Addendum to Thanet District

Strategic Flood Risk Assessment (2009)

January 2018

thanet
district council

Addendum to the 2009 Strategic Flood Risk Assessment

1.0 BACKGROUND

1.1 On the advice of the Environment Agency, the Council has produced this addendum to the original SFRA published in 2009, to explain the changes in the planning system and flood improvements that have taken place since the original study.

2.0 CHANGES SINCE 2009

2.1 The SFRA was carried out by Entec in 2009 in line with Planning Policy Statement 25 Development and Flood Risk (PPS25) to support the work on the local Development Framework, namely the core strategy.

2.2 Much of the original work is still relevant, however, a number of changes have taken place locally and within the planning system since 2009.

i) Changes in Government Guidance

2.3 The system of planning policy statements (PPS) has been replaced by the National Planning Policy Framework (NPPF) in 2012 with an accompanying online National Planning Policy Guidance system (NPPG) in 2014. The general approach to flood risk that was contained in the PPS25 and practice guidance has been largely been transferred to the NPPG

ii) Regional Plans

2.4 Since 2009, the government has abolished the Regional Plans such as the South East Plan which was finally revoked in 2013.

iii) Local Development Framework

2.5 The government has moved away from the Local Development Framework for local planning and has encouraged local authorities to produce a single local plan with a supporting evidence base.

iv) Sustainable Urban Drainage Systems (SuDs)

2.6 The provision of sustainable drainage within new development became a material consideration in planning decisions from April 2015. Kent County Council is the Lead Local Flood Authority (LLFA) for the county and as such they are the statutory consultee in the planning process to oversee the provision of SuDs for major development within the District**.**

v) New flood defence scheme

2.7 Since 2009, a new flood defence scheme to protect Margate from future sea flooding has been completed. This was implemented in two phases and started in October 2010 and was completed in Spring 2013. This new flood defence scheme was developed and designed over the 2 years to provide future protection for the town. The standard of flood defence was as low as 1:20, which meant that anything more severe than a 1 in 20 year storm would cause flooding in the town. The new scheme has increased this defence standard to 1:200 for the next 50 years.

2.8 The works included the strengthening of the grade 2 listed Stone Pier; the construction of new sea walls along Marine Drive and The Parade; a series of 7 manual floodgates and one hydraulic floodgate which will be closed in the event of a flood warning; and a new stepped structure from the beach to the promenade.

2.9 The new hydraulic floodgate is situated beneath the ground when there is no risk of flooding, with only the top visible as a steel strip in the pavement. When active the gate will rise 1.2 m from the pavement, and, by sealing against the adjacent floodwall it will divert water harmlessly back into the harbour.

2.10 The completed scheme has a life of at least 50 years and provides much better flood protection to the properties on Marine Drive and in the Old Town area. The scheme has also improved the quality and amenity value of the public space on the seafront. Further information can be found at https://www.thanet.gov.uk/your-services/beaches-and-coastline/margate-flood-and-coastal-protection/margate-flood-and-coastal-protection/

3.0 The NPPF / NPPG

"*For the purposes of applying the National Planning Policy Framework, "flood risk" is a combination of the probability and the potential consequences of flooding from all sources – including from rivers and the sea, directly from rainfall on the ground surface and rising groundwater, overwhelmed sewers and drainage systems, and from reservoirs, canals and lakes and other artificial sources*." Paragraph: 002 of NPPG.

3.1 Areas at risk from flooding as defined by the National Planning Policy Framework, include areas at risk from all sources of flooding are included. This includes fluvial (river) and sea flooding, which is principally land within Flood Zones 2 and 3 as defined by the Environment Agency. It can also include an area within Flood Zone 1 which the Environment Agency has notified the local planning authority as having critical drainage problems.

3.2 These Flood Zones refer to the probability of river and sea flooding, ignoring the presence of defences. The definition of the flood zones are set out in the table 1.

Table 1: Definitions of Flood Zones

Flood Zone	Definition
Zone 1 Low Probability	Land having a less than 1 in 1,000 annual probability of river or sea flooding. (Shown as 'clear' on the Flood Map – all land outside Zones 2 and 3)
Zone 2 Medium Probability	Land having between a 1 in 100 and 1 in 1,000 annual probability of river flooding; or land having between a 1 in 200 and 1 in 1,000 annual probability of sea flooding. (Land shown in light blue on the Flood Map)
Zone 3a High Probability	Land having a 1 in 100 or greater annual probability of river flooding; or Land having a 1 in 200 or greater annual probability of sea flooding.(Land shown in dark blue on the Flood Map)
Zone 3b The Functional Floodplain	This zone comprises land where water has to flow or be stored in times of flood. Local planning authorities should identify in their Strategic Flood Risk Assessments areas of functional floodplain and its boundaries accordingly, in agreement with the Environment Agency. (Not separately distinguished from Zone 3a on the Flood Map)

3.3 NPPG paragraph 66 sets out the flood risk vulnerability classification which is reproduced below in table 2.

Table 2: Flood Risk Vulnerability

Essential infrastructure	• Essential transport infrastructure (including mass evacuation routes) which has to cross the area at risk. • Essential utility infrastructure which has to be located in a flood risk area for operational reasons, including electricity generating power stations and grid and primary substations; and water treatment works that need to remain operational in times of flood. • Wind turbines.
Highly vulnerable	• Police and ambulance stations; fire stations and command centres; telecommunications installations required to be operational during flooding. • Emergency dispersal points. • Basement dwellings. • Caravans, mobile homes and park homes intended for permanent residential use. • Installations requiring hazardous substances consent. (Where there is a demonstrable need to locate such installations for bulk storage of materials with port or other similar facilities, or such installations with energy infrastructure or carbon capture and storage installations, that require coastal or water-side locations, or need to be located in other high flood risk areas, in these instances the facilities should be classified as 'Essential Infrastructure').

More vulnerable	• Hospitals • Residential institutions such as residential care homes, children's homes, social services homes, prisons and hostels. • Buildings used for dwelling houses, student halls of residence, drinking establishments, nightclubs and hotels. • Non–residential uses for health services, nurseries and educational establishments. • Landfill* and sites used for waste management facilities for hazardous waste. • Sites used for holiday or short-let caravans and camping, subject to a specific warning and evacuation plan.
Less vulnerable	• Police, ambulance and fire stations which are not required to be operational during flooding. • Buildings used for shops; financial, professional and other services; restaurants, cafes and hot food takeaways; offices; general industry, storage and distribution; non-residential institutions not included in the 'more vulnerable' class; and assembly and leisure. • Land and buildings used for agriculture and forestry. • Waste treatment (except landfill* and hazardous waste facilities). • Minerals working and processing (except for sand and gravel working). • Water treatment works which do not need to remain operational during times of flood. • Sewage treatment works, if adequate measures to control pollution and manage sewage during flooding events are in place.
Water-compatible development	• Flood control infrastructure. • Water transmission infrastructure and pumping stations. • Sewage transmission infrastructure and pumping stations. • Sand and gravel working. • Docks, marinas and wharves. • Navigation facilities. • Ministry of Defence defence installations. • Ship building, repairing and dismantling, dockside fish processing and refrigeration and compatible activities requiring a waterside location. • Water-based recreation (excluding sleeping accommodation). • Lifeguard and coastguard stations. • Amenity open space, nature conservation and biodiversity, outdoor sports and recreation and essential facilities such as changing rooms. • Essential ancillary sleeping or residential accommodation for staff required by uses in this category, subject to a specific warning and evacuation plan.

3.4 The table in Paragraph 67 of NPPG sets out the flood risk vulnerability and flood zone compatibility and is reproduced below in Table 3. The Council will use this and the previous tables to inform requirements for and decisions on, planning applications.

Table 3: Flood risk vulnerability and flood zone compatibility matrix

Flood Zones	Flood Risk Vulnerability Classification				
	Essential infrastructure	Highly vulnerable	More vulnerable	Less vulnerable	Water compatible
Zone 1	✓	✓	✓	✓	✓
Zone 2	✓	Exception Test required	✓	✓	✓
Zone 3a †	Exception Test required †	✗	Exception Test required	✓	✓
Zone 3b *	Exception Test required *	✗	✗	✗	✓*

Key:

✓ Development is appropriate

✗ Development should not be permitted.

Notes to table 3:

This table does not show the application of the Sequential Test which should be applied first to guide development to Flood Zone 1, then Zone 2, and then Zone 3; nor does it reflect the need to avoid flood risk from sources other than rivers and the sea;

The Sequential and Exception Tests do not need to be applied to minor developments and changes of use, except for a change of use to a caravan, camping or chalet site, or to a mobile home or park home site;

Some developments may contain different elements of vulnerability and the highest vulnerability category should be used, unless the development is considered in its component parts.

† In Flood Zone 3a essential infrastructure should be designed and constructed to remain operational and safe in times of flood.

** In Flood Zone 3b (functional floodplain) essential infrastructure that has to be there and has passed the Exception Test, and water-compatible uses, should be designed and constructed to:*

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

Taking flood risk into account in the preparation of Local Plans: the Sequential and Exceptions Test

The Sequential Test

3.5 NPPF and NPPG set out how local plans should approach the location of development and flood risk, namely the sequential, risk-based approach to the location of development. Paragraph 018 of NPPG states that the general approach is to ensure that areas at little or no risk of flooding from any source are developed in preference to areas at higher risk. The aim should be to keep development out of medium and high flood risk areas (Flood Zones 2 and 3) and other areas affected by other sources of flooding where possible. This sequential approach will help ensure that development can be safely and sustainably delivered. This approach should ensure that sites which are inappropriate on flood risk are not promoted and development is steered to are with low probability of river or sea flooding.

3.6 Where there are no reasonably available sites in Flood Zone 1, then local planning authorities should take into account the flood risk vulnerability of land uses as set out in table 3 above and consider reasonably available sites in Flood zones 2 and apply the Exceptions Test if required. If there are no suitable sites in flood zone 2 then authorities should look at the suitability of sites in flood zone 3 applying the exception test if required. Other sources of flooding within each of these ones, such as surface water will also have to be taken into account.

3.7 In the case of the Thanet Local Plan, the Council has generally avoided allocating land for major development in flood zones 2 and 3. This approach has been supported by the SA.

The Exception Test

3.8 The Exception Test is a method to demonstrate and help ensure that flood risk to people and property will be managed satisfactorily, while allowing necessary development to go ahead in situations where suitable sites at lower risk of flooding are not available. There are two parts to the test which require proposed development to show that it will provide wider sustainability benefits to the community that outweigh flood risk, and that it will be safe for its lifetime, without increasing flood risk elsewhere and where possible reduce flood risk overall. Further advice and information is available in the NPPG and from the Environment Agency.

4.0 THE LOCAL PLAN APPROACH

4.1 Following on from core strategy in 2009, the Council has used the existing SFRA to inform plan preparation at the following stages – Issues and Options 2013, Preferred Option 2015, Revisions to Preferred Options 2017 and the Pre-Submission Publication Local Plan January 2018. Even though there has been considerable change in the national planning system since the production of the SFRA, the government's approach to flood risk remains to avoid new development in areas at risk from flooding in all but exceptional circumstances, through the application of the Sequential and

Exceptions Tests. The Council has applied the general approach of locating major new development on greenfield land away from areas at risk from flooding (Zones 2 and 3).

4.2 Data in the main SFRA and from EA's latest flood risk maps show that much of the District lies outside of zones 2 & 3 (see extracts in Appendix 1). Detailed mapping and assessments of each of the main coastal towns and flood risk areas are available as part of the original SFRA at https://www.thanet.gov.uk/your-services/planning-policy/evidence-base/strategic-flood-risk-assessment/. The SFRA looked at the impacts of climate change, impacts from the 1 in 200 and 1 in 1000 year flood and the impact of flooding on groundwater protection zones and vulnerability.

4.3 The main areas of flood risk are confined to the lowlying former Wantsum channel eg Wade Marsh, Minster Marshes and marshes associated with the River Stour, at the foot of the chalk slope. This is a largely rural landscape and is generally avoided for large scale development.

4.4 The other areas of flood risk are Margate Old Town and Dreamland. The Council has identified some limited small brownfield sites in Margate old town, for residential development to aid regeneration within this area which is a Council priority. These allocations have been carried forward from the 2006 adopted local plan. Dreamland Amusement Park is synonymous with Margate as a seaside resort. The Council has worked hard with partners to achieve its reopening. The site is allocated for amusement park and/or theme park use as is seen as an important component for the regeneration of Margate.

4.5 Developments in these areas will need to undertake a Flood Risk Assessment and demonstrate that the Exceptions test can be passed as set out in Policy CC01. Further guidance in the form of a site specific flood Risk Assessment Checklist is set out in paragraph 067 of NPPG. As a general rule the Council will expect development in these areas to include appropriate flood mitigation and resilience measures such as avoiding sleeping accommodation on the ground floor, no single storey residential accommodation in areas of flood risk, raising floor levels to a height recommended by the Environment Agency, designing electrical sockets and wiring at a higher level, or provide safe escape routes including access to upper floors. This is referenced in the SFRA paragraph 9.2 – Flood Risk Management through Design.

4.6 In addition to the above, the Council may, on the advice of the Environment Agency, require developments in areas close to the sea frontage (e.g. within 30m) but outside flood zones 2 and 3, to undertake a flood risk assessment in order to examine the effects of overtopping. The Environment Agency regularly update flood risk data and modelling and their website should be checked for the latest and most up to date information.

4.7 The SFRA contained a number of recommendations (paragraph 10.2 and 10.3 of the SFRA 2009) and the table below shows how these recommendations have been addressed in the Local Plan.

Table 4: SFRA 2009 Recommendations and their inclusion in the draft local plan 2018

SFRA Recommendation	Local Plan reference January 2018
Drainage recommendation - Sustainable Drainage Systems (SuDS) discharging to groundwater are considered the most appropriate approach for much of the study area where appropriate	Chapter 15: Climate Change Policy CC02 – Surface Water Management Policy SE04 - Groundwater Protection Kent County Council as the Lead Local Flood Authority (LLFA) for the county has prepared a Drainage and Planning Policy Statement (September 2015)
Manage flood risk through avoidance by allocating sites in lower flood risk zones, unless regeneration aspirations are met and exceptions demonstrated. The sequential test provides a framework for undertaking this screening process to inform site allocations.	Policy CC01 – Fluvial and Tidal Flooding
Development in higher flood risk zones must pass the Exceptions Test	Policy CC01 - Fluvial and Tidal Flooding
When determining the requirement for a FRA and the scope of a FRA, the 2115 predicted climate change extents for Flood Zones 2 &3 should be used.	Paragraph 15.2 and 15.4 refer developers to the advice in SFRA
Seek to see betterment of the requirement of PPS25 which states that only sites in Flood Zones 2 and 3 or sites larger than 1 hectare in Flood Zone 1 should be accompanied by a FRA addressing surface water runoff rates. This could be achieved by, for example, requiring all new development of all sizes to, where possible, sustainably manage surface water on site to reduce the potential for off-site increases in flood risk.	Policy CC01 - Fluvial and Tidal Flooding
Adopt resilient or resistant design practices for all developments in zones of flood risk	Policy CC01 - Fluvial and Tidal Flooding
Site specific FRAs in tidal flood zone 3 should incorporate an assessment of the potential impacts of wind and wave action for developments lying within this risk zone. Through consultation with the Environment Agency, agree the necessary mitigation measures to facilitate “safe” development.	Policy CC03 – Coastal Development

4.8 The relevant policies and local plan extracts are set out in Appendix 2.

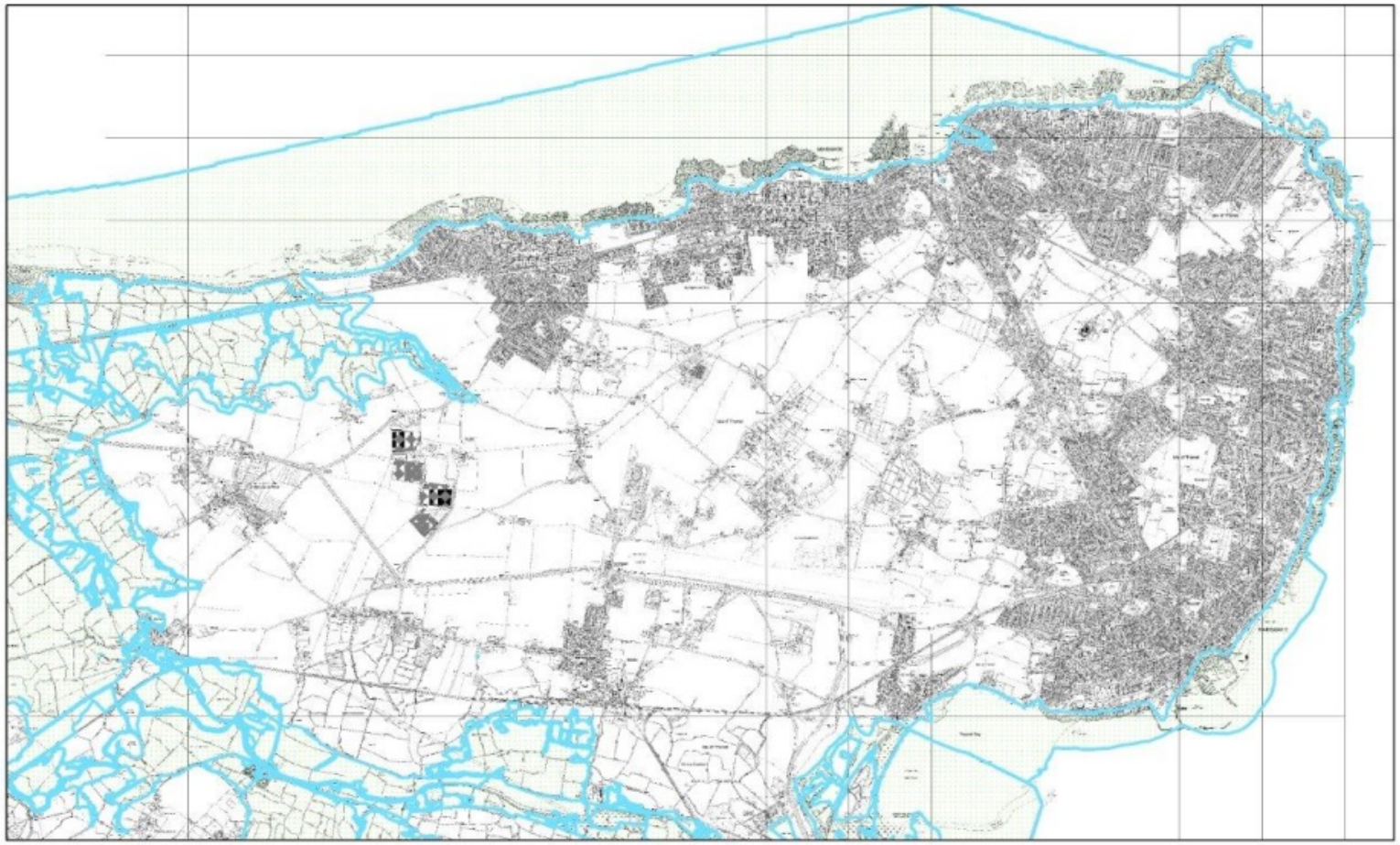
4.9 In addition to addressing the specific recommendations above, paragraph 4.93 to 4.98 of Chapter 4 of the local plan sets out the Council’s general approach to climate change whilst Chapter 15 Climate Change, contains more details on the Council’s

approach to fluvial and tidal flooding, surface water management and the use of SuDs. Groundwater protection and pollution are dealt with in Chapter 16.

6.0 Conclusion

6.1 Although a number of changes have taken place since 2009, the Council's approach to the location of development has been in line with Government guidance. It has avoided locating major development in areas at risk from flooding. In addition, it has included stringent policies in Local Plan for assessing unidentified sites that come forward (windfalls) through the application of sequential and exceptions test and requiring a Flood Risk Assessment. The Plan has recommended flood resilient and mitigation measures that may be appropriate and has sought to address surface water management in new developments and the protection of groundwater sources.

6.2 This addendum together with the detailed SFRA underpins the policies in the Local Plan.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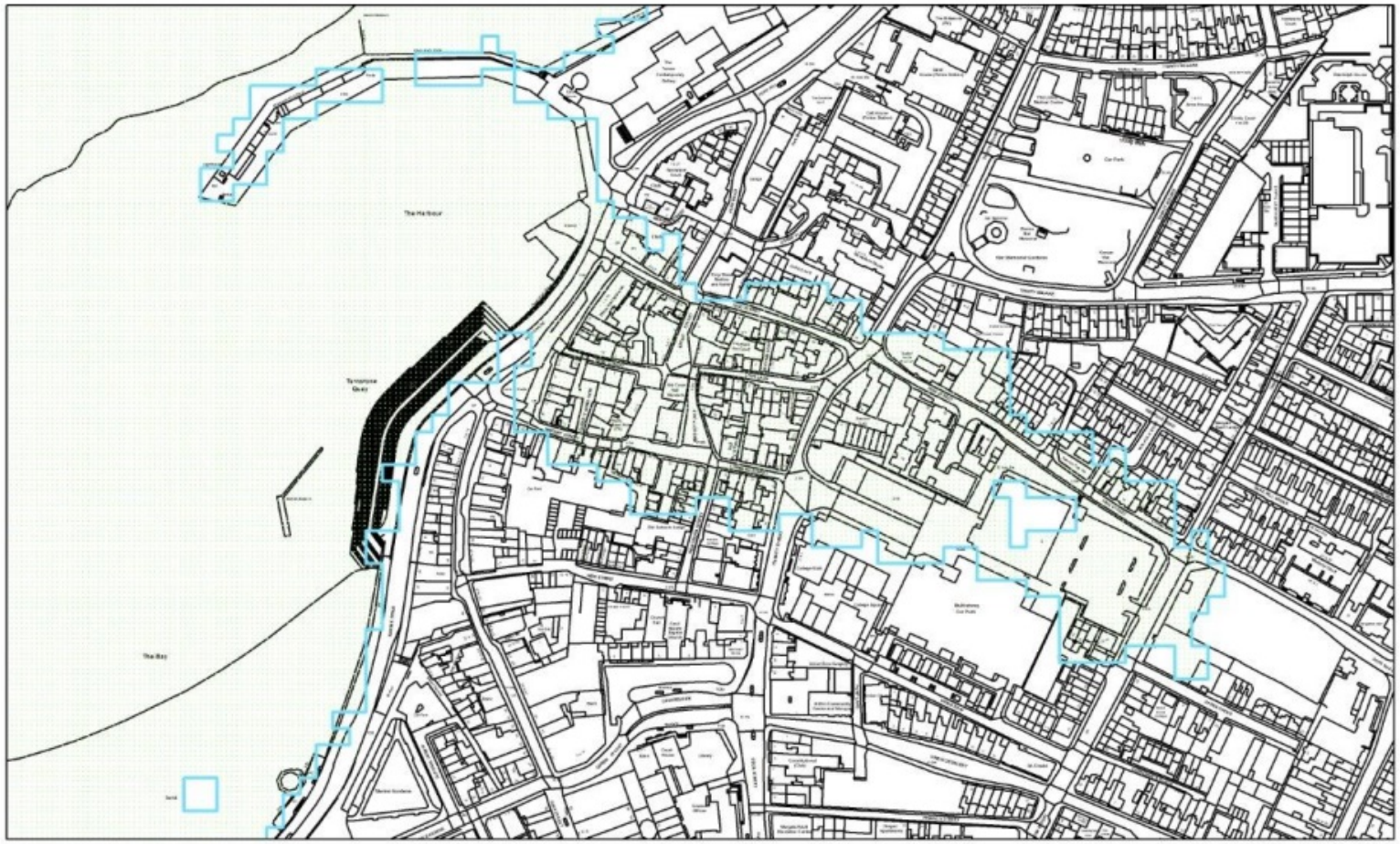
Legend

Margate Old Town



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Appendix 2

Policy Extracts from Pre-submission Publication Local Plan January 2018

Policy CC01 - Fluvial and Tidal Flooding

Development will not usually be appropriate in areas falling within the identified Environment Agency's flood Zones 2 and 3.

Where there is no alternative to developing in an area identified as being at risk of flooding (Zones 2 and 3), the sequential test and exception test as set out in the NPPF will be applied. Development proposals in these areas will need a Flood Risk Assessment to be carried out by the developer.

Any development that takes place in a flood risk area will be expected to incorporate flood resilient measures.

Policy CC02 - Surface Water Management

New development will be expected to manage surface water resulting from the development using sustainable drainage systems (SuDs) wherever possible. SuDs design, together with a robust long term maintenance plan should be considered as an integral part of the master planning and design process for new development. Developers should seek and refer to guidance produced by the Lead Local Flood Authority (LLFA) when submitting a planning application for any major development. Approval for the design and long term maintenance of SuDs will be required prior to development being permitted.

When preparing SuDs schemes developers should fully consider the potential impact on the historic environment and ensure that any damage is mitigated. Proposals for SuDs at sites within the Groundwater Source Protection Zone as shown on the Policies Map, or sites near the Groundwater Source Protection Zone, must demonstrate that the methods used will not cause detriment to the quality of the groundwater.

Sites identified as a Tidally Sensitive Area (as identified in surface water management plans) will need to incorporate Sustainable Drainage Methods and a maintenance schedule where appropriate, at the design stage of a planning application, and a Flood Risk Assessment will be required before planning permission can be granted.

Policy CC03 - Coastal Development

Proposals for new development within 40 metres of the coastline or clifftop must demonstrate to the satisfaction of the Council that it will not:

1. Expose people and property to the risks of coastal erosion and flooding, or

2. Accelerate coastal erosion due to increased surface water run off before planning permission can be granted.

Climate change

Policy SP35 - Climate Change

New development must take account of:

1. **Adapting to climate change by minimising vulnerability, providing resilience to the impacts of climate change**
2. **Mitigating against climate change by reducing emissions and energy demands**
3. **Improving building resilience to climate change through the use of best available technology**
4. **Opportunities to reduce the impact of climate change on biodiversity.**

Policy SE04 - Groundwater Protection

Proposals for development within the Groundwater Source Protection Zones identified on the Policies Map will only be permitted if there is no risk of contamination to groundwater sources. If a risk is identified, development will only be permitted if adequate mitigation measures can be implemented.

Proposals for Sustainable Drainage systems involving infiltration must be assessed and discussed with the Environment Agency to determine their suitability in terms of the impact of any drainage into the groundwater aquifer.