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Land north of Balcombe Road, Haywards Heath: Flood Risk Assessment

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Title

Land north of Balcombe Road, Haywards Heath: Flood Risk Assessment

Client

Fairfax Acquisitions Ltd,
Buncton Barn,
Buncton Lane,
Bolney,
West Sussex,
RH17 5RE

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1. Introduction

Aqua Terra Consultants Ltd (Aqua Terra) was instructed by Fairfax Acquisitions Ltd (the Client) on behalf of SDP to provide a Flood Risk Assessment (FRA) to support a residential led development on a parcel of land north of Balcombe Road, Haywards Heath (the Site).

1.1. Background

The FRA is to support an outline planning application for the erection of up to 125 dwellings, together with the provision of landscaping, open space, and associated development works, with access from Balcombe Road.

1.2. Scope

The scope of the FRA is as follows:

- Preparation of a FRA, written in line with the National Planning Policy Framework (NPPF) and supporting Planning Practice Guidance (PPG), to satisfy the Environment Agency (EA) and the Lead Local Flood Authority (LLFA, West Sussex County Council) that potential flood risks from all sources to and from the proposed development have been considered and that the proposed development is appropriate, as defined in the NPPF.
- Acquisition and review of modelled flood extents and levels for current and future climate scenarios from the EA.
- Where required, consideration of appropriate site-specific flood risk mitigation measures and provision of recommendations for a strategy for managing and mitigating potential flood risk posed on the Site.

1.3. Data sources

The main sources of data utilised in this assessment are summarised below:

- The proposed development plans as provided by the Client;
- LiDAR Digital Terrain Model (DTM) data obtained through data.gov.uk;
- EA flood risk data (Environment Agency, 2025);
- Soilscapes soil mapping (Cranfield Soil and AgriFood Institute, 2025);
- British Geological Survey (BGS) mapping (British Geological Society, 2025);
- Haywards Heath Town Council Neighbourhood Plan: Our Bright Future, 2016 (Haywards Heath Town Council, 2016);
- Mid Sussex District Plan 2014-2031 (Mid Sussex District Council, 2018);
- Mid Sussex Strategic Flood Risk Assessment Level 1 (aegaea, 2024);
  West Sussex Preliminary Flood Risk Assessment (West Sussex County Council, 2011); and,
- West Sussex Local Flood Risk Management Strategy: 2015 - 2030 (West Sussex County Council, 2025)

1.4. Limitations

This report is written strictly for the benefit of the Client and bound by the conditions presented in Appendix A.

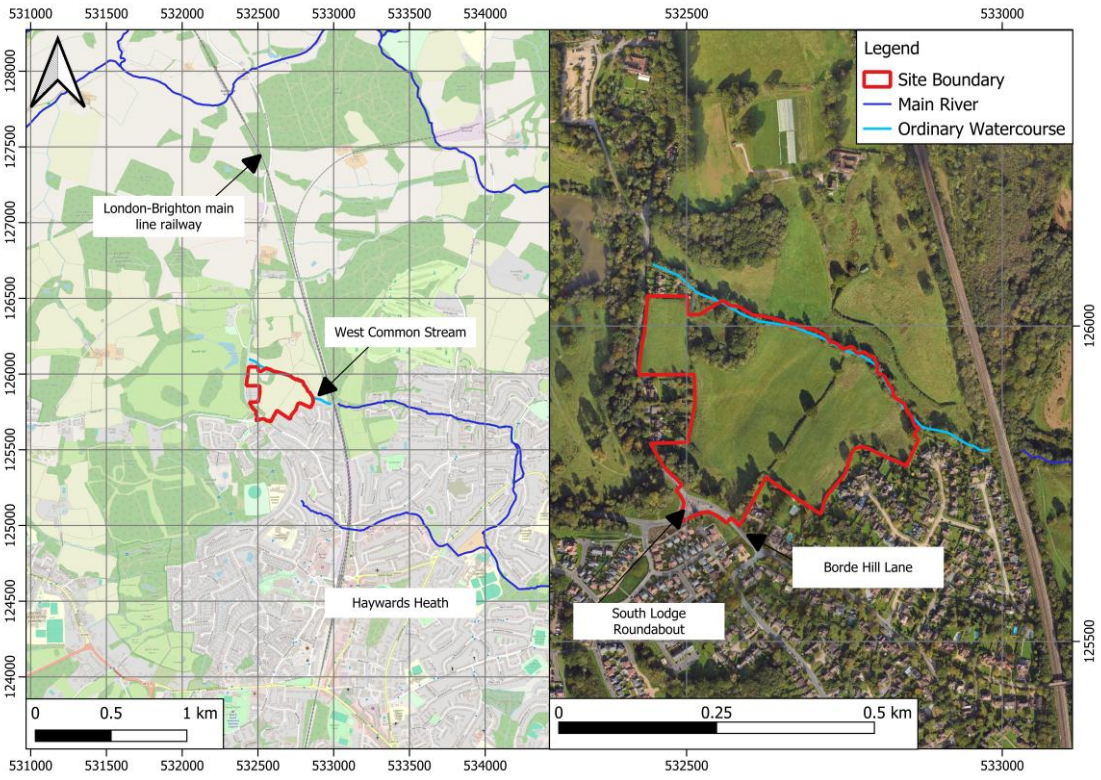
2. Site setting

2.1. Site location and description

The Site is located on the outskirts of Haywards Heath as shown in Figure 2-1, between Borde Hill Lane and the London-Brighton main railway line. The National Grid Reference for the approximate centre of the Site is 532685, 125872.

The Site currently comprises predominantly agricultural land with small areas of woodland and has an overall area of approximately 9.4 ha. There is a small watercourse (West Common Stream) located along the northern boundary of the Site, flowing north-west to south-east.

Figure 2-1 Site location



Contains Open Street Map data © OpenStreetMap and Bing Aerial imagery © Microsoft

2.2. Topography and current drainage arrangements

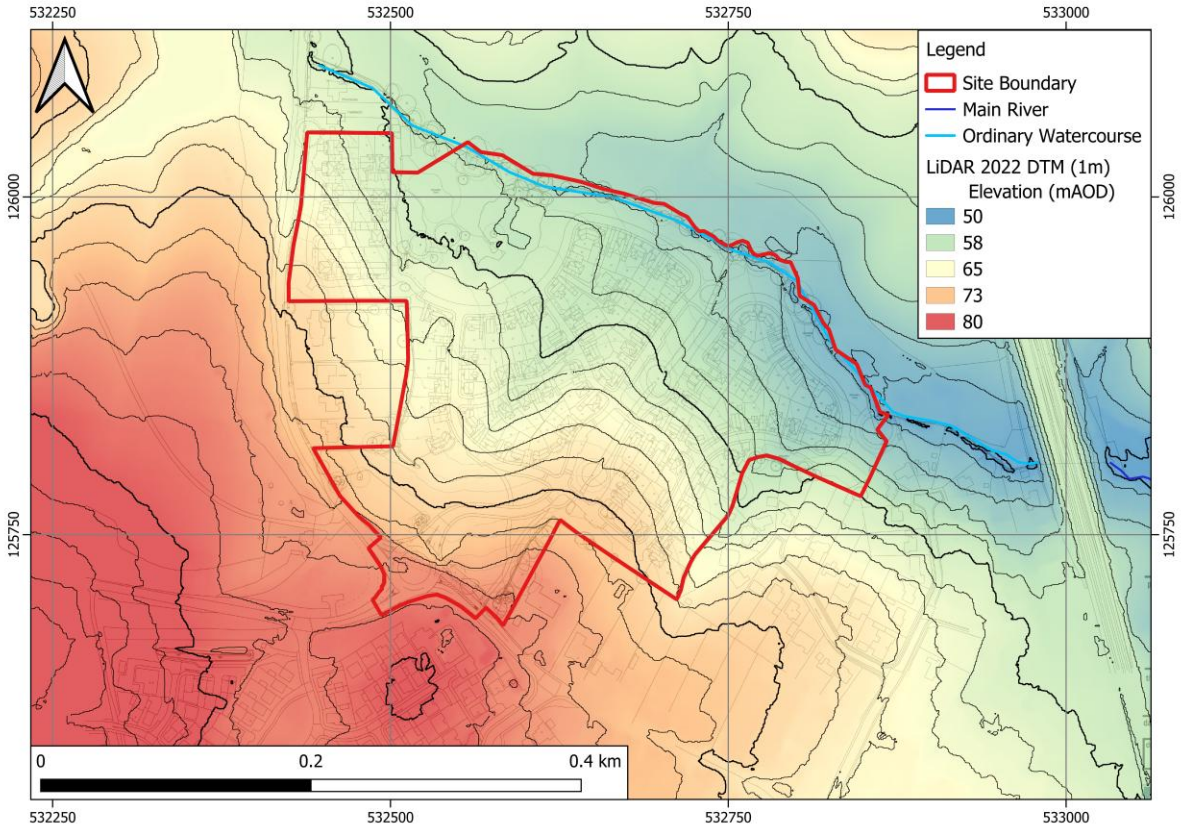
Figure 2-2 presents LiDAR topographical data. Ground elevations in the area around the Site slope generally north-eastwards. The ground elevation at the Site falls from approximately 76.0m above Ordnance Datum (m aOD) in the southwest to a minimum of approximately 50.7m aOD in the northeast, where West Common Stream leaves the Site. A topographical survey was completed for the Site by Marvin & Partners Limited in 2023 and is provided in Appendix B.

At present, the Site does not have a formal drainage system and surface water runoff will either infiltrate or flow overland with the topography towards West Common Stream.

Public sewer asset plans (see Appendix C) confirm that there are no existing public sewers crossing the Site. The nearest accessible foul sewer is in Balcombe Road to the south of the Site, however it is

understood that works are in progress for Borde Hill Estate to for sewerage connection works which will include foul water rising main adjacent to South Lodge Roundabout.

Figure 2-2 Existing ground elevations from LiDAR data



2.3. Geology and hydrogeology

2.3.1. Published soils and geology

A review of British Geological Survey (BGS) 1:50,000 scale mapping (Reigate, Sheet 286) indicates the geological sequence underlying the Site is as follows:

- Soils: Slightly acid loamy and clayey soils with impeded drainage across the Site.
- Superficial geology (see Figure 2-3): None across the majority of the Site, a narrow band of Head Deposits (clay, silt and gravel) runs across the northern boundary and north-eastern corner, following the path of the watercourse.
- Solid geology (see Figure 2-4): Predominantly the Wadhurst Clay Formation (mudstone) across the northern half of the Site. The Cuckfield Stone Bed (sandstone) lies across the southern half of the Site, with small areas of the Upper Tunbridge Wells Sand (sandstone and siltstone) and Lower Tunbridge Wells Sand (sandstone, siltstone and mudstone).

There are no historical borehole logs on Site within the BGS database, however borehole TQ 32NW9 is located 700m to the southeast, on the Upper Tunbridge Wells Sand confirms layers of Clay & Sandstone, Blue Clay, Sandy Clay and Sandstone & Clay to a depth of 30.5m. Water was struck at a depth of 26.2m, with the rest level rising to 23.2m.

Figure 2-3 Superficial deposits

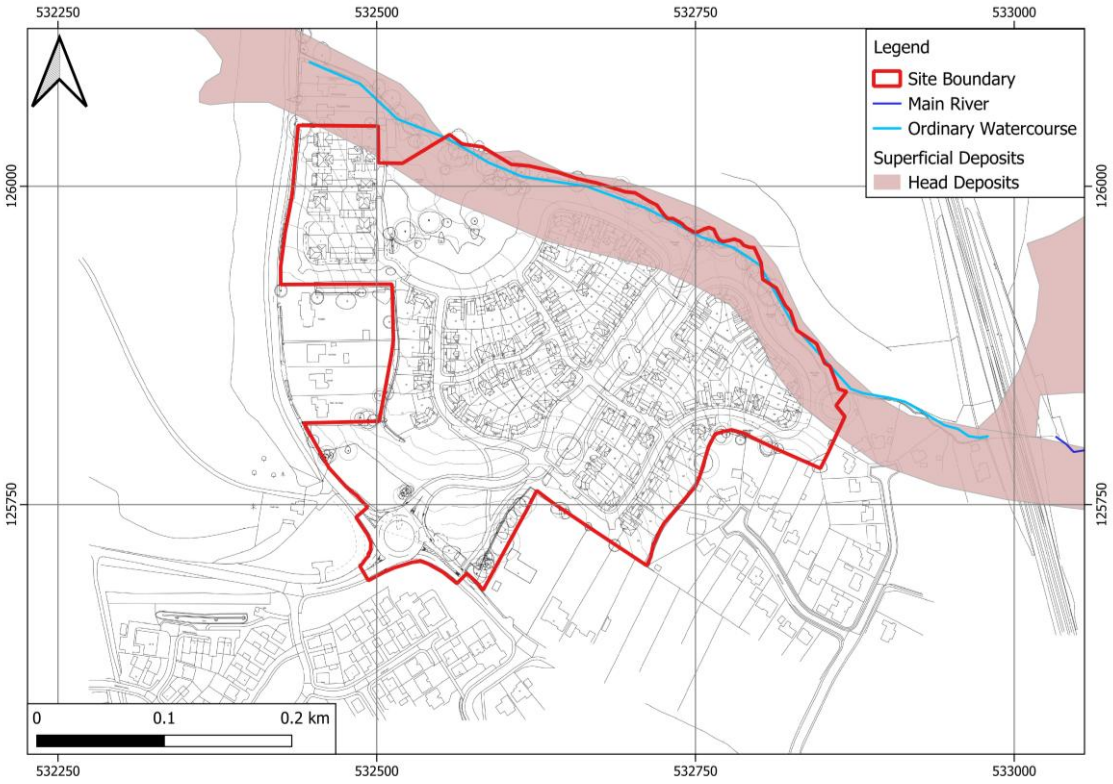
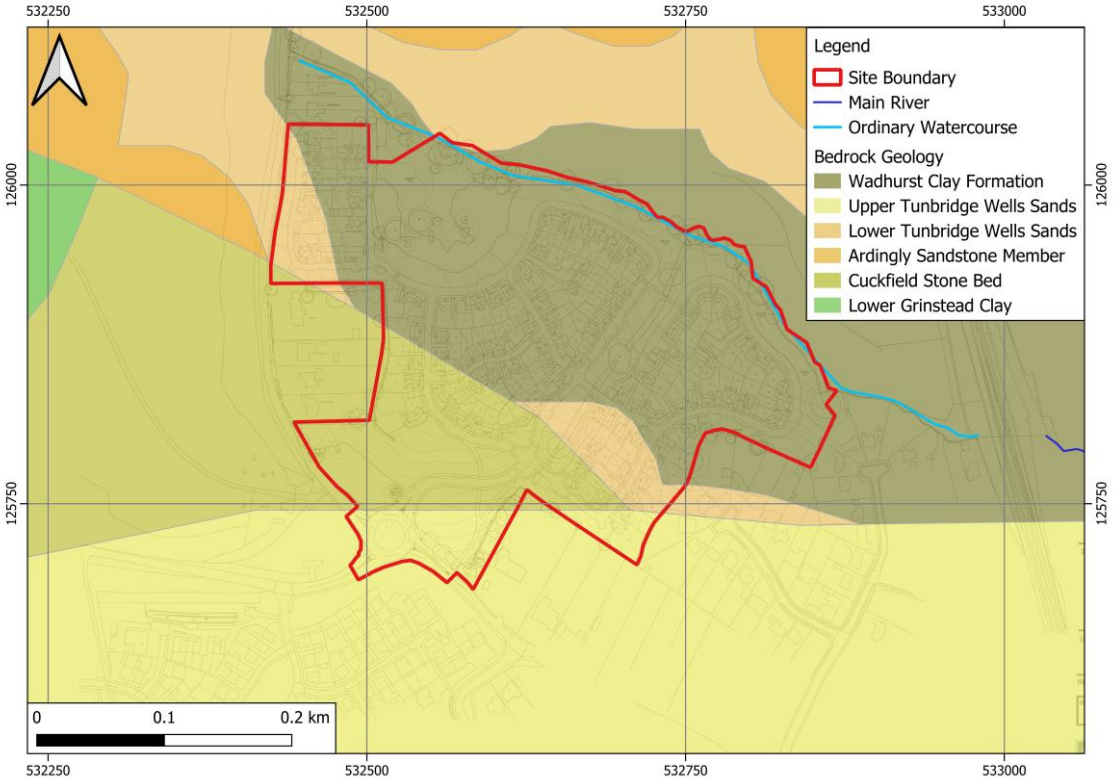


Figure 2-4 Bedrock Geology



2.3.2. Hydrogeology

The Head Deposits, along the northern boundary of the Site, are classified as a Secondary (undifferentiated) aquifer. The Cuckfield Stone Bed, Upper Tunbridge Wells Sand and Lower Tunbridge Wells Sand, across the southern half of the Site, are classified as Secondary A aquifers. The Wadhurst Clay Formation which covers the northern half of the Site is classified as unproductive strata.

Mapping indicates that the southern half of the Site is designated as high Groundwater Vulnerability. The land along West Common Stream is classified as having low Groundwater Vulnerability

The Water Framework Directive (WFD) classifies the Adur and Ouse Hastings Beds groundwater body as having an overall, quantitative and chemical rating of good in 2022. The Site does not lie within a source protection zone.

2.4. Hydrology

Hydrological descriptors for the Site are provided in Table 2-1.

Table 2-1 Hydrological point descriptors

Descriptor	Value
NGR	TQ 532625 125852
BFIHOST19	0.437
PROPWET	0.36
SAAR6190	829 mm

There are several ponds and lakes in the surrounding area, the closest being Robertsmere Lake 70m west of the Site, on West Common Stream. West Common Stream, an Ordinary watercourse as it passes along the boundary of the Site, is classified as a Main River downstream of the railway line, and flows into Scrase Stream approximately 2km downstream of the Site.

The Site lies within the Scrase Bridge Stream at Haywards Heath water body, which is classified under the WFD as having an ecological rating of moderate in 2022 and a chemical rating of 'fail'. Reasons for not achieving a good ecological status are due to physical modifications and pollution from waste water, and for chemical status due to failing levels of mercury and it's compounds and polybrominated diphenyl ethers (PBDE).

3. Proposed Development

The Proposed Development comprises the erection of up to 125 dwellings, together with the provision of landscaping, open space, and associated development works, with access from South Lodge Roundabout.

An illustrative masterplan of the proposed development has been supplied to Aqua Terra and is presented in Figure 3-1. More detailed plans are provided in Appendix D.

Figure 3-1 Illustrative masterplan

Source: Paul Hewett (November 2025)

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4. Flood risk to the proposed development

4.1. Fluvial and tidal

The EA's Flood Map for Planning (see Figure 4-1) indicates that Flood Zones 2 and 3 associated with West Common Stream along the northern boundary of the Site extend partially over the Site. The flood zones however are approximately 5m in width, which is likely to be a property of the resolution of the model used to define the flood zones, and represents the watercourse itself, rather than any out-of-bank flow that could be considered to represent a Flood Zone.

The EA have provided fluvial flood model data for the West Common Stream. The modelling was undertaken by Atkins in September 2009, and consists of a 1D-2D linked model of the Scrase Stream and tributaries.

The Scrase Stream model provides flood levels, depth, velocity and hazard grids for a range of return periods including the 1 in 100, 1 in 250, 1 in 1000 and the 1 in 100 year with climate change. It is not clear from the report what uplift has been applied for climate change, however due to the age of the report, this is likely to be 20% as that has historically been used as a standard uplift. This has now been superseded, with a current recommended climate change uplift of 37% for river flows (central allowance – 2070 to 2115).

The flood extents from the model data correspond with the Flood Zone extents, and do not indicate any out-of-bank flooding in the vicinity of the Site. There is no point data provided, and the level / depth grids only provide levels where flow has come out of bank. However working back from some chainage data provided in the report, and a table of modelled flood levels for the 1 in 100 year, approximate flood levels near the Site have been derived and are shown in Figure 4-1. Tables of flood levels for other return periods have not been provided in the report. No out of bank flooding is shown for the 0.1% AEP event.

Table 4-1 compares the 1% AEP flood levels against the nearest Proposed Development perpendicular to each node. This shows that closest proposed development (the access roads) are elevated at a minimum of 1m above the modelled 1% AEP flood level. Residential dwellings are further elevated away from the stream, and would therefore have a greater difference in level.

Table 4-1 Comparison of modelled 1% AEP flood levels and nearest Proposed Development

Model Node	1 in 100 year flood level (m aOD)	Ground elevation a nearest proposed development (perpendicular to watercourse)	Difference in level
W2921	60.08	N/A upstream of Site	N/A
W2798	57.47	59.20	1.73
W2667	55.52	57.51	1.99
W2572	53.64	56.28	2.64
W2448	51.62	52.80	1.18
W2371	50.79	N/A downstream of Site	N/A

A typical cross-section (located near W2572) through the Site is provided in Figure 4-2, which demonstrates that the proposed development is elevated away from the watercourse, with the predominant floodplain on the far side of the valley if the stream should come out of bank (although not modelled to come out of bank).

All Proposed Development within the Site is therefore deemed to be within Flood Zone 1 and as such has a low probability of flooding from rivers (i.e. less than a 0.1% annual probability of flooding from rivers). It is however recognised that an Ordinary Watercourse Consent may be required if any works are proposed that may affect water flow within the channel or within 8m of the watercourse.

Figure 4-1 Risk of Flooding from Rivers

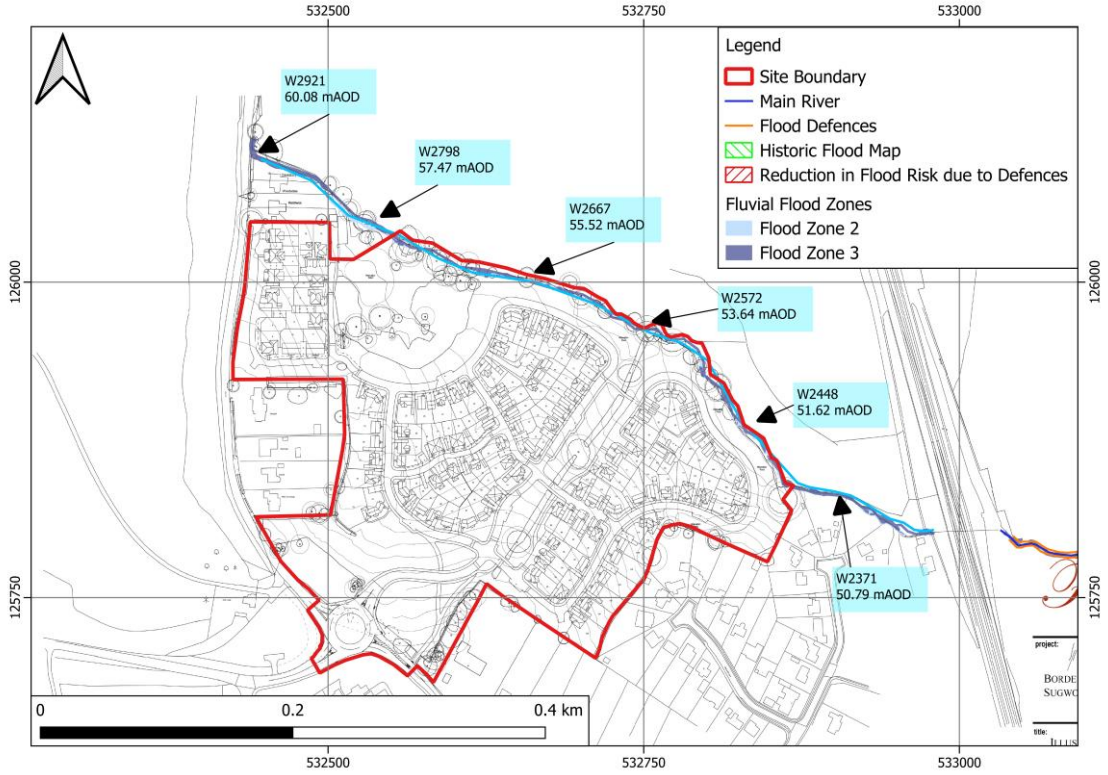
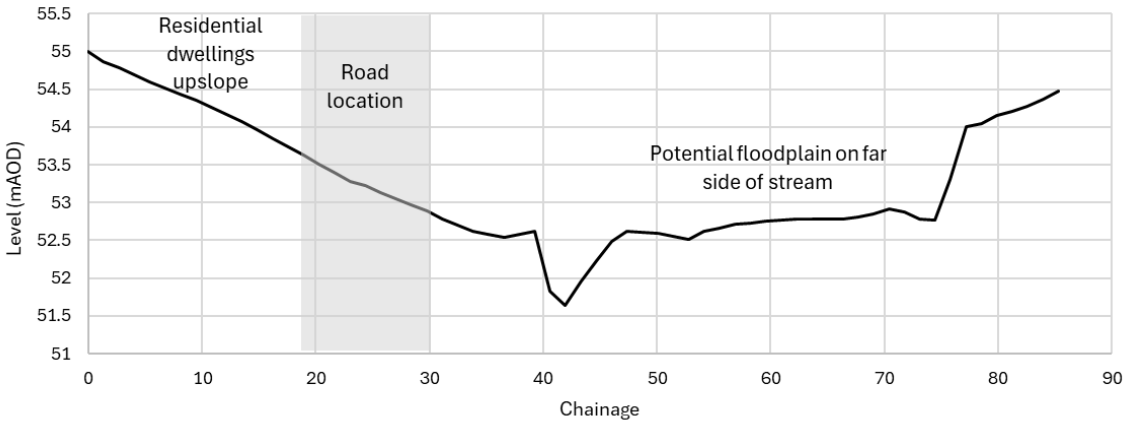


Figure 4-2 Typical cross-section through Site (near W2572)



4.2. Surface water

Surface water (pluvial) flooding is usually associated with extreme rainfall events but may also occur when rain falls on land that is already saturated or has a low permeability. Rainfall that is unable to infiltrate into the ground generates overland flow which can lead to flooding or 'ponding' in localised topographical depressions before the runoff is able to enter local drainage systems and watercourses.

The EA's Risk of Flooding from Surface Water (RoFSW) flood map, updated in February 2025 to account for climate change, is shown in Figure 4-3. The majority of the Site is at very low risk of flooding from surface water however there are some key flow paths through the Site. These flow paths can be broadly split into four locations:

- The first is an area of ponding in an area of trees in the north-west of the Site. There is a slight depression in the ground here allowing surface flow to pond.
- The second is a very small linear area of flooding in the west of the Site that lies within a ditch identifiable from LiDAR data.
- The third is a low risk flow path flowing west to east and likely joins with the final fourth flow low – medium risk flow path that runs south to north before flowing into West Common Stream.

Depth of flooding in the third and fourth flow paths that cross the Site is under 0.2 m for all scenarios. Depths in the area of ponding in trees and along the ditch are greater due to the underlying topography allowing flow to pond. Velocities along the main flow path are between 0.5 and 1.0 m/s for both the 1% AEP and 0.1% AEP events.

The access to the Site is free from surface water flooding, both in the immediate vicinity and on into Haywards Heath.

Analysis of the catchment that contributes to the third and fourth flow paths has been undertaken using GIS software, and the number of cells that drain through each cell presented in Figure 4-4. along with catchments delineated based on LiDAR data. The western 'low-risk' flow path appears to have the largest contributing catchment, however a significant portion of this is south-west of the road and roundabout that lies along the southern boundary of the Site. It is likely that highways drainage would capture a proportion of this runoff.

Mitigation measures to ensure that the Site remains safe from flooding are presented in Section 6.2.

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Figure 4-3 Risk of Flooding from Surface Water

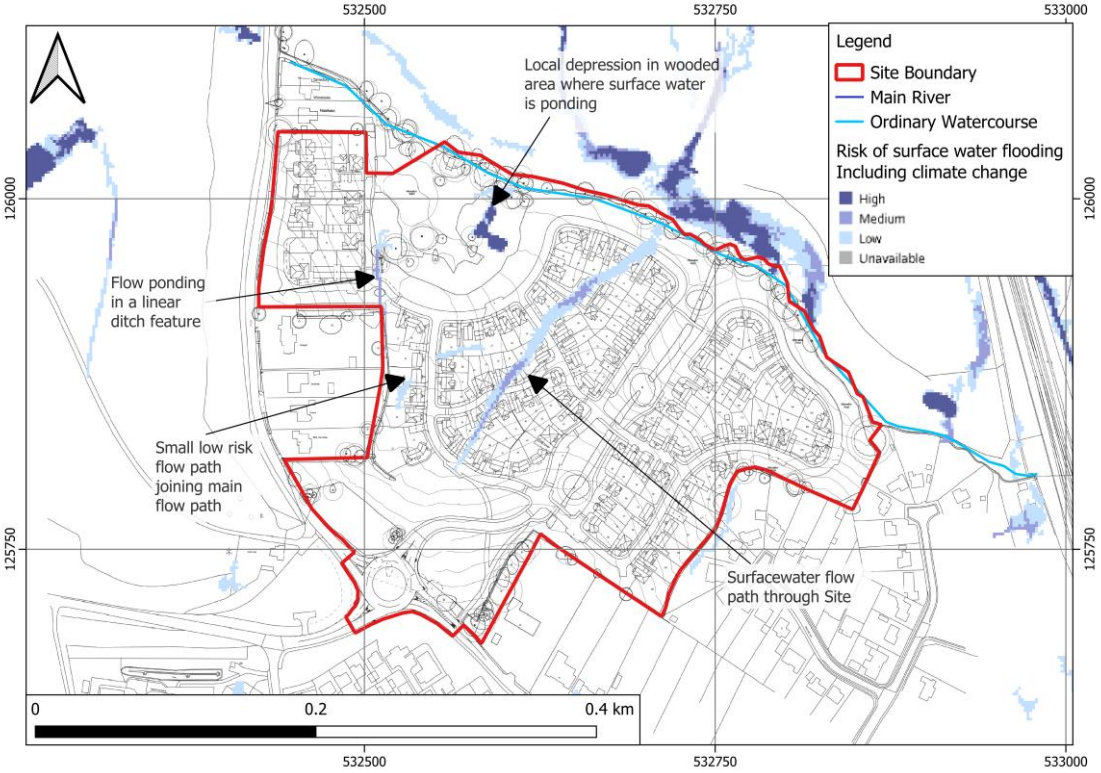
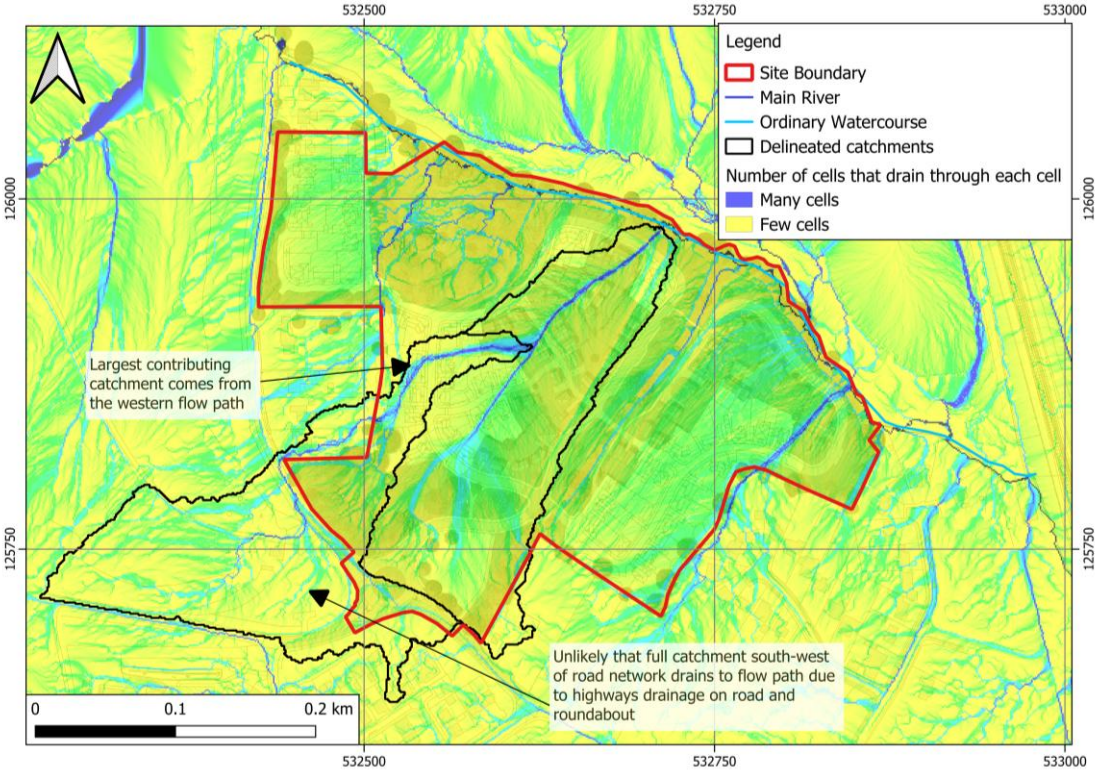


Figure 4-4 GIS analysis of surface water flow path



4.3. Groundwater

Groundwater flooding occurs when the water table rises above the surface elevation (or the floor of sub-surface structures).

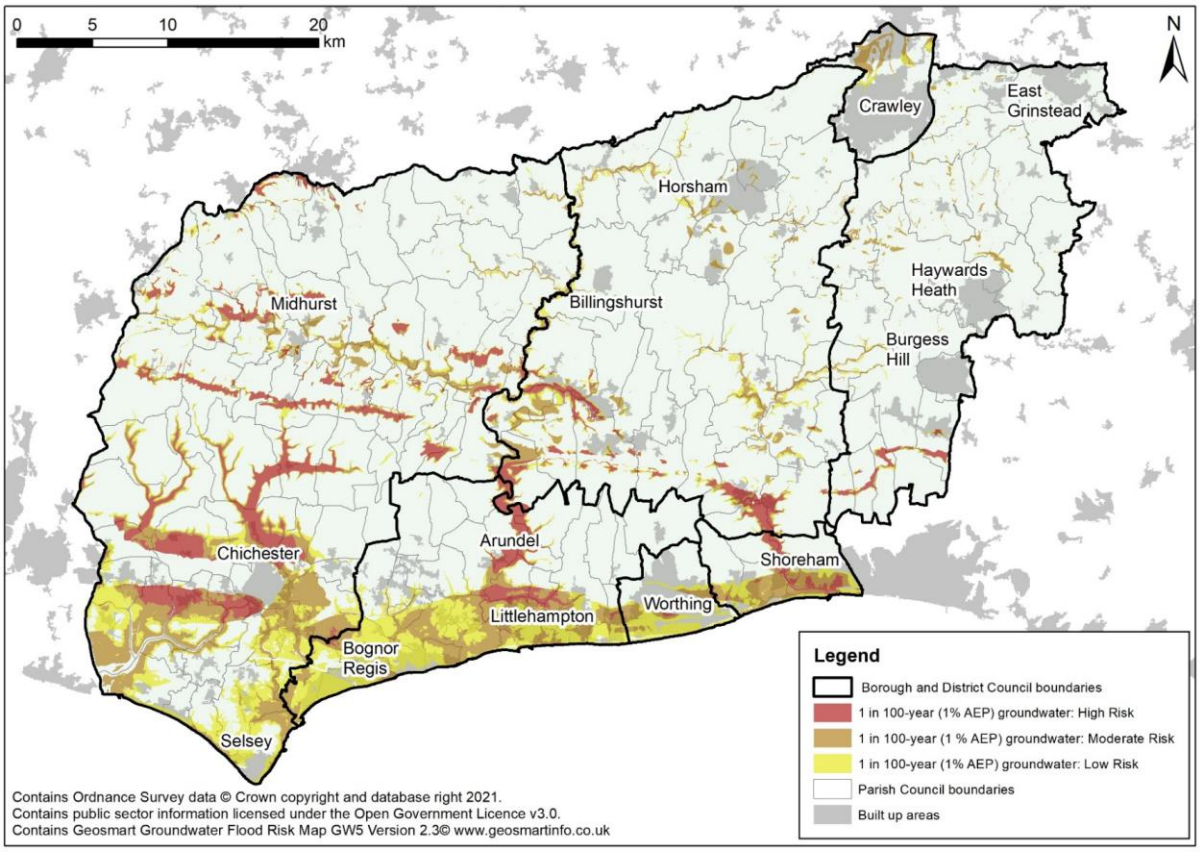
The Mid Sussex District Council SFRM report states that:

"The majority of the Mid Sussex is considered to have low potential for groundwater flooding as a result of the underlying geology…. The settlements of Burgess Hill, Haywards heath, Hurstpierpoint, Albourne and Sayers Common, as well as countryside areas to the west are considered to be in an area of low potential for groundwater flooding."

The West Sussex Local Flood Risk Management Strategy (2021 – 2026) provides a map of groundwater risk (see Figure 4-5) which identifies the area of Haywards Heath as having a less than Low Groundwater Risk.

Given that the Site is located immediately north of Haywards Heath, and therefore near the area identified in the SFRM as having low potential for groundwater flooding, which is confirmed by the West Sussex Local Flood Risk Management Strategy, it is considered that the risk of groundwater flooding at the Site is low.

Figure 4-5 Flood Risk from Groundwater, based on the Groundwater Flood Risk Map



Source: Draft West Sussex Local flood Risk Management Strategy (2021-2026)

4.4. Sewer flooding

Sewer flooding can occur during periods of intense rainfall and /or if a sewer becomes blocked with debris. Whilst the Site is crossed by a sewer there is currently no connection on the Site to this network.

It has not been possible to obtain detailed sewer flooding records for the area, however the Mid Sussex SFRA Level 1 report suggests there were between 5 internal and 27 external reports of sewer flooding, within the last 10 years within postcode area RH16 1.

4.5. Catastrophic failures

This section considers catastrophic failures of water bearing infrastructure in the area of interest. The data.gov.uk datasets suggest no risk of catastrophic flooding from reservoir failure.

Robertsmere Lake is immediately to the north-west of the Site, and sits at an elevation of approximately 64.5m aOD. The land falls sharply from the lake to a level of approximately 63m aOD to the west of Borde Hill Lane, before plateauing for approximately 30m, and then falling a further 1m near Borde Hill Lane to a level of 62m aOD, which is then consistent with the Site elevations in the north-west corner of the Site.

There is therefore a residual risk of catastrophic failure of the lake to the portions of the Site that are at lower elevations, however volumes within the lake are limited, and therefore flood flows are likely to be constrained to the valley bottom, which predominantly lies to the north of the Site.

4.6. Historical flooding

There are no recorded flood outlines for the area, and the EA have stated that they have no records of flooding for the Site (see Appendix E).

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5. Suitability of the proposed development

The Sequential Test, outlined in the PPG, identifies that developments should be directed to areas with the lowest probability of flooding.

The Site has been considered within the 2024 sequential and exception flood risk test undertaken by Mid Sussex District Council as proposed allocation DPA7 with the conclusion that the Site can be considered for allocation. It should be noted that allocation DPA7 includes a small area of additional land to the east through which passes West Common Stream, and which is at an increased risk of surface water flooding compared to the Proposed Development. Therefore the Proposed Development is at a lower flood risk than proposed allocation DPA7.

Conclusions from the sequential and exception flood risk for DPA 7 include:

1. A surface water drainage strategy should be provided which utilises SuDS to reduce the rate of discharge to greenfield runoff rates.
2. The drainage strategy should address any isolated patches of surface water flooding on site.
3. No development should be located in present day or future Flood Zone 3b.

A separate Outline Drainage Strategy has been developed to address point 1. Section 6.2 of this FRA details how the Site will remain safe from surface water flooding (point 2). No development has been located within any fluvial flood zone, and therefore point 3 is also considered to be met.

It is therefore considered that the sequential test for the Site has been passed.

The development, consisting of residential dwellings is considered to be 'More vulnerable' and is acceptable within Flood Zones 1 and 2. All development is proposed to be within Flood Zone 1.

6. Flood risk mitigation measures

6.1. Key considerations

To meet the PPG requirements, the proposed development will be considered appropriate in this location provided the following conditions are met:

- Remains safe in times of flooding whilst taking climate change into account;
- Does not result in a net loss of floodplain storage;
- Does not impede existing water flow pathways; and,
- Does not increase the volume and rate of surface water runoff leaving a site over its intended design lifetime.

Each of these requirements is discussed in relation to the proposed development in Sections 6.2 to 6.5 below.

6.2. Remain safe in times of flooding

The risk of flooding to the Site is limited surface water flood risk only. The proposed development will remain safe from surface water flood risk through three measures:

1. Avoiding development in the area of ponding within woodland in the north-west of the Site.
2. Maintaining the existing ditch in the west of the Site that forms a flow path towards West Common Stream. It is recommended that along the western boundary a small bund / French drain is installed to capture runoff from the catchment to the west and direct towards this existing ditch, avoiding runoff into residential gardens. The road leading to the north-western portion of the development will include a culvert to allow any surface flow accumulating on the southern side to pass through to the north and on towards West Common Stream (see Figure 6-1).
3. Capturing the upstream catchments for the two main flow paths via the road network and into the drainage system prior to entering the residential areas. The drainage system has been designed to accept all runoff from permeable surfaces within the Site that are upslope of the road that will capture the flow path. Catchment beyond the Site boundary to the west is expected to be partly captured by the highways drainage network and is not shown within the surface water flood maps as consisting of any significant accumulation of flow. Downslope of the road, residual contributing runoff will be reduced through the provision of the drainage network, which has been designed within this area to include an allowance for 30% of the permeable surfaces. Site reprofiling and positioning of kerbs / humps in the road will encourage any exceedance flows to follow the road network and into open green areas (see Figure 6-2).

Access / Escape to and from the Site is flood free during the design food, and during the extreme flood depths along existing surface water flow paths are modelled to be less than 0.2m in the surface water flood map. This should however be further reduced / eliminated based on the above mitigation measures.

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Figure 6-1 Proposed surface water flood risk mitigation for western ditch

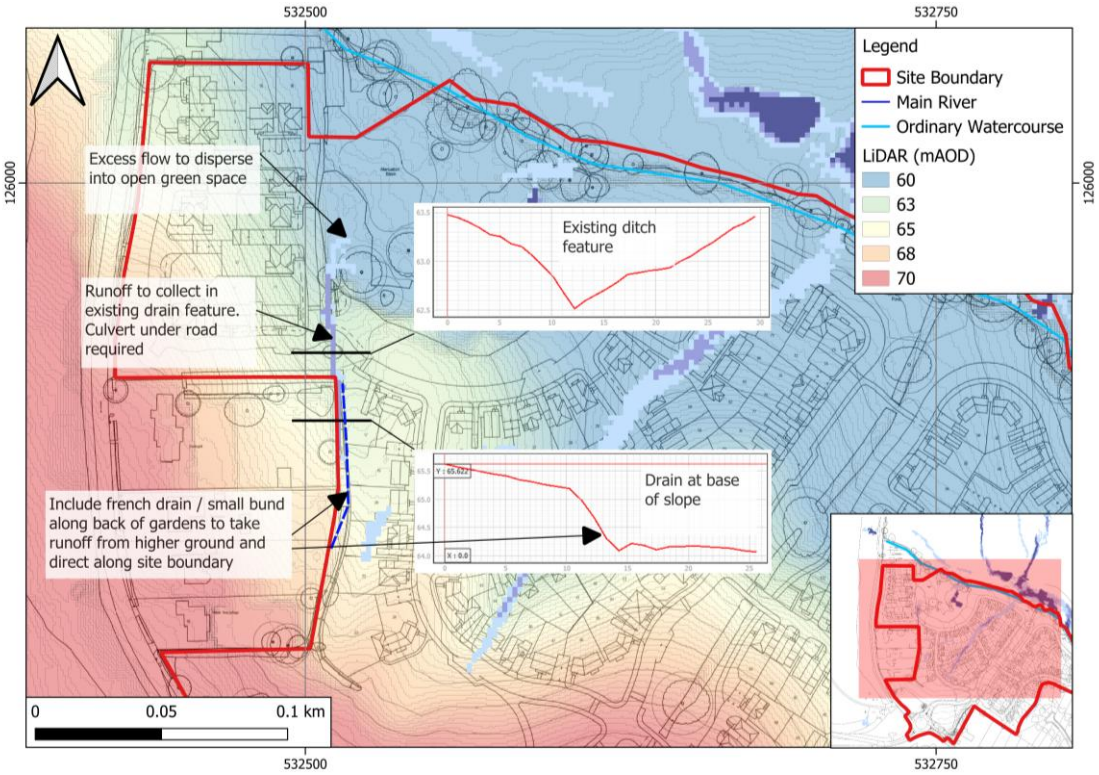
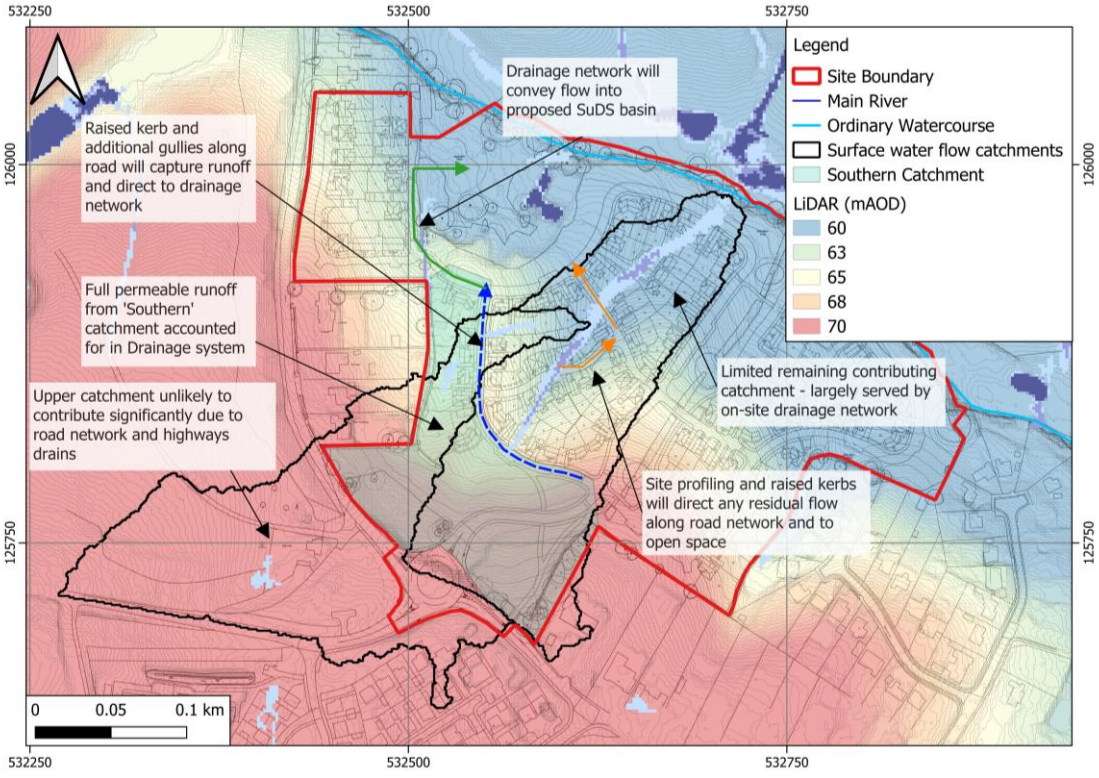


Figure 6-2 Proposed surface water flood risk mitigation measures (main flow path)



6.3. No net loss of floodplain storage

The proposed development would not result in a net loss of river floodplain storage as the areas of proposed development are not within the floodplain.

6.4. No impediments to flood water flows

The overland flow paths identified in the Surface Water Flood Map (see Figure 4-3) will be captured and routed via the road as shown in Figure 6-1 and Figure 6-2 into the on-site drainage network post-development to ensure no impediment to surface water runoff towards the West Common Stream. The drainage network has been sized to accommodate the runoff from permeable areas upstream

6.5. No increase in the volume and rate of surface water runoff

The following stipulations are provided in the EA guidance for managing rainfall runoff:

- Stormwater runoff rates and volumes discharged from urban developments should approximate to the Site greenfield response over a range of storm frequencies of occurrence (return periods).
- Runoff for extreme events should be managed on-Site. This requires:
    - The peak rate of stormwater run-off to be limited.
    - The volume of run-off to be limited.
- The pollution load to receiving waters from stormwater runoff to be minimised.
- The assessment of overland flows and temporary flood storage across the Site.

An Outline Sustainable Drainage Strategy has been prepared for the Site, which is designed in such a way as to prevent an increase in runoff rates from the Site under a range of design storm scenarios. This includes suitable allowances for future increases in rainfall intensity caused by climate change.

Due to the underlying geology (largely Wadhurst Clay, particularly in the lower slopes) it has not been possible to limit the volume of run-off to greenfield volumes, however in line with the National standards for sustainable drainage systems (SuDS) runoff rates will be limited to the 50% AEP greenfield runoff rate for all events up to and including the design event (1% AEP with 45% Climate change).

The Drainage Strategy also assesses measures for ensuring pollution load to receiving water courses from stormwater runoff are minimised and an assessment of overland flows and temporary flood storage across the Site.

7. Conclusions

The Proposed Development for up to 125 dwellings on land at north of Balcombe Road, lies within an area of overall low flood risk. Flood zones associated with West Common Stream which flows along the northern boundary of the Site extend onto the Site, however existing detailed modelling of the stream, provided by the EA do not show any out of bank flooding within the Site area. Some surface water flood risk is present on the Site, primarily located around a flow path passing south to north through the Site.

The Site is also likely to be at risk of catastrophic flood sources from failure of Robertsmere Lake, although this has not been modelled and is considered an unlikely event. This is however likely to be limited to within the valley bottom which is not being developed. There are no existing sewers within the Site, and the risk of groundwater flooding is low.

The proposed development is classified as 'More Vulnerable' with regards to flood risk, and all development will be within Flood Zone 1. Access to the Site via South Lodge Roundabout is free from all forms of flood risk.

Given the surface water flood risk to the Site, several mitigation measures have been proposed which will ensure that the Site remains safe during times of flooding, and does not increase flood risk elsewhere. These include:

- Implementation of a Sustainable Drainage Strategy that will reduce runoff from the Site to the 50% AEP greenfield runoff rate for all events.
- Inclusion of a French drain / small bund along the western boundary of the Site behind gardens to capture runoff from the upper slopes and direct into an existing drain feature.
- Use of the road network to capture the surface water flow path that flows south to north through the Site and redirect this into the drainage network via road gullies (which has been appropriately sized to contain that flow) thereby reducing the contributing catchment for the flow path.

It is therefore considered that this flood risk assessment demonstrates that the Site can be made safe from flooding during its lifetime without increasing flood risk elsewhere.

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8. References

aegaea. (2024). *Mid Sussex District Council - Level 1 Strategic Flood Risk Assessment.*

British Geological Society. (2025). *BGS Geology Viewer*. Retrieved from https://www.bgs.ac.uk/map-viewers/bgs-geology-viewer/

Cranfield Soil and AgriFood Institute. (2025). Retrieved from http://www.landis.org.uk/soilscapes/.

Environment Agency. (2025). *Check the long term flood risk for an area in England*. Retrieved from https://www.gov.uk/check-long-term-flood-risk

Haywards Heath Town Council. (2016). *Haywards Heath Town Council Neighbourhood Plan: Our Bright Future.*

Mid Sussex District Council. (2018). *Mid Sussex District Plan 2014 - 2031*.

West Sussex County Council. (2011). *West Sussex Preliminary Flood Risk Assessment.*

West Sussex County Council. (2025). *West Sussex Local Flood Risk Management Strategy: 2015 - 2030.*

Appendix A Report conditions

Report Conditions

This report has been prepared by Aqua Terra Consultants Ltd. (Aqua Terra) in its professional capacity as soil and groundwater specialists, with reasonable skill, care and diligence within the agreed scope and terms of contract and taking account of the manpower and resources devoted to it by agreement with its client and is provided by Aqua Terra solely for the internal use of its client.

The advice and opinions in this report should be read and relied on only in the context of the report, taking account of the terms of reference agreed with the client. The findings are based on the information made available to Aqua Terra at the date of the report (and will have been assumed to be correct) and on current UK standards, codes, technology, and practices as at that time. They do not purport to include any manner of legal advice or opinion. New information or changes in conditions and regulatory requirements may occur in future, which will change the conclusions presented here.

Where necessary and appropriate, the report represents and relies on published information from third party, publicly and commercially available sources which is used in good faith of its accuracy and efficacy. Aqua Terra cannot accept responsibility for the work of others.

Site investigation results necessarily rely on tests and observations within exploratory holes only. The inherent variation in ground conditions mean that the results may not be representative of ground conditions between exploratory holes. Aqua Terra take no responsibility for variation in ground conditions between exploratory positions.

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Appendix B Topographic Survey

Danesbury

Woodsdale

Hazelwick

Hill Cottage

Buntinghill

Saxonmead

Crowlink

Willow Tree Cottage

South Lodge

Borde Hill Lane

TIMBERGATE DRIVE

Brain

Dunnings Way

Surveyed by: S Smith

Plotted by: P Marvin

Drawn by: Acad

Legend

ACU	Air Conditioning Unit
AV	Air Valve
BC	Barrier Control
BOL	Bollard
BTB	British Telecom Junction Box
BTMH	British Telecom Manhole
CL	Cover Level
CTV	Cable TV
ELCP	Electricity Cable Pit
EM	Electricity Cable Marker
EP	Electricity Pole
ER	Earth Rod
FH	Fire Hydrant
FP	Flag Pole
G	Gully
GV	Gas Valve
IB	Illuminated Bollard
IL	Invert Level
JB	Junction Box
LB	Letter Box
LC	Lamp Column
MH	Manhole
MRK	Concrete Marker
O/F	Outfall
PM	Parking Meter
RE	Rodding Eye
RWP	Rainwater Pipe
SC	Stop Cock
SP	Sign Post
SV	Sluice Valve
TCB	Telephone Kiosk
TL	Traffic Light
TLC	Traffic Light Cover
TM	Ticket Machine
TP	Telegraph Pole
UTR	Unable To Raise
UTS	Unable To Survey
VC	Vent Column
WM	Water Meter
WO	Wash Out
WWP	Waste Water Pipe

Data

i) Trees shown thus 9/6/200 indicates Ht. in metres/Span. dia in metres Trunk dia. in millimetres

ii) Trees shown thus 9/6x6/200 indicates Ht. in metres/Span. dia in metres Trunk dia, in millimetres

iii) Grid : Metric and oriented to north

iv)Levels : Metric and based on OS GPS DATA

Situated on Survey station 1

Value: 56.514m

N

Client

FAIRFAX

Site

BORDE HILL LANE
SUGWORTH
HAYWARDS HEATH

Marvin & Partners Limited

Plestor House
Farnham Road
West Liss
Hampshire GU33 6JQ

Tel : 01428 751888
Email: paul@maplimited.com

Date	JULY 2023
Scale	1/200 @ A0
Dwg/Job No.	23/6025
Checked By	

Appendix C Southern Water Asset Plans

Woodsdale
Hazelwick
Hill Cottage
Burtinghill
Saxonmead
Crowlink
Willow Tree Cottage
BORDEHILL LANE
GP
South Lodge
6602
ORCHARD WAY
ORCHARD CLOSE
ORCHARD CLOSE
0m
100m
200m
300m

(c) Crown copyright and database rights 2020 Ordnance Survey 100031673 | Date: 04/08/20 | Scale: 1:1250 | Map Centre: 532710,125868 | Data updated: 15/06/20 | Our Ref: 422739 - 1 | Wastewater Plan A2

The positions of pipes shown on this plan are believed to be correct, but Southern Water Services Ltd accept no responsibility in the event of inaccuracy. The actual positions should be determined on site. This plan is produced by Southern Water Services Ltd (c) Crown copyright and database rights 2020 Ordnance Survey 100031673 .This map is to be used for the purposes of viewing the location of Southern Water plant only. Any other uses of the map data or further copies is not permitted.

WARNING: BAC pipes are constructed of Bonded Asbestos Cement.

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

Foul Gravity Sewer
Combined Gravity Sewer
Culverted Water Course or Treated Effluent
Surface Water Gravity Sewer
Rising Main, Vacuum or Syphon
Combined Outfall
Foul Outfall
Surface Water Outfall
Surface Water Inlet
Combined Pumping Station
Surface Water Pumping Station
Foul Pumping Station
Water Treatment Works
Section 104 Area
Building Over Agreement Area
Foul Manhole
Combined Manhole
Surface Water Manhole
Side Entry Manhole, Decarcation Chamber, Dummy Manhole or Surface Water Soakaway

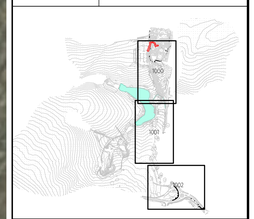
tomclark@ridge.co.uk

Boredehill Lane Sugw

WATER for LIFE
from Southern Water

SITE LOCATION

OS X (EASTINGS)	532411
OS Y (NORTHINGS)	126168
NAT GRID	TQ 32411 26168
POSTCODE	RH16 1XN



KEY PLAN - 1:5000

NOTES:

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KEY

- EXISTING UNIDENTIFIED MANHOLE COVER
- PROPOSED FOUL WATER DRAIN
- PROPOSED FOUL WATER INSPECTION CHAMBER
- PROPOSED FOUL WATER RISING MAIN
- SINGLE-LINE WASHOUT CHAMBER
- TREE ROOT PROTECTION AREA

TABLE 1: DESIGNERS RISK ASSESSMENT

RISK REFERENCE	RISK DESCRIPTION	RISK CONSIDERATION/ MITIGATION
R.01	INSTALLATION OF NEW DRAINAGE RUNS ADJACENT TO EXISTING DRAINS.	TEMPORARY WORKS MAY BE REQUIRED WHERE EXCAVATING ADJACENT TO EXISTING DRAIN IF IT IS TO REMAIN LIVE. SUITABLE TEMPORARY WORKS DESIGNS ARE TO BE PROPOSED BY THE CONTRACTOR.
R.02	INSTALLATION OF PROPOSED DRAINS THROUGH TREE ROOT PROTECTION AREA CAUSING DAMAGE TO TREE ROOTS.	DRAINAGE ROUTES HAVE BEEN PROPOSED TO MINIMISE THE EXTENTS WITHIN TREE ROOT PROTECTION AREA IN LINE WITH ARBORICULTURALIST'S RECOMMENDATIONS. ALL AREAS WHERE DRAINS ARE PROPOSED TO PASS THROUGH A TREE ROOT PROTECTION AREA IS SUBJECT TO FULL METHOD STATEMENTS FROM AN ARBORICULTURALIST.
R.03	PIPES WITHIN TRAFFICKED AREAS WITH REDUCED COVER ARE AT RISK OF DAMAGE WHEN EXCESSIVELY LOADED.	PIPES WITH LESS THAN 1.2m COVER WITHIN VEHICULAR TRAFFICKED AREAS ARE TO BE LAID WITH CLASS Z CONCRETE BED AND SURROUND.
R.04	UNIDENTIFIED MANHOLES / SERVICES PRESENT IN THE AREA OF WORKS POTENTIALLY CLASHING WITH THE DRAINAGE PROPOSALS.	ALL EXISTING SERVICES ARE TO BE SURVEYED PRIOR TO THE COMMENCEMENT OF WORKS AND COMMUNICATED TOT HE ENGINEER FOR A DESIGN REVIEW. IF ANY CLASHES ARE IDENTIFIED, THE ENGINEER WILL NOTIFY THE DESIGN TEAM AND ADJUST THE DESIGNS ACCORDINGLY.
R.05	THE PROPOSED FOUL OUTFALL INVERT LEVELS IS BASED ON DESIGN DRAWINGS AND THE AS-BUILT SCENARIO MAY DIFFER.	INVERT LEVELS OF THE EXISTING ADOPTED FOUL WATER MANHOLES ARE TO BE CONFIRMED PRIOR TO THE COMMENCEMENT OF WORKS. IF THE INVERT DIFFERS FROM WHAT IS SHOWN, THE DESIGN IS TO BE ADJUSTED AND CIRCULATED TOT HE DESIGN TEAM.

TABLE 2: NOTE TO DEVELOPER

NOTE REFERENCE	NOTE DESCRIPTION
N.01	THE PROPOSED PUMP AND RISING MAIN SPECIFICATION/DESIGN IS TO BE INLINE WITH SPECIALIST'S PROPOSALS.
N.02	THE PROPOSED FOUL WATER OUTFALL IS SUBJECT TO A SECTION 106 APPROVAL WITH SOUTHERN WATER.
N.03	THE PROPOSED FOUL WATER RISING MAIN IS TO STAY WITHIN 2.0m OF THE EXISTING HIGHWAY IN ORDER TO STAY WITHIN HIGHWAYS LAND. ANY PIPE WITHIN THIRD PARTY LAND IS SUBJECT TO ALL RELVANT AGREEMENTS / APPROVALS.
N.04	WASHOUT CHAMBER IS IN LINE WITH ADVANTAGE PUMPING SOLUTIONS SPECIFICATIONS.

Rev	Date	Remarks	Drawn	Check
P04	26/12/24	OUTFALL ROUTE UPDATED TO SUIT SITE DISCUSSIONS.	LS	JLE
P03	13/11/24	WASHOUT CHAMBER ADDED.	LS	JLE
P02	16/08/24	DRAINAGE ROUTES REVISED TO SUIT CLIENT COMMENTS.	LS	JLE
P01	25/07/24	FIRST ISSUE FOR CLIENT REVIEW.	LS	JLE

PWA / GROUP

CIVIL, STRUCTURAL, GEO-ENVIRONMENTAL

SUMMIT HOUSE, RIPARIAN WAY, THE CROSSINGS, CROSSHILLS, KEIGHLEY, BD20 7BW

01535 655550
info@pwagroup.co.uk
www.pwagroup.co.uk

Client: BORDE HILL ESTATE

Project: SEWERAGE CONNECTION WORKS
BORDE HILL GARDENS
HAYWARDS HEATH

Title: BORDE HILL ESTATE FOUL WATER OUTFALL
BALCOMBE ROAD OUTFALL

PRELIMINARY

Size	Scale	Designed	Checked	Date
A0	1:250	LS	JLE	JUL 24

Drawing Status: PRELIMINARY

Job Number	Originator	Zone	Level	Type	Role	Drawing No.	Rev
23363	PWA	00	XX	DR	C	1002	P04