In partnership with:

**Medway Council**

# Level 2 Strategic Flood Risk Assessment

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Level 2 Strategic Flood Risk Assessment
# Medway Council

## Contents Amendment Record

This report has been issued and amended as follows:

| Issue | Revision | Description | Date | Written by | Checked by |
|---|---|---|---|---|---|
| 1 | 0 | Draft report | May 2025 | AB | AW |
| 2 | 1 | Report updated in line with new modelling. Final report issued. | November 2025 | AB | SMB |

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# 1.
# Scope and Summary of Appraisal

This report has been prepared to accompany the document titled 'Medway Council Sequential Test Report' prepared by EPS (formerly Herrington Consulting) in November 2025 and should be read in conjunction with this report.

Paragraph 177 of the National Planning Policy Framework (NPPF 2024) states that; "Having applied the sequential test, if 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. The need for the exception test will depend on the potential vulnerability of the site and of the development proposed, in line with the Flood Risk Vulnerability Classification set out in Annex 3."

Paragraph 178 of the NPPF 2024 reads;

- **Exception Test Part B** – To pass the Exception Test 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."

Therefore, this document applies Part B of the Exception Test to the sites identified within the Medway Strategic Land Availability Assessment (SLAA) preferred development option, which did not pass the Sequential Test.

A high-level application of Part B of the Exception Test has been carried out for all sites within Flood Zones 2 and 3, and for sites in any Flood Zone where over 5% of the gross site area is at 'high' risk of surface water flooding, and where over 40% of the gross area is at 'medium' risk of surface water flooding. In total, 50 sites were taken forward for the application of the Exception Test Part B, with the breakdown of the sites as follows:

- **9 sites** within Flood Zone 1, that have been identified to have a 'high' surface water risk which covers greater than 5% of the gross site area, and a 'medium' surface water risk which covers greater than 40% of the gross site area.
- **3 sites** within both Flood Zone 1 and 2, which have less than 10% of the gross area located within Flood Zone 2, that have been identified to have a 'high' surface water risk which covers less than 5% of the gross site area, and a 'medium' surface water risk which covers less than 40% of the gross site area.
- **38 sites** within Flood Zone 3 or partly within Flood Zone 3.

The aim of this appraisal is to inform the evidence base for the Sustainability Appraisal and Infrastructure Development Plan, to support the final allocation of sites within the Medway 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 application of 'Part B' of the Exception Test.

Recommendations are made on the basis of the best available information at this time and in absence of detailed proposals or Site Investigation data. Therefore, the suitability of any proposals is subject to appropriate Flood Risk Assessments in the context of wider planning objectives.

# 2.
# Definition of Assessment Criteria

## 2.1.
## 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:

**Site Reference** – The assigned site reference, as provided by Medway Council

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

Existing Land Use – States whether the site is currently a brownfield site (i.e., previously developed), or a greenfield site (i.e., undeveloped).

**Proposed Land Use** – States the proposed land use of the site (i.e., residential or commercial).

**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 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.

In some instances, a site is shown to be located/partially located within the functional floodplain, where this is the case, an * is located next to the Flood Zone 3b percentage stated. Further guidance is included in the 'Exception Test Required' and 'Required Actions / Recommended Mitigation Measures' sections.

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

**Development Lifetime** – States 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[1], but that the lifetime of a non-residential development depends on the characteristics of the development. For commercial development, a 75 year design life is typically assumed.

**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 zone classification and flood risk vulnerability classification. The application of the Exception Test has been summarised in Table 2.1 below.

[1] Paragraph 031 of the NPPG (September 2025)

| 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 | × | × |
| **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 | × |
| **Less Vulnerable** – Shops, offices, restaurants, general industry, agriculture, sewerage treatment plants. | ✓ | ✓ | ✓ | × |
| **Water Compatible Development** – Flood control infrastructure, sewerage infrastructure, docks, marinas, ship building, water-based recreation etc. | ✓ | ✓ | ✓ | ✓ |

Key :

| | |
|---|---|
| ✓ | Development is appropriate |
| × | Development should not be permitted |
| e | Exception Test required |

### Table 2.1 - Flood risk vulnerability and flood zone incompatibility.[2]

**Flood History** – Based on historic flood records provided by Medway Council 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, or within 100m of the site. If incidents were present, a brief description has been provided.

**Watercourse/Rivers** – Identifies any main rivers, ordinary or man-made watercourses near to the site. Based on the EA's 'Statutory Main River Map', OS mapping and satellite imagery.

**Percentage of site at risk of flooding from tidal sources and/or surface water** – For tidal flooding, analysis was undertaken using the NKC Modelling Study (2024 – provided

[2] Taken from Table 2 of the NPPG (September 2025)

by the EA) to identify the percentage of each site within the extent of flooding for a range of return period events. The analysis was carried out for the 'defended'. The maximum flood level on site was also extracted and is shown in brackets within the table.

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

- '**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 has between 1% and 3.3% chance of flooding.
- '**High**' risk means that each year this area has greater than 3.3% chance of flooding

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

**Existing Flood Defence Infrastructure** – A summary of the existing defence infrastructure which is based on the Medway Flood Defence High Level Appraisal (2011) and the EA's 'Spatial Flood Defence Dataset' (last updated in June 2024). Where available, the Standard of Protection (SoP) as provided by Medway Council has been listed.

**High Level Indicative Defence Cos**t – Where consideration should be given to upgrading existing defences, a high-level estimation of the costs associated with carrying out the works has been provided. This section assesses the cost of upgrading all defences that have an impact on each individual site with the aim of providing an indication of the cost to be shared amongst beneficiaries or defence upgrades.

All estimates have been based on the information contained within 'Cost Estimation for Coastal Protection – Summary of Evidence – Report SC080039/R7' and 'Cost Estimation for fluvial defences – Summary of Evidence – Report SC080039/R2' previously provided by the EA. The estimates do not account for inflation since the documents were published in March 2015, and the cost for the individual sites do include 'double counting' of defence costs where multiple sites benefit from the same defences. All figures are broad estimates, based on data available at the time of writing, and further detailed analysis will be required to determine a more accurate cost to upgrade the

defences. Further data on costs is available within MEASS, which considers the costs of options throughout a Benefit Area, which may be referred to where a scheme is considered to benefit a wider area and multiple beneficiaries. It is advised that as well as obtaining pre-app advice from the Council, that applicants also seek pre-app advice from the EA, who can provide further advice on their implementation plans for MEASS and how this may relate to development proposals.

**Flood Warning Area** – States whether the site is wholly or partially within a Flood Alert Area or Flood Warning Area based on the EA's 'Flood Warning Area's' dataset.

**Hazard Rating**[3] – The hazard rating classification outputs, provided as part of the NKC Modelling Study (2024), have been analysed and the percentage of the site which falls within each classification has been listed. There are four hazard rating classifications, as defined in Table 2.2 below, and the dominant Hazard Rating has been coloured within each site summary table (in the corresponding hazard rating colour) to allow for ease of comparison between sites.

| Hazard Rating (HR) | Degree of Flood Hazard | Description |
|---|---|---|
| < 0.75 | Low | Caution – shallow flowing water or deep standing water |
| 0.75 to 1.25 | Moderate | Dangerous for some, i.e., children – deep or fast flowing water |
| 1.25 to 2.0 | Significant | Dangerous for most people – deep fast flowing water |
| > 2.0 | Extreme | Dangerous for all – extreme danger with deep and fast flowing water |

**Table 2.2 – Classification of Hazard Rating Thresholds.**

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

**Required Actions / Recommended Mitigation Measures** – The 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 requirements to be considered as part of an FRA, and/or SWMS.

[3] Taken from the DEFRA Hazard Rating Report

## 2.2.
## Table of Individual Sites

The table below lists the sites that have been assessed as part of this appraisal alongside the flood zone classification. Appendix A.1 shows the location of these sites within Medway.

# 3.
# Site Summary Tables

## 3.1.
## Medium Risk Areas

### AS2

- **Site Area (Ha):** 0.341
- **Existing Land Use:** Brownfield
- **Proposed Land Use:** Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 100.0%
- **Flood Zone 2:** 0.0%
- **Flood Zone 3:** 0.0%
- **Flood Zone 3b:** 0.0%

Development lifetime

100 years

Exception Test required?

The Exception Test is not required to be applied for any vulnerability classification

Flood History

- **Incidents within the site:** None.
- **Incidents within close proximity of the site:** None.

Watercourses/Rivers

There is a drainage ditch along the southern border

Geology

- **Bedrock:** London Clay Formation - Clay and Silt
- **Superficial deposits:** Head - Clay, Silt, Sand and Gravel

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 0.00% (0.0m AODN)
- **1 in 200-year return period event – 2100:** 0.00% (0.0m AODN)
- **1 in 200-year return period event – 2125:** 0.00% (0.0m AODN)
- **1 in 1000-year return period event:** 0.00% (0.0m AODN)

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:** 15.4%
- **'Medium' risk scenario:** 4.3%
- **'Low' risk scenario:** 6.8%

Description of Surface Water Flow Paths

During all modelled scenarios, water is shown to accumulate onsite attributed to topographic depressions

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows the existing defences consist of an embankment with an effective crest level of 5.08m AODN, and has a condition rating of 3. The design standard of protection is 1 in 1000 years

High-Level Indication of Defence Costs

N/A – The site is predicted to remain unaffected from the River Medway and the sea for the lifetime of any development.

Flood Warning Area?

N/A

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 0.00%
- **'Moderate' Hazard Rating:** 0.00%
- **'Significant' Hazard Rating:** 0.00%
- **'Extreme' Hazard Rating:** 0.00%

Required Actions / Recommended Mitigation Measures

The site is located is at risk of flooding from surface water. As a result, a FRA, is required to be undertaken.

SuDS should be considered to be included within the development where possible, in accordance with the NPPF and its planning practice guidance.

Floor levels should be raised above the maximum depth of flooding from surface water, including an additional freeboard where practicable.

Flood resistance and resilience measures should be considered for inclusion.

The LPA should be consulted prior to the commencement of any works to obtain consent for any development proposed within 8m of any ordinary watercourse. Where the watercourse falls within the RSIDB area, the RSIDB should be consulted to obtain consent.

### CCB15

- **Site Area (Ha):** 0.337
- **Existing Land Use:** Brownfield
- **Proposed Land Use:** Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 91.6%
- **Flood Zone 2:** 8.4%
- **Flood Zone 3:** 0.0%
- **Flood Zone 3b:** 0.0%

Development lifetime

100 years

Exception Test required?

The Exception Test is not required to be applied for development classified as 'more vulnerable'.

Flood History

- **Incidents within the site:** None.
- **Incidents within close proximity of the site:** None.

Watercourses/Rivers

The River Medway is approximately 485m northwest of the site.

Geology

- **Bedrock:** Lewes Nodular Chalk Formation – Chalk
- **Superficial deposits:** Head - Clay, Silt, Sand and Gravel

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 0.00% (0.0m AODN)
- **1 in 200-year return period event – 2100:** 33.19% (5.79m AODN)
- **1 in 200-year return period event – 2125:** 36.77% (6.10m AODN)
- **1 in 1000-year return period event:** 9.05% (4.92m AODN)

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:** 1.8%
- **'Medium' risk scenario:** 0.5%
- **'Low' risk scenario:** 97.4%

Description of Surface Water Flow Paths

During the 'high' and 'medium' risk scenario, surface water is shown to encroach onto the northern corner. Under the 'low' risk scenario, the entire site is shown to be affected by a surface water flow path.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows the existing defences consist of natural and engineered high ground and has an actual crest level between 4.60m and 5.49m AODN. The current condition rating is unknown. The design standard of protection is 1 in 100 years.

High-Level Indication of Defence Costs

Based on an average cost of £1,152/m to raise an existing embankment, it is estimated to cost in the region of £550,000 to upgrade the 450m of defences in order to protect the site for the lifetime of any development.

Flood Warning Area?

Yes

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 11.19%
- **'Moderate' Hazard Rating:** 12.89%
- **'Significant' Hazard Rating:** 11.87%
- **'Extreme' Hazard Rating:** 0.00%

Required Actions / Recommended Mitigation Measures

The site is located in Flood Zones 2 and therefore will require a detailed Flood Risk Assessment.

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.

The development should meet the requirements of the EA's Flood Risk Standing Advice, which applies for 'less vulnerable' and 'more vulnerable' development within Flood Zone 2.

Floor levels should be raised above the maximum depth of flooding from surface water, including an additional freeboard where practicable.

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.

Flood resistance and resilience measures should be considered for inclusion.

Flood Hazard should be appraised against the proposed development layout to ensure that users and occupants of the site can achieve safe access and egress.

**LW10**

- **Site Area (Ha):** 0.310
- **Existing Land Use:** Brownfield
- **Proposed Land Use:** Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 100.0%
- **Flood Zone 2:** 0.0%
- **Flood Zone 3:** 0.0%
- **Flood Zone 3b:** 0.0%

Development lifetime

100 years

Exception Test required?

The Exception Test is not required to be applied for any vulnerability classification.

Flood History

- **Incidents within the site:** None.
- **Incidents within close proximity of the site:** None.

Watercourses/Rivers

No watercourses/rivers are located within close proximity to the site.

Geology

- **Bedrock:** Lewes Nodular Chalk Formation – Chalk
- **Superficial deposits:** Head - Clay, Silt, Sand and Gravel

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 0.00% (0.00m AODN)
- **1 in 200-year return period event – 2100:** 0.00% (0.00m AODN)
- **1 in 200-year return period event – 2125:** 0.00% (0.00m AODN)
- **1 in 1000-year return period event:** 0.00% (0.00m AODN)

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:** 7.7%
- **'Medium' risk scenario:** 24.6%
- **'Low' risk scenario:** 46.9%

Description of Surface Water Flow Paths

Under the 'high' risk scenario, surface water is shown to accumulate within the north of the site. Under the 'medium' and 'low' risk scenarios, there is a surface water flow path onsite.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows no existing defences nearby.

High-Level Indication of Defence Costs

N/A - There are no defences near to the site and the site is predicted to remain unaffected from the River Medway for the lifetime of development based on current data.

Flood Warning Area?

No

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 0.00%
- **'Moderate' Hazard Rating:** 0.00%
- **'Significant' Hazard Rating:** 0.00%
- **'Extreme' Hazard Rating:** 0.00%

Required Actions / Recommended Mitigation Measures

The site is at risk of flooding from surface water. As a result, a FRA is required to be undertaken.

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.

Floor levels should be raised above the maximum depth of flooding from surface water, including an additional freeboard where practicable.

Flood resistance and resilience measures should be considered for inclusion.

**HHH6**

- **Site Area (Ha):** 30.050
- **Existing Land Use:** Greenfield
- **Proposed Land Use:** Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 100.0%
- **Flood Zone 2:** 0.0%
- **Flood Zone 3:** 0.0%
- **Flood Zone 3b:** 0.0%

Development lifetime

100 years

Exception Test required?

The Exception Test is not required to be applied for any vulnerability classification.

Flood History

- **Incidents within the site:** None.
- **Incidents within close proximity of the site:** None.

Watercourses/Rivers

There are multiple drainage ditches onsite. The River Medway (Upnor Reach) is located approximately 920m south of the site.

Geology

- **Bedrock:** London Clay Formation - Clay and Silt
- **Superficial deposits:** Head - Clay, Silt, Sand and Gravel

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 0.00% (0.00m AODN)
- **1 in 200-year return period event – 2100:** 0.00% (0.00m AODN)
- **1 in 200-year return period event – 2125:** 0.00% (0.00m AODN)
- **1 in 1000-year return period event:** 0.00% (0.00m AODN)

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:** 12.6%
- **'Medium' risk scenario:** 3.6%
- **'Low' risk scenario:** 9.8%

Description of Surface Water Flow Paths

Under the 'high' risk scenario, surface water is shown to accumulate within the southeastern corner of the site. Also, due to multiple drainage ditches onsite, surface water is shown to accumulate under all modelled scenarios.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows the existing defences consist of natural high ground with an actual crest level between 4.67m and 5.82m AODN. The current condition rating is unknown. The design standard of protection is 1 in 1000 years.

High-Level Indication of Defence Costs

N/A - The site is predicted to remain unaffected from the River Medway and the sea for the lifetime of development based on current data.

Flood Warning Area?

N/A

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 0.00%
- **'Moderate' Hazard Rating:** 0.00%
- **'Significant' Hazard Rating:** 0.00%
- **'Extreme' Hazard Rating:** 0.00%

Required Actions / Recommended Mitigation Measures

The site is at risk of flooding from surface water and greater than 1ha. As a result, a FRA is required to be undertaken.

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.

Floor levels should be raised above the maximum depth of flooding from surface water, including an additional freeboard where practicable.

Flood resistance and resilience measures should be considered for inclusion.

The LPA should be consulted prior to the commencement of any works to obtain consent for any development proposed within 8m of any ordinary watercourse. Where the watercourse falls within the RSIDB area, the RSIDB should be consulted to obtain consent.

**SR4**

- **Site Area (Ha):** 6.290
- **Existing Land Use:** Greenfield
- **Proposed Land Use:** Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 100.0%
- **Flood Zone 2:** 0.0%
- **Flood Zone 3:** 0.0%
- **Flood Zone 3b:** 0.0%

Development lifetime

100 years

Exception Test required?

The Exception Test is not required to be applied for any vulnerability classification.

Flood History

- **Incidents within the site:** None.
- **Incidents within close proximity of the site:** None.

Watercourses/Rivers

There is a drainage ditch along the northern border.

Geology

- **Bedrock:** London Clay Formation - Clay and Silt

- **Superficial deposits:** No Superficial deposits

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 0.00% (0.00m AODN)
- **1 in 200-year return period event – 2100:** 0.00% (0.00m AODN)
- **1 in 200-year return period event – 2125:** 0.00% (0.00m AODN)
- **1 in 1000-year return period event:** 0.00% (0.00m AODN)

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:** 8.0%
- **'Medium' risk scenario:** 1.1%
- **'Low' risk scenario:** 6.3%

Description of Surface Water Flow Paths

Under all modelled scenarios, water is shown to accumulate in the south of the site. There are also small areas along the northern and western borders.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows no existing defences nearby.

High-Level Indication of Defence Costs

N/A - There are no defences near to the site and the site is predicted to remain unaffected from the River Medway and the sea for the lifetime of any development.

Flood Warning Area?

N/A

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 0.00%
- **'Moderate' Hazard Rating:** 0.00%
- **'Significant' Hazard Rating:** 0.00%
- **'Extreme' Hazard Rating:** 0.00%

Required Actions / Recommended Mitigation Measures

The site is at risk of flooding from surface water and greater than 1ha. As a result, a FRA is required to be undertaken.

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.

Floor levels should be raised above the maximum depth of flooding from surface water, including an additional freeboard where practicable.

Flood resistance and resilience measures should be considered for inclusion.

The LPA should be consulted prior to the commencement of any works to obtain consent for any development proposed within 8m of any ordinary watercourse. Where the watercourse falls within the RSIDB area, the RSIDB should be consulted to obtain consent.

**CCB1**

- **Site Area (Ha):** 0.232
- **Existing Land Use:** Brownfield
- **Proposed Land Use:** Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 100.0%
- **Flood Zone 2:** 0.0%
- **Flood Zone 3:** 0.0%
- **Flood Zone 3b:** 0.0%

Development lifetime

100 years

Exception Test required?

The Exception Test is not required to be applied for any vulnerability classification.

Flood History

- **Incidents within the site:** None.
- **Incidents within close proximity of the site:** None.

Watercourses/Rivers

The River Medway is located approximately 220m north of the site.

Geology

- **Bedrock:** Lewes Nodular Chalk Formation – Chalk

- **Superficial deposits:** Head - Clay, Silt, Sand and Gravel

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 0.00% (0.00m AODN)
- **1 in 200-year return period event – 2100:** 0.00% (0.00m AODN)
- **1 in 200-year return period event – 2125:** 0.00% (0.00m AODN)
- **1 in 1000-year return period event:** 0.00% (0.00m AODN)

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:** 20.1%
- **'Medium' risk scenario:** 13.6%
- **'Low' risk scenario:** 32.3%

Description of Surface Water Flow Paths

Under all modelled scenarios, surface water is shown to accumulate onsite.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows the existing defences consist of natural high ground and engineered high ground with an actual crest level of between 4.60m and 5.49m AODN. The current condition rating is unknown. The design standard of protection is 1 in 100 years.

High-Level Indication of Defence Costs

N/A - The site is predicted to remain unaffected from the River Medway and the sea for the lifetime of development based on current data.

Flood Warning Area?

N/A

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 0.00%
- **'Moderate' Hazard Rating:** 0.00%
- **'Significant' Hazard Rating:** 0.00%
- **'Extreme' Hazard Rating:** 0.00%

Required Actions / Recommended Mitigation Measures

The site is at risk of flooding from surface water. As a result, a FRA is required to be undertaken.

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.

Floor levels should be raised above the maximum depth of flooding from surface water, including an additional freeboard where practicable.

Flood resistance and resilience measures should be considered for inclusion.

## RWB19

- **Site Area (Ha):** 1.567
- **Existing Land Use:** Brownfield
- **Proposed Land Use:** Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 100.0%
- **Flood Zone 2:** 0.0%
- **Flood Zone 3:** 0.0%
- **Flood Zone 3b:** 0.0%

Development lifetime

100 years

Exception Test required?

The Exception Test is not required to be applied for any vulnerability classification.

Flood History

- **Incidents within the site:** None.
- **Incidents within close proximity of the site:** None.

Watercourses/Rivers

River Medway approximately 120m east of the site

Geology

- **Bedrock:** Lewes Nodular Chalk Formation – Chalk
- **Superficial deposits:** Alluvium - Clay, Silt, Sand and Peat, Head - Clay, Silt, Sand and Gravel

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 0.00% (0.00m AODN)
- **1 in 200-year return period event – 2100:** 0.00% (0.00m AODN)
- **1 in 200-year return period event – 2125:** 0.00% (0.00m AODN)
- **1 in 1000-year return period event:** 0.00% (0.00m AODN)

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:** 47.2%
- **'Medium' risk scenario:** 24.3%
- **'Low' risk scenario:** 21.2%

Description of Surface Water Flow Paths

Under all modelled scenarios, surface water could accumulate on the majority of the site.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows the existing defences consist of a wall with an actual crest level of between 5.77m and 6.40m AODN. The current condition rating is unknown. The design standard of protection is 1 in 1000 years.

High-Level Indication of Defence Costs

N/A - The site is predicted to remain unaffected from the River Medway and the sea for the lifetime of development based on current data.

Flood Warning Area?

N/A

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 0.00%
- **'Moderate' Hazard Rating:** 0.00%
- **'Significant' Hazard Rating:** 0.00%
- **'Extreme' Hazard Rating:** 0.00%

Required Actions / Recommended Mitigation Measures

The site is at risk of flooding from surface water and greater than 1ha. As a result, a FRA is required to be undertaken.
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.
Floor levels should be raised above the maximum depth of flooding from surface water, including an additional freeboard where practicable.
Flood resistance and resilience measures should be considered for inclusion.

### REWW3

- **Site Area (Ha):** 0.341
- **Existing Land Use:** Brownfield
- **Proposed Land Use:** Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 100.0%
- **Flood Zone 2:** 0.0%
- **Flood Zone 3:** 0.0%
- **Flood Zone 3b:** 0.0%

Development lifetime

100 years

Exception Test required?

The Exception Test is not required to be applied for any vulnerability classification.

Flood History

- **Incidents within the site:** None.
- **Incidents within close proximity of the site:** None.

Watercourses/Rivers

The River Medway is located approximately 720m northeast of the site.

Geology

- **Bedrock:** Lewes Nodular Chalk Formation – Chalk
- **Superficial deposits:** Head - Clay, Silt, Sand and Gravel

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 0.00% (0.00m AODN)
- **1 in 200-year return period event – 2100:** 0.00% (0.00m AODN)
- **1 in 200-year return period event – 2125:** 0.00% (0.00m AODN)
- **1 in 1000-year return period event:** 0.00% (0.00m AODN)

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:** 17.8%
- **'Medium' risk scenario:** 11.9%
- **'Low' risk scenario:** 20.2%

Description of Surface Water Flow Paths

Under all modelled scenarios, there is a surface water flow path across the site.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows the existing defences consist of a wall with an actual crest level of between 5.77m and 5.79m AODN. The current condition rating is unknown. The design standard of protection is 1 in 1000 years.

High-Level Indication of Defence Costs

N/A - The site is predicted to remain unaffected from the River Medway and the sea for the lifetime of development based on current data

Flood Warning Area?

No

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 0.00%
- **'Moderate' Hazard Rating:** 0.00%
- **'Significant' Hazard Rating:** 0.00%
- **'Extreme' Hazard Rating:** 0.00%

Required Actions / Recommended Mitigation Measures

The site is at risk of flooding from surface water. As a result, a FRA is required to be undertaken.

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.

Floor levels should be raised above the maximum depth of flooding from surface water, including an additional freeboard where practicable.

Flood resistance and resilience measures should be considered for inclusion.

**SNF8**

- **Site Area (Ha):** 0.264
- **Existing Land Use:** Brownfield
- **Proposed Land Use:** Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 96.7%
- **Flood Zone 2:** 3.1%
- **Flood Zone 3:** 0.0%
- **Flood Zone 3b:** 0.0%

Development lifetime

100 years

Exception Test required?

The Exception Test is not required to be applied for development classified as 'more vulnerable'.

Flood History

- **Incidents within the site:** None.
- **Incidents within close proximity of the site:** None.

Watercourses/Rivers

The River Medway (Bridge Reach) is located approximately 185m southeast of the site.

Geology

- **Bedrock:** Lewes Nodular Chalk Formation, Seaford Chalk Formation and Newhaven Chalk Formation (undifferentiated) – Chalk
- **Superficial deposits:** Head - Clay and Silt

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 0.00% (0.00m AODN)
- **1 in 200-year return period event – 2100:** 20.84% (5.81m AODN)
- **1 in 200-year return period event – 2125:** 20.84% (6.10m AODN)
- **1 in 1000-year return period event:** 12.83% (5.29m AODN)

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:** 0.0%

Description of Surface Water Flow Paths

Under all modelled scenarios, the entire site is shown to remain dry.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows the existing defences consist of a wall and natural high ground with an actual crest level of between 4.05m and 4.10m AODN. The current condition rating is unknown. The design standard of protection is 1 in 10 years.

High-Level Indication of Defence Costs

Based on an average cost of £1,526/m to raise an existing defence wall, it is estimated to cost in the region of £475,000 to upgrade the 300m of defences in order to protect the site for the lifetime of any development.

Flood Warning Area?

Yes

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 5.74%
- **'Moderate' Hazard Rating:** 11.30%
- **'Significant' Hazard Rating:** 3.37%
- **'Extreme' Hazard Rating:** 0.00%

Required Actions / Recommended Mitigation Measures

The site is located in Flood Zones 1 and 2, and therefore will require a detailed Flood Risk Assessment.

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.

The development should meet the requirements of the EA's Flood Risk Standing Advice, which applies for 'less vulnerable' and 'more vulnerable' development within Flood Zone 2.

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.

Flood resistance and resilience measures should be considered for inclusion.

Flood Hazard should be appraised against the proposed development layout to ensure that users and occupants of the site can achieve safe access and egress.

**SNF5**

- **Site Area (Ha):** 0.353
- **Existing Land Use:** Mostly Greenfield
- **Proposed Land Use:** Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 100.0%
- **Flood Zone 2:** 0.0%
- **Flood Zone 3:** 0.0%
- **Flood Zone 3b:** 0.0%

Development lifetime

100 years

Exception Test required?

The Exception Test is not required to be applied for any vulnerability classification.

Flood History

- **Incidents within the site:** None.
- **Incidents within close proximity of the site:** None.

Watercourses/Rivers

The River Medway (Bridge Reach) is located approximately 790m southeast of the site.

Geology

- **Bedrock:** Lewes Nodular Chalk Formation, Seaford Chalk Formation and Newhaven Chalk Formation (undifferentiated) – Chalk
- **Superficial deposits:** No Superficial deposits

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 0.00% (0.00m AODN)
- **1 in 200-year return period event – 2100:** 0.00% (0.00m AODN)
- **1 in 200-year return period event – 2125:** 0.00% (0.00m AODN)
- **1 in 1000-year return period event:** 0.00% (0.00m AODN)

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:** 11.9%
- **'Medium' risk scenario:** 8.3%
- **'Low' risk scenario:** 18.6%

Description of Surface Water Flow Paths

Under all modelled scenarios, surface water is shown to accumulate onsite.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows the existing defences consist of natural high ground and a wall with an actual crest level of between 4.50m and 5.20m AODN. The current condition rating is unknown. The design standard of protection is 1 in 50 and 1 in 200 years.

High-Level Indication of Defence Costs

Based on an average cost of £1,152/m to raise an existing embankment, it is estimated to cost in the region of £475,000 to upgrade the 400m of defences in order to protect the site for the lifetime of any development

Flood Warning Area?

No

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 0.00%
- **'Moderate' Hazard Rating:** 0.00%
- **'Significant' Hazard Rating:** 0.00%
- **'Extreme' Hazard Rating:** 0.00%

Required Actions / Recommended Mitigation Measures

The site is at risk of flooding from surface water. As a result, a FRA is required to be undertaken.

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.

Floor levels should be raised above the maximum depth of flooding from surface water, including an additional freeboard where practicable.

Flood resistance and resilience measures should be considered for inclusion.

**CCB20**

- **Site Area (Ha):** 0.498
- **Existing Land Use:** Brownfield
- **Proposed Land Use:** Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 94.1%
- **Flood Zone 2:** 5.9%
- **Flood Zone 3:** 0.0%
- **Flood Zone 3b:** 0.0%

Development lifetime

100 years

Exception Test required?

The Exception Test is not required to be applied for development classified as 'more vulnerable'.

Flood History

- **Incidents within the site:** None.
- **Incidents within close proximity of the site:** None.

Watercourses/Rivers

The River Medway is located approximately 620m northwest of the site.

Geology

- **Bedrock:** Lewes Nodular Chalk Formation – Chalk
- **Superficial deposits:** Head - Clay, Silt, Sand and Gravel

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 0.00% (0.00m AODN)
- **1 in 200-year return period event – 2100:** 9.31% (5.79m AODN)
- **1 in 200-year return period event – 2125:** 9.39% (6.09m AODN)
- **1 in 1000-year return period event:** 0.00% (0.00m AODN)

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:** 2.1%

Description of Surface Water Flow Paths

Under the 'high' and 'medium' risk scenario, the entire site is shown to remain dry. Under the 'low' risk scenario, surface water could accumulate over a small portion of the northern corner of the site.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows the existing defences consist of natural high ground with an actual crest level of between 4.75m and 4.93m AODN. The current condition rating is unknown. The design standard of protection is 1 in 100 years

High-Level Indication of Defence Costs

Based on an average cost of £1,152/m to raise an existing embankment, it is estimated to cost in the region of £250,000 to upgrade the 200m of defences in order to protect the site for the lifetime of any development

Flood Warning Area?

Yes

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 0.12%
- **'Moderate' Hazard Rating:** 4.33%
- **'Significant' Hazard Rating:** 4.89%
- **'Extreme' Hazard Rating:** 0.00%

Required Actions / Recommended Mitigation Measures

The site is located in Flood Zones 1 and 2, and therefore will require a detailed Flood Risk Assessment.

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.

The development should meet the requirements of the EA's Flood Risk Standing Advice, which applies for 'less vulnerable' and 'more vulnerable' development within Flood Zone 2.

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.

Flood resistance and resilience measures should be considered for inclusion.

Flood Hazard should be appraised against the proposed development layout to ensure that users and occupants of the site can achieve safe access and egress.

**SNF17**

- **Site Area (Ha):** 0.024
- **Existing Land Use:** Brownfield
- **Proposed Land Use:** Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 94.4%
- **Flood Zone 2:** 5.6%
- **Flood Zone 3:** 0.0%
- **Flood Zone 3b:** 0.0%

Development lifetime

100 years

Exception Test required?

The Exception Test is not required to be applied for development classified as 'more vulnerable'.

Flood History

- **Incidents within the site:** None.
- **Incidents within close proximity of the site:** None.

Watercourses/Rivers

The River Medway (Bridge Reach) is located approximately 235m southeast of the site.

Geology

- **Bedrock:** Lewes Nodular Chalk Formation, Seaford Chalk Formation and Newhaven Chalk Formation (undifferentiated) – Chalk
- **Superficial deposits:** Head - Clay and Silt

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 0.00% (0.00m AODN)
- **1 in 200-year return period event – 2100:** 71.71% (5.77m AODN)
- **1 in 200-year return period event – 2125:** 71.72% (6.11m AODN)
- **1 in 1000-year return period event:** 0.00% (0.00m AODN)

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:** 0.7%
- **'Low' risk scenario:** 0.0%

Description of Surface Water Flow Paths

Under the 'high' and 'medium' risk scenario, surface water is shown to accumulate within a small area in the north of the site. Under the 'low' risk scenario, the extent does not increase from the 'medium' risk scenario.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows the existing defences consist of natural high ground and a wall with an actual crest level of between 4.50m and 5.20m AODN. The current condition rating is unknown. The design standard of protection is 1 in 50 and 1 in 200 years.

High-Level Indication of Defence Costs

Based on an average cost of £1,152/m to raise an existing embankment, it is estimated to cost in the region of £300,000 to upgrade the 250m of defences in order to protect the site for the lifetime of any development.

Flood Warning Area?

Yes

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 0.00%
- **'Moderate' Hazard Rating:** 29.88%
- **'Significant' Hazard Rating:** 0.00%
- **'Extreme' Hazard Rating:** 0.00%

Required Actions / Recommended Mitigation Measures

The site is located in Flood Zones 1 and 2, and therefore will require a detailed Flood Risk Assessment.

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.

The development should meet the requirements of the EA's Flood Risk Standing Advice, which applies for 'less vulnerable' and 'more vulnerable' development within Flood Zone 2.

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.

Flood resistance and resilience measures should be considered for inclusion.

Flood Hazard should be appraised against the proposed development layout to ensure that users and occupants of the site can achieve safe access and egress

**FP25**

- **Site Area (Ha):** 2.590
- **Existing Land Use:** Brownfield
- **Proposed Land Use:** Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 100.0%
- **Flood Zone 2:** 0.0%
- **Flood Zone 3:** 0.0%
- **Flood Zone 3b:** 0.0%

Development lifetime

100 years

Exception Test required?

The Exception Test is not required to be applied for any vulnerability classification.

Flood History

- **Incidents within the site:** None.
- **Incidents within close proximity of the site:** None.

Watercourses/Rivers

The River Medway is located approximately 270m north of the site.

Geology

- **Bedrock:** Lewes Nodular Chalk Formation – Chalk
- **Superficial deposits:** Head - Clay, Silt, Sand and Gravel

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 0.00% (0.00m AODN)
- **1 in 200-year return period event – 2100:** 0.00% (0.00m AODN)
- **1 in 200-year return period event – 2125:** 0.00% (0.00m AODN)
- **1 in 1000-year return period event:** 0.00% (0.00m AODN)

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:** 17.5%
- **'Medium' risk scenario:** 26.0%
- **'Low' risk scenario:** 16.8%

Description of Surface Water Flow Paths

Under all modelled scenarios, surface water is shown to accumulate onsite. However, this is likely due to the lowered land for the railway line.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows the existing defences consist of engineered high ground and a wall with an actual crest level of between 4.60m and 5.49m AODN. The current condition rating is unknown. The design standard of protection is 1 in 100 and 1 in 1000 years

High-Level Indication of Defence Costs

Based on an average cost of £1,526/m to raise an existing defence wall, it is estimated to cost in the region of £550,000 to upgrade the 350m of defences in order to protect the site for the lifetime of any development

Flood Warning Area?

No

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 0.00%
- **'Moderate' Hazard Rating:** 0.00%
- **'Significant' Hazard Rating:** 0.00%
- **'Extreme' Hazard Rating:** 0.00%

Required Actions / Recommended Mitigation Measures

The site is at risk of flooding from surface water and greater than 1ha. As a result, a FRA is required to be undertaken.

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.

Floor levels should be raised above the maximum depth of flooding from surface water, including an additional freeboard where practicable.

Flood resistance and resilience measures should be considered for inclusion.

## 3.2.
## High Risk Areas

### CHR14

- **Site Area (Ha):** 11.396
- **Existing Land Use:** Brownfield
- **Proposed Land Use:** Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 36.7%
- **Flood Zone 2:** 1.6%
- **Flood Zone 3:** 61.8%
- **Flood Zone 3b:** ~63.9% *refer to text below

Development lifetime

100 years

Exception Test required?

Development which has a 'more vulnerable' classification will be subject to the Exception Test. 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 if it is located within Flood Zone 3b. 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.

Flood History

- **Incidents within the site:** None.
- **Incidents within close proximity of the site:** None.

Watercourses/Rivers

The River Medway (Wickham Reach) is located along the southern border.

Geology

- **Bedrock:** Lewes Nodular Chalk Formation - Chalk, New Pit Chalk Formation – Chalk
- **Superficial deposits:** Alluvium - Clay, Silt, Sand and Peat, Beach and Tidal Flat Deposits (undifferentiated) - Clay, Silt and Sand, Head - Clay and Silt

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 65.70% (4.98m AODN)
- **1 in 200-year return period event – 2100:** 69.76% (5.94m AODN)
- **1 in 200-year return period event – 2125:** 71.46% (6.30m AODN)
- **1 in 1000-year return period event:** 68.11% (5.48m AODN)

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:** 0.3%
- **'Medium' risk scenario:** 0.3%
- **'Low' risk scenario:** 19.1%

Description of Surface Water Flow Paths

During all modelled scenarios, a small area of localised flooding could occur in the southwest of the site. Under the 'low' risk scenario, surface water could accumulate in the northeast portion of the site.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows the existing defences consist of an embankment and naturally elevated ground. The defences have an actual crest level between 3.58 - 5.21m AODN. The current condition rating is unknown. The design standard of protection is between 1 in 5 and 1 in 200 years.

High-Level Indication of Defence Costs

Based on an average cost of £1,152/m to raise an existing embankment, it is estimated to cost in the region of £1,500,000 to upgrade the 1300m of defences in order to protect the site for the lifetime of any development.

Flood Warning Area?

Yes

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 2.47%
- **'Moderate' Hazard Rating:** 3.70%
- **'Significant' Hazard Rating:** 11.49%
- **'Extreme' Hazard Rating:** 53.08%

Required Actions / Recommended Mitigation Measures

The site is located in Flood Zones 2 and 3, and therefore will require a detailed Flood Risk Assessment.

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.

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.

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.

Flood Hazard should be appraised against the proposed development layout to ensure that users and occupants of the site can achieve safe access and egress.

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).

**HHH32**

- **Site Area (Ha):** 0.787
- **Existing Land Use:** Brownfield
- **Proposed Land Use:** Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 0.0%
- **Flood Zone 2:** 0.0%
- **Flood Zone 3:** 100.0%
- **Flood Zone 3b:** 0.0%

Development lifetime

100 years

Exception Test required?

Development which has a 'more vulnerable' classification will be subject to the Exception Test.

Flood History

- **Incidents within the site:** None.

- **Incidents within close proximity of the site:** EA Recorded Flood datasets shows the site was affected from the sea in 1953 due to waves overtopping the defences.

Watercourses/Rivers

The Hoo Flats are located approximately 490m south of the site.

Geology

- **Bedrock:** London Clay Formation - Clay and Silt
- **Superficial deposits:** River Terrace Deposits, 1 - Clay and Silt

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 0.00% (0.00m AODN)
- **1 in 200-year return period event – 2100:** 91.23% (5.83m AODN)
- **1 in 200-year return period event – 2125:** 91.23% (6.12m AODN)
- **1 in 1000-year return period event:** 86.31% (5.39m AODN)

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:** 0.0%

Description of Surface Water Flow Paths

Under all modelled scenarios, the site is shown to remain dry.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows the existing defences consist of an embankment with an effective crest level of 5.05m AODN, and has a condition rating of 3. The design standard of protection is 1 in 1000 years.

High-Level Indication of Defence Costs

Based on an average cost of £1,152/m to raise an existing embankment, it is estimated to cost in the region of £1,400,000 to upgrade the 1200m of defences in order to protect the site for the lifetime of any development.

Flood Warning Area?

Yes

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 6.08%
- **'Moderate' Hazard Rating:** 13.27%
- **'Significant' Hazard Rating:** 53.51%
- **'Extreme' Hazard Rating:** 18.07%

Required Actions / Recommended Mitigation Measures

The site is located in Flood Zones 3, and therefore will require a detailed Flood Risk Assessment.

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.

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.

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.

Flood Hazard should be appraised against the proposed development layout to ensure that users and occupants of the site can achieve safe access and egress.

**HHH12**

- **Site Area (Ha):** 131.268
- **Existing Land Use:** Mostly Greenfield
- **Proposed Land Use:** Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 98.0%
- **Flood Zone 2:** 0.6%
- **Flood Zone 3:** 1.4%
- **Flood Zone 3b:** ~0.3% *refer to text below

Development lifetime

100 years

Exception Test required?

Development which has a 'more vulnerable' classification will be subject to the Exception Test. 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 if it is located within Flood Zone 3b. . 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.

Flood History

- **Incidents within the site:** None.
- **Incidents within close proximity of the site:** EA Recorded Flood datasets shows the site was affected from the sea in 1953 due to waves overtopping the defences.

Watercourses/Rivers

The River Medway (Upnor Reach and Short Reach) is located along the southern border of the site.

Geology

- **Bedrock:** London Clay Formation - Clay and Silt, Lambeth Group - Sand, Silt and Clay
- **Superficial deposits:** Head - Clay, Silt, Sand and Gravel, River Terrace Deposits, 1 - Clay and Silt

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 0.27% (4.93m AODN)
- **1 in 200-year return period event – 2100:** 1.06% (5.72m AODN)
- **1 in 200-year return period event – 2125:** 3.86% (6.06m AODN)
- **1 in 1000-year return period event:** 0.27% (5.34m AODN)

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:** 0.9%
- **'Medium' risk scenario:** 0.7%
- **'Low' risk scenario:** 1.3%

Description of Surface Water Flow Paths

During all modelled scenarios, there are localised areas of surface water flooding across the site attributed to localised depressions.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows the existing defences consist of natural and engineered high ground and has an effective crest level between 4.07m and 6.00m AODN. The current condition rating is unknow. The design standard of protection is 1 in 10, 1 in 200 and 1 in 1000 years.

High-Level Indication of Defence Costs

Based on an average cost of £1,152/m to raise an existing embankment, it is estimated to cost in the region of £3,150,000 to upgrade the 2700m of defences in order to protect the site for the lifetime of any development.

Flood Warning Area?

Yes

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 0.62%
- **'Moderate' Hazard Rating:** 0.84%
- **'Significant' Hazard Rating:** 1.96%
- **'Extreme' Hazard Rating:** 0.43%

Required Actions / Recommended Mitigation Measures

The site is located in Flood Zones 1,2 and 3, and therefore will require a detailed Flood Risk Assessment.

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.

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.

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.

Flood resistance and resilience measures should be considered for inclusion.

Flood Hazard should be appraised against the proposed development layout to ensure that users and occupants of the site can achieve safe access and egress.

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).

**SNF41**

- **Site Area (Ha):** 4.972
- **Existing Land Use:** Brownfield
- **Proposed Land Use:** Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 5.2%
- **Flood Zone 2:** 2.5%
- **Flood Zone 3:** 92.3%
- **Flood Zone 3b:** ~13.4% *refer to text below

Development lifetime

100 years

Exception Test required?

Development which has a 'more vulnerable' classification will be subject to the Exception Test. 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 if it is located within Flood Zone 3b. . 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.

Flood History

- **Incidents within the site:** None.
- **Incidents within close proximity of the site:** None.

Watercourses/Rivers

The River Medway (Limehouse Reach) is located along the southeastern border of the site.

Geology

- **Bedrock:** Lewes Nodular Chalk Formation, Seaford Chalk Formation and Newhaven Chalk Formation (undifferentiated) - Chalk, Lewes Nodular Chalk Formation – Chalk
- **Superficial deposits:** Head - Clay and Silt, Alluvium - Clay, Silt, Sand and Peat

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 34.70% (5.07m AODN)
- **1 in 200-year return period event – 2100:** 87.26% (6.02m AODN)
- **1 in 200-year return period event – 2125:** 99.75% (6.21m AODN)
- **1 in 1000-year return period event:** 65.26% (5.58m AODN)

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:** 2.4%
- **'Medium' risk scenario:** 2.7%
- **'Low' risk scenario:** 10.1%

Description of Surface Water Flow Paths

During all modelled scenarios, there are localised areas of surface water flooding across the site attributed to localised depressions.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows the existing defences consist of a natural high ground and a wall with an actual crest level of 3.75m and 5.50m AODN, and has a condition rating of 3. The design standard of protection is 1 in 10, 1 in 20, and 1 in 100 years.

High-Level Indication of Defence Costs

Based on an average cost of £1,526/m to raise an existing defence wall, it is estimated to cost in the region of £925,000 to upgrade the 600m of defences in order to protect the site for the lifetime of any development.

Flood Warning Area?

Yes

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 14.67%
- **'Moderate' Hazard Rating:** 16.22%
- **'Significant' Hazard Rating:** 45.34%
- **'Extreme' Hazard Rating:** 23.65%

Required Actions / Recommended Mitigation Measures

The site is located in Flood Zones 1, 2 and 3, and therefore will require a detailed Flood Risk Assessment.

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.

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.

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.

Flood resistance and resilience measures should be considered for inclusion.

Flood Hazard should be appraised against the proposed development layout to ensure that users and occupants of the site can achieve safe access and egress.

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).

**SNF35**

- **Site Area (Ha):** 2.649
- **Existing Land Use:** Brownfield
- **Proposed Land Use:** Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 0.05%
- **Flood Zone 2:** 0.05%
- **Flood Zone 3:** 99.90%
- **Flood Zone 3b:** ~16.2% *refer to text below

Development lifetime

100 years

Exception Test required?

Development which has a 'more vulnerable' classification will be subject to the Exception Test. 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 if it is located within Flood Zone 3b. 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.

Flood History

- **Incidents within the site:** None.
- **Incidents within close proximity of the site:** None.

Watercourses/Rivers

The River Medway (Bridge Reach) is located approximately 25m southeast of the site.

Geology

- **Bedrock:** Lewes Nodular Chalk Formation - Chalk
- **Superficial deposits:** Alluvium - Clay, Silt, Sand and Peat

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 73.85% (4.64m AODN)
- **1 in 200-year return period event – 2100:** 78.24% (5.89m AODN)
- **1 in 200-year return period event – 2125:** 97.73% (6.15m AODN)
- **1 in 1000-year return period event:** 76.71% (5.42m AODN)

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:** 0.4%
- **'Low' risk scenario:** 15.4%

Description of Surface Water Flow Paths

During all modelled scenarios, there are localised areas of surface water flooding across the site attributed to localised depressions.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows the existing defences consist of a natural high ground and a wall with an actual crest level of 3.75m and 5.50m AODN, and has a condition rating of 3. The design standard of protection is 1 in 10, 1 in 20, and 1 in 100 years.

High-Level Indication of Defence Costs

Based on an average cost of £1,526/m to raise an existing defence wall, it is estimated to cost in the region of £925,000 to upgrade the 600m of defences in order to protect the site for the lifetime of any development.

Flood Warning Area?

Yes

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 17.54%
- **'Moderate' Hazard Rating:** 7.55%
- **'Significant' Hazard Rating:** 29.25%
- **'Extreme' Hazard Rating:** 43.02%

Required Actions / Recommended Mitigation Measures

The site is located in Flood Zones 3, and therefore will require a detailed Flood Risk Assessment.

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.

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.

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.

Flood Hazard should be appraised against the proposed development layout to ensure that users and occupants of the site can achieve safe access and egress.

**SMI6**

- **Site Area (Ha):** 57.714
- **Existing Land Use:** Brownfield
- **Proposed Land Use:** Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 20.9%
- **Flood Zone 2:** 10.0%
- **Flood Zone 3:** 69.1%
- **Flood Zone 3b:** ~28.2% *refer to text below

Development lifetime

100 years

Exception Test required?

Development which has a 'more vulnerable' classification will be subject to the Exception Test. 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 if it is located within Flood Zone 3b. 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.

Flood History

- **Incidents within the site:** None.
- **Incidents within close proximity of the site:** None.

Watercourses/Rivers

The River Medway (Gillingham Reach) is located along the northeastern border of the site.

Geology

- **Bedrock:** Thanet Formation - Sand, Silt and Clay, Seaford Chalk Formation - Chalk

- **Superficial deposits:** Alluvium - Clay, Silt, Sand and Peat

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 38.49% (5.06m AODN)
- **1 in 200-year return period event – 2100:** 65.63% (5.81m AODN)
- **1 in 200-year return period event – 2125:** 81.41% (6.32m AODN)
- **1 in 1000-year return period event:** 44.05% (5.42m AODN)

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:** 3.9%
- **'Medium' risk scenario:** 3.8%
- **'Low' risk scenario:** 12.5%

Description of Surface Water Flow Paths

Under all modelled scenarios, there are numerous localised areas of surface water onsite attributed to localised depressions.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows the existing defences consist of a wall with an effective crest level of between 4.60m AODN. The current condition rating is unknown. The design standard of protection is 1 in 1000 years.

High-Level Indication of Defence Costs

Based on an average cost of £1,526/m to raise an existing defence wall, it is estimated to cost in the region of £2,400,000 to upgrade approximately 1550m of defences in order to protect the site for the lifetime of any development.

Flood Warning Area?

Yes

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 6.90%
- **'Moderate' Hazard Rating:** 5.66%
- **'Significant' Hazard Rating:** 29.34%

- **'Extreme' Hazard Rating:** 38.87%

Required Actions / Recommended Mitigation Measures

The site is located in Flood Zones 2 and 3, and therefore will require a detailed Flood Risk Assessment.

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.

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.

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.

Flood resistance and resilience measures should be considered for inclusion.

Flood Hazard should be appraised against the proposed development layout to ensure that users and occupants of the site can achieve safe access and egress.

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).

**FP11**

- **Site Area (Ha):** 57.714
- **Existing Land Use:** Brownfield
- **Proposed Land Use:** Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 52.5%
- **Flood Zone 2:** 6.4%
- **Flood Zone 3:** 41.1%
- **Flood Zone 3b:** ~23.1% *refer to text below

Development lifetime

100 years

Exception Test required?

Development which has a 'more vulnerable' classification will be subject to the Exception Test. * 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 if it is located within Flood Zone 3b. 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.

Flood History

- **Incidents within the site:** None.
- **Incidents within close proximity of the site:** None.

Watercourses/Rivers

The River Medway is located along the northern border of the site.

Geology

- **Bedrock:** Lewes Nodular Chalk Formation - Chalk
- **Superficial deposits:** Alluvium - Clay, Silt, Sand and Peat, Beach and Tidal Flat Deposits (undifferentiated) - Clay, Silt and Sand

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 47.68% (4.99m AODN)
- **1 in 200-year return period event – 2100:** 72.20% (5.80m AODN)
- **1 in 200-year return period event – 2125:** 79.64% (6.13m AODN)
- **1 in 1000-year return period event:** 56.23% (5.33m AODN)

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:** 5.1%
- **'Medium' risk scenario:** 7.0%
- **'Low' risk scenario:** 9.5%

Description of Surface Water Flow Paths

Under all modelled scenarios, surface water is shown to accumulate in the northern corner of the site. Under the 'medium' and 'low' scenarios, there is a localised area of surface water shown to accumulate within the centre of the site.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows the existing defences consist of natural high ground, engineered high ground, and a wall with an actual crest level between 4.14m and 5.49m AODN. The current condition rating is unknown. The design standard of protection is 1 in 10, 1 in 100, and 1 in 1000 years.

High-Level Indication of Defence Costs

Based on an average cost of £1,526/m to raise an existing defence wall, it is estimated to cost in the region of £400,000 to upgrade the 250m of defences in order to protect the site for the lifetime of any development.

Flood Warning Area?

Yes

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 13.72%
- **'Moderate' Hazard Rating:** 17.88%
- **'Significant' Hazard Rating:** 39.36%
- **'Extreme' Hazard Rating:** 8.19%

Required Actions / Recommended Mitigation Measures

The site is located in Flood Zones 1, 2 and 3, and therefore will require a detailed Flood Risk Assessment.

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.

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.

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.

Flood resistance and resilience measures should be considered for inclusion.

Flood Hazard should be appraised against the proposed development layout to ensure that users and occupants of the site can achieve safe access and egress.

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).

### AS28

- **Site Area (Ha):** 57.714
- **Existing Land Use:** Greenfield
- **Proposed Land Use:** Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 62.17%
- **Flood Zone 2:** 6.55%
- **Flood Zone 3:** 31.28%
- **Flood Zone 3b:** 0.0%

Development lifetime

100 years

Exception Test required?

Development which has a 'more vulnerable' classification will be subject to the Exception Test.

Flood History

- **Incidents within the site:** EA Recorded Flood datasets shows the southern corner of the site was affected from the sea in 1953 due to waves overtopping the defences.
- **Incidents within close proximity of the site:** EA Recorded Flood datasets shows the surrounding area was affected from the sea in 1953 due to waves overtopping the defences.

Watercourses/Rivers

The coastline is located approximately 235m east of the site.

Geology

- **Bedrock:** London Clay Formation - Clay and Silt
- **Superficial deposits:** Head - Clay, Silt, Sand and Gravel, Alluvium - Clay, Silt, Sand and Peat

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 0.0% (0.00m AODN)
- **1 in 200-year return period event – 2100:** 0.00% (0.00m AODN)
- **1 in 200-year return period event – 2125:** 0.00% (0.00m AODN)
- **1 in 1000-year return period event:** 0.00% (0.00m AODN)

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:** 0.5%
- **'Low' risk scenario:** 2.0%

Description of Surface Water Flow Paths

Under all modelled scenarios, surface water is shown to accumulate in the southern corner of the site.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows the existing defences consist of a wall with an effective crest level of 5.70m AODN, and has a condition rating of 3. The design standard of protection is 1 in 1000 years.

High-Level Indication of Defence Costs

Based on an average cost of £1,526/m to raise an existing defence wall, it is estimated to cost in the region of £625,000 to upgrade the 400m of defences in order to protect the site for the lifetime of any development.

Flood Warning Area?

Yes

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 0.00%
- **'Moderate' Hazard Rating:** 0.00%
- **'Significant' Hazard Rating:** 0.00%
- **'Extreme' Hazard Rating:** 0.00%

Required Actions / Recommended Mitigation Measures

The site is located in Flood Zones 2 and 3, and therefore will require a detailed Flood Risk Assessment.

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.

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.

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.

Flood resistance and resilience measures should be considered for inclusion.

Flood Hazard should be appraised against the proposed development layout to ensure that users and occupants of the site can achieve safe access and egress.

## CCB27

- **Site Area (Ha):** 0.062
- **Existing Land Use:** Brownfield
- **Proposed Land Use:** Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 0.00%
- **Flood Zone 2:** 0.35%
- **Flood Zone 3:** 99.65%
- **Flood Zone 3b:** 0.0%

Development lifetime

100 years

Exception Test required?

Development which has a 'more vulnerable' classification will be subject to the Exception Test.

Flood History

- **Incidents within the site:** None.

- **Incidents within close proximity of the site:** None.

Watercourses/Rivers

The River Medway is located approximately 625m northwest of the site.

Geology

- **Bedrock:** Lewes Nodular Chalk Formation - Chalk
- **Superficial deposits:** Head - Clay, Silt, Sand and Gravel

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 0.00% (0.00m AODN)
- **1 in 200-year return period event – 2100:** 100.00% (5.79m AODN)
- **1 in 200-year return period event – 2125:** 100.00% (6.09m AODN)
- **1 in 1000-year return period event:** 100.00% (4.92m AODN)

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:** 76.5%
- **'Medium' risk scenario:** 20.2%
- **'Low' risk scenario:** 3.3%

Description of Surface Water Flow Paths

Under the 'high' risk scenario, surface water is shown to accumulate on the vast majority of the site. Under the 'medium' and 'low' risk scenario, the surface water extent is shown to increase slightly.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows the existing defences consist of natural high ground with an actual crest level of 4.75m AODN. The current condition rating is unknown. The design standard of protection is 1 in 100 years.

High-Level Indication of Defence Costs

Based on an average cost of £1,152/m to raise an existing embankment, it is estimated to cost in the region of £350,000 to upgrade the 300m of defences in order to protect the site for the lifetime of any development.

Flood Warning Area?

Yes

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 0.00%
- **'Moderate' Hazard Rating:** 0.00%
- **'Significant' Hazard Rating:** 65.81%
- **'Extreme' Hazard Rating:** 34.19%

Required Actions / Recommended Mitigation Measures

The site is located in Flood Zones 2 and 3, and at risk of surface water flooding. Therefore, the site will require a detailed Flood Risk Assessment.

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.

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.

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.

Flood Hazard should be appraised against the proposed development layout to ensure that users and occupants of the site can achieve safe access and egress.

**GN6**

- **Site Area (Ha):** 3.860
- **Existing Land Use:** Brownfield
- **Proposed Land Use:** Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 30.5%
- **Flood Zone 2:** 14.4%
- **Flood Zone 3:** 55.1%
- **Flood Zone 3b:** ~15.5% *refer to text below

Development lifetime

100 years

Exception Test required?

Development which has a 'more vulnerable' classification will be subject to the Exception Test. 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 if it is located within Flood Zone 3b. 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.

Flood History

- **Incidents within the site:** None.
- **Incidents within close proximity of the site:** None.

Watercourses/Rivers

The River Medway (Gillingham Reach) is located along the northern border of the site.

Geology

- **Bedrock:** Thanet Formation - Sand, Silt and Clay
- **Superficial deposits:** Alluvium - Clay, Silt, Sand and Peat, Beach and Tidal Flat Deposits (undifferentiated) - Clay, Silt and Sand

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 55.56% (4.94m AODN)
- **1 in 200-year return period event – 2100:** 87.58% (5.73m AODN)
- **1 in 200-year return period event – 2125:** 93.30% (6.12m AODN)
- **1 in 1000-year return period event:** 73.58% (5.38m AODN)

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:** 8.0%
- **'Medium' risk scenario:** 1.1%
- **'Low' risk scenario:** 6.3%

Description of Surface Water Flow Paths

Under all modelled scenarios, surface water is shown to accumulate onsite.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows the existing defences consist of a wall with an actual crest level of 5.38m AODN. The current condition rating is unknown. The design standard of protection is 1 in 200 years.

High-Level Indication of Defence Costs

Based on an average cost of £1,526/m to raise an existing defence wall, it is estimated to cost in the region of £625,000 to upgrade the 400m of defences in order to protect the site for the lifetime of any development.

Flood Warning Area?

Yes

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 9.11%
- **'Moderate' Hazard Rating:** 9.11%
- **'Significant' Hazard Rating:** 65.24%
- **'Extreme' Hazard Rating:** 9.28%

Required Actions / Recommended Mitigation Measures

The site is located in Flood Zones 1, 2 and 3, and therefore will require a detailed Flood Risk Assessment.

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.

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.

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.

Flood resistance and resilience measures should be considered for inclusion.

Flood Hazard should be appraised against the proposed development layout to ensure that users and occupants of the site can achieve safe access and egress.

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).

**SR49**

- **Site Area (Ha):** 0.235
- **Existing Land Use:** Brownfield
- **Proposed Land Use:** Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 44.8%
- **Flood Zone 2:** 16.5%
- **Flood Zone 3:** 38.7%
- **Flood Zone 3b:** 0.0%

Development lifetime

100 years

Exception Test required?

Development which has a 'more vulnerable' classification will be subject to the Exception Test.

Flood History

- **Incidents within the site:** None.
- **Incidents within close proximity of the site:** None.

Watercourses/Rivers

The River Medway (Upnor Reach) is located approximately 12m southeast of the site.

Geology

- **Bedrock:** Lambeth Group - Sand, Silt and Clay
- **Superficial deposits:** No Superficial deposits

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 64.58% (4.97m AODN)
- **1 in 200-year return period event – 2100:** 74.22% (5.73m AODN)
- **1 in 200-year return period event – 2125:** 82.76% (6.04m AODN)
- **1 in 1000-year return period event:** 69.23% (5.44m AODN)

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:** 17.4%
- **'Medium' risk scenario:** 9.1%
- **'Low' risk scenario:** 11.2%

Description of Surface Water Flow Paths

Under all modelled scenarios, water is shown to accumulate along the southeastern border of the site.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows the existing defences consist of natural high ground and a wall with an actual crest level of between 5.39m and 6.24m AODN. The current condition rating is unknown. The design standard of protection is 1 in 1000 years.

High-Level Indication of Defence Costs

Based on an average cost of £1,526/m to raise an existing defence wall, it is estimated to cost in the region of £250,000 to upgrade the 150m of defences in order to protect the site for the lifetime of any development.

Flood Warning Area?

Yes

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 11.24%
- **'Moderate' Hazard Rating:** 18.96%
- **'Significant' Hazard Rating:** 45.53%
- **'Extreme' Hazard Rating:** 8.46%

Required Actions / Recommended Mitigation Measures

The site is located in Flood Zones 1, 2 and 3, and therefore will require a detailed Flood Risk Assessment.

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.

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.

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.

Flood Hazard should be appraised against the proposed development layout to ensure that users and occupants of the site can achieve safe access and egress.

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).

## SNF15

- **Site Area (Ha):** 2.368
- **Existing Land Use:** Brownfield
- **Proposed Land Use:** Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 36.9%
- **Flood Zone 2:** 7.2%
- **Flood Zone 3:** 55.9%
- **Flood Zone 3b:** ~36.9% *refer to text below

Development lifetime

100 years

Exception Test required?

Development which has a 'more vulnerable' classification will be subject to the Exception Test. 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 if it is located within Flood Zone 3b. 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.

Flood History

- **Incidents within the site:** None.
- **Incidents within close proximity of the site:** None.

Watercourses/Rivers

The River Medway (Bridge Reach) is located approximately 155m southeast of the site.

Geology

- **Bedrock:** Lewes Nodular Chalk Formation, Seaford Chalk Formation and Newhaven Chalk Formation (undifferentiated) - Chalk
- **Superficial deposits:** Head - Clay and Silt

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 53.58% (4.62m AODN)
- **1 in 200-year return period event – 2100:** 69.77% (5.95m AODN)
- **1 in 200-year return period event – 2125:** 72.94% (6.27m AODN)
- **1 in 1000-year return period event:** 65.18% (5.30m AODN)

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:** 28.5%
- **'Medium' risk scenario:** 11.0%
- **'Low' risk scenario:** 15.4%

Description of Surface Water Flow Paths

Under all modelled scenarios, surface water is shown to accumulate across the southern portion of the site.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows the existing defences consist of natural high ground and a wall with an actual crest level of between 4.50m and 5.20m AODN.

The current condition rating is unknown. The design standard of protection is 1 in 50 and 1 in 200 years.

High-Level Indication of Defence Costs

Based on an average cost of £1,526/m to raise an existing defence wall, it is estimated to cost in the region of £1,125,000 to upgrade the 700m of defences in order to protect the site for the lifetime of any development.

Flood Warning Area?

Yes

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 4.00%
- **'Moderate' Hazard Rating:** 6.38%
- **'Significant' Hazard Rating:** 22.01%
- **'Extreme' Hazard Rating:** 40.34%

Required Actions / Recommended Mitigation Measures

The site is located in Flood Zones 2 and 3, and therefore will require a detailed Flood Risk Assessment.

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.

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.

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.

Flood Hazard should be appraised against the proposed development layout to ensure that users and occupants of the site can achieve safe access and egress.

### SNF23

- **Site Area (Ha):** 0.059
- **Existing Land Use:** Brownfield
- **Proposed Land Use:** Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 0.0%
- **Flood Zone 2:** 0.0%
- **Flood Zone 3:** 100.0%
- **Flood Zone 3b:** 0.0%

Development lifetime

100 years

Exception Test required?

Development which has a 'more vulnerable' classification will be subject to the Exception Test.

Flood History

- **Incidents within the site:** None.
- **Incidents within close proximity of the site:** None.

Watercourses/Rivers

The River Medway (Bridge Reach and Limehouse Reach) is located approximately 235m southeast of the site.

Geology

- **Bedrock:** Lewes Nodular Chalk Formation, Seaford Chalk Formation and Newhaven Chalk Formation (undifferentiated) – Chalk
- **Superficial deposits:** Head - Clay and Silt

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 42.00% (4.42m AODN)
- **1 in 200-year return period event – 2100:** 100.00% (5.77m AODN)
- **1 in 200-year return period event – 2125:** 100.00% (6.10m AODN)
- **1 in 1000-year return period event:** 100.00% (5.28m AODN)

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:** 0.0%

Description of Surface Water Flow Paths

Under all modelled scenarios, the entire site is shown to remain dry.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows the existing defences consist of natural high ground and a wall with an actual crest level of between 4.50m and 5.20m AODN. The current condition rating is unknown. The design standard of protection is 1 in 50 and 1 in 200 years.

High-Level Indication of Defence Costs

Based on an average cost of £1,526/m to raise an existing defence wall, it is estimated to cost in the region of £400,000 to upgrade the 250m of defences in order to protect the site for the lifetime of any development.

Flood Warning Area?

Yes

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 0.00%
- **'Moderate' Hazard Rating:** 0.00%
- **'Significant' Hazard Rating:** 100.00%
- **'Extreme' Hazard Rating:** 0.00%

Required Actions / Recommended Mitigation Measures

The site is located in Flood Zones 3, and therefore will require a detailed Flood Risk Assessment.

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.

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.

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.

Flood Hazard should be appraised against the proposed development layout to ensure that users and occupants of the site can achieve safe access and egress.

**SNF32**

- **Site Area (Ha):** 0.025
- **Existing Land Use:** Brownfield
- **Proposed Land Use:** Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 66.7%
- **Flood Zone 2:** 0.0%
- **Flood Zone 3:** 33.3%
- **Flood Zone 3b:** 0.0%

Development lifetime

100 years

Exception Test required?

Development which has a 'more vulnerable' classification will be subject to the Exception Test.

Flood History

- **Incidents within the site:** None.
- **Incidents within close proximity of the site:** None.

Watercourses/Rivers

The River Medway (Limehouse Reach) is located approximately 390m southeast of the site.

Geology

- **Bedrock:** Lewes Nodular Chalk Formation, Seaford Chalk Formation and Newhaven Chalk Formation (undifferentiated) - Chalk
- **Superficial deposits:** Head - Clay and Silt

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 0.00% (0.00m AODN)
- **1 in 200-year return period event – 2100:** 100.00% (5.77m AODN)
- **1 in 200-year return period event – 2125:** 100.00% (6.12m AODN)
- **1 in 1000-year return period event:** 98.68% (5.05m AODN)

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:** 60.7%
- **'Medium' risk scenario:** 1.8%
- **'Low' risk scenario:** 3.4%

Description of Surface Water Flow Paths

Under the 'high' scenario, surface water is shown to accumulate in the northern portion of the site. Under the 'medium' and 'low' risk scenario, the surface water extent is shown to increase slightly.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows the existing defences consist of natural high ground and a wall with an actual crest level of between 4.08m and 4.49m AODN, and the condition rating is 4. The design standard of protection is 1 in 10 and 1 in 20 years.

High-Level Indication of Defence Costs

Based on an average cost of £1,526/m to raise an existing defence wall, it is estimated to cost in the region of £250,000 to upgrade the 150m of defences in order to protect the site for the lifetime of any development.

Flood Warning Area?

Yes

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 1.29%
- **'Moderate' Hazard Rating:** 30.21%

- **'Significant' Hazard Rating:** 68.50%
- **'Extreme' Hazard Rating:** 0.00%

Required Actions / Recommended Mitigation Measures

The site is located in Flood Zones 1 and 3, and therefore will require a detailed Flood Risk Assessment.

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.

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.

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.

Flood Hazard should be appraised against the proposed development layout to ensure that users and occupants of the site can achieve safe access and egress.

## CCB21

- **Site Area (Ha):** 0.035
- **Existing Land Use:** Brownfield
- **Proposed Land Use:** Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 0.0%
- **Flood Zone 2:** 98.7%
- **Flood Zone 3:** 1.3%
- **Flood Zone 3b:** 0.0%

Development lifetime

100 years

Exception Test required?

Development which has a 'more vulnerable' classification will be subject to the Exception Test.

Flood History

- **Incidents within the site:** None.
- **Incidents within close proximity of the site:** None.

Watercourses/Rivers

The River Medway is located approximately 575m northwest of the site.

Geology

- **Bedrock:** Lewes Nodular Chalk Formation - Chalk
- **Superficial deposits:** Head - Clay, Silt, Sand and Gravel

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 0.00% (0.00m AODN)
- **1 in 200-year return period event – 2100:** 100.00% (5.79m AODN)
- **1 in 200-year return period event – 2125:** 100.00% (6.09m AODN)
- **1 in 1000-year return period event:** 48.51% (4.92m AODN)

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:** 99.2%

Description of Surface Water Flow Paths

Under the 'high' and 'medium' risk scenario, the entire site is shown to remain dry. Under the 'low' risk scenario, surface water could accumulate across the entire site.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows the existing defences consist of natural high ground with an actual crest level of 4.75m AODN. The current condition rating is unknown. The design standard of protection is 1 in 100 years.

High-Level Indication of Defence Costs

Based on an average cost of £1,152/m to raise an existing embankment, it is estimated to cost in the region of £250,000 to upgrade the 200m of defences in order to protect the site for the lifetime of any development.

Flood Warning Area?

Yes

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 0.00%
- **'Moderate' Hazard Rating:** 0.00%
- **'Significant' Hazard Rating:** 100.00%
- **'Extreme' Hazard Rating:** 0.00%

Required Actions / Recommended Mitigation Measures

The site is located in Flood Zones 2 and 3, and therefore will require a detailed Flood Risk Assessment.

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.

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.

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.

Flood Hazard should be appraised against the proposed development layout to ensure that users and occupants of the site can achieve safe access and egress.

**CCB24**

- **Site Area (Ha):** 0.021
- **Existing Land Use:** Brownfield
- **Proposed Land Use:** Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 0.0%
- **Flood Zone 2:** 3.1%
- **Flood Zone 3:** 96.9%
- **Flood Zone 3b:** 0.0%

Development lifetime

100 years

Exception Test required?

Development which has a 'more vulnerable' classification will be subject to the Exception Test.

Flood History

- **Incidents within the site:** None.
- **Incidents within close proximity of the site:** None.

Watercourses/Rivers

The River Medway is located approximately 615m northwest of the site.

Geology

- **Bedrock:** Lewes Nodular Chalk Formation - Chalk
- **Superficial deposits:** Head - Clay, Silt, Sand and Gravel

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 0.00% (4.48m AODN)
- **1 in 200-year return period event – 2100:** 100.00% (5.79m AODN)
- **1 in 200-year return period event – 2125:** 100.00% (6.09m AODN)
- **1 in 1000-year return period event:** 100.00% (4.92m AODN)

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:** 100.0%
- **'Medium' risk scenario:** 0.0%
- **'Low' risk scenario:** 0.0%

Description of Surface Water Flow Paths

Under all modelled scenarios, surface water is shown to accumulate on the entire site.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows the existing defences consist of natural high ground with an actual crest level of 4.75m AODN. The current condition rating is unknown. The design standard of protection is 1 in 100 years.

High-Level Indication of Defence Costs

Based on an average cost of £1,152/m to raise an existing embankment, it is estimated to cost in the region of £250,000 to upgrade the 200m of defences in order to protect the site for the lifetime of any development.

Flood Warning Area?

Yes

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 0.00%
- **'Moderate' Hazard Rating:** 0.00%
- **'Significant' Hazard Rating:** 100.00%
- **'Extreme' Hazard Rating:** 0.00%

Required Actions / Recommended Mitigation Measures

The site is located in Flood Zones 2 and 3, and therefore will require a detailed Flood Risk Assessment.

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.

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.

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.

Flood Hazard should be appraised against the proposed development layout to ensure that users and occupants of the site can achieve safe access and egress.

**SNF30**

- **Site Area (Ha):** 0.112
- **Existing Land Use:** Brownfield
- **Proposed Land Use:** Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 0.0%
- **Flood Zone 2:** 0.0%
- **Flood Zone 3:** 100.0%
- **Flood Zone 3b:** 0.0%

Development lifetime

100 years

Exception Test required?

Development which has a 'more vulnerable' classification will be subject to the Exception Test.

Flood History

- **Incidents within the site:** None.
- **Incidents within close proximity of the site:** None.

Watercourses/Rivers

The River Medway (Bridge Reach) is located approximately 160m southeast of the site.

Geology

- **Bedrock:** Lewes Nodular Chalk Formation, Seaford Chalk Formation and Newhaven Chalk Formation (undifferentiated) - Chalk
- **Superficial deposits:** Alluvium - Clay, Silt, Sand and Peat

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 100.00% (4.40m AODN)
- **1 in 200-year return period event – 2100:** 100.00% (5.78m AODN)
- **1 in 200-year return period event – 2125:** 100.00% (6.10m AODN)
- **1 in 1000-year return period event:** 100.00% (5.29m AODN)

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:** 13.0%
- **'Medium' risk scenario:** 11.9%
- **'Low' risk scenario:** 75.1%

Description of Surface Water Flow Paths

Under the 'medium' and 'high' risk scenario surface water is shown to accumulate on the southern portion of the site. Under the 'low' risk scenario, surface water is shown to accumulate on the majority of the site.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows the existing defences consist of a wall with an actual crest level of between 4.07m and 5.20m AODN. The current condition rating is unknown. The design standard of protection is 1 in 20 years.

High-Level Indication of Defence Costs

Based on an average cost of £1,526/m to raise an existing defence wall, it is estimated to cost in the region of £250,000 to upgrade the 150m of defences in order to protect the site for the lifetime of any development.

Flood Warning Area?

Yes

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 0.00%
- **'Moderate' Hazard Rating:** 0.00%
- **'Significant' Hazard Rating:** 0.00%
- **'Extreme' Hazard Rating:** 100.00%

Required Actions / Recommended Mitigation Measures

The site is located in Flood Zones 3, and therefore will require a detailed Flood Risk Assessment.

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.

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.

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.

Flood Hazard should be appraised against the proposed development layout to ensure that users and occupants of the site can achieve safe access and egress.

### CCB31

- **Site Area (Ha):** 0.795
- **Existing Land Use:** Brownfield
- **Proposed Land Use:** Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 82.3%
- **Flood Zone 2:** 13.7%
- **Flood Zone 3:** 4.0%
- **Flood Zone 3b:** 0.0%

Development lifetime

100 years

Exception Test required?

Development which has a 'more vulnerable' classification will be subject to the Exception Test.

Flood History

- **Incidents within the site:** None.
- **Incidents within close proximity of the site:** None.

Watercourses/Rivers

The River Medway is located approximately 545m northwest of the site.

Geology

- **Bedrock:** Lewes Nodular Chalk Formation – Chalk
- **Superficial deposits:** No Superficial deposits

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 0.00% (0.00m AODN)
- **1 in 200-year return period event – 2100:** 41.81% (5.81m AODN)

- **1 in 200-year return period event – 2125:** 45.58% (6.41m AODN)
- **1 in 1000-year return period event:** 23.90% (5.00m AODN)

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:** 0.1%
- **'Medium' risk scenario:** 1.6%
- **'Low' risk scenario:** 18.0%

Description of Surface Water Flow Paths

Under the 'high' risk scenario, the entire site is shown to remain dry. Under the 'medium' risk scenario, a small portion of the northwestern corner is shown to be affected by surface water. Under the 'low' risk scenario, the extent of flooding to the northwestern corner is shown to increase.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows the existing defences consist of natural high ground with an actual crest level of 4.75m AODN. The current condition rating is unknown. The design standard of protection is 1 in 100 years.

High-Level Indication of Defence Costs

Based on an average cost of £1,152/m to raise an existing embankment, it is estimated to cost in the region of £300,000 to upgrade the 250m of defences in order to protect the site for the lifetime of any development.

Flood Warning Area?

Yes

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 8.81%
- **'Moderate' Hazard Rating:** 12.03%
- **'Significant' Hazard Rating:** 23.69%
- **'Extreme' Hazard Rating:** 0.82%

Required Actions / Recommended Mitigation Measures

The site is located in Flood Zones 1, 2 and 3, and therefore will require a detailed Flood Risk Assessment.

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.

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.

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.

Flood Hazard should be appraised against the proposed development layout to ensure that users and occupants of the site can achieve safe access and egress.

### RWB2

- **Site Area (Ha):** 1.775
- **Existing Land Use:** Brownfield
- **Proposed Land Use:** Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 31.8%
- **Flood Zone 2:** 6.9%
- **Flood Zone 3:** 61.3%
- **Flood Zone 3b:** ~64.8% *refer to text below

Development lifetime

100 years

Exception Test required?

Development which has a 'more vulnerable' classification will be subject to the Exception Test. 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 if it is located within Flood Zone 3b. 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.

Flood History

- **Incidents within the site:** None.

- **Incidents within close proximity of the site:** None.

Watercourses/Rivers

The River Medway (Wickham Reach) is located along the northwestern border of the site.

Geology

- **Bedrock:** Lewes Nodular Chalk Formation - Chalk
- **Superficial deposits:** Head - Clay, Silt, Sand and Gravel, Alluvium - Clay, Silt, Sand and Peat, Beach and Tidal Flat Deposits (undifferentiated) - Clay, Silt and Sand

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 70.82% (5.04m AODN)
- **1 in 200-year return period event – 2100:** 79.77% (5.88m AODN)
- **1 in 200-year return period event – 2125:** 83.98% (6.16m AODN)
- **1 in 1000-year return period event:** 76.43% (5.46m AODN)

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:** 0.9%
- **'Medium' risk scenario:** 0.0%
- **'Low' risk scenario:** 3.2%

Description of Surface Water Flow Paths

Under the 'high' risk scenario, there is one localised area of surface water flooding. Under the 'medium' and 'low' risk scenario, this localised area increases as well as another localised area appears in the northeastern corner of the site.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows the existing defences consist of natural high ground with an actual crest level of between 8.89m and 8.91m AODN. The current condition rating is unknown. The design standard of protection is 1 in 1000 years. However, the defences are on the southern side of the site, therefore providing little/no benefit to the site itself.

High-Level Indication of Defence Costs

N/A – Existing defences are behind the site, as such the defences provide little/no benefit to the site itself. Therefore, it is not considered appropriate to consider upgrading the defences for this site.

Flood Warning Area?

Yes

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 6.18%
- **'Moderate' Hazard Rating:** 8.43%
- **'Significant' Hazard Rating:** 27.60%
- **'Extreme' Hazard Rating:** 41.60%

Required Actions / Recommended Mitigation Measures

The site is located in Flood Zones 1, 2 and 3, and therefore will require a detailed Flood Risk Assessment.

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.

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.

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.

Flood Hazard should be appraised against the proposed development layout to ensure that users and occupants of the site can achieve safe access and egress.

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).

### SNF34

- **Site Area (Ha):** 0.172
- **Existing Land Use:** Brownfield
- **Proposed Land Use:** Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 0.0%
- **Flood Zone 2:** 0.0%
- **Flood Zone 3:** 100.0%
- **Flood Zone 3b:** 8.7% *refer to text below

Development lifetime

100 years

Exception Test required?

Development which has a 'more vulnerable' classification will be subject to the Exception Test. 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 if it is located within Flood Zone 3b. 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.

Flood History

- **Incidents within the site:** None.
- **Incidents within close proximity of the site:** None.

Watercourses/Rivers

The River Medway (Bridge Reach and Limehouse Reach) is located approximately 210m southeast of the site.

Geology

- **Bedrock:** Lewes Nodular Chalk Formation - Chalk
- **Superficial deposits:** Alluvium - Clay, Silt, Sand and Peat

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 100.00% (4.40 AODN)
- **1 in 200-year return period event – 2100:** 100.00% (5.77m AODN)

- **1 in 200-year return period event – 2125:** 100.00% (6.10m AODN)
- **1 in 1000-year return period event:** 100.00% (5.28m AODN)

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:** 10.8%
- **'Medium' risk scenario:** 10.2%
- **'Low' risk scenario:** 79.0%

Description of Surface Water Flow Paths

Under the 'high' and 'medium' risk scenario, surface water is shown to accumulate within the southwestern corner of the site. Under the 'low' risk scenario, the majority of the site is shown to be affected by surface water flooding.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows the existing defences consist of a wall with an actual crest level of between 4.42m and 4.78m AODN. The current condition rating is unknown. The design standard of protection is 1 in 20 years.

High-Level Indication of Defence Costs

Based on an average cost of £1,526/m to raise an existing defence wall, it is estimated to cost in the region of £625,000 to upgrade the 400m of defences in order to protect the site for the lifetime of any development

Flood Warning Area?

Yes

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 0.00%
- **'Moderate' Hazard Rating:** 0.00%
- **'Significant' Hazard Rating:** 0.00%
- **'Extreme' Hazard Rating:** 100.00%

Required Actions / Recommended Mitigation Measures

The site is located in Flood Zones 3, and therefore will require a detailed Flood Risk Assessment.

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.

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.

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.

Flood Hazard should be appraised against the proposed development layout to ensure that users and occupants of the site can achieve safe access and egress.

**SR48**

- **Site Area (Ha):** 0.245
- **Existing Land Use:** Brownfield
- **Proposed Land Use:** Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 0.0%
- **Flood Zone 2:** 44.8%
- **Flood Zone 3:** 55.2%
- **Flood Zone 3b:** ~5.3% *refer to text below

Development lifetime

100 years

Exception Test required?

Development which has a 'more vulnerable' classification will be subject to the Exception Test. 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 if it is located within Flood Zone 3b. 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.

Flood History

- **Incidents within the site:** None.
- **Incidents within close proximity of the site:** None.

Watercourses/Rivers

The River Medway (Upnor Reach) is located along the southeastern border of the site.

Geology

- **Bedrock:** Thanet Formation - Sand, Silt and Clay
- **Superficial deposits:** Beach and Tidal Flat Deposits (undifferentiated) - Clay, Silt and Sand

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 14.57% (4.93m AODN)
- **1 in 200-year return period event – 2100:** 100.00% (5.73m AODN)
- **1 in 200-year return period event – 2125:** 100.00% (6.04m AODN)
- **1 in 1000-year return period event:** 100.00% (5.34m AODN)

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:** 0.3%
- **'Medium' risk scenario:** 0.5%
- **'Low' risk scenario:** 64.8%

Description of Surface Water Flow Paths

Under the 'high' and 'medium' risk scenario, surface water is shown to encroach onto a small portion of the north of the site. Under the 'low' risk scenario, the majority of the site is shown to be affected by surface water.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows the existing defences consist of a wall with an actual crest level of between 5.03m and 5.54m AODN. The current condition rating is unknown. The design standard of protection is 1 in 200 years.

High-Level Indication of Defence Costs

Based on an average cost of £1,526/m to raise an existing defence wall, it is estimated to cost in the region of £250,000 to upgrade the 150m of defences in order to protect the site for the lifetime of any development.

Flood Warning Area?

Yes

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 0.00%
- **'Moderate' Hazard Rating:** 0.00%
- **'Significant' Hazard Rating:** 72.19%
- **'Extreme' Hazard Rating:** 27.81%

Required Actions / Recommended Mitigation Measures

The site is located in Flood Zones 2 and 3, and therefore will require a detailed Flood Risk Assessment.

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.

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.

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.

Flood Hazard should be appraised against the proposed development layout to ensure that users and occupants of the site can achieve safe access and egress.

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).

### CCB7

- **Site Area (Ha):** 0.049
- **Existing Land Use:** Brownfield
- **Proposed Land Use:** Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 0.0%
- **Flood Zone 2:** 42.8%

- **Flood Zone 3:** 57.2%
- **Flood Zone 3b:** 0.0%

Development lifetime

100 years

Exception Test required?

Development which has a 'more vulnerable' classification will be subject to the Exception Test.

Flood History

- **Incidents within the site:** None.
- **Incidents within close proximity of the site:** None.

Watercourses/Rivers

The River Medway is located approximately 235m northwest of the site.

Geology

- **Bedrock:** Lewes Nodular Chalk Formation - Chalk
- **Superficial deposits:** Alluvium - Clay, Silt, Sand and Peat

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 34.97% (3.84m AODN)
- **1 in 200-year return period event – 2100:** 100.00% (5.78m AODN)
- **1 in 200-year return period event – 2125:** 100.00% (6.09m AODN)
- **1 in 1000-year return period event:** 100.00% (4.92m AODN)

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:** 35.1%
- **'Medium' risk scenario:** 0.0%
- **'Low' risk scenario:** 64.1%

Description of Surface Water Flow Paths

Under the 'medium' risk scenario, the entire site is shown to remain dry. Under the 'high' risk scenario over a third of the site could be affected by surface water. Under the 'low' risk scenario, more than half of the site could be affected by surface water.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows the existing defences consist of natural high ground with an actual crest level of between 4.75m and 4.93m AODN. The current condition rating is unknown. The design standard of protection is 1 in 100 years.

High-Level Indication of Defence Costs

Based on an average cost of £1,152/m to raise an existing embankment, it is estimated to cost in the region of £200,000 to upgrade the 150m of defences in order to protect the site for the lifetime of any development

Flood Warning Area?

Yes

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 0.00%
- **'Moderate' Hazard Rating:** 0.00%
- **'Significant' Hazard Rating:** 82.74%
- **'Extreme' Hazard Rating:** 17.26%

Required Actions / Recommended Mitigation Measures

The site is located in Flood Zones 2 and 3, and therefore will require a detailed Flood Risk Assessment.

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.

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.

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.

Flood Hazard should be appraised against the proposed development layout to ensure that users and occupants of the site can achieve safe access and egress.

## FP14

- **Site Area (Ha):** 0.011
- **Existing Land Use:** Brownfield
- **Proposed Land Use:** Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 96.8 %
- **Flood Zone 2:** 0.0%
- **Flood Zone 3:** 3.2%
- **Flood Zone 3b:** 0.0%

Development lifetime

100 years

Exception Test required?

Development which has a 'more vulnerable' classification will be subject to the Exception Test.

Flood History

- **Incidents within the site:** None.
- **Incidents within close proximity of the site:** None.

Watercourses/Rivers

The River Medway is located approximately 70m north of the site.

Geology

- **Bedrock:** Lewes Nodular Chalk Formation - Chalk
- **Superficial deposits:** No Superficial deposits

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 71.83% (4.99m AODN)
- **1 in 200-year return period event – 2100:** 71.83% (5.77m AODN)
- **1 in 200-year return period event – 2125:** 71.83% (6.09m AODN)
- **1 in 1000-year return period event:** 71.83% (5.33m AODN)

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:** 0.0%

Description of Surface Water Flow Paths

Under all modelled scenarios, the entire site is shown to remain dry.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows the existing defences consist of engineered high ground with an actual crest level of between 4.60m and 5.49m AODN. The current condition rating is unknown. The design standard of protection is 1 in 100 years.

High-Level Indication of Defence Costs

Based on an average cost of £1,152/m to raise an existing embankment, it is estimated to cost in the region of £200,000 to upgrade the 150m of defences in order to protect the site for the lifetime of any development

Flood Warning Area?

Yes

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 0.00%
- **'Moderate' Hazard Rating:** 54.85%
- **'Significant' Hazard Rating:** 18.19%
- **'Extreme' Hazard Rating:** 0.00%

Required Actions / Recommended Mitigation Measures

The site is located in Flood Zones 3, and therefore will require a detailed Flood Risk Assessment.

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.

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.

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.

Flood Hazard should be appraised against the proposed development layout to ensure that users and occupants of the site can achieve safe access and egress.

### SNF38

- **Site Area (Ha):** 0.069
- **Existing Land Use:** Brownfield
- **Proposed Land Use:** Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 0.0 %
- **Flood Zone 2:** 0.0%
- **Flood Zone 3:** 100.0%
- **Flood Zone 3b:** 100.0% *refer to text below

Development lifetime

100 years

Exception Test required?

Development which has a 'more vulnerable' classification will be subject to the Exception Test. 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 if it is located within Flood Zone 3b. 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.

Flood History

- **Incidents within the site:** None.
- **Incidents within close proximity of the site:** None.

Watercourses/Rivers

The River Medway (Limehouse Reach) is located approximately 50m east of the site.

Geology

- **Bedrock:** Lewes Nodular Chalk Formation - Chalk
- **Superficial deposits:** Alluvium - Clay, Silt, Sand and Peat

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 100.00% (4.95m AODN)
- **1 in 200-year return period event – 2100:** 100.00% (5.76m AODN)
- **1 in 200-year return period event – 2125:** 100.00% (6.10m AODN)
- **1 in 1000-year return period event:** 100.00% (5.33m AODN)

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:** 8.4%
- **'Low' risk scenario:** 76.8%

Description of Surface Water Flow Paths

Under the 'high' risk scenario, the entire site is shown to remain dry. Under the 'medium' risk scenario, a small portion in the north of the site is shown to be affected. Under the 'low' risk scenario, surface water is shown to accumulate across the majority of the site.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows the existing defences consist of a wall with an actual crest level of between 4.49m and 5.11m AODN. The current condition rating is unknown. The design standard of protection is 1 in 20 years.

High-Level Indication of Defence Costs

Based on an average cost of £1,526/m to raise an existing defence wall, it is estimated to cost in the region of £250,000 to upgrade the 150m of defences in order to protect the site for the lifetime of any development.

Flood Warning Area?

Yes

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 0.00%
- **'Moderate' Hazard Rating:** 0.00%
- **'Significant' Hazard Rating:** 10.61%
- **'Extreme' Hazard Rating:** 89.39%

Required Actions / Recommended Mitigation Measures

The site is located in Flood Zones 3, and therefore will require a detailed Flood Risk Assessment.
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.
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.
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.
Flood Hazard should be appraised against the proposed development layout to ensure that users and occupants of the site can achieve safe access and egress.

**CCB25**

- **Site Area (Ha):** 0.069
- **Existing Land Use:** Brownfield
- **Proposed Land Use:** Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 0.0 %
- **Flood Zone 2:** 1.9%
- **Flood Zone 3:** 98.1%
- **Flood Zone 3b:** ~8.1% *refer to text below

Development lifetime

100 years

Exception Test required?

Development which has a 'more vulnerable' classification will be subject to the Exception Test. 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 if it is located within Flood Zone 3b. 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.

Flood History

- **Incidents within the site:** None.
- **Incidents within close proximity of the site:** None.

Watercourses/Rivers

The River Medway (Chatham Reach) is located along the northwestern border of the site.

Geology

- **Bedrock:** Seaford Chalk Formation - Chalk
- **Superficial deposits:** Alluvium - Clay, Silt, Sand and Peat

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 8.13% (4.94m AODN)
- **1 in 200-year return period event – 2100:** 100.00% (5.74m AODN)
- **1 in 200-year return period event – 2125:** 100.00% (6.06m AODN)
- **1 in 1000-year return period event:** 8.13% (5.34m AODN)

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:** 3.8%
- **'Low' risk scenario:** 7.9%

Description of Surface Water Flow Paths

Under all modelled scenarios, there are a few localised areas of surface water flooding.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows the existing defences consist of a wall with an actual crest level of between 5.60m and 6.00m AODN. The current condition rating is unknown. The design standard of protection is 1 in 1000 years.

High-Level Indication of Defence Costs

Based on an average cost of £1,526/m to raise an existing defence wall, it is estimated to cost in the region of £475,000 to upgrade the 300m of defences in order to protect the site for the lifetime of any development.

Flood Warning Area?

Yes

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 0.00%
- **'Moderate' Hazard Rating:** 0.00%
- **'Significant' Hazard Rating:** 9.44%
- **'Extreme' Hazard Rating:** 90.56%

Required Actions / Recommended Mitigation Measures

The site is located in Flood Zones 2 and 3, and therefore will require a detailed Flood Risk Assessment.

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.

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.

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.

Flood Hazard should be appraised against the proposed development layout to ensure that users and occupants of the site can achieve safe access and egress.

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).

**SNF31**

- **Site Area (Ha):** 0.032
- **Existing Land Use:** Brownfield
- **Proposed Land Use:** Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 0.0 %
- **Flood Zone 2:** 0.0%
- **Flood Zone 3:** 100.0%

- **Flood Zone 3b:** 0.0%

Development lifetime

100 years

Exception Test required?

Development which has a 'more vulnerable' classification will be subject to the Exception Test.

Flood History

- **Incidents within the site:** None.
- **Incidents within close proximity of the site:** None.

Watercourses/Rivers

The River Medway (Bridge Reach and Limehouse Reach) is located approximately 350m southeast of the site.

Geology

- **Bedrock:** Lewes Nodular Chalk Formation, Seaford Chalk Formation and Newhaven Chalk Formation (undifferentiated) - Chalk
- **Superficial deposits:** Alluvium - Clay, Silt, Sand and Peat

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 100.00% (4.40m AODN)
- **1 in 200-year return period event – 2100:** 100.00% (5.77m AODN)
- **1 in 200-year return period event – 2125:** 100.00% (6.10m AODN)
- **1 in 1000-year return period event:** 100.00% (5.28m AODN)

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:** 25.8%
- **'Low' risk scenario:** 74.2%

Description of Surface Water Flow Paths

Under the 'high' risk scenario, the entire site is shown to remain dry. Under the 'medium' risk scenario, surface water is shown to accumulate along the southeastern boundary. Under the 'low' risk scenario, the majority of the site is shown to be affected by surface water.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows the existing defences consist of natural high ground and a wall with an actual crest level of between 4.50m and 5.20m AODN. The current condition rating is unknown. The design standard of protection is 1 in 50 and 1 in 200 years.

High-Level Indication of Defence Costs

Based on an average cost of £1,526/m to raise an existing defence wall, it is estimated to cost in the region of £250,000 to upgrade the 150m of defences in order to protect the site for the lifetime of any development.

Flood Warning Area?

Yes

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 0.00%
- **'Moderate' Hazard Rating:** 0.00%
- **'Significant' Hazard Rating:** 0.00%
- **'Extreme' Hazard Rating:** 100.00%

Required Actions / Recommended Mitigation Measures

The site is located in Flood Zones 3, and therefore will require a detailed Flood Risk Assessment.

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.

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.

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.

Flood Hazard should be appraised against the proposed development layout to ensure that users and occupants of the site can achieve safe access and egress.

## SNF24

- **Site Area (Ha):** 0.052
- **Existing Land Use:** Brownfield
- **Proposed Land Use:** Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 0.0 %
- **Flood Zone 2:** 0.0%
- **Flood Zone 3:** 100.0%
- **Flood Zone 3b:** 0.0%

Development lifetime

100 years

Exception Test required?

Development which has a 'more vulnerable' classification will be subject to the Exception Test.

Flood History

- **Incidents within the site:** None.
- **Incidents within close proximity of the site:** None.

Watercourses/Rivers

The River Medway (Bridge Reach and Limehouse Reach) is located approximately 470m southeast of the site.

Geology

- **Bedrock:** Lewes Nodular Chalk Formation, Seaford Chalk Formation and Newhaven Chalk Formation (undifferentiated) - Chalk
- **Superficial deposits:** Head - Clay and Silt

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 100.00% (4.40m AODN)
- **1 in 200-year return period event – 2100:** 100.00% (5.77m AODN)
- **1 in 200-year return period event – 2125:** 100.00% (6.10m AODN)
- **1 in 1000-year return period event:** 100.00% (5.28m AODN)

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:** 59.8%
- **'Medium' risk scenario:** 10.9%
- **'Low' risk scenario:** 16.1%

Description of Surface Water Flow Paths

Under all modelled scenarios, surface water is shown to accumulate across the majority of the site.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows the existing defences consist of natural high ground and a wall with an actual crest level of between 4.50m and 5.20m AODN. The current condition rating is unknown. The design standard of protection is 1 in 50 and 1 in 200 years.

High-Level Indication of Defence Costs

Based on an average cost of £1,526/m to raise an existing defence wall, it is estimated to cost in the region of £250,000 to upgrade the 150m of defences in order to protect the site for the lifetime of any development.

Flood Warning Area?

Yes

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 0.00%
- **'Moderate' Hazard Rating:** 0.00%
- **'Significant' Hazard Rating:** 36.13%
- **'Extreme' Hazard Rating:** 63.87%

Required Actions / Recommended Mitigation Measures

The site is located in Flood Zones 3, and therefore will require a detailed Flood Risk Assessment.

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.

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.

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.

Flood Hazard should be appraised against the proposed development layout to ensure that users and occupants of the site can achieve safe access and egress.

### CCB8

- **Site Area (Ha):** 0.157
- **Existing Land Use:** Brownfield
- **Proposed Land Use:** Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 0.0 %
- **Flood Zone 2:** 0.0%
- **Flood Zone 3:** 100.0%
- **Flood Zone 3b:** 0.0%

Development lifetime

100 years

Exception Test required?

Development which has a 'more vulnerable' classification will be subject to the Exception Test.

Flood History

- **Incidents within the site:** None.
- **Incidents within close proximity of the site:** None.

Watercourses/Rivers

The River Medway is located approximately 180m northwest of the site.

Geology

- **Bedrock:** Lewes Nodular Chalk Formation - Chalk
- **Superficial deposits:** Alluvium - Clay, Silt, Sand and Peat

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 56.80% (4.19m AODN)
- **1 in 200-year return period event – 2100:** 100.00% (5.77m AODN)

- **1 in 200-year return period event – 2125:** 100.00% (6.09m AODN)
- **1 in 1000-year return period event:** 100.00% (4.92m AODN)

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:** 100.0%

Description of Surface Water Flow Paths

Under the 'high' and 'medium' risk scenario, the entire site is shown to remain dry. Under the 'low' risk scenario, surface water is shown to accumulate across the entire site.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows the existing defences consist of natural high ground with an actual crest level of between 4.75m and 4.93m AODN. The current condition rating is unknown. The design standard of protection is 1 in 100 years.

High-Level Indication of Defence Costs

Based on an average cost of £1,152/m to raise an existing embankment, it is estimated to cost in the region of £200,000 to upgrade the 150m of defences in order to protect the site for the lifetime of any development.

Flood Warning Area?

Yes

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 0.00%
- **'Moderate' Hazard Rating:** 0.00%
- **'Significant' Hazard Rating:** 19.42%
- **'Extreme' Hazard Rating:** 80.58%

Required Actions / Recommended Mitigation Measures

The site is located in Flood Zones 3, and therefore will require a detailed Flood Risk Assessment.

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.

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.

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.

Flood Hazard should be appraised against the proposed development layout to ensure that users and occupants of the site can achieve safe access and egress.

## GN15

- **Site Area (Ha):** 5.869
- **Existing Land Use:** Brownfield
- **Proposed Land Use:** Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 1.4 %
- **Flood Zone 2:** 1.9%
- **Flood Zone 3:** 96.7%
- **Flood Zone 3b:** ~53.5% *refer to text below

Development lifetime

100 years

Exception Test required?

Development which has a 'more vulnerable' classification will be subject to the Exception Test. * 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 if it is located within Flood Zone 3b. 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.

Flood History

- **Incidents within the site:** None.
- **Incidents within close proximity of the site:** None.

Watercourses/Rivers

The River Medway (Gillingham Reach) is located along the northern border of the site.

Geology

- **Bedrock:** Thanet Formation - Sand, Silt and Clay, Lewes Nodular Chalk Formation, Seaford Chalk Formation and Newhaven Chalk Formation (undifferentiated) - Chalk
- **Superficial deposits:** Beach and Tidal Flat Deposits (undifferentiated) - Clay, Silt and Sand, Alluvium - Clay, Silt, Sand and Peat

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 98.53% (4.93m AODN)

- **1 in 200-year return period event – 2100:** 100.00% (5.72m AODN)
- **1 in 200-year return period event – 2125:** 100.00% (6.02m AODN)
- **1 in 1000-year return period event:** 100.00% (5.35m AODN)

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:** 2.4%
- **'Medium' risk scenario:** 10.6%
- **'Low' risk scenario:** 38.2%

Description of Surface Water Flow Paths

Under all modelled scenarios, water is shown to accumulate within the southern portion of the site. Surface water is also shown to accumulate within the northern part of the site under the 'low' risk scenario but this is due to the presence of the marina.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows the existing defences consist of engineered high ground and a wall with an actual crest level of between 4.80m and 5.38m AODN. The current condition rating is unknown. The design standard of protection is 1 in 20 and 1 in 1000 years.

High-Level Indication of Defence Costs

Based on an average cost of £1,526/m to raise an existing defence wall, it is estimated to cost in the region of £1,550,000 to upgrade the 1000m of defences in order to protect the site for the lifetime of any development.

Flood Warning Area?

Yes

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 0.00%
- **'Moderate' Hazard Rating:** 0.18%
- **'Significant' Hazard Rating:** 44.92%
- **'Extreme' Hazard Rating:** 54.90%

Required Actions / Recommended Mitigation Measures

The site is located in Flood Zones 2 and 3, and therefore will require a detailed Flood Risk Assessment.

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.

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.

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.

Flood Hazard should be appraised against the proposed development layout to ensure that users and occupants of the site can achieve safe access and egress.

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).

### RWB25

- **Site Area (Ha):** 0.593
- **Existing Land Use:** Brownfield
- **Proposed Land Use:** Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 0.47 %
- **Flood Zone 2:** 0.12%
- **Flood Zone 3:** 99.41%
- **Flood Zone 3b:** ~34.6% *refer to text below

Development lifetime

100 years

Exception Test required?

Development which has a 'more vulnerable' classification will be subject to the Exception Test. 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 if it is located within Flood Zone 3b. 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.

Flood History

- **Incidents within the site:** None.
- **Incidents within close proximity of the site:** None.

Watercourses/Rivers

The River Medway (Limehouse Reach) is located along the northern border of the site.

Geology

- **Bedrock:** Lewes Nodular Chalk Formation - Chalk
- **Superficial deposits:** Alluvium - Clay, Silt, Sand and Peat

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 100.00% (4.95m AODN)
- **1 in 200-year return period event – 2100:** 100.00% (5.76m AODN)
- **1 in 200-year return period event – 2125:** 100.00% (6.09m AODN)
- **1 in 1000-year return period event:** 100.00% (5.32m AODN)

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:** 17.3%

Description of Surface Water Flow Paths

Under the 'high' and 'medium' risk scenario, the entire site is shown to remain dry. Under the 'low' risk scenario, there are two localised areas onsite shown to flood from surface water.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows the existing defences consist of engineered high ground and an embankment with an actual crest level of 5.87m AODN. The current condition rating is unknown. The design standard of protection is 1 in 1000 years.

High-Level Indication of Defence Costs

Based on an average cost of £1,152/m to raise an existing embankment, it is estimated to cost in the region of £425,000 to upgrade the 350m of defences in order to protect the site for the lifetime of any development.

Flood Warning Area?

Yes

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 0.00%
- **'Moderate' Hazard Rating:** 0.00%
- **'Significant' Hazard Rating:** 3.06%
- **'Extreme' Hazard Rating:** 96.94%

Required Actions / Recommended Mitigation Measures

The site is located in Flood Zones 3, and therefore will require a detailed Flood Risk Assessment.

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.

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.

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.

Flood Hazard should be appraised against the proposed development layout to ensure that users and occupants of the site can achieve safe access and egress.

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).

### GN3

- **Site Area (Ha):** 1.235
- **Existing Land Use:** Brownfield
- **Proposed Land Use:** Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 22.4 %
- **Flood Zone 2:** 15.7%
- **Flood Zone 3:** 61.9%
- **Flood Zone 3b:** 0.0%

Development lifetime

100 years

Exception Test required?

Development which has a 'more vulnerable' classification will be subject to the Exception Test. 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 if it is located within Flood Zone 3b. 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.

Flood History

- **Incidents within the site:** None.
- **Incidents within close proximity of the site:** None.

Watercourses/Rivers

The River Medway (Gillingham Reach) is located approximately 80m north of the site.

Geology

- **Bedrock:** Thanet Formation - Sand, Silt and Clay
- **Superficial deposits:** Alluvium - Clay, Silt, Sand and Peat

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 58.39% (4.81m AODN)
- **1 in 200-year return period event – 2100:** 87.73% (5.73m AODN)
- **1 in 200-year return period event – 2125:** 99.40% (6.03m AODN)

- **1 in 1000-year return period event:** 78.16% (5.38m AODN)

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:** 9.1%
- **'Medium' risk scenario:** 10.8%
- **'Low' risk scenario:** 45.8%

Description of Surface Water Flow Paths

Under all modelled scenarios, surface water is shown to accumulate onsite.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows the existing defences consist of engineered high ground with an effective crest level of3.63m AODN. The current condition rating is unknown. The design standard of protection is 1 in 200 years.

High-Level Indication of Defence Costs

Based on an average cost of £1,152/m to raise an existing embankment, it is estimated to cost in the region of £600,000 to upgrade the 500m of defences in order to protect the site for the lifetime of any development.

Flood Warning Area?

Yes

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 11.01%
- **'Moderate' Hazard Rating:** 11.81%
- **'Significant' Hazard Rating:** 75.35%
- **'Extreme' Hazard Rating:** 1.20%

Required Actions / Recommended Mitigation Measures

The site is located in Flood Zones 2 and 3, and therefore will require a detailed Flood Risk Assessment.

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.

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.
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.
Flood Hazard should be appraised against the proposed development layout to ensure that users and occupants of the site can achieve safe access and egress.

### HHH22 & HHH31

- **Site Area (Ha):** 170.876
- **Existing Land Use:** Greenfield
- **Proposed Land Use:** Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 94.68 %
- **Flood Zone 2:** 1.47%
- **Flood Zone 3:** 3.85%
- **Flood Zone 3b:** 0.0%

Development lifetime

100 years

Exception Test required?

Development which has a 'more vulnerable' classification will be subject to the Exception Test

Flood History

- **Incidents within the site:** None.
- **Incidents within close proximity of the site:** EA Recorded Flood datasets shows the surrounding area was affected from the sea in 1953 due to waves overtopping the defences.

Watercourses/Rivers

The Hoo Flats are located approximately 1,190m south of the site.

Geology

- **Bedrock:** London Clay Formation - Clay and Silt
- **Superficial deposits:** Head - Clay, Silt, Sand and Gravel, River Terrace Deposits, 2 - Sand and Gravel, Alluvium - Clay, Silt, Sand and Peat

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 0.00% (0.00m AODN)
- **1 in 200-year return period event – 2100:** 0.00% (0.00m AODN)
- **1 in 200-year return period event – 2125:** 0.00% (0.00m AODN)
- **1 in 1000-year return period event:** 0.00% (0.00m AODN)

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:** 2.3%
- **'Medium' risk scenario:** 1.5%
- **'Low' risk scenario:** 4.0%

Description of Surface Water Flow Paths

Under all modelled scenarios, water is shown to flow along parts of the site, however, this is due to the presence of a drainage ditches. There are also a few localised areas shown to be at risk of surface water flooding.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows the existing defences consist of an embankment with an effective crest level of 5.05m AODN, with a condition rating of 3. The design standard of protection is 1 in 1000 years.

High-Level Indication of Defence Costs

Based on an average cost of £1,152/m to raise an existing embankment, it is estimated to cost in the region of £4,400,000 to upgrade approximately 3,800m of defences in order to protect the site for the lifetime of any development.

Flood Warning Area?

Yes

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 0.00%
- **'Moderate' Hazard Rating:** 0.00%
- **'Significant' Hazard Rating:** 0.00%
- **'Extreme' Hazard Rating:** 0.00%

Required Actions / Recommended Mitigation Measures

**The site is located in Flood Zones 2 and 3, and therefore will require a detailed Flood Risk Assessment.**

**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.**

**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.**

**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.**

**Flood Hazard should be appraised against the proposed development layout to ensure that users and occupants of the site can achieve safe access and egress.**

**SR53**

- **Site Area (Ha):** 99.005
- **Existing Land Use:** Brownfield
- **Proposed Land Use:** Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 30.0 %
- **Flood Zone 2:** 38.2%
- **Flood Zone 3:** 31.9%
- **Flood Zone 3b:** ~2.0% *refer to text below

Development lifetime

100 years

Exception Test required?

Development which has a 'more vulnerable' classification will be subject to the Exception Test. * 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 if it is located within Flood Zone 3b. 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.

Flood History

- **Incidents within the site:** None.
- **Incidents within close proximity of the site:** None.

Watercourses/Rivers

The River Medway is along the eastern, southern and western border of the site.

Geology

- **Bedrock:** Lewes Nodular Chalk Formation, Seaford Chalk Formation and Newhaven Chalk Formation (undifferentiated) - Chalk, Lewes Nodular Chalk Formation - Chalk
- **Superficial deposits:** Head - Clay And Silt, River Terrace Deposits, 3 - Sand and Gravel, Alluvium - Clay, Silt, Sand and Peat, Beach and Tidal Flat Deposits (undifferentiated) - Clay, Silt and Sand

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 11.85% (5.15m AODN)
- **1 in 200-year return period event – 2100:** 94.35% (5.85m AODN)
- **1 in 200-year return period event – 2125:** 98.51% (6.21m AODN)
- **1 in 1000-year return period event:** 49.05% (5.78m AODN)

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:** 4.8%
- **'Medium' risk scenario:** 7.4%
- **'Low' risk scenario:** 14.8%

Description of Surface Water Flow Paths

Under all modelled scenarios, there are numerous localised areas of surface water flooding onsite.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows the existing defences consist of natural high ground and a wall with an actual crest level of between 4.70m and 5.87m AODN.

The current condition rating is unknown. The design standard of protection is 1 in 200 and 1 in 1000 years.

High-Level Indication of Defence Costs

Based on an average cost of £1,526/m to raise an existing defence wall, it is estimated to cost in the region of £5,850,000 to upgrade approximately 3800m of defences in order to protect the site for the lifetime of any development.

Flood Warning Area?

Yes

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 2.55%
- **'Moderate' Hazard Rating:** 5.14%
- **'Significant' Hazard Rating:** 59.67%
- **'Extreme' Hazard Rating:** 21.57%

Required Actions / Recommended Mitigation Measures

The site is located in Flood Zones 1, 2 and 3, and therefore will require a detailed Flood Risk Assessment.

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.

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.

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.

Flood Hazard should be appraised against the proposed development layout to ensure that users and occupants of the site can achieve safe access and egress.

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).

### CCB35

- **Site Area (Ha):** 2.700
- **Existing Land Use:** Mostly Greenfield
- **Proposed Land Use:** Non-Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 61.5%
- **Flood Zone 2:** 10.3%
- **Flood Zone 3:** 28.2%
- **Flood Zone 3b:** 0.0%

Development lifetime

75 years

Exception Test required?

Development which has a 'more vulnerable' classification will be subject to the Exception Test.

Flood History

- **Incidents within the site:** None.
- **Incidents within close proximity of the site:** None.

Watercourses/Rivers

The River Medway (Chatham Reach) is located approximately 245m west of the site.

Geology

- **Bedrock:** Seaford Chalk Formation - Chalk
- **Superficial deposits:** River Terrace Deposits, 1 - Sand and Gravel

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 0.00% (0.00m AODN)
- **1 in 200-year return period event – 2100:** 28.15% (4.95m AODN)
- **1 in 200-year return period event – 2125:** 54.46% (6.09m AODN)
- **1 in 1000-year return period event:** 0.00% (0.00m AODN)

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:** 0.5%
- **'Low' risk scenario:** 2.4%

Description of Surface Water Flow Paths

Under all modelled scenarios, there are a few localised areas of surface water flooding.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows the existing defences consist of a wall with an actual crest level of between 5.60m and 5.66m AODN. The current condition rating is unknown. The design standard of protection is 1 in 1000 years.

High-Level Indication of Defence Costs

Based on an average cost of £1,526/m to raise an existing defence wall, it is estimated to cost in the region of £850,000 to upgrade approximately 550m of defences in order to protect the site for the lifetime of any development.

Flood Warning Area?

Yes

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 9.22%
- **'Moderate' Hazard Rating:** 7.69%
- **'Significant' Hazard Rating:** 34.36%
- **'Extreme' Hazard Rating:** 3.20%

Required Actions / Recommended Mitigation Measures

The site is located in Flood Zones 1, 2 and 3, and therefore will require a detailed Flood Risk Assessment.

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.

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.

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.

Flood Hazard should be appraised against the proposed development layout to ensure that users and occupants of the site can achieve safe access and egress.

**SMI6**

- **Site Area (Ha):** 57.714
- **Existing Land Use:** Brownfield
- **Proposed Land Use:** Non-Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 20.9%
- **Flood Zone 2:** 10.0%
- **Flood Zone 3:** 69.1%
- **Flood Zone 3b:** ~28.2% *refer to text below

Development lifetime

75 years

Exception Test required?

Development which has a 'more vulnerable' classification will be subject to the Exception Test. 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 if it is located within Flood Zone 3b. 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.

Flood History

- **Incidents within the site:** None.
- **Incidents within close proximity of the site:** None.

Watercourses/Rivers

The River Medway (Gillingham Reach) is located along the northeastern border of the site.

Geology

- **Bedrock:** Thanet Formation - Sand, Silt and Clay, Seaford Chalk Formation - Chalk

- **Superficial deposits:** Alluvium - Clay, Silt, Sand and Peat

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 38.49% (5.06m AODN)
- **1 in 200-year return period event – 2100:** 65.63% (5.81m AODN)
- **1 in 200-year return period event – 2125:** 81.41% (6.32m AODN)
- **1 in 1000-year return period event:** 44.05% (5.42m AODN)

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:** 3.9%
- **'Medium' risk scenario:** 3.8%
- **'Low' risk scenario:** 12.5%

Description of Surface Water Flow Paths

Under all modelled scenarios, there are numerous localised areas of surface water flooding onsite.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows the existing defences consist of a wall with an effective crest level of between 4.60m AODN. The current condition rating is unknown. The design standard of protection is 1 in 1000 years.

High-Level Indication of Defence Costs

Based on an average cost of £1,526/m to raise an existing defence wall, it is estimated to cost in the region of £2,400,000 to upgrade approximately 1550m of defences in order to protect the site for the lifetime of any development.

Flood Warning Area?

Yes

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 6.90%
- **'Moderate' Hazard Rating:** 5.66%
- **'Significant' Hazard Rating:** 29.34%

- **'Extreme' Hazard Rating:** 38.87%

Required Actions / Recommended Mitigation Measures

The site is located in Flood Zones 1, 2 and 3, and therefore will require a detailed Flood Risk Assessment.

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.

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.

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.

Flood Hazard should be appraised against the proposed development layout to ensure that users and occupants of the site can achieve safe access and egress.

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).

**HHH35**

- **Site Area (Ha):** 57.440
- **Existing Land Use:** Greenfield
- **Proposed Land Use:** Non-Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 84.9%
- **Flood Zone 2:** 5.1%
- **Flood Zone 3:** 10.0%
- **Flood Zone 3b:** 0.0%

Development lifetime

75 years

Exception Test required?

Development which has a 'more vulnerable' classification will be subject to the Exception Test.

Flood History

- **Incidents within the site:** None.
- **Incidents within close proximity of the site:** EA Recorded Flood datasets shows the surrounding area was affected from the sea in 1953 due to waves overtopping the defences.

Watercourses/Rivers

The Hoo Flats are located approximately 965m south of the site.

Geology

- **Bedrock:** London Clay Formation - Clay and Silt
- **Superficial deposits:** Head - Clay and Silt, River Terrace Deposits, 1 - Clay and Silt, Alluvium - Clay, Silt, Sand and Peat

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 0.00% (0.00m AODN)
- **1 in 200-year return period event – 2100:** 10.57% (5.74m AODN)
- **1 in 200-year return period event – 2125:** 15.49% (6.04m AODN)
- **1 in 1000-year return period event:** 6.268% (5.04m AODN)

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:** 1.0%
- **'Medium' risk scenario:** 0.4%
- **'Low' risk scenario:** 1.2%

Description of Surface Water Flow Paths

Under all modelled scenarios, water is shown to flow along parts of the site, however, this is due to the presence of a drainage ditches. There are also a few localised areas of surface water flooding.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows the existing defences consist of an embankment and wall with an actual crest level of between 5.12m and 7.10m AODN, and has a condition rating of 3. The design standard of protection is 1 in 1000 years.

High-Level Indication of Defence Costs

Based on an average cost of £1,526/m to raise an existing defence wall, it is estimated to cost in the region of £4,750,000 to upgrade approximately 3100m of defences in order to protect the site for the lifetime of any development.

Flood Warning Area?

Yes

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 4.61%
- **'Moderate' Hazard Rating:** 2.14%
- **'Significant' Hazard Rating:** 6.04%
- **'Extreme' Hazard Rating:** 2.60%

Required Actions / Recommended Mitigation Measures

The site is located in Flood Zones 1, 2 and 3, and therefore will require a detailed Flood Risk Assessment.

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.

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.

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.

Flood Hazard should be appraised against the proposed development layout to ensure that users and occupants of the site can achieve safe access and egress.

## HHH36

- **Site Area (Ha):** 114.109
- **Existing Land Use:** Brownfield
- **Proposed Land Use:** Non-Residential

Flood Zone Classification based on the EA's 'Flood Map for Planning'

- **Flood Zone 1:** 0.1%
- **Flood Zone 2:** 10.2%
- **Flood Zone 3:** 89.7%
- **Flood Zone 3b:** ~1.1% *refer to text below

Development lifetime

75 years

Exception Test required?

Development which has a 'more vulnerable' classification will be subject to the Exception Test. 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 if it is located within Flood Zone 3b. 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.

Flood History

- **Incidents within the site:** None.
- **Incidents within close proximity of the site:** EA Recorded Flood datasets shows the surrounding area was affected from the sea in 1953 due to waves overtopping the defences.

Watercourses/Rivers

The Hoo Flats and Slede Ooze are located along the southern border of the site.

Geology

- **Bedrock:** London Clay Formation - Clay and Silt
- **Superficial deposits:** River Terrace Deposits, 1 - Clay and Silt, Alluvium - Clay, Silt, Sand and Peat

Percentage of site at risk of flooding from tidal sources and surface water, based off mapping available from the EA

Percentage of site at risk of flooding from tidal sources during the defenced scenario for key return period events. Maximum flood level on site shown in brackets.

- **1 in 200-year return period event:** 2.04% (4.94m AODN)
- **1 in 200-year return period event – 2100:** 25.61% (5.75m AODN)
- **1 in 200-year return period event – 2125:** 95.57% (6.00m AODN)
- **1 in 1000-year return period event:** 17.95% (5.42m AODN)

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:** 2.3%
- **'Medium' risk scenario:** 3.3%
- **'Low' risk scenario:** 12.4%

Description of Surface Water Flow Paths

Under all modelled scenarios, water is shown to flow along parts of the site, however, this is due to the presence of a drainage ditches. There are also numerous areas of localised surface water flooding.

Existing Flood Defence Infrastructure (inc. SoP):

The EA's Spatial Flood Defence dataset shows the existing defences consist of an embankment and wall with an actual crest level of between 5.12m and 7.10m AODN, and has a condition rating of 3. The design standard of protection is 1 in 1000 years.

High-Level Indication of Defence Costs

Based on an average cost of £1,526/m to raise an existing defence wall, it is estimated to cost in the region of £2,450,000 to upgrade approximately 1600m of defences in order to protect the site for the lifetime of any development.

Flood Warning Area?

Yes

Hazard Rating

Percentage of site in each Hazard Rating Classification during the design flood event (2125) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2.2)

- **'Low' Hazard Rating:** 6.76%
- **'Moderate' Hazard Rating:** 16.41%
- **'Significant' Hazard Rating:** 33.22%
- **'Extreme' Hazard Rating:** 28.67%

Required Actions / Recommended Mitigation Measures

The site is located in Flood Zones 2 and 3, and therefore will require a detailed Flood Risk Assessment.

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.

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.

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.

Flood Hazard should be appraised against the proposed development layout to ensure that users and occupants of the site can achieve safe access and egress.

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).

# A.
# Appendices

Appendix A.1 – Site Location Map

## Appendix A.1 – Site Location Map