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Level 2 Strategic Flood Risk Assessment

Medway Council

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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	August 2021	TV, BI, NW	SMB
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Herrington Consulting Limited

Canterbury Office
Unit 6 & 7
Barham Business Park
Elham Valley Road
Barham
Canterbury
Kent
CT4 6DQ

London Office
Unit 52.11
Woolyard
52 Bermondsey Street
London
SE1 3UD

Tel 01227 833855
www.herringtonconsulting.co.uk

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1 Scope and Summary of Appraisal

This report has been prepared to accompany the document entitled **'Medway Council Sequential and Exception Test'** prepared by Medway Council in July 2021 and should be read in conjunction with this report.

Paragraph 160 of the National Planning Policy Framework (NPPF 2021) states that, if *"following the application of the Sequential Test, it is not possible, consistent with wider sustainability objectives for the development to be located in zones with a lower probability of flooding, the Exception Test can be applied."*

Paragraph 164 of the NPPF 2021 reads;

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

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 Zone 2 and 3, and for sites in any Flood Zone where ≥ 40% of the site area is shown to be at risk of flooding from surface water flooding from either the 'high' and/or 'medium' risk scenarios. In total, **53 sites** were taken forward for the application of the Exception Test Part B, with the breakdown of the sites as follows:

- 5 sites within Flood Zone 1 with ≥ 40% of the site at risk of surface water flooding,
- 3 sites in Flood Zone 2, with 1 site where ≥ 40% of the site is also at risk of surface water flooding , and
- 45 sites in Flood Zone 3, with 11 sites where ≥ 40% of the site is also at risk of surface water flooding.

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 Assessment 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 and Name – The assigned site reference and name, 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 (undeveloped).

Proposed Lane 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 20 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 within the functional floodplain, when in reality this is considered not to be the case, with this inaccuracy attributed to the outputs of the hydrodynamic flood modelling that is currently available. The North Kent Coast (NKC) Modelling Study (2018) was released *prior* to the completion of a number of defence upgrades, most recently at Jane's Creek and Strood Riverside. The impact that these defence upgrades will have is therefore not accounted for within the model and as a consequence, for the sites that are shown to be located within the functional floodplain that actually benefit from new defences. It is intended that further modelling

refinements are undertaken as part of the Council's forthcoming Strood Flood Strategy to determine the true flood zone classification, and ultimately, to determine whether the site would pass the Exception Test. 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.

This approach is applied in accordance with paragraph 015 of the National Planning Policy Guidance (NPPG) Flood and Coastal Change, which states that; *"The area identified as functional floodplain should take into account the effects of defences and other flood risk management infrastructure. Areas which would naturally flood, but which are prevented from doing so by existing defences and infrastructure or solid buildings, will not normally be identified as functional floodplain".*

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, and that the lifetime of non-residential development depends on the characteristics of that development. A 60 year lifetime is often used as a design threshold for consideration of commercial development in flood risk modelling and therefore is referred to in this report.

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.

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 compatibility.

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. 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 (2018 – provided 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 both the 'defended' and 'undefended' scenarios. The maximum flood level on site was also extracted and is shown in brackets within the table.

In some instances, the 'defended' flood levels are shown to be higher than the modelled 'undefended' flood levels. In some cases, this is a result of water being contained within the channel

by the defences prior to water overtopping the defences, whereas when the defences are removed, the water level is reduced as floodwater is no longer contained within the channel during extreme events. In addition, it should be acknowledged that for sites where defences have recently been improved, these levels were modelled *prior* to the installation of new defences (particularly Jane's Creek and Strood Riverside), which may account for the anomalous values.

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 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 May 2020). Where available, the Standard of Protection (SoP) as provided by Medway Council has been listed.

The Medway Estuary and Swale Flood and Erosion Risk Management Strategy (MEASS) Benefit Area and Policies – Lists the MEASS Benefit Area covering the flood and erosion cell within which the site is located. This section also states the Preferred Options across three epochs; 'Now – 2038', '2038 to 2068' and '2068 to 2118' as described within the MEASS Non-Technical Summary (2018).

High Level Indicative Defence Cost – 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 basic estimates based on available data, 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 Environment Agency 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 – The hazard rating classification outputs, provided as part of the NKC Modelling Study (2018), 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 SMWS.

2.2 Table of Individual Sites

Tables 2.3 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.

Site Reference	Site Name	Flood Zone
0781	218 Main Road, Hoo	1
0839	Former Alloy Wheels Priory Road	1
1088	Manor Farm, Parsonage Lane	1
1106	Miles Place, Delce Road, Rochester	1
1302	Rear of Angel Cottages, Station Road, Rainham	1
0243	Chatham-Comparison Retailing	2
0810	Junction of Pier Road and Medway Road, Gillingham	2
1315	Multi-storey car park, Rhode Street, Chatham	2
0090	Strood Riverside, Canal Road	3
0102	1-35 High Street, Chatham (Grays Garage)	3
0137	Civic Centre and Janes Creek	3
0213	352-356 Luton Road, Luton	3
0646	Grain Power Station, Grain Road	3
0647	ELNA Kingsnorth 1	3
0687	National Grid Property, Pier Road, Gillingham	3
0699	National Grid Property Holdings, Grain Road	3
0735	Upnor Wharf	3
1109	Steelfields, Danes Hill, Gillingham	3
1115	Car Park, Commercial Road, Strood	3
1133	247-253 High Street, Chatham	3
1141	325 High Street, Rochester	3
1147	18-20 Batchelor Street, Chatham	3
1188	Pier Approach Road Depot	3
1190	Acorn Wharf Shipyard	3
1216	Site 4 Land to north of Binney Farm	3
1251	Land to the west of Kingsnorth	3
1278	Land East of Pier Approach Rd, Gillingham	3
1297	Land bound by Commercial Rd, Knight Rd, Priory Rd and Smith St	3
1299	East of Ropers Lane, Hoo	3
1301	Temple Street Public Car Park, 151-175 High St, 1A-1 Cuxton Road	3
1306	Dagenham Motors, Pier Road, Gillingham	3
1308	B&M Bargains, Medway Street, Chatham	3
1309	Riverside Gardens, Chatham	3
1311	199 to 233 High Street, Chatham	3

Site Reference	Site Name	Flood Zone
0757	Between Cross Street & The Brook, Chatham	3
0760	Site bound by Cross Street, Upbury Way, High Street and Slicketts Hill	3
0818	J7, Chatham Maritime	3
0824	Chatham Docks, Chatham	3
0834	Halfords, The Brook, Chatham	3
0843	Tesco Site, Cuxton Road access point and Commercial Road works site	3
0866	Crown House, The Brook, Chatham	3
1039	National Tyre, Station Road, Strood	3
1057	North side, Priory Road	3
1105	Manor Farm, Marsh Road, Halling	3
1312	Pumping Station, The Brook, Chatham	3
1313	279 to 313a High Street, Chatham	3
1317	Railway arches (3) and adjacent land	3
1318	Sewage Pumping Station / Travelling Showpeople Site	3
1319	Kingswear Gardens	3
1320	McDonalds, Car Sales Garage and rear of High Street properties	3
1321	2 Station Road	3
0820a	Interface Land (northern parcel), Chatham Maritime	3
0820b	Interface Land, Chatham Maritime	3
-	-	-

Table 2.3 – List of sites assessed

3 Site Summary Tables

3.1 Flood Zone 1 Sites

781 - 218 Main Road, Hoo

Site Area: 0.52ha		**Existing Land Use:** Brownfield		**Proposed Land Use:** Residential
Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	100%	0%	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 100m of the site: Water-logging of fields.			
Watercourses/Rivers	The River Medway is located 900m to the south of the site. In addition, there is an ordinary watercourse along the northern boundary of the site.			
Geology	Bedrock: London Clay Formation (Clay (Undifferentiated) and Silt (Undifferentiated)) Superficial: Head (Undifferentiated) (Clay (Undifferentiated) and Silt (Undifferentiated) and Sand(Undifferentiated) and Gravel (Undifferentiated); Clay (Undifferentiated) and Silt (Undifferentiated))			
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 defended scenario for key return period events. Maximum flood level on site shown in brackets.***			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	0.0% (0.00m AODN)	0.0% (0.00m AODN)	0.0% (0.00m AODN)	0.0% (0.00m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	0.0% (0.00m AODN)	0.0% (0.00m AODN)	0.0% (0.00m AODN)	0.0% (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	*'Medium' risk scenario*	*'Low' risk scenario*	
	31.3%	47.3%	79.7%	
Description of Surface Water Flow Paths (EA's RoFSW Maps)	During all modelled scenarios, surface water flows across the centre of the site in an easterly direction.			
Existing Flood Defence Infrastructure (inc. SoP):	The EA's Spatial Flood Defence dataset shows that there is high ground along the River Medway adjacent to the site. The crest levels of this defence vary between 4.67m to 6.00m AODN. Standard of Protection: Unknown			
MEASS Benefit Area and Preferred Option	-			
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*	
	-	-	-	
High-Level Indication of Defence Costs	N/A - The site is predicted to remain unaffected by flooding from the River Medway for the lifetime of the development.			
Flood Warning Area?	Not available at this location.			

781 - 218 Main Road, Hoo				
Hazard Rating	***Percentage of site in each Hazard Rating Classification during the design flood event (2115) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	0.0%	0.0%	0.0%	0.0%
Required Actions / Recommended Mitigation Measures	The site is located partially in Flood Zone 3, and is at risk of flooding from surface water. As a result, a detailed FRA, including a comprehensive investigation into surface water flood risk, 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 SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. The site is also identifed by the Level 1 SFRA as a 'Sensitive Drainage Area' and therefore Medway Council LLFA may require a SWMS and SuDs proforma to be completed for non major development proposals. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. Floor levels should be raised above the depth of flooding from surface water, including the Environment Agency's recommended additional freeboard requirements where practicable. Flood resistance and resilience measures should be considered for inclusion. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area. 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 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 LMIDB area, the LMIDB should be consulted to obtain consent.			

839 - Former Alloy Wheels Priory Road

Site Area: 3.01ha		**Existing Land Use:** Brownfield		**Proposed Land Use:** Employment
Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	100%	0%	0%	0%
Development lifetime	60 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 100m of the site:. Public sewer flooding. Highway flooding.			
Watercourses/Rivers	The River Medway is located 425m to the southeast of the site.			
Geology	Bedrock: Lewes Nodular Chalk Formation, Seaford Chalk Formation and Newhaven Chalk Formation (Undifferentiated) (Chalk) Superficial: Head (Undifferentiated) (Clay (Undifferentiated) and Silt (Undifferentiated))			
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 defended scenario for key return period events. Maximum flood level on site shown in brackets.***			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	0.0% (0.00m AODN)	0.0% (0.00m AODN)	0.3% (6.10m AODN)	0.0% (0.00m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	0.0% (0.00m AODN)	0.0% (0.00m AODN)	0.0% (6.02m AODN)	0.0% (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	*'Medium' risk scenario*	*'Low' risk scenario*	
	31.6%	41.7%	50.7%	
Description of Surface Water Flow Paths (EA's RoFSW Maps)	During all modelled scenarios, surface water is shown to flow across the northern half of the site in an easterly direction.			
Existing Flood Defence Infrastructure (inc. SoP):	The existing defences consist of a wall with minimum actual crest level of 3.67m to 4.67m AODN (as stated in the MedwayFlood Defence High Level Appraisal) and has a condition rating of 2 (Good) to 3 (Fair). EA's Spatial Flood Defence dataset shows crest levels of 4.04m to 4.25m AODN and a condition rating of 3. Standard of Protection: Unknown			
MEASS Benefit Area and Preferred Option	BA2.1 Strood. Raise (sustain) embankments,walls, flood gates and revetments. This option involves improving the current SOP provided by the defences to 1% AEP SoP with sea level rise.			
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*	
	HTL Sustain	HTL Sustain	HTL Sustain	
High-Level Indication of Defence Costs	N/A - The site is predicted to remain unaffected by flooding from the River Medway for the lifetime of any development.			
Flood Warning Area?	Not available at this location.			

839 - Former Alloy Wheels Priory Road				
Hazard Rating	***Percentage of site in each Hazard Rating Classification during the design flood event (2070) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	0.0%	0.0%	0.0%	0.0%
Required Actions / Recommended Mitigation Measures	The site covers an area of greater than 1ha and is shown to be at risk of flooding from surface water. As a result, an FRA, including a comprehensive investigation into surface water flood risk, is required. SuDS should be considered to be included within the development where possible, in accordance with the NPPF and its planning practice guidance. All major development will require a SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. Floor levels should be raised above the design flood level and depth of flooding from surface water, including the Environment Agency's recommended additional freeboard requirements where practicable. Flood resistance and resilience measures should be considered for inclusion. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area. 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.			

1088 - Manor Farm, Parsonage Lane

Site Area: 19.06ha		**Existing Land Use:** Brownfield		**Proposed Land Use:** Residential
Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	100%	0%	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 100m of the site: Basement flooding and flooding recorded on Frindsbury Hill by Southern Water. No further information is provided.			
Watercourses/Rivers	The River Medway is located 725m to the east of the site. In addition, there is an ordinary watercourse 200m to the east of the site.			
Geology	Bedrock: Thanet Sand Formation; Lewes Nodular Chalk Formation, Seaford Chalk Formation and Newhaven Chalk Formation (Undifferentiated) (Sand(Undifferentiated) and Silt (Undifferentiated) and Clay (Undifferentiated);Chalk) Superficial: Head (Undifferentiated); River Terrace Deposits, 3; River Terrace Deposits, 2 (Clay (Undifferentiated) and Silt (Undifferentiated); 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 defended scenario for key return period events. Maximum flood level on site shown in brackets.***			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	0.0% (0.00m AODN)	0.0% (5.47m AODN)	0.1% (6.10m AODN)	0.0% (5.41m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	0.0% (0.00m AODN)	0.0% (5.43m AODN)	0.1% (6.05m AODN)	0.0% (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	*'Medium' risk scenario*	*'Low' risk scenario*	
	0.5%	2.5%	7.4%	
Description of Surface Water Flow Paths (EA's RoFSW Maps)	During the 'low' and 'medium' risk scenario surface water flows across the centre of the site in an easterly direction. There is only localised surface water accumulation on site during the 'high' risk scenario, which could be attributed to localised depressions in the topography.			
Existing Flood Defence Infrastructure (inc. SoP):	The existing defences consist of an embankment and high ground with minimum actual crest level of <3.67m to 5.17m AODN (as stated in the MedwayFlood Defence High Level Appraisal) and has a condition rating of 2 (Good) to 3 (Fair). The EA's Spatial Flood Defence dataset shows crest levels of 3.58m to 7.14m AODN and a condition rating of 2 to 3. Standard of Protection: Unknown			
MEASS Benefit Area and Preferred Option	-			
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*	
	-	-	-	
High-Level Indication of Defence Costs	N/A - The site is predicted to remain almost entirely unaffected by flooding from the River Medway for the lifetime of the development and therefore defence improvements are not considered appropriate.			
Flood Warning Area?	Yes.			

1088 - Manor Farm, Parsonage Lane				
Hazard Rating	***Percentage of site in each Hazard Rating Classification during the design flood event (2115) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	0.1%	0.0%	0.0%	0.0%
Required Actions / Recommended Mitigation Measures	The site covers an area of greater than 1ha and is shown to be at risk of flooding from surface water. As a result, an FRA, including a comprehensive investigation into surface water flood risk, is required. SuDS should be considered to be included within the development where possible, in accordance with the NPPF and its planning practice guidance. All major development will require a SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. Floor levels should be raised above the depth of flooding from surface water, including the Environment Agency's recommended additional freeboard requirements where practicable. Flood resistance and resilience measures should be considered for inclusion. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area. 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.			

1106 - Miles Place, Delce Road, Rochester

Site Area: 0.31ha		**Existing Land Use:** Brownfield		**Proposed Land Use:** Residential
Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	100%	0%	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 100m of the site: Highway flooding from private drain.			
Watercourses/Rivers	The nearest watercourse is the River Medway which is located over 800m away.			
Geology	Bedrock: Lewes Nodular Chalk Formation (Chalk) Superficial: Head (Undifferentiated) (Clay (Undifferentiated) and Silt (Undifferentiated) and Sand(Undifferentiated) and Gravel (Undifferentiated))			
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 defended scenario for key return period events. Maximum flood level on site shown in brackets.***			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	0.0% (0.00m AODN)	0.0% (0.00m AODN)	0.0% (0.00m AODN)	0.0% (0.00m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	0.0% (0.00m AODN)	0.0% (0.00m AODN)	0.0% (0.00m AODN)	0.0% (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	*'Medium' risk scenario*	*'Low' risk scenario*	
	37.4%	47.2%	59.9%	
Description of Surface Water Flow Paths (EA's RoFSW Maps)	During all modelled scenarios, surface water is shown to flow across the site in a northerly direction.			
Existing Flood Defence Infrastructure (inc. SoP):	There are no flood defences near to the site. Standard of Protection: Unknown			
MEASS Benefit Area and Preferred Option	-			
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*	
	-	-	-	
High-Level Indication of Defence Costs	N/A - There are no defences near to the site and the site is predicted to remain unaffected by flooding from the River Medway for the lifetime of any development.			
Flood Warning Area?	Not available at this location.			

1106 - Miles Place, Delce Road, Rochester				
Hazard Rating	***Percentage of site in each Hazard Rating Classification during the design flood event (2115) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	0.0%	0.0%	0.0%	0.0%
Required Actions / Recommended Mitigation Measures	Whilst the site is located in Flood Zone 1 and covers less than 1ha, the site is shown to be at risk of flooding from surface water. As a result, an FRA, including a comprehensive investigation into surface water flood risk, is recommended. SuDS should be considered to be included within the development where possible, in accordance with the NPPF and its planning practice guidance. All major development will require a SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. The site is also identifed by the Level 1 SFRA as a 'Sensitive Drainage Area' and therefore Medway Council LLFA may require a SWMS and SuDs proforma to be completed for non major development proposals. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. Floor levels should be raised above the depth of flooding from surface water, including the Environment Agency's recommended additional freeboard requirements where practicable. Flood resistance and resilience measures should be considered for inclusion. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area. 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.			

1302 - Rear of Angel Cottages, Station Road, Rainham

Site Area: 0.62ha		**Existing Land Use:** Greenfield		**Proposed Land Use:** Residential
Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	100%	0%	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 100m of the site: External property flooding on Station Road.			
Watercourses/Rivers	The Otterham Creek is located 400m to north of the site. The Otterham Creek discharges into the River Medway further north.			
Geology	Bedrock: Seaford Chalk Formation (Chalk) Superficial: Head (Undifferentiated) (Clay (Undifferentiated) and Silt (Undifferentiated))			
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 defended scenario for key return period events. Maximum flood level on site shown in brackets.***			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	0.0% (0.00m AODN)	0.0% (0.00m AODN)	0.0% (0.00m AODN)	0.0% (0.00m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	0.0% (0.00m AODN)	0.0% (0.00m AODN)	0.0% (0.00m AODN)	0.0% (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	*'Medium' risk scenario*	*'Low' risk scenario*	
	35.1%	41.6%	51.5%	
Description of Surface Water Flow Paths (EA's RoFSW Maps)	During all modelled scenarios surface water is shown to flow in north-westerly direction across the centre of the site.			
Existing Flood Defence Infrastructure (inc. SoP):	The EA's Spatial Flood Defence dataset shows there is high ground defences to the north of the site with crest levels of 4.90m to 5.10m AODN and a condition rating of 3. Standard of Protection: Unknown			
MEASS Benefit Area and Preferred Option	-			
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*	
	-	-	-	
High-Level Indication of Defence Costs	N/A - The site is predicted to remain unaffected by flooding from the River Medway for the lifetime of any development.			
Flood Warning Area?	Not available at this location.			

1302 - Rear of Angel Cottages, Station Road, Rainham				
Hazard Rating	***Percentage of site in each Hazard Rating Classification during the design flood event (2115) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	0.0%	0.0%	0.0%	0.0%
Required Actions / Recommended Mitigation Measures	Whilst the site is located in Flood Zone 1 and covers an area of less than 1ha, the site is shown to be at risk of flooding from surface water. As a result, an FRA, including a comprehensive investigation into surface water flood risk, is recommended. SuDS should be considered to be included within the development where possible, in accordance with the NPPF and its planning practice guidance. All major development will require a SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. The site is also identifed by the Level 1 SFRA as a 'Sensitive Drainage Area' and therefore Medway Council LLFA may require a SWMS and SuDs proforma to be completed for non major development proposals. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. Floor levels should be raised above the depth of flooding from surface water, including the Environment Agency's recommended additional freeboard requirements where practicable. Flood resistance and resilience measures should be considered for inclusion. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area. 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.			

3.2 Flood Zone 2 Sites

243 - Chatham-Comparison Retailing

Site Area: 1.36ha		**Existing Land Use:** Brownfield		**Proposed Land Use:** Residential
Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	98.06%	1.94%	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 100m of the site: None.			
Watercourses/Rivers	The River Medway is 500m to the northwest of the site.			
Geology	Bedrock: Lewes Nodular Chalk Formation (Chalk) Superficial: Head (Undifferentiated) (Clay (Undifferentiated) and Silt (Undifferentiated) and Sand(Undifferentiated) and Gravel (Undifferentiated))			
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 defended scenario for key return period events. Maximum flood level on site shown in brackets.***			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	0.0% (0.00m AODN)	1.9% (5.46m AODN)	4.3% (6.11m AODN)	1.9% (5.40m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	0.0% (0.00m AODN)	1.9% (5.45m AODN)	4.2% (6.07m AODN)	1.9% (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	*'Medium' risk scenario*	*'Low' risk scenario*	
	0.0%	2.0%	14.2%	
Description of Surface Water Flow Paths (EA's RoFSW Maps)	During the 'low' risk scenario there are localised areas of surface water accumulation on site, possibly as a result of localised depressions in topography, and surface water flows in a a northerly direction along the northwest boundary of the site. The northerly flow path remains during the 'medium' scenario, albeit it on a smaller scale, and the site is not predicted to flood during the 'high' scenario.			
Existing Flood Defence Infrastructure (inc. SoP):	The existing defences consist of a wall with minimum actual crest level of 4.67m to 5.17m AODN (as stated in the Medway Flood Defence High Level Appraisal and has a condition rating of 2 (Good). The EA's Spatial Flood Defence dataset shows crest levels of 4.60m to 5.49m AODN and a condition rating of 3. Standard of Protection: Unknown			
MEASS Benefit Area and Preferred Option	BA2.2 Rochester. Raise (sustain) embankments, walls, flood gates, and revetments in localised areas. Localised raising of the defences to protect properties and assets at risk of flooding around Rochester and Chatham against a 0.1% AEP with sea level rise. The rest of the Benefit Area will have a No Active Intevention Approach.			
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*	
	HTL Sustain with localised NAI	HTL Sustain with localised NAI	HTL Sustain with localised NAI	
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 £610,000 to upgrade the 400m of defences in order to protect the site for the lifetime of any development.			
Flood Warning Area?	Yes.			

243 - Chatham-Comparison Retailing				
Hazard Rating	***Percentage of site in each Hazard Rating Classification during the design flood event (2115) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	0.8%	0.0%	2.3%	0.0%
Required Actions / Recommended Mitigation Measures	The site is located partially in Flood Zone 2 , and therefore will required a 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 SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. The 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. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area. 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. When developing a scheme, the condition of any adjacent defences should be taking into account and consideration given to upgrading the defences to maintain, or further, the protection offered to the site and surrounding area. The costs associated with defence upgrades should be shared amongst beneficiaries.			

810 - Junction of Pier Road and Medway Road, Gillingham

Site Area: 0.59ha		**Existing Land Use:** Brownfield		**Proposed Land Use:** Residential
Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	97.67%	2.33%	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 100m of the site: Surface water flooding within highways due to tide locking and capacity within public sewer and pumping station.			
Watercourses/Rivers	The River Medway is located 450m to the north of the site.			
Geology	Bedrock: Thanet Sand Formation (Sand(Undifferentiated) and Silt (Undifferentiated) and Clay (Undifferentiated)) Superficial: Alluvium (Clay, Silty Peaty Sandy (Unconsolidated Deposits Classification Scheme))			
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 defended scenario for key return period events. Maximum flood level on site shown in brackets.***			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	0.0% (0.00m AODN)	0.0% (0.00m AODN)	86.1% (6.07m AODN)	0.0% (0.00m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	0.0% (0.00m AODN)	3.0% (5.04m AODN)	85.2% (6.05m AODN)	2.3% (4.53m 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	*'Medium' risk scenario*	*'Low' risk scenario*	
	53.7%	74.6%	92.4%	
Description of Surface Water Flow Paths (EA's RoFSW Maps)	During all modelled scenarios, surface water flows across the centre of the site in a northerly direction.			
Existing Flood Defence Infrastructure (inc. SoP):	The existing defences consist of a wall with minimum actual crest level of 3.67m to 4.17m AODN (as stated in the Medway Flood Defence High Level Appraisal). The EA's Spatial Flood Defence dataset shows crest levels of 3.63m to 5.53m AODN and a condition rating of 3. Standard of Protection: Unknown			
MEASS Benefit Area and Preferred Option	BA2.3 St Mary's Island. Raise (sustain) embankments, walls, flood gates and revetments. This option involves improving the SoP provided by the defences to 0.5% AEP SoP with sea level rise.			
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*	
	HTL Sustain	HTL Sustain	HTL Sustain	
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 £2,750,000 to upgrade the 1.8km of defences in order to protect the site for the lifetime of any development.			
Flood Warning Area?	Yes.			

810 - Junction of Pier Road and Medway Road, Gillingham				
Hazard Rating	***Percentage of site in each Hazard Rating Classification during the design flood event (2115) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	3.3%	0.0%	65.0%	3.1%
Required Actions / Recommended Mitigation Measures	The site is located partially in Flood Zone 2, and is at risk of flooding from surface water. As a result, a FRA, including a comprehensive investigation into surface water flood risk, 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 SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. The site is also identifed by the Level 1 SFRA as a 'Sensitive Drainage Area' and therefore Medway Council LLFA may require a SWMS and SuDs proforma to be completed for non major development proposals. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. The 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. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area. 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. When developing a scheme, the condition of any adjacent defences should be taking into account and consideration given to upgrading the defences to maintain, or further, the protection offered to the site and surrounding area. The costs associated with defence upgrades should be shared amongst beneficiaries.			

1315 - Multi-storey car park, Rhode Street, Chatham				
Site Area: 0.41ha		**Existing Land Use:** Brownfield		**Proposed Land Use:** Residential
Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	93.75%	6.25%	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 100m of the site: . Public sewer flooding.			
Watercourses/Rivers	The River Medway is located 700m to the northwest of the site.			
Geology	Bedrock: Lewes Nodular Chalk Formation (Chalk) Superficial: Head (Undifferentiated) (Clay (Undifferentiated) and Silt (Undifferentiated) and Sand(Undifferentiated) and Gravel (Undifferentiated))			
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 defended scenario for key return period events. Maximum flood level on site shown in brackets.***			
	1 in 200 year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	0.0% (0.00m AODN)	9.1% (5.47m AODN)	9.7% (6.12m AODN)	6.3% (5.40m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	0.0% (0.00m AODN)	9.1% (5.46m AODN)	9.7% (6.07m AODN)	6.3% (5.40m 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	*'Medium' risk scenario*	*'Low' risk scenario*	
	0.2%	0.6%	0.6%	
Description of Surface Water Flow Paths (EA's RoFSW Maps)	The entire site is almost entirely unaffected by flooding from surface water during all modelled scenarios.			
Existing Flood Defence Infrastructure (inc. SoP):	The existing defences consist of high ground with minimum actual crest level of 4.67m to 5.17m AODN (as stated in the MedwayFlood Defence High Level Appraisal) and has a condition rating of 2 (Good). The EA's Spatial Flood Defence dataset shows crest levels of 4.75m to 4.93m AODN and a condition rating of 3. Standard of Protection: Unknown			
MEASS Benefit Area and Preferred Option	BA2.2 Rochester. Raise (sustain) embankments, walls, flood gates, and revetments in localised areas. Localised raising of the defences to protect properties and assets at risk of flooding around Rochester and Chatham against a 0.1% AEP with sea level rise. The rest of the Benefit Area will have a No Active Intevention Approach.			
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*	
	HTL Sustain with localised NAI	HTL Sustain with localised NAI	HTL Sustain with localised NAI	
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 £610,000 to upgrade the 400m of defences in order to protect the site for the lifetime of any development.			
Flood Warning Area?	Yes.			

1315 - Multi-storey car park, Rhode Street, Chatham				
Hazard Rating	***Percentage of site in each Hazard Rating Classification during the design flood event (2115) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	1.1%	0.0%	6.5%	0.0%
Required Actions / Recommended Mitigation Measures	The site is located partially in Flood Zone 2 , and therefore will required a 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 SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. The site is also identifed by the Level 1 SFRA as a 'Sensitive Drainage Area' and therefore Medway Council LLFA may require a SWMS and SuDs proforma to be completed for non major development proposals. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. The 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. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area. 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.			

3.3 Flood Zone 3 Sites

90 - Strood Riverside, Canal Road

Site Area: 7.17ha	**Existing Land Use:** Brownfield	**Proposed Land Use:** Residential	

Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	11.54%	3.53%	6.64%	78.29% **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. *Although the NKC modelling shows the site to be within the functional floodplain, the modelling study does not take into account the recently completed Strood Riverside defences. These defences would likely reduce the extent of flooding during a 1in20 year return period event, and further analysis is recommended to determine the true extent of the functional floodplain on site. Development classified as 'more vulnerable' use should not be permitted in Flood Zone 3b.
Flood History	Incidents within the site: Internal flooding possibly caused by water overtopping the river wall. External flooding in yard. Internal flooding of cellar. Internal flooding of property. Incidents within 100m of the site: External flooding of areas around and adjacent to Watermill Wharf, caused by a small breach in the flood defences at Watermill Wharf. Re-occurring flooding following heavy rainfall due to tide locking. Public sewer flooding.
Watercourses/Rivers	The River Medway is adjacent to the site.
Geology	Bedrock: Lewes Nodular Chalk Formation, Seaford Chalk Formation and Newhaven Chalk Formation (Undifferentiated) (Chalk) Superficial: Head (Undifferentiated); Alluvium (Clay (Undifferentiated) and Silt (Undifferentiated); Clay, Silty Peaty Sandy (Unconsolidated Deposits Classification Scheme); Clay (Undifferentiated) and Silt (Undifferentiated) and Sand(Undifferentiated) and Gravel (Undifferentiated))

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 defended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	84.2% (5.07m AODN)	88.7% (5.49m AODN)	94.7% (6.13m AODN)	88.0% (5.43m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	84.9% (5.03m AODN)	88.8% (5.47m AODN)	94.1% (6.06m AODN)	88.1% (5.43m 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	*'Medium' risk scenario*	*'Low' risk scenario*	
	1.7%	4.8%	17.2%	

Description of Surface Water Flow Paths (EA's RoFSW Maps)	During the 'low' risk scenario, there are localised areas of surface water accumulation and a flow path from the northwest corner of the site towards the centre of the site. During the 'high' and 'medium' risk scenarios there are localised areas where flood water is shown to accumulate, which could be attributed to localised depressions in the topography.
Existing Flood Defence Infrastructure (inc. SoP):	Defences at Strood Riverside have recently been upgraded and now have a crest height of 6.1m AODN. The existing defences between Jane's Creek and Strood Riverside consist of a wall with minimum actual crest level of 4.17m to 4.67m AODN (as stated in the Medway Flood Defence High Level Appraisal) and has a condition rating of 2 (Good). The EA's Spatial Flood Defence dataset shows crest levels of 4.49m to 5.11m and a condition rating of 2. Standard of Protection: Variable

MEASS Benefit Area and Preferred Option			
	BA2.1 Strood. Raise (sustain) embankments,walls, flood gates and revetments. This option involves improving the current SOP provided by the defences to 1% AEP SoP with sea level rise.		
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*
	Hold The Line (HTL) Sustain	HTL Sustain	HTL Sustain

90 - Strood Riverside, Canal Road				
High-Level Indication of Defence Costs	The Strood Riverside and Jane's Creek defences have recently been upgraded to improve the standard of protection. Notwithstanding this, further improvements should be considered to improve the defences between Strood Riverside and Jane's Creek. Based on an average cost of £1,526/m to raise an existing defence wall, it is estimated to cost in the region of £460,000 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 (2115) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	2.6%	1.2%	22.6%	64.5%
Required Actions / Recommended Mitigation Measures	The site is located in Flood Zones 2 and 3. As a result, a detailed FRA, including further analysis to determine the extent of Flood Zone 3b on site, 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 SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. 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. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area. 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). When developing a scheme, the condition of any adjacent defences should be taking into account and consideration given to upgrading the defences to maintain, or further, the protection offered to the site and surrounding area. The costs associated with defence upgrades should be shared amongst beneficiaries.			

102 - 1-35 High Street, Chatham (Grays Garage)

Site Area: 0.59ha		**Existing Land Use:** Brownfield		**Proposed Land Use:** Residential
Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	65.79%	6.26%	26.14%	1.81% **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. Development classified as 'more vulnerable' use should not be permitted in Flood Zone 3b.			
Flood History	Incidents within the site: None. Incidents within 100m of the site: None.			
Watercourses/Rivers	The River Medway is adjacent to the site.			
Geology	Bedrock: Lewes Nodular Chalk Formation (Chalk) Superficial: Alluvium; Beach and Tidal Flat Deposits (Undifferentiated) (Clay, Silty Peaty Sandy (Unconsolidated Deposits Classification Scheme); Clay (Undifferentiated) and Silt (Undifferentiated) and Sand(Undifferentiated))			
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 defended scenario for key return period events. Maximum flood level on site shown in brackets.***			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	5.4% (5.09m AODN)	23.1% (5.48m AODN)	56.6% (6.12m AODN)	23.1% (5.42m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	28.0% (5.02m AODN)	34.5% (5.49m AODN)	54.9% (6.08m AODN)	34.2% (5.43m 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	*'Medium' risk scenario*	*'Low' risk scenario*	
	2.1%	6.4%	17.3%	
Description of Surface Water Flow Paths (EA's RoFSW Maps)	During the 'low' risk scenario surface water flows across the centre of the site in a northerly direction. During the 'high' and 'medium' risk scenarios there are localised areas where flood water is shown to accumulate, which could be attributed to localised depressions in the topography.			
Existing Flood Defence Infrastructure (inc. SoP):	The existing defences consist of a wall with minimum actual crest level of 5.17 to 5.67m AODN (as stated in the Medway Flood Defence High Level Appraisal) and has a condition rating of 2 (Good). The EA's Spatial Flood Defence dataset shows crest levels of 4.14m to 5.65m AODN and a varying condition rating of 3 to 4. Standard of Protection: 200			
MEASS Benefit Area and Preferred Option	BA2.2 Rochester. Raise (sustain) embankments, walls, flood gates, and revetments in localised areas. Localised raising of the defences to protect properties and assets at risk of flooding around Rochester and Chatham against a 0.1% AEP with sea level rise. The rest of the Benefit Area will have a No Active Intevention Approach.			
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*	
	HTL Sustain with localised No Acitive Intervention (NAI)	HTL Sustain with localised NAI	HTL Sustain with localised NAI	
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 £725,000 to upgrade the 475m of defences in order to protect the site for the lifetime of any development.			
Flood Warning Area?	Yes.			

102 - 1-35 High Street, Chatham (Grays Garage)				
Hazard Rating	***Percentage of site in each Hazard Rating Classification during the design flood event (2115) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	6.8%	1.1%	32.1%	0.0%
Required Actions / Recommended Mitigation Measures	The site is located in Flood Zones 2 and 3, and therefore will required 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 SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. The site is also identifed by the Level 1 SFRA as a 'Sensitive Drainage Area' and therefore Medway Council LLFA may require a SWMS and SuDs proforma to be completed for non major development proposals. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. 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. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area. The Sequential Approach should be applied to the layout of the site by locating the most vulnerable elements in the lowest risk areas, and avoiding develpoment within Flood Zone 3b*. 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). When developing a scheme, the condition of any adjacent defences should be taking into account and consideration given to upgrading the defences to maintain, or further, the protection offered to the site and surrounding area. The costs associated with defence upgrades should be shared amongst beneficiaries.			

137 - Civic Centre and Janes Creek

Site Area: 4.8ha		**Existing Land Use:** Brownfield		**Proposed Land Use:** Residential
Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	0.03%	2.02%	22.95%	75% **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. *Although the NKC modelling shows the site to be within the functional floodplain, the modelling study does not take into account the recently completed Jane's Creek defences. These defences would prevent the site flooding during a 1in20 year return period event, therefore the site is not considered to be located within the functional floodplain and does not automatically fail the Exception Test.			
Flood History	Incidents within the site: None. Incidents within 100m of the site: Public sewer flooding.			
Watercourses/Rivers	The River Medway is adjacent to the site.			
Geology	Bedrock: Lewes Nodular Chalk Formation, Seaford Chalk Formation and Newhaven Chalk Formation (Undifferentiated) (Chalk) Superficial: Alluvium; Beach and Tidal Flat Deposits (Undifferentiated) (Clay, Silty Peaty Sandy (Unconsolidated Deposits Classification Scheme); Clay (Undifferentiated) and Silt (Undifferentiated) and Sand(Undifferentiated))			
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 defended scenario for key return period events. Maximum flood level on site shown in brackets.***			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	96.8% (5.05m AODN)	100.0% (5.47m AODN)	100.0% (6.09m AODN)	100.0% (5.42m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	97.5% (5.01m AODN)	100.0% (5.42m AODN)	100.0% (6.02m AODN)	100.0% (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	*'Medium' risk scenario*	*'Low' risk scenario*	
	4.4%	9.9%	35.0%	
Description of Surface Water Flow Paths (EA's RoFSW Maps)	During the 'low' risk scenario, surface water flows along the eastern boundary of the site towards the River Medway, and towards the centre of the site. During the 'medium' and 'high' risk scenarios surface water is shown to flow only along the eastern boundary of the site towards the river.			
Existing Flood Defence Infrastructure (inc. SoP):	Defences at St Jane's Creek have recently been upgraded and now have a crest height of 6.1m AODN. Standard of Protection: Variable			
MEASS Benefit Area and Preferred Option	BA2.1 Strood. Raise (sustain) embankments,walls, flood gates and revetments. This option involves improving the current SOP provided by the defences to 1% AEP SoP with sea level rise.			
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*	
	HTL Sustain	HTL Sustain	HTL Sustain	
High-Level Indication of Defence Costs	The Strood Riverside and Jane's Creek defences have recently been upgraded to improve the standard of protection. Notwithstanding this, further improvements should be considered to improve the defences between Strood Riverside and Jane's Creek. Based on an average cost of £1,526/m to raise an existing defence wall, it is estimated to cost in the region of £460,000 to upgrade the 300m of defences in order to protect the site for the lifetime of any development.			
Flood Warning Area?	Yes.			

137 - Civic Centre and Janes Creek				
Hazard Rating	***Percentage of site in each Hazard Rating Classification during the design flood event (2115) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	0.0%	0.0%	27.9%	71.9%
Required Actions / Recommended Mitigation Measures	The site is located in Flood Zones 2 and 3. As a result, a detailed FRA, including further analysis to determine the extent of Flood Zone 3b on site, 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 SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. 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. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area. 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). When developing a scheme, the condition of any adjacent defences should be taking into account and consideration given to upgrading the defences to maintain, or further, the protection offered to the site and surrounding area. The costs associated with defence upgrades should be shared amongst beneficiaries.			

213 - 352-356 Luton Road, Luton

Site Area: 0.31ha		**Existing Land Use:** Brownfield		**Proposed Land Use:** Residential
Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	2.12%	3.29%	94.59%	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 100m of the site: None.			
Watercourses/Rivers	There are no watercourses near to the site.			
Geology	Bedrock: Lewes Nodular Chalk Formation (Chalk) Superficial: Head (Undifferentiated) (Clay (Undifferentiated) and Silt (Undifferentiated) and Sand(Undifferentiated) and Gravel (Undifferentiated))			
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 defended scenario for key return period events. Maximum flood level on site shown in brackets.***			
	1 in 200 year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	0.0% (0.00m AODN)	0.0% (0.00m AODN)	0.0% (0.00m AODN)	0.0% (0.00m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	0.0% (0.00m AODN)	0.0% (0.00m AODN)	0.0% (0.00m AODN)	0.0% (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	*'Medium' risk scenario*	*'Low' risk scenario*	
	1.1%	11.4%	38.2%	
Description of Surface Water Flow Paths (EA's RoFSW Maps)	During the 'low' and 'medium' risk scenarios surface water flows in a northwesterly direction across the northern part of the site. During the 'high' risk scenario only a very small area along the access road is shown to flood.			
Existing Flood Defence Infrastructure (inc. SoP):	There are no flood defences near to the site. Standard of Protection: N/A			
MEASS Benefit Area and Preferred Option	-			
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*	
	-	-	-	
High-Level Indication of Defence Costs	N/A - There are no defences near to the site and the site is predicted to remain unaffected by flooding from the River Medway for the lifetime of any development.			
Flood Warning Area?	Not available at this location.			

213 - 352-356 Luton Road, Luton				
Hazard Rating	***Percentage of site in each Hazard Rating Classification during the design flood event (2115) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	0.0%	0.0%	0.0%	0.0%
Required Actions / Recommended Mitigation Measures	The site is located within a dry valley which is also not predicted to flood from the River Medway. The site is, however, at risk of flooding from surface water. As a result, a comprehensive investigation into surface water flood risk, 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. The site is also identifed by the Level 1 SFRA as a 'Sensitive Drainage Area' and therefore Medway Council LLFA may require a SWMS and SuDs proforma to be completed for non major development proposals. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. 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. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area. 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.			

646 - Grain Power Station, Grain Road

Site Area: 101.02ha	**Existing Land Use:** Brownfield	**Proposed Land Use:** Employment	

Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	20.35%	3.79%	73.92%	1.94% **refer to text below*

Development lifetime	60 years
Exception Test required?	Any development classified as 'Less Vulnerable', 'More Vulnerable' and 'Highly Vulnerable' uses should not be permitted within the Functional Floodplain (Flood Zone 3b). Development which is classified as 'essential infrastructure' will be subject to the Exception Test. Development that is classified as 'water-compatible' should be designed and constructed to: o remain operational and safe for users in times of flood; o result in no net loss of floodplain storage; and o not impede water flows and not increase flood risk elsewhere.
Flood History	Incidents within the site: Overtopping of defences during the 1953 tidal flood event. Incidents within 100m of the site: Overtopping of defences during the 1953 tidal flood event.
Watercourses/Rivers	The River Medway is adjacent to the site, and there are a number of ordinary watercourses in the surrounding area.
Geology	Bedrock: London Clay Formation (Clay (Undifferentiated) and Silt (Undifferentiated)) Superficial: River Terrace Deposits, 2; Head (Undifferentiated); Beach and Tidal Flat Deposits (Undifferentiated); Alluvium (Sand and Gravel; Clay (Undifferentiated) and Silt (Undifferentiated) and Sand(Undifferentiated) and Gravel (Undifferentiated); Clay (Undifferentiated) and Silt (Undifferentiated) and Sand(Undifferentiated); Clay, Silty Peaty Sandy (Unconsolidated Deposits C)

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 defended scenario for key return period events. Maximum flood level on site shown in brackets.

1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
2.6% (6.07m AODN)	6.1% (6.07m AODN)	35.1% (6.08m AODN)	3.8% (6.07m AODN)

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

1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
75.9% (4.76m AODN)	77.7% (5.23m AODN)	80.3% (5.87m AODN)	77.6% (5.17m 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	*'Medium' risk scenario*	*'Low' risk scenario*
0.5%	2.0%	11.0%

Description of Surface Water Flow Paths (EA's RoFSW Maps)	There are localised areas of surface water accumulation during all three modelled scenarios, which could be attributed to localised depressions in the topography.
Existing Flood Defence Infrastructure (inc. SoP):	The existing defences consist of a wall. The EA's Spatial Flood Defence dataset shows crest levels of 5.3m to 5.7m AODN and a condition rating of 3. Standard of Protection: 1000

MEASS Benefit Area and Preferred Option

T2100 Action Zone 7, Policy 4: Take further action to keep up with climate and land use change so that flood risk does not increase.

MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*
n/a	n/a	n/a

646 - Grain Power Station, Grain Road				
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 £230,000 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 (2070) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	3.9%	1.6%	0.3%	0.7%
Required Actions / Recommended Mitigation Measures	The site is located in Flood Zones 2 and 3, and therefore will required 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 SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. 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, and avoiding develpoment within Flood Zone 3b*. 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). 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 LMIDB area, the LMIDB should be consulted to obtain consent. When developing a scheme, the condition of any adjacent defences should be taking into account and consideration given to upgrading the defences to maintain, or further, the protection offered to the site and surrounding area. The costs associated with defence upgrades should be shared amongst beneficiaries.			

647 - ELNA Kingsnorth 1

Site Area: 24.77ha		**Existing Land Use:** Greenfield		**Proposed Land Use:** Employment
Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	0%	0.14%	99.86%	0%
Development lifetime	60 years			
Exception Test required?	Development which is classified as 'essential infrastructure' and 'more vulnerable' will be subject to the Exception Test. Development classified as 'highly vulnerable' use should not be permitted. The Exception Test is not required to be applied for development classified as 'water compatible' or 'less vulnerable'.			
Flood History	Incidents within the site: Overtopping of defences during the 1953 tidal flood event. Incidents within 100m of the site: Overtopping of defences during the 1953 tidal flood event.			
Watercourses/Rivers	The site is located 800m from the River Medway. There are also ordinary watercourses along the northern and southern borders of the site, and a small pond on site.			
Geology	Bedrock: London Clay Formation (Clay (Undifferentiated) and Silt (Undifferentiated)) Superficial: Alluvium; River Terrace Deposits, 1 (Clay, Silty Peaty Sandy (Unconsolidated Deposits Classification Scheme); Clay (Undifferentiated) and Silt (Undifferentiated))			
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 defended scenario for key return period events. Maximum flood level on site shown in brackets.***			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	0.0% (0.00m AODN)	34.3% (5.40m AODN)	99.9% (6.02m AODN)	29.0% (5.25m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	99.9% (5.03m AODN)	100.0% (5.43m AODN)	100.0% (6.03m AODN)	100.0% (5.37m 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	*'Medium' risk scenario*	*'Low' risk scenario*	
	1.8%	4.7%	16.2%	
Description of Surface Water Flow Paths (EA's RoFSW Maps)	There are localised areas of surface water accumulation during all three modelled scenarios, which could be attributed to localised depressions in the topography.			
Existing Flood Defence Infrastructure (inc. SoP):	The existing defences consist of a wall and embankment. The EA's Spatial Flood Defence dataset shows crest levels of 5.64m to 6.14m AODN and a condition rating of 2 to 3. Standard of Protection: 200-1000			
MEASS Benefit Area and Preferred Option	BA1.2 Kingsnorth. Maintenance of the current defences (embankment, seawall and rock revetment) for the first 8 years to the current SoP offered. Following this, defences to be raised to 5.3mAOD and then raised again in year 50 to 6.6mAOD to ensure a 0.1% SoP in 100 years taking account of sea level rise.			
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*	
	HTL Maintain to Yr 5 then HTL Sustain	HTL Sustain	HTL Sustain	
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 £115,000 to upgrade the 100m of defences in order to protect the site for the lifetime of any development.			
Flood Warning Area?	Yes.			

647 - ELNA Kingsnorth 1				
Hazard Rating	***Percentage of site in each Hazard Rating Classification during the design flood event (2070) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	5.2%	0.6%	2.0%	26.3%
Required Actions / Recommended Mitigation Measures	The site is located in Flood Zone 3, and therefore will required 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 SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. 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 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 LMIDB area, the LMIDB should be consulted to obtain consent. When developing a scheme, the condition of any adjacent defences should be taking into account and consideration given to upgrading the defences to maintain, or further, the protection offered to the site and surrounding area. The costs associated with defence upgrades should be shared amongst beneficiaries.			

687 - National Grid Property, Pier Road, Gillingham

Site Area: 2.12ha		**Existing Land Use:** Brownfield		**Proposed Land Use:** Residential
Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	33.09%	17.43%	39.22%	10.26% **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. Development classified as 'more vulnerable' use should not be permitted in Flood Zone 3b.			
Flood History	Incidents within the site: None. Incidents within 100m of the site: Public sewer flooding and highway flooding due to tide locking and pump capacity issues.			
Watercourses/Rivers	The River Medway is adjacent to the site.			
Geology	Bedrock: Thanet Sand Formation (Sand(Undifferentiated) and Silt (Undifferentiated) and Clay (Undifferentiated)) Superficial: Beach and Tidal Flat Deposits (Undifferentiated); Alluvium (Clay (Undifferentiated) and Silt (Undifferentiated) and Sand(Undifferentiated); Clay, Silty Peaty Sandy (Unconsolidated Deposits Classification Scheme))			
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 defended scenario for key return period events. Maximum flood level on site shown in brackets.***			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	43.6% (5.04m AODN)	68.3% (5.43m AODN)	88.7% (6.05m AODN)	60.0% (5.38m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	44.0% (4.99m AODN)	74.2% (5.46m AODN)	88.7% (6.05m AODN)	66.9% (5.41m 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	*'Medium' risk scenario*	*'Low' risk scenario*	
	0.1%	1.6%	8.4%	
Description of Surface Water Flow Paths (EA's RoFSW Maps)	During all modelled scenarios surface water is shown to flow in northerly direction along the eastern border of the site. During the 'low' risk scenario there are also localised areas where flood water is shown to accumulate, which could be attributed to localised depressions in the topography.			
Existing Flood Defence Infrastructure (inc. SoP):	The existing defences consist of a wall with minimum actual crest level of 3.67m to 4.67m AODN (as stated in the MedwayFlood Defence High Level Appraisal). The EA's Spatial Flood Defence dataset shows effective crest levels of 3.09m to 5.38m AODN and a condition rating of 2 to 3. Standard of Protection: Unknown			
MEASS Benefit Area and Preferred Option	BA2.3 St Mary's Island. Raise (sustain) embankments, walls, flood gates and revetments. This option involves improving the SoP provided by the defences to 0.5% AEP SoP with sea level rise.			
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*	
	HTL Sustain	HTL Sustain	HTL Sustain	
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 £2,750,000 to upgrade the 1.8km of defences in order to protect the site for the lifetime of any development.			
Flood Warning Area?	Yes.			

687 - National Grid Property, Pier Road, Gillingham

Hazard Rating	*Percentage of site in each Hazard Rating Classification during the design flood event (2115) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)*			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	1.3%	0.0%	77.6%	2.8%

Required Actions / Recommended Mitigation Measures	The site is located in Flood Zones 2 and 3, and therefore will required 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 SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. 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. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area. The Sequential Approach should be applied to the layout of the site by locating the most vulnerable elements in the lowest risk areas, and avoiding development within Flood Zone 3b*. 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). When developing a scheme, the condition of any adjacent defences should be taking into account and consideration given to upgrading the defences to maintain, or further, the protection offered to the site and surrounding area. The costs associated with defence upgrades should be shared amongst beneficiaries.

699 - National Grid Property Holdings, Grain Road

Site Area: 587.97ha		**Existing Land Use:** Brownfield		**Proposed Land Use:** Employment
Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	4.66%	6.47%	88.36%	0.51% **refer to text below*
Development lifetime	60 years			
Exception Test required?	Any development classified as 'Less Vulnerable', 'More Vulnerable' and 'Highly Vulnerable' uses should not be permitted within the Functional Floodplain (Flood Zone 3b). Development which is classified as 'essential infrastructure' will be subject to the Exception Test. Development that is classified as 'water-compatible' should be designed and constructed to: o remain operational and safe for users in times of flood; o result in no net loss of floodplain storage; and o not impede water flows and not increase flood risk elsewhere.			
Flood History	Incidents within the site: Overtopping of defences during the 1953 tidal flood event. Incidents within 100m of the site: Surface water flooding due to urban and rural land drainage ditches being unable to discharge freely into Yantlett Creek and Thames Estuary due to tide locking. Overtopping of defences during the 1953 tidal flood event.			
Watercourses/Rivers	The River Medway is adjacent to the site. In addition, there are numerous ordinary and man-made watercourses on site.			
Geology	Bedrock: London Clay Formation (Clay (Undifferentiated) and Silt (Undifferentiated)) Superficial: River Terrace Deposits, 2; Head (Undifferentiated); Beach and Tidal Flat Deposits (Undifferentiated); Alluvium (Sand and Gravel; Clay (Undifferentiated) and Silt (Undifferentiated) and Sand(Undifferentiated) and Gravel (Undifferentiated); Clay (Undifferentiated) and Silt (Undifferentiated) and Sand(Undifferentiated); Clay, Silty Peaty Sandy (Unconsolidated Deposits C)			
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 defended scenario for key return period events. Maximum flood level on site shown in brackets.***			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	1.7% (4.92m AODN)	6.1% (5.33m AODN)	38.5% (5.95m AODN)	4.6% (5.29m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	88.9% (4.84m AODN)	93.6% (5.30m AODN)	95.7% (5.93m AODN)	93.3% (5.24m 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	*'Medium' risk scenario*	*'Low' risk scenario*	
	0.4%	1.5%	9.0%	
Description of Surface Water Flow Paths (EA's RoFSW Maps)	There are localised areas of surface water accumulation across the site during all three modelled scenarios, in particular surrounding the watercourses on site.			
Existing Flood Defence Infrastructure (inc. SoP):	The existing defences consist of a wall. The EA's Spatial Flood Defence dataset shows crest levels of 3.94m to 6.08m AODN and a condition rating of 2 to 3. Standard of Protection: 1000			
MEASS Benefit Area and Preferred Option	T2100 Action Zone 7, Policy 4: Take further action to keep up with climate and land use change so that flood risk does not increase			
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*	
	n/a	n/a	n/a	

699 - National Grid Property Holdings, Grain Road				
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 £230,000 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 (2070) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	1.5%	1.6%	2.9%	0.1%
Required Actions / Recommended Mitigation Measures	The site is located in Flood Zones 2 and 3, and therefore will required 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 SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. 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, and avoiding development within Flood Zone 3b*. 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). 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 LMIDB area, the LMIDB should be consulted to obtain consent. When developing a scheme, the condition of any adjacent defences should be taking into account and consideration given to upgrading the defences to maintain, or further, the protection offered to the site and surrounding area. The costs associated with defence upgrades should be shared amongst beneficiaries.			

735 - Upnor Wharf

Site Area: 0.25ha		**Existing Land Use:** Brownfield		**Proposed Land Use:** Residential
Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	0%	44.89%	54.66%	0.45% **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. Development classified as 'more vulnerable' use should not be permitted in Flood Zone 3b.			
Flood History	Incidents within the site: None. Incidents within 100m of the site: None.			
Watercourses/Rivers	The River Medway is located 500m to the northwest of the site.			
Geology	Bedrock: Thanet Sand Formation (Sand(Undifferentiated) and Silt (Undifferentiated) and Clay (Undifferentiated)) Superficial: Beach and Tidal Flat Deposits (Undifferentiated) (Clay (Undifferentiated) and Silt (Undifferentiated) and Sand(Undifferentiated))			
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 defended scenario for key return period events. Maximum flood level on site shown in brackets.***			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	0.6% (5.06m AODN)	100.0% (5.45m AODN)	100.0% (6.08m AODN)	100.0% (5.40m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	55.1% (5.01m AODN)	100.0% (5.49m AODN)	100.0% (6.06m AODN)	100.0% (5.43m 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	*'Medium' risk scenario*	*'Low' risk scenario*	
	0.0%	0.0%	0.1%	
Description of Surface Water Flow Paths (EA's RoFSW Maps)	The site is not predicted to flood from surface water during any of the modelled scenarios.			
Existing Flood Defence Infrastructure (inc. SoP):	The existing defences consist of a wall with a minimum actual crest level of 4.67m to 5.17m AODN (as stated in the MedwayFlood Defence High Level Appraisal) and has a condition rating of 2 (Good). The EA's Spatial Flood Defence dataset shows effective crest levels of 5.03m to 6.13m AODN and a condition rating of 3. Standard of Protection: <20			
MEASS Benefit Area and Preferred Option	BA2.3 St Mary's Island. Raise (sustain) embankments, walls, flood gates and revetments. This option involves improving the SoP provided by the defences to 0.5% AEP SoP with sea level rise.			
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*	
	HTL Sustain	HTL Sustain	HTL Sustain	
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 £460,000 to upgrade the 300m of defences in order to protect the site for the lifetime of any development.			
Flood Warning Area?	Yes.			

735 - Upnor Wharf				
Hazard Rating	***Percentage of site in each Hazard Rating Classification during the design flood event (2115) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	0.0%	0.0%	99.3%	0.7%
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 SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. The site is also identifed by the Level 1 SFRA as a 'Sensitive Drainage Area' and therefore Medway Council LLFA may require a SWMS and SuDs proforma to be completed for non major development proposals. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. 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, and avoiding development within Flood Zone 3b*. 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. When developing a scheme, the condition of any adjacent defences should be taking into account and consideration given to upgrading the defences to maintain, or further, the protection offered to the site and surrounding area. The costs associated with defence upgrades should be shared amongst beneficiaries.			

757 - Between Cross Street & The Brook, Chatham

Site Area: 0.79ha		**Existing Land Use:** Brownfield		**Proposed Land Use:** Residential
Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	81.9%	12.47%	5.63%	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 100m of the site: Public sewer flooding.			
Watercourses/Rivers	The River Medway is located 650m to the northwest of the site.			
Geology	Bedrock: Lewes Nodular Chalk Formation (Chalk) Superficial: Head (Undifferentiated) (Clay (Undifferentiated) and Silt (Undifferentiated) and Sand(Undifferentiated) and Gravel (Undifferentiated))			
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 defended scenario for key return period events. Maximum flood level on site shown in brackets.***			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	3.9% (4.48m AODN)	20.0% (5.47m AODN)	27.6% (6.12m AODN)	18.1% (5.40m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	3.9% (4.43m AODN)	20.0% (5.46m AODN)	27.6% (6.07m AODN)	18.1% (5.40m 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	*'Medium' risk scenario*	*'Low' risk scenario*	
	0.0%	9.3%	23.8%	
Description of Surface Water Flow Paths (EA's RoFSW Maps)	During the 'low' and 'medium' risk scenarios surface water is shown to flow along part of the southwest site boundary in a north-easterly direction. The site is not predicted to flood from surface water during the 'high' risk scenario.			
Existing Flood Defence Infrastructure (inc. SoP):	The existing defences consist of a wall with minimum actual crest level of 4.67m to 5.17m AODN (as stated in the MedwayFlood Defence High Level Appraisal) and has a condition rating of 2 (Good). The EA's Spatial Flood Defence dataset shows crest levels of 4.75m to 4.93m AODN and a condition rating of 3. Standard of Protection: Unknown			
MEASS Benefit Area and Preferred Option	BA 2.2 Rochester. Raise (sustain) embankments, walls, flood gates, and revetments in localised areas. Localised raising of the defences to protect properties and assets at risk of flooding around Rochester and Chatham against a 0.1% AEP with sea level rise. The rest of the Benefit Area will have a No Active Intevention Approach.			
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*	
	HTL Sustain with localised NAI	HTL Sustain with localised NAI	HTL Sustain with localised NAI	
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 £610,000 to upgrade the 400m of defences in order to protect the site for the lifetime of any development.			
Flood Warning Area?	Yes.			

757 - Between Cross Street & The Brook, Chatham

Hazard Rating	***Percentage of site in each Hazard Rating Classification during the design flood event (2115) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	1.6%	0.2%	18.5%	0.8%
Required Actions / Recommended Mitigation Measures	The site is located in Flood Zones 2 and 3, and is at risk of flooding from surface water. As a result, a detailed FRA, including a comprehensive investigation into surface water flood risk, 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 SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. The site is also identifed by the Level 1 SFRA as a 'Sensitive Drainage Area' and therefore Medway Council LLFA may require a SWMS and SuDs proforma to be completed for non major development proposals. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. Floor levels should be raised above the design flood level and depth of flooding from surface water, including the Environment Agency's recommended additional freeboard requirements where practicable. Flood resistance and resilience measures should be considered for inclusion. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area. 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. When developing a scheme, the condition of any adjacent defences should be taking into account and consideration given to upgrading the defences to maintain, or further, the protection offered to the site and surrounding area. The costs associated with defence upgrades should be shared amongst beneficiaries.			

760 - Site bound by Cross Street, Upbury Way, High Street and Slicketts Hill

Site Area: 1.34ha		**Existing Land Use:** Brownfield		**Proposed Land Use:** Residential
Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	99.95%	0%	0.05%	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 100m of the site: Public sewer flooding.			
Watercourses/Rivers	The River Medway is located 800m to the northwest of the site.			
Geology	Bedrock: Lewes Nodular Chalk Formation (Chalk) Superficial: Head (Undifferentiated) (Clay (Undifferentiated) and Silt (Undifferentiated) and Sand(Undifferentiated) and Gravel (Undifferentiated))			
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 defended scenario for key return period events. Maximum flood level on site shown in brackets.***			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	0.0% (0.00m AODN)	0.0% (0.00m AODN)	10.7% (6.12m AODN)	0.0% (0.00m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	0.0% (0.00m AODN)	0.0% (0.00m AODN)	9.0% (6.07m AODN)	0.0% (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	*'Medium' risk scenario*	*'Low' risk scenario*	
	0.0%	0.1%	6.9%	
Description of Surface Water Flow Paths (EA's RoFSW Maps)	During the 'low' risk scenario there are localised areas of surface water accumulation on site, which could be attributed to localised depressions in the topography. The site is not predicted to flood from surface water during the ' medium' and 'high' risk scenarios.			
Existing Flood Defence Infrastructure (inc. SoP):	The existing defences consist of a wall with minimum actual crest level of 4.67m to 5.17m AODN (as stated in the MedwayFlood Defence High Level Appraisal) and has a condition rating of 2 (Good). The EA's Spatial Flood Defence dataset shows crest levels of 4.75m to 4.93m AODN and a condition rating of 3. Standard of Protection: Unknown			
MEASS Benefit Area and Preferred Option	-			
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*	
	-	-	-	
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 £610,000 to upgrade the 400m of defences in order to protect the site for the lifetime of any development.			
Flood Warning Area?	Not available at this location.			

760 - Site bound by Cross Street, Upbury Way, High Street and Slicketts Hill				
Hazard Rating	***Percentage of site in each Hazard Rating Classification during the design flood event (2115) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	6.8%	0.0%	0.0%	0.0%
Required Actions / Recommended Mitigation Measures	The site is located partially in Flood Zone 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 SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. Floor levels should be raised above the design flood level and depth of flooding from surface water, including the Environment Agency's recommended additional freeboard requirements where practicable. Flood resistance and resilience measures should be considered for inclusion. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area. 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. When developing a scheme, the condition of any adjacent defences should be taking into account and consideration given to upgrading the defences to maintain, or further, the protection offered to the site and surrounding area. The costs associated with defence upgrades should be shared amongst beneficiaries.			

818 - J7, Chatham Maritime

Site Area: 0.51ha		**Existing Land Use:** Brownfield		**Proposed Land Use:** Residential
Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	0%	0%	100%	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 100m of the site: None.			
Watercourses/Rivers	The River Medway is located 150m to the west of the site. In addition, the site is located adjacent to the Chatham Maritime Marina.			
Geology	Bedrock: Seaford Chalk Formation (Chalk) Superficial: Alluvium (Clay, Silty Peaty Sandy (Unconsolidated Deposits Classification Scheme))			
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 defended scenario for key return period events. Maximum flood level on site shown in brackets.***			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	0.0% (0.00m AODN)	100.0% (4.61m AODN)	100.0% (6.08m AODN)	25.4% (4.20m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	100.0% (5.01m AODN)	100.0% (5.49m AODN)	100.0% (6.06m AODN)	100.0% (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	*'Medium' risk scenario*	*'Low' risk scenario*	
	0.0%	0.0%	0.1%	
Description of Surface Water Flow Paths (EA's RoFSW Maps)	The site is not predicted to flood from surface water during any of the modelled scenarios.			
Existing Flood Defence Infrastructure (inc. SoP):	The existing defences consist of a wall with minimum actual crest level of 5.17m to 5.67m AODN (as stated in the Medway Flood Defence High Level Appraisal) and has a condition rating of 2 (Good). The EA's Spatial Flood Defence dataset shows crest levels of 5.60m to 6.00m AODN and a condition rating of 2. Standard of Protection: 200-1000			
MEASS Benefit Area and Preferred Option	BA2.3 St Mary's Island. Raise (sustain) embankments, walls, flood gates and revetments. This option involves improving the SoP provided by the defences to 0.5% AEP SoP with sea level rise.			
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*	
	HTL Sustain	HTL Sustain	HTL Sustain	
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 £5,800,000 to upgrade the 3.8km of defences in order to protect the site for the lifetime of any development.			
Flood Warning Area?	Yes.			

818 - J7, Chatham Maritime				
Hazard Rating	***Percentage of site in each Hazard Rating Classification during the design flood event (2115) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	0.0%	0.0%	2.6%	97.4%
Required Actions / Recommended Mitigation Measures	The site is located in Flood Zone 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 SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. The site is also identifed by the Level 1 SFRA as a 'Sensitive Drainage Area' and therefore Medway Council LLFA may require a SWMS and SuDs proforma to be completed for non major development proposals. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. 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). When developing a scheme, the condition of any adjacent defences should be taking into account and consideration given to upgrading the defences to maintain, or further, the protection offered to the site and surrounding area. The costs associated with defence upgrades should be shared amongst beneficiaries.			

824 - Chatham Docks, Chatham

Site Area: 29.45ha	**Existing Land Use:** Brownfield	**Proposed Land Use:** Residential	

Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	29.7%	15.81%	51.84%	2.65% **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. Development classified as 'more vulnerable' use should not be permitted in Flood Zone 3b.			
Flood History	Incidents within the site: None. Incidents within 100m of the site: None.			
Watercourses/Rivers	The site is located adjacent to the River Medway and the Chatham Maritime Marina.			
Geology	Bedrock: Seaford Chalk Formation; Thanet Sand Formation (Chalk;Sand(Undifferentiated) and Silt (Undifferentiated) and Clay (Undifferentiated)) Superficial: Beach and Tidal Flat Deposits (Undifferentiated); Alluvium (Clay (Undifferentiated) and Silt (Undifferentiated) and Sand(Undifferentiated); Clay, Silty Peaty Sandy (Unconsolidated Deposits Classification Scheme))			
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 defended scenario for key return period events. Maximum flood level on site shown in brackets.***			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	28.6% (5.04m AODN)	52.9% (5.43m AODN)	76.9% (6.19m AODN)	49.7% (5.38m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	54.5% (5.01m AODN)	71.2% (5.53m AODN)	77.2% (6.08m AODN)	70.3% (5.49m 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	*'Medium' risk scenario*	*'Low' risk scenario*	
	1.8%	4.1%	12.3%	
Description of Surface Water Flow Paths (EA's RoFSW Maps)	There are localised areas of surface water accumulation during all three modelled scenarios, which could be attributed to localised depressions in the topography.			
Existing Flood Defence Infrastructure (inc. SoP):	The existing defences consist of a wall with minimum actual crest level of 4.17m to 4.67m AODN (as stated in the MedwayFlood Defence High Level Appraisal) and has a condition rating of 2 (Good). The EA's Spatial Flood Defence dataset shows crest level of 4.6m AODN and a condition rating of 3. Standard of Protection: Variable			
MEASS Benefit Area and Preferred Option	BA2.3 St Mary's Island. Raise (sustain) embankments, walls, flood gates and revetments. This option involves improving the SoP provided by the defences to 0.5% AEP SoP with sea level rise.			
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*	
	HTL Sustain	HTL Sustain	HTL Sustain	
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 £1,070,000 to upgrade the 750m of defences in order to protect the site for the lifetime of any development.			
Flood Warning Area?	Yes.			

824 - Chatham Docks, Chatham				
Hazard Rating	***Percentage of site in each Hazard Rating Classification during the design flood event (2115) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	3.5%	0.0%	36.8%	33.2%
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 SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. 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. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area. The Sequential Approach should be applied to the layout of the site by locating the most vulnerable elements in the lowest risk areas, and avoiding develpoment within Flood Zone 3b*. 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). When developing a scheme, the condition of any adjacent defences should be taking into account and consideration given to upgrading the defences to maintain, or further, the protection offered to the site and surrounding area. The costs associated with defence upgrades should be shared amongst beneficiaries.			

834 - Halfords, The Brook, Chatham

Site Area: 0.25ha		**Existing Land Use:** Brownfield		**Proposed Land Use:** Residential
Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	0%	0%	100%	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 100m of the site: Public sewer flooding.			
Watercourses/Rivers	The River Medway is located 500m to the northwest of the site.			
Geology	Bedrock: Lewes Nodular Chalk Formation (Chalk) Superficial: Head (Undifferentiated) (Clay (Undifferentiated) and Silt (Undifferentiated) and Sand(Undifferentiated) and Gravel (Undifferentiated))			
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 defended scenario for key return period events. Maximum flood level on site shown in brackets.***			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	100.0% (4.48m AODN)	100.0% (5.47m AODN)	100.0% (6.12m AODN)	100.0% (5.40m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	100.0% (4.43m AODN)	100.0% (5.46m AODN)	100.0% (6.07m AODN)	100.0% (5.40m 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	*'Medium' risk scenario*	*'Low' risk scenario*	
	18.3%	100.0%	100.0%	
Description of Surface Water Flow Paths (EA's RoFSW Maps)	During the 'low' and 'medium' risk scenario surface water flows across the entire site in a northwesterly direction. During the 'high' risk scenario, surface water flows across the eastern boundary of the site only.			
Existing Flood Defence Infrastructure (inc. SoP):	The existing defences consist of a wall with minimum actual crest level of 4.67m to 5.17m AODN (as stated in the MedwayFlood Defence High Level Appraisal) and has a condition rating of 2 (Good). The EA's Spatial Flood Defence dataset shows crest levels of 4.75m to 4.93m AODN and a condition rating of 3. Standard of Protection: Unknown			
MEASS Benefit Area and Preferred Option	BA2.2. Rochester. Raise (sustain) embankments, walls, flood gates, and revetments in localised areas. Localised raising of the defences to protect properties and assets at risk of flooding around Rochester and Chatham against a 0.1% AEP with sea level rise. The rest of the Benefit Area will have a No Active Intevention Approach.			
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*	
	HTL with Sustain with localised NAI	HTL Sustain with localised NAI	HTL Sustain with localised NAI	
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 £610,000 to upgrade the 400m of defences in order to protect the site for the lifetime of any development.			
Flood Warning Area?	Yes.			

834 - Halfords, The Brook, Chatham				
Hazard Rating	***Percentage of site in each Hazard Rating Classification during the design flood event (2115) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	0.0%	0.0%	82.5%	17.5%
Required Actions / Recommended Mitigation Measures	The site is located in Flood Zones 2 and 3, and is at risk of flooding from surface water. As a result, a detailed FRA, including a comprehensive investigation into surface water flood risk, 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 SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. The site is also identifed by the Level 1 SFRA as a 'Sensitive Drainage Area' and therefore Medway Council LLFA may require a SWMS and SuDs proforma to be completed for non major development proposals. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. Floor levels should be raised above the design flood level and depth of flooding from surface water, including the Environment Agency's recommended additional freeboard requirements where practicable. Flood resistance and resilience measures should be considered for inclusion. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area. 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. When developing a scheme, the condition of any adjacent defences should be taking into account and consideration given to upgrading the defences to maintain, or further, the protection offered to the site and surrounding area. The costs associated with defence upgrades should be shared amongst beneficiaries.			

843 - Tesco Site, Cuxton Road access point and Commercial Road works site

Site Area: 1.21ha	**Existing Land Use:** Brownfield	**Proposed Land Use:** Residential	

Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	8.89%	2.32%	14.61%	74.18% **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. *Although the NKC modelling shows the site to be within the functional floodplain, the modelling study does not take into account the recently completed Jane's Creek defences. These defences would likely reduce the extent of flooding during a 1in20 year return period event, and further analysis is recommended to determine the true extent of the functional floodplain on site. Development classified as 'more vulnerable' use should not be permitted in Flood Zone 3b.
Flood History	Incidents within the site: None. Incidents within 100m of the site:..Highway flooding. Public sewer flooding. Highway flooding.
Watercourses/Rivers	The River Medway is located 475m to the southeast of the site.
Geology	Bedrock: Lewes Nodular Chalk Formation, Seaford Chalk Formation and Newhaven Chalk Formation (Undifferentiated) (Chalk) Superficial: Head (Undifferentiated) (Clay (Undifferentiated) and Silt (Undifferentiated))

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 defended scenario for key return period events. Maximum flood level on site shown in brackets.			
1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
87.8% (5.00m AODN)	91.1% (5.47m AODN)	93.6% (6.10m AODN)	91.1% (5.42m AODN)

Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
88.8% (5.01m AODN)	91.1% (5.42m AODN)	92.9% (6.02m AODN)	91.1% (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	*'Medium' risk scenario*	*'Low' risk scenario*
37.2%	49.0%	91.8%

Description of Surface Water Flow Paths (EA's RoFSW Maps)	During the 'medium' and 'high' scenarios, surface water is shown to accumulate around the existing buildings on site. During the 'low' scenario, the majority of the site is shown to flood from surface water.
Existing Flood Defence Infrastructure (inc. SoP):	Dat Strood Riverside and Jane's Creek have recently been upgraded and now have a crest height of 6.1m AODN. The existing defences to the southwest of Jane's Creek consist of a wall and high ground with minimum actual crest level of 3.67m to 5.17m AODN (as stated in the MedwayFlood Defence High Level Appraisal) and has a condition rating of 2 (Good) to 4 (Poor). EA's Spatial Flood Defence dataset shows crest levels of 4.04m to 4.99m AODN and a condition rating of 2 to 4. Standard of Protection: Variable

MEASS Benefit Area and Preferred Option

BA2.1 Strood. Raise (sustain) embankments,walls, flood gates and revetments. This option involves improving the current SOP provided by the defences to 1% AEP SoP with sea level rise.		
MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*
HTL Sustain	HTL Sustain	HTL Sustain

High-Level Indication of Defence Costs	The Jane's Creek defences have recently been upgraded to improve the standard of protection. Notwithstanding this, further improvements should be considered to improve the defences to the southwest of Jane's Creek. Based on an average cost of £2,984/m to construct a defence wall, it is estimated to cost in the region of £2,540,000 to upgrade the 850m of defences in order to protect the site for the lifetime of any development.

843 - Tesco Site, Cuxton Road access point and Commercial Road works site				
Flood Warning Area?	Yes.			
Hazard Rating	***Percentage of site in each Hazard Rating Classification during the design flood event (2115) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	0.3%	0.3%	21.5%	70.6%
Required Actions / Recommended Mitigation Measures	The site is located in Flood Zones 2 and 3, and is at risk of flooding from surface water. As a result, a detailed FRA, including a comprehensive investigation into surface water flood risk and further analysis to determine the extent of Flood Zone 3b on site, 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 SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. Floor levels should be raised above the design flood level and depth of flooding from surface water, including the Environment Agency's recommended additional freeboard requirements where practicable. Flood resistance and resilience measures should be considered for inclusion. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area. 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. When developing a scheme, the condition of any adjacent defences should be taking into account and consideration given to upgrading the defences to maintain, or further, the protection offered to the site and surrounding area. The costs associated with defence upgrades should be shared amongst beneficiaries.			

866 - Crown House, The Brook, Chatham

Site Area: 0.68ha		**Existing Land Use:** Brownfield		**Proposed Land Use:** Residential
Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	73.3%	16.44%	10.26%	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 100m of the site: None.			
Watercourses/Rivers	The River Medway is located 450m to the northwest of the site.			
Geology	Bedrock: Lewes Nodular Chalk Formation (Chalk) Superficial: None			
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 defended scenario for key return period events. Maximum flood level on site shown in brackets.***			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	9.9% (4.48m AODN)	26.3% (5.46m AODN)	34.9% (6.11m AODN)	26.3% (5.40m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	9.9% (4.43m AODN)	26.3% (5.45m AODN)	34.9% (6.07m AODN)	26.3% (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	*'Medium' risk scenario*	*'Low' risk scenario*	
	6.2%	11.5%	16.5%	
Description of Surface Water Flow Paths (EA's RoFSW Maps)	During all three modelled scenarios, surface water is shown to flow along part of the southwest site boundary in a north-westerly direction.			
Existing Flood Defence Infrastructure (inc. SoP):	The existing defences consist of a wall with minimum actual crest level of 4.67m to 5.17m AODN (as stated in the MedwayFlood Defence High Level Appraisal) and has a condition rating of 2 (Good). The EA's Spatial Flood Defence dataset shows crest levels of 4.75m to 4.93m AODN and a condition rating of 3. Standard of Protection: Unknown			
MEASS Benefit Area and Preferred Option	BA2.2. Rochester. Raise (sustain) embankments, walls, flood gates, and revetments in localised areas. Localised raising of the defences to protect properties and assets at risk of flooding around Rochester and Chatham against a 0.1% AEP with sea level rise. The rest of the Benefit Area will have a No Active Intevention Approach.			
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*	
	HTL Sustain with localised NAI	HTL Sustain with localised NAI	HTL Sustain with localised NAI	
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 £610,000 to upgrade the 400m of defences in order to protect the site for the lifetime of any development.			
Flood Warning Area?	Yes.			

866 - Crown House, The Brook, Chatham				
Hazard Rating	***Percentage of site in each Hazard Rating Classification during the design flood event (2115) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	1.7%	2.2%	16.3%	10.9%
Required Actions / Recommended Mitigation Measures	The site is located in Flood Zones 2 and 3, and is at risk of flooding from surface water. As a result, a detailed FRA, including a comprehensive investigation into surface water flood risk, 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 SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. The site is also identifed by the Level 1 SFRA as a 'Sensitive Drainage Area' and therefore Medway Council LLFA may require a SWMS and SuDs proforma to be completed for non major development proposals. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. Floor levels should be raised above the design flood level and depth of flooding from surface water, including the Environment Agency's recommended additional freeboard requirements where practicable. Flood resistance and resilience measures should be considered for inclusion. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area. 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. When developing a scheme, the condition of any adjacent defences should be taking into account and consideration given to upgrading the defences to maintain, or further, the protection offered to the site and surrounding area. The costs associated with defence upgrades should be shared amongst beneficiaries.			

1039 - National Tyre, Station Road, Strood

Site Area: 0.14ha		**Existing Land Use:** Brownfield		**Proposed Land Use:** Residential
Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	0%	0%	0%	100% **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. *Although the NKC modelling shows the site to be within the functional floodplain, the modelling study does not take into account the recently completed Strood Riverside and Jane's Creek defences. These defences would likely reduce the extent of flooding during a 1in20 year return period event, and further analysis is recommended to determine the true extent of the functional floodplain on site. Development classified as 'more vulnerable' use should not be permitted in Flood Zone 3b.			
Flood History	Incidents within the site: None. Incidents within 100m of the site: None.			
Watercourses/Rivers	The River Medway is located 250m to the southeast of the site.			
Geology	Bedrock: Lewes Nodular Chalk Formation, Seaford Chalk Formation and Newhaven Chalk Formation (Undifferentiated) (Chalk) Superficial: Alluvium (Clay, Silty Peaty Sandy (Unconsolidated Deposits Classification Scheme))			
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 defended scenario for key return period events. Maximum flood level on site shown in brackets.***			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	100.0% (5.00m AODN)	100.0% (5.47m AODN)	100.0% (6.12m AODN)	100.0% (5.42m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	100.0% (5.02m AODN)	100.0% (5.43m AODN)	100.0% (6.05m AODN)	100.0% (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	*'Medium' risk scenario*	*'Low' risk scenario*	
	45.4%	79.0%	100.0%	
Description of Surface Water Flow Paths (EA's RoFSW Maps)	During all modelled scenarios, surface water is shown to accumulate on the northeast part of the site. During the 'low' risk scenario, the entire site is shown to flood from surface water.			
Existing Flood Defence Infrastructure (inc. SoP):	Defences at Strood Riverside and Jane's Creek have recently been upgraded and now have a crest height of 6.1m AODN. The existing defences between Jane's Creek and Strood Riverside consist of a wall with minimum actual crest level of 4.17m to 4.67m AODN (as stated in the Medway Flood Defence High Level Appraisal) and has a condition rating of 2 (Good). The EA's Spatial Flood Defence dataset shows crest levels of 4.49m to 5.11m and a condition rating of 2. Standard of Protection: Variable			
MEASS Benefit Area and Preferred Option	BA2.1 Strood. Raise (sustain) embankments,walls, flood gates and revetments. This option involves improving the current SOP provided by the defences to 1% AEP SoP with sea level rise.			
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*	
	HTL Sustain	HTL Sustain	HTL Sustain	
High-Level Indication of Defence Costs	The Strood Riverside and Jane's Creek defences have recently been upgraded to improve the standard of protection. Notwithstanding this, further improvements should be considered to improve the defences between Strood Riverside and Jane's Creek. Based on an average cost of £1,526/m to raise an existing defence wall, it is estimated to cost in the region of £460,000 to upgrade the 300m of defences in order to protect the site for the lifetime of any development.			

1039 - National Tyre, Station Road, Strood				
Flood Warning Area?	Yes.			
Hazard Rating	***Percentage of site in each Hazard Rating Classification during the design flood event (2115) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	0.0%	0.0%	0.0%	100.0%
Required Actions / Recommended Mitigation Measures	The site is located in Flood Zones 2 and 3, and is at risk of flooding from surface water. As a result, a detailed FRA, including a comprehensive investigation into surface water flood risk and further analysis to determine the extent of Flood Zone 3b on site, 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 SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. The site is also identifed by the Level 1 SFRA as a 'Sensitive Drainage Area' and therefore Medway Council LLFA may require a SWMS and SuDs proforma to be completed for non major development proposals. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. Floor levels should be raised above the design flood level and depth of flooding from surface water, including the Environment Agency's recommended additional freeboard requirements where practicable. Flood resistance and resilience measures should be considered for inclusion. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area. 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. When developing a scheme, the condition of any adjacent defences should be taking into account and consideration given to upgrading the defences to maintain, or further, the protection offered to the site and surrounding area. The costs associated with defence upgrades should be shared amongst beneficiaries.			

1057 - North side, Priory Road

Site Area: 0.26ha		**Existing Land Use:** Brownfield		**Proposed Land Use:** Residential
Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	97.19%	2.8%	0.01%	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 100m of the site: Internal flooding of property. Highway flooding.			
Watercourses/Rivers	The River Medway is located 425m to the southeast of the site.			
Geology	Bedrock: Lewes Nodular Chalk Formation, Seaford Chalk Formation and Newhaven Chalk Formation (Undifferentiated) (Chalk) Superficial: Head (Undifferentiated) (Clay (Undifferentiated) and Silt (Undifferentiated))			
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 defended scenario for key return period events. Maximum flood level on site shown in brackets.***			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	0.0% (5.00m AODN)	2.8% (5.47m AODN)	12.0% (6.10m AODN)	2.8% (5.42m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	0.0% (5.01m AODN)	2.8% (5.42m AODN)	12.0% (6.02m AODN)	2.8% (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	*'Medium' risk scenario*	*'Low' risk scenario*	
	0.0%	0.0%	11.8%	
Description of Surface Water Flow Paths (EA's RoFSW Maps)	During the 'low' risk scenario there are areas of localised surface water accumulation, which could be attributed to localised depressions in the topography. The site is not predicted to flood during the 'medium' and 'high' risk scenarios.			
Existing Flood Defence Infrastructure (inc. SoP):	Defences at Strood Riverside and Jane's Creek have recently been upgraded and now have a crest height of 6.1m AODN. The existing defences to the southwest of Jane's Creek consist of a wall and high ground with minimum actual crest level of 3.67m to 5.17m AODN (as stated in the MedwayFlood Defence High Level Appraisal) and has a condition rating of 2 (Good) to 4 (Poor). EA's Spatial Flood Defence dataset shows crest levels of 4.04m to 4.99m AODN and a condition rating of 2 to 4. Standard of Protection: Unknown			
MEASS Benefit Area and Preferred Option	BA2.1 Strood. Raise (sustain) embankments,walls, flood gates and revetments. This option involves improving the current SOP provided by the defences to 1% AEP SoP with sea level rise.			
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*	
	HTL Sustain	HTL Sustain	HTL Sustain	
High-Level Indication of Defence Costs	The Jane's Creek defences have recently been upgraded to improve the standard of protection. Notwithstanding this, further improvements should be considered to improve the defences to the southwest of Jane's Creek. Based on an average cost of £2,984/m to construct a defence wall, it is estimated to cost in the region of £2,540,000 to upgrade the 850m of defences in order to protect the site for the lifetime of any development.			
Flood Warning Area?	Yes.			

1057 - North side, Priory Road				
Hazard Rating	***Percentage of site in each Hazard Rating Classification during the design flood event (2115) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	4.2%	1.8%	1.0%	0.0%
Required Actions / Recommended Mitigation Measures	The site is located partially in Flood Zone 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 SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. The site is also identifed by the Level 1 SFRA as a 'Sensitive Drainage Area' and therefore Medway Council LLFA may require a SWMS and SuDs proforma to be completed for non major development proposals. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. 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.			

1105 - Manor Farm, Marsh Road, Halling

Site Area: 1.1ha		**Existing Land Use:** Brownfield		**Proposed Land Use:** Residential
Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	84.76%	10.27%	4.85%	0.12% **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. Development classified as 'more vulnerable' use should not be permitted in Flood Zone 3b.			
Flood History	Incidents within the site: None. Incidents within 100m of the site: Overtopping of defences during the 1953 tidal flood event.			
Watercourses/Rivers	The River Medway is 500m to the east of the site, and there is an ordinary watercourse 200m to the east.			
Geology	Bedrock: West Melbury Marly Chalk Formation and Zig Zag Chalk Formation (Undifferentiated) (Chalk) Superficial: Head (Undifferentiated);Alluvium (Clay (Undifferentiated) and Silt (Undifferentiated) and Sand(Undifferentiated) and Gravel (Undifferentiated); Clay, Silty Peaty Sandy (Unconsolidated Deposits Classification Scheme))			
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 defended scenario for key return period events. Maximum flood level on site shown in brackets.***			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	5.0% (4.96m AODN)	17.3% (5.47m AODN)	37.9% (6.13m AODN)	15.2% (5.43m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	5.0% (4.97m AODN)	14.3% (5.36m AODN)	32.7% (5.95m AODN)	12.8% (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	*'Medium' risk scenario*	*'Low' risk scenario*	
	0.9%	1.1%	3.2%	
Description of Surface Water Flow Paths (EA's RoFSW Maps)	There are localised areas of surface water accumulation during all three modelled scenarios, which could be attributed to localised depressions in the topography.			
Existing Flood Defence Infrastructure (inc. SoP):	The EA's Spatial Flood Defence dataset shows that there is an embankment to the east of the site with crest levels of 3.33m to 3.58m AODN and a condition rating of 3. Standard of Protection: Unknown			
MEASS Benefit Area and Preferred Option	BA 3.2 Halling. Construct new setbak embankments at Halling Marshes. Raise (sustain) embankments, walls, and flood gates in localised areas. Localised raising of the defences to protect properties and assets at risk of flooding around Halling against a 5%AEP with sea level rise. The rest of the Benefit Area will have a NAI approach and management will cease on the defences. Additionally, construction of a MR site at Halling marsh to help compensate for the strategy wide coastal squeexe impacts. Setback embankments to be constructed to manage tifdal water and a breach in the current defences created.			
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*	
	HTL Sustain and MR with localised NAI	HTL Sustain and MR with localised NAI	HTL Sustain and MR with localised NAI	
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.			

1105 - Manor Farm, Marsh Road, Halling				
Hazard Rating	***Percentage of site in each Hazard Rating Classification during the design flood event (2115) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	6.7%	0.1%	20.2%	0.0%
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 SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. Floor levels should be raised above the design flood level and depth of flooding from surface water, including the Environment Agency's recommended additional freeboard requirements where practicable. Flood resistance and resilience measures should be considered for inclusion. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area. The Sequential Approach should be applied to the layout of the site by locating the most vulnerable elements in the lowest risk areas, and avoiding develpoment within Flood Zone 3b*. 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. When developing a scheme, the condition of any adjacent defences should be taking into account and consideration given to upgrading the defences to maintain, or further, the protection offered to the site and surrounding area. The costs associated with defence upgrades should be shared amongst beneficiaries.			

1109 - Steelfields, Danes Hill, Gillingham

Site Area: 2.41ha		**Existing Land Use:** Brownfield		**Proposed Land Use:** Residential
Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	54.99%	19.96%	18.36%	6.69% **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. Development classified as 'more vulnerable' use should not be permitted in Flood Zone 3b.			
Flood History	Incidents within the site: None. Incidents within 100m of the site: None.			
Watercourses/Rivers	The River Medway is adjacent to the site.			
Geology	Bedrock: Thanet Sand Formation (Sand(Undifferentiated) and Silt (Undifferentiated) and Clay (Undifferentiated)) Superficial: Beach and Tidal Flat Deposits (Undifferentiated); Alluvium; Head (Undifferentiated) (Clay (Undifferentiated) and Silt (Undifferentiated) and Sand(Undifferentiated); Clay, Silty Peaty Sandy (Unconsolidated Deposits Classification Scheme); Clay (Undifferentiated) and Silt (Undifferentiated))			
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 defended scenario for key return period events. Maximum flood level on site shown in brackets.***			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	22.4% (5.03m AODN)	45.0% (5.42m AODN)	50.5% (6.05m AODN)	45.0% (5.38m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	20.5% (4.98m AODN)	45.0% (5.45m AODN)	50.2% (6.04m AODN)	45.0% (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	*'Medium' risk scenario*	*'Low' risk scenario*	
	0.0%	0.0%	2.1%	
Description of Surface Water Flow Paths (EA's RoFSW Maps)	During the 'low' risk scenario there is localised surface water accumulation on site, which could be attributed to localised depressions in the topography. The site is not predicted to flood during the 'medium' and 'high' risk scenarios.			
Existing Flood Defence Infrastructure (inc. SoP):	The existing defences consist of high ground with minimum actual crest level of <3.67m to 4.17m AODN (as stated in the MedwayFlood Defence High Level Appraisal). The EA's Spatial Flood Defence dataset shows crest levels of 3.99m to 4.33m AODN and a condition rating of 3 to 4. Standard of Protection: Unknown			
MEASS Benefit Area and Preferred Option	BA2.3 St Mary's Island. Raise (sustain) embankments, walls, flood gates and revetments. This option involves improving the SoP provided by the defences to 0.5% AEP SoP with sea level rise.			
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*	
	HTL Sustain	HTL Sustain	HTL Sustain	
High-Level Indication of Defence Costs	Based on an average cost of £2,984/m to construct a defence wall, it is estimated to cost in the region of £1,350,000 to upgrade the 450m of defences in order to protect the site for the lifetime of any development.			

1109 - Steelfields, Danes Hill, Gillingham				
Flood Warning Area?	Yes.			
Hazard Rating	***Percentage of site in each Hazard Rating Classification during the design flood event (2115) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	2.1%	0.6%	43.4%	1.0%
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 SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. 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. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area. The Sequential Approach should be applied to the layout of the site by locating the most vulnerable elements in the lowest risk areas, and avoiding develpoment within Flood Zone 3b*. 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). When developing a scheme, the condition of any adjacent defences should be taking into account and consideration given to upgrading the defences to maintain, or further, the protection offered to the site and surrounding area. The costs associated with defence upgrades should be shared amongst beneficiaries.			

1115 - Car Park, Commercial Road, Strood

Site Area: 0.29ha		**Existing Land Use:** Brownfield		**Proposed Land Use:** Residential
Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	0%	0%	3.02%	96.98% **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. *Although the NKC modelling shows the site to be within the functional floodplain, the modelling study does not take into account the recently completed Strood Riverside and Jane's Creek defences. These defences would likely reduce the extent of flooding during a 1in20 year return period event, and further analysis is recommended to determine the true extent of the functional floodplain on site. Development classified as 'more vulnerable' use should not be permitted in Flood Zone 3b.			
Flood History	Incidents within the site: None. Incidents within 100m of the site: Public sewer flooding.			
Watercourses/Rivers	The River Medway is located 400m to the southeast of the site.			
Geology	Bedrock: Lewes Nodular Chalk Formation, Seaford Chalk Formation and Newhaven Chalk Formation (Undifferentiated) (Chalk) Superficial: Head (Undifferentiated); Alluvium (Clay (Undifferentiated) and Silt (Undifferentiated); Clay, Silty Peaty Sandy (Unconsolidated Deposits Classification Scheme))			
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 defended scenario for key return period events. Maximum flood level on site shown in brackets.***			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	100.0% (5.00m AODN)	100.0% (5.47m AODN)	100.0% (6.10m AODN)	100.0% (5.42m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	100.0% (5.01m AODN)	100.0% (5.42m AODN)	100.0% (6.02m AODN)	100.0% (5.37m 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	*'Medium' risk scenario*	*'Low' risk scenario*	
	64.3%	97.4%	100.0%	
Description of Surface Water Flow Paths (EA's RoFSW Maps)	During all modelled scenarios, surface water is shown to flow across the site in an easterly direction.			
Existing Flood Defence Infrastructure (inc. SoP):	Defences at Strood Riverside and Jane's Creek have recently been upgraded and now have a crest height of 6.1m AODN. The existing defences to the southwest of Jane's Creek consist of a wall and high ground with minimum actual crest level of 3.67m to 5.17m AODN (as stated in the MedwayFlood Defence High Level Appraisal) and has a condition rating of 2 (Good) to 4 (Poor). EA's Spatial Flood Defence dataset shows crest levels of 4.04m to 4.99m AODN and a condition rating of 2 to 4. Standard of Protection: Variable			
MEASS Benefit Area and Preferred Option	BA2.1 Strood. Raise (sustain) embankments,walls, flood gates and revetments. This option involves improving the current SOP provided by the defences to 1% AEP SoP with sea level rise.			
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*	
	HTL Sustain	HTL Sustain	HTL Sustain	
High-Level Indication of Defence Costs	The Jane's Creek defences have recently been upgraded to improve the standard of protection. Notwithstanding this, further improvements should be considered to improve the defences to the southwest of Jane's Creek. Based on an average cost of £2,984/m to construct a defence wall, it is estimated to cost in the region of £2,540,000 to upgrade the 850m of defences in order to protect the site for the lifetime of any development.			

1115 - Car Park, Commercial Road, Strood				
Flood Warning Area?	Yes.			
Hazard Rating	***Percentage of site in each Hazard Rating Classification during the design flood event (2115) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	0.0%	0.0%	0.2%	99.8%
Required Actions / Recommended Mitigation Measures	The site is located in Flood Zones 2 and 3, and is at risk of flooding from surface water. As a result, a detailed FRA, including a comprehensive investigation into surface water flood risk and further analysis to determine the extent of Flood Zone 3b on site, 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 SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. The site is also identifed by the Level 1 SFRA as a 'Sensitive Drainage Area' and therefore Medway Council LLFA may require a SWMS and SuDs proforma to be completed for non major development proposals. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. Floor levels should be raised above the design flood level and depth of flooding from surface water, including the Environment Agency's recommended additional freeboard requirements where practicable. Flood resistance and resilience measures should be considered for inclusion. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area. 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. When developing a scheme, the condition of any adjacent defences should be taking into account and consideration given to upgrading the defences to maintain, or further, the protection offered to the site and surrounding area. The costs associated with defence upgrades should be shared amongst beneficiaries.			

1133 - 247-253 High Street, Chatham

Site Area: 0.08ha		**Existing Land Use:** Brownfield		**Proposed Land Use:** Residential
Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	0%	4.27%	95.73%	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 100m of the site:			
Watercourses/Rivers	The River Medway is located 500m to the northwest of the site.			
Geology	Bedrock: Lewes Nodular Chalk Formation (Chalk) Superficial: Head (Undifferentiated) (Clay (Undifferentiated) and Silt (Undifferentiated) and Sand(Undifferentiated) and Gravel (Undifferentiated))			
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 defended scenario for key return period events. Maximum flood level on site shown in brackets.***			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	95.7% (4.48m AODN)	100.0% (5.46m AODN)	100.0% (6.12m AODN)	100.0% (5.40m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	95.7% (4.43m AODN)	100.0% (5.46m AODN)	100.0% (6.07m AODN)	100.0% (5.40m 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	*'Medium' risk scenario*	*'Low' risk scenario*	
	48.7%	95.8%	100.0%	
Description of Surface Water Flow Paths (EA's RoFSW Maps)	During the 'low' risk scenario, surface water flows across the entire site in a northwesterly direction. During the 'medium' and 'high' risk scenarios, surface water is shown to accumulate on site, which could be attributed to localised depressions in the topography.			
Existing Flood Defence Infrastructure (inc. SoP):	The existing defences consist of high ground with minimum actual crest level of 4.67m to 5.17m AODN (as stated in the MedwayFlood Defence High Level Appraisal) and has a condition rating of 2 (Good). The EA's Spatial Flood Defence dataset shows crest levels of 4.75m to 4.93m AODN and a condition rating of 3. Standard of Protection: Unknown			
MEASS Benefit Area and Preferred Option	BA2.2 Rochester. Raise (sustain) embankments, walls, flood gates, and revetments in localised areas. Localised raising of the defences to protect properties and assets at risk of flooding around Rochester and Chatham against a 0.1% AEP with sea level rise. The rest of the Benefit Area will have a No Active Intevention Approach.			
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*	
	HTL Sustain with localises NAI	HTL Sustain with localised NAI	HTL Sustain with localised NAI	
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 £610,000 to upgrade the 400m of defences in order to protect the site for the lifetime of any development.			
Flood Warning Area?	Yes.			

1133 - 247-253 High Street, Chatham				
Hazard Rating	***Percentage of site in each Hazard Rating Classification during the design flood event (2115) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	0.0%	0.0%	64.2%	35.8%
Required Actions / Recommended Mitigation Measures	The site is located in Flood Zones 2 and 3, and is at risk of flooding from surface water. As a result, a detailed FRA, including a comprehensive investigation into surface water flood risk, 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 SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. The site is also identifed by the Level 1 SFRA as a 'Sensitive Drainage Area' and therefore Medway Council LLFA may require a SWMS and SuDs proforma to be completed for non major development proposals. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. Floor levels should be raised above the design flood level and depth of flooding from surface water, including the Environment Agency's recommended additional freeboard requirements where practicable. Flood resistance and resilience measures should be considered for inclusion. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area. 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. When developing a scheme, the condition of any adjacent defences should be taking into account and consideration given to upgrading the defences to maintain, or further, the protection offered to the site and surrounding area. The costs associated with defence upgrades should be shared amongst beneficiaries.			

1141 - 325 High Street, Rochester

Site Area: 0.03ha		**Existing Land Use:** Brownfield		**Proposed Land Use:** Residential
Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	11.11%	33.42%	0%	55.47%
Development lifetime	100 years			
Exception Test required?	Development classified as 'more vulnerable' use should not be permitted**.			
Flood History	Incidents within the site: None. Incidents within 100m of the site: Highway flooding following high tides due to tide locking.			
Watercourses/Rivers	The River Medway is 100m to the north of the site.			
Geology	Bedrock: Lewes Nodular Chalk Formation (Chalk) Superficial: None			
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 defended scenario for key return period events. Maximum flood level on site shown in brackets.***			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	55.5% (5.09m AODN)	88.9% (5.47m AODN)	89.7% (6.12m AODN)	88.9% (5.42m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	55.5% (5.02m AODN)	88.9% (5.50m AODN)	89.7% (6.08m AODN)	88.9% (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	*'Medium' risk scenario*	*'Low' risk scenario*	
	32.6%	34.6%	39.3%	
Description of Surface Water Flow Paths (EA's RoFSW Maps)	There are localised areas of surface water accumulation during all three modelled scenarios, which could be attributed to localised depressions in the topography.			
Existing Flood Defence Infrastructure (inc. SoP):	The existing defences consist of a wall with minimum actual crest level of 3.67m to 4.67m AODN (as stated in the MedwayFlood Defence High Level Appraisal) and has a condition rating of 2 (Good) to 3(Fair). The EA's Spatial Flood Defence dataset shows crest levels of 4.14m to 4.5m AODN and a condition rating of 3 to 4. Standard of Protection: Unknown			
MEASS Benefit Area and Preferred Option	BA2.2 Rochester. Raise (sustain) embankments, walls, flood gates, and revetments in localised areas. Localised raising of the defences to protect properties and assets at risk of flooding around Rochester and Chatham against a 0.1% AEP with sea level rise. The rest of the Benefit Area will have a No Active Intevention Approach.			
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*	
	HTL Sustain with localised NAI	HTL Sustain with localised NAI	HTL Sustain with localised NAI	
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 £575,000 to upgrade the 375m of defences in order to protect the site for the lifetime of any development.			
Flood Warning Area?	Yes.			

1141 - 325 High Street, Rochester				
Hazard Rating	***Percentage of site in each Hazard Rating Classification during the design flood event (2115) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	0.8%	21.5%	51.5%	8.2%
Required Actions / Recommended Mitigation Measures	The site is located in Flood Zone 3B (i.e. the functional floodplain) and therefore, normally, 'more vulnerable' development should not be permitted. **The site is currently 'brownfield' and in accordance with Paragraph 015 of NPPG: Flood and Coastal Change is an area prevented from acting as a functional floodplain by existing defences and infrastructure or solid buildings and would therefore not normally be identified as functional floodplain. Therefore, if a development proposal is progressed for this site, a detailed FRA, including a comprehensive investigation into surface water flood risk, 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 SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. The site is also identifed by the Level 1 SFRA as a 'Sensitive Drainage Area' and therefore Medway Council LLFA may require a SWMS and SuDs proforma to be completed for non major development proposals. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. Floor levels should be raised above the design flood level and depth of flooding from surface water, including the Environment Agency's recommended additional freeboard requirements where practicable. Flood resistance and resilience measures should be considered for inclusion. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area. 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. When developing a scheme, the condition of any adjacent defences should be taking into account and consideration given to upgrading the defences to maintain, or further, the protection offered to the site and surrounding area. The costs associated with defence upgrades should be shared amongst beneficiaries.			

1147 - 18-20 Batchelor Street, Chatham

Site Area: 0.03ha		**Existing Land Use:** Brownfield		**Proposed Land Use:** Residential
Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	0%	0%	100%	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 100m of the site:. Public sewer flooding.			
Watercourses/Rivers	The River Medway is located 550m to the northwest of the site.			
Geology	Bedrock: Lewes Nodular Chalk Formation (Chalk) Superficial: Head (Undifferentiated) (Clay (Undifferentiated) and Silt (Undifferentiated) and Sand(Undifferentiated) and Gravel (Undifferentiated))			
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 defended scenario for key return period events. Maximum flood level on site shown in brackets.***			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	100.0% (4.48m AODN)	100.0% (5.47m AODN)	100.0% (6.12m AODN)	100.0% (5.40m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	100.0% (4.43m AODN)	100.0% (5.46m AODN)	100.0% (6.07m AODN)	100.0% (5.40m 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	*'Medium' risk scenario*	*'Low' risk scenario*	
	7.0%	100.0%	100.0%	
Description of Surface Water Flow Paths (EA's RoFSW Maps)	During the 'low' and 'medium' risk scenario surface water flows across the entire site in a northwesterly direction. The site is not predicted to flood from surface water during the 'high' risk scenario.			
Existing Flood Defence Infrastructure (inc. SoP):	The existing defences consist of a wall with minimum actual crest level of 4.67m to 5.17m AODN (as stated in the MedwayFlood Defence High Level Appraisal) and has a condition rating of 2 (Good). The EA's Spatial Flood Defence dataset shows crest levels of 4.75m to 4.93m AODN and a condition rating of 3. Standard of Protection: Unknown			
MEASS Benefit Area and Preferred Option	BA2.2 Rochester. Raise (sustain) embankments, walls, flood gates, and revetments in localised areas. Localised raising of the defences to protect properties and assets at risk of flooding around Rochester and Chatham against a 0.1% AEP with sea level rise. The rest of the Benefit Area will have a No Active Intevention Approach.			
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*	
	HTL Sustain with localised NAI	HTL Sustain with localised NAI	HTL Sustain with localised NAI	
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 £610,000 to upgrade the 400m of defences in order to protect the site for the lifetime of any development.			
Flood Warning Area?	Yes.			

1147 - 18-20 Batchelor Street, Chatham				
Hazard Rating	***Percentage of site in each Hazard Rating Classification during the design flood event (2115) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	0.0%	0.0%	0.4%	99.6%
Required Actions / Recommended Mitigation Measures	The site is located in Flood Zones 2 and 3, and is at risk of flooding from surface water. As a result, a detailed FRA, including a comprehensive investigation into surface water flood risk, 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 SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. The site is also identifed by the Level 1 SFRA as a 'Sensitive Drainage Area' and therefore Medway Council LLFA may require a SWMS and SuDs proforma to be completed for non major development proposals. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. Floor levels should be raised above the design flood level and depth of flooding from surface water, including the Environment Agency's recommended additional freeboard requirements where practicable. Flood resistance and resilience measures should be considered for inclusion. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area. 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. When developing a scheme, the condition of any adjacent defences should be taking into account and consideration given to upgrading the defences to maintain, or further, the protection offered to the site and surrounding area. The costs associated with defence upgrades should be shared amongst beneficiaries.			

1188 - Pier Approach Road Depot

Site Area: 0.93ha		**Existing Land Use:** Brownfield		**Proposed Land Use:** Residential
Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	1.24%	13.29%	41.3%	44.17% **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. *Although the NKC modelling shows the site to be within the functional floodplain, the EA's 'Spatial Flood Defence' dataset shows that the site benefits from defences with a 1in200 year SoP. Paragraph 015 in the NPPG Flood and Coastal Change states 'Areas which would naturally flood, but which are prevented from doing so by existing defences and infrastructure or solid buildings, will not normally be identified as functional floodplain'. Therefore, further analysis is recommended to determine the true extent of the functional floodplain on site. Development classified as 'more vulnerable' use should not be permitted in Flood Zone 3b.			
Flood History	Incidents within the site: None. Incidents within 100m of the site: None.			
Watercourses/Rivers	The River Medway is 200m to the north of the site.			
Geology	Bedrock: Thanet Sand Formation (Sand(Undifferentiated) and Silt (Undifferentiated) and Clay (Undifferentiated)) Superficial: Alluvium (Clay, Silty Peaty Sandy (Unconsolidated Deposits Classification Scheme))			
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 defended scenario for key return period events. Maximum flood level on site shown in brackets.***			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	85.5% (5.05m AODN)	98.8% (5.42m AODN)	100.0% (6.06m AODN)	98.8% (5.37m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	77.1% (4.99m AODN)	99.7% (5.47m AODN)	100.0% (6.05m AODN)	98.8% (5.41m 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	*'Medium' risk scenario*	*'Low' risk scenario*	
	0.0%	12.9%	65.3%	
Description of Surface Water Flow Paths (EA's RoFSW Maps)	During the 'low' and 'medium' risk scenarios surface water flows across the site in a north-easterly direction. The site is not predicted to flood during the 'high' risk scenario.			
Existing Flood Defence Infrastructure (inc. SoP):	The existing defences consist of a wall with minimum actual crest level of 4.17m to 4.67m AODN (as stated in the Medway Flood Defence High Level Appraisal) and has a condition rating of 2 (Good). The EA's Spatial Flood Defence dataset shows crest level of 4.6m AODN and a condition rating of 3. Standard of Protection: Variable			
MEASS Benefit Area and Preferred Option	BA2.3 St Mary's Island. Raise (sustain) embankments, walls, flood gates and revetments. This option involves improving the SoP provided by the defences to 0.5% AEP SoP with sea level rise.			
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*	
	HTL Sustain	HTL Sustain	HTL Sustain	
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 £2,750,000 to upgrade the 1.8km of defences in order to protect the site for the lifetime of any development.			

1188 - Pier Approach Road Depot				
Flood Warning Area?	Yes.			
Hazard Rating	***Percentage of site in each Hazard Rating Classification during the design flood event (2115) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	0.0%	0.0%	33.1%	66.9%
Required Actions / Recommended Mitigation Measures	The site is located in Flood Zones 2 and 3, and is at risk of flooding from surface water. As a result, a detailed FRA, including a comprehensive investigation into surface water flood risk and further analysis to determine the extent of Flood Zone 3b on site, 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 SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. The site is also identifed by the Level 1 SFRA as a 'Sensitive Drainage Area' and therefore Medway Council LLFA may require a SWMS and SuDs proforma to be completed for non major development proposals. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. Floor levels should be raised above the design flood level and depth of flooding from surface water, including the Environment Agency's recommended additional freeboard requirements where practicable. Flood resistance and resilience measures should be considered for inclusion. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area. 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. When developing a scheme, the condition of any adjacent defences should be taking into account and consideration given to upgrading the defences to maintain, or further, the protection offered to the site and surrounding area. The costs associated with defence upgrades should be shared amongst beneficiaries.			

1190 - Acorn Wharf Shipyard

Site Area: 1.5ha	**Existing Land Use:** Brownfield	**Proposed Land Use:** Residential	

Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	0.07%	0.05%	43.2%	56.68%

Development lifetime	100 years
Exception Test required?	Development classified as 'more vulnerable' use should not be permitted.**
Flood History	Incidents within the site: None. Incidents within 100m of the site: None.
Watercourses/Rivers	The River Medway is adjacent to the site.
Geology	Bedrock: Lewes Nodular Chalk Formation (Chalk) Superficial: Alluvium (Clay, Silty Peaty Sandy (Unconsolidated Deposits Classification Scheme))

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 defended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	57.4% (5.02m AODN)	99.3% (5.45m AODN)	100.0% (6.08m AODN)	99.2% (5.40m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	99.9% (4.99m AODN)	100.0% (5.40m AODN)	100.0% (6.03m AODN)	99.9% (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	*'Medium' risk scenario*	*'Low' risk scenario*	
	0.0%	0.0%	9.8%	

Description of Surface Water Flow Paths (EA's RoFSW Maps)	During the 'low' risk scenario surface water flows in a northeasterly direction along the southern boundary of the site. The site is not predicted to flood from surface water during the 'medium' and 'high' risk scenarios.
Existing Flood Defence Infrastructure (inc. SoP):	The existing defences consist of a wall with minimum actual crest level of 4.67m to 6.17m AODN (as stated in the Medway Flood Defence High Level Appraisal) and has a condition rating of 2 (Good). The EA's Spatial Flood Defence dataset shows crest levels of 5.4m to 6.9m AODN and a condition rating of 2 to 4. Standard of Protection: 200-1000

MEASS Benefit Area and Preferred Option			
	BA2.2 Rochester. Raise (sustain) embankments, walls, flood gates, and revetments in localised areas. Localised raising of the defences to protect properties and assets at risk of flooding around Rochester and Chatham against a 0.1% AEP with sea level rise. The rest of the Benefit Area will have a No Active Intevention Approach.		
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*
	HTL Sustain with localised NAI	HTL Sustain with localised NAI	HTL Sustain with localised NAI

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 £650,000 to upgrade the 425m of defences in order to protect the site for the lifetime of any development.
Flood Warning Area?	Yes.

1190 - Acorn Wharf Shipyard

Hazard Rating	*Percentage of site in each Hazard Rating Classification during the design flood event (2115) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)*			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	0.3%	0.5%	28.1%	69.6%

Required Actions / Recommended Mitigation Measures	The site is located in Flood Zone 3B (i.e. the functional floodplain) and therefore, 'more vulnerable' development should not be permitted. **The site is currently 'brownfield' and in accordance with Paragraph 015 of NPPG: Flood and Coastal Change is an area prevented from acting as a functional floodplain by existing defences and infrastructure or solid buildings and would therefore not normally be identified as functional floodplain. Therefore, if a development proposal is progressed for this site, a detailed FRA, including a comprehensive investigation into surface water flood risk, 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 SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. The site is also identifed by the Level 1 SFRA as a 'Sensitive Drainage Area' and therefore Medway Council LLFA may require a SWMS and SuDs proforma to be completed for non major development proposals. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. Floor levels should be raised above the design flood level and depth of flooding from surface water, including the Environment Agency's recommended additional freeboard requirements where practicable. Flood resistance and resilience measures should be considered for inclusion. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area. 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. When developing a scheme, the condition of any adjacent defences should be taking into account and consideration given to upgrading the defences to maintain, or further, the protection offered to the site and surrounding area. The costs associated with defence upgrades should be shared amongst beneficiaries.

1216 - Site 4 Land to north of Binney Farm

Site Area: 1.69ha		**Existing Land Use:** Brownfield		**Proposed Land Use:** Residential
Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	85.02%	8.54%	6.44%	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 100m of the site: Overtopping of defences during the 1953 tidal flood event.			
Watercourses/Rivers	The River Thames Estuary is located 1km to the north of the site. There are a number of ordinary watercourses to the east of the site.			
Geology	Bedrock: London Clay Formation (Clay (Undifferentiated) and Silt (Undifferentiated)) Superficial: Head (Undifferentiated) (Clay (Undifferentiated) and Silt (Undifferentiated) and Sand(Undifferentiated) and Gravel (Undifferentiated))			
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 defended scenario for key return period events. Maximum flood level on site shown in brackets.***			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	0.0% (0.00m AODN)	0.0% (0.00m AODN)	10.4% (5.01m AODN)	0.0% (0.00m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	6.4% (4.81m AODN)	16.2% (5.24m AODN)	32.4% (5.88m AODN)	15.0% (5.19m 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	*'Medium' risk scenario*	*'Low' risk scenario*	
	0.5%	6.1%	38.6%	
Description of Surface Water Flow Paths (EA's RoFSW Maps)	During the 'low' risk scenario, surface water flows across the site in an easterly direction. There is localised surface water accumulation on site during the 'medium' risk scenario, and the site is not predicted to flood during the 'high' risk scenario.			
Existing Flood Defence Infrastructure (inc. SoP):	The EA's Spatial Flood Defence dataset shows a number of embankments to the northeast and east of the site with crest levels of 3.62m to 6.4m AODN and a condition rating of 3. Standard of Protection: Unknown			
MEASS Benefit Area and Preferred Option	-			
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*	
	-	-	-	
High-Level Indication of Defence Costs	N/A - the cost of improving the defences is not considered commensurate with the size of the site and extent of flooding on site.			
Flood Warning Area?	Yes.			

1216 - Site 4 Land to north of Binney Farm				
Hazard Rating	***Percentage of site in each Hazard Rating Classification during the design flood event (2115) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	4.5%	0.0%	2.2%	0.0%
Required Actions / Recommended Mitigation Measures	The site is located in Flood Zones 2 and 3, and is at risk of flooding from surface water. As a result, a detailed FRA, including a comprehensive investigation into surface water flood risk, 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 SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. Floor levels should be raised above the design flood level and depth of flooding from surface water, including the Environment Agency's recommended additional freeboard requirements where practicable. Flood resistance and resilience measures should be considered for inclusion. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area. 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.			

1251 - Land to the west of Kingsnorth

Site Area: 65ha		**Existing Land Use:** Greenfield		**Proposed Land Use:** Employment
Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	77.62%	4.05%	18.33%	0%
Development lifetime	60 years			
Exception Test required?	Development which is classified as 'essential infrastructure' and 'more vulnerable' will be subject to the Exception Test. Development classified as 'highly vulnerable' use should not be permitted. The Exception Test is not required to be applied for development classified as 'water compatible' or 'less vulnerable'.			
Flood History	Incidents within the site: None. Incidents within 100m of the site: Highway flooding. Overtopping of defences during the 1953 tidal flood event.			
Watercourses/Rivers	The River Medway is located 1.3km to the southeast of the site.			
Geology	Bedrock: London Clay Formation (Clay (Undifferentiated) and Silt (Undifferentiated)) Superficial: Head (Undifferentiated); Alluvium; River Terrace Deposits, 1 (Clay (Undifferentiated) and Silt (Undifferentiated) and Sand(Undifferentiated) and Gravel (Undifferentiated); Clay, Silty Peaty Sandy (Unconsolidated Deposits Classification Scheme); Clay (Undifferentiated) and Silt (Undifferentiated))			
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 defended scenario for key return period events. Maximum flood level on site shown in brackets.***			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	0.0% (0.00m AODN)	7.0% (5.42m AODN)	14.8% (6.03m AODN)	6.3% (5.26m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	5.1% (5.03m AODN)	8.6% (5.44m AODN)	14.9% (6.03m AODN)	8.2% (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	*'Medium' risk scenario*	*'Low' risk scenario*	
	2.8%	5.0%	15.1%	
Description of Surface Water Flow Paths (EA's RoFSW Maps)	During all modelled scenarios, surface water is shown to flow across the north of the site in an easterly direction. During the 'low' risk scenario surface water flows from the centre of the site towards the southeast boundary of the site. There is localised flooding along the southeast boundary of the site during the 'medium' and 'high' risk scenarios, which could be attributed to localised depressions in the topography.			
Existing Flood Defence Infrastructure (inc. SoP):	The EA's Spatial Flood Defence dataset shows a number of embankments to the south of the site with crest levels of 5.03m to 5.12m AODN and a condition rating of 3. In addition, there are a number of embankments to the east of the site with crest levels of 4.54m to 5.63m AODN and a condition rating of 3. Standard of Protection: Unknown			
MEASS Benefit Area and Preferred Option	BA1.2 Kingsnorth. Maintenance of the current defences (embankment, seawall and rock revetment) for the first 8 years to the current SoP offered. Following this, defences to be raised to 5.3mAOD and then raised again in year 50 to 6.6mAOD to ensure a 0.1% SoP in 100 years taking account of sea level rise.			
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*	
	HTL Maintain until year 5 and then HTL Sustain	-HTL Sustain	HTL Sustain	
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 £1,610,000 to upgrade the 1.4km of defences in order to protect the site for the lifetime of any development.			

1251 - Land to the west of Kingsnorth				
Flood Warning Area?	Yes.			
Hazard Rating	***Percentage of site in each Hazard Rating Classification during the design flood event (2070) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	1.0%	1.2%	4.7%	0.1%
Required Actions / Recommended Mitigation Measures	The site is located partially in Flood Zones 2 and 3, and is at risk of flooding from surface water. As a result, a detailed FRA, including a comprehensive investigation into surface water flood risk, 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 SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. Floor levels should be raised above the design flood level and depth of flooding from surface water, including the Environment Agency's recommended additional freeboard requirements where practicable. Flood resistance and resilience measures should be considered for inclusion. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area. 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. When developing a scheme, the condition of any adjacent defences should be taking into account and consideration given to upgrading the defences to maintain, or further, the protection offered to the site and surrounding area. The costs associated with defence upgrades should be shared amongst beneficiaries.			

1278 - Land East of Pier Approach Rd, Gillingham

Site Area: 0.35ha		**Existing Land Use:** Brownfield		**Proposed Land Use:** Residential
Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	93.16%	6.19%	0.65%	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 100m of the site: None.			
Watercourses/Rivers	The River Medway is 400m to the north of the site.			
Geology	Bedrock: Thanet Sand Formation (Sand(Undifferentiated) and Silt (Undifferentiated) and Clay (Undifferentiated)) Superficial: ()			
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 defended scenario for key return period events. Maximum flood level on site shown in brackets.***			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	0.7% (5.04m AODN)	6.8% (5.42m AODN)	96.7% (6.06m AODN)	6.8% (5.37m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	0.0% (0.00m AODN)	6.8% (5.47m AODN)	96.7% (6.05m AODN)	6.8% (5.41m 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	*'Medium' risk scenario*	*'Low' risk scenario*	
	0.0%	0.0%	40.6%	
Description of Surface Water Flow Paths (EA's RoFSW Maps)	During the 'low' risk scenario surface water flows across the site in an easterly direction. The site is not predicted to flood during the 'medium' and 'high' risk scenario.			
Existing Flood Defence Infrastructure (inc. SoP):	The existing defences consist of a wall with minimum actual crest level of 3.67m to 4.67m AODN (as stated in the MedwayFlood Defence High Level Appraisal). The EA's Spatial Flood Defence dataset shows crest levels of 3.63m to 5.67m AODN and a condition rating of 2 to 3. Standard of Protection: Unknown			
MEASS Benefit Area and Preferred Option	BA2.3 St Mary's Island. Raise (sustain) embankments, walls, flood gates and revetments. This option involves improving the SoP provided by the defences to 0.5% AEP SoP with sea level rise.			
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*	
	HTL Sustain	HTL Sustain	HTL Sustain	
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 £2,750,000 to upgrade the 1.8km of defences in order to protect the site for the lifetime of any development.			
Flood Warning Area?	Yes.			

1278 - Land East of Pier Approach Rd, Gillingham

Hazard Rating	***Percentage of site in each Hazard Rating Classification during the design flood event (2115) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	25.9%	0.0%	24.1%	0.6%
Required Actions / Recommended Mitigation Measures	The site is located in Flood Zones 2 and 3, and is at risk of flooding from surface water. As a result, a detailed FRA, including a comprehensive investigation into surface water flood risk, 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 SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. The site is also identifed by the Level 1 SFRA as a 'Sensitive Drainage Area' and therefore Medway Council LLFA may require a SWMS and SuDs proforma to be completed for non major development proposals. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. Floor levels should be raised above the design flood level and depth of flooding from surface water, including the Environment Agency's recommended additional freeboard requirements where practicable. Flood resistance and resilience measures should be considered for inclusion. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area. 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. When developing a scheme, the condition of any adjacent defences should be taking into account and consideration given to upgrading the defences to maintain, or further, the protection offered to the site and surrounding area. The costs associated with defence upgrades should be shared amongst beneficiaries.			

1297 - Land bound by Commercial Rd, Knight Rd, Priory Rd and Smith St

Site Area: 3.23ha		**Existing Land Use:** Brownfield		**Proposed Land Use:** Residential
Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	7.93%	4.32%	16.27%	71.48% **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. *Although the NKC modelling shows the site to be within the functional floodplain, the modelling study does not take into account the recently completed Jane's Creek defences. These defences would likely reduce the extent of flooding during a 1in20 year return period event, and further analysis is recommended to determine the true extent of the functional floodplain on site. Development classified as 'more vulnerable' use should not be permitted in Flood Zone 3b.			
Flood History	Incidents within the site: Public sewer flooding. Incidents within 100m of the site:. Highway flooding.			
Watercourses/Rivers	The River Medway is 350m to the southeast of the site.			
Geology	Bedrock: Lewes Nodular Chalk Formation, Seaford Chalk Formation and Newhaven Chalk Formation (Undifferentiated) (Chalk) Superficial: Head (Undifferentiated); Alluvium (Clay (Undifferentiated) and Silt (Undifferentiated); Clay, Silty Peaty Sandy (Unconsolidated Deposits Classification Scheme))			
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 defended scenario for key return period events. Maximum flood level on site shown in brackets.***			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200 year return period event - 2115*	*1 in 1000-year return period event*
	87.8% (5.00m AODN)	92.1% (5.47m AODN)	94.1% (6.10m AODN)	92.1% (5.42m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	87.8% (5.01m AODN)	92.1% (5.42m AODN)	94.1% (6.02m AODN)	91.0% (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	*'Medium' risk scenario*	*'Low' risk scenario*	
	29.4%	38.6%	78.7%	
Description of Surface Water Flow Paths (EA's RoFSW Maps)	During the 'low' risk scenario, surface water accumulates on the majority of the site. During the 'medium' and 'high' risk scenarios surface water accumulates in the centre of the site, which could be attributed to a localised depression in the topography.			
Existing Flood Defence Infrastructure (inc. SoP):	Defences at Strood Riverside and Jane's Creek have recently been upgraded and now have a crest height of 6.1m AODN. The existing defences to the southwest of Jane's Creek consist of a wall and high ground with minimum actual crest level of 3.67m to 5.17m AODN (as stated in the Medway Flood Defence High Level Appraisal) and has a condition rating of 2 (Good) to 4 (Poor). EA's Spatial Flood Defence dataset shows crest levels of 4.04m to 4.99m AODN and a condition rating of 2 to 4. Standard of Protection: Unknown			
MEASS Benefit Area and Preferred Option	BA2.1 Strood. Raise (sustain) embankments,walls, flood gates and revetments. This option involves improving the current SOP provided by the defences to 1% AEP SoP with sea level rise.			
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*	
	HTL Sustain	HTL Sustain	HTL Sustain	
High-Level Indication of Defence Costs	The Jane's Creek defences have recently been upgraded to improve the standard of protection. Notwithstanding this, further improvements should be considered to improve the defences to the southwest of Jane's Creek. Based on an average cost of £2,984/m to construct a defence wall, it is estimated to cost in the region of £2,540,000 to upgrade the 850m of defences in order to protect the site for the lifetime of any development.			

1297 - Land bound by Commercial Rd, Knight Rd, Priory Rd and Smith St				
Flood Warning Area?	Yes.			
Hazard Rating	***Percentage of site in each Hazard Rating Classification during the design flood event (2115) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	0.7%	0.2%	32.0%	59.3%
Required Actions / Recommended Mitigation Measures	The site is located in Flood Zones 2 and 3, and is at risk of flooding from surface water. As a result, a detailed FRA, including a comprehensive investigation into surface water flood risk and further analysis to determine the extent of Flood Zone 3b on site, 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 SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. Floor levels should be raised above the design flood level and depth of flooding from surface water, including the Environment Agency's recommended additional freeboard requirements where practicable. Flood resistance and resilience measures should be considered for inclusion. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area. 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. Where new defences are present which were completed after the NKC modelling, further analysis should be undertaken to determine the extent of Flood Zone 3b on site.			

1299 - East of Ropers Lane, Hoo

Site Area: 80.76ha		**Existing Land Use:** Greenfield		**Proposed Land Use:** Residential
Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	92.39%	0.66%	6.95%	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 100m of the site: Highway flooding.			
Watercourses/Rivers	The River Medway is located 1.8km to the southeast of the site. In addition, there are numerous ordinary watercourses on site.			
Geology	Bedrock: London Clay Formation (Clay (Undifferentiated) and Silt (Undifferentiated)) Superficial: Head (Undifferentiated); River Terrace Deposits, 2; Alluvium (Clay (Undifferentiated) and Silt (Undifferentiated) and Sand(Undifferentiated) and Gravel (Undifferentiated); Clay (Undifferentiated) and Silt (Undifferentiated); Sand and Gravel; Clay, Silty Peaty Sandy (Unconsolidated Deposits Classification Scheme))			
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 defended scenario for key return period events. Maximum flood level on site shown in brackets.***			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	0.0% (0.00m AODN)	0.0% (0.00m AODN)	0.0% (0.00m AODN)	0.0% (0.00m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	0.0% (0.00m AODN)	0.0% (0.00m AODN)	0.0% (0.00m AODN)	0.0% (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	*'Medium' risk scenario*	*'Low' risk scenario*	
	3.2%	5.5%	11.4%	
Description of Surface Water Flow Paths (EA's RoFSW Maps)	During the 'low' risk scenario, surface water flows across the centre of the site in an easterly direction and along the northeast border of the site in a southeasterly direction. During the 'medium' and 'high' risk scenarios the flow path is only present along the northeast boundary.			
Existing Flood Defence Infrastructure (inc. SoP):	The EA's Spatial Flood Defence dataset shows a number of embankments 1.4km to the south of the site with crest levels of 5.03m to 5.12m AODN and a condition rating of 3. Standard of Protection: Unknown			
MEASS Benefit Area and Preferred Option	BA1.3 Hoo. Maintenance (patch and repair) of the current defences (earth embankments and rock revetment) for the first 25 years. After this all maintenance will be ceased with the site becoming No Active Intevention.			
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*	
	HTL Maintain with MR	NAI with MR	NAI with MR	
High-Level Indication of Defence Costs	N/A - The site is predicted to remain unaffected by flooding from the River Medway for the lifetime of any development.			
Flood Warning Area?	Not available at this location.			

1299 - East of Ropers Lane, Hoo				
Hazard Rating	***Percentage of site in each Hazard Rating Classification during the design flood event (2115) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	0.0%	0.0%	0.0%	0.0%
Required Actions / Recommended Mitigation Measures	The site is located in Flood Zones 2 and 3, and is at risk of flooding from surface water. As a result, a detailed FRA, including a comprehensive investigation into surface water flood risk, 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 SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. Floor levels should be raised above the depth of flooding from surface water, including the Environment Agency's recommended additional freeboard requirements where practicable. Flood resistance and resilience measures should be considered for inclusion. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area. 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 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 LMIDB area, the LMIDB should be consulted to obtain consent.			

1301 - Temple Street Public Car Park, 151-175 High St, 1A-1 Cuxton Road

Site Area: 0.72ha		**Existing Land Use:** Brownfield		**Proposed Land Use:** Residential
Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	65.36%	20.35%	12.68%	1.61% **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. Development classified as 'more vulnerable' use should not be permitted in Flood Zone 3b.			
Flood History	Incidents within the site: None. Incidents within 100m of the site: Public sewer flooding.			
Watercourses/Rivers	The River Medway is located 475m to the southeast of the site.			
Geology	Bedrock: Lewes Nodular Chalk Formation, Seaford Chalk Formation and Newhaven Chalk Formation (Undifferentiated) (Chalk) Superficial: Head (Undifferentiated) (Clay (Undifferentiated) and Silt (Undifferentiated))			
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 defended scenario for key return period events. Maximum flood level on site shown in brackets.***			
	1 in 200 year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	14.3% (5.00m AODN)	34.6% (5.47m AODN)	44.2% (6.10m AODN)	34.6% (5.42m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	14.3% (5.01m AODN)	34.6% (5.42m AODN)	43.7% (6.02m AODN)	34.6% (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	*'Medium' risk scenario*	*'Low' risk scenario*	
	8.3%	14.8%	45.0%	
Description of Surface Water Flow Paths (EA's RoFSW Maps)	During all modelled scenarios, surface water is shown to flow across the site in a southeasterly direction.			
Existing Flood Defence Infrastructure (inc. SoP):	Defences at Strood Riverside and Jane's Creek have recently been upgraded and now have a crest height of 6.1m AODN. The existing defences to the southwest of Jane's Creek consist of a wall and high ground with minimum actual crest level of 3.67m to 5.17m AODN (as stated in the Medway Flood Defence High Level Appraisal) and has a condition rating of 2 (Good) to 4 (Poor). EA's Spatial Flood Defence dataset shows crest levels of 4.04m to 4.99m AODN and a condition rating of 2 to 4. Standard of Protection: Unknown			
MEASS Benefit Area and Preferred Option	BA2.1 Strood. Raise (sustain) embankments,walls, flood gates and revetments. This option involves improving the current SOP provided by the defences to 1% AEP SoP with sea level rise.			
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*	
	HTL Sustain	HTL Sustain	HTL Sustain	
High-Level Indication of Defence Costs	The Jane's Creek defences have recently been upgraded to improve the standard of protection. Notwithstanding this, further improvements should be considered to improve the defences to the southwest of Jane's Creek. Based on an average cost of £2,984/m to construct a defence wall, it is estimated to cost in the region of £2,540,000 to upgrade the 850m of defences in order to protect the site for the lifetime of any development.			
Flood Warning Area?	Yes.			

1301 - Temple Street Public Car Park, 151-175 High St, 1A-1 Cuxton Road				
Hazard Rating	***Percentage of site in each Hazard Rating Classification during the design flood event (2115) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	4.0%	0.7%	32.6%	0.3%
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 SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. The site is also identifed by the Level 1 SFRA as a 'Sensitive Drainage Area' and therefore Medway Council LLFA may require a SWMS and SuDs proforma to be completed for non major development proposals. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. 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. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area. The Sequential Approach should be applied to the layout of the site by locating the most vulnerable elements in the lowest risk areas, and avoiding develpoment within Flood Zone 3b*. 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. When developing a scheme, the condition of any adjacent defences should be taking into account and consideration given to upgrading the defences to maintain, or further, the protection offered to the site and surrounding area. The costs associated with defence upgrades should be shared amongst beneficiaries.			

1306 - Dagenham Motors, Pier Road, Gillingham

Site Area: 4.66ha		**Existing Land Use:** Brownfield		**Proposed Land Use:** Residential
Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	6.14%	6.47%	69.53%	17.86%
Development lifetime	100 years			
Exception Test required?	Development classified as 'more vulnerable' use should not be permitted**.			
Flood History	Incidents within the site: Public sewer flooding. Public sewer flooding related to capacity issues with nearby pump. Incidents within 100m of the site: None.			
Watercourses/Rivers	The River Medway is located 250m to the north of the site.			
Geology	Bedrock: Thanet Sand Formation (Sand(Undifferentiated) and Silt (Undifferentiated) and Clay (Undifferentiated)) Superficial: Beach and Tidal Flat Deposits (Undifferentiated); Alluvium (Clay (Undifferentiated) and Silt (Undifferentiated) and Sand(Undifferentiated); Clay, Silty Peaty Sandy (Unconsolidated Deposits Classification Scheme))			
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 defended scenario for key return period events. Maximum flood level on site shown in brackets.***			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	85.6% (5.04m AODN)	94.1% (5.43m AODN)	98.3% (6.05m AODN)	93.0% (5.38m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000 year return period event*
	87.4% (4.99m AODN)	95.2% (5.46m AODN)	98.3% (6.05m AODN)	93.9% (5.41m 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	*'Medium' risk scenario*	*'Low' risk scenario*	
	19.4%	33.0%	62.8%	
Description of Surface Water Flow Paths (EA's RoFSW Maps)	During all modelled scenarios, surface water is shown to flow across the site in a northerly direction.			
Existing Flood Defence Infrastructure (inc. SoP):	The existing defences consist of high ground and a wall with minimum actual crest level of 3.67m to 4.67m AODN (as stated in the Medway Flood Defence High Level Appraisal). The EA's Spatial Flood Defence dataset shows effective crest levels of 4.00m to 5.59m AODN and a condition rating of 2 to 4. Standard of Protection: Unknown			
MEASS Benefit Area and Preferred Option	BA2.3 St Mary's Island. Raise (sustain) embankments, walls, flood gates and revetments. This option involves improving the SoP provided by the defences to 0.5% AEP SoP with sea level rise.			
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*	
	HTL Sustain	HTL Sustain	HTL Sustain	
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 £2,750,000 to upgrade the 1.8km of defences in order to protect the site for the lifetime of any development.			
Flood Warning Area?	Yes.			

1306 - Dagenham Motors, Pier Road, Gillingham

Hazard Rating	*Percentage of site in each Hazard Rating Classification during the design flood event (2115) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)*			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	0.3%	0.1%	69.0%	27.6%

Required Actions / Recommended Mitigation Measures	The site is located in Flood Zone 3B (i.e. the functional floodplain) and therefore, 'more vulnerable' development should not be permitted. **The site is currently 'brownfield' and in accordance with Paragraph 015 of NPPG: Flood and Coastal Change is an area prevented from acting as a functional floodplain by existing defences and infrastructure or solid buildings and would therefore not normally be identified as functional floodplain. Therefore, if a development proposal is progressed for this site, a detailed FRA, including a comprehensive investigation into surface water flood risk, 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 SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. The site is also identifed by the Level 1 SFRA as a 'Sensitive Drainage Area' and therefore Medway Council LLFA may require a SWMS and SuDs proforma to be completed for non major development proposals. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. Floor levels should be raised above the design flood level and depth of flooding from surface water, including the Environment Agency's recommended additional freeboard requirements where practicable. Flood resistance and resilience measures should be considered for inclusion. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area. 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. When developing a scheme, the condition of any adjacent defences should be taking into account and consideration given to upgrading the defences to maintain, or further, the protection offered to the site and surrounding area. The costs associated with defence upgrades should be shared amongst beneficiaries.

1308 - B&M Bargains, Medway Street, Chatham

Site Area: 0.31ha		**Existing Land Use:** Brownfield		**Proposed Land Use:** Residential
Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	0%	1.06%	98.94%	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 100m of the site: None.			
Watercourses/Rivers	The River Medway is located adjacent to the site.			
Geology	Bedrock: Lewes Nodular Chalk Formation (Chalk) Superficial: Alluvium (Clay, Silty Peaty Sandy (Unconsolidated Deposits Classification Scheme))			
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 defended scenario for key return period events. Maximum flood level on site shown in brackets.***			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	98.9% (5.07m AODN)	100.0% (5.46m AODN)	100.0% (6.11m AODN)	100.0% (5.41m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	98.9% (5.01m AODN)	100.0% (5.47m AODN)	100.0% (6.07m AODN)	100.0% (5.41m 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	*'Medium' risk scenario*	*'Low' risk scenario*	
	0.0%	1.7%	49.5%	
Description of Surface Water Flow Paths (EA's RoFSW Maps)	During the 'low' risk scenario, floodwater flows across the western half of the site in a northerly direction. The site is not predicted to flood from surface water during the 'medium' and 'high' risk scenarios.			
Existing Flood Defence Infrastructure (inc. SoP):	The existing defences consist of high ground with minimum actual crest level of 4.60m to 5.17m AODN (as stated in the MedwayFlood Defence High Level Appraisal) and has a condition rating of 2 (Good). The EA's Spatial Flood Defence dataset shows crest levels of 4.75m to 4.93m AODN and a condition rating of 3. Standard of Protection: Unknown			
MEASS Benefit Area and Preferred Option	BA2.2 Rochester. Raise (sustain) embankments, walls, flood gates, and revetments in localised areas. Localised raising of the defences to protect properties and assets at risk of flooding around Rochester and Chatham against a 0.1% AEP with sea level rise. The rest of the Benefit Area will have a No Active Intevention Approach.			
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*	
	HTL Sustain with localised NAI	HTL Sustain with localised NAI	HTL Sustain with localised NAI	
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 £610,000 to upgrade the 400m of defences in order to protect the site for the lifetime of any development.			
Flood Warning Area?	Yes.			

1308 - B&M Bargains, Medway Street, Chatham				
Hazard Rating	***Percentage of site in each Hazard Rating Classification during the design flood event (2115) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	0.0%	0.0%	96.9%	3.1%
Required Actions / Recommended Mitigation Measures	The site is located in Flood Zones 2 and 3, and is at risk of flooding from surface water. As a result, a detailed FRA, including a comprehensive investigation into surface water flood risk, 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 SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. The site is also identifed by the Level 1 SFRA as a 'Sensitive Drainage Area' and therefore Medway Council LLFA may require a SWMS and SuDs proforma to be completed for non major development proposals. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. Floor levels should be raised above the design flood level and depth of flooding from surface water, including the Environment Agency's recommended additional freeboard requirements where practicable. Flood resistance and resilience measures should be considered for inclusion. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area. 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. When developing a scheme, the condition of any adjacent defences should be taking into account and consideration given to upgrading the defences to maintain, or further, the protection offered to the site and surrounding area. The costs associated with defence upgrades should be shared amongst beneficiaries.			

1309 - Riverside Gardens, Chatham

Site Area: 0.41ha		**Existing Land Use:** Brownfield		**Proposed Land Use:** Residential
Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	14.2%	16.47%	69.33%	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 100m of the site: None.			
Watercourses/Rivers	The River Medway is located adjacent to the site.			
Geology	Bedrock: Lewes Nodular Chalk Formation (Chalk) Superficial: Alluvium (Clay, Silty Peaty Sandy (Unconsolidated Deposits Classification Scheme))			
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 defended scenario for key return period events. Maximum flood level on site shown in brackets.***			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	67.4% (5.07m AODN)	83.8% (5.46m AODN)	96.3% (6.11m AODN)	83.8% (5.41m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	68.4% (5.01m AODN)	85.7% (5.47m AODN)	98.5% (6.07m AODN)	85.7% (5.41m 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	*'Medium' risk scenario*	*'Low' risk scenario*	
	0.0%	65.2%	77.9%	
Description of Surface Water Flow Paths (EA's RoFSW Maps)	During the 'low' and 'medium' risk scenarios, surface water is shown to flow across the majority of the site in a northwesterly direction. The site is not predicted to flood from surface water during the 'high' risk scenario.			
Existing Flood Defence Infrastructure (inc. SoP):	The existing defences consist of high ground with minimum actual crest level of 4.67m to 5.17m AODN (as stated in the MedwayFlood Defence High Level Appraisal) and has a condition rating of 2 (Good). The EA's Spatial Flood Defence dataset shows crest levels of 4.75m to 4.93m AODN and a condition rating of 3. Standard of Protection: Unknown			
MEASS Benefit Area and Preferred Option	BA2.2 Rochester. Raise (sustain) embankments, walls, flood gates, and revetments in localised areas. Localised raising of the defences to protect properties and assets at risk of flooding around Rochester and Chatham against a 0.1% AEP with sea level rise. The rest of the Benefit Area will have a No Active Intevention Approach.			
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*	
	HTL Sustain with localised NAI	HTL Sustain with localised NAI	HTL Sustain with localised NAI	
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 £610,000 to upgrade the 400m of defences in order to protect the site for the lifetime of any development.			
Flood Warning Area?	Yes.			

1309 - Riverside Gardens, Chatham				
Hazard Rating	***Percentage of site in each Hazard Rating Classification during the design flood event (2115) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	4.7%	4.9%	47.0%	30.1%
Required Actions / Recommended Mitigation Measures	The site is located in Flood Zones 2 and 3, and is at risk of flooding from surface water. As a result, a detailed FRA, including a comprehensive investigation into surface water flood risk, 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 SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. The site is also identifed by the Level 1 SFRA as a 'Sensitive Drainage Area' and therefore Medway Council LLFA may require a SWMS and SuDs proforma to be completed for non major development proposals. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. Floor levels should be raised above the design flood level and depth of flooding from surface water, including the Environment Agency's recommended additional freeboard requirements where practicable. Flood resistance and resilience measures should be considered for inclusion. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area. 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. When developing a scheme, the condition of any adjacent defences should be taking into account and consideration given to upgrading the defences to maintain, or further, the protection offered to the site.			

1311 - 199 to 233 High Street, Chatham

Site Area: 0.53ha	**Existing Land Use:** Brownfield	**Proposed Land Use:** Residential	

Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	0%	26.35%	73.65%	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 100m of the site:
Watercourses/Rivers	The River Medway is located 575m to the northwest of the site.
Geology	Bedrock: Lewes Nodular Chalk Formation (Chalk) Superficial: Head (Undifferentiated) (Clay (Undifferentiated) and Silt (Undifferentiated) and Sand(Undifferentiated) and Gravel (Undifferentiated))

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 defended scenario for key return period events. Maximum flood level on site shown in brackets.

1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
69.0% (4.48m AODN)	100.0% (5.46m AODN)	100.0% (6.12m AODN)	100.0% (5.40m AODN)

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

1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
61.8% (4.43m AODN)	100.0% (5.46m AODN)	100.0% (6.07m AODN)	100.0% (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	*'Medium' risk scenario*	*'Low' risk scenario*
17.8%	47.5%	100.0%

Description of Surface Water Flow Paths (EA's RoFSW Maps)	During the 'low' risk scenario, surface water is shown to flow across the entire site in a northwesterly direction, and during the 'medium' risk scenario in the same direction to a lesser extent. During the 'high' risk scenario, there is only localised accumulation on site, which could be attributed to localised depressions in the topography.
Existing Flood Defence Infrastructure (inc. SoP):	The existing defences consist of high ground with minimum actual crest level of 4.67m to 5.17m AODN (as stated in the MedwayFlood Defence High Level Appraisal) and has a condition rating of 2 (Good). The EA's Spatial Flood Defence dataset shows crest levels of 4.75m to 4.93m AODN and a condition rating of 3. Standard of Protection: Unknown

MEASS Benefit Area and Preferred Option

BA2.2 Rochester. Raise (sustain) embankments, walls, flood gates, and revetments in localised areas. Localised raising of the defences to protect properties and assets at risk of flooding around Rochester and Chatham against a 0.1% AEP with sea level rise. The rest of the Benefit Area will have a No Active Intevention Approach.

MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*
HTL Sustain with localised NAI	HTL Sustain with localised NAI	HTL Sustain with localised NAI

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 £610,000 to upgrade the 400m of defences in order to protect the site for the lifetime of any development.
Flood Warning Area?	Yes.

1311 - 199 to 233 High Street, Chatham				
Hazard Rating	***Percentage of site in each Hazard Rating Classification during the design flood event (2115) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	0.0%	0.0%	75.9%	24.1%
Required Actions / Recommended Mitigation Measures	The site is located in Flood Zones 2 and 3, and is at risk of flooding from surface water. As a result, a detailed FRA, including a comprehensive investigation into surface water flood risk, 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 SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. The site is also identifed by the Level 1 SFRA as a 'Sensitive Drainage Area' and therefore Medway Council LLFA may require a SWMS and SuDs proforma to be completed for non major development proposals. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. Floor levels should be raised above the design flood level and depth of flooding from surface water, including the Environment Agency's recommended additional freeboard requirements where practicable. Flood resistance and resilience measures should be considered for inclusion. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area. 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.			

1312 - Pumping Station, The Brook, Chatham

Site Area: 0.2ha		**Existing Land Use:** Brownfield		**Proposed Land Use:** Residential
Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	56.06%	23.06%	20.88%	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 100m of the site: None.			
Watercourses/Rivers	The River Medway is located 500m to the northwest of the site.			
Geology	Bedrock: Lewes Nodular Chalk Formation (Chalk) Superficial: Head (Undifferentiated) (Clay (Undifferentiated) and Silt (Undifferentiated) and Sand(Undifferentiated) and Gravel (Undifferentiated))			
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 defended scenario for key return period events. Maximum flood level on site shown in brackets.***			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	9.2% (4.48m AODN)	47.2% (5.46m AODN)	60.2% (6.12m AODN)	43.4% (5.40m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	7.9% (4.43m AODN)	47.2% (5.46m AODN)	60.2% (6.07m AODN)	43.4% (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	*'Medium' risk scenario*	*'Low' risk scenario*	
	0.0%	18.8%	39.7%	
Description of Surface Water Flow Paths (EA's RoFSW Maps)	During the 'low' and 'medium' risk scenarios surface water is shown to flow along part of the southwest site boundary in a north-easterly direction. The site is not predicted to flood from surface water during the 'high' risk scenario.			
Existing Flood Defence Infrastructure (inc. SoP):	The existing defences consist of high ground with minimum actual crest level of 4.67m to 5.17m AODN (as stated in the MedwayFlood Defence High Level Appraisal) and has a condition rating of 2 (Good). The EA's Spatial Flood Defence dataset shows crest levels of 4.75m to 4.93m AODN and a condition rating of 3. Standard of Protection: Unknown			
MEASS Benefit Area and Preferred Option	BA2.2 Rochester. Raise (sustain) embankments, walls, flood gates, and revetments in localised areas. Localised raising of the defences to protect properties and assets at risk of flooding around Rochester and Chatham against a 0.1% AEP with sea level rise. The rest of the Benefit Area will have a No Active Intevention Approach.			
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*	
	HTL Sustain with localised NAI	HTL Sustain with localised NAI	HTL Sustain with localised NAI	
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 £610,000 to upgrade the 400m of defences in order to protect the site for the lifetime of any development.			
Flood Warning Area?	Yes.			

1312 - Pumping Station, The Brook, Chatham				
Hazard Rating	***Percentage of site in each Hazard Rating Classification during the design flood event (2115) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	0.5%	3.8%	37.9%	6.8%
Required Actions / Recommended Mitigation Measures	The site is located in Flood Zones 2 and 3, and is at risk of flooding from surface water. As a result, a detailed FRA, including a comprehensive investigation into surface water flood risk, 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 SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. The site is also identifed by the Level 1 SFRA as a 'Sensitive Drainage Area' and therefore Medway Council LLFA may require a SWMS and SuDs proforma to be completed for non major development proposals. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. Floor levels should be raised above the design flood level and depth of flooding from surface water, including the Environment Agency's recommended additional freeboard requirements where practicable. Flood resistance and resilience measures should be considered for inclusion. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area. 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.			

1313 - 279 to 313a High Street, Chatham

Site Area: 0.46ha		**Existing Land Use:** Brownfield		**Proposed Land Use:** Residential
Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	0%	36.54%	63.46%	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: Public sewer flooding. Incidents within 100m of the site:			
Watercourses/Rivers	The River Medway is located 700m to the northwest of the site.			
Geology	Bedrock: Lewes Nodular Chalk Formation (Chalk) Superficial: Head (Undifferentiated) (Clay (Undifferentiated) and Silt (Undifferentiated) and Sand(Undifferentiated) and Gravel (Undifferentiated))			
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 defended scenario for key return period events. Maximum flood level on site shown in brackets.***			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	53.3% (4.48m AODN)	100.0% (5.47m AODN)	100.0% (6.12m AODN)	100.0% (5.40m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	43.5% (4.43m AODN)	100.0% (5.46m AODN)	100.0% (6.07m AODN)	100.0% (5.40m 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	*'Medium' risk scenario*	*'Low' risk scenario*	
	19.2%	39.7%	100.0%	
Description of Surface Water Flow Paths (EA's RoFSW Maps)	During the 'low' risk scenario, surface water is shown to flow across the entire site in a northwesterly direction, and during the 'medium' risk scenario in the same direction to a lesser extent. During the 'high' risk scenario, there is only localised accumulation on site, which could be attributed to localised depressions in the topography.			
Existing Flood Defence Infrastructure (inc. SoP):	The existing defences consist of high ground with minimum actual crest level of 4.67m to 5.17m AODN (as stated in the MedwayFlood Defence High Level Appraisal) and has a condition rating of 2 (Good). The EA's Spatial Flood Defence dataset shows crest levels of 4.75m to 4.93m AODN and a condition rating of 3. Standard of Protection: -Unknown			
MEASS Benefit Area and Preferred Option	BA2.2 Rochester.Raise (sustain) embankments, walls, flood gates, and revetments in localised areas. Localised raising of the defences to protect properties and assets at risk of flooding around Rochester and Chatham against a 0.1% AEP with sea level rise. The rest of the Benefit Area will have a No Active Intevention Approach			
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*	
	HTL Sustain with localised NAI	HTL Sustain with localised NAI	HTL Sustain with localised NAI	
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 £610,000 to upgrade the 400m of defences in order to protect the site for the lifetime of any development.			
Flood Warning Area?	Yes.			

1313 - 279 to 313a High Street, Chatham				
Hazard Rating	***Percentage of site in each Hazard Rating Classification during the design flood event (2115) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	0.0%	0.0%	83.7%	16.3%
Required Actions / Recommended Mitigation Measures	The site is located in Flood Zones 2 and 3, and is at risk of flooding from surface water. As a result, a detailed FRA, including a comprehensive investigation into surface water flood risk, 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 SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. The site is also identifed by the Level 1 SFRA as a 'Sensitive Drainage Area' and therefore Medway Council LLFA may require a SWMS and SuDs proforma to be completed for non major development proposals. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. Floor levels should be raised above the design flood level and depth of flooding from surface water, including the Environment Agency's recommended additional freeboard requirements where practicable. Flood resistance and resilience measures should be considered for inclusion. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area. 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.			

1317 - Railway arches (3) and adjacent land

Site Area: 0.48ha		**Existing Land Use:** Brownfield		**Proposed Land Use:** Residential
Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	97.2%	1.57%	1.23%	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 100m of the site: None.			
Watercourses/Rivers	The River Medway is located 650m to the southeast of the site.			
Geology	Bedrock: Lewes Nodular Chalk Formation, Seaford Chalk Formation and Newhaven Chalk Formation (Undifferentiated) (Chalk) Superficial: Head (Undifferentiated) (Clay (Undifferentiated) and Silt (Undifferentiated))			
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 defended scenario for key return period events. Maximum flood level on site shown in brackets.***			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	1.2% (4.99m AODN)	2.8% (5.47m AODN)	7.0% (6.10m AODN)	2.8% (5.42m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	1.2% (5.01m AODN)	2.8% (5.42m AODN)	5.0% (6.02m AODN)	2.8% (5.37m 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	*'Medium' risk scenario*	*'Low' risk scenario*	
	2.3%	5.6%	19.3%	
Description of Surface Water Flow Paths (EA's RoFSW Maps)	During the 'low' and 'medium' risk scenarios, surface water flows along the eastern boundary of the site in a southeasterly direction. The site is not predicted to flood from surface water during the 'high' risk scenario.			
Existing Flood Defence Infrastructure (inc. SoP):	Defences at Strood Riverside and Jane's Creek have recently been upgraded and now have a crest height of 6.1m AODN. The existing defences to the south of Jane's Creek consist of a wall and high ground with minimum actual crest level of 3.67m to 5.17m AODN (as stated in the MedwayFlood Defence High Level Appraisal) and has a condition rating of 2 (Good) to 4 (Poor). EA's Spatial Flood Defence dataset shows crest levels of 4.04m to 4.99m AODN and a condition rating of 2 to 4. Standard of Protection: Unknown			
MEASS Benefit Area and Preferred Option	BA2.1 Strood. Raise (sustain) embankments,walls, flood gates and revetments. This option involves improving the current SOP provided by the defences to 1% AEP SoP with sea level rise.			
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*	
	HTL Sustain	HTL Sustain	HTL Sustain	
High-Level Indication of Defence Costs	N/A - The site is predicted to remain unaffected by flooding from the River Medway for the lifetime of any development.			
Flood Warning Area?	Yes.			

1317 - Railway arches (3) and adjacent land				
Hazard Rating	***Percentage of site in each Hazard Rating Classification during the design flood event (2115) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	2.2%	0.0%	2.8%	0.0%
Required Actions / Recommended Mitigation Measures	The site is located partially within Flood Zones 2 and 3, and is at risk of flooding from surface water. As a result, a detailed FRA, including a comprehensive investigation into surface water flood risk, 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 SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. The site is also identifed by the Level 1 SFRA as a 'Sensitive Drainage Area' and therefore Medway Council LLFA may require a SWMS and SuDs proforma to be completed for non major development proposals. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. Floor levels should be raised above the design flood level and depth of flooding from surface water, including the Environment Agency's recommended additional freeboard requirements where practicable. Flood resistance and resilience measures should be considered for inclusion. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area. 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.			

1318 - Sewage Pumping Station / Travelling Showpeople Site

Site Area: 0.87ha		**Existing Land Use:** Brownfield		**Proposed Land Use:** Residential
Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	0.1%	0%	1.13%	98.77% **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. *Although the NKC modelling shows the site to be within the functional floodplain, the modelling study does not take into account the recently completed Strood Riverside and Jane's Creek defences. These defences would likely reduce the extent of flooding during a 1in20 year return period event, and further analysis is recommended to determine the true extent of the functional floodplain on site. Development classified as 'more vulnerable' use should not be permitted in Flood Zone 3b.			
Flood History	Incidents within the site: None. Incidents within 100m of the site: Sewer flooding.			
Watercourses/Rivers	The River Medway is located 275m to the southeast of the site.			
Geology	Bedrock: Lewes Nodular Chalk Formation, Seaford Chalk Formation and Newhaven Chalk Formation (Undifferentiated) (Chalk) Superficial: Head (Undifferentiated); Alluvium (Clay (Undifferentiated) and Silt (Undifferentiated); Clay, Silty Peaty Sandy (Unconsolidated Deposits Classification Scheme))			
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 defended scenario for key return period events. Maximum flood level on site shown in brackets.***			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	99.9% (5.00m AODN)	99.9% (5.47m AODN)	100.0% (6.12m AODN)	99.9% (5.43m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	99.9% (5.02m AODN)	99.9% (5.43m AODN)	100.0% (6.05m AODN)	99.9% (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	*'Medium' risk scenario*	*'Low' risk scenario*	
	18.6%	73.9%	99.7%	
Description of Surface Water Flow Paths (EA's RoFSW Maps)	During the 'low' and 'medium' risk scenarios, surface water is shown to accumulate across the majority of the site. During the 'high' risk scenario, surface water accumulates in the southeast part of the site only. The accumulation of surface water is could be attributed to localised depressions in the topography.			
Existing Flood Defence Infrastructure (inc. SoP):	Defences at Strood Riverside and Jane's Creek have recently been upgraded and now have a crest height of 6.1m AODN. The existing defences between Jane's Creek and Strood Riverside consist of a wall with minimum actual crest level of 4.17m to 4.67m AODN (as stated in the MedwayFlood Defence High Level Appraisal) and has a condition rating of 2 (Good). The EA's Spatial Flood Defence dataset shows crest levels of 4.49m to 5.11m and a condition rating of 2. Standard of Protection: Unknown			
MEASS Benefit Area and Preferred Option	BA2.1 Strood. Raise (sustain) embankments,walls, flood gates and revetments. This option involves improving the current SOP provided by the defences to 1% AEP SoP with sea level rise.			
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*	
	HTL Sustain	HTL Sustain	HTL Sustain	
High-Level Indication of Defence Costs	The Strood Riverside and Jane's Creek defences have recently been upgraded to improve the standard of protection. Notwithstanding this, further improvements should be considered to improve the defences between Strood Riverside and Jane's Creek. Based on an average cost of £1,526/m to raise an existing defence wall, it is estimated to cost in the region of£460,000 to upgrade the 300m of defences in order to protect the site for the lifetime of any development.			

1318 - Sewage Pumping Station / Travelling Showpeople Site				
Flood Warning Area?	Yes.			
Hazard Rating	***Percentage of site in each Hazard Rating Classification during the design flood event (2115) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	0.0%	0.0%	1.4%	98.6%
Required Actions / Recommended Mitigation Measures	The site is located partially in Flood Zone 3, and is at risk of flooding from surface water. As a result, a detailed FRA, including a comprehensive investigation into surface water flood risk, 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 SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. The site is also identifed by the Level 1 SFRA as a 'Sensitive Drainage Area' and therefore Medway Council LLFA may require a SWMS and SuDs proforma to be completed for non major development proposals. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. Floor levels should be raised above the design flood level and depth of flooding from surface water, including the Environment Agency's recommended additional freeboard requirements where practicable. Flood resistance and resilience measures should be considered for inclusion. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area. 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. When developing a scheme, the condition of any adjacent defences should be taking into account and consideration given to upgrading the defences to maintain, or further, the protection offered to the site and surrounding area. The costs associated with defence upgrades should be shared amongst beneficiaries.			

1319 - Kingswear Gardens

Site Area: 1.76ha		**Existing Land Use:** Brownfield		**Proposed Land Use:** Residential
Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	1.4%	2.96%	4.22%	91.42% **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. *Although the NKC modelling shows the site to be within the functional floodplain, the modelling study does not take into account the recently completed Strood Riverside and Jane's Creek defences. These defences would likely reduce the extent of flooding during a 1in20 year return period event, and further analysis is recommended to determine the true extent of the functional floodplain on site. Development classified as 'more vulnerable' use should not be permitted in Flood Zone 3b.			
Flood History	Incidents within the site: None. Incidents within 100m of the site: External flooding of areas around and adjacent to Watermill Wharf, caused by a small breach in the flood defences at Watermill Wharf. Re-occurring flooding following heavy rainfall due to highway drainage and tide locking. External flooding in yard.			
Watercourses/Rivers	The River Medway is located 75m to the southeast of the site.			
Geology	Bedrock: Lewes Nodular Chalk Formation, Seaford Chalk Formation and Newhaven Chalk Formation (Undifferentiated) (Chalk) Superficial: Alluvium (Clay, Silty Peaty Sandy (Unconsolidated Deposits Classification Scheme))			
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 defended scenario for key return period events. Maximum flood level on site shown in brackets.***			
	1 in 200 year return period event	*1 in 200 year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	95.5% (5.05m AODN)	99.0% (5.48m AODN)	99.2% (6.12m AODN)	98.5% (5.43m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	95.4% (5.02m AODN)	98.6% (5.46m AODN)	99.1% (6.05m AODN)	98.6% (5.41m 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	*'Medium' risk scenario*	*'Low' risk scenario*	
	1.2%	3.6%	21.1%	
Description of Surface Water Flow Paths (EA's RoFSW Maps)	There are localised areas of surface water accumulation across the site, during all three modelled scenarios. The accumulation of surface water could be attributed to localised depressions in the topography and surface water backing up on site.			
Existing Flood Defence Infrastructure (inc. SoP):	Defences at Strood Riverside and Jane's Creek have recently been upgraded and now have a crest height of 6.1m AODN. The existing defences between Jane's Creek and Strood Riverside consist of a wall with minimum actual crest level of 4.17m to 4.67m AODN (as stated in the MedwayFlood Defence High Level Appraisal) and has a condition rating of 2 (Good). The EA's Spatial Flood Defence dataset shows crest levels of 4.49m to 5.11m and a condition rating of 2. Standard of Protection: Unknown			
MEASS Benefit Area and Preferred Option	BA2.1 Strood. Raise (sustain) embankments,walls, flood gates and revetments. This option involves improving the current SOP provided by the defences to 1% AEP SoP with sea level rise.			
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*	
	HTL Sustain	HTL Sustain	HTL Sustain	
High-Level Indication of Defence Costs	The Strood Riverside and Jane's Creek defences have recently been upgraded to improve the standard of protection. Notwithstanding this, further improvements should be considered to improve the defences between Strood Riverside and Jane's Creek. Based on an average cost of £1,526/m to raise an existing defence wall, it is estimated to cost in the region of£460,000 to upgrade the 300m of defences in order to protect the site for the lifetime of any development.			

1319 - Kingswear Gardens				
Flood Warning Area?	Yes.			
Hazard Rating	***Percentage of site in each Hazard Rating Classification during the design flood event (2115) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	0.4%	0.7%	11.6%	85.5%
Required Actions / Recommended Mitigation Measures	The site is located in Flood Zones 2 and 3, and is at risk of flooding from surface water. As a result, a detailed FRA, including a comprehensive investigation into surface water flood risk, 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 SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. Floor levels should be raised above the design flood level and depth of flooding from surface water, including the Environment Agency's recommended additional freeboard requirements where practicable. Flood resistance and resilience measures should be considered for inclusion. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area. 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. When developing a scheme, the condition of any adjacent defences should be taking into account and consideration given to upgrading the defences to maintain, or further, the protection offered to the site and surrounding area. The costs associated with defence upgrades should be shared amongst beneficiaries.			

1320 - McDonalds, Car Sales Garage and rear of High Street properties

Site Area: 0.59ha	**Existing Land Use:** Brownfield	**Proposed Land Use:** Residential	

Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	4.3%	9.7%	21.46%	64.54% **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. *Although the NKC modelling shows the site to be within the functional floodplain, the modelling study does not take into account the recently completed Strood Riverside and Jane's Creek defences. These defences would likely reduce the extent of flooding during a 1in20 year return period event, and further analysis is recommended to determine the true extent of the functional floodplain on site. Development classified as 'more vulnerable' use should not be permitted in Flood Zone 3b.
Flood History	Incidents within the site: None. Incidents within 100m of the site: Public sewer flooding.
Watercourses/Rivers	The River Medway is located 400m to the southeast of the site.
Geology	Bedrock: Lewes Nodular Chalk Formation, Seaford Chalk Formation and Newhaven Chalk Formation (Undifferentiated) (Chalk) Superficial: Head (Undifferentiated); Alluvium (Clay (Undifferentiated) and Silt (Undifferentiated); Clay, Silty Peaty Sandy (Unconsolidated Deposits Classification Scheme))

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 defended scenario for key return period events. Maximum flood level on site shown in brackets.			
1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
86.0% (5.00m AODN)	97.4% (5.47m AODN)	100.0% (6.10m AODN)	95.7% (5.42m AODN)

Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
86.0% (5.01m AODN)	95.3% (5.42m AODN)	100.0% (6.02m AODN)	95.0% (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	*'Medium' risk scenario*	*'Low' risk scenario*
14.4%	43.3%	85.6%

Description of Surface Water Flow Paths (EA's RoFSW Maps)	During the 'low' and 'medium' risk scenarios, surface water is shown to flow in an easterly direction across the southern half of the site. During the 'high' risk scenario, surface water flows along the southern boundary of the site only.
Existing Flood Defence Infrastructure (inc. SoP):	Defences at Strood Riverside and Jane's Creek have recently been upgraded and now have a crest height of 6.1m AODN. The existing defences to the southwest of Jane's Creek consist of a wall and high ground with minimum actual crest level of 3.67m to 5.17m AODN (as stated in the MedwayFlood Defence High Level Appraisal) and has a condition rating of 2 (Good) to 4 (Poor). EA's Spatial Flood Defence dataset shows crest levels of 4.04m to 4.99m AODN and a condition rating of 2 to 4. Standard of Protection: Unknown

MEASS Benefit Area and Preferred Option

BA2.1 Strood. Raise (sustain) embankments,walls, flood gates and revetments. This option involves improving the current SOP provided by the defences to 1% AEP SoP with sea level rise.		
MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*
HTL Sustain	HTL Sustain	HTL Sustain

High-Level Indication of Defence Costs	The Jane's Creek defences have recently been upgraded to improve the standard of protection. Notwithstanding this, further improvements should be considered to improve the defences to the southwest of Jane's Creek. Based on an average cost of £2,984/m to construct a defence wall, it is estimated to cost in the region of £2,540,000 to upgrade the 850m of defences in order to protect the site for the lifetime of any development.

1320 - McDonalds, Car Sales Garage and rear of High Street properties				
Flood Warning Area?	Yes.			
Hazard Rating	***Percentage of site in each Hazard Rating Classification during the design flood event (2115) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	0.0%	0.0%	38.5%	59.7%
Required Actions / Recommended Mitigation Measures	The site is located in Flood Zones 2 and 3, and is at risk of flooding from surface water. As a result, a detailed FRA, including a comprehensive investigation into surface water flood risk, 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 SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. The site is also identifed by the Level 1 SFRA as a 'Sensitive Drainage Area' and therefore Medway Council LLFA may require a SWMS and SuDs proforma to be completed for non major development proposals. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. Floor levels should be raised above the design flood level and depth of flooding from surface water, including the Environment Agency's recommended additional freeboard requirements where practicable. Flood resistance and resilience measures should be considered for inclusion. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area. 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. When developing a scheme, the condition of any adjacent defences should be taking into account and consideration given to upgrading the defences to maintain, or further, the protection offered to the site and surrounding area. The costs associated with defence upgrades should be shared amongst beneficiaries.			

1321 - 2 Station Road, Strood

Site Area: 0.19ha		**Existing Land Use:** Brownfield		**Proposed Land Use:** Residential
Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	0%	0%	0%	100% **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. *Although the NKC modelling shows the site to be within the functional floodplain, the modelling study does not take into account the recently completed Strood Riverside and Jane's Creek defences. These defences would likely reduce the extent of flooding during a 1in20 year return period event, and further analysis is recommended to determine the true extent of the functional floodplain on site. Development classified as 'more vulnerable' use should not be permitted in Flood Zone 3b.			
Flood History	Incidents within the site: None. Incidents within 100m of the site: None.			
Watercourses/Rivers	The River Medway is located 275m to the southeast of the site.			
Geology	Bedrock: Lewes Nodular Chalk Formation, Seaford Chalk Formation and Newhaven Chalk Formation (Undifferentiated) (Chalk) Superficial: Alluvium (Clay, Silty Peaty Sandy (Unconsolidated Deposits Classification Scheme))			
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 defended scenario for key return period events. Maximum flood level on site shown in brackets.***			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	100.0% (4.99m AODN)	100.0% (5.47m AODN)	100.0% (6.10m AODN)	100.0% (5.42m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	100.0% (5.01m AODN)	100.0% (5.42m AODN)	100.0% (6.02m AODN)	100.0% (5.37m 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	*'Medium' risk scenario*	*'Low' risk scenario*	
	78.2%	81.0%	100.0%	
Description of Surface Water Flow Paths (EA's RoFSW Maps)	Surface water is shown to flow across the site in an easterly direction during all modelled scenarios.			
Existing Flood Defence Infrastructure (inc. SoP):	Defences at Strood Riverside and Jane's Creek have recently been upgraded and now have a crest height of 6.1m AODN. The existing defences between Jane's Creek and Strood Riverside consist of a wall with minimum actual crest level of 4.17m to 4.67m AODN (as stated in the Medway Flood Defence High Level Appraisal) and has a condition rating of 2 (Good). The EA's Spatial Flood Defence dataset shows crest levels of 4.49m to 5.11m and a condition rating of 2. Standard of Protection: Unknown			
MEASS Benefit Area and Preferred Option	BA2.1 Strood. Raise (sustain) embankments,walls, flood gates and revetments. This option involves improving the current SOP provided by the defences to 1% AEP SoP with sea level rise.			
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*	
	HTL Sustain	HTL Sustain	HTL Sustain	
High-Level Indication of Defence Costs	The Strood Riverside and Jane's Creek defences have recently been upgraded to improve the standard of protection. Notwithstanding this, further improvements should be considered to improve the defences between Strood Riverside and Jane's Creek. Based on an average cost of £1,526/m to raise an existing defence wall, it is estimated to cost in the region of £460,000 to upgrade the 300m of defences in order to protect the site for the lifetime of any development.			

1321 - 2 Station Road, Strood				
Flood Warning Area?	Yes.			
Hazard Rating	***Percentage of site in each Hazard Rating Classification during the design flood event (2115) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	0.0%	0.0%	0.0%	100.0%
Required Actions / Recommended Mitigation Measures	The site is located in Flood Zone 3, and is at risk of flooding from surface water. As a result, a detailed FRA, including a comprehensive investigation into surface water flood risk, 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 SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. The site is also identifed by the Level 1 SFRA as a 'Sensitive Drainage Area' and therefore Medway Council LLFA may require a SWMS and SuDs proforma to be completed for non major development proposals. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. Floor levels should be raised above the design flood level and depth of flooding from surface water, including the Environment Agency's recommended additional freeboard requirements where practicable. Flood resistance and resilience measures should be considered for inclusion. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area. 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. When developing a scheme, the condition of any adjacent defences should be taking into account and consideration given to upgrading the defences to maintain, or further, the protection offered to the site and surrounding area. The costs associated with defence upgrades should be shared amongst beneficiaries.			

0820a - Interface Land (northern parcel), Chatham Maritime

Site Area: 2.8ha		**Existing Land Use:** Brownfield		**Proposed Land Use:** Residential
Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	0.25%	2.15%	94.53%	3.07% **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. Development classified as 'more vulnerable' use should not be permitted in Flood Zone 3b.			
Flood History	Incidents within the site: None. Incidents within 100m of the site: Highway flooding within both carriageways following heavy rainfall.			
Watercourses/Rivers	The River Medway is adjacent to the site.			
Geology	Bedrock: Seaford Chalk Formation (Chalk) Superficial: Alluvium (Clay, Silty Peaty Sandy (Unconsolidated Deposits Classification Scheme))			
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 defended scenario for key return period events. Maximum flood level on site shown in brackets.***			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	3.1% (5.06m AODN)	3.1% (5.46m AODN)	100.0% (6.09m AODN)	3.1% (5.40m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	97.6% (5.01m AODN)	99.8% (5.49m AODN)	100.0% (6.06m AODN)	99.8% (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	*'Medium' risk scenario*	*'Low' risk scenario*	
	0.4%	2.4%	8.5%	
Description of Surface Water Flow Paths (EA's RoFSW Maps)	There are localised areas of surface water accumulation during all three modelled scenarios , which could be attributed to localised depressions in the topography.			
Existing Flood Defence Infrastructure (inc. SoP):	The existing defences consist of a wall with minimum actual crest level of 5.17m to 5.67m AODN (as stated in the Medway Flood Defence High Level Appraisal) and has a condition rating of 2 (Good). The EA's Spatial Flood Defence dataset shows crest levels of 5.60m to 6.17m AODN and a condition rating of 2. Standard of Protection: 200-1000			
MEASS Benefit Area and Preferred Option	BA2.3 St Mary's Island. Raise (sustain) embankments, walls, flood gates and revetments. This option involves improving the SoP provided by the defences to 0.5% AEP SoP with sea level rise.			
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*	
	HTL Sustain	HTL Sustain	HTL Sustain	
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 £1,530,000 to upgrade the 1km of defences in order to protect the site for the lifetime of any development.			
Flood Warning Area?	Yes.			

0820a - Interface Land (northern parcel), Chatham Maritime				
Hazard Rating	***Percentage of site in each Hazard Rating Classification during the design flood event (2115) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	0.0%	0.0%	26.5%	73.3%
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 SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. 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. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area. The Sequential Approach should be applied to the layout of the site by locating the most vulnerable elements in the lowest risk areas, and avoiding develpoment within Flood Zone 3b*. 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). When developing a scheme, the condition of any adjacent defences should be taking into account and consideration given to upgrading the defences to maintain, or further, the protection offered to the site and surrounding area. The costs associated with defence upgrades should be shared amongst beneficiaries.			

0820b - Interface Land, Chatham Maritime

Site Area: 2.23ha		**Existing Land Use:** Brownfield		**Proposed Land Use:** Residential
Flood Zone Classification based on the EA's 'Flood Map for Planning'	*Flood Zone 1*	*Flood Zone 2*	*Flood Zone 3*	*Flood Zone 3b*
	71.86%	10.21%	17.93%	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 100m of the site: None.			
Watercourses/Rivers	The River Medway is 275m to the west of the site.			
Geology	Bedrock: Seaford Chalk Formation (Chalk) Superficial: Alluvium;River Terrace Deposits, 1 (Clay, Silty Peaty Sandy (Unconsolidated Deposits Classification Scheme); 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 defended scenario for key return period events. Maximum flood level on site shown in brackets.***			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	0.0% (0.00m AODN)	0.0% (0.00m AODN)	39.7% (6.09m AODN)	0.0% (0.00m AODN)
	Percentage of site at risk of flooding from tidal sources during the undefended scenario for key return period events. Maximum flood level on site shown in brackets.			
	1 in 200-year return period event	*1 in 200-year return period event - 2070*	*1 in 200-year return period event - 2115*	*1 in 1000-year return period event*
	17.9% (5.00m AODN)	28.8% (5.49m AODN)	38.8% (6.06m AODN)	28.1% (5.43m 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	*'Medium' risk scenario*	*'Low' risk scenario*	
	0.6%	1.5%	7.8%	
Description of Surface Water Flow Paths (EA's RoFSW Maps)	There are localised areas of surface water accumulation during all three modelled scenarios, which could be attributed to localised depressions in the topography.			
Existing Flood Defence Infrastructure (inc. SoP):	The existing defences consist of a wall with minimum actual crest level of 5.17m to 5.67m AODN (as stated in the Medway Flood Defence High Level Appraisal) and has a condition rating of 2 (Good). The EA's Spatial Flood Defence dataset shows crest levels of 5.60m to 6.17m AODN and a condition rating of 2. Standard of Protection: 200-1000			
MEASS Benefit Area and Preferred Option	BA2.3 St Mary's Island. Raise (sustain) embankments, walls, flood gates and revetments. This option involves improving the SoP provided by the defences to 0.5% AEP SoP with sea level rise.			
	MEASS Policy Now - 2038	*MEASS Policy 2038 - 2068*	*MEASS Policy 2068 - 2118*	
	HTL Sustain	HTL Sustain	HTL Sustain	
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 £1,530,000 to upgrade the 1km of defences in order to protect the site for the lifetime of any development.			
Flood Warning Area?	Yes.			

0820b - Interface Land, Chatham Maritime				
Hazard Rating	***Percentage of site in each Hazard Rating Classification during the design flood event (2115) (The dominant hazard rating on the subject site has been highlighted in the respective colour – Refer to Table 2)***			
	'Low' Hazard Rating	*'Moderate' Hazard Rating*	*'Significant' Hazard Rating*	*'Extreme' Hazard Rating*
	2.8%	0.0%	29.1%	2.0%
Required Actions / Recommended Mitigation Measures	The site is partially located in Flood Zones 2 and 3, and therefore will required 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 SWMS to be produced to show how SuDS will be included to manage surface water runoff from the site. The SuDS proforma will be required to accompany any SWMS. For major developments, or where there are historic sewer flooding incidents, developers should consult the relevant water authority at an early stage to ensure that there will be sufficient capacity in the wastewater system to accommodate the development and any upgrades are carried out where necessary. Floor levels should be raised above the design flood level and depth of flooding from surface water, including the Environment Agency's recommended additional freeboard requirements where practicable. Flood resistance and resilience measures should be considered for inclusion. Suitable mitigation (i.e. compensatory flood storage, floodable voids) should be provided where development would displace surface water and increase the risk of flooding to the surrounding area. 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. When developing a scheme, the condition of any adjacent defences should be taking into account and consideration given to upgrading the defences to maintain, or further, the protection offered to the site and surrounding area. The costs associated with defence upgrades should be shared amongst beneficiaries.			

4 Appendices

Appendix A.1 – Site Location Map

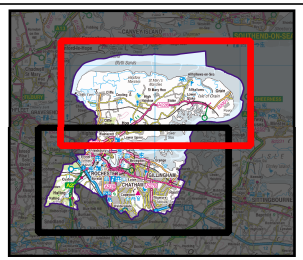
Appendix A.1 – Site Location Map

LEVEL 2 SITES

Medway Council
Strategic Flood Risk Assessment

Drawn:	NW	Date:	17/09/2021	Scale:	1: 50,000
Checked:	TV	Date:	17/09/2021	Original:	A3
Approved:	SMB	Date:	17/09/2021	Sheet:	1 of 2

Drawing Number:	Revision No:	Status:
Appendix A.1 - North	2	Final



Sites

The datasets used may have been designed to be viewed at a range of map scales, and therefore this map is not intended to be viewed at a site-specific scale. The information presented is the best available at the time of collation, but should not be considered comprehensive. Queries with regard to the adminstrative boundaries should be directed to the LPA.

herrington CONSULTING LIMITED

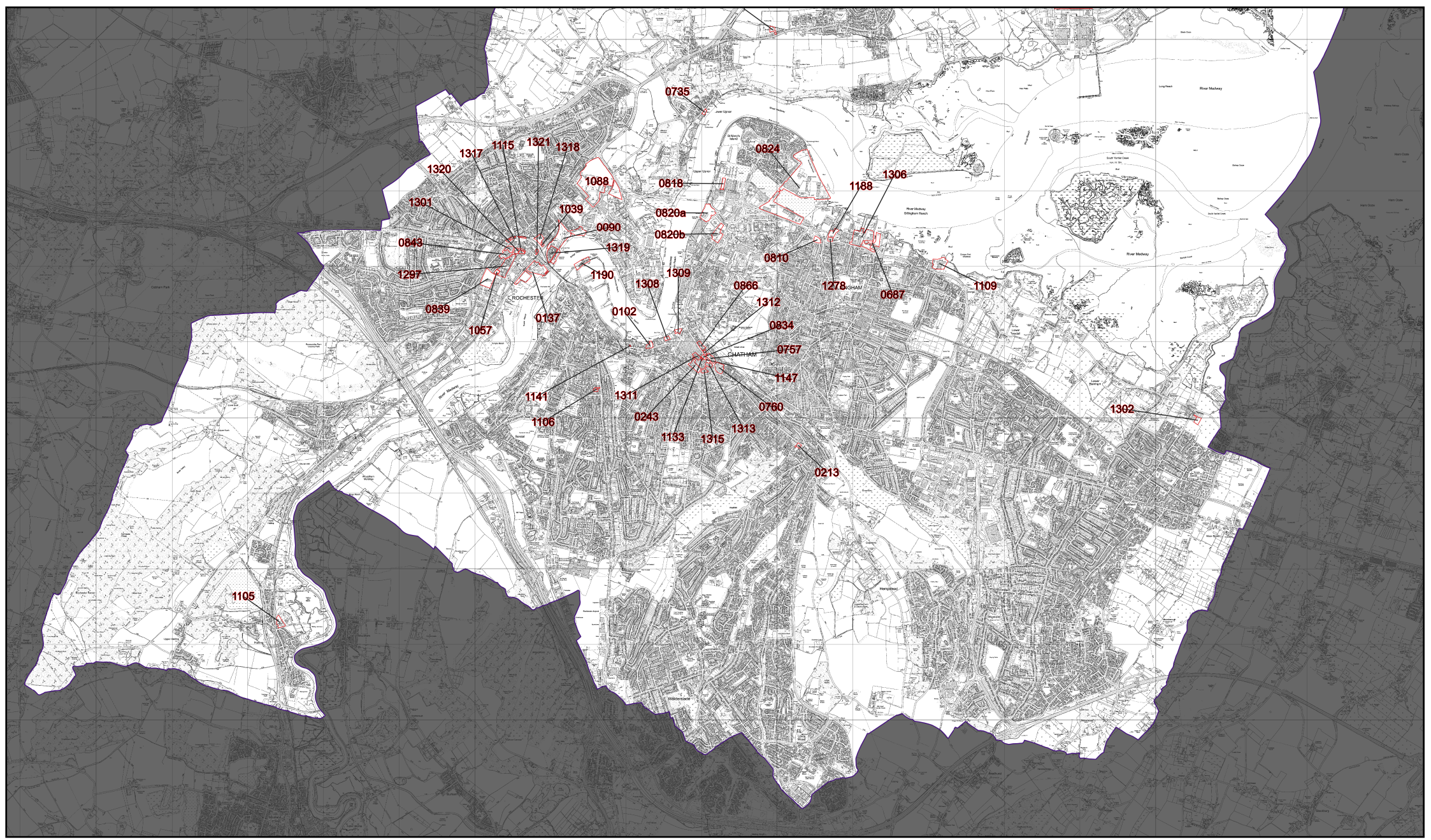
Canterbury Office:
Unit 6 & 7 Barham Business Park
Elham Valley Road
Canterbury
Kent
CT6 4DQ

London Office:
Unit 52.11, Woolyard
52 Bermondsey Street
London
SE1 3UD

www.herringtonconsulting.co.uk
+44 (0)1227 833855
enquiries@herringtonconsulting.co.uk

Medway COUNCIL

Medway Council
Gun Wharf
Dock Road
Chatham
Kent
ME4 4TR

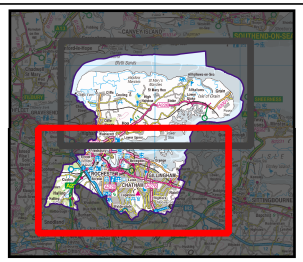


LEVEL 2 SITES

Medway Council
Strategic Flood Risk Assessment

Drawn:	NW	Date:	17/09/2021	Scale:	1: 45,000
Checked:	TV	Date:	17/09/2021	Original:	A3
Approved:	SMB	Date:	17/09/2021	Sheet:	2 of 2

Drawing Number: Appendix A.1 - South
Revision No: 2
Status: Final



Sites

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SE1 3UD

www.herringtonconsulting.co.uk
+44 (0)1227 833855
enquiries@herringtonconsulting.co.uk

Medway Council
Gun Wharf
Dock Road
Chatham
Kent
ME4 4TR