



Flood Risk Assessment

Proposed Residential Development at

Land at Bonhams Field, Yapton

On behalf of

Seaward Properties Ltd.

September 2020

Document History and Status

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1 Non Technical Summary

- 1.1 This Flood Risk Assessment has been undertaken in accordance with the National Planning Policy Framework on behalf of Seaward Properties Ltd. in support of a Full Planning Application for the construction of 75 residential dwellings with associated access roads, car parking and landscaping on the land at Bonhams Field, B2233 Main Road, Yapton, West Sussex.
- 1.2 This Assessment is to be read in conjunction with all planning, architectural and other reports that accompany the Full Planning Application for the proposed development.
- 1.3 The site is located in Flood Zone 1.
- 1.4 The proposed development will incorporate a sustainable drainage system which will discharge surface water by infiltration to ground via an infiltration blanket and provide sufficient onsite storage for all storm return periods up to and including the 1:100 year rainfall event with a 40% allowance for climate change.
- 1.5 Foul drainage will be discharged by gravity to the existing public foul sewer located beneath the B2233 Main Road to the southwest of the site.
- 1.6 A suitable maintenance plan will be implemented by the Developer to ensure that maintenance of the foul and surface water drainage systems in shared ownership is passed on to a suitably qualified Management Company appointed by the Developer on behalf of the Residents.
- 1.7 The development will not increase flood risk elsewhere and the proposed development is suitable at this location.

2 Planning Policy Context

2.1 National Planning Policy Framework

2.1.1 The National Planning Policy Framework was updated in February 2019.

2.1.2 With regard to planning and flood risk the policy framework states that :when determining any planning applications, local planning authorities should ensure that flood risk is not increased elsewhere. Where appropriate, applications should be supported by a site-specific flood-risk assessment.

Development should only be allowed in areas at risk of flooding where, in the light of this assessment (and the sequential and exception tests, as applicable) it can be demonstrated that:

- a) within the site, the most vulnerable development is located in areas of lowest flood risk, unless there are overriding reasons to prefer a different location;
- b) the development is appropriately flood resistant and resilient;
- c) it incorporates sustainable drainage systems, unless there is clear evidence that this would be inappropriate;
- d) any residual risk can be safely managed; and
- e) safe access and escape routes are included where appropriate, as part of an agreed emergency plan. ~

2.1.3 With regard to major developments the NPPF states that :major developments should incorporate sustainable drainage systems unless there is clear evidence that this would be inappropriate. The systems used should:

- a) take account of advice from the lead local flood authority;
- b) have appropriate proposed minimum operational standards;
- c) have maintenance arrangements in place to ensure an acceptable standard of operation for the lifetime of the development; and
- d) where possible, provide multifunctional benefits ~

2.1.4 Major development is defined as follows:

:For housing, development where 10 or more homes will be provided, or the site has an area of 0.5 hectares or more. For non-residential development it means additional floorspace of 1,000m² or more, or a site of 1 hectare or more, or as otherwise provided in the Town and Country Planning (Development Management Procedure) (England) Order 2015. ~

2.2 Lead Local Flood Authority

2.2.1 West Sussex County Council became a Lead Local Flood Authority under the Flood and Water Management Act 2010 and was given a series of new responsibilities to coordinate the management of local flood risk.

2.2.2 As part of its role West Sussex County Council has commissioned and produced the following documents:

- ¿ Strategic Flood Risk Assessment - J anuary 2010
- ¿ Preliminary Flood Risk Assessment - May 2011
- ¿ Local Flood Risk Management Strategy - May 2014

2.2.3 In addition to the above documents the West Sussex County Council Policy for the Management of Surface Water was updated in November 2018.

2.2.4 The above documents have been reviewed in the preparation of this report.

2.3 Arun District Council

2.3.1 Arun District Council has commissioned and produced the following documents:

- ¿ Strategic Flood Risk Assessment - February 2008
- ¿ Arun Strategic Surface Water Management Study - October 2016
- ¿ Combined Level 1 and Level 2 Strategic Flood Risk Assessment - November 2016

2.3.2 Arun District Council have collaborated with Chichester District Council to produce a Surface Water Drainage Proposal Checklist dated November 2019 which outlines both councils' expectations and requirements for Surface Water Drainage proposals.

2.3.3 The above documents have been reviewed in the preparation of this report.

2.4 Local Planning Policy

2.4.1 The Arun Local Plan 2011 - 2031 was adopted in J uly 2018.

2.4.2 Policy W SP1 - Water states that :Arun District Council will encourage water efficiency measures in order to protect the District's water resources and enhance the quality of the water environment which supports a range of habitats and ecosystems. Development will be encouraged to make active use of surface water as a design feature and permitted where it identifies measures to improve and enhance waterbodies, coastal habitats or provides additional flood relief.

The Council will also support development that

- ¿ is appropriately located, taking account of flood risk and promotes the incorporation of appropriate mitigation measures into new development, particularly Sustainable Drainage Systems that reduces the creation and flow of surface water and improves water quality;
- ¿ reduces the risk to homes and places of work from flooding whilst increasing biodiversity;
- ¿ delivers a range of community benefits including enhancing the quality of life and providing greater resistance to the impact of climate change.~

2.4.3 Policy W DM1 ~ Water Supply and Quality states:

1. Water supply

Development will be permitted where:

- 1 Sufficient water supplies can be provided prior to occupation to serve the development and;
- 2 Provision of a water supply is not considered detrimental to existing abstractions, river flows, water quality, fisheries, amenity or nature conservation.

To ensure that all new development of two dwellings or more are water efficient and reduce pressure on water abstraction sites, it must include measures that meet the optional standards of 110 l/person/day.

2. Water quality

To ensure good water quality in the District, all major developments must:

- 1 Illustrate, where necessary, how they have contributed to the protection and enhancement of waterbodies identified by the South East River Basin Management Plan objectives; and

Demonstrate, where it will materially increase foul and/or surface water discharges, adequate drainage capacity exists or can be provided as part of the development. Where adequate capacity does not exist, there will be a requirement that facilities are adequately upgraded prior to the completion and occupation of development. In sewered areas, there will be a general presumption against the use of non mains foul water drainage.~

2.4.4 Policy W DM2 ~ Flood Risk states that development in areas at risk from flooding, identified on the latest Environment Agency flood risk maps and the Council's Strategic Flood Risk Assessment (SFRA) will only be permitted where all of the following criteria have been satisfied:

- ¿ The sequential test in accordance with the National Planning Policy Guidance has been met.
- ¿ A site specific Flood Risk Assessment demonstrates that the development will be safe, including access and egress, without increasing flood risk elsewhere and reduce flood risk overall.
- ¿ The sustainability benefits to the wider community are clearly identified.
- ¿ The scheme identifies adaptation and mitigation measures.
- ¿ Appropriate flood warning and evacuation plans are in place; and

New site drainage systems are designed to take account of events which exceed the normal design standard i.e. consideration of flood flow routing and utilising temporary storage areas.

The reports prepared as part of the criteria above must take into account contingency allowances, taking climate change into account as set out in Flood Risk Assessments: climate change allowances section of the NPPG.

In locations where strategic flood defence or resilient and resistant construction measures are necessary within the site itself, proposals will be required to demonstrate how measures have been incorporated as an intrinsic part of the scheme in a manner which is compatible with the latest Strategic Flood Risk Assessment.

All development proposals must take account of relevant Surface Water Management Plans, Catchment Flood Management Plans and related Flood Defence Plans and strategies such as the Lower Tidal River Arun Strategy. The council may require financial contributions from development on sites where measures to address flood risk or to improve the environmental quality of watercourses have been identified by these Plans and Strategies.~

- 2.4.5 Policy W DM3 ~ Sustainable Urban Drainage Systems states that :to increase the levels of water capture and storage and improve water quality, all development must identify opportunities to incorporate a range of Sustainable Urban Drainage Systems (SUDS), appropriate to the size of development, at an early stage of the design process.

Proposals for both major and minor development proposals must incorporate SUDS within the private areas of the development in order to provide source control features to the overall SUDS design. These features include:

- ¿ Green roofs

- ¿ Permeable driveways and parking
- ¿ Soakaways
- ¿ Water harvesting and storage features including water butts.

Proposals for major development must also integrate SUDS within public open spaces and roads, reflecting discussion with the appropriate bodies. SUDS must therefore be integrated into the overall design of a development and must:

- ¿ Contribute positively to the appearance of the area, integrating access to allow maintenance of existing watercourses and the system.
- ¿ Effectively manage water (including its quality)
- ¿ Accommodate and enhance biodiversity by making connections to existing Green Infrastructure assets and
- ¿ Provide amenity for local residents (ensuring a safe environment)
- ¿ Retain the existing drainage network of the site and the wider area,
- ¿ Be maintained in perpetuity, supported through a Maintenance and Management Plan/Regime, including its financing, agreed with the Local Planning Authority.

In order to ensure that SUDS discharge water from the development at the same or lesser rate, as prior to construction, developers must:

- ¿ Follow the hierarchy of preference for different types of surface water drainage disposal systems as set out in Approved Document H of the Building Regulations and the SUDS manual produced by CIRIA.
- ¿ Undertake up to six months groundwater monitoring within the winter period.
- ¿ Undertake winter percolation testing in accordance with BRE 365.
- ¿ The proposed drainage system must be designed to ensure that there is no flooding on a 1 in 30 year storm event.
- ¿ The design must also take account of the 1 in 100 year storm event plus 30% allowance for climate change, on stored volumes, to ensure that there is no flooding of properties or the public highway or inundation of the foul sewerage system. Any excess flows must be contained within the site boundary, and within designated storage areas.

2.4.6 Policy ECC SP1 - Adapting to climate change states that the Council will support development which is located and appropriately designed to adapt to impacts arising from climate change such as the increased probability of tidal and

fluvial flooding; water stress; health impacts as a result of extreme temperatures and a decline in the quality of habitats and richness of biodiversity.

In order to achieve this, development must be designed to take account of the following issues:

- ¿ Location (in relation to flood risk and vulnerability to coastal erosion);
- ¿ Water efficiency;
- ¿ Shade, cooling, ventilation, solar gain;
- ¿ Connectivity to the green infrastructure network;
- ¿ Layout and massing;
- ¿ Resilience of buildings and building materials to extreme weather events; and
- ¿ Capacity of drainage systems and incorporation of Sustainable urban Drainage Systems (SuDS)~

3 Existing Site

3.1 Site Location

- 3.1.1 The development site is located on the northeast side of the B2233 Main Road, Yapton, West Sussex at Ordnance Survey reference SU 975 034. The nearest postcode is BN18 0DX.



Image 1: Site Location

- 3.1.2 The site is bounded to the north by agricultural farmland, the east and southwest by existing residential dwellings and the southern boundary by the B2233 Main Road.
- 3.1.3 A copy of the site location plan is located in Appendix 1 at the rear of this report.
- #### 3.2 Site Description
- 3.2.1 The site is approximately 3.2ha in area and currently comprises undeveloped agricultural land.
- 3.2.2 Existing ground levels generally ranging between 6.5m and 6m AOD falling at the southwest site boundary to approximately 4.5m AOD at its boundary with the B2233 Main Road.
- 3.2.3 There are no public sewers crossing the site and Southern Water's sewer records do not identify any surface water sewers in the immediate vicinity.
- 3.2.4 A copy of the existing site layout plan is located in Appendix 2 at the rear of this report.

- 3.3.1 The site currently has no positive surface water or foul water drainage infrastructure.
- 3.3.2 Rainfall on the site currently discharges in part to ground and in part overland as greenfield runoff.
- 3.3.3 There are no watercourses adjoining the site boundaries.
- 3.3.4 The existing greenfield runoff rate has been established using the HR Wallingford tool for Greenfield runoff estimation.

Image 2: Greenfield Runoff Calculation

3.3.5 The pre-developed greenfield runoff rates are as follows:

¿ Q_{bar}	1.95 l/s/ha
¿ 1:100 year	6.21 l/s/ha

3.3.6 There are no public surface water sewers located within the vicinity of the site.

3.3.7 There are public foul water sewers located beneath the B2233 Main Road to the southwest of the site

3.3.8 A copy of the sewer records is located in Appendix 3 at rear of this report

3.4 Geology and Groundwater

3.4.1 British Geological Survey maps and borehole information confirm that the site is within an area underlain by Superficial River Terrace Deposits beneath made ground overlying Lewes Nodular Chalk.

3.4.2 Superficial River Terrace Deposits predominantly comprise slightly gravelly slightly sandy silty clay to a depth of approximately 3.5mbgl.

3.4.3 A site specific Site Investigation was undertaken by Tweedie Evans Consulting in September 2016 with additional investigations in October 2019.

3.4.4 Soakage testing in September 2016 was undertaken to BRE365 and generally recorded favourable soakage rates in the order of 3×10^{-5} m/s.

3.4.5 The worst case infiltration rate recorded in the Site Investigation in September 2016 was 9.16×10^{-6} m/s and identified a localised infiltration rate equivalent to 3.65×10^{-6} m/s.

3.4.6 Further site wide testing was completed in October 2019 which confirmed infiltration test results of between 1.1×10^{-6} m/s and 9.31×10^{-6} m/s at a depth of between 1.7mbgl and 3.5mbgl.

3.4.7 Groundwater was encountered at a depth of 3m below ground level during the October 2019 testing. Subsequent monitoring undertaken between October 2019 and March 2020 confirmed groundwater at a maximum level of 0.95m below ground level in the southeast corner of the site.

3.4.8 The online 'Magic Map' available from Defra confirms that the site is located above a major aquifer classified as having an intermediate vulnerability.

3.4.9 Extracts from the site investigation reports are located in Appendix 4 at the rear of this report.

4 Flood Zone and Flood History

4.1 Flood Zone

- 4.1.1 The Environment Agency's online mapping confirms that the site is located in Flood Zone 1 and is not at risk of flooding from rivers or the sea from anything less extreme than a 1:1,000 year flood event.

4.2 Flood History

4.2.1 Environment Agency

- 4.2.1.1 The Environment Agency maps of historic flood incidents identify a short section of the B2233 Main Road 125m west of the site which has historically suffered localised flooding, but they do not identify any historic incidents directly affecting the site or adjacent highway.

4.2.2 West Sussex County Council

- 4.2.2.1 Neither the Strategic Flood Risk Assessment dated January 2010, the Preliminary Flood Risk Assessment dated May 2011, nor the Local Flood Risk Management Strategy dated May 2014 identify any specific flood incidents in the immediate vicinity of the site.

4.2.3 Arun District Council

- 4.2.3.1 The Strategic Flood Risk Assessment dated November 2016 identifies no historic flooding on the site or adjacent section of highway to the south of the site. A short section of the B2233 Main Road 125m west of the site, (as identified by the Environment Agency mapping) has historically suffered localised flooding. Two points attributed to surface water flooding are also identified on the B2132 North End Road, approximately 50m from the site's eastern boundary.
- 4.2.3.2 There are no records of any flood incidents directly affecting the site.
- 4.2.3.3 Copies of the available flood maps are located in Appendix 5 at the rear of this report.

5 Flooding Potential

5.1 Tidal Flooding

- 5.1.1 The site is located 2km from the tidal estuary of the River Arun and is defended against tidal flooding.

5.2 Fluvial Flooding

- 5.2.1 The area of the proposed site is within Flood Zone 1 and is not at risk of fluvial flooding from anything less extreme than a 1:1,000 year flood event.

5.3 Groundwater Flooding

- 5.3.1 Groundwater monitoring undertaken between October 2019 and March 2020 confirmed groundwater at a maximum level of 0.95m below ground level in the southeast corner of the site.
- 5.3.2 The flood mapping contained within Arun District Council's latest Strategic Flood Risk Assessment dated November 2016 identifies the site as being within an area of 1 square kilometre where the geology is such that ground water might emerge within 25-50% of that area. No indication of likelihood is given.
- 5.3.3 There are no records identified within West Sussex County Council's Strategic Flood Risk Assessment, Preliminary Flood Risk Assessment or Local Flood Risk Management Strategy nor in Arun District Council's Strategic Flood Risk Assessments (2006 and 2016 update) or Strategic Surface Water Management Study of groundwater flooding affecting the site.

5.4 Overland Flow

- 5.4.1 The Environment Agency maps identify the southeast boundary of the site to be at low risk of flooding from overland surface water with the remainder of the site at very low risk.
- 5.4.2 The flood mapping contained within the various flood documents produced by West Sussex County Council and Arun District Council do not identify any associated history of flooding and the risk is identified as low.

5.5 Flood Routing

5.5.1 The natural route for flood waters to dissipate, should any event occur on the site, is towards the B2233 Main Road to the southern boundary heading southwest away from the site.

5.5.2 There is no associated flood risk to the downstream catchment area.

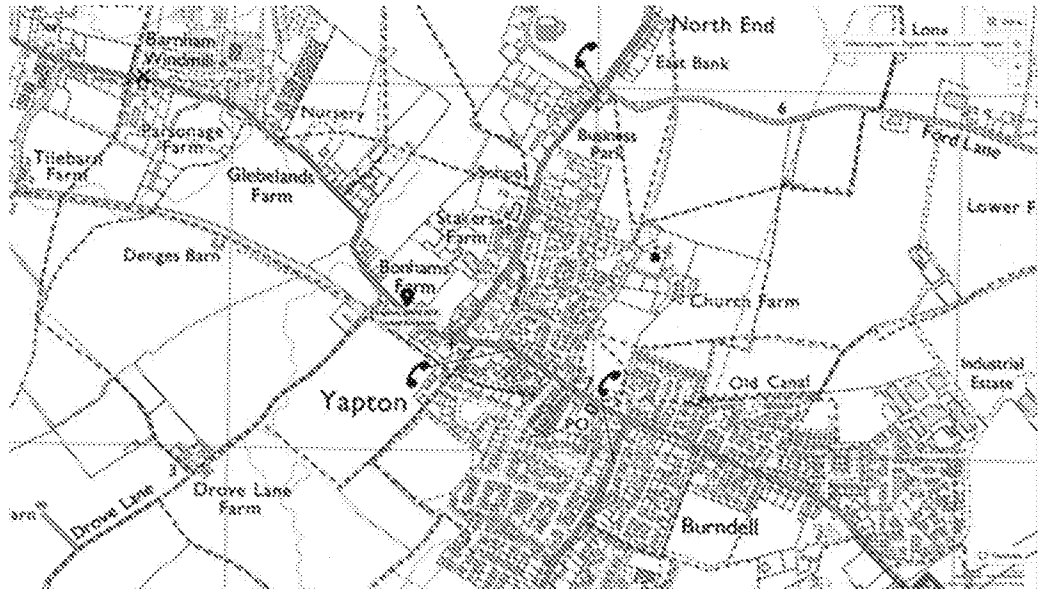


Image 3: Local Topography

6 Development Proposals

6.1 Description

6.1.1 The construction of 75 residential dwellings with associated access roads, car parking and landscaping.

6.2 Impermeable areas

6.2.1 The impermeable areas of the various elements of the development are summarised as follows:

¿ Roof areas	5,600m ²
¿ Access Road and Parking Areas	8,300m ²

6.2.2 A copy of the proposed site layout plan together with an impermeable areas plan is located in Appendix 6 at the rear of this report.

6.3 Surface Water Drainage

6.3.1 CIRIA report C753 The SuDS Manual-v6 provides guidance on surface water drainage. The aim for surface water runoff is to match greenfield runoff rates and volumes where reasonably achievable.

6.3.2 For surface water discharge, the drainage hierarchy notes the following list of drainage options in order of preference:

- 1 Infiltration to ground
- 2 Discharge to a watercourse
- 3 Discharge to a surface water sewer
- 4 Discharge to a foul water sewer

6.3.3 The proposed surface water drainage strategy will be based on infiltration to ground with sufficient storage provided to accommodate a 1:100 year storm event with an additional 40% to account for the predicted effects of future climate change.

6.3.4 All surface water runoff from the roofs, private access roads, driveways and parking areas will be discharged via rainwater diffusers units into voided subbase infiltration blankets located beneath the onsite roads and driveways.

6.3.5 Preliminary calculations have been prepared using existing infiltration test data to demonstrate that surface water drainage can be adequately accommodated within the site without any increased flood risk elsewhere. Further testing is planned during Winter 2020/21 to inform the final detailed design.

6.3.6 The drainage has initially been separated into eight catchments. The lowest recorded site infiltration rate of $1.1 \times 10^{-6} \text{m/s}$ has been used in the design. Location specific testing will be used in the final detailed design.

6.3.7 Surface water storage requirements for each catchment is as follows:

Catchment	Total Impermeable Area	Total Area of Permeable Highway	Subbase Thickness Required for Storage of 1:100 Plus 40% Climate Change Storm Event	Storage Required for 1:100 Plus 40% Climate Change Storm Event	Storage provide with minimum 450mm of voided subbase
A	102m ²	102m ²	235mm	7.2mE	13.8mE
B	303m ²	166m ²	422mm	21.5mE	22.4mE
C	510m ²	319m ²	370mm	36.5mE	43.1mE
D	4,730m ²	2,773m ²	405mm	337.0mE	375.0mE
E	2,310m ²	1,854m ²	307mm	171.0mE	250.3mE
F	2,328m ²	1,200m ²	470mm	169.0mE	162mE
G	1,485m ²	869m ²	250mm	58.4mE	117.3mE
H	1,936m ²	1,008m ²	395mm	117.2mE	136.1mE

Table 1: Surface Water Storage Requirements

6.3.8 Assumed CBR values of 2%-5% require a minimum voided subbase thickness of 450mm is to be provided beneath all parking areas, access roads and driveways accept where additional depth is required for surface water storage. Catchment F will have a deeper voided subbase to ensure sufficient surface water attenuation is achieved.

6.3.9 The initial design identifies a maximum depth of construction of the formation level for the permeable paving as 800mm below existing ground levels. The winter groundwater monitoring confirms that an unsaturated zone can be maintained between the voided subbase and the maximum recorded groundwater level.

6.3.10 The drainage proposals will be confirmed prior to the final detailed design with further site investigations planned during Winter 2020/21.

6.3.11 Should the discharging of surface water using infiltration to ground become unviable then an alternative means of discharge is proposed in accordance with the drainage hierarchy.

6.3.12 All surface water from the site would be discharged to the public foul sewer located beneath B2233 Main Road as there are no ordinary watercourses adjacent to the site and no or surface water sewers within the vicinity of the site.

6.3.13 Surface water storage would be provided using a lined voided subbase beneath highways, driveways and footways.

6.3.14 Initial calculations indicate that a discharge rate of 3.6l/s would be capable of achieving half drain time of less than 24 hours for a 1:30 year event.

6.3.15 To accommodate a 1:100 year storm event with an additional 40% to account for the predicted effects of future climate change at a restricted rate of 3.6l/s an average minimum subbase thickness of 460mm providing 1,148mE of storage is required.

6.4 Foul Water Drainage

6.4.1 The anticipated peak foul water discharge from the site is 3.45l/s in accordance with Sewers for Adoption requirements.

6.4.2 Foul drainage will be discharged to the existing public foul sewer located beneath the B2233 Main Road to the south of the site.

6.4.3 A copy of the drainage strategy plans together with copies of the calculations and a plan showing exceedance event flow routes is located in Appendix 7 at the rear of this report.

6.4.4 A completed copy of Arun District Council's Surface Water Drainage Proposal Checklist together with supporting calculations is located in Appendix 8 at the rear of this report.

6.5 Water Quality

6.5.1 The proposed development is for residential use. In accordance with CIRIA SuDS Manual 2015 (Report C753), the pollution hazard level for this type of development is between very low and low.

6.5.2 The surface water scheme will include mitigation to ensure that surface water is suitably treated and any pollution risk adequately managed prior to discharge.

6.5.3 Table 26.2 in Chapter 26 of CIRIA report C753 The SuDS Manual provides Pollution Hazard Indices for varying land types. Those of relevance to the development proposals are as follows:

Land Use	Pollution hazard level	Total suspended solids (TSS)	Metals	Hydro-carbons
Residential roofs	Very Low	0.2	0.2	0.05
Individual property driveways, residential car park, low-traffic roads (<300 movements a day)	Low	0.5	0.4	0.4
All roads except low traffic roads, trunk roads and motorways	Medium	0.7	0.6	0.7

Table 2: Pollution Hazard Indices

6.5.4 Table 26.3 in Chapter 26 of CIRIA report C753 The SuDS Manual provides Mitigation Indices for various types of SuDS components. Those of relevance to the development proposals are as follows:

SuDS Type	Total suspended solids (TSS)	Metals	Hydro-carbons
Permeable pavement	0.7	0.6	0.7

Table 3: Pollution Mitigation Indices

6.5.5 The proposed use of permeable paving will meet the target treatment level required for runoff with very low to medium level of pollution hazard thus demonstrating that the surface water drainage system for the site can be designed to adequately mitigate against the risk of pollution.

6.5.6 A drainage maintenance schedule is located in Appendix 9 at the rear of this report.

7 Safe Development

7.1 Flood Zone Compatibility

7.1.1 The site and its wider area are in Flood Zone 1 and will remain so for the foreseeable future.

7.1.2 With reference to the Government Guidance on Flood Risk and Coastal Change at <https://www.gov.uk/guidance/flood-risk-and-coastal-change>:

¿ Table 2: Flood Risk Vulnerability Classification

The type of commercial element of the development proposed is classified as less vulnerable and the residential element as More Vulnerable

¿ Table 3: Flood Risk Vulnerability and Flood Zone Compatibility

More Vulnerable development is appropriate in Flood Zones 1

7.2 Risk to Others

7.2.1 The proposed surface water drainage system will be designed to current standards incorporating SuDS elements providing treatment, attenuation and storage which will minimise runoff leaving the site during times of heavy rain.

7.2.2 Allowance has been made for a 40% increase in rainfall intensities which accords with the latest figures published by the Environment Agency and in accordance with the requirements under the National Planning Policy Framework.

7.2.3 The proposed drainage system will incorporate sufficient treatment prior to final discharge thus mitigating the risk of pollution from the site.

7.2.4 The risk of surface water flooding to others due to the development proposals is reduced and the resultant risk is negligible.

7.2.5 Sewerage undertakers have an obligation to upgrade the existing networks if a connection to an equivalent or larger sized public sewer is technically achievable.

7.2.6 The residual risk of sewer flooding from this development for the foreseeable future is therefore negligible.

8 Conclusions

- 8.1 The site is located within Flood Zone 1 and is not at risk from any source of flooding.
- 8.2 There are no historic records of flooding from any source affecting the site or its immediate area.
- 8.3 The geology of the area is currently demonstrated as being suitable to provide an infiltration drainage system. Should infiltration prove unviable an alternative design option is achievable.
- 8.4 Calculations confirm that surface water runoff generated by the proposed development can be discharged to ground via a voided subbase infiltration blanket located beneath the roads and driveways sized with sufficient depth to accommodate a 1:100 year storm event with an additional 40% to account for the predicted effects of future climate change.
- 8.5 Water quality improvement will be provided to mitigate against any risk to any receiving waterbody.
- 8.6 Foul drainage will be discharged by gravity to the existing public foul sewer located beneath the B2233 Yapton Road to the southwest of the site.
- 8.7 The development proposals are suitable at this location.

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