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In partnership with:

Canterbury City Council

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Level 2

Strategic Flood Risk

Assessment

September 2022

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Project Reference: 1396

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Level 2 Strategic Flood Risk Assessment Canterbury City Council

Contents Amendment Record

This report has been issued and amended as follows:

Issue	Revision	Description	Date	Written by	Checked by
1	0	First issue sent.	25 August 2022	AB, AW, LS, TV	AW, SMB
2	1	Changes to functional floodplain definition. Second issue sent.	15 September 2022	AW	-

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Background and Summary of Appraisal

Herrington Consulting has been commissioned by Canterbury City Council (CCC) to prepare a Level 2 Strategic Flood Risk Assessment (SFRA) to inform the allocation of sites in the Regulation 19 Proposed Submission version of the Local Plan. According to government guidance, a Level 2 SFRA should:

- apply the Sequential Test by identifying the severity and variation in risk within medium and high flood risk areas;
- establish whether proposed allocations or windfall sites, on which the local plan will rely, are capable of being made safe throughout their lifetime without increasing flood risk elsewhere; and
- apply the Exception Test, where relevant.

Paragraph 162 of the National Planning Policy Framework (NPPF 2021) states that “the aim of the Sequential Test is to steer development to areas with the lowest risk of flooding from any source”. The Level 1 Strategic Flood Risk Assessment has been updated by Herrington Consulting alongside the preparation of the Level 2 assessment and has identified that the main risk of flooding to the district is from tidal, fluvial and pluvial sources.

This report has therefore been prepared to inform the Regulation 19 version of CCC’s emerging Local Plan. As part of Regulation 19, it is necessary to complete the Sequential Test Assessment and Exception Test for the potential site allocations.

CCC has provided details of 61 sites. Out of these sites, 6 sites have been identified to be situated in Flood Zone 1 and at ‘very low’ risk of flooding from surface water. An additional 25 sites have been identified in Flood Zone 1 where less than 10% of the site is shown to be at risk of flooding from surface water. Consequently, it is concluded that these sites can meet the requirements of the Sequential Test and as a result, the Exception Test is not required.

There are 9 sites where more than 10% of the area is shown to be at risk of flooding from surface water. Whilst for 6 of these sites, the surface water risk is shown to be ‘low’ and therefore, it is concluded that the requirements of the Sequential Test can be met, it is recommended that the risk is considered in more detail to ensure that development is safe, in line with the Exception Test. For the remaining 3 sites, a large proportion of the site is also shown to be at ‘medium’ risk of surface water flooding. As such, it is recommended that the requirements of the Exception Test are still considered.

10 of the reviewed sites have been identified as being located within Flood Zones 2 and 3.

Paragraph 163 of the National Planning Policy Framework (NPPF 2021) states that, if “[following the application of the Sequential Test] it is not possible for development to be located in areas with

a lower risk of flooding (taking into account wider sustainable development objectives), the Exception Test may have to be applied”.

Paragraph 164 of the NPPF 2021 further states;

- **Exception Test Part B** – For the Exception Test to be passed it should be demonstrated that *“the development will be safe for its lifetime taking account of the vulnerability of its users without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall.”*

This document applies Part B of the Exception Test to the sites identified as potentially suitable for allocation, which do not pass the Sequential Test. A high-level application of Part B of the Exception Test has been carried out for all sites located within Flood Zone 2 and 3. and for sites where $\geq 10\%$ of the site area is shown to be at risk of flooding from surface water.

This appraisal also provides a high-level analysis of those sites which, whilst currently shown to be at low risk of flooding, could be affected by the impacts of climate change in the future. For completeness, summary tables of all of the sites have been included at the end of this document.

A breakdown of the sites is listed below;

- 31 sites within Flood Zone 1 where $\leq 10\%$ of the site is at risk of surface water flooding,
- 6 sites within Flood Zone 1 where $\geq 10\%$ of the site is at ‘low’ risk of surface water flooding,
- 3 sites within Flood Zone 1 where $\sim 10\%$ of the site is at ‘medium’ risk of surface water flooding
- 0 site in Flood Zone 2,
- 9 sites in Flood Zone 3.

The aim of this appraisal is to support the final allocation of sites within the CCC Local Plan and to inform ‘Part A’ of the Exception Test at a strategic level. The document will also be used to assist developers in undertaking site-specific applications of ‘Part B’ of the Exception Test.

Recommendations are made on the basis of best available information at this time, and it is acknowledged that there is an absence of detailed proposals, or site investigation data. Therefore, the suitability of any proposals is still subject to an appropriate Flood Risk Assessment in the context of the wider planning objectives.

Definition of Assessment Criteria

Assessment Criteria

This section outlines the information and datasets that have been referenced in the process of applying the Exception Test Part B to the individual sites:

CCC ID – Site reference as provided by CCC, consistent with the reference used in the Draft Local Plan.

Policy – Refers to the allocated policy by CCC.

Existing Land Use – States whether the site is currently a brownfield site (i.e. previously developed), or a greenfield site (undeveloped). This information has been provided by CCC. Greenfield sites are classified as sites where it is evident that proposed development will be situated on the undeveloped part of the site.

Proposals – States the proposed land use of the site (i.e. housing, employment or mixed-use). The proposals also provide an indication in terms of the anticipated lifetime of the development. The NPPF and 'Flood and Coastal Change' Planning Practice Guidance states that residential development should be considered for a minimum of 100 years, and that the lifetime of non-residential development depends on the characteristics of that development. A 60 year lifetime is often used as a design threshold for consideration of commercial development in flood risk modelling. Where a mixed-use is proposed, the highest lifetime associated with the development should be considered.

Area – The area of the site in hectares (ha).

Flood Zone Classification – States the percentage of the site within each flood zone based on the Environment Agency's (EA) 'Flood Map for Planning'. The definition of each flood zone is as follows:

Zone 1 – *Low probability of flooding* – This zone is assessed as having less than a 1 in 1000 annual probability of river or sea flooding in any one year.

Zone 2 – *Medium probability of flooding* – This zone comprises land assessed as having between a 1 in 100 and 1 in 1000 annual probability of river flooding, or between 1 in 200 and 1 in 1000 annual probability of sea flooding in any one year.

Zone 3a – *High probability of flooding* - This zone comprises land assessed as having a 1 in 100 or greater annual probability of river flooding, or 1 in 200 or greater annual probability of sea flooding in any one year.

Zone 3b – *The Functional Floodplain* – This zone comprises land where water has to flow or be stored in times of flood and can be defined as land which would flood during an event having

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an annual probability of 1 in 30 or greater. This zone can also represent areas that are designed to flood in an extreme event as part of a flood alleviation or flood storage scheme.

The EA's 'Flood Map for Planning' does not distinguish between Flood Zone 3a and 3b and typically, model data from the EA has to be referenced to identify areas shown to be located within the functional floodplain.

It should be recognised that the model data provided by the EA as part of this assessment has been prepared prior to the latest update to the NPPG. Model results for the 1 in 30 year return period are available for

- East Kent Coast Modelling Study (2018)
- Gorrell Stream Modelling Study (2017)
- Nailbourne Fluvial Mapping Study (2019)

For the following models, modelled data was not available for the 1 in 30 year return period;

- Plenty Brook Modelling Study (2013) – HC Update
- Great Stour Flood Risk Mapping Study (2013) – including 2016 Climate Change
- Isle of Sheppey and Oyster Coast Brooks Flood Risk Mapping Study (2014) - including 2016 Climate Change

Consequently, for the strategic purposes of this assessment, the **1 in 50 year flood event has been referenced to show the likely impact of the functional floodplain**. Where this is the case, the functional floodplain has been labelled 'indicative functional floodplain'. Nevertheless, it should be recognised that this scenario is likely to overestimate the extent of the functional floodplain and therefore, further investigation is recommended as part of a site-specific Flood Risk Assessment, where applicable.

For Whitstable Harbour, the analysis has identified the site to be affected under the 1 in 30 year return period for both fluvial and tidal sources. In this case, Flood Zone 3b shows the sum of percentage of the two sources of flooding. Further analysis as part of a detailed site-specific Flood Risk Assessment is recommended to determine the exact extent of the functional floodplain from all sources.

A site where less than 10% of the boundary is shown to be located within the functional floodplain is not considered to be wholly within Flood Zone 3b. In this situation, it is recommended that the Sequential Approach is applied to these sites and development within the area of the site shown to be located within Flood Zone 3b should be avoided. This is listed as a recommendation within the 'Required Actions / Recommended Mitigation Measures' section within the data tables.

In some cases, main rivers or watercourses run through the development sites. As a result, parts of the site are shown to be situated within the functional floodplain when in reality, the functional floodplain is likely to be confined to the river channel and its banks.

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Susceptible to Climate Change – States whether a site is considered to be at risk of flooding when the impacts of climate change are taken into consideration.

Paragraph 161 of the NPPF 2021 states that “*All plans should apply a sequential, risk-based approach to the location of development – taking into account all sources of flood risk and the current and future impacts of climate change [...]*”.

All fluvial modelled flood level data referenced within this Level 2 assessment (see further below) include an allowance for climate change. However, since these models have been constructed, the EA has updated the climate change allowances for peak river flow and as such, the climate change scenarios within these models are partially out-of-date.

Similarly, the ‘Risk of Flooding from Surface Water’ (RoFSW) maps prepared by the EA do not include an allowance for climate change. The mapping does include a scenario which represents the impacts of an extreme pluvial event with a 1 in 1000 year return period (excluding climate change), and often this ‘low’ likelihood of occurrence event is used to *estimate* the impacts of climate change for lower return period events. However, in some cases these results are likely to *significantly* overestimate the risk of flooding to a site and therefore, caution should be applied when adopting this methodology to appraise the risk of climate change.

As a consequence of these inconsistencies in the data available, it is not possible to apply an accurate allowance for climate change across the district at this time. Therefore, where it has been identified that sites could be affected by flooding when the future impacts of climate change are taken into consideration, they have been flagged as being ‘susceptible to climate change’ and further investigation is recommended as part of a sites-specific flood risk assessment or any future development.

Exception Test Required – This section considers whether the development falls into a category that requires the Exception Test to be undertaken and is based on the flood risk vulnerability and flood zone ‘incompatibility’. The application of the Exception Test has been summarised in Table 2.1 below.

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Flood Risk Vulnerability Classification	Zone 1	Zone 2	Zone 3a	Zone 3b
Essential Infrastructure – Essential transport infrastructure, strategic utility infrastructure, including electricity generating power stations.	✓	✓	e	e
High Vulnerability – Emergency services, basement dwellings, caravans and mobile homes intended for permanent residential use.	✓	e	x	x
More Vulnerable – Hospitals, residential care homes, buildings used for dwelling houses, halls of residence, pubs, hotels, non-residential uses for health services, nurseries and education.	✓	✓	e	x
Less Vulnerable – Shops, offices, restaurants, general industry, agriculture, sewerage treatment plants.	✓	✓	✓	x
Water Compatible Development – Flood control infrastructure, sewerage infrastructure, docks, marinas, ship building, water-based recreation etc.	✓	✓	✓	✓
Key: ✓ Development is appropriate x Development should not be permitted e Exception Test required				

Table 2.1 - Flood risk vulnerability and flood zone incompatibility.

All sites listed in Table 3.1 and Table 3.2 are situated within Flood Zone 1 and therefore, the Exception Test is not required to be applied for any vulnerability classification according to Table 2.1. However, it has been identified that 3 sites located within Flood Zone 1 are at 'medium' risk of surface water flooding. As such, it is recommended that the requirements of the Exception Test are still considered for these sites.

The Broad Oak Reservoir and Country Park (SLAA233) is situated in Flood Zone 2. As the site would be classified as 'water compatible' and 'less vulnerable' development, the Exception Test is not applicable.

The site at Milton Manor Concrete Batching Plant (SLAA153) is partially situated within Flood Zone 3a and classified as 'less vulnerable'. As a result, the Exception Test is not applicable.

The remaining sites identified to be situated in Flood Zones 2 and 3 are as follows;

- Wincheap
- Land to the West of Thornden Wood Road
- Land adjacent to Valley Road
- Milton Manor Concrete Batching Plant

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- Whitstable Harbour
- Bodkin Farm
- Land at Brooklands Farm

For these 7 sites, the following applies;

Development which is classified as 'essential infrastructure' and 'more vulnerable' will be subject to the Exception Test. Development classified as 'highly vulnerable' use should not be permitted. The Exception Test is not required to be applied for development classified as 'water compatible' or 'less vulnerable'.

Parts of the site are shown to be located within the functional floodplain. Any development classified as 'Less Vulnerable', 'More Vulnerable' and 'Highly Vulnerable' uses should not be permitted within the Functional Floodplain (Flood Zone 3b). Development which is classified as 'essential infrastructure' will be subject to the Exception Test. Development that is classified as 'water-compatible' should be designed and constructed to:

- remain operational and safe for users in times of flood;
- result in no net loss of floodplain storage; and
- not impede water flows and not increase flood risk elsewhere.

As stated within the 'Required Actions / Recommended Mitigation Measures', the Sequential Approach should be adopted for these sites to ensure that only appropriate development is situated within the areas identified as the functional floodplain.

Flood History – Based on historic flood records provided by CCC and the EA's 'Historic Flood Outlines' GIS layer, analysis was carried out for each site to identify if there were any recorded flood events from any source, both on site, and within proximity of the site. Where incidents were present, a brief description has been provided.

Watercourses – Identifies any main rivers, ordinary or man-made watercourses near to the site. This analysis is based on the EA's 'Statutory Main River Map', OS mapping and satellite imagery.

Groundwater Protection Zone – Identifies whether the site lies within a Groundwater Protection Zone (GPZ). The zones show the level of risk from contamination to the source. There are three zones, the definition of which is as follows according to the EA;

Inner Zone I – This zone is 50 day travel time of pollutant to source with a 50 metres default minimum radius.

Outer Zone II - This zone is 400 day travel time of pollutant to source. This has a 250 or 500 metres minimum radius around the source depending on the amount of water taken.

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Total Catchment III - This is the area around a supply source within which all the groundwater ends up at the abstraction point. This is the point from where the water is taken. This could extend some distance from the source point.

Geology – The underlying bedrock geology and any overlying superficial deposits have been extracted from mapping provided by the British Geological Society (BGS) and recorded.

Indicative Ground Level (m AODN) – Shows the minimum and maximum land levels across the site, based on 1m aerial height data extracted from The DEFRA Survey Data website. A brief description on how land levels fall is included.

Flood Defences – A summary of the existing defence infrastructure which is based on the CCC SFRA (2019) and the EA's 'Spatial Flood Defence Dataset' (last updated in August 2022). Where available, the Standard of Protection (SoP) as provided by CCC has been listed.

Percentage of site at risk of flooding from tidal sources, fluvial sources and/or surface water

For tidal and fluvial flooding, analysis was undertaken using the following studies to identify the percentage of each site located within the extent of flooding for a range of return period events;

- Great Stour Flood Risk Mapping Study (2013) – including 2016 Climate Change
- Isle of Sheppey and Oyster Coast Brooks Flood Risk Mapping Study (2014) - including 2016 Climate Change
- East Kent Coast Modelling Study (2018)
- Plenty Brook Modelling Study (2013)
- Nailbourne Fluvial Mapping Study (2019)
- Gorrell Stream Modelling Study (2017)

The analysis was carried out for the 'defended' scenarios. The maximum flood level on site was also extracted and is shown in brackets within the table where applicable. It should be recognised that due to the topography of the land, it was not always possible to determine a flood level. In these cases, the range of flood level has been included in 'description of flood mechanism'.

Whilst the climate change allowances presented for sites identified as being at fluvial risk of flooding have since been superseded, a climate change scenario including a 45% increase in peak river flow has been included to indicate the likely impact and sensitivity of applying climate change.

With regard to surface water flooding, the EA's 'Risk of Flooding from Surface Water' maps formed the basis of the analysis. The EA's mapping shows three modelled scenarios; 'low', 'medium' and 'high', and where an area is not shown to flood from surface water, this is classified as 'very low' risk (as described below).

'Very low' risk means that each year this area has less than 0.1% chance of flooding.

'Low' risk means that each year this area has between 0.1% and 1% chance of flooding.

'Medium' risk means that each year this area between 1% and 3.3% chance of flooding.

'High' risk means that each year this area has greater than 3.3% chance of flooding.

The percentage of the site at risk of flooding during each modelled scenario was extracted and recorded in the table of results.

Description of surface water flow paths – Describes any surface water flow path, or identifies areas where surface water could accumulate on site and/or in close proximity to the site during the 'low', 'medium' and/or 'high' risk scenarios.

Description of Flood Mechanism – Provides a description of the flood mechanism on site for a range of return periods. For some sites, it was not considered appropriate to state a maximum flood level due to the sloping topography. As such, a more detailed description of the flood levels has been included in this section for these sites.

Hazard Rating – This section sets out the hazard rating for the main source of flooding and an indicative climate change scenario. As described above, the climate change allowances available within the EA's model files do not represent the current guidance and as such, this section is shown to provide an indication only.

Required Actions / Recommended Mitigation Measures – This section highlights where a Flood Risk Assessment (FRA) and/or Surface Water Management Strategy (SWMS) would be required. In addition, this section summarises the recommendations and mitigation measures which are *likely* to be required following the preparation of a site-specific FRA and/or SMWS.

Tables of Individual Sites

The tables below set out the sites which have been appraised as part of this study. The sites have been listed in four categories, based on the size and associated flood risk;

Table 3.1 Sites in Flood Zone 1 and where less than 10% of the site is shown to be at 'low' risk of flooding from surface water

Table 3.2 Sites in Flood Zone 1 and where more than 10% of the site is shown to be at 'low' risk of flooding from surface water

Table 3.3 Sites located in Flood Zones 2 and/or 3

Tables 3.1 below lists the sites that have been identified as being at 'very low' risk of flooding based on the EA's 'Flood map for Planning' and 'Risk of Flooding from Surface Water' map. As such, these sites are considered to pass the Sequential Test and Exception Test Part B without the requirement for further evidence.

Table 3.2 includes sites where more than 10% of the site area is shown to be at surface water flooding. Whilst these sites do not typically require a FRA to be prepared to demonstrate that the Exception Test Part B can be passed, it may be necessary to appraise the risk in more detail as part of the application process to ensure that any future impact as a result of climate change can be mitigated.

Table 3.3 shows sites which typically require the Exception Test to be applied.

**Table 3.1 - Sites in Flood Zone 1 and < 10% shown
to be at 'low' risk of flooding from
surface water**

Site Address	Area (ha)	CCC ID	No. of Units	Proposals	CCC Policy	1 in 30 year RoFSW (%)	1 in 100 year RoFSW (%)	1 in 1000 year RoFSW (%)	Groundwater Protection Zone	Indicative Ground Level (m AODN)	Description of SW Flooding	Recommendations
37 Kingsdown Park	0.2	SLAA222	7	Housing	W10	0.0	0.0	0.7	The site does not lie within a GPZ.	Land levels vary between 9.6m AODN and 13.9m AODN. The site is relatively flat, with a slight fall towards the south.	The majority of the site is at 'very low' risk of surface water flooding. Only the southeast boundary of the site is shown to be at 'low' risk of flooding from surface water.	The site is less than 1 hectare and not shown to be at risk of flooding according to the EA's 'Flood map for Planning' and 'Risk of Flooding from Surface Water' maps and therefore, a Flood Risk Assessment would not typically be required. The NPPF states that new development should seek opportunities to reduce the causes and impacts of flooding (both onsite and offsite) through the use of green and other infrastructure (e.g. sustainable drainage). This is to minimise the impacts of climate change.
Land fronting Mayton Lane	0.5	SLAA045	8	Housing	R25	0.0	2.9	6.4	The site does not lie within a GPZ.	Land levels vary between 50.3m and 52.3m AODN and fall from southeast to northwest.	The majority of the site is shown to be at 'very low' risk of flooding from surface water. During the 'medium' and 'low' risk scenario, minor flooding is predicted along the northern site boundary with depths predicted to reach approximately 150mm.	
43-45 St George's Place	0.2	SLAA099	50	Mixed-use	C2	0.0	0.6	1.4	The site lies within GPZ III.	Land levels vary between 15.6m AODN and 16.5m AODN. The site is relatively flat.	The majority of the site is at 'very low' risk of surface water flooding. The exception to this is a small area on the eastern and western boundary of the site which are shown to be at 'low' to 'medium' risk of flooding from surface water.	The site is less than 1 hectare and not shown to be at risk of flooding according to the EA's 'Flood map for Planning' and 'Risk of Flooding from Surface Water' maps and therefore, a Flood Risk Assessment would not typically be required.
Former Metric Site	0.2	SLAA013	12	Housing	HB9	0.0	0.0	0.6	The site does not lie within a GPZ.	Land levels vary between 32.0m AODN and 33.6m AODN. The site is relatively flat.	The majority of the site is at 'very low' risk of surface water flooding. Only the southwest corner of the site is shown to be at 'low' risk of flooding from surface water.	
Former Gas Holder Site	0.4	SLAA068	-	Employment	HB7	0.0	0.0	9.2	The site does not lie within a GPZ.	Land levels vary between 6.8m AODN and 8.1m AODN. Land levels are relatively flat, with the eastern part of the site being elevated slightly.	The majority of the site is shown to be at 'very low' risk of flooding from surface water. The exception is a flow path within the adjacent highway which results in part of the northern boundary of the site shown to be at 'low' risk of flooding from surface water.	All major development will require a Surface Water Management Strategy to be produced to show how SuDS will be included to manage surface water runoff from the site. The NPPF states that new development should seek opportunities to reduce the causes and impacts of flooding (both onsite and offsite) through the use of green and other infrastructure (e.g. sustainable drainage). This is to minimise the impacts of climate change.
Land west of Cooting Lane and south of Station Road	0.7	SLAA185	10	Housing	R22	0.0	0.0	0.0	The site is located in GPZ II.	Land levels vary between 36.9m AODN and 41.0m AODN. Land levels are relatively flat.	The entire site is shown to be at 'very low' risk of surface water flooding.	For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary.
Great Pett Farmyard	0.9	SLAA218	13	Housing	R6	0.8	1.9	5.7	The site lies within GPZ III.	Land levels vary between 32.26m and 38.66m AODN and fall from southwest to northeast.	The majority of the site is shown to be at 'very low' risk of flooding from surface water. There is a localised depression just north of the development where surface water is predicted to flood under all three risk scenarios.	
Land at Church Farm	1.0	SLAA202	17	Mixed-use	R27	0.0	0.0	0.0	The site does not lie within a GPZ.	Land levels vary between 32.3m AODN and 33.4m AODN. Land levels are relatively flat.	The entire site is shown to be at 'very low' risk of surface water flooding.	Whilst the site is located in Flood Zone 1, it covers an area greater than 1ha. As a result, an FRA is required which should include an appraisal of the impacts of climate change.
Land at Hersden	1.2	SLAA146	18	Housing	R13	0.0	0.0	1.2	The site does not lie within a GPZ.	Land levels vary between 28.6m AODN and 31.5m AODN. The site is relatively flat with the exception of localised features in the west of the site and along the southern border.	The majority of the site is shown to be at 'very low' risk of flooding from surface water. The exception is two areas of localised surface water accumulation along the western site boundary during the 'low' risk scenario.	All major development will require a Surface Water Management Strategy to be produced to show how SuDS will be included to manage surface water runoff from the site. The NPPF states that new development should seek opportunities to reduce the causes and impacts of flooding (both onsite and offsite) through the use of green and other infrastructure (e.g. sustainable drainage). This is to minimise the impacts of climate change.
Altira	1.6	SLAA226A&SLAA226B	70	Mixed-use (residential parcel)	HB8	0.0	0.0	0.4	The site does not lie within a GPZ.	Land levels vary between 36.6m AODN and 40.2m AODN. The site is relatively flat with the exception of localised features.	The majority of the site is at 'very low' risk of flooding from surface water. Only the southwest boundary of the site and two localised areas along the southern boundary are shown to be at 'low' risk of flooding from surface water.	For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary.

Site Address	Area (ha)	CCC ID	No. of Units	Proposals	CCC Policy	1 in 30 year RoFSW (%)	1 in 100 year RoFSW (%)	1 in 1000 year RoFSW (%)	Groundwater Protection Zone	Indicative Ground Level (m AODN)	Description of SW Flooding	Recommendations
<i>Land to North of Cockerling Farm</i>	1.9	SLAA137B	36	Housing	C9	0.0	0.0	0.0	The majority of the site lies within GPZ II, with the eastern most corner within GPZ I.	Land levels vary between 16.8m AODN and 40.9m AODN. Land levels fall gradually across the site towards the north.	The entire site is shown to be at 'very low' risk of surface water flooding.	<p>Whilst the site is located in Flood Zone 1, it covers an area greater than 1ha. As a result, an FRA is required which should include an appraisal of the impacts of climate change.</p> <p>All major development will require a Surface Water Management Strategy to be produced to show how SuDS will be included to manage surface water runoff from the site. The NPPF states that new development should seek opportunities to reduce the causes and impacts of flooding (both onsite and offsite) through the use of green and other infrastructure (e.g. sustainable drainage). This is to minimise the impacts of climate change.</p> <p>For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary.</p>
<i>Land north of Court Hill</i>	2.0	SLAA145	50	Mixed-use	R16	0.0	0.2	0.3	The majority of the site is not located within a GPZ, although the south-eastern boundary of the site is located within GPZ III.	Land levels vary between 16.7m AODN and 27.1m AODN. Land levels fall towards the southeast.	The majority of the site is shown to be at 'very low' risk of flooding from surface water. The exception is a small area in the south of the site at 'low' to 'medium' risk of surface water flooding.	
<i>Land at Goose Farm, Shalloak Road</i>	2.1	SLAA235	26	Mixed-use	R24	0.0	0.4	2.3	The site does not lie within a GPZ.	Land levels vary between 51.7m AODN and 53.0m AODN. Land levels are relatively flat.	The majority of the site is shown to be at 'very low' risk of flooding from surface water. The exception is a small area at 'low' to 'medium' risk of flooding along the eastern site boundary.	
<i>Land at The Paddocks, Shalloak Road</i>	2.4	SLAA066	50	Housing	R19	0.0	0.1	5.6	The site does not lie within a GPZ.	Land levels vary between 34.8m and 48.2m AODN and fall from north to southeast.	The site is not shown to be affected by flooding under the 'medium' and 'high' risk scenario. During a 'low' risk scenario, some minor flooding is predicted along the eastern site boundary where the drainage ditch is situated. The maximum predicted depth of flooding during this scenario is less than 150mm.	
<i>Land north of Bekesbourne Lane at Hoath Farm</i>	2.5	SLAA266	67	Housing	C14	0.0	0.0	0.6	The site does not lie within a GPZ	Land levels vary between 45.2m AODN and 47.9m AODN. The site is relatively flat.	The majority of the site is at 'very low' risk of surface water flooding. Only the southeast corner of the site is shown to be at 'low' risk of flooding from surface water.	
<i>Hawthorne Corner</i>	2.8	SLAA042	-	Employment	HB6	0.0	0.0	1.0	The site does not lie within a GPZ.	Land levels vary between 28.7m AODN and 33.6m AODN. Land levels gradually fall towards the northeast.	The majority of the site is shown to be at 'very low' risk of flooding from surface water. The exception two area of localised surface water accumulation during the 'low' risk scenario.	
<i>Milton Manor House</i>	4.5	SLAA090	95	Housing	C8	0.0	0.0	0.0	The western half of the site lies within GPZ I, and the eastern half of site site within GPZ II.	Land levels vary between 14.5m AODN and 46.4m AODN. Land levels fall gradually across the site towards the northwest.	The entire site is shown to be at 'very low' risk of surface water flooding.	
<i>Land at Golden Hill</i>	5.5	SLAA172	120	Housing	W7	0.0	0.0	0.0	The site does not lie within a GPZ.	Land levels vary between 40.4m AODN and 51.2m AODN. The site is located on a plateau with land levels falling away towards the edges of the site.	The entire site is shown to be at 'very low' risk of surface water flooding.	
<i>Altira</i>	7.0	SLAA226A&B	-	Mixed-use (employment parcel)	HB8	0.2	0.4	2.6	The site does not lie within a GPZ.	Land levels vary between 33.4m AODN and 42.0m AODN. Land levels gradually fall towards the north. There are localised elevated features in the eastern part of the site.	The majority of the site is shown to be at 'very low' risk of flooding from surface water. The exception is localised surface water accumulation in areas of the northern part of the site during the 'low', 'medium' and 'high' risk scenarios.	

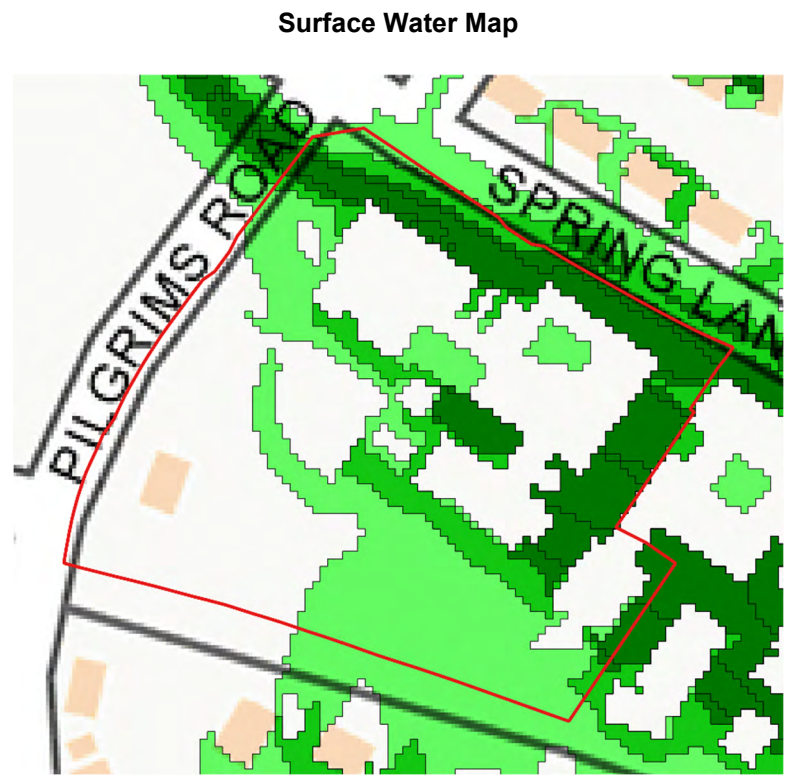
Site Address	Area (ha)	CCC ID	No. of Units	Proposals	CCC Policy	1 in 30 year RoFSW (%)	1 in 100 year RoFSW (%)	1 in 1000 year RoFSW (%)	Groundwater Protection Zone	Indicative Ground Level (m AODN)	Description of SW Flooding	Recommendations
<i>Bread and Cheese Field</i>	7.5	SLAA163	150	Mixed-use	R12	0.0	0.0	0.1	The majority of the site is located within GPZ II.	Land levels vary between 20.1m AODN and 37.2m AODN. Land levels are relatively flat across the majority of the site but fall away towards the south in the southeast corner.	The majority of the site is shown to be at 'very low' risk of flooding from surface water. The exception is one area of localised surface water accumulation onsite during the 'low' risk scenario.	Whilst the site is located in Flood Zone 1, it covers an area greater than 1ha. As a result, an FRA is required which should include an appraisal of the impacts of climate change. All major development will require a Surface Water Management Strategy to be produced to show how SuDS will be included to manage surface water runoff from the site. The NPPF states that new development should seek opportunities to reduce the causes and impacts of flooding (both onsite and offsite) through the use of green and other infrastructure (e.g. sustainable drainage). This is to minimise the impacts of climate change. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary.
<i>Canterbury Golf Club</i>	7.6	SLAA183	74	Mixed-use	C15	0.0	0.0	0.7	The site does not lie within a GPZ.	Land levels vary between 43.1m AODN and 50.4m AODN. Land levels are relatively flat across the majority of the site but fall away towards the east along the eastern border and in the southern part of the site.	The majority of the site is shown to be at 'very low' risk of flooding from surface water. The exception is a narrow flow path in the northwest corner of the site, and southeast corner of the site during the 'low' risk scenario.	
<i>Land North of Popes Lane</i>	9.3	SLAA011	110	Housing	R18	0.0	0.1	2.4	The site does not lie within a GPZ.	Land levels vary between 45.2m AODN and 49.8m AODN. The site is relatively flat.	The majority of the site is shown to be at 'very low' risk of flooding from surface water. During the 'low' and 'medium' risk scenarios there are localised areas of accumulation along the southern boundary of the site, in addition to further localised accumulation on the northern boundary during the 'low' risk scenario.	
<i>Land to the West of Rattington Street</i>	10.3	SLAA110	170	Mixed-use	R8	0.0	0.0	1.7	The northwest part of the site lies within GPZ I, with the central and southeast part of the site within GPZ II.	Land levels vary between 27.3m AODN and 62.9m AODN. Land levels fall across the site towards the north.	The majority of the site is shown to be at 'very low' risk of flooding from surface water. There are three areas of localised surface water accumulation during the 'low' risk scenario.	
<i>Land South of Thanet Way</i>	14.0	SLAA132	270	Mixed-use	W6	0.4	0.5	0.8	The site does not lie within a GPZ.	Land levels vary between 37.3m AODN and 54.1m AODN. The site is located on a plateau with land levels falling away towards the edges of the site.	The majority of the site is at 'very low' risk of surface water flooding. Only the southernmost corner of the site and northern most corner of the site are shown to be at 'low' risk of flooding from surface water.	
<i>The Hill, Littlebourne</i>	16.0	SLAA098	300	Mixed-use	R15	0.4	0.6	2.4	The east and southeast part of the site is located within GPZ III.	Land levels vary between 17.5m AODN and 34.1m AODN. Land levels fall across the site towards the east.	The majority of the site is shown to be at 'very low' risk of flooding from surface water. The exception is a surface water flow path flowing through the centre of the site and along the eastern site boundary during the 'low', 'medium' and 'high' risk scenarios.	
<i>Land at Canterbury Business Park</i>	22.4	SLAA155	-	Employment	C21	0.0	0.0	0.0	The site does not lie within a GPZ.	Land levels vary between 56.9m AODN and 78.4m AODN. Land levels gradually fall across the site towards the northeast.	The majority of the site is shown to be at 'very low' risk of flooding from surface water. Only a small area along the east boundary is at 'low' to 'medium' risk.	
<i>Land to the North of Hollow Lane</i>	40.9	SLAA259	735	Mixed-use	C7	0.4	0.5	1.5	The majority of the site lies within GPZ II, with the northern most part of the site within GPZ I.	Land levels vary between 36.5m AODN and 68.9m AODN. Land levels generally fall towards the north.	The majority of the site is at 'very low' risk of surface water flooding. During the 'high' to 'low' scenarios there is a narrow flow path along the northeast boundary of the site. During the 'low' risk scenario there is a separate, small flow path through the centre of the site.	

Site Address	Area (ha)	CCC ID	No. of Units	Proposals	CCC Policy	1 in 30 year RoFSW (%)	1 in 100 year RoFSW (%)	1 in 1000 year RoFSW (%)	Groundwater Protection Zone	Indicative Ground Level (m AODN)	Description of SW Flooding	Recommendations
<i>Aylesham South</i>	66.7	SLAA180	420	Housing	R20	0.0	0.5	3.1	The majority of the site is located in GPZ II, with a small part of the southern area of the site located in GPZ III.	Land levels vary between 65.2m AODN and 102.1m AODN. Land levels fall across the site towards the northeast. There are two distinct valleys within the site.	The majority of the site is at 'very low' risk of surface water flooding. During the 'high' and 'medium' risk scenarios there is localised surface water accumulation in the centre of the site. During the 'medium' and 'low' risk scenarios, there is also a flow path along the eastern border of the site and during the 'low' risk scenario there is a further surface water flow path through the centre of the site.	Whilst the site is located in Flood Zone 1, it covers an area greater than 1ha. As a result, an FRA is required which should include an appraisal of the impacts of climate change. All major development will require a Surface Water Management Strategy to be produced to show how SuDS will be included to manage surface water runoff from the site. The NPPF states that new development should seek opportunities to reduce the causes and impacts of flooding (both onsite and offsite) through the use of green and other infrastructure (e.g. sustainable drainage). This is to minimise the impacts of climate change. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary.
<i>Land South of Littlebourne Road</i>	77.3	SLAA122	1400	Mixed-use	C12	3.4	4.5	7.6	The site does not lie within a GPZ.	Land levels vary between 21.9m AODN and 50.6m AODN and fall towards the east with a localised depression with the north-western corner of the site.	The vast majority of the site is shown to be at 'very low' risk of flooding from surface water. There is a localised depression within the north-western corner of the site where surface water is shown to pond. In addition, there is a surface water flow path which follows the course of the existing drainage ditch on site and therefore, is attributed to flooding from the drainage ditch itself.	
<i>Land at Merton Park</i>	99.7	SLAA151	2075	Mixed-use	C6	0.3	1.4	4.9	The majority of the site lies within GPZ II with the eastern boundary located within GPZ III and a small area to the west located within GPZ I.	Land levels vary between 20.9m AODN and 60.4m AODN and fall from southeast to northwest towards the centre of the site.	The vast majority of the site is shown to be at 'very low' risk of surface water flooding. There is a flow path across the site which is situated within the valley which runs across the site in a north-westerly direction. In addition, there is a flow path across the southern half of the development site during a 'low' risk scenario.	
<i>Land at Cooting Farm</i>	172.9	SLAA267, SLAA268, SLAA262	3200	Mixed use	R1	0.0	0.1	1.6	The entire site lies within GPZ II.	Land levels vary between 35.6m AODN and 100.8m AODN. Land levels reduce across the site towards the north.	The majority of the site is shown to be at 'very low' risk of flooding from surface water. During the 'low' risk scenario, there is a narrow flow path through the centre of the site, as well as some localised surface water accumulation. There is also a surface water flow path present along the west boundary of the site during the 'low' and 'medium' risk scenarios.	

Table 3.2 - Sites in Flood Zone 1 and $\geq 10\%$ shown to be at 'low' risk of flooding from surface water

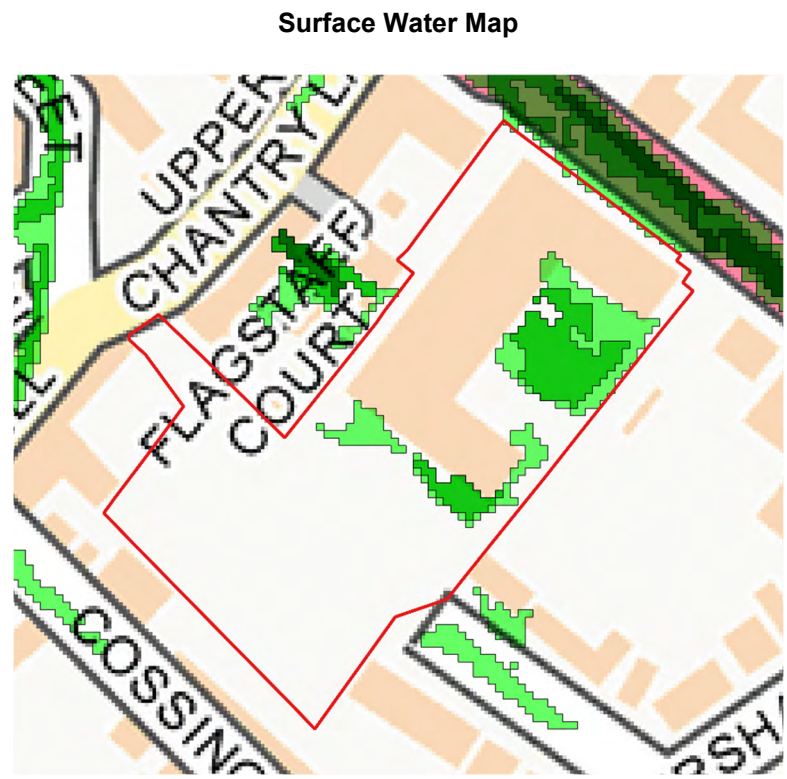
Land at the Former Chaucer Technology School

CCC ID: SLAA102		Policy: C19
Proposals: Housing		No of Units: 70
Existing Land Use: Brownfield		Area: 1.7ha
Flood Zone Classification based on the EA's 'Flood Map for Planning'		Flood Zone 1 100%
Percentage of site at risk of flooding from surface water based on the EA's 'Risk of Flooding from Surface Water' Map	'High' risk scenario	16.0%
	'Medium' risk scenario	24.2%
	'Low' risk scenario	49.1%
Description of Surface Water Flooding (EA's RoFSW Maps)	During all three scenarios, there is a flow path which runs along the northern boundary from east to west. In addition, there is localised surface water flooding across the site under all three risk scenarios.	
Susceptible to Climate Change	Yes	
Flood History	There are no recorded flood incidents on site or in close proximity to the site.	
Main Rivers:	There are no watercourses within close proximity to the site.	
Groundwater Protection Zone	The site lies within GPZ III.	
Geology	Bedrock: Margate Chalk Member (chalk) Superficial: Head (clay and silt)	
Indicative Ground Level (m AODN)	Land levels vary between 23.4m and 29.32m AODN and fall from south to north.	
Required Actions / Recommended Mitigation Measures	<p>The site covers an area greater than 1ha and is shown to be at risk of flooding from surface water. As a result, an FRA, including a comprehensive investigation into surface water flood risk, is required.</p> <p>SuDS should be considered to be included within the development where possible, in accordance with the NPPF and its planning practice guidance. All major development will require a SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site.</p> <p>For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary.</p> <p>The Sequential Approach should be applied to the layout of the site by locating the most vulnerable elements in the lowest risk areas. The Sequential Approach should also be applied to the internal layout of buildings, in particular where floor levels cannot be raised.</p> <p>Floor levels should be raised above the depth of flooding from surface water, including an additional freeboard where practicable.</p> <p>Flood resistance and resilience measures should be considered for inclusion. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area.</p>	



Becket House

CCC ID: SLAA239		Policy: C17
Proposals: Housing		No of Units: 67
Existing Land Use: Brownfield		Area: 1.1ha
Flood Zone Classification based on the EA's 'Flood Map for Planning'		<i>Flood Zone 1</i> 100%
Percentage of site at risk of flooding from surface water based on the EA's 'Risk of Flooding from Surface Water' Map	<i>'High' risk scenario</i>	0.0%
	<i>'Medium' risk scenario</i>	5.9%
	<i>'Low' risk scenario</i>	12.4%
Description of Surface Water Flooding (EA's RoFSW Maps)	The site is shown to be at 'very low' to 'medium' risk of flooding from surface water. The areas shown to be affected by surface water flooding are restricted to localised depressions surrounding the existing building.	
Susceptible to Climate Change	Yes	
Flood History	There are no recorded flood incidents on site or in close proximity to the site.	
Main Rivers:	There are no main rivers or watercourses in close proximity to the site.	
Groundwater Protection Zone	The site lies within GPZ III.	
Geology	Bedrock: Margate Chalk Member (chalk)	
	Superficial: Head (clay and silt)	
Indicative Ground Level (m AODN)	Land levels vary between 19.2m and 24.9m AODN. Land levels fall from south to north.	
Required Actions / Recommended Mitigation Measures	The site covers an area greater than 1ha and is shown to be at risk of flooding from surface water. As a result, an FRA, including a comprehensive investigation into surface water flood risk, is required.	
	SuDS should be considered to be included within the development where possible, in accordance with the NPPF and its planning practice guidance. All major development will require a SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site.	
	For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary.	
	The Sequential Approach should be applied to the layout of the site by locating the most vulnerable elements in the lowest risk areas. The Sequential Approach should also be applied to the internal layout of buildings, in particular where floor levels cannot be raised.	
	Floor levels should be raised above the depth of flooding from surface water, including an additional freeboard where practicable.	
Flood resistance and resilience measures should be considered for inclusion. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area.		



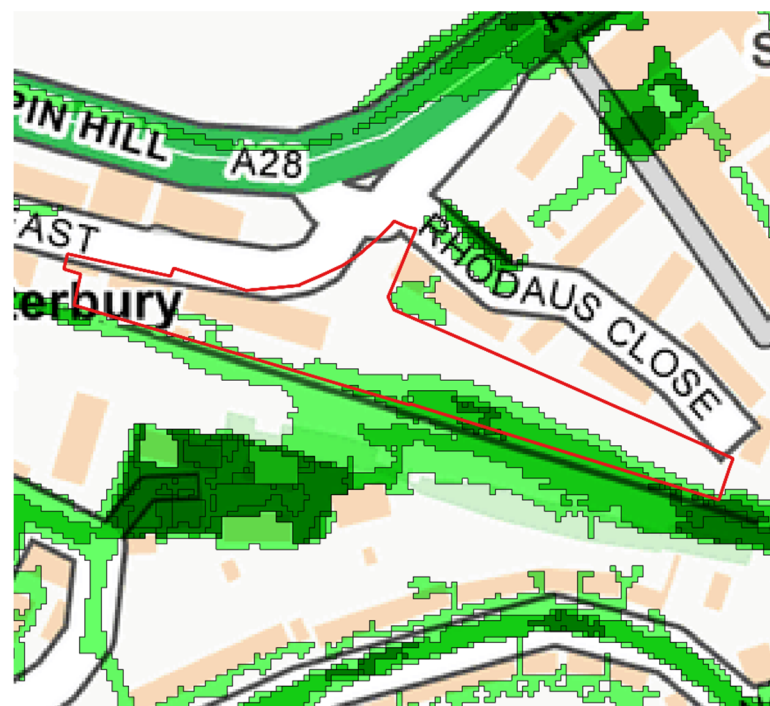
Land at Folly Farm

CCC ID: SLAA162	Policy: C20	<p style="text-align: center;">Surface Water Map</p>
Proposals: Housing	No of Units: 17	
Existing Land Use: Greenfield	Area: 0.6ha	
Flood Zone Classification based on the EA's 'Flood Map for Planning'	Flood Zone 1 100%	
Percentage of site at risk of flooding from surface water based on the EA's 'Risk of Flooding from Surface Water' Map	'High' risk scenario	55.0%
	'Medium' risk scenario	71.1%
	'Low' risk scenario	89.0%
Description of Surface Water Flooding (EA's RoFSW Maps)	The site is shown to be affected by flooding under all three risk scenarios. Surface water is shown to flow from the higher ground to the northeast across the site and ponds against the raised railway embankment. As a result, a large area of the site is shown to flood with depths predicted to reach up to 1.2m for the 'medium' risk scenario.	
Susceptible to Climate Change	Yes	
Flood History	There are no recorded flood incidents on site or in close proximity to the site.	
Main Rivers:	The river Great Stour (main river) runs 350m to the southeast of the site.	
Groundwater Protection Zone	The site does not lie within a GPZ.	
Geology	Bedrock: Thanet Formation (sand, silt and clay) Superficial: Head (clay, silt, sand and gravel)	
Indicative Ground Level (m AODN)	Land levels vary between 6.8m AODN and 9.4m AODN and fall from northwest to southeast.	
Required Actions / Recommended Mitigation Measures	Whilst the site is located in Flood Zone 1 and covers an area less than 1ha, the site is shown to be at risk of flooding from surface water. As a result, an FRA, including a comprehensive investigation into surface water flood risk, is recommended. SuDS should be considered to be included within the development where possible, in accordance with the NPPF and its planning practice guidance. All major development will require a SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. The Sequential Approach should be applied to the layout of the site by locating the most vulnerable elements in the lowest risk areas. The Sequential Approach should also be applied to the internal layout of buildings, in particular where floor levels cannot be raised. Floor levels should be raised above the depth of flooding from surface water, including an additional freeboard where practicable. Flood resistance and resilience measures should be considered for inclusion. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area.	

Land at Station Road East

CCC ID: SLAA156 (and existing allocation)		Policy: C18
Proposals: Mixed-use		No of Units: 37
Existing Land Use: Brownfield		Area: 0.7ha
Flood Zone Classification based on the EA's 'Flood Map for Planning'		Flood Zone 1 100%
Percentage of site at risk of flooding from surface water based on the EA's 'Risk of Flooding from Surface Water' Map	'High' risk scenario	1.1%
	'Medium' risk scenario	9.1%
	'Low' risk scenario	22.4%
Description of Surface Water Flooding (EA's RoFSW Maps)	The majority of the site is shown to be at 'very low' risk of flooding from surface water. During the 'medium' and 'low' risk scenario, surface water is shown to pond along the southern site boundary, against the railway line. Depths during these scenarios are shown to reach a maximum of 300mm across the majority of the area shown to flood with some localised areas shown to flood to higher depths.	
Susceptible to Climate Change	Yes	
Flood History	There are no recorded flood incidents on site or in close proximity to the site.	
Main Rivers:	There are no watercourses within close proximity to the site.	
Groundwater Protection Zone	The site lies within GPZ III.	
Geology	Bedrock: Seaford Chalk Formation (chalk) Superficial: Head (clay and silt)	
Indicative Ground Level (m AODN)	Land levels vary between 17.0m and 19.6m AODN and generally fall towards the railway line along the southern site boundary.	
Required Actions / Recommended Mitigation Measures	<p>Whilst the site is located in Flood Zone 1 and covers an area less than 1ha, the site is shown to be at risk of flooding from surface water. As a result, an FRA, including a comprehensive investigation into surface water flood risk, is recommended.</p> <p>SuDS should be considered to be included within the development where possible, in accordance with the NPPF and its planning practice guidance. All major development will require a SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site.</p> <p>For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary.</p> <p>The Sequential Approach should be applied to the layout of the site by locating the most vulnerable elements in the lowest risk areas. The Sequential Approach should also be applied to the internal layout of buildings, in particular where floor levels cannot be raised.</p> <p>Floor levels should be raised above the depth of flooding from surface water, including an additional freeboard where practicable.</p> <p>Flood resistance and resilience measures should be considered for inclusion. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area.</p>	

Surface Water Map

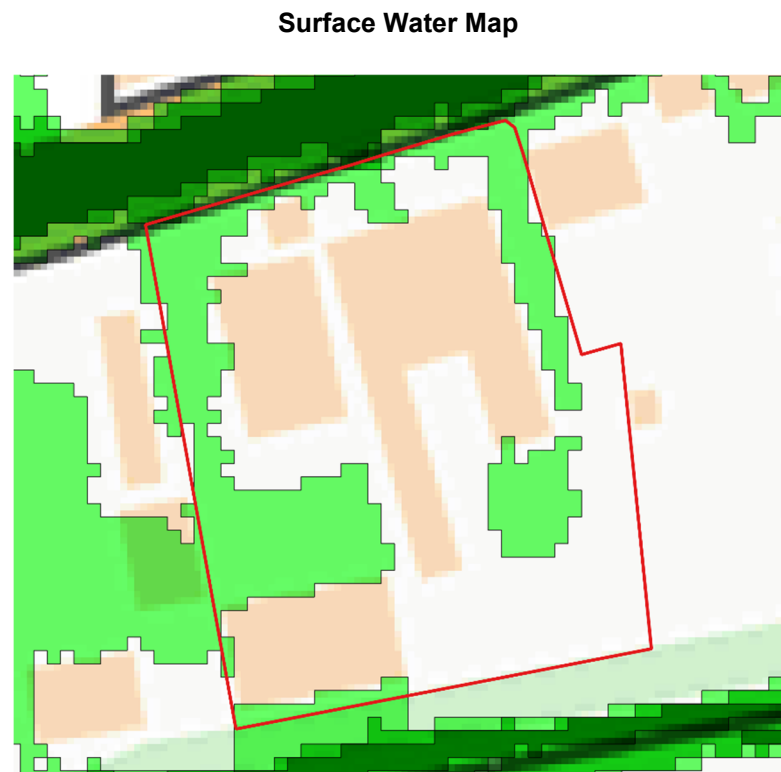


St Vincent's Centre

CCC ID: SLAA223	Policy: W9	
Proposals: Mixed-use	No of Units: 10	
Existing Land Use: Brownfield	Area: 0.3ha	
Flood Zone Classification based on the EA's 'Flood Map for Planning'	Flood Zone 1 100%	
Percentage of site at risk of flooding from surface water based on the EA's 'Risk of Flooding from Surface Water' Map	'High' risk scenario	0.0%
	'Medium' risk scenario	0.0%
	'Low' risk scenario	18.7%
Description of Surface Water Flooding (EA's RoFSW Maps)	The majority of the site is shown to be at 'very low' risk of flooding from surface water. During the 'low' risk scenario, there is a flow path shown across the site with depths predicted to be relatively shallow (i.e. less than 150mm).	
Susceptible to Climate Change	Yes	
Flood History	There are no recorded flood incidents on site or in close proximity to the site.	
Main Rivers:	The coastline lies approximately 465m to the north of the site.	
Groundwater Protection Zone	The site does not lie within a GPZ.	
Geology	<p>Bedrock: London Clay Formation (clay and silt)</p> <p>Superficial: None</p>	
Indicative Ground Level (m AODN)	Land levels vary between 9.1m and 14.3m AODN and fall from southeast to northwest.	
Required Actions / Recommended Mitigation Measures	<p>Whilst the site is located in Flood Zone 1 and covers an area less than 1ha, the site is shown to be at risk of flooding from surface water. As a result, an FRA, including a comprehensive investigation into surface water flood risk, is recommended.</p> <p>SuDS should be considered to be included within the development where possible, in accordance with the NPPF and its planning practice guidance. All major development will require a SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site.</p> <p>For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary.</p> <p>The Sequential Approach should be applied to the layout of the site by locating the most vulnerable elements in the lowest risk areas. The Sequential Approach should also be applied to the internal layout of buildings, in particular where floor levels cannot be raised.</p> <p>Floor levels should be raised above the depth of flooding from surface water, including an additional freeboard where practicable.</p> <p>Flood resistance and resilience measures should be considered for inclusion. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area.</p>	

Land comprising Nursery Industrial Units and former Kent Ambulance Station

CCC ID: SLAA067		Policy: HB5
Proposals: Housing		No of Units: 14
Existing Land Use: Brownfield		Area: 0.5ha
Flood Zone Classification based on the EA's 'Flood Map for Planning'		Flood Zone 1 100%
Percentage of site at risk of flooding from surface water based on the EA's 'Risk of Flooding from Surface Water' Map	'High' risk scenario	0.0%
	'Medium' risk scenario	0.2%
	'Low' risk scenario	28.6%
Description of Surface Water Flooding (EA's RoFSW Maps)	The site is shown to be at 'low' risk of surface water flooding. During this scenario, surface water is shown to accumulate along the eastern and western site boundary. The maximum predicted depth of flooding for the 'low' risk scenario is 300mm.	
Susceptible to Climate Change	Yes	
Flood History	There are no recorded flood incidents on site or in close proximity to the site.	
Main Rivers:	There are no watercourses in close proximity to the site. The coastline lies approximately 850m to the north of the site.	
Groundwater Protection Zone	The site does not lie within a GPZ.	
Geology	Bedrock: London Clay Formation (clay and silt) Superficial: Head (clay and silt)	
Indicative Ground Level (m AODN)	Land levels vary between 7.5m and 9.4m AODN and fall from east to west.	
Required Actions / Recommended Mitigation Measures	<p>Whilst the site is located in Flood Zone 1 and covers an area less than 1ha, the site is shown to be at risk of flooding from surface water. As a result, an FRA, including a comprehensive investigation into surface water flood risk, is recommended.</p> <p>SuDS should be considered to be included within the development where possible, in accordance with the NPPF and its planning practice guidance. All major development will require a SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site.</p> <p>For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary.</p> <p>The Sequential Approach should be applied to the layout of the site by locating the most vulnerable elements in the lowest risk areas. The Sequential Approach should also be applied to the internal layout of buildings, in particular where floor levels cannot be raised.</p> <p>Floor levels should be raised above the depth of flooding from surface water, including an additional freeboard where practicable.</p> <p>Flood resistance and resilience measures should be considered for inclusion. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area.</p>	



Land on the eastern side of Shellford Landfill

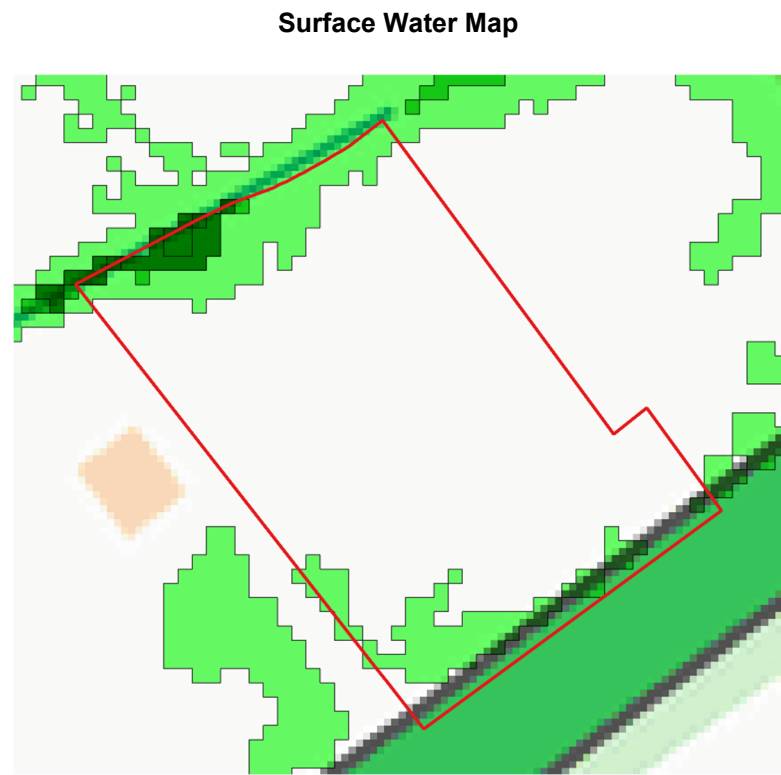
CCC ID: SLAA056		Policy: C22
Proposals: Employment		No of Units: -
Existing Land Use: Greenfield		Area: 4.9ha
Flood Zone Classification based on the EA's 'Flood Map for Planning'		<i>Flood Zone 1</i> 100%
Percentage of site at risk of flooding from surface water based on the EA's 'Risk of Flooding from Surface Water' Map	<i>'High' risk scenario</i>	3.5%
	<i>'Medium' risk scenario</i>	5.4%
	<i>'Low' risk scenario</i>	13.1%
Description of Surface Water Flooding (EA's RoFSW Maps)	The majority of the site is shown to be at 'very low' risk of surface water flooding. Surface water is shown to follow the route of the existing drainage ditches on site. In addition, there is an area within the northern half of the site which is shown to flood under all three risk scenarios. This is considered to be a result of surface water runoff from the north pond against Broad Oak Road.	
Susceptible to Climate Change	Yes	
Flood History	There are no recorded flood incidents on site or in close proximity to the site.	
Main Rivers:	There are two drainage ditches across the site which discharge flows into a pond, located to the southeast of the site. It is assumed that the pond is connected to the Great Stour (main river) which lies approximately 190m further to the southeast of the	
Groundwater Protection Zone	The site does not lie within a GPZ.	
Geology	Bedrock: Thanet Formation (sand, silt and clay) across the majority of the site with Lambeth Group (sand) to the west and north of the site and Harwich Formation (sand and gravel) along the northern boundary Superficial: Head (clay and silt)	
Indicative Ground Level (m AODN)	Land levels vary between 8.6m and 25.8m AODN and fall from north to south within the northern half of the site. Within the southern half of the site, land levels fall predominantly from west to east.	
Required Actions / Recommended Mitigation Measures	<p>The site covers an area greater than 1ha and is shown to be at risk of flooding from surface water. As a result, an FRA, including a comprehensive investigation into surface water flood risk, is required.</p> <p>SuDS should be considered to be included within the development where possible, in accordance with the NPPF and its planning practice guidance. All major development will require a SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site.</p> <p>For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary.</p> <p>The Sequential Approach should be applied to the layout of the site by locating the most vulnerable elements in the lowest risk areas. The Sequential Approach should also be applied to the internal layout of buildings, in particular where floor levels cannot be raised.</p> <p>Floor levels should be raised above the depth of flooding from surface water, including an additional freeboard where practicable.</p> <p>Flood resistance and resilience measures should be considered for inclusion. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area.</p>	

Surface Water Map



Land at Ashford Road

CCC ID: SLAA115		Policy: R9
Proposals: Employment		No of Units: -
Existing Land Use: Greenfield		Area: 0.4ha
Flood Zone Classification based on the EA's 'Flood Map for Planning'		Flood Zone 1 100%
Percentage of site at risk of flooding from surface water based on the EA's 'Risk of Flooding from Surface Water' Map	'High' risk scenario	2.0%
	'Medium' risk scenario	2.3%
	'Low' risk scenario	16.9%
Description of Surface Water Flooding (EA's RoFSW Maps)	The majority of the site is shown to be at 'very low' risk of flooding from surface water. Minor surface water flooding is predicted to the south of the site during the 'low' risk scenario. In addition, flooding is predicted along the existing drainage ditch.	
Susceptible to Climate Change	Yes	
Flood History	There are no recorded flood incidents on site or in close proximity to the site.	
Main Rivers:	There is a drainage ditch which runs along the northern boundary. In addition, the site lies approximately 300m north of the River Great Stour.	
Groundwater Protection Zone	The site lies within GPZ I.	
Geology	Bedrock: Seaford Chalk Formation (chalk) Superficial: River Terrace Deposits 2 (sand and gravel)	
Indicative Ground Level (m AODN)	Land levels vary between 13.2m and 14.7m AODN and are generally flat.	
Required Actions / Recommended Mitigation Measures	<p>Whilst the site is located in Flood Zone 1 and covers an area less than 1ha, the site is shown to be at risk of flooding from surface water. As a result, an FRA, including a comprehensive investigation into surface water flood risk, is recommended.</p> <p>SuDS should be considered to be included within the development where possible, in accordance with the NPPF and its planning practice guidance. All major development will require a SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site.</p> <p>For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary.</p> <p>The Sequential Approach should be applied to the layout of the site by locating the most vulnerable elements in the lowest risk areas. The Sequential Approach should also be applied to the internal layout of buildings, in particular where floor levels cannot be raised.</p> <p>Floor levels should be raised above the depth of flooding from surface water, including an additional freeboard where practicable.</p> <p>Flood resistance and resilience measures should be considered for inclusion. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area.</p>	



Land at Mill Field

CCC ID: SLAA036		Policy: R4
Proposals: Housing		No of Units: 36
Existing Land Use: Greenfield		Area: 2.3ha
Flood Zone Classification based on the EA's 'Flood Map for Planning'		Flood Zone 1 100%
Percentage of site at risk of flooding from surface water based on the EA's 'Risk of Flooding from Surface Water' Map	'High' risk scenario	1.3%
	'Medium' risk scenario	7.6%
	'Low' risk scenario	35.3%
Description of Surface Water Flooding (EA's RoFSW Maps)	The majority of the site is shown to be at 'very low' risk of flooding from surface water. During the 'low' risk scenario, surface water is shown to flow across the northern half of the site from west to east. Whilst there are some localised depressions in this area, the flow path is generally shown to be shallow with depths predicted to reach 150mm.	
Susceptible to Climate Change	Yes	
Flood History	There are no recorded flood incidents on site or in close proximity to the site.	
Main Rivers:	The nearest watercourse is a drainage ditch approximately 530m to the south of the site which becomes the Nethergong Penn (main river) approximately 1.5km further to the southeast.	
Groundwater Protection Zone	The site does not lie within a GPZ.	
Geology	Bedrock: London Clay Formation (clay and silt) Superficial: None	
Indicative Ground Level (m AODN)	Land levels vary between 72.7m and 74.7m AODN and fall from west to east.	
Required Actions / Recommended Mitigation Measures	<p>The site covers an area greater than 1ha and is shown to be at risk of flooding from surface water. As a result, an FRA, including a comprehensive investigation into surface water flood risk, is required.</p> <p>SuDS should be considered to be included within the development where possible, in accordance with the NPPF and its planning practice guidance. All major development will require a SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site.</p> <p>For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary.</p> <p>The Sequential Approach should be applied to the layout of the site by locating the most vulnerable elements in the lowest risk areas. The Sequential Approach should also be applied to the internal layout of buildings, in particular where floor levels cannot be raised.</p> <p>Floor levels should be raised above the depth of flooding from surface water, including an additional freeboard where practicable.</p> <p>Flood resistance and resilience measures should be considered for inclusion. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area.</p>	

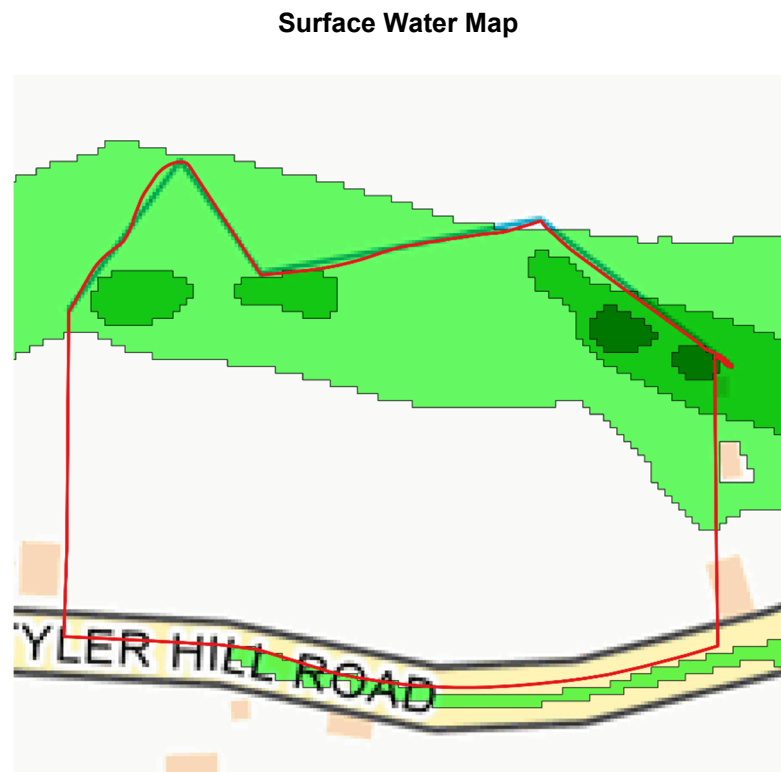
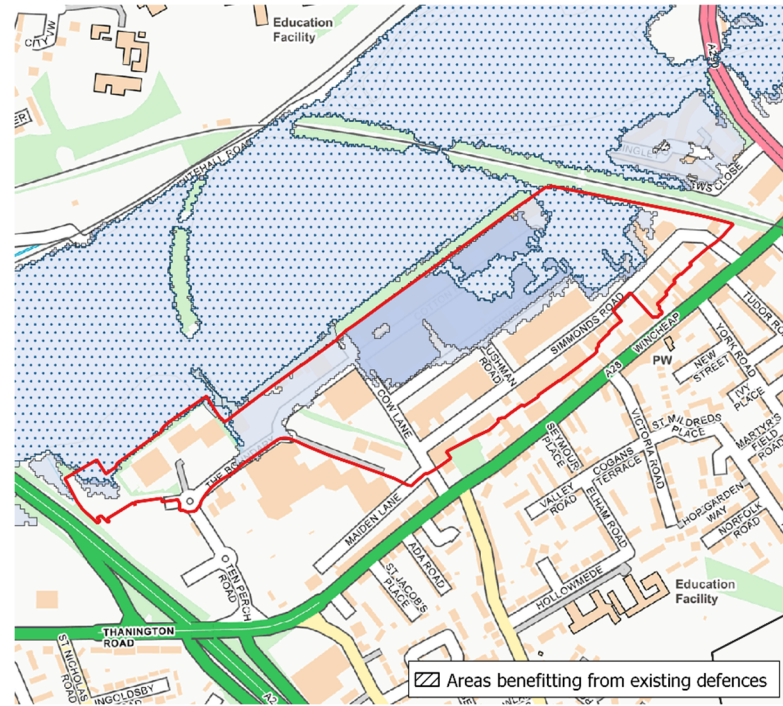


Table 3.3 - Sites in Flood Zone 2 and 3

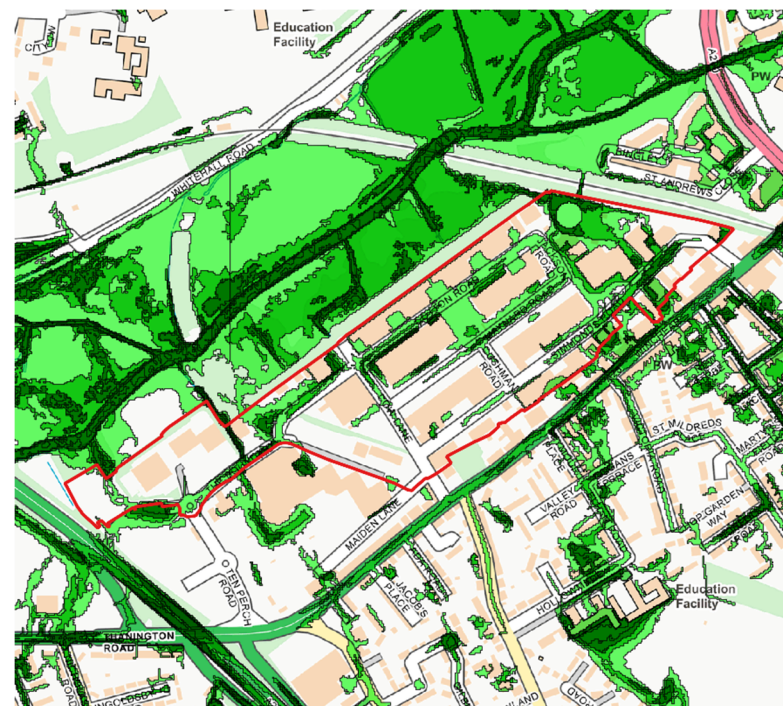
Wincheap

CCC ID: N/A		Policy: C23	
Proposals: Mixed-use		No of Units: 300	
Existing Land Use: Brownfield		Area: 15.6ha	
Flood Zone Classification based on the EA's 'Flood Map for Planning'	Flood Zone 1	54.7%	
	Flood Zone 2	12.6%	
	Flood Zone 3a	26.8%	
	Indicative Flood Zone 3b	13.6%	
Susceptible to Climate Change	Yes		
Exception Test required	Yes		
Flood History	A small area to the southwest of the site was affected by flooding as a result of the Great Stour exceeding its river banks. In addition, there is a recorded flood incident to the southeast of the site, along Wincheap as a result of heavy rainfall.		
Watercourses	The Great Stour (main river) runs over 40m along the north-western site boundary. In addition, there is a drainage ditch which crosses the site further to the west and discharges into the Great Stour approximately 40m to the northwest of the site.		
Groundwater Protection Zone	The majority of the site lies within GPZ I with the northern part of the site located within GPZ III.		
Geology	<p>Bedrock: Seaford Chalk Formation (chalk)</p> <p>Superficial: Mixed with Alluvium (clay, silt, sand and gravel) along the north-western boundary, Head (clay and silt) across the majority of the site and River Terrace Deposits 2 (sand and gravel) in the north-eastern corner.</p>		
Indicative Ground Level (m AODN)	Land levels vary between 8.9m and 16.3m AODN. Land levels generally fall to the northwest, towards the Great Stour.		
Percentage of site at risk of flooding from surface water based on the EA's 'Risk of Flooding from Surface Water' Map	'High' risk scenario	3.7%	
	'Medium' risk scenario	10.1%	
	'Low' risk scenario	31.0%	
Description of Surface Water Flooding (EA's RoFSW Maps)	During the 'high' risk scenario, there are localised surface water hotspots across the site, predominantly along the highways. During the 'medium' to 'low' risk scenarios, there are surface water flow paths to the northeast and southwest of the site which flow towards the Great Stour.		
Percentage of site at risk of flooding from fluvial sources based off modelling data available from the EA	Percentage of site at risk of flooding from fluvial sources during the defended scenario for key return period events. Maximum flood level on site shown in brackets.		
	1 in 100 year return period event	1 in 100 year return period event 45%cc	1 in 1000 year return period event
	32.8% (10.49m AODN)	47.7% (10.74m AODN)	45.2% (10.75m AODN)
Flood Defences	The site benefits from natural high ground which provides a 1 in 5 year standard of protection.		

Flood Zone Map



Surface Water Map

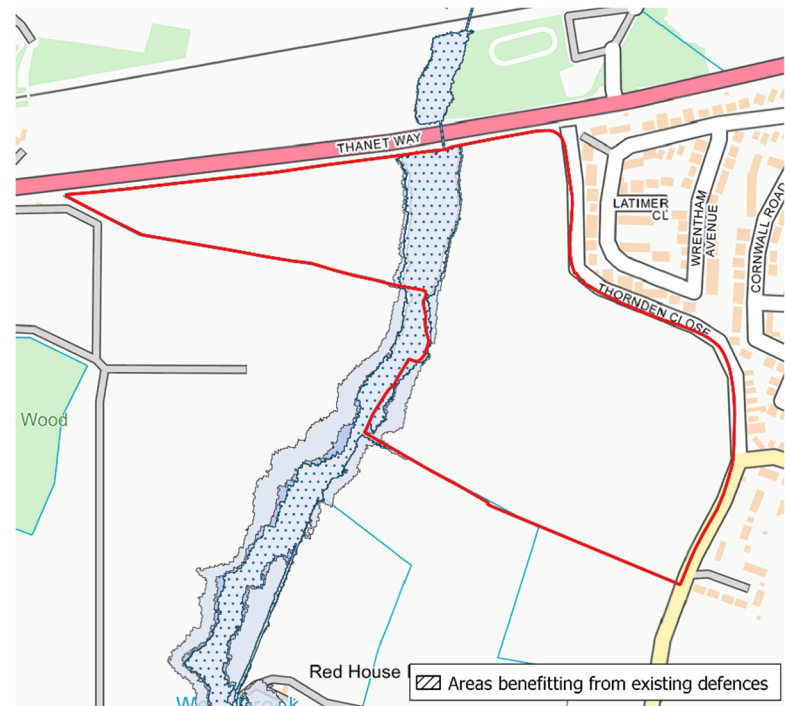


<p>Description of Flood Mechanism</p>	<p>During the 1 in 50 year return period, the northern corner of the site boundary is shown to be affected. During the 1 in 100 year return period, water is shown to enter the site from the north. When an allowance for climate change is taken into consideration, water is also shown to back up within the drainage ditch and flowing towards the lower areas of the site from the west.</p>
<p>Hazard Rating for 1 in 100 year+45%cc</p>	<p>The hazard rating during the 1 in 100 year return period including a 45% allowance for climate change is classified as 'low' to 'significant'.</p>
<p>Required Actions / Recommended Mitigation Measures</p>	<p>The site is located in Flood Zone 3. As a result, a detailed FRA is required to be undertaken. It should be recognised that the extent for the functional floodplain is indicative and therefore, a more detailed analysis is recommended as part of a site-specific FRA.</p> <p>SuDS should be considered to be included within the development where possible, in accordance with the NPPF and its planning practice guidance. All major development will require a SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site.</p> <p>For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary.</p> <p>The Sequential Approach should be applied to the layout of the site by locating the most vulnerable elements in the lowest risk areas. The Sequential Approach should also be applied to the internal layout of buildings, in particular where floor levels cannot be raised.</p> <p>Floor levels should be raised above the design flood level, including the Environment Agency's recommended additional freeboard requirements where practicable.</p> <p>Flood resistance and resilience measures should be considered for inclusion.</p> <p>Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace floodwater and increase the risk of flooding to the surrounding area.</p> <p>The EA should be consulted where development is proposed within 8m of a main river to obtain consent via a Flood Risk Activity Permit (FRAP).</p>

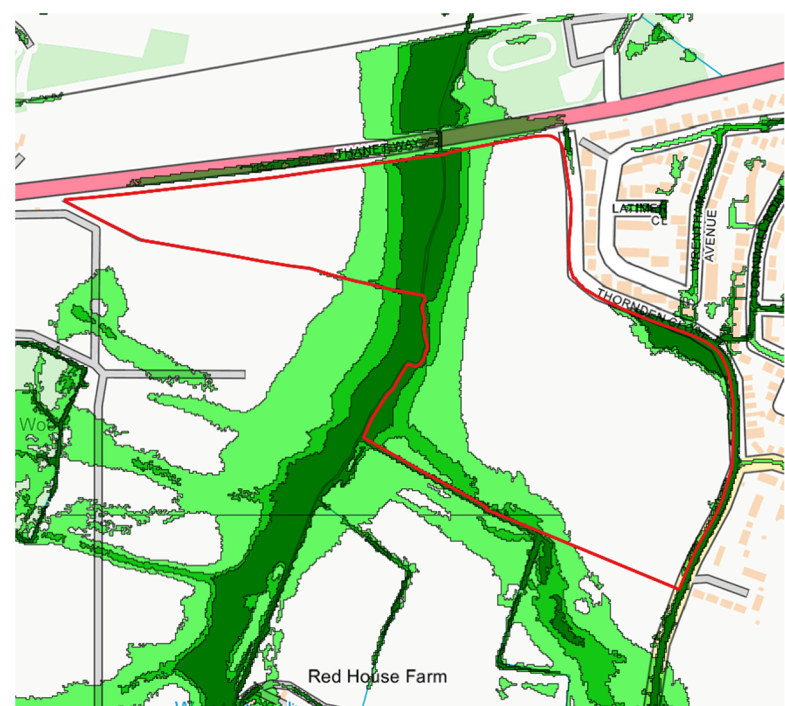
Land to the West of Thornden Wood Road

CCC ID: SLAA240		Policy: HB4	
Proposals: Mixed-use		No of Units: N/A	
Existing Land Use: Greenfield		Area: 16.3ha	
Flood Zone Classification based on the EA's 'Flood Map for Planning'	Flood Zone 1	91.8%	
	Flood Zone 2	2.5%	
	Flood Zone 3a	2.3%	
	Indicative Flood Zone 3b	6.2%	
Susceptible to Climate Change	Yes		
Exception Test required	Yes		
Flood History	There are no historic records of flooding on site or in close proximity.		
Watercourses	The West Brook (main river) runs through the centre of the site. There is a network of drainage ditches to the south of the site which are discharging flows into the West Brook.		
Groundwater Protection Zone	The site does not lie within a GPZ.		
Geology	<p>Bedrock: London Clay Formation (clay and silt)</p> <p>Superficial: The areas along the West Brook are overlain by Head (clay and silt).</p>		
Indicative Ground Level (m AODN)	Land levels vary between 4.0m and 13.06m AODN. Land levels fall across the site towards the West Brook		
Percentage of site at risk of flooding from surface water based on the EA's 'Risk of Flooding from Surface Water' Map	'High' risk scenario	3.3%	
	'Medium' risk scenario	15.2%	
	'Low' risk scenario	29.1%	
Description of Surface Water Flooding (EA's RoFSW Maps)	The site is shown to be at 'very low' to 'high' risk of flooding from surface water. There is a surface water flow path shown which enters the site to the southeast and flows towards the West Brook. In addition, there seems to be a topographic low point to the northeast where surface water is shown to accumulate. Surface water is shown to flow across the site, following the course of the West Brook, however, the map is unlikely to take the flow of the river into consideration.		
Percentage of site at risk of flooding from fluvial sources based off modelling data available from the EA	Percentage of site at risk of flooding from fluvial sources during the defended scenario for key return period events. Maximum flood level on site shown in brackets.		
	1 in 100 year return period event	1 in 100 year return period event +45%cc	1 in 1000 year return period event
	5.6%	7.8%	8.2%
Flood Defences	The site benefits from natural high ground which provides a 1 in 5 year standard of protection.		
Description of Flood Mechanism	During the 1 in 50 year flood event, water is shown to come out of channel of the West Brook and flowing along the river towards the north, with flood levels varying between 6.1m and 6.4m AODN. For the 1 in 100 year flood event including a 45% allowance for climate change, the flood level increases to 6.3m and 6.6m AODN with up to a 100mm reduction in flood level for the 1 in 1000 year flood event.		
Hazard Rating for 1 in 100 year+45%cc	The hazard rating during the 1 in 100 year return period including a 45% allowance for climate change is classified as 'low' to 'significant'.		

Flood Zone Map



Surface Water Map

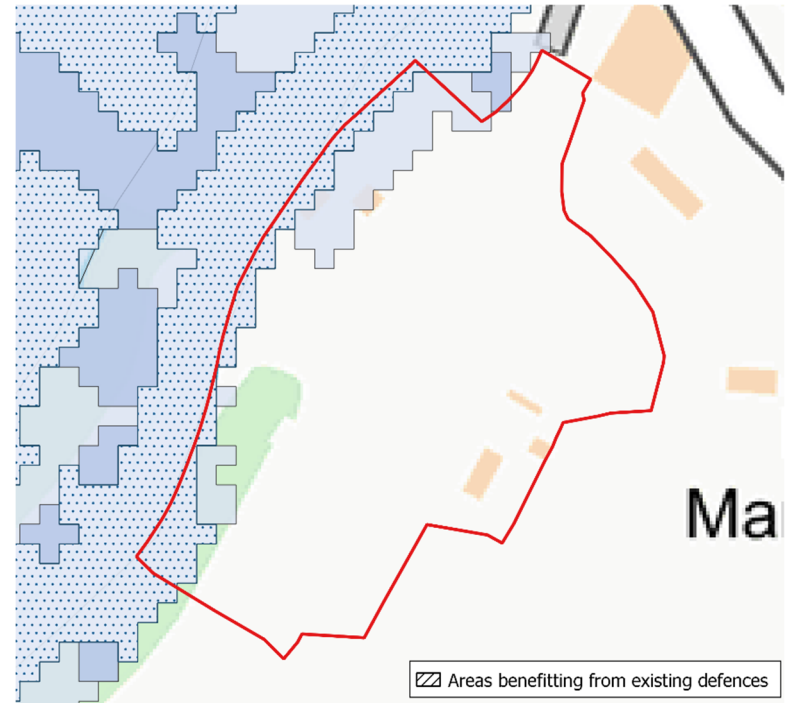


<p>Required Actions / Recommended Mitigation Measures</p>	<p>The site is located in Flood Zone 3. As a result, a detailed FRA is required to be undertaken. It should be recognised that the extent for the functional floodplain is indicative and therefore, a more detailed analysis is recommended as part of a site-specific FRA.</p> <p>SuDS should be considered to be included within the development where possible, in accordance with the NPPF and its planning practice guidance. All major development will require a SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site.</p> <p>For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary.</p> <p>The Sequential Approach should be applied to the layout of the site by locating the most vulnerable elements in the lowest risk areas. The Sequential Approach should also be applied to the internal layout of buildings, in particular where floor levels cannot be raised.</p> <p>Floor levels should be raised above the design flood level, including the Environment Agency’s recommended additional freeboard requirements where practicable.</p> <p>Flood resistance and resilience measures should be considered for inclusion.</p> <p>Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace floodwater and increase the risk of flooding to the surrounding area.</p> <p>The EA should be consulted where development is proposed within 8m of a main river to obtain consent via a Flood Risk Activity Permit (FRAP).</p>
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Milton Manor Concrete Batching Plant

CCC ID: SLAA153		Policy: R10	
Proposals: Employment		No of Units: -	
Existing Land Use: Brownfield		Area: 1.6ha	
Flood Zone Classification based on the EA's 'Flood Map for Planning'	Flood Zone 1	80.2%	
	Flood Zone 2	8.4%	
	Flood Zone 3a	6.7%	
	Indicative Flood Zone 3b	6.7%	
Susceptible to Climate Change	Yes		
Exception Test required	No, providing all development is located outside Flood Zone 3b.		
Flood History	Parts along the north-western site boundary have been affected by flooding from the Great Stour in the past. There are no other recorded flood incidents on site or in proximity from any other sources.		
Watercourses	The Great Stour (main river) runs along the north-western site boundary.		
Groundwater Protection Zone	The site lies within GPZ I, II and III.		
Geology	Bedrock: Seaford Chalk Formation (chalk)		
	Superficial: Alluvium (clay, silt, sand and gravel) along the north-western site boundary.		
Indicative Ground Level (m AODN)	Land levels vary between 12.2 and 21.4m AODN. Land levels fall towards the Great Stour.		
Percentage of site at risk of flooding from surface water based on the EA's 'Risk of Flooding from Surface Water' Map	'High' risk scenario	0%	
	'Medium' risk scenario	0%	
	'Low' risk scenario	0.1%	
Description of Surface Water Flooding (EA's RoFSW Maps)	The vast majority of the site is shown to be at 'very low' risk of flooding from surface water. It is only along the Great Stour where the EA's maps show minor flooding during the 'low' risk scenario, however, this is likely to be attributed to the risk of flooding from the Great Stour itself.		
Percentage of site at risk of flooding from fluvial sources based off modelling data available from the EA	Percentage of site at risk of flooding from fluvial sources during the defended scenario for key return period events. Maximum flood level on site shown in brackets.		
	<i>1 in 100 year return period event</i>	<i>1 in 100 year return period event +45%cc</i>	<i>1 in 1000 year return period event</i>
	6.7%	15.0%	15.1%
Flood Defences	The site benefits from natural high ground which provides a 1 in 2 standard of protection.		
Description of Flood Mechanism	During the 1 in 50 year flood event, the western site boundary is shown to be affected by flooding, however, this is likely to be a result of the resolution used to project the flood extent when in reality, the flood extent is likely to be confined to the river channel. For the 1 in 100 year flood event, the flood extent only marginally increases within the south-western corner, with flood levels varying between 13.24m and 13.0m AODN from south to north. The flood level increases by approximately 250mm for the 35% and 300mm for the 45% climate change scenario. The flood level for the 1 in 1000 year flood event is similar to the flood level predicted for the 45% climate change scenario.		

Flood Zone Map



Surface Water Map

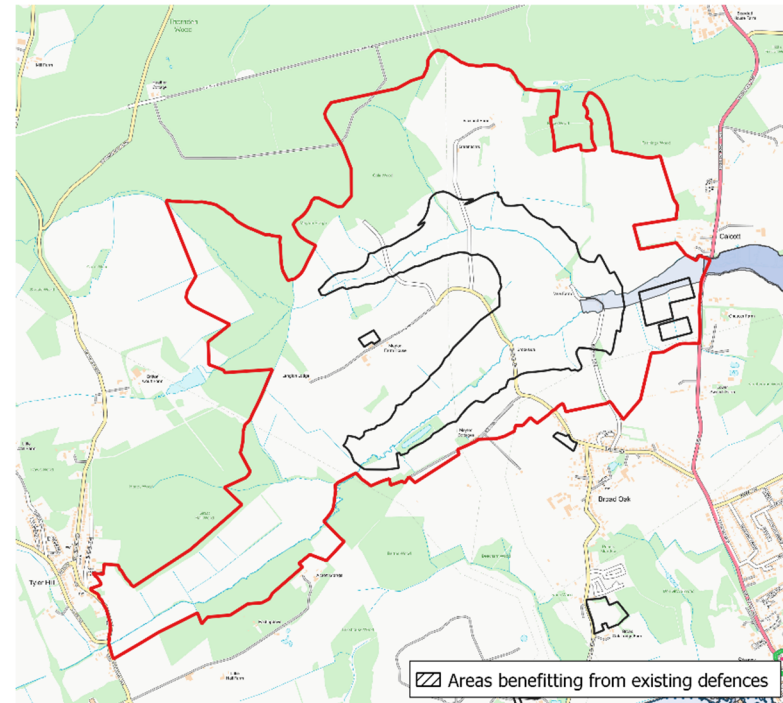


<p>Hazard Rating for 1 in 100 year+45%cc</p>	<p>The hazard rating during the 1 in 100 year return period including a 45% allowance for climate change is classified as 'low' to 'significant'.</p>
<p>Required Actions / Recommended Mitigation Measures</p>	<p>The site is located in Flood Zone 3. As a result, a detailed FRA is required to be undertaken. It should be recognised that the extent for the functional floodplain is indicative and therefore, a more detailed analysis is recommended as part of a site-specific FRA.</p> <p>SuDS should be considered to be included within the development where possible, in accordance with the NPPF and its planning practice guidance. All major development will require a SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site.</p> <p>For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary.</p> <p>The Sequential Approach should be applied to the layout of the site by locating the most vulnerable elements in the lowest risk areas. The Sequential Approach should also be applied to the internal layout of buildings, in particular where floor levels cannot be raised.</p> <p>Floor levels should be raised above the design flood level, including the Environment Agency's recommended additional freeboard requirements where practicable.</p> <p>Flood resistance and resilience measures should be considered for inclusion.</p> <p>Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace floodwater and increase the risk of flooding to the surrounding area.</p> <p>The EA should be consulted where development is proposed within 8m of a main river to obtain consent via a Flood Risk Activity Permit (FRAP).</p>

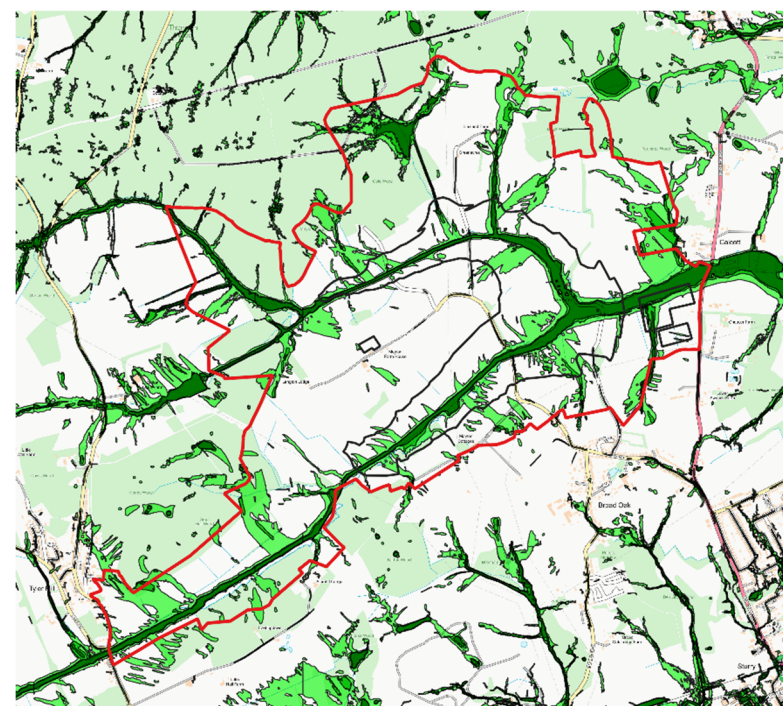
Broad Oak Reservoir and Country Park (Entire Site)

CCC ID: SLAA233		Policy: R26
Proposals: Reservoir		No of Units: -
Existing Land Use: Greenfield		Area: 443.6ha
Flood Zone Classification based on the EA's 'Flood Map for Planning'	Flood Zone 1	98.6%
	Flood Zone 2	1.4%
	Flood Zone 3a	0.0%
	Flood Zone 3b	0.0%
Susceptible to Climate Change	Yes	
Exception Test required	No	
Flood History	There is a record of historic flooding from the Nethergong Penn in the eastern corner of the development site.	
Watercourses	The Nethergong Penn (main river) is running through the southern half of the site from southwest to southeast. In addition, there are several drainage ditches across the site which discharge into the Nethergong Penn.	
Groundwater Protection Zone	The site does not lie within a GPZ.	
Geology	<p>Bedrock: London Clay Formation (clay and silt)</p> <p>Superficial: The site is partially overlain by Head (clay and silt) in the river and drainage ditch valleys.</p>	
Indicative Ground Level (m AODN)	Land levels vary between 18.3m and 65.4m AODN. Land levels generally fall towards the existing drainage ditches and watercourses across the site.	
Percentage of site at risk of flooding from surface water based on the EA's 'Risk of Flooding from Surface Water' Map	'High' risk scenario	5.2%
	'Medium' risk scenario	8.0%
	'Low' risk scenario	25.2%
Description of Surface Water Flooding (EA's RoFSW Maps)	The site is shown to be at 'very low' to 'high' risk of flooding from surface water. During the 'high' risk scenario, water seems to be confined to the existing drainage network and flow towards the Nethergong Penn. During the 'medium' and 'low' risk scenario, the extent of surface water flooding in these areas is shown to increase.	
Flood Defences	The Nethergong Penn benefits from natural high ground which provides a 1 in 5 year standard of protection.	
Description of Flood Mechanism	Detailed numerical flood modelling for the Nethergong Penn and its tributaries is not available by the EA. As such, it is recommended that detailed modelling is undertaken. Nevertheless, as the catchment is considered to be driven by surface water runoff, the EA's surface water maps can provide an indication in terms of the flood risk from the Nethergong Penn.	

Flood Zone Map



Surface Water Map

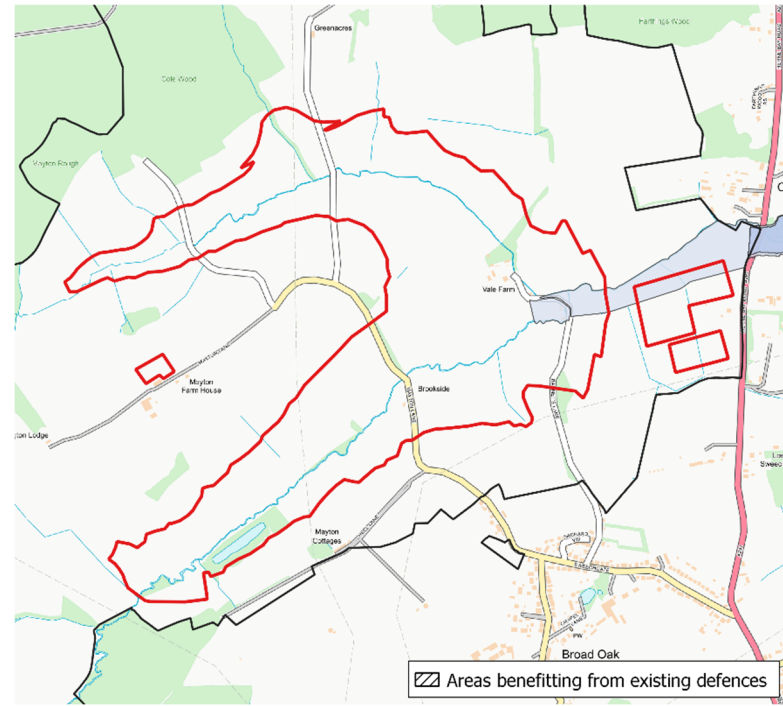


<p>Required Actions / Recommended Mitigation Measures</p>	<p>The site is located in Flood Zone 2 and is at risk of flooding from surface water. Therefore, a detailed Flood Risk Assessment will be required.</p> <p>SuDS should be considered to be included within the development where possible, in accordance with the NPPF and its planning practice guidance. All major development will require a Surface Water Management Strategy to be produced to show how SuDS will be included to manage surface water runoff from the site.</p> <p>It is recommended that the risk of flooding to the site is quantified in more detail following a detailed numerical flood modelling of the Nethergong Penn and its tributaries.</p> <p>Based on the outcome, the Sequential Approach should be applied to the layout of the site by locating the most vulnerable elements in the lowest risk areas. The Sequential Approach should also be applied to the internal layout of buildings, in particular where floor levels cannot be raised.</p> <p>Floor levels should be raised above the design flood level, including the Environment Agency’s recommended additional freeboard requirements where practicable. Flood resistance and resilience measures should be considered for inclusion.</p> <p>Floor levels should be raised above the maximum depth of flooding from surface water, including an additional freeboard where practicable.</p> <p>Flood resistance and resilience measures should be considered for inclusion.</p> <p>Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace floodwater and increase the risk of flooding to the surrounding area.</p> <p>The EA should be consulted where development is proposed within 16m of a tidal waterbody or tidal defence infrastructure to obtain consent via a Flood Risk Activity Permit (FRAP).</p> <p>When developing a scheme, the condition of any adjacent defences should be taking into account and consideration given to upgrading the defences to maintain, or further, the protection offered to the site and surrounding area. The costs associated with defence upgrades should be shared amongst beneficiaries.</p>
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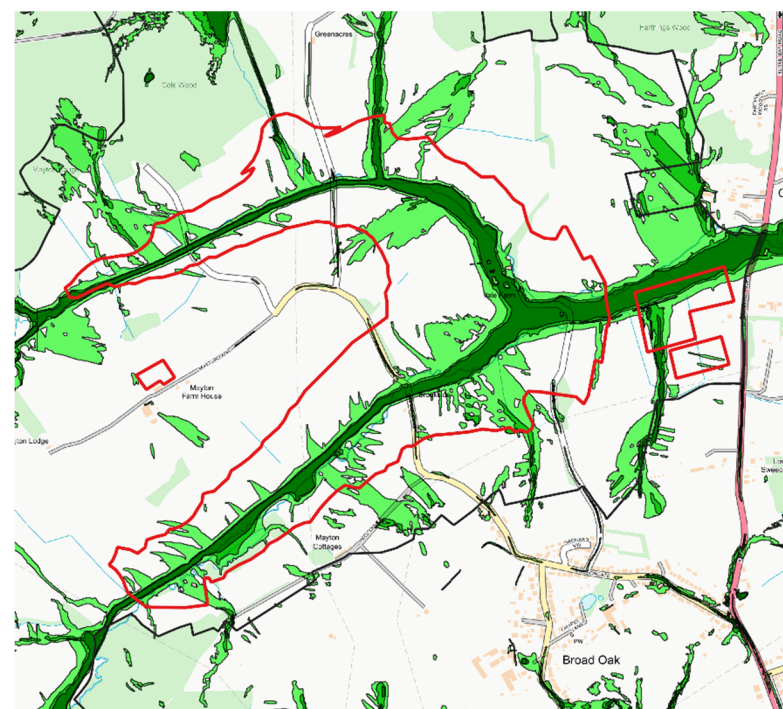
Broad Oak Reservoir and Country Park (Draft Water and Buildings only)

CCC ID: SLAA233		Policy: R26
Proposals: Reservoir		No of Units: -
Existing Land Use: Greenfield		Area: 92.5ha
Flood Zone Classification based on the EA's 'Flood Map for Planning'	Flood Zone 1	97.0%
	Flood Zone 2	3.0%
	Flood Zone 3a	0.0%
	Flood Zone 3b	0.0%
Indicative Ground Level (m AODN)	Land levels vary between 19.7m and 54.3m AODN and generally fall towards the Nethergong Penn.	
Percentage of site at risk of flooding from surface water based on the EA's 'Risk of Flooding from Surface Water' Map	'High' risk scenario	11.6%
	'Medium' risk scenario	15.9%
	'Low' risk scenario	39.5%
Description of Surface Water Flooding (EA's RoFSW Maps)	The most western building is shown to be situated outside the predicted extent of surface water flooding. However, the larger of the two buildings situated to the east is shown to be located within a surface water flow path under all three risk scenarios.	
Description of Flood Mechanism	Detailed numerical flood modelling for the Nethergong Penn and its tributaries is not available by the EA. As such, it is recommended that detailed modelling is undertaken. Nevertheless, as the catchment is considered to be driven by surface water runoff, the EA's surface water maps can provide an indication in terms of the flood risk from the Nethergong Penn.	
Recommendations	See 'Required Actions / Recommended Mitigation Measures' above for the entire site.	

Flood Zone Map



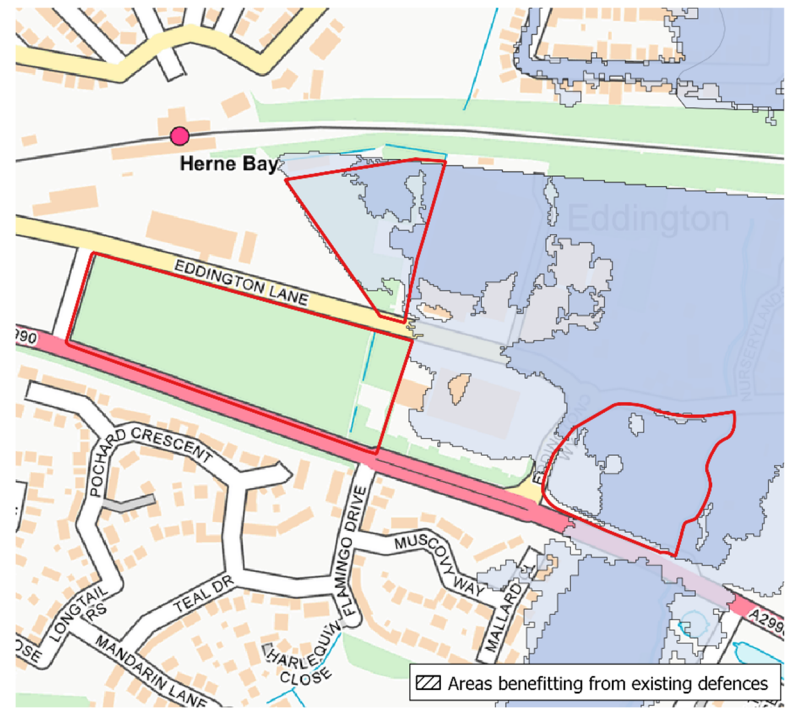
Surface Water Map



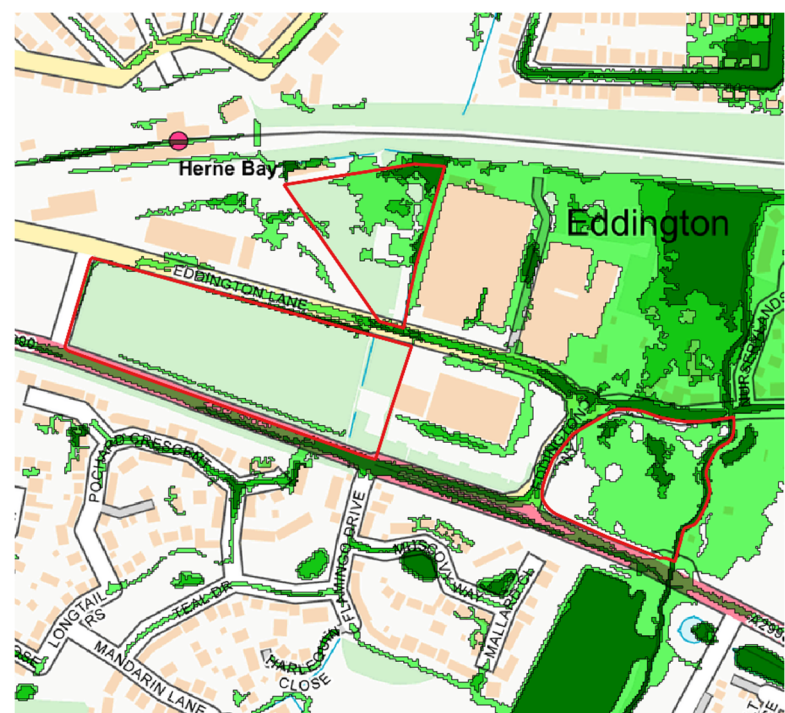
Eddington Business Park

CCC ID: -		Policy: HB10	
Proposals: Mixed use		No of Units: -	
Existing Land Use: Greenfield		Area: 6.3ha	
Flood Zone Classification based on the EA's 'Flood Map for Planning'	Flood Zone 1	54.5%	
	Flood Zone 2	18.5%	
	Flood Zone 3	26.9%	
	Flood Zone 3b	*Refer to comments below	
Susceptible to Climate Change	Yes		
Exception Test required	Yes		
Flood History	There are no flood incidents recorded on site. There is a recorded flood outline as provided by the EA to the north of the most eastern parcel of land as a result of the Plenty Brook exceeding its channel.		
Watercourses	The Plenty Brook (main river) is running along the eastern boundary of the most eastern parcel of land. In addition, there are drainage ditches which run from south to north across the western two parcels of land and which discharge into the Plenty Brook further to the north.		
Groundwater Protection Zone	The sites do not lie within the GWP.		
Geology	Bedrock: London Clay Formation (clay and sand)		
	Superficial: The sites are partially overlain by Head (clay and silt)		
Indicative Ground Level (m AODN)	Land levels vary between 4.3m AODN within the most eastern parcel of land and 14.0m AODN within the most western parcel of land. Generally, land levels fall from west to east with the two smaller parcels being lower lying.		
Percentage of site at risk of flooding from surface water based on the EA's 'Risk of Flooding from Surface Water' Map	'High' risk scenario	3.4%	
	'Medium' risk scenario	5.6%	
	'Low' risk scenario	31.3%	
Description of Surface Water Flooding (EA's RoFSW Maps)	The largest parcel of land to the west is shown to be at 'very low' to 'low' risk of flooding from surface water, whereas the other two parcels of land are shown to be at 'very low' to 'high' risk. However, the extent shown by the EA's maps is likely to be a result of flows within the adjacent river not being taken into consideration. As such, the extent from surface water flooding is likely to be less than depicted by the maps.		
Percentage of site at risk of flooding from fluvial sources based off modelling data available from the EA	Percentage of site at risk of flooding from fluvial sources during the defended scenario for key return period events.		
	Maximum flood level on site shown in brackets.		
	1 in 100 year return period event	1 in 100 year return period event +45%cc	1 in 1000 year return period event
0.0%	16.3% (6.51m AODN)	*Refer to comments below	
Flood Defences	The most eastern parcel of land benefits from natural high ground which provides a 1 in 5 year standard of protection.		

Flood Zone Map



Surface Water Map

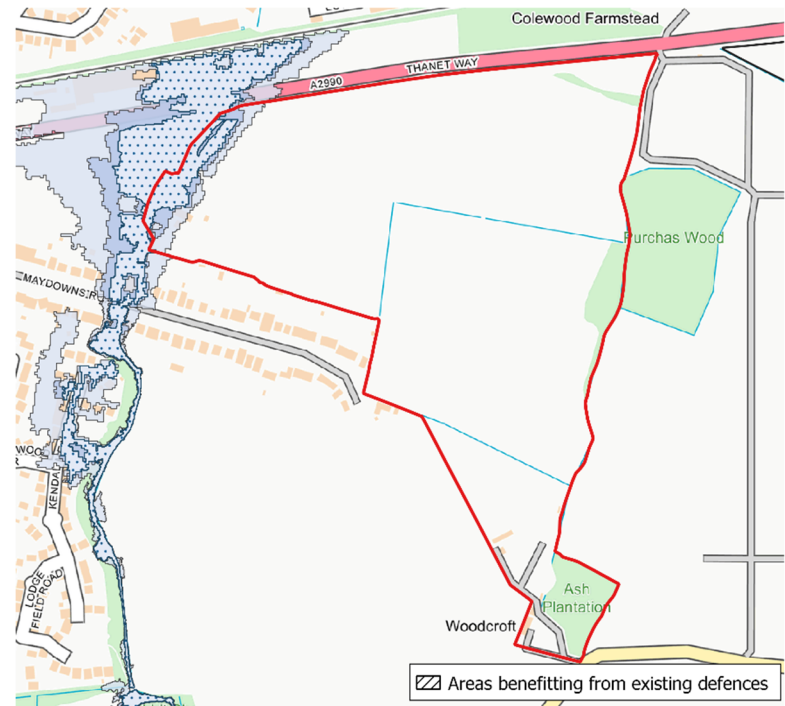


<p>Description of Flood Mechanism</p>	<p>The EA's model results show that the site could partially be affected by flooding under the 1 in 50 year flood event. Nevertheless, it is recognised that the model is erroneous and therefore, modelling undertaken by Herrington Consulting for the Plenty Brook has been referenced as a precaution. The updated model does not constitute a full update to the Plenty Brook model which is due in the future following correspondence with the EA. Modelling has been undertaken by HC for the 1 in 50 year flood event (i.e. indicative functional floodplain) and the model results show that the extent of flooding would be limited to the river channel.</p> <p>The EA's model does not include an appropriate allowance for climate change and therefore, the model outputs from the HC model have been referenced. Under the 1 in 100 year flood event including a 45% allowance for climate change, the model shows that the majority of the eastern parcel of land could be subject to flooding with a maximum predicted flood level of 6.51m AODN. No modelling has been undertaken for the 1 in 1000 year flood event.</p>
<p>Hazard Rating for 1 in 100 year+45%cc</p>	<p>Under the 1 in 100 year return period including a 45% allowance for climate change, the majority of the eastern site is shown to be classified as having a hazard rating of 'significant'. The smaller parcel of land to the northwest is predominantly shown to be classified as 'low' to 'moderate' with a few areas shown to be 'significant'.</p>
<p>Required Actions / Recommended Mitigation Measures</p>	<p>The site is located in Flood Zone 3. As a result, a detailed FRA is required to be undertaken. It should be recognised that the extent for the functional floodplain is indicative and therefore, a more detailed analysis is recommended as part of a site-specific FRA.</p> <p>SuDS should be considered to be included within the development where possible, in accordance with the NPPF and its planning practice guidance. All major development will require a SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site.</p> <p>For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary.</p> <p>The Sequential Approach should be applied to the layout of the site by locating the most vulnerable elements in the lowest risk areas. The Sequential Approach should also be applied to the internal layout of buildings, in particular where floor levels cannot be raised.</p> <p>Floor levels should be raised above the design flood level, including the Environment Agency's recommended additional freeboard requirements where practicable.</p> <p>Flood resistance and resilience measures should be considered for inclusion.</p> <p>Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace floodwater and increase the risk of flooding to the surrounding area.</p> <p>The EA should be consulted where development is proposed within 8m of a main river to obtain consent via a Flood Risk Activity Permit (FRAP).</p>

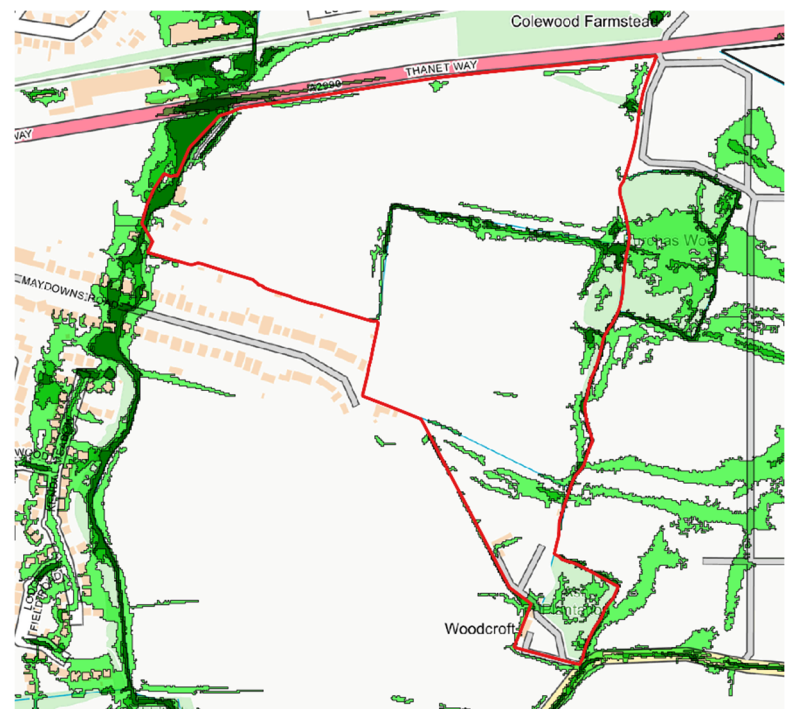
Bodkin Farm

CCC ID: SLAA247		Policy: W8	
Proposals: Mixed-use		No of Units: 250	
Existing Land Use: Greenfield		Area: 27.3ha	
Flood Zone Classification based on the EA's 'Flood Map for Planning'	Flood Zone 1	96.2%	
	Flood Zone 2	1.2%	
	Flood Zone 3	1.1%	
	Indicative Flood Zone 3b	1.8%	
Susceptible to Climate Change	Yes		
Exception Test required	Yes		
Flood History	There are no recorded incidents within the site. There are a number of flood incidents recorded to the southwest and northwest of the site, along the Kite Farm Ditch as a result of inadequate culverts.		
Watercourses	The Kite Farm Ditch (main river) runs along the north-western site boundary with the West Brook (main river) running approximately 400m to the east of the site. There are also several drainage ditches on site, which collect surface water runoff from the surrounding area and are considered to discharge flows into the West Brook.		
Groundwater Protection Zone	The site does not lie within a GWP.		
Geology	Bedrock: London Clay Formation (clay and silt) Superficial: None		
Indicative Ground Level (m AODN)	Land levels vary between 6.6m and 17.6m AODN. Land levels are lowest in the northwest before they rise and fall again towards the east.		
Percentage of site at risk of flooding from surface water based on the EA's 'Risk of Flooding from Surface Water' Map	'High' risk scenario	1.5%	
	'Medium' risk scenario	2.5%	
	'Low' risk scenario	8.3%	
Description of Surface Water Flooding (EA's RoFSW Maps)	The site is shown to be at 'very low' to 'high' risk of flooding from surface water. To the west of the site, the surface water extent follows the Kite Farm Ditch. Furthermore, minor surface water flooding is shown within the existing drainage ditches on site. During a 'low' risk scenario, localised flooding is predicted to along the eastern site boundary.		
Percentage of site at risk of flooding from fluvial sources based off modelling data available from the EA	Percentage of site at risk of flooding from fluvial sources during the defended scenario for key return period events. Maximum flood level on site shown in brackets.		
	1 in 100 year return period event	1 in 100 year return period event +45%cc	1 in 1000 year return period event
	2.6% (8.49m AODN)	3.4% (8.72m AODN)	3.8% (8.92m AODN)
Flood Defences	The site partially benefits from natural high ground which provides a 1 in 5 year standard of protection.		

Flood Zone Map



Surface Water Map

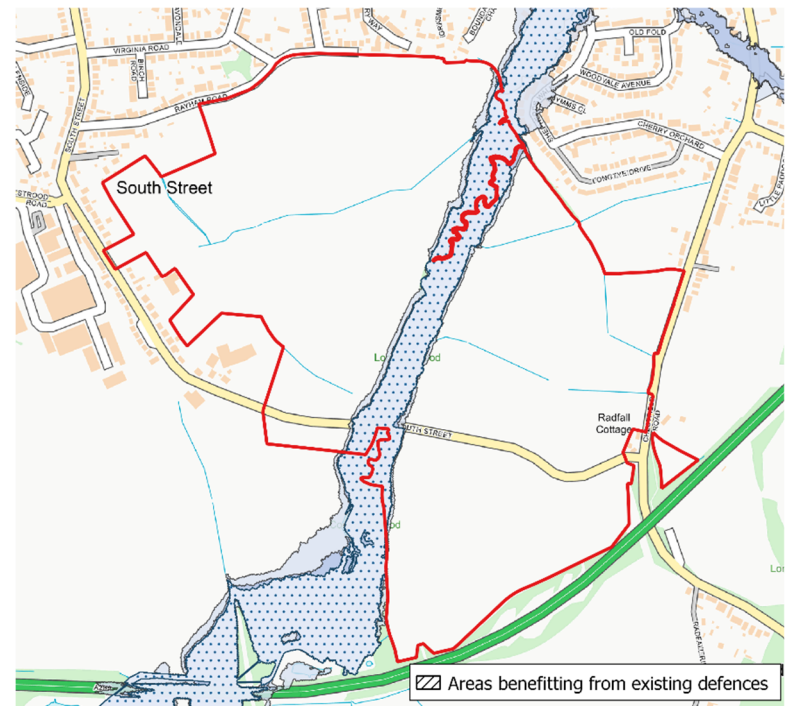


<p>Description of Flood Mechanism</p>	<p>It is evident that during the 1 in 50 year flood event, some localised areas along the western site boundary are shown to be affected by flooding. However, there doesn't seem to be any onward connectivity to the river and as such, these maps may be erroneous. During all other scenarios, water is shown to flow along the western site boundary as a result of the river exceeding its capacity.</p>
<p>Hazard Rating for 1 in 100 year+45%cc</p>	<p>The hazard rating varies between 'low' to 'significant' during the 1 in 100 year return period including a 45% allowance for climate change.</p>
<p>Required Actions / Recommended Mitigation Measures</p>	<p>The site is located in Flood Zone 3. As a result, a detailed FRA is required to be undertaken. It should be recognised that the extent for the functional floodplain is indicative and therefore, a more detailed analysis is recommended as part of a site-specific FRA.</p> <p>SuDS should be considered to be included within the development where possible, in accordance with the NPPF and its planning practice guidance. All major development will require a SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site.</p> <p>For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary.</p> <p>The Sequential Approach should be applied to the layout of the site by locating the most vulnerable elements in the lowest risk areas. The Sequential Approach should also be applied to the internal layout of buildings, in particular where floor levels cannot be raised.</p> <p>Floor levels should be raised above the design flood level, including the Environment Agency's recommended additional freeboard requirements where practicable.</p> <p>Flood resistance and resilience measures should be considered for inclusion.</p> <p>Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace floodwater and increase the risk of flooding to the surrounding area.</p> <p>The EA should be consulted where development is proposed within 8m of a main river to obtain consent via a Flood Risk Activity Permit (FRAP).</p>

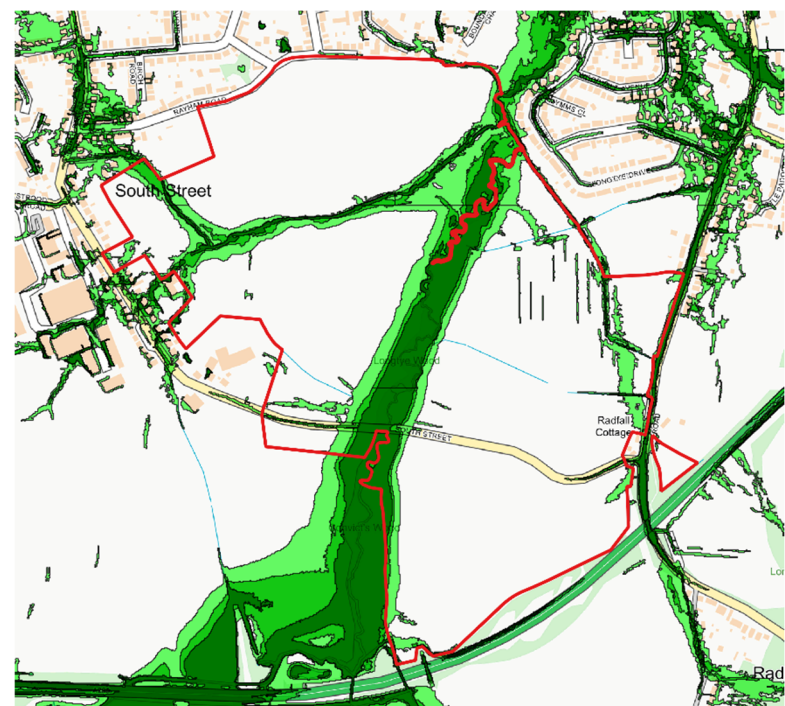
Land at Brooklands Farm

CCC ID: SLAA104		Policy: W5	
Proposals: Mixed-use		No of Units: 1300	
Existing Land Use: Greenfield		Area: 79.1ha	
Flood Zone Classification based on the EA's 'Flood Map for Planning'	Flood Zone 1	91.0%	
	Flood Zone 2	1.5%	
	Flood Zone 3	1.0%	
	Indicative Flood Zone 3b	7.1%	
Susceptible to Climate Change	Yes		
Exception Test required	Yes		
Flood History	The EA's historic flood outline map shows a small area to the north and south of the site, along the Swalecliffe Brook to have been affected by flooding. There are also several historic flood records in close proximity to the site.		
Watercourses	The Swalecliffe Brook (main river) runs through the centre of the site from southwest to northeast.		
Groundwater Protection Zone	The site does not lie within a GWP.		
Geology	Bedrock: London Clay Formation (clay and silt) Superficial: Head (clay and silt)		
Indicative Ground Level (m AODN)	Land levels vary between 10.0m AODN and 35.67m AODN. Land levels fall towards the watercourses crossing the site, with a general slope of land to the north.		
Percentage of site at risk of flooding from surface water based on the EA's 'Risk of Flooding from Surface Water' Map	'High' risk scenario	6.6%	
	'Medium' risk scenario	10.1%	
	'Low' risk scenario	20.8%	
Description of Surface Water Flooding (EA's RoFSW Maps)	A surface water flow path is shown to run across the site following the course of the Swalecliffe Brook for all three scenarios. The risk of flooding from surface water can therefore be attributed to the risk of flooding from the river.		
Percentage of site at risk of flooding from fluvial sources based off modelling data available from the EA	Percentage of site at risk of flooding from fluvial sources during the defended scenario for key return period events. Maximum flood level on site shown in brackets.		
	1 in 100 year return period event	1 in 100 year return period event +45%cc	1 in 1000 year return period event
	7.5%	8.1%	9.0%
Flood Defences	The site benefits from natural high ground which provides a 1 in 5 year standard of protection.		
Description of Flood Mechanism	During a 1 in 50 year flood event, areas immediately surrounding the drainage ditch which becomes the Swalecliffe Brook are shown to be affected by flooding, with flood levels varying significantly between 11.1m and 14.3m AODN. For the 1 in 100 year flood event, flood levels are shown to increase by approximately 100mm. A similar increase is predicted for the 45% climate change scenarios.		
Hazard Rating for 1 in 100 year+45%cc	For the 1 in 100 year return period including a 45% allowance for climate change, the hazard rating varies between 'low' to 'significant' outside the river channel. However, the flood extent is confined to the immediate surrounding areas of the river.		

Flood Zone Map



Surface Water Map

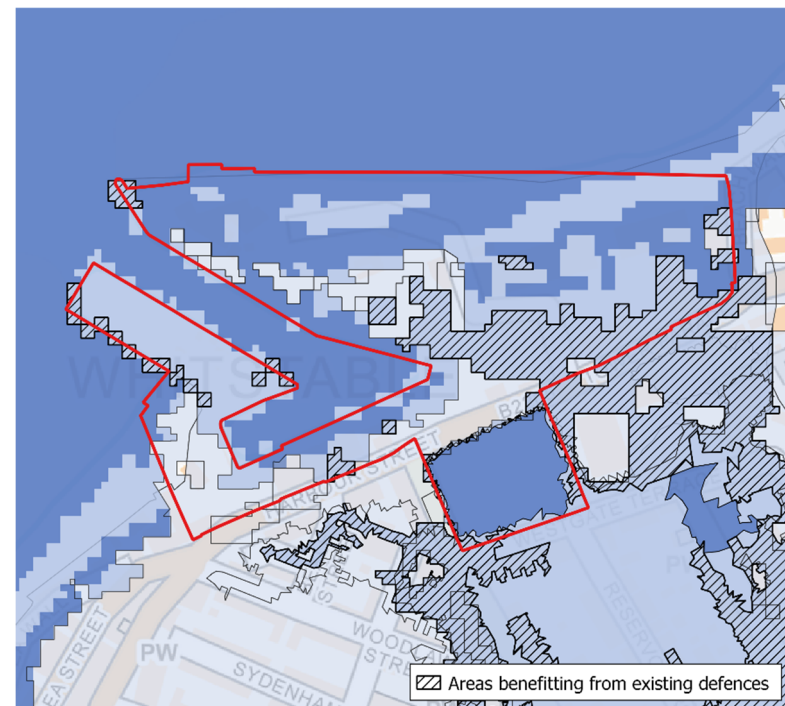


<p>Required Actions / Recommended Mitigation Measures</p>	<p>The site is located in Flood Zone 3. As a result, a detailed FRA is required to be undertaken. It should be recognised that the extent for the functional floodplain is indicative and therefore, a more detailed analysis is recommended as part of a site-specific FRA.</p> <p>SuDS should be considered to be included within the development where possible, in accordance with the NPPF and its planning practice guidance. All major development will require a SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site.</p> <p>For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary.</p> <p>The Sequential Approach should be applied to the layout of the site by locating the most vulnerable elements in the lowest risk areas. The Sequential Approach should also be applied to the internal layout of buildings, in particular where floor levels cannot be raised.</p> <p>Floor levels should be raised above the design flood level, including the Environment Agency’s recommended additional freeboard requirements where practicable.</p> <p>Flood resistance and resilience measures should be considered for inclusion.</p> <p>Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace floodwater and increase the risk of flooding to the surrounding area.</p> <p>The EA should be consulted where development is proposed within 8m of a main river to obtain consent via a Flood Risk Activity Permit (FRAP).</p>
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Whitstable Harbour

CCC ID: -		Policy: W2	
Proposals: Mixed-use		No of Units: -	
Existing Land Use: Brownfield		Area: 6.3ha	
Flood Zone Classification based on the EA's 'Flood Map for Planning'	Flood Zone 1	0.1%	
	Flood Zone 2	16.5%	
	Flood Zone 3	44.4%	
	Flood Zone 3b	39.0%	
Susceptible to Climate Change	Yes		
Exception Test required	Yes		
Flood History	The vast majority of the site has been affected by flooding in the past as a result of the 1953 storm surge.		
Watercourses	The Gorrell Stream (main river) is running through the southern site towards Whitstable Harbour.		
Groundwater Protection Zone	The site does not lie within a GPZ.		
Geology	Bedrock: London Clay Formation (clay and silt)		
	Superficial: Alluvium (clay, silt, sand and peat) across the majority of the site with Beach and Tidal Flat Deposits (clay, silt and sand) to the north of the site.		
Indicative Ground Level (m AODN)	Land levels vary between 1.7m AODN to the south and 5.0m AODN. Land levels are relatively flat with localised depressions to the south and east.		
Percentage of site at risk of flooding from surface water based on the EA's 'Risk of Flooding from Surface Water' Map	'High' risk scenario	10.3%	
	'Medium' risk scenario	13.9%	
	'Low' risk scenario	23.1%	
Description of Surface Water Flooding (EA's RoFSW Maps)	The majority of the site is shown to be at 'very low' risk of flooding from surface water. The southern half of the site is affected during all three scenarios with further flooding shown within the eastern half of the site where land levels are lowest.		
Percentage of site at risk of flooding from fluvial sources based off modelling data available from the EA	Percentage of site at risk of flooding from fluvial sources during the defended scenario for key return period events. Maximum flood level on site shown in brackets.		
	1 in 100 year return period event	1 in 100 year return period event +40%cc	1 in 1000 year return period event
	9.0% (2.38m AODN)	9.3% (2.54m AODN)	9.5% (2.78m AODN)
Percentage of site at risk of flooding from tidal sources based off modelling data available from the EA	Percentage of site at risk of flooding from tidal sources during the defended scenario for key return period events. Maximum flood level on site shown in brackets.		
	1 in 200 year return period event (current day)	1 in 200 year return period event (future year 2115)	1 in 1000 year return period event
	59.2%	80.1%	68.4%

Flood Zone Map



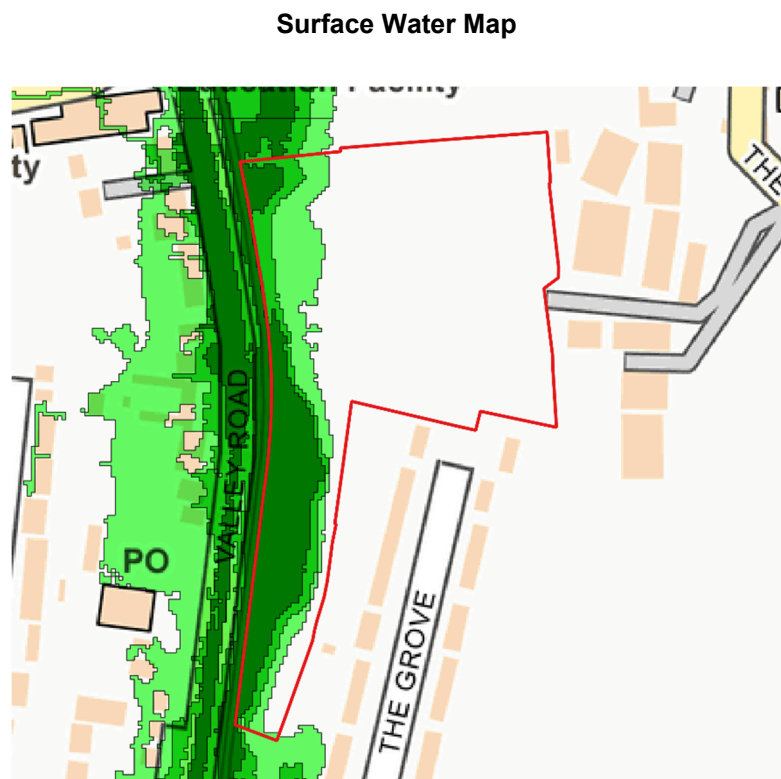
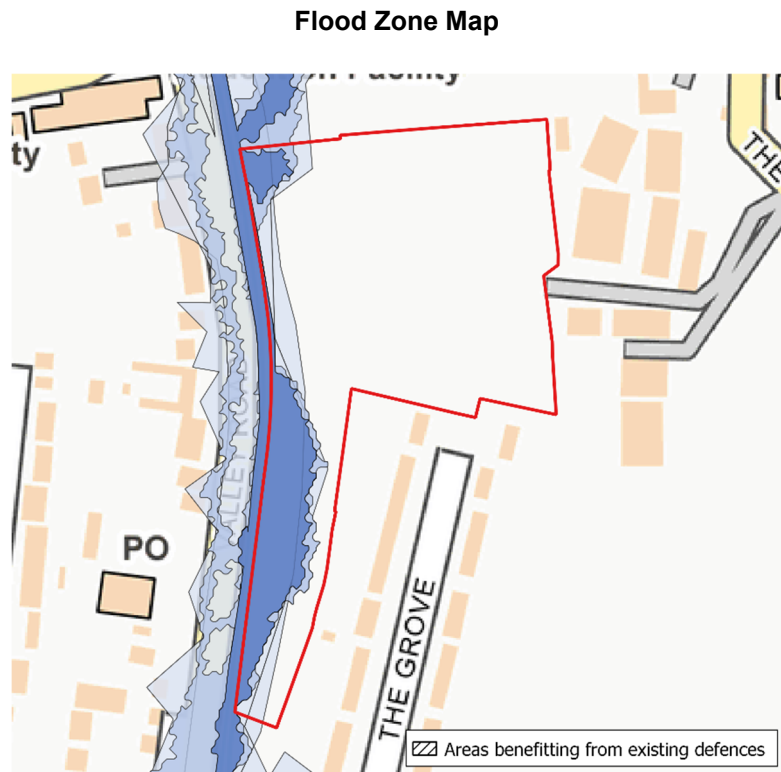
Surface Water Map



Flood Defences	A flood wall which provides a 1 in 200 year standard of protection runs through the site. In addition, there are other flood walls along Whitstable Harbour which are considered to provide the same standard of protection. The rear sea wall level is 5.8m AODN.
Description of Flood Mechanism	<p>Parts of the site are shown to be located within the tidal functional floodplain as a result of waves overtopping the defences. During the 1 in 200 year return period for the year 2070, the western half of the site is shown to be affected by flooding with a flood level of 5.03m AODN. Parts to the east are shown to be affected by flooding with a flood level of 3.76m AODN as a result of water overtopping the defence further to the east of the site. During the future year 2115, water is also shown to overtop the defences to the north of the site. The site is shown to be affected by all three breach scenarios, with the maximum predicted flood level of 5.5m AODN for the future year 2115.</p> <p>With regard to the fluvial risk of flooding from the Gorrell Stream, the predicted extent of flooding for all three scenarios as shown in the table above is limited to the lower-lying southern corner of the site.</p>
Hazard Rating	<p>The hazard rating for the 1 in 200 year return period including 100 years of climate change (i.e. future year 2115) is classified as 'low' to 'significant'.</p> <p>No hazard rating has been provided by the EA for the Gorrell Stream.</p>
Required Actions / Recommended Mitigation Measures	<p>The site is located in Flood Zone 3. As a result, a detailed FRA is required to be undertaken.</p> <p>SuDS should be considered to be included within the development where possible, in accordance with the NPPF and its planning practice guidance. All major development will require a SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site.</p> <p>For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary.</p> <p>The Sequential Approach should be applied to the layout of the site by locating the most vulnerable elements in the lowest risk areas. The Sequential Approach should also be applied to the internal layout of buildings, in particular where floor levels cannot be raised.</p> <p>Floor levels should be raised above the design flood level, including the Environment Agency's recommended additional freeboard requirements where practicable.</p> <p>Flood resistance and resilience measures should be considered for inclusion.</p> <p>Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace floodwater and increase the risk of flooding to the surrounding area.</p> <p>The EA should be consulted where development is proposed within 8m of a main river to obtain consent via a Flood Risk Activity Permit (FRAP).</p>

Land adjacent to Valley Road

CCC ID: SLAA062		Type: R23	
Proposals: Housing		No of Units: 9	
Existing Land Use: Greenfield		Area: 2.8ha	
Flood Zone Classification based on the EA's 'Flood Map for Planning'	Flood Zone 1	77.3%	
	Flood Zone 2	6.4%	
	Flood Zone 3a	6.1%	
	Flood Zone 3b	13.7%	
Susceptible to Climate Change	Yes		
Exception Test required	Yes		
Flood History	There are records of flooding along the western boundary as a result of the Nailbourne exceeding its river banks.		
Watercourses	The Nailbourne (main river) is an ephemeral stream and runs along the western site boundary.		
Groundwater Protection Zone	The eastern boundary runs along GWP III, however, the site itself is shown to be located outside.		
Geology	Bedrock: Lewes Nodular Chalk Formation (chalk)		
	Superficial: The western boundary is shown to be overlain by Alluvium (clay, silt, sand and gravel).		
Indicative Ground Level (m AODN)	Land levels vary between 47.9m AODN and 60.37m AODN. Land levels fall across the site from east to west towards the Nailbourne.		
Percentage of site at risk of flooding from surface water based on the EA's 'Risk of Flooding from Surface Water' Map	'High' risk scenario	15.1%	
	'Medium' risk scenario	21.0%	
	'Low' risk scenario	31.6%	
Description of Surface Water Flooding (EA's RoFSW Maps)	The site is shown to be at 'very low' to 'high' risk of flooding from surface water. The predicted extent of flooding is limited to the western boundary along the Nailbourne.		
Percentage of site at risk of flooding from fluvial sources based off modelling data available from the EA	Percentage of site at risk of flooding from fluvial sources during the defended scenario for key return period events. Maximum flood level on site shown in brackets.		
	1 in 100 year return period event	1 in 100 year return period event +45%cc	1 in 1000 year return period event
	16.3%	20.4%	21.5%
Flood Defences	The site benefits from natural high ground which provides a 1 in 5 year standard of protection.		
Description of Flood Mechanism	During the 1 in 30 year flood event, water is shown to exit the channel to the southwest of the site and flow towards the north before it joins the river channel again just south of the existing access footpath to the field. The maximum predicted flood level under this scenario varies between 47.9 and 49.2m AODN. During the 1 in 100 year flood event, the north-western corner of the site is also shown to be affected by flooding as a result of water coming out of channel and flowing overland. The flood level increases marginally (i.e. less than ~100mm) for both 35% and 45% climate change scenarios. Even during the 1 in 1000 year flood event, flooding is confined to the lower lying areas along the western boundary.		



<p>Hazard Rating for 1 in 100 year+45%cc</p>	<p>The hazard rating during the 1 in 100 year return period including a 45% allowance for climate change is classified as 'low' to 'significant'.</p>
<p>Required Actions / Recommended Mitigation Measures</p>	<p>The site is located in Flood Zone 3. As a result, a detailed FRA is required to be undertaken.</p> <p>SuDS should be considered to be included within the development where possible, in accordance with the NPPF and its planning practice guidance. All major development will require a SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site.</p> <p>For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary.</p> <p>The Sequential Approach should be applied to the layout of the site by locating the most vulnerable elements in the lowest risk areas. The Sequential Approach should also be applied to the internal layout of buildings, in particular where floor levels cannot be raised.</p> <p>Floor levels should be raised above the design flood level, including the Environment Agency's recommended additional freeboard requirements where practicable.</p> <p>Flood resistance and resilience measures should be considered for inclusion.</p> <p>Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace floodwater and increase the risk of flooding to the surrounding area.</p> <p>The EA should be consulted where development is proposed within 8m of a main river to obtain consent via a Flood Risk Activity Permit (FRAP).</p>