

Rear of Chideock and Keepers, Valebridge Road, Burgess Hill.

Flood Risk Assessment



Document Control

Document Reference	26005-HOD-XX-XX-RP-C-5801
Project Name	Rear of Keepers and Chideock
Location	Rear of Chideock and Keepers, Valebridge Road, Burgess Hill
Client	Paul and Alea Holland
Title	Flood Risk Assessment

Revision	Purpose	Date	Author	Checked	Authorised
Z01	Initial issue	08/01/26	JRH	MJ	JRH
Z02	Location plan revised, appendices updated.	9/1/26	JRH	MJ	JRH
Z03	Revised following Flood Risk & Drainage Team consultation response. Additional surface water mitigation and drainage strategy information added.	11/06/2026	JRH	MJ	JRH

1 Introduction

- 1.1.1 Hodel Ltd have been instructed by Vander Homes on behalf of Paul and Alea Holland to prepare a Flood Risk Assessment (FRA) to supplement two separate planning applications at the Rear of Chideock and Keepers, Valebridge Road, Burgess Hill.
- 1.1.2 An FRA is undertaken to establish the risk to a proposed development for its lifetime and, if required, propose suitable flood risk mitigation measures.
- 1.1.3 This FRA has been undertaken in accordance with the National Planning Policy Framework (NPPF) and Planning Practice Guidance (PPG).
- 1.1.4 This report has been produced in consultation with relevant authorities, and referenced to established data, documents and guidance that is published by the Environment Agency (EA), the Lead Local Flood Authority (LLFA), the Local Planning Authority (LPA), the Water Authority and the Internal Drainage Board (IDB).

2 Existing Site

2.1 Description

2.1.1 The site is located at the rear of Keepers and Chideock, Valebridge Road, Burgess Hill; National Grid Reference 532396E, 120966N. A copy of the site location plan is shown in Figure A.

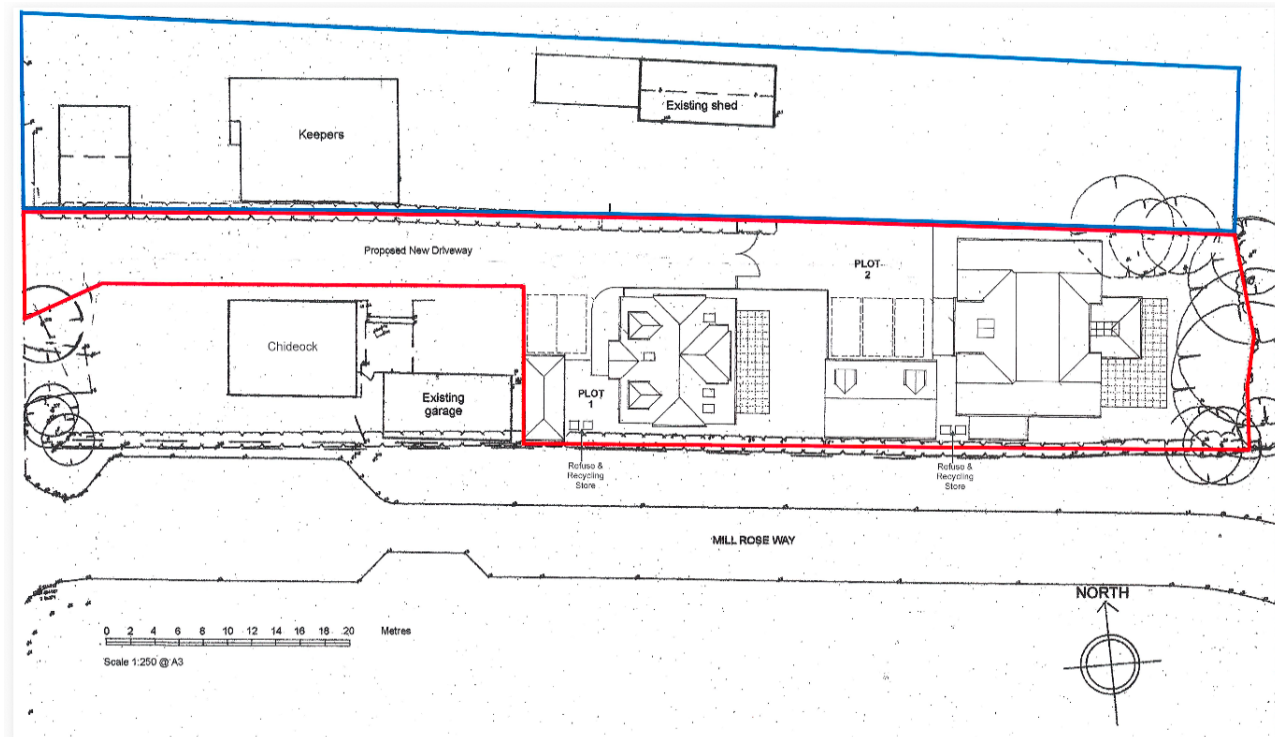


Figure A - Site Location Plan

2.1.2 The site comprises of two undeveloped gardens. The site is bounded by Keepers and Chideock and principal site access to the west, Mill Rose Way to the south. Residential properties are to the north and east. The site area measures approximately 0.12Ha for Chideock, and approximately 0.06Ha for the site behind Keepers.

2.2 Topography

2.2.1 A topographical survey has been undertaken, this survey shows that the existing ground levels range from circa 34.6mAOD in the NW corner at the east of the site, to circa 37.3mAOD in the SE corner of the site. There is a shallow valley running through the centre of the site in an approximate north south direction.

2.3 Existing Drainage

2.3.1 Southern Water sewer records for the site show a public foul sewer located to the east of the site crossing Mill Rose Way. No public surface water sewer is identified within the immediate vicinity of the site on the records reviewed. A copy of the sewer records can be found in Appendix A.

- 2.3.2 The wider area is, however, understood to contain existing drainage infrastructure associated with the surrounding highway and residential development. The precise nature and suitability of any potential surface water discharge location will be confirmed as part of the detailed drainage design process.

3 Proposed Site

3.1 Description

- 3.1.1 It is proposed to build two properties behind Chideock. Copies of the proposed drawings are provided within Appendix B.
- 3.1.2 The existing and proposed development (without basements) is classed as a More Vulnerable classification based on the Flood Risk Vulnerability Classification table with the NPPF guidance.
- 3.1.3 Additionally, given that the proposal is for new build, the Environment Agency's Flood Risk Standing Advice will be applicable. This advice is available here: [Preparing a flood risk assessment: standing advice - GOV.UK](#)

4 Environmental Setting

4.1 Hydrology

- 4.1.1 The EA Statutory Main River Map (extract in Figure B) shows that the nearest EA Main River is located circa 400m to the north of the site.



Figure B - Environment Agency Statutory River Map

4.2 Geology

- 4.2.1 British Geological Survey (BGS) records have been reviewed and shows that the site is underlain by the Weald Clay Formation.

4.3 Hydrogeology

Based on the online Magic Maps service, hydrogeological information has been obtained. The site is underlain by an unproductive aquifer within the Weald Clay Formation.

The site is not located within a groundwater Source Protection Zone (SPZ).

5 Sources of Flood Risk

5.1 Criteria

- 5.1.1 As assessment of the risk associated with various sources of flooding is required to comply with the NPPF and EA standing advice. This assessment is undertaken with the assumption that the development will have a design life of 100 years (residential).

In May 2022 the EA updated the climate change allowance guidance and this should be consulted to ascertain the appropriate peak river flow and rainfall intensities for the proposed development. This is based on the site location, lifetime of the development, flood zone and vulnerability of the end users. 'BS 8533:2017 – Assessing and managing flood risk in development – code of practice' identifies the forms of flooding as per the below list.

- Flooding from rivers (fluvial)
- Flooding from sea (tidal)
- Flooding from land (surface water)
- Flooding from groundwater
- Flooding from sewers
- Flooding from reservoirs, canals, and other structures

5.2 Flooding From Rivers (Fluvial)

The latest EA flood zone map has been reviewed, and an extract can be found in Figure C. This shows that the site lies within Flood Zone 1 (low probability).

Flood Zone 1 comprises of land assessed as having less than 1 in 1,000 annual probability of river or sea flooding (less than 0.1%) in any year.

Flood Zone 2 comprises of land assessed as having between a 1 in 100 and 1 in 1,000 annual probability of river flooding (1% - 0.1%), or between a 1 in 200 and 1 in 1,000 annual probability of sea flooding (0.5% - 0.1%) in any year.

Flood Zone 3a comprises of land assessed as having a 1 in 100 or greater annual probability of river flooding (>1%), or a 1 in 200 or greater annual probability flooding from the sea (>0.5%) in any year.

Flood Zone 3b comprises of land assessed as having a 1 in 20 or greater annual probability of river flooding (>5%) and is often referred to as the functional floodplain.

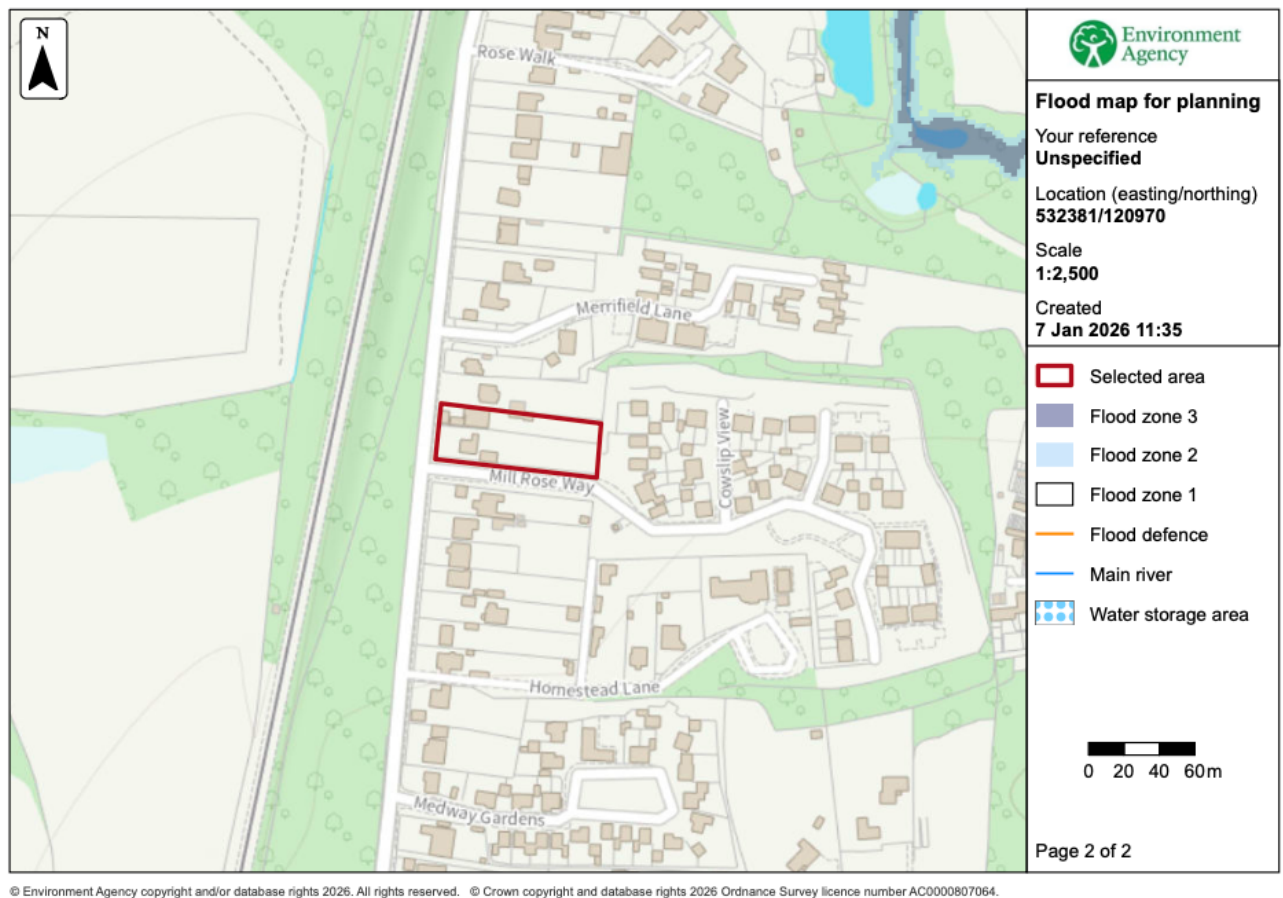


Figure C - Flood map for Planning

5.2.1 It is considered that the flood risk from rivers is Very Low.

5.3 Flooding From Sea (Tidal)

5.3.1 This is not considered to be a risk due to the inland location of the site.

5.4 Flooding From Land (Surface Water)

- 5.4.1 During intense rainfall events the ground can become saturated, or man-made drainage systems can be overwhelmed, and this can cause localised floods before reaching a watercourse or river.
- 5.4.2 The Environment Agency's updated Risk of Flooding from Surface Water mapping, Figure D, including climate change scenarios for the 2040–2060 epoch, identifies an overland flow route crossing part of the site generally from south to north. This flow route is categorised as Low to High risk. The mapped flow route affects part of the proposed access driveway and adjacent areas associated with the Chideock plots. The mapping identifies areas potentially affected by surface water flooding irrespective of the predicted flood depth.

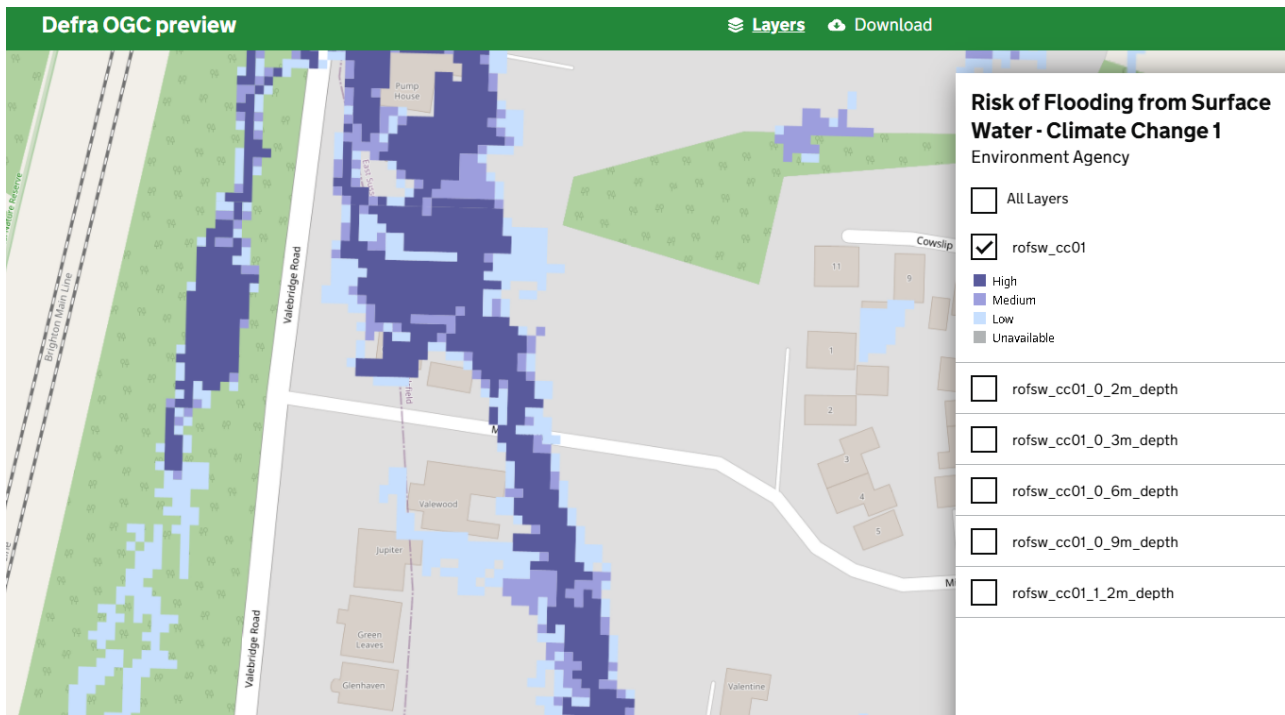


Figure D - Environment Agency Risk of Flooding from Surface Water Map

- 5.4.3 The majority of the site remains within areas identified as being at Very Low risk of surface water flooding. The mapped areas of elevated risk are associated with shallow exceedance flow routing following local topography.
- 5.4.4 The submitted topographical survey identifies a localised low point behind the existing Chideock garage at approximately 35.07mAOD, with surrounding proposed dwelling areas generally located at levels of approximately 35.48mAOD and above. The proposed dwellings are therefore situated above the primary mapped flow route.

- 5.4.5 Overlays of the flooding including climate change, for various depths can be found at the end of this report, the first overlay is shown below as Figure E which shows risk of flooding up to 0.2m deep.



Figure E - Environment Agency Risk of Flooding (0.2m) from Surface Water View

5.5 Flooding From Groundwater

- 5.5.1 During long periods of rainfall, the water table can rise and issue out of the ground's surface. This is dependent on average groundwater levels, extent of periods of rainfall and the ground strata.
- 5.5.2 The EA long term flood risk service notes that flooding from groundwater is unlikely in this area. The underlying Weald Clay bedrock is considered unlikely to contain significant quantities of groundwater.
- 5.5.3 It is therefore considered that the flood risk from groundwater is Low.

5.6 Flooding From Sewers

- 5.6.1 Sewer flooding can occur when an artificial drainage system is overwhelmed, becomes blocked, or cannot discharge freely at its outfall. This can result in water exiting the system at locations such as gullies and manholes.
- 5.6.2 The Southern Water sewer records for the site are shown in Appendix A. These show there is no mapped sewer within the confines of the site.
- 5.6.3 It is therefore considered that the flood risk from sewer flooding is Low.

5.7 Flooding From Reservoirs, Canals and Other Structures.

- 5.7.1 A large release of water from a reservoir may cause flooding. The EA reservoirs flood map is shown in Figure F.



Figure F - Environment Agency Reservoir Flood Map

- 5.7.2 The mapping has been updated in 2021 to show a modelled reservoir flooding when rivers are running at normal levels, as well as when flooding from rivers is occurring. The EA mapping shows that the site is located outside of an area that may flood from a reservoir in either modelled scenario.
- 5.7.3 Due to safeguards that are in place through legislation that reservoirs must be maintained, it is considered unlikely that a reservoir failure would occur.
- 5.7.4 It is therefore considered that the flood risk from reservoir flooding is Low.
- 5.7.5 There are no Canal and River Trust owned canals near to the site.
- 5.7.6 No other artificial structures in the vicinity of the site are deemed to pose a potential risk that haven't already been explored previously in this report.

6 Mitigation Measures and Residual Risk

6.1 Overview

- 6.1.1 The site is located within Flood Zone 1 as shown by the EA flood mapping, and the proposed development will comprise 'More Vulnerable' residential development.
- 6.1.2 The surface water flood map shows some High to Low-risk flood risk in the vicinity of the of the proposals. The development proposals have been prepared to maintain the existing overland flow corridor through the site and avoid placing buildings directly within the apparent flow route.
- 6.1.3 In response to consultation comments received from the Flood Risk and Drainage Team, the access strategy is to be further refined to incorporate localised flood mitigation measures. This is anticipated to include a modestly raised driveway profile together with appropriately sized hydraulic conveyance measures beneath the access to maintain exceedance flow routing through the site and avoid obstruction of surface water flows.
- 6.1.4 The proposed mitigation approach is intended to:
- maintain existing exceedance flow routing;
 - avoid displacement of floodwater elsewhere;
 - improve resilience of the access during intense rainfall events; and
 - ensure the development does not materially increase flood risk on or off site.
- 6.1.5 Whilst parts of the site are shown to be affected by mapped surface water flow routes, the overall risk to the proposed dwellings is considered capable of being appropriately mitigated through detailed design and drainage measures.
- 6.1.6 A surface water drainage strategy based on SuDS principles will also be implemented as part of the development to ensure runoff arising from the proposed hardstanding and access arrangements is appropriately managed and does not increase flood risk elsewhere. Surface water runoff will be discharged at controlled rates to a suitable outfall, subject to confirmation during detailed design.
- 6.1.7 All other sources of flooding were deemed Low or Very Low.

6.2 Flood Compensation

- 6.2.1 As the site is not within the fluvial floodplain, flood compensation is not required.

6.3 Safe Access/Egress

- 6.3.1 The proposed access route may be affected by shallow surface water exceedance flows during extreme rainfall events. The proposed mitigation strategy, including maintenance of overland flow routing and incorporation of hydraulic conveyance beneath the access, is intended to improve the resilience of the access arrangement during such events.
- 6.3.2 Given the nature of the mapped surface water flow route and local topography, any flooding affecting the access is anticipated to comprise relatively shallow, localised and short duration exceedance flows associated with intense rainfall events rather than deep or prolonged inundation. This conclusion is supported by the published EA surface water mapping which identifies the majority of the route as Very Low to Low risk, with only a localised crossing point affected by the mapped flow path.

- 6.3.3 The EA RoFSW mapping, included in Appendix D, shows the risk of flooding to various depths across the site, the majority of the flow path is categorised as Very Low risk to all depths, with small, localised pockets at greater risk. The standing advice from the EA asks for the 1 in 100 annual probability plus climate change to be assessed for surface water flooding, this is equivalent to the Medium and High risk zones. Figure 10 of Appendix D shows the clear route through the site where the risk of flooding to a depth of 0.2m, is outside of the 1 in 100 annual probability zone, Looking further to assess the Low risk (1 in 1,000 probability), also shows a clear route through the site where the anticipated depth of flooding is less than 0.2m deep.
- 6.3.4 The LPA have referred to a maximum hazard rating of 0.75 associated with the published surface water flood mapping. The Environment Agency's currently available mapping does not provide the underlying flood depth and velocity data necessary to independently verify or calculate this hazard value. Nevertheless, it is noted that a hazard rating of 0.75 lies at the lower end of the recognised flood hazard scale and is below the levels typically associated with conditions considered dangerous for most people. The assessment has therefore been based upon the published flood extents, risk classifications, climate change mapping and site topography. The proposed mitigation measures, including the raised access profile and hydraulic conveyance beneath the driveway (as indicated on the Engineering Layout appended to this report), are intended to further improve access resilience whilst maintaining exceedance flow routing through the site.

6.4 Flood Resistance and Resilience Measures

- 6.4.1 Although the site is not located within the fluvial floodplain, proportionate flood resilience and mitigation measures are proposed in response to the mapped surface water flow route crossing part of the site.
- 6.4.2 The development layout has been prepared to avoid obstruction of the apparent overland flow corridor, with the proposed dwellings positioned outside the principal mapped flow route.
- 6.4.3 Additional mitigation measures associated with the access driveway are proposed, including localised raising of the access level and provision of hydraulic conveyance beneath the driveway to maintain exceedance flow routing.
- 6.4.4 These measures are intended to reduce the potential for localised ponding and improve the resilience of the access arrangement during extreme rainfall events.

7 Conclusions and Recommendations

- 7.1.1 This FRA has been written to be compliant with the NPPF and PPG. It demonstrates that the site is located within Flood Zone 1.

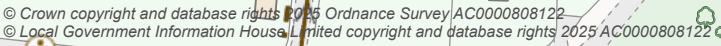
Source	Level of Risk	Mitigation
Fluvial	Very Low	None required
Tidal	Very Low	None required
Surface Water	Low to High: Site Low: Properties	Development layout maintains exceedance flow routing.

		Raised access profile, hydraulic conveyance beneath driveway and SuDS-led drainage strategy proposed.
Groundwater	Low	None required
Sewers	Low	None required
Reservoirs, Canals and other Structures	Very Low	None required

Table A - Flood Risk Summary

- 7.1.2 Overall, the assessment demonstrates that whilst part of the site and access arrangement are affected by mapped surface water flow routes, the proposed development can be appropriately mitigated through site layout, maintenance of exceedance flow routing, incorporation of hydraulic conveyance measures beneath the access, and implementation of a SuDS-led drainage strategy.
- 7.1.3 The development should not therefore be precluded on flood risk grounds subject to detailed drainage and mitigation design.

Appendix A - Sewer Records

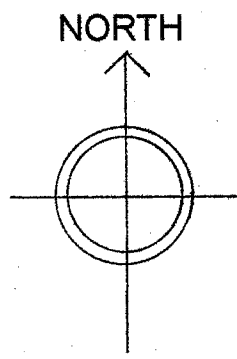
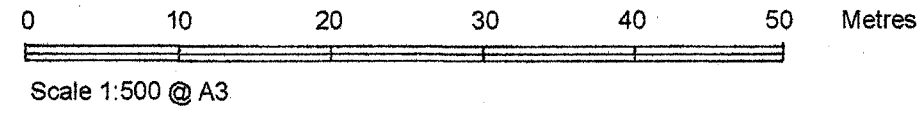
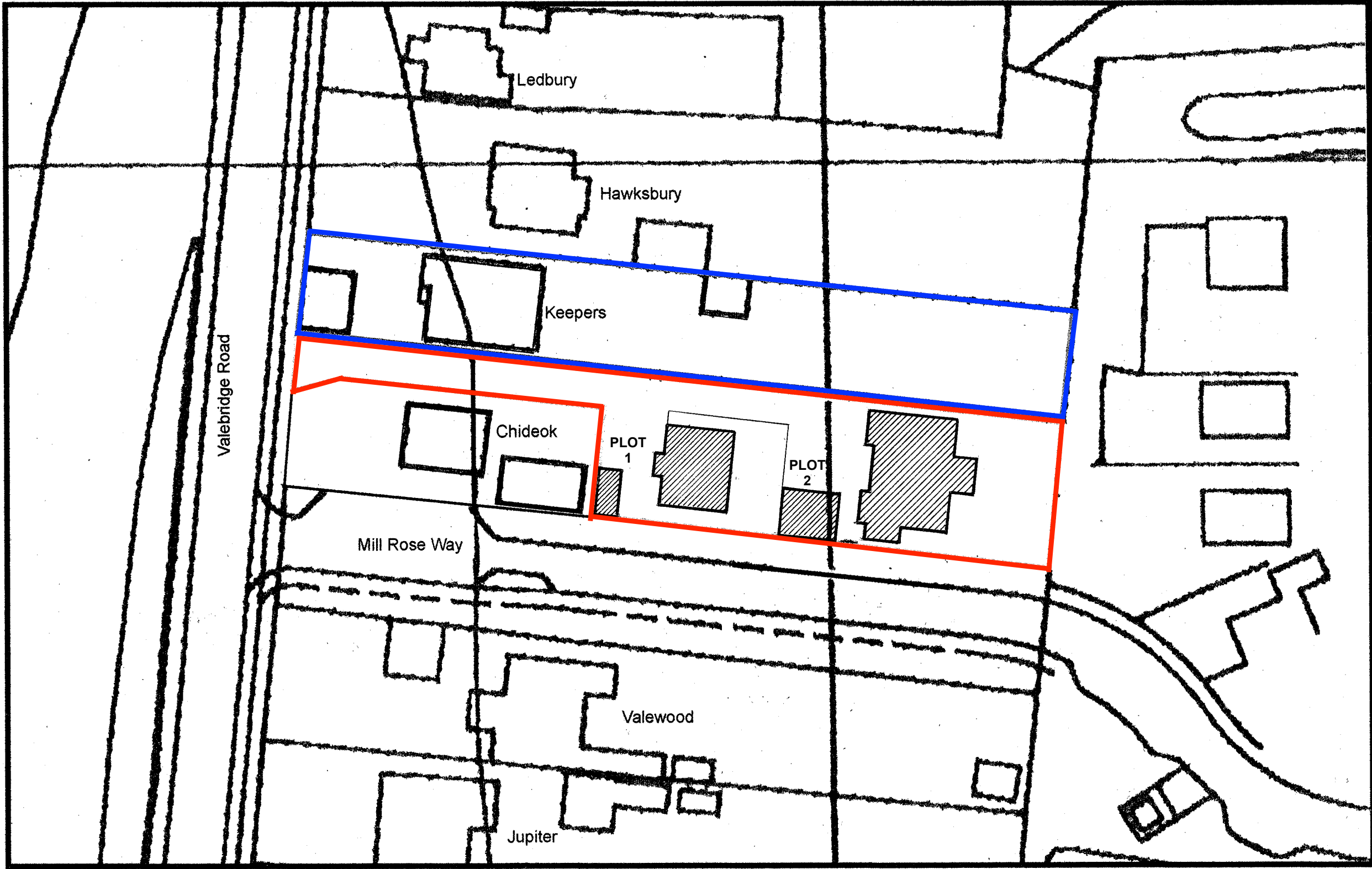


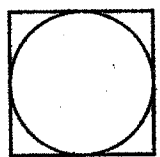
Map Title: SW Print

The information provided is believed to be correct but is provided on an 'as is' basis and without any warranty or condition express or implied, statutory or otherwise as to its quality or fitness for purpose. Actual positions of assets should always be determined on site.



Appendix B - Proposed Drawings





Client: Paul Holland

Project: Residential Development

Location: Land to the rear of Chideok, Valebridge Road, Burgess Hill. RH15 0RT

Drawing Title: Block Plan

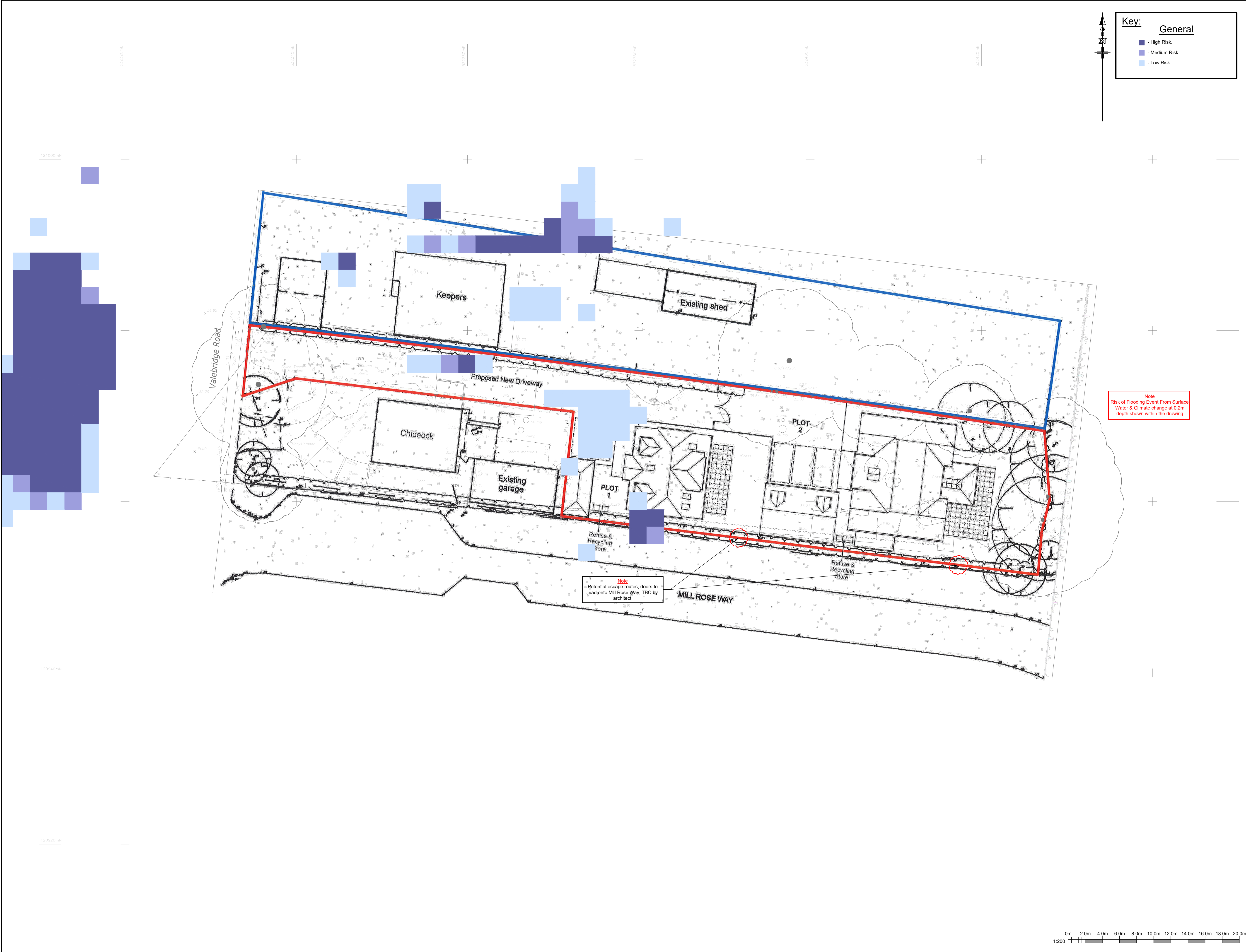
Drawing No: 2025-03-P-002

Scale: 1:500 @ A3

Date: 20/02/2025

Paper Size: A3

Rev:



Key:General

- High Risk.

- Medium Risk.

- Low Risk.

NOTES

1. Do not scale this drawing unless for Planning Permission purposes only.
2. This drawing is to be read in conjunction with all other relevant Engineer's and Architect's drawings and specifications.

Drawings References:

Drawing:	Drawing no:	Rev:	Date:
Topo	23068 1.01	-	10/10/23
Proposed Site	2025-03-P-004	A	19/02/25

RISK ASSESSMENT

Residual Risks Identified

1. TBC

Contractor's General Risk Items

(List is not exhaustive but includes commonly raised issues)

1. Location of all buried services.
2. Existing drainage:

i) Gases, confined spaces, diseases.

ii) Maintain flow in drains during works.
3. Manual lifting of heavy objects; manhole covers, drainage pipes, concrete rings, kerbs,etc.
4. Excavation for drainage trenches and manholes.
5. Security:

Keep site secure from members of the public.

maintain public safety when accessing site.

P01	11/06/26	DR	JH	Preliminary issue
Rev	Date	By	Chkd	Revision notes

Job Title

RO Chideok,
Valebridge Road,
Burgess Hill,
RH15 0RT.

Drawing Title

Sketch with Flood Maps

Client

Paul Holland

HODEL

CONSULTING
ENGINEERS

01732 617555

mail@hodel.uk

Scale at A1: 1:200	Status: PRELIMINARY	
Drawn: DR	Checked: JH	Approved: -
Date: June '26	Date: June '26	Date: xxx

Document Reference:	Revision:
26005-HOD-XX-ZZ-DR-C-5700	P01

Key:

1000, 1.80

S1

1000, 1.80

F1

Surface water drain.

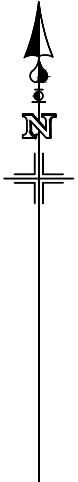
Surface water chamber.

Foul water drain.

Foul water chamber.

(Dashed Red line denotes main channel).

(Dashed Red line denotes main channel).



NOTES

- Do not scale this drawing unless for Planning Permission purposes only.
- This drawing is to be read in conjunction with all other relevant Engineer's and Architect's drawings and specifications.

Drawings References:

Drawing:	Drawing no:	Rev:	Date:
Topo	23068 1.01	-	10/10/23
Proposed Site	2025-03-P-004	A	19/02/25

RISK ASSESSMENT

Residual Risks Identified

- ????????

Contractor's General Risk Items

(List is not exhaustive but includes commonly raised issues)

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- Manual lifting of heavy objects; manhole covers, drainage pipes, concrete rings, kerbs etc.
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 - maintain public safety when accessing site.

P01	08/06/26	DR	JH	Preliminary issue
Rev	Date	By	Chkd	Revision notes

Job Title
RO Chideok,
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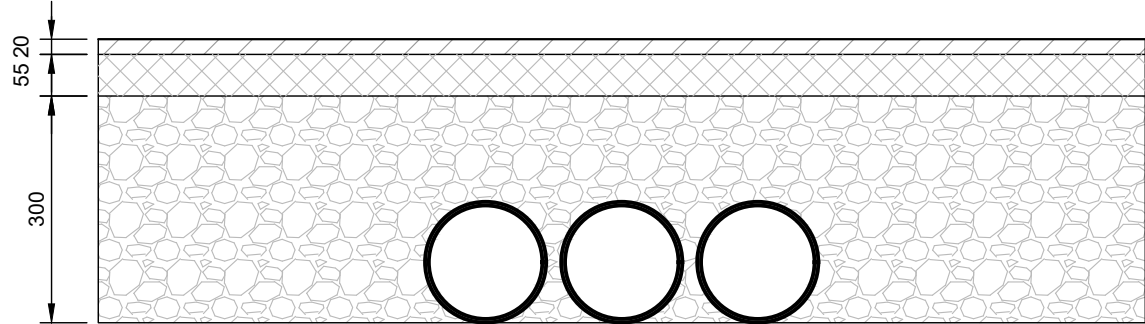
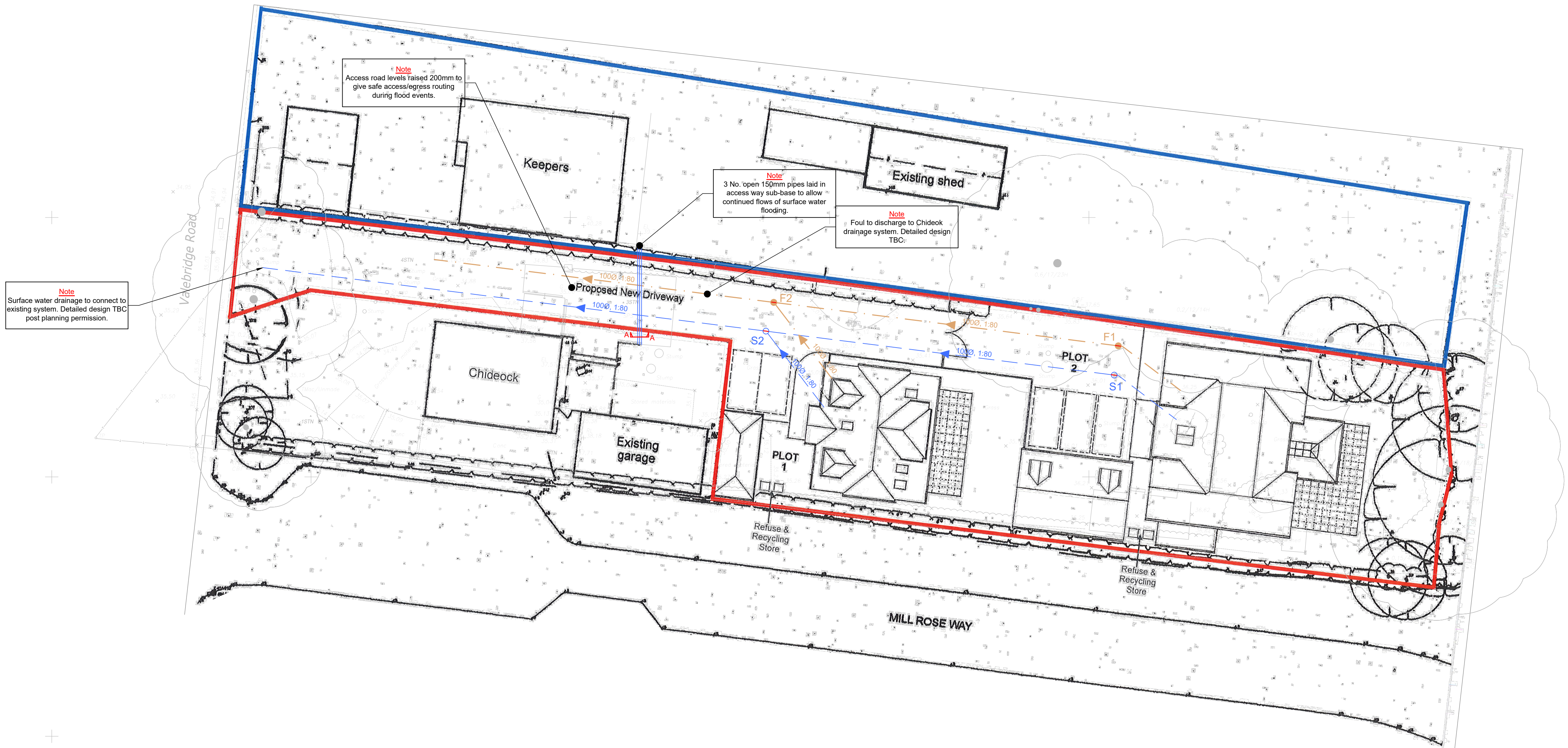
Drawing Title
Engineering Layout

Client
Paul Holland

01732 617555
mail@hodel.uk

Scale at A1: 1:200	Status: PRELIMINARY	
Drawn: DR	Checked: JH	Approved: -
Date: June '26	Date: June '26	Date: xxx

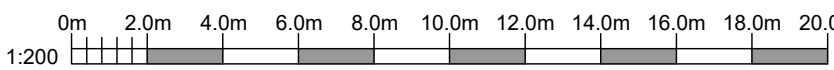
Document Reference:	Revision:
26005-HOD-XX-ZZ-DR-C-5100	P01



Shared Driveway Cross-Section
Section A-A

20mm Dense surface course AC6 dense surf to clause 909 of SHW (100/150 pen).
55mm Dense binder course AC20 dense bin to clause 929 of SHW (40/60 pen).
300mm Sub base type 1 granular material to clause 803 of SHW.

(Scale 1:10)



Appendix C – Topographical Survey

Appendix D – Flood Mapping

Flood map for planning

Your reference
Unspecified

Location (easting/northing)
532381/120970

Created
7 January 2026 11:34

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)
532381/120970

Scale
1:2,500

Created
7 Jan 2026 11:35

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


0 20 40 60m

26005 – RO Chideok Burgess Hill

Risk of Flooding from Surface Water:



Figure 1 - Risk Of Flooding From Surface Water; 0.2m



Figure 2 - Risk Of Flooding From Surface Water; Medium & High Risk Only; 0.2m



Figure 3 - Risk Of Flooding From Surface Water; 0.3m



Figure 4 - Risk Of Flooding From Surface Water; Medium & High Risk Only; 0.3m



Figure 5 - Risk Of Flooding From Surface Water; 0.6m



Figure 6 - Risk Of Flooding From Surface Water; Medium & High Risk Only; 0.6m



Figure 7 - Risk Of Flooding From Surface Water; 0.9m



Figure 8 - Risk Of Flooding From Surface Water; 1.2m

Risk of Flooding from Surface Water + Climate Change:



Figure 9 - Risk Of Flooding From Surface Water & Climate Change; 0.2m



Figure 10 - Risk Of Flooding From Surface Water & Climate Change; Medium & High Risk Only; 0.2m



Figure 11 - Risk Of Flooding From Surface Water & Climate Change; 0.3m



Figure 12 - Risk Of Flooding From Surface Water & Climate Change; Medium & High Risk Only; 0.3m



Figure 13 - Risk Of Flooding From Surface Water & Climate Change; 0.6m



Figure 14 - Risk Of Flooding From Surface Water & Climate Change; Medium & High Risk Only; 0.6m



Figure 15 - Risk Of Flooding From Surface Water & Climate Change; 0.9m



Figure 16 - Risk Of Flooding From Surface Water & Climate Change; 1.2m