to communities.	When it's used When a flood warning or severe flood warning is no longer in force.
Triggers • Forecasts that indicate that flooding from rivers may be possible. • Forecast intense rainfall for rivers that respond very rapidly. • Forecasts of high tides, surges or strong winds.	Triggers • High tides, surges coupled with strong winds. • Heavy rainfall forecast to cause flash flooding of rivers. • Forecast flooding from rivers.	Triggers • Actual flooding where the conditions pose a significant risk to life and/or widespread disruption to communities. • On-site observations from flooded locations. • A breach in defences or failure of a tidal surge barrier or dam that is likely to cause significant risk to life. • Discussions with partners.	Triggers • Risk of flooding has passed. • River or sea levels have dropped back below severe flood warning or flood warning levels and no further flooding is expected. • Professional judgment and discussions with partners agree that a severe flood warning status is no longer needed.
Impact on the ground • Flooding of fields, recreation land and car parks. • Flooding of minor roads. • Flooding of farmland. • Spray or wave overtopping on the coast.	Impact on the ground • Flooding of homes and businesses. • Flooding of rail infrastructure. • Flooding to roads with major impacts. • Significant waves and spray on the coast. • Extensive flood plain inundation (including caravan parks or campsites). • Flooding of major tourist/recreational attractions.	Impact on the ground • Deep and fast flowing water. • Debris in the water causing danger. • Potential or observed collapse of buildings and structures. • Communities isolated by flood waters. • Critical infrastructure for communities disabled. • Large number of evacuees. • Military support.	Impact on the ground • No new impacts expected from flooding, however there may still be: • Standing water following flooding; • Flooded properties; • Flooded or damaged infrastructure.
Advice to the public/media • Be prepared to act on your flood plan. • Prepare a flood kit of essential items. • Avoid walking, cycling or driving through flood water. • Farmers should consider moving livestock and equipment away from areas likely to flood. • Call Floodline on 0845 988 1188 for up-to-date flooding information. • Monitor local water levels on the Environment Agency website www.environment-agency.gov.uk.	Advice to the public/media • Protect yourself, your family and help others. • Move family, pets and valuables to a safe place. • Turn off gas, electricity and water supplies if safe to do so. • Put flood protection equipment in place. • If you are caught in a flash flood, get to higher ground. • Call Floodline on 0845 988 1188 for up-to-date information.	Advice to the public/media • Stay in a safe place with a means of escape. • Be ready should you need to evacuate from your home. • Co-operate with the emergency services. • Call 999 if you are in immediate danger. • Call Floodline on 0845 988 1188 for up-to-date flooding information.	Advice to the public/media • Be careful. Flood water may still be around for several days and could be contaminated. • If you've been flooded, ring your insurance company as soon as possible.
Advice to operational organisations • Check your flood response plans to see how your organisation needs to respond. • Speak to your local Environment Agency Flood Warning Duty Officer for the latest forecast information. • Dial into Flood Advisory Service teleconferences. • Advise the public to call Floodline on 0845 988 1188 for up-to-date flooding information. • Please report any flooding in your area to your local Environment Agency office.	Advice to operational organisations • Check flood response plans for actions required at this stage. • Speak to your local Environment Agency Flood Warning Duty Officer for the latest forecast information. • Advise the public to call Floodline on 0845 988 1188 for up-to-date flooding information. • Please report any flooding in your area to your local Environment Agency office.	Advice to operational organisations • Check flood response plans for actions required at this stage. • Advise the public to put their safety first and to be ready to evacuate should the authorities decide it's needed. • Develop clear messages for local communities and the public.	Advice to operational organisations • Recovery phase will have started. • Advise the public to call Floodline on 0845 988 1188 for advice on what to do if they have been affected by flooding.

Where to go for further information

We realise that organisations have a variety of responding roles, locations and needs across England and Wales, which is why our partners should work closely with the Environment Agency. Our local Flood Resilience Teams are available to provide further assistance on your specific response area. They can help your organisation link the flood codes to triggers and typical impacts seen on the ground at a local level. Our teams can help you define specific triggers appropriate in your area and ensure your emergency response plans incorporate suitable actions upon receipt of a Flood Alert, Flood Warning or Severe Flood Warning. In turn, we can provide you and your organisation with confidence to respond to a potential or actual flood event. To contact your local Environment Agency Flood Resilience Team, speak to our National Customer Contact Centre on 03708 506 506 and one of our advisors will put you through to your local team.

In addition to issuing flood warnings, we also provide the following services:

- **Three day flood risk forecast** – This shows, county by county, where there is risk of flooding over the next three days. The three-day forecast is updated at least every eight hours. For more information, please visit [our website](#).
- **Rivers and sea levels** – We measure river and sea levels by collecting data from our monitoring stations along rivers and the coast. This information will show you how the rivers and sea are behaving at key locations. Rivers and sea levels are updated once a day on our website. During flooding, it will be updated more frequently if levels reach above a given threshold. For more information, please visit [our website](#).

Weather and flood products provided by the Met Office and Flood Forecasting Centre can also be used by responders to ensure they are fully aware of the current and forecasted situations.

**Would you like to find out more about us,
or about your environment?**

Then call us on

03708 506 506 (Mon-Fri 8-6)

Calls to 03 numbers cost the same as calls to standard geographic numbers
(i.e. numbers beginning with 01 or 02).

email

enquiries@environment-agency.gov.uk

or visit our website

www.environment-agency.gov.uk

incident hotline 0800 80 70 60 (24hrs)

floodline 0845 988 1188



Environment first: Are you viewing this on screen? Please consider the environment and only print if absolutely necessary. If you are reading a paper copy, please don't forget to reuse and recycle if possible.

Appendix F

Plan Showing Utility Cut-Off Point

Appendix G

Map of Suggested Evacuation Route

Flood Evacuation Route Map

