MLP/ED27

Medway Flood Defences High Level Appraisal

Client: Medway Council

Site: Medway

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Connected Sustainable Thinking.

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NON-TECHNICAL SUMMARY

Medway Council

Medway Council is planning where new homes and businesses will be built over the coming years. Much of the land alongside the River Medway, including parts of Strood, Gillingham, Chatham and Rochester, is protected from tidal flooding by walls, embankments and other defences, some of which are many decades old.

This study looks at how well those defences are likely to perform, both today and as sea levels rise due to climate change. It updates a similar study carried out in 2011, using the latest flood modelling from the Environment Agency (EA), a review of available records, and site visits to defences close to the areas where the most new homes are proposed.

The study found that the condition and height of the defences vary considerably along the river. Some sections, particularly those recently rebuilt, are in good condition. Others show signs of wear, have gaps, or are simply not high enough to cope with future flood levels. Two areas; Strood and St Mary's Island, were found to need the most urgent attention, because their defences are relatively weak and a large number of people, homes and proposed new developments are located behind them. Medway City Estate and the area around the Historic Dockyard and Gillingham will need attention over the medium term, while Rochester and Chatham are a lower priority for now.

This report does not provide detailed designs or costs for improving the defences. Instead, it identifies where more detailed investigation is needed, and helps the Council and the Environment Agency agree how future improvements should be prioritised and funded, including through contributions from new development. Further, more detailed studies are recommended as the next step for the priority areas.

The above points represent a simplified summary of the findings of this assessment and must not form the basis for key decisions for the proposed development. A thorough review of the details is contained within the following report.

EXECUTIVE SUMMARY

This report presents an updated High Level Appraisal of the Medway Flood Defence Strategy, commissioned by Medway Council (EPS Ref: 18605) to supersede and refine the high-level appraisal previously undertaken by Scott Wilson in 2011. The study reassesses the condition and performance of the existing tidal flood defence network, drawing on the Environment Agency's 2024 North Kent Coast hydrodynamic model, an updated desk-based review, and a targeted site walkover of frontages associated with the highest-yielding residential allocations in the emerging Local Plan.

The appraisal finds that the standard of protection (SoP) provided by the Medway flood defences is highly variable, reflecting the piecemeal, incremental development of the network over time. Several frontages retain only a limited margin of protection under present-day conditions, and this margin is reduced further once current climate change allowances are applied, increasing the likelihood of overtopping later in the century. Localised deterioration, low or inconsistent crest levels, and discontinuities between defence assets have been identified at a number of locations, particularly where defences rely on ageing or third-party structures.

On the basis of a combined assessment of indicative SoP and the vulnerability of the land and communities behind each frontage, two frontages; Strood and St Mary's Island, have been classified as high priority for further investigation and investment. Medway City Estate and the Historic Dockyard/Gillingham frontage have been classified as medium priority, and Rochester and Chatham as low priority, reflecting their comparatively lower present-day exposure.

These findings provide Medway Council with an evidence base to demonstrate, in accordance with the National Planning Policy Framework (NPPF) and National Planning Practice Guidance (NPPG), how flood risk can be safely managed to support housing delivery within the emerging Local Plan, and to inform discussions with the Environment Agency regarding the funding of flood defence infrastructure, including developer contributions.

It is recommended that targeted topographic and crest level surveys, confirmation of asset ownership, and a consistent GIS-based asset register are progressed for the priority frontages in the first instance, followed by detailed structural condition surveys, hydraulic modelling and options appraisal to inform a phased flood defence investment strategy. Consistent with the scope agreed with Medway Council, this appraisal is strategic and non-intrusive in nature; it does not include detailed condition surveys, hydraulic modelling or cost estimation, which are recommended as the focus of subsequent, more detailed studies.

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The report has been written, reviewed and authorised by the persons listed on page 2. It has also undergone EPS' in house quality management inspection. Should you require any further assistance regarding the information provided within the report, please do not hesitate to contact us.

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1 BACKGROUND AND STRATEGIC CONTEXT

Medway Council is currently progressing the preparation of its emerging Local Plan, which will set out the spatial strategy for housing, employment, and regeneration across the authority area. A key component of this strategy is the continued delivery of riverside and waterfront development, reflecting the long-established role of the River Medway as a focus for growth and regeneration.

The Medway Local Plan 2041 was submitted for examination in December 2025, with Phase 1 hearings anticipated for September 2026. Following consultee comments, there are particular challenges relating to deliverability and the ability of the Council to meets its identified housing requirements. In this context, a number of proposed development allocations, many of which are located within defended tidal floodplains, are now subject to increased scrutiny. Demonstrating that these sites can be safely developed, in accordance with the National Planning Policy Framework (NPPF) and National Planning Practice Guidance (NPPG), is therefore critical to supporting the progression of the Local Plan.

Flood risk remains a key constraint to growth in Medway. Large parts of the urban area lie within Flood Zones 2 and 3 and are reliant on a network of tidal flood defences of varying age, type, and condition. Much of this infrastructure was not designed to meet current-day standards or account for updated climate change allowances. As a result, there is increasing uncertainty regarding the standard of protection (SoP) provided and the level of residual risk associated with defended areas.

The NPPF and NPPG requires that development in areas at risk of flooding must be safe for its lifetime, without increasing flood risk elsewhere. For defended areas, this includes consideration of residual risks such as overtopping or breaches. Consequently, there is a clear need for an up-to-date, evidence-based understanding of defence performance to underpin site allocations and planning decisions.

In parallel, the Environment Agency (EA), as a key statutory consultee, has raised specific concerns regarding the funding and long-term sustainability of flood defences along the Medway frontage. In particular, the EA has indicated a requirement for clearer evidence on how developer contributions will support the maintenance, upgrading, or replacement of flood defence infrastructure necessary to protect existing properties and enable future development.

This requirement introduces an important strategic linkage between spatial planning and flood risk management. However, without a robust understanding of:

- Where defences are currently underperforming,
- Which areas are most at risk, and
- Where investment should be prioritised,

It is not possible to establish a clear, defensible approach to securing developer contributions or to demonstrate the deliverability of development sites within flood risk areas.

The original Medway Flood Defence Strategy (Scott Wilson, 2011) provided a high-level framework for understanding flood compartments and defence requirements. However, the policy, technical, and environmental context has evolved significantly since its publication. In particular;

The 2011 study covered approximately 32.5km of river frontage and estimated the total cost of achieving the required standard of flood protection across the study area at approximately £190–280 million, indicating the scale of investment historically associated with the defence network.

- Updated climate change allowances have increased predicted tidal water levels;
- Improved hydrodynamic modelling (EA, 2024) provides a more accurate representation of flood risk;
- Changes in planning policy and guidance place greater emphasis on resilience and long-term adaptability; and
- The condition and performance of existing assets have continued to change over time.

Accordingly, the Scott Wilson 2011 study is no longer sufficient to support current Local Plan requirements or to respond to the EA's requests for funding clarity.

This updated High-Level Appraisal has therefore been commissioned to provide a proportionate, strategic evidence base that:

- Reassesses the performance and extent of existing flood defences;
- Identifies areas of potential shortfall in protection;
- Defines and refines flood compartments; and
- Establishes a clear basis for prioritising future investment and securing developer contributions.

In doing so, the report forms a critical supporting document to the Strategic Flood Risk Assessment (SFRA) and provides an essential link between flood risk management, spatial planning, and infrastructure funding. It is intended to showcase where further studies may be required so Medway Council can demonstrate a sound, deliverable, and policy-compliant approach to managing flood risk, whilst facilitating sustainable growth along the Medway waterfront.

2 DESK-BASED REVIEW AND SITE APPRAISAL

2.1 Desk-Based Review

The primary purpose of this study is to provide an up-to-date strategic understanding of the performance of the Medway flood defence network, identifying where existing defences are likely to be underperforming and where improvements or interventions will be required. In doing so, this study establishes a clear evidence base to support the planning and delivery of flood risk management infrastructure.

Importantly, the appraisal enables Medway Council to demonstrate how flood risk can be appropriately managed across key development areas, thereby supporting the delivery of housing allocations within the emerging Local Plan. Therefore, a targeted approach has been taken as part of this study, whereby the top residential sites proposed within the emerging Local Plan have been considered, see Table 2-1 below. These proposed residential sites offer the greatest number of units. As such, this is a key component when prioritising flood defences to be upgraded to meet the housing allocations.

LAA ID	Geography	Site Area (Ha)	Total Plan Units
SMI6	Gillingham North	57.714	2521
LW8	Capstone Valley	87.793	2000
HHH12	Chattenden and Hoo St Werburgh	131.268	1801
HHH22 & HHH31	Chattenden and Hoo St Werburgh	170.876	1700
GN15	Gillingham North	5.869	1100
RN9	Lower Rainham	51.226	800
SNF3	Strood West	39.024	800
HHH26	High Halstow	39.813	760
LW6	Capstone Valley	46.797	698
SR53	MCE OA	99.005	690
		Total Number of Units	**12,870**

Table 2-1 Residential sites providing the greatest number of units within the emerging Local Plan.

Table 2-1 has been developed further for the purpose of this study i.e., identifying flood defences which need improving. Therefore, the top residential sites within the emerging Local Plan which are also located within the functional floodplain (i.e., Flood Zone 3b – 1 in 30 year return period) have been considered, see Table 2-2 below. This provides a targeted area to carry out the site walkover.

LAA ID	Geography	Site Area (Ha)	Flood Zone 3b Percentage (%)	Total Plan Units
SMI6	Gillingham North	57.714	28.17	2521
HHH12	Chattenden and Hoo St Werburgh	131.268	0.27	1801
GN15	Gillingham North	5.869	53.54	1100
SR53	MCE OA	99.005	1.95	690
GN6	Gillingham North	3.860	15.45	400
SNF15	Strood Town Centre and Surrounds	2.368	36.92	350
SNF41	Strood Town Centre and Surrounds	4.972	13.36	216
SNF35	Strood Town Centre and Surrounds	2.649	16.16	171
CCB25	Heritage-led Sites	2.636	8.13	150
RWB25	Other	0.593	34.60	132
			Total Number of Units	**7,531**

Table 2-2 Residential sites providing the greatest number of units within the emerging Local Plan which are also located within Flood Zone 3b (i.e., the functional floodplain).

From Table 2-2 above, it can be seen that the site walkover should be focused primarily in 'Gillingham North' and 'Strood Town Centre and Surrounds'. This is to ensure a proportionate, targeted approach is taken and reflects the agreed scope. The study's focus is to support the emerging Local Plan housing allocations, rather than a full re-survey of the approximately 32.5km frontage previously covered by the 2011 Scott Wilson Study.

2.2 Site Appraisal

2.2.1 Overview of Site Walkover

A programme of site walkover inspections was undertaken to inform a high-level appraisal of the existing flood defence network along the River Medway and its tidal extents. Photographs, LiDAR scans, and qualitative descriptions of the flood defences were carried out, focusing on Gillingham and Strood. The site walkover primarily focused on publicly accessible areas, with the exception of St Marys Dockside and Gillingham marina where access was granted on a discretionary basis, without a formal appointment.

The purpose of the site appraisal was to visually assess the type, condition, and continuity of defences, and to identify any observable features that may influence performance, including potential overtopping pathways and structural weaknesses.

Access to certain sections of the frontage was restricted due to private ownership or operational constraints. In such cases, observations were made from publicly accessible land or using indirect viewpoints where feasible.

It is noted that the site appraisal is non-intrusive and high-level in nature, and does not constitute a detailed structural condition survey or engineering assessment of the assets. The purpose of this study is simply to identify areas to prioritise areas to upgrade the flood defences. Additional studies will likely follow, in which detailed structural condition survey or engineering assessment of the assets can be carried out. Access to privately owned land would need to be secured at that stage to enable these surveys to be undertaken.

2.2.2 Description of Defence Frontages

The Medway frontage comprises a varied and often complex arrangement of flood defence types, reflecting the historic development of the river corridor. The site walkover focused on the allocated sites in the emerging Local Plan that are located in Gillingham and Strood.

SMI6 – Frontage consists of original/historic quayside construction topped by a more recently added pre-formed segmented, un-reinforced, concrete wall, approximately 0.5m in height. The concrete wall is secured in place with concrete buttresses to the rear, see Figure 2-1Figure 2-1 below.

Figure 2-1 Site walkover photographs of the flood defences at SMI6.

The quayside walls generally appear in much better condition than the concrete wall on top. Original joints between segments are sealed as if the wall was once intended to offer flood protection.

The wall is in poor condition, with many segments broken or offset such that its flood protection function has been significantly reduced; it now serves primarily to prevent accidental pedestrian or vehicle movement over the quay edge.

At its northern end the wall abuts the newer St Mary's residential development wall which has a crest above the docks wall. At the southern end the wall ends abruptly somewhere along the perimeter of the SMARTEC compound, giving way to a defence level of the quayside elevation only, which continues across the lock gates and to the landward side of the locks and East End Road.

At the northern end of the docks the land levels to the rear elevate well above the crest of the wall. In the south, the land levels to the rear of the wall are generally flat and at the quayside level throughout.

The St Mary's residential development appears to have been built on top of the same quayside as that which still exists along the docks, although rip-rap has been loaded forward of the quaywall. The existing St Mary's flood walls are set back from the quayside edge except for the section that directly abuts the docks, where the flood wall is directly on top of the quayside edge.

Access to the south of the lock gates was not permitted for this area, see Figure 2-2 below.

Figure 2-2 Area delineated in red showcasing the area where access was not permitted.

Defence of this section would require raising of the river wall above the existing quayside level from the existing St Mary's flood wall through to the high wall at Gillingham Pier. This would include the need to raise the crest level of the two lock gates and the island between them.

GN15 – Access to the marina was granted by the marina manager. The marina walls are comparably recent and generally appear in good condition. The brick wall atop the quayside is not in such a good condition, and for the most part is cosmetic and for vehicular safety.

The defence level is determined by the gaps in the wall, see Figure 2-3 below. Following a review of the LiDAR scan, the defence level is approximately 0.23m above the level in the car park. The defence level continues through the lock gate and around to the rear of the marina. However, to the rear and the perimeter with the ex-gas works the level of protection drops significantly, approximately a 0.6m difference. Static water levels could enter the marina from the ex-gas works site.

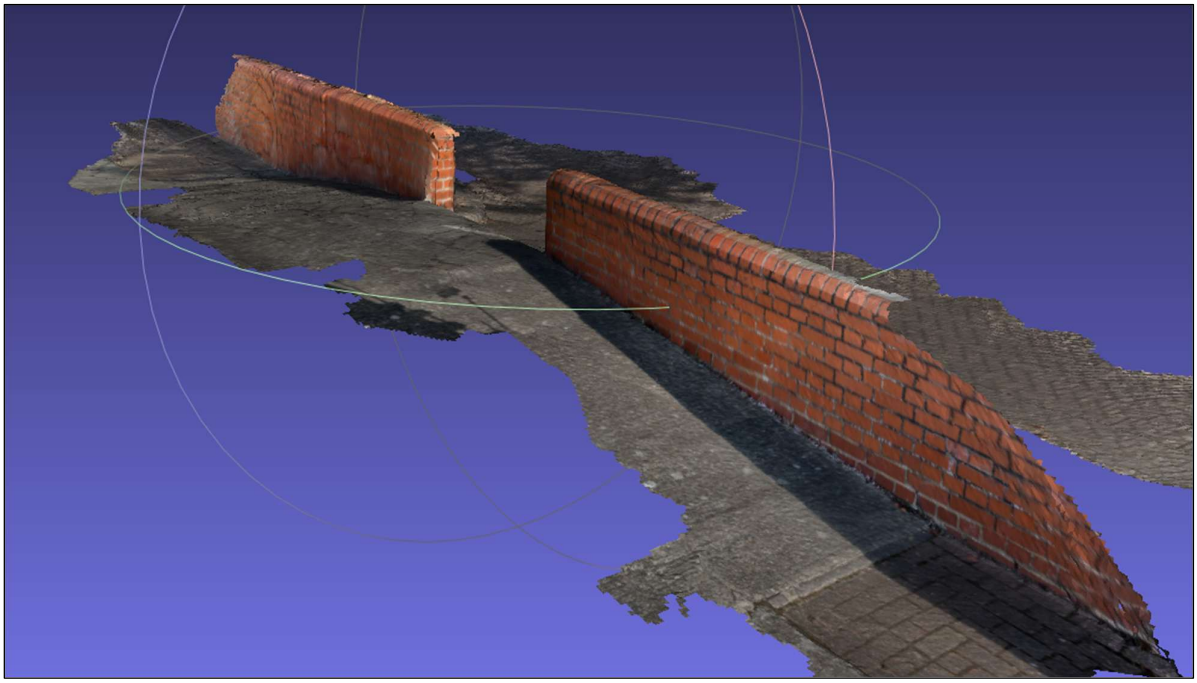

Figure 2-3 LiDAR scans showing the gaps in the wall and to establish crest levels.

GN16 – Access not possible. Defence line around the perimeter and not 'on-site, see details for the marina (GN15) above. High ground to the rear (main road) that rise rapidly to provide natural defences.

CCB25 – Fenced off, access not possible. From the neighbouring site, the seawall appears continuous. There is no wall along the slipway (likely source of Flood Zone 3b onsite). High ground to the rear (north) only.

RWB25 – Fenced off, access not possible.

SNF41 – Main core of site low ground level. Recently completed continuous defence wall and high ground from the 'Pier' to 'Medway Metals' provide protection to the developable area. Figure 2-4 below shows the defence wall.

Figure 2-4 Flood defence wall at SNF41.

No obvious need to further improve the flood defences. The pub (The Boat House) is currently undefended.

SNF15 – The site visit focused on the creeks (Janes Creek and 'Morrisons Creek'), with no visit directly to the retail centre.

Relevant areas include Strood Civic Centre (elevated and behind defences of 6.1m AODN), Janes Creek and the unnamed creel (i.e., 'Morrisons Creek'). A flood route into Strood exists via the Rochester bridge abutment and rail bridge arches.

Various LiDAR scans have been taken so that the wall crest height can be checked against the Defra LiDAR. For the most part, the actual defence level is determined by the natural ground level of Section B at Janes Creek and the ground level on the southern side of Morrisons Creek. The northern side of Morrisons Creek includes a basic concrete wall of two levels.

In Janes creek the natural ground levels are significantly below the defence level of the civic centre where the defence line ends abruptly.

Any improvements to the defence level in Janes Creek will require reliance on the rail bridge abutments which themselves are in poor condition and have historically been strapped to prevent further deterioration. On the south side of the creek and the access to Temple Mount the defence level relies on natural ground elevation again which are again significantly lower than the defence level of the civic centre.

Considering the complication with improving the defence height along its existing line and the strong reliance on the rail bridge abutment, and therefore Network Rail, it may be more practical to continue the defence line from the civic centre to Temple mount directly across the creek (and infill the creek; routing the sewers along the creek and under the new defence line).

A similar approach may be preferable to consider at Morrisons Creek.

The defences in this location can be seen in Figure 2-5 below.

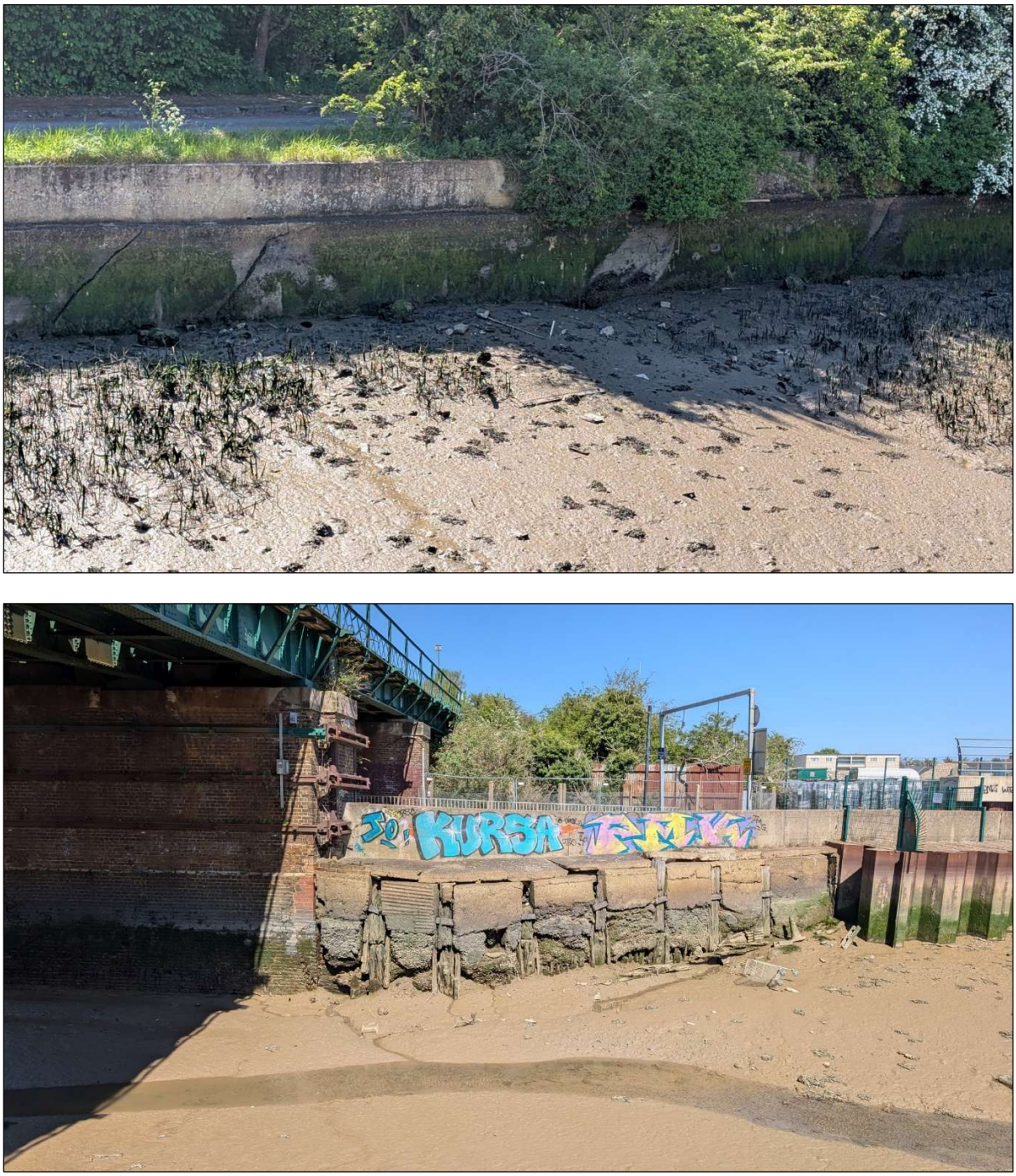

Figure 2-5 Flood defences at SNF15.

2.2.3 Condition Assessment

The general condition of the flood defence structures was observed to vary considerably along the study area.

Sections of more modern infrastructure, particularly in recently refurbished or regenerated areas, appear to be in relatively good condition, with limited visible defences i.e., marina walls GN15.

However, in a number of locations, particularly where assets are older or less maintained, signs of deterioration were evident. These included:

- Deteriorated structures – cracking/broken concrete walls, deteriorated rail bridge abutments
- Abrupt termination of defence lines – weak points
- Lack of engineered crest levels in some locations
- Inconsistent defence heights

In some instances, it was unclear whether routine maintenance activities are being undertaken, particularly where access is constrained or ownership is uncertain.

It should be noted that these observations are indicative only and are based on visual inspection from accessible areas. No intrusive investigations or formal condition grading has been undertaken as part of this study.

2.2.4 Crest Levels and Overtopping Risk Indicators

Whilst no detailed crest level survey has been carried out, LiDAR scans and Defra LiDAR have been reviewed to provide an approximate flood defence crest height level. In addition, several qualitative indicators of potential overtopping risk were identified during the site appraisal. In particular;

- Apparent low points were observed along several frontages, especially at transitions between asset types or at access points such as slipways, locks, gates, and steps.
- Variability in crest height was noted in some locations, suggesting potential inconsistencies in the standard of protection along a continuous frontage.
- In areas where defences lie close to the tidal water level, the available freeboard appears limited, particularly when considering future climate change allowances.

In addition, features such as gaps, openings and changes in material condition may provide preferential pathways for overtopping or seepage during extreme events. These observations provide an important qualitative basis for the subsequent assessment of standard of protection

<u>Defence Continuity and Weak Points</u>
A key outcome of the site appraisal has been the identification of potential weak points within the flood defence network. These include;

- Discontinuities in the defence line, where formal structures terminate or transition into informal features.
- Interfaces between different asset types, which may represent structural or hydraulic vulnerabilities.
- Reliance on privately owned structures or buildings to complete the defence line, introducing uncertainty regarding maintenance and long-term integrity.
- Localised areas where defence height appears reduced relative to adjacent sections.

Such weak points may act as preferential locations for overtopping or failure, and therefore have the potential to control flood pathways into defended areas.

2.2.5 Hinterland and Receptor Sensitivity

The areas located behind the flood defences (the hinterland) were also considered as part of the site appraisal. The Medway waterfront includes a diverse range of land uses, including;

- Established residential neighbourhoods.
- Commercial and industrial areas.
- Key infrastructure such as transport routes and utilities.
- Sites identified for future development within the emerging Local Plan.

Many of these areas are low-lying and appear to be reliant on the continued performance of defences to manage tidal flood risk. In several locations, there is limited visible relief between the defence line and adjacent land, indicating a potential for rapid inundation in the event of overtopping or a breach.

The presence of existing communities and planned development allocations behind certain frontages increases the consequences of flood defence underperformance and reinforces the need for targeted investment.

2.2.6 Key Observations and Emerging Issues

The site appraisal has identified several overarching themes across the study area:

- A high degree of variability in defence type, condition, and apparent standard of protection.
- Evidence of localised deterioration and maintenance challenges in certain areas.
- Potential overtopping risks associated with low crest levels and limited freeboard.
- Discontinuities and complex interfaces within the defence network.
- Reliance on third-party or informal assets in some locations.

These findings highlight that flood risk along the Medway frontage is influenced not only by individual structures, but by the performance of the defence system as a whole.

The observations made during the site appraisal have been used to inform the subsequent GIS-based technical analysis and underpin the identification and prioritisation of frontages requiring further investigation.

2.2.7 Limitations of the Site Appraisal

The following limitations should be noted:

- It should be noted, it was not considered appropriate to attempt to specify the condition of the defences between St Marys Island and Gillingham, due to a lack of suitable information sources and access problems during the site walkover. In addition, it is thought that providing a grading condition based on unsuitable information could be mis-leading and would present a more significant risk than simply acknowledging that no relevant information is available for this area.
- The appraisal is based on visual inspection only and does not include intrusive investigation or structural assessment.
- Crest levels have not been surveyed. Approximations only have been provided based on observations and available data.

- Access was limited to publicly accessible areas; some sections could not be inspected directly.
- Asset ownership and maintenance responsibility have not been verified.
- Observations represent conditions at the time of survey and may not capture temporal changes (e.g. seasonal variation, post-storm impacts).

Notwithstanding these limitations, the site appraisal provides a high-level understanding of the current state of the flood defence network and forms a critical component of the overall assessment.

3 DEFENCE CONDITION, CREST LEVELS, AND FLOOD COMPARTMENTS

A Geographic Information System (GIS) has been developed to collate, manage, and analyse all spatial datasets relevant to the Medway flood defence network. This GIS forms a central component of the study, providing a consistent and auditable framework to integrate information from desk-based sources, site walkover observations, and Environment Agency (EA) model outputs.

The primary purpose of the GIS analysis is to spatially represent the condition and performance of flood defences, assess their relationship with modelled flood levels, and define coherent flood compartments to support strategic planning and investment decisions.

3.1 Data Sources and Collation

A range of datasets has been incorporated into the GIS, including:

- EA flood defence asset data, including asset type and recorded attributes (where available)
- Crest level data from existing surveys and historical records. Approximations have also been used from site walkover LiDAR scans and Defra LiDAR.
- Outputs from the EA's North Kent Coast hydrodynamic model (2024), including peak flood levels for a range of flood events.
- Ordnance Survey base mapping and topographic datasets.
- Site walkover observations, including mapped defence alignments, condition indicators, and photographic references.
- Historic flood mapping and Strategic Flood Risk Assessment (SFRA) datasets.

3.2 Mapping of Defence Alignments and Condition

Flood defence alignments have been digitised and classified within the GIS to reflect both their physical characteristics and their observed condition.

Each frontage has been attributed with the following key parameters:

- Defence type (e.g. wall, embankment, sheet piling, informal structure) - Figure 3-1.
- Defence condition, based on available data and site observations (categorised qualitatively based on site appraisal) - Figure 3-2.
- Continuity (continuous, discontinuous, or reliant on third-party assets).
- Presence of localised defects or features of concern.

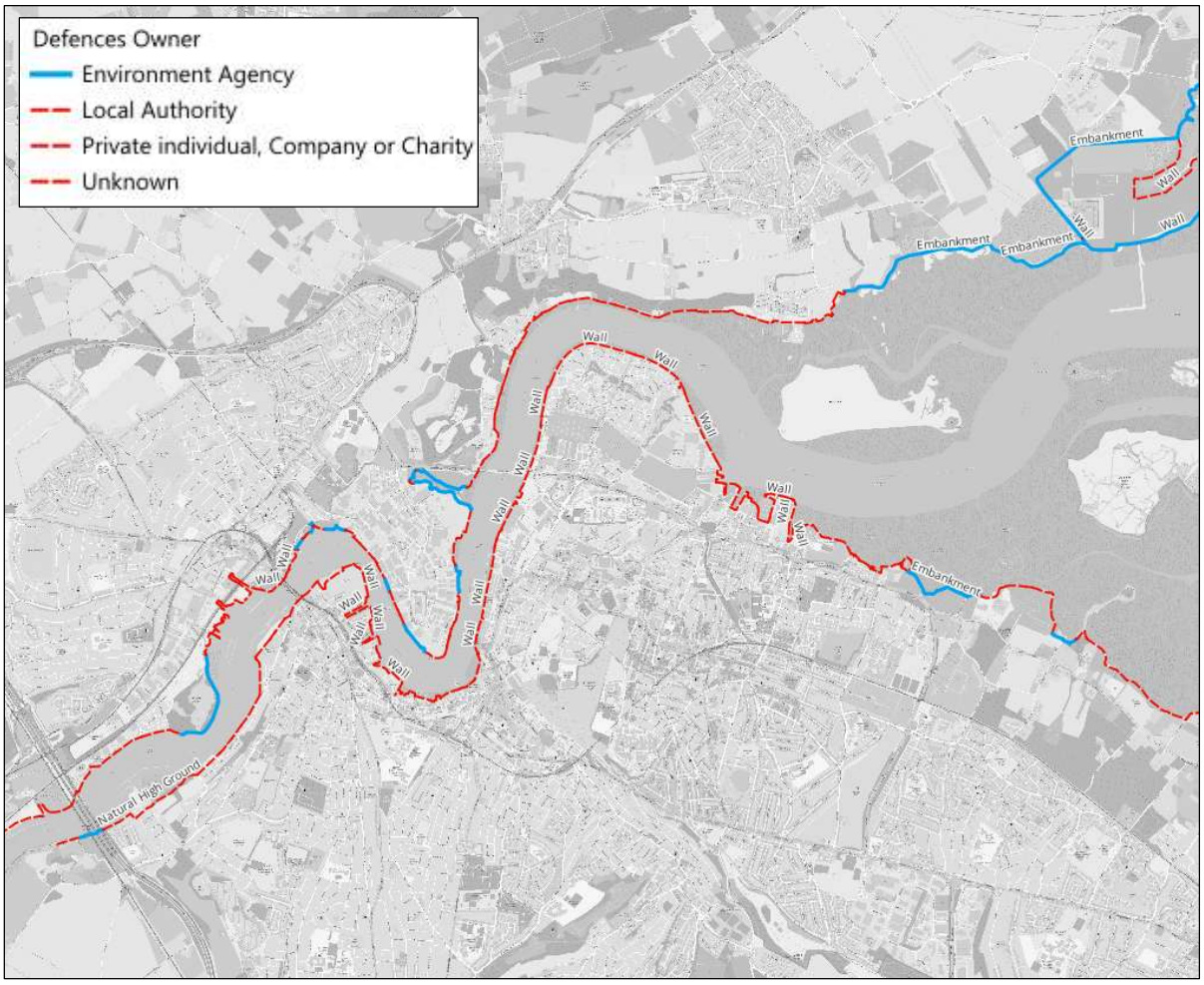

Figure 3-1 Flood defence type and owner in Medway.

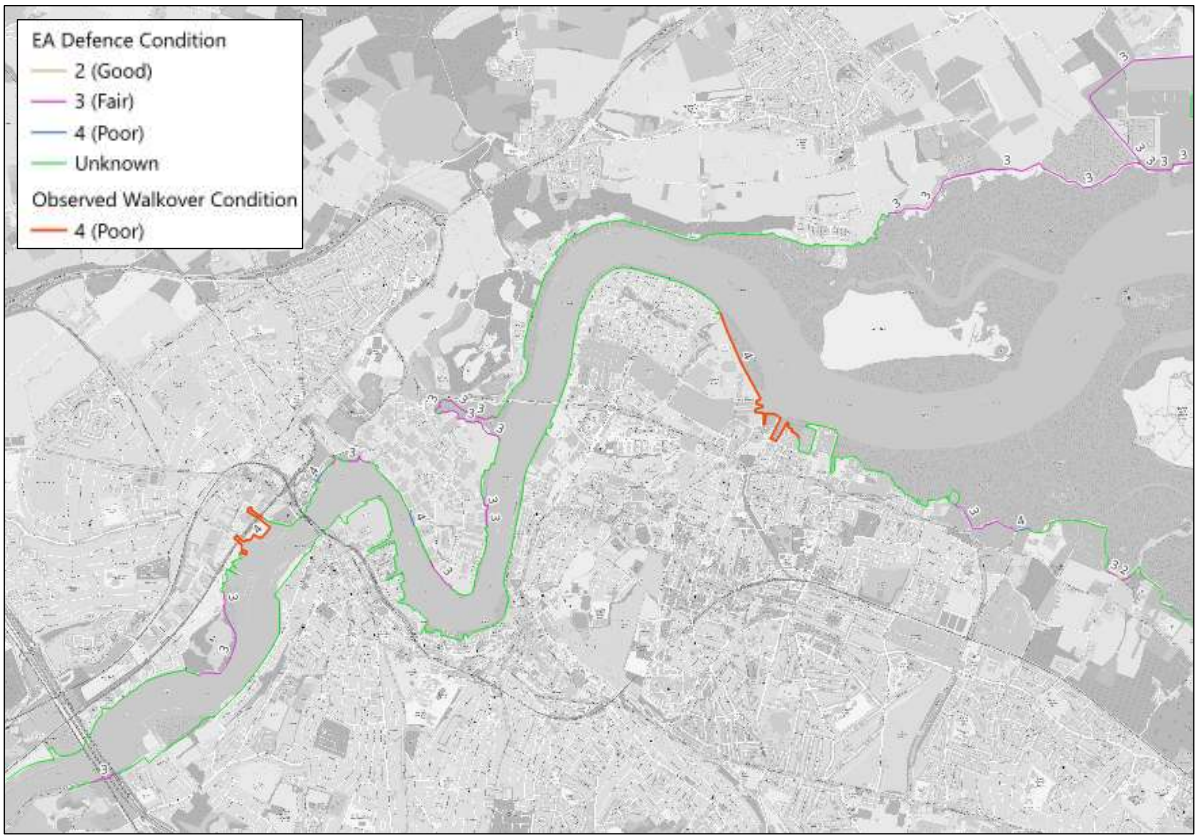

Figure 3-2 Flood defence condition in Medway.

Condition has been classified on a high-level basis following the EA's condition classification[1]:

- Very Good (1) – Cosmetic defects that will have no effect on performance;
- Good (2) – Minor defects that will not reduce the overall performance of the asset;
- Fair (3) – Defects that could reduce the performance of the asset;
- Poor (4) – Defects that would significantly reduce the performance of the asset. Further investigation need; and,
- Very Poor (5) – Severe defects resulting in complete performance failure.

It should be noted, that the conditions classification has been informed by visual inspection and available asset information only, no intrusive investigations have been undertaken. This classification is indicative and intended to highlight relative difference in performance rather than provide a formal condition grade.

During the site walkover, LiDAR scans, photographs, and observed defence condition were noted at 11 sites. The location of the sites are shown in Figure 3-3 below, with their corresponding ID number shown in Figure 3-4 below. Figure 3-4 below has been carried out post site walkover to determine the approximate crest height of the defences, their current observed condition, and how suitable the defences are based on climate change projections using the extreme sea level.

[1] Environment Agency's Condition Assessment Manual

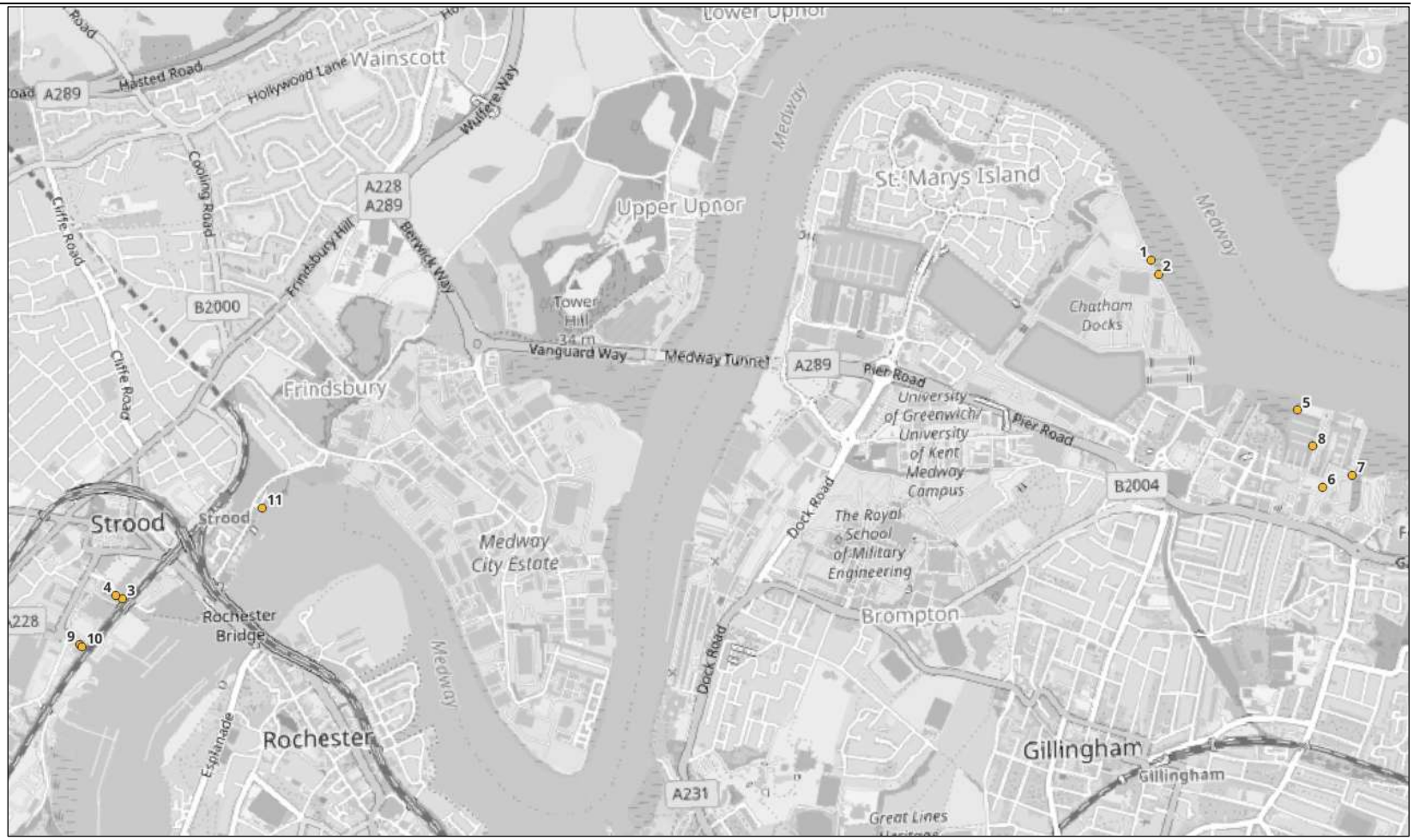

Figure 3-3 Site walkover ID locations.

Location	QGIS ID	Approx LiDAR Value (m AODN)	Approx Defence Height (m)	Approx Defence Height (m AODN)	Defence Condition	Current Day Extreme Sea Level (1in200 - m AODN)	2065 Extreme Sea Level (m AODN)		2101 Extreme Sea Level (m AODN)		2126 Extreme Sea Level (m AODN)		Defences are currently suitable up to i.e., years away
							Higher Central	Upper End	Higher Central	Upper End	Higher Central	Upper End	
Dockside Seawall St Marys	1	5.04	0.52	5.56	Poor (4)*	5.06	5.42	5.52	5.85	6.11	6.18	6.56	2065 i.e., 39 years away
Dockside St Marys	2	5.04	0.52	5.56	Poor (4)*	5.06	5.42	5.52	5.85	6.11	6.18	6.56	2065 i.e., 39 years away
Janes Creek Section A	3	4.24	0.48	4.72	Poor (4)	5.02	5.38	5.48	5.81	6.07	6.14	6.52	Would flood under current day
Janes Creek Section B	4	5.09	0.52	5.61	Fair (3)	5.02	5.38	5.48	5.81	6.07	6.14	6.52	2065 i.e., 39 years away
Marina Pier End Steps & Level	5	2.18	0.96	3.14	Poor (4)*	5.06	5.42	5.52	5.85	6.11	6.18	6.56	Would flood under current day
Marina Rear Wall	6	4.26	0.91	5.17	Good (2)*	5.06	5.42	5.52	5.85	6.11	6.18	6.56	2065 i.e., 39 years away
Marina Rear Wall Corner Level	7	4.83	0.55	5.38	Good (2)*	5.06	5.42	5.52	5.85	6.11	6.18	6.56	2065 i.e., 39 years away
Marina Wall Gap Example	8	4.49	0.71	5.20	Good (2)*	5.06	5.42	5.52	5.85	6.11	6.18	6.56	2065 i.e., 39 years away
Morrisons Creek A	9	4.79	0.22	5.01	Fair (3)*	5.02	5.38	5.48	5.81	6.07	6.14	6.52	Would flood under current day
Morrisons Creek Low B	10	4.78	0.99	5.77	Fair (3)*	5.02	5.38	5.48	5.81	6.07	6.14	6.52	2101 i.e., 75 years away
Riverside Wall & Cap	11	4.18	1.85	6.03	Fair (3)*	5.02	5.38	5.48	5.81	6.07	6.14	6.52	2101 i.e., 75 years away

*EPS Site Visit rating

Figure 3-4 Table showing post site walkover indications of defence crest height, defence condition, and defence suitability.

The continuity of the flood defences has not been mapped on GIS for multiple reasons;

- Uncertainty in flood defence ownership.
- Due to time constraints and access, unable to carry out a site walkover for the entire Medway defences.

However, it should be noted that it is understood that the defences in Medway are owned by the LPA, EA, and various private individuals. In addition, the site walkover noted gaps in the defences at various locations. Consequently, further studies will be required to accurately map and determine the continuity of the flood defences in Medway.

The resulting mapping illustrates significant spatial variability in both defence type and condition, with certain frontages demonstrating relatively robust and continuous infrastructure, while others show evidence of fragmentation, ageing assets, or uncertainty in performance.

3.3 Crest Levels and Comparison with Modelled Flood Levels

Available crest level data have been incorporated into the GIS and spatially compared against modelled tidal flood levels derived from the EA's North Kent Coast model (2024) dataset and extreme sea levels for various climate change allowances.

The available flood defence crest level data in Medway is shown in Figure 3-5.

The comparison of the flood defence crest levels with modelled flood levels from the EA's North Kent Coast model (2024) under current day conditions (i.e., 1 in 200 year return period) is shown in Figure 3-6 below. Figure 3-6 illustrates the spatial distribution of flooding under present-day conditions. This mapping highlights two principal areas where flooding is predicted to occur, specifically at Strood and Gillingham/St Mary's Island, indicating where the existing standard of protection may be insufficient. These areas are characterised by relatively low-lying topography and apparent constraints in defence height and continuity. As such, they represent key locations where further, more detailed investigation is required.

To further demonstrate areas where the defences may need to be improved, the impact of climate change has been compared to the flood defence crest level. Under the 1 in 200 year return period for future year 2125, the extent of flooding is shown to increase (Figure 3-7), with additional areas such as Medway City Estate, Rochester, and Chatham, as well as a greater spatial spread of inundation from these initial locations, in particularly St Mary's Island. This demonstrates the increasing pressure on the existing flood defence network and highlights that areas currently at marginal risk may become increasingly vulnerable over time. As such, these locations, and the surrounding affected areas, warrant further, more detailed investigations to better understand the existing flood defence conditions to improve future flood mechanisms and inform safe development.

The extreme sea levels have already been considered in Figure 3-4 above in relation to the site walkover locations. Figure 3-4 shows that much of Strood, Gillingham, and St Mary's Island would flood by 2065 based off the current climate change projections, as well as the observed flood defence condition and estimated flood defence.

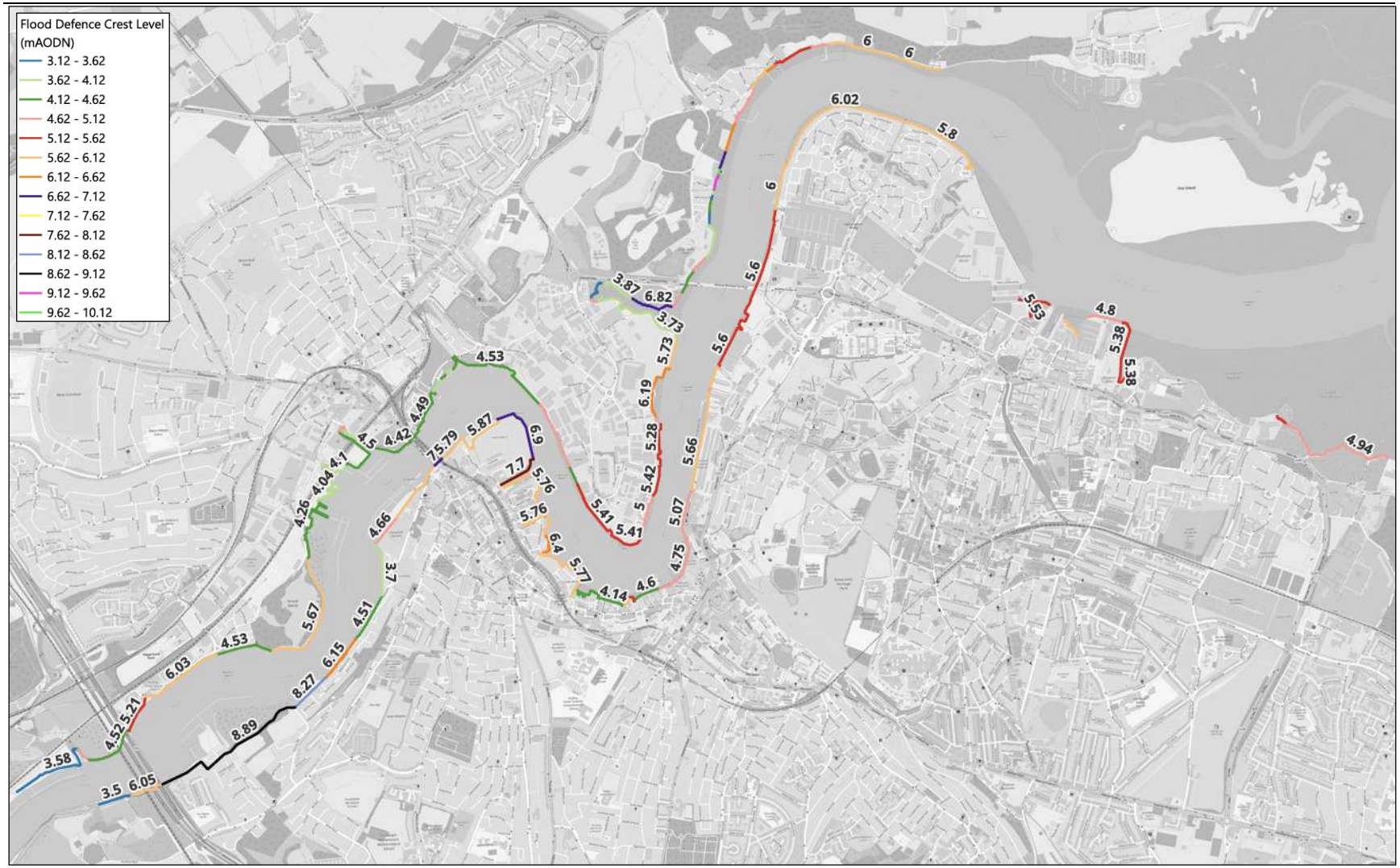

Figure 3-5 Flood Defence Crest Levels in Medway using available data.

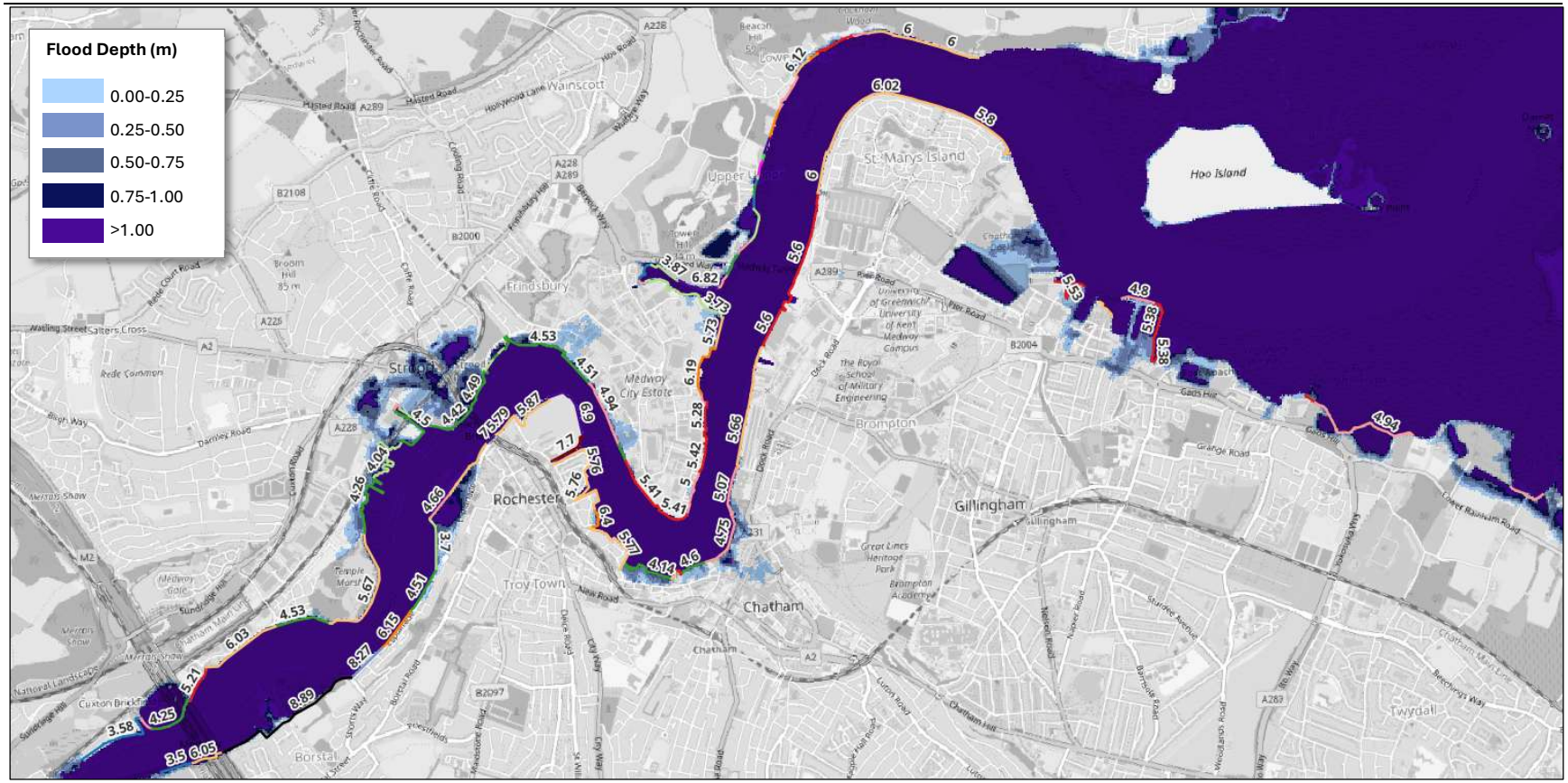

Figure 3-6 Flood Defence Crest Levels in Medway compared to the EA's North Kent Coast model (2024) under current day flood conditions (i.e., 1 in 200 year return period event). Flood extent and depth also shown.

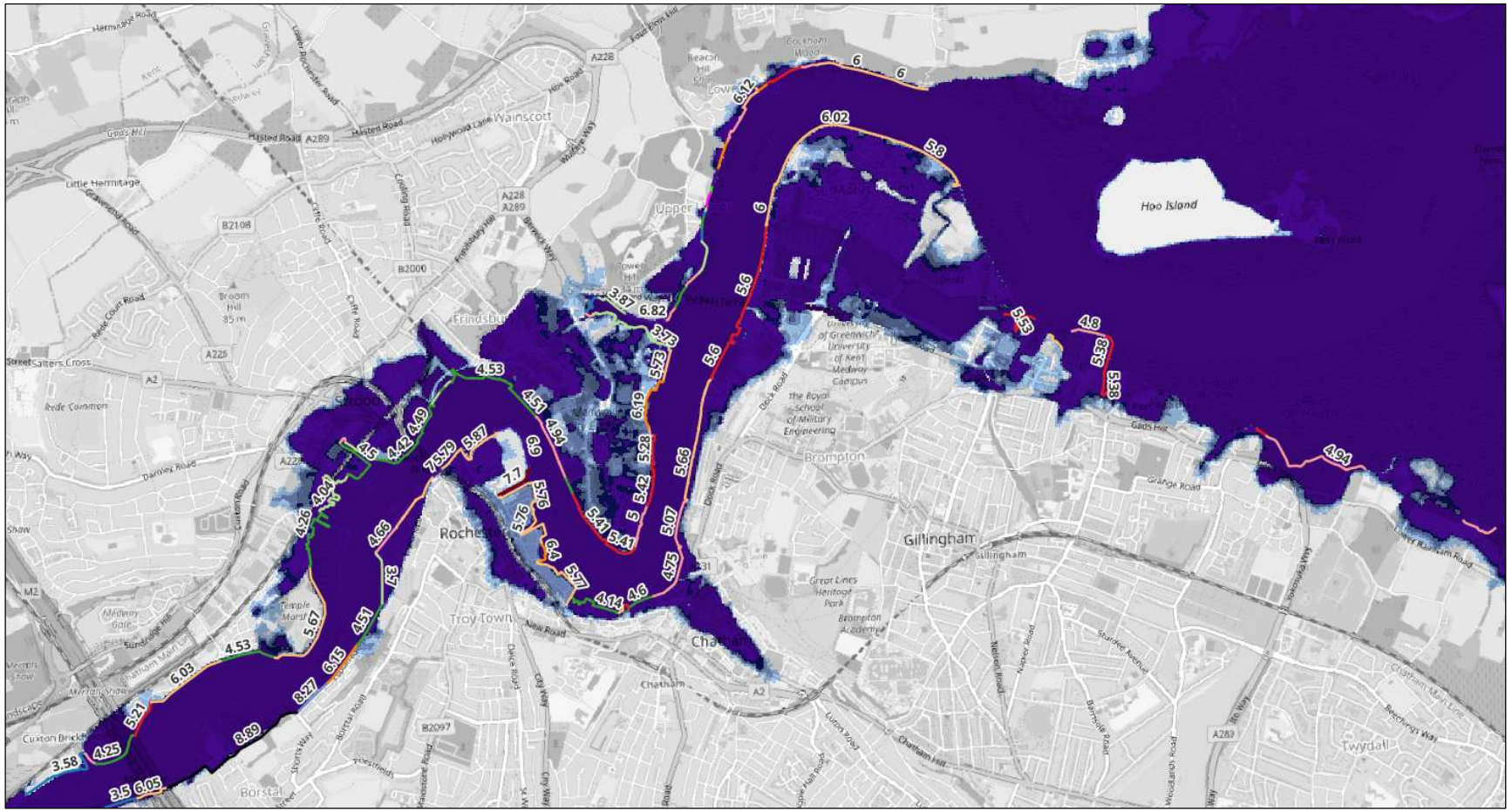

Figure 3-7 Flood Defence Crest Levels in Medway compared to the EA's North Kent Coast model (2024) 1 in 200 year return period event for future year 2125 (i.e., considering the impacts of climate change). Flood extent and depth also shown.

This comparison provides an indication of the relative standard of protection (refer to Section 4) offered by each frontage under a range of present-day and climate change scenarios. Key locations where defence crest levels are close to or below modelled extreme flood levels include;

- Strood
- Gillingham
- St Mary's Island
- Medway City Estate
- Rochester
- Chatham

Due to limitations in data coverage, crest level information is not uniformly available across the entire study area. In such cases, qualitative observations from the site walkover have been used to support interpretation.

The analysis indicates that, while some frontages provide an apparent margin of protection under present-day conditions, this margin is reduced considerably when allowance is made for climate change, resulting in increased potential for overtopping in the future.

3.4 Delineation of Flood Compartments

Flood compartments have been delineated within the GIS workspace, based on a combination of topographic controls, defence alignments, and modelled flood extents (i.e., 1 in 200 year return period and 1 in 1000 year return period).

These compartments represent discrete areas of land that would be expected to flood as a single unit in the event of defence overtopping or a breach. The delineation process has:

- Built upon the compartment framework established in the 2011 Scott Wilson study. It should be noted that there are some slight changes to the flood compartments/cells in light of the EA's North Kent Coast model (2024) and aerial height data (2022).
- Incorporated updated defence alignments and condition data, as denoted in the EA's North Kent Coast model (2024).
- Utilised EA model outputs to understand likely flood pathways and extents.

The flood compartments were subdivided into nine distinct flood cells, as illustrated in Figure 3-8 below. This subdivision enables a more targeted approach to prioritising flood defence improvements across the study area.

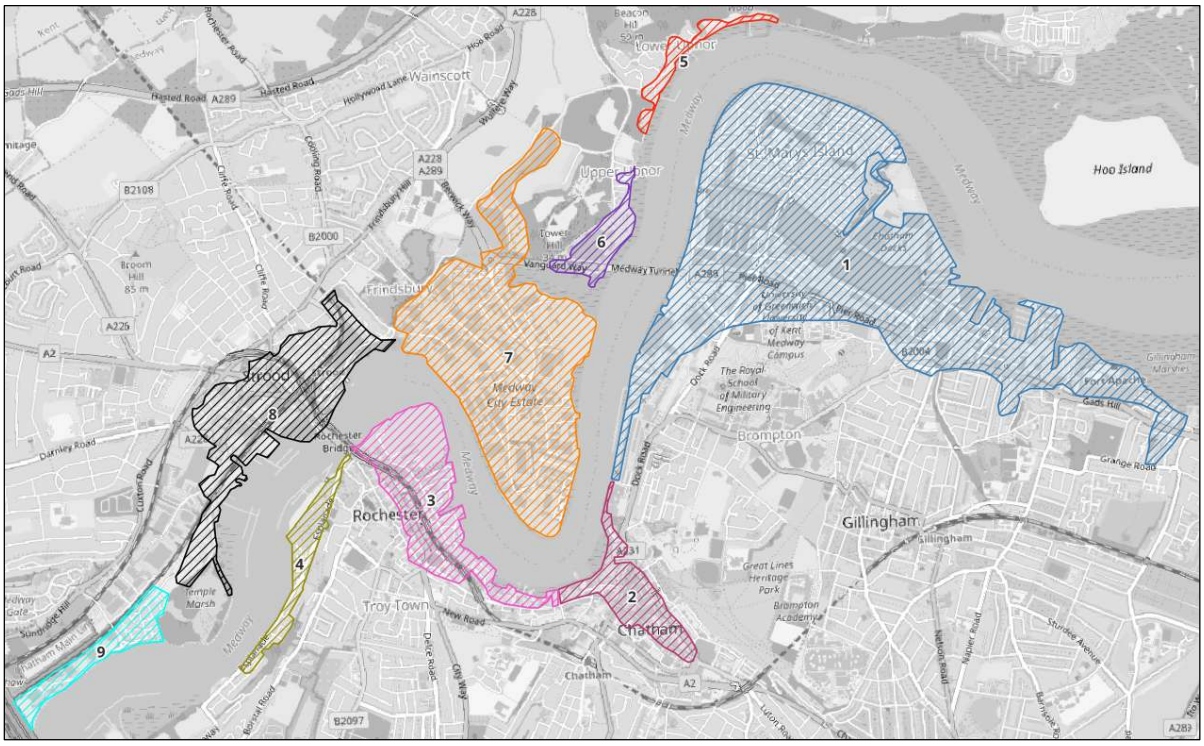

Figure 3-8 Nine Flood Cells (Flood Compartments) in Medway.

The resulting compartment mapping provides a strategic framework for understanding flood risk at a system level, allowing:

- Assessment of the consequences of defence failure within each compartment/cell.
- Identification of communities and assets at risk.
- Evaluation of how improvements at specific frontages could reduce risk across wider areas.

Based on the proposed site allocations within the emerging Local Plan, the following three flood cells have been identified for prioritised flood defence improvements, as they present the greatest potential benefit in terms of residential unit provision;

1. Flood Cell 1
2. Flood Cell 7
3. Flood Cell 8

3.5 Limitations

The GIS analysis is subject to the following limitations:

- Crest level data are incomplete and of varying accuracy across the study area, some are based off the site walkover LiDAR scans and Defra LiDAR.
- Defence condition classifications are based on high-level visual assessment and accompanied by EA data where available. As such, these classifications should not be considered definitive.
- EA model outputs represent a specific set of assumptions and scenarios, and results may vary under different conditions.

- Asset ownership and detailed structural performance have not been verified.

Despite these constraints, the GIS-derived mapping provides a robust and proportionate basis for identifying areas of potential underperformance and for informing the prioritisation of further detailed investigations.

4 INDICATIVE STANDARD OF PROTECTION AND RELATIVE VULNERABILITY

An indicative assessment of the Standard of Protection (SoP) provided by the existing flood defences has been undertaken to support a strategic understanding of flood risk across the Medway study area. This assessment has been combined with an evaluation of the relative vulnerability of the areas located behind each defence frontage (the hinterland), in order to identify locations where flood risk is most acute and where intervention may be required.

The outputs of this section provide a key evidence base to inform the prioritisation of defence improvements and to support the development of a funding strategy, including potential developer contributions.

4.1 Methodology for Estimating Standard of Protection

The indicative SoP has been derived through comparison of available defence crest level data with modelled tidal water levels from the EA's North Kent Coast model (2024). This comparison has been undertaken within the GIS environment and considers:

- Peak water levels for a range of flood events (e.g. Annual exceedance probability events)
- The influence of climate change allowances on tidal levels.
- Variability in crest heights along individual frontages.

The primary focus has been on the 1 in 200 year return period for future year 2125 (i.e., the design flood event). The extreme sea level allowance used under this event was 6.20m AODN, which is in line with the 'Higher Central' allowance for the 2070s epoch (2061-2125). This is because the design flood event sets the benchmark water used to determine whether the existing defences provide adequate protection in the future.

Where robust EA crest level data are available, a relative freeboard has been estimated. The freeboard has been estimated by applying the following equation; Freeboard = Design Crest Level – Water Level. An indicative SoP has then been shown in various locations in Figure 4-1 by following Table 4-1 below.

Freeboard	Interpretation	Indicative SoP
Greater than +0.5m	Comfortable Margin	High
0 to +0.5m	Limited Freeboard	Moderate
Less than 0m	Overtopping Likely	Low

Table 4-1 Rule-based approach to showcase freeboard and indicative SoP for the 1 in 200 year return period for future year 2125. Colours shown in the 'Freeboard' column are representative to the dots shown in Figure 4-1.

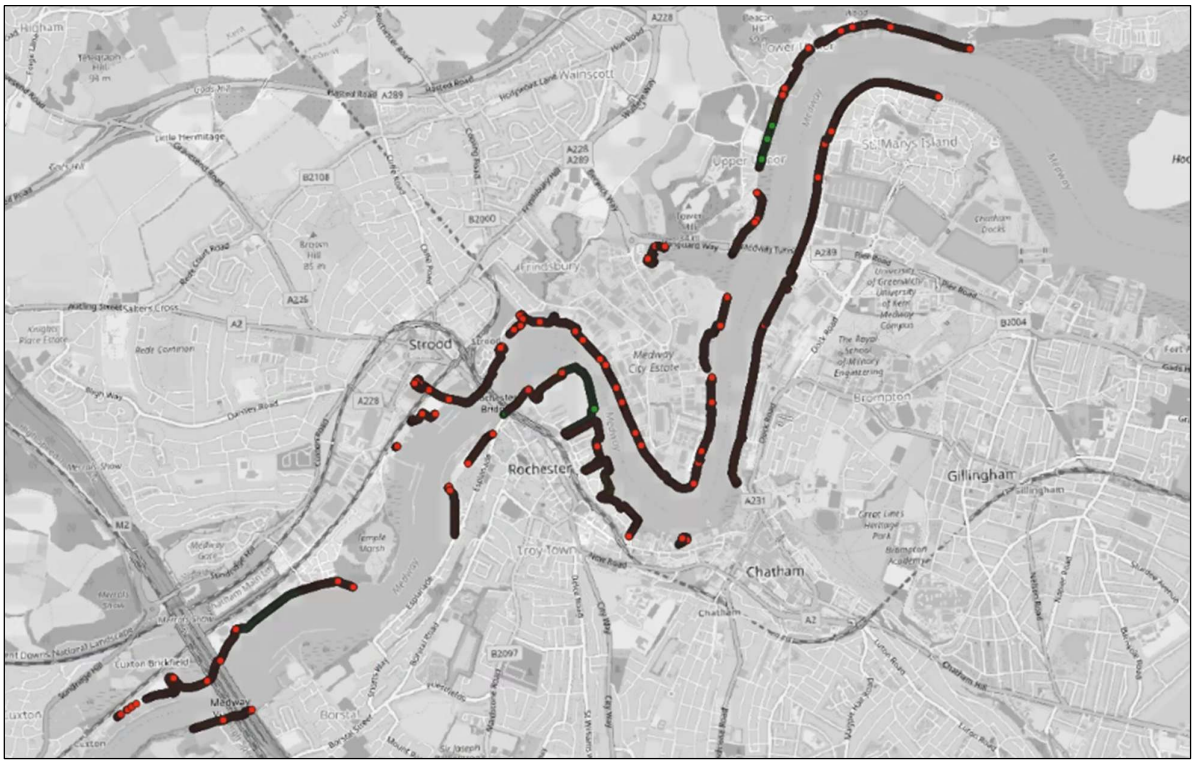

Figure 4-1 Rule-based approach to showcase freeboard and indicative SoP for the 1 in 200 year return period for future year 2125. Colours shown in the 'Freeboard' column in Table 4-1 are representative of the dots shown above.

The resulting SoP has been categorised on an indicative basis (e.g., *high, moderate, low, or unknown*) to reflect the confidence and resolution of available data. It is emphasised that this is a high-level assessment, intended to highlight relative differences in performance rather than provide definitive design standards.

4.2 Spatial Variation in Standard of Protection

The assessment indicates that the SoP varies significantly along the Medway frontage.

Some urban frontages, particularly those associated with recent regeneration or known improvement works, appear to provide a moderate to relatively high standard of protection under present-day conditions.

Other sections, particularly where older or mixed-asset defences are present, exhibit a lower or more uncertain SoP, reflecting variability in crest height, condition, and continuity.

A number of frontages have been identified where the crest levels appear close to the modelled water levels for present-day extreme conditions i.e., 1 in 200 year return period (Figure 4-2)

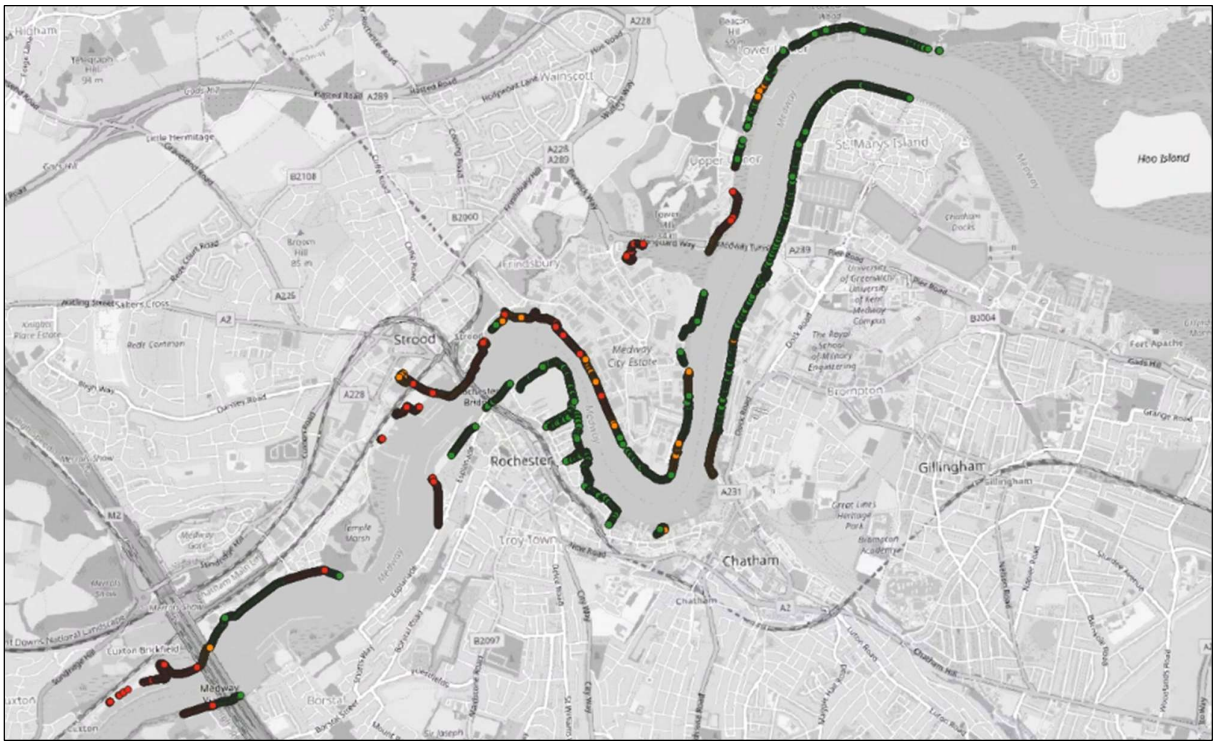

Figure 4-2 Rule-based approach to showcase freeboard and indicative SoP for the 1 in 200 year return period (present day). Colours shown in the 'Freeboard' column in Table 4-1 are representative of the dots shown above.

It should be noted that localised low points at a number of frontages could act as controls on overtopping. In addition, it can also be noted from Figure 4-2 that the defence continuity is compromised, reducing overall effectiveness. In the most part, this is due to data being unavailable. However, this does highlight the need for further studies on the defences in Medway.

When climate change allowances are incorporated (Figure 4-1), the effective SoP is reduced across much of the study area, with several frontages transitioning from moderate to low levels of protection. This highlights the increasing pressure on existing infrastructure and the need for future adaptation.

4.3 Residual Risk and System Behaviour

In defended areas, flood risk is not eliminated but managed. As such, consideration has been given to residual risks, including overtopping and breaches.

The assessment indicates that:

- Even when defences provide a reasonable standard of protection under current conditions, overtopping may occur under more extreme or future scenarios.
- Localised weak points, such as transitions between assets or areas of reduced crest height, are likely to govern the onset of flooding.
- Flooding is likely to propagate across defined flood compartments, meaning that failure at a single frontage could affect a wider area.

This reinforces the importance of considering the defence network as a system, rather than as isolated assets.

4.4 Assessment of Relative Vulnerability

The assessment indicates that many defended areas along the Medway frontage are highly sensitive to flooding, with limited capacity to accommodate inundation without significant adverse consequences. In particular:

- Established urban areas represent a high concentration of receptors.
- Several proposed development sites are located within defended floodplain areas and are therefore reliant on the continued performance of defences.
- In some locations, topography suggests limited opportunity for flood water storage or attenuation, increasing potential impacts.

4.5 Combined Assessment of SoP and Vulnerability

By combining the indicative SoP with the relative vulnerability of the hinterland, it is possible to identify areas of elevated flood risk priority.

Frontages of greatest concern are those where:

- The SoP is low or uncertain; and
- The consequences of flooding are high (e.g. dense residential area or key development allocations).

From the information provided within this assessment and site observations, it is clear that the frontages of greatest concern are those in:

- Strood
- Medway City Estate
- St Mary's Island
- Gillingham

These areas represent locations where:

- There is a higher likelihood of defence exceedance under current or future conditions; and
- The impacts of flooding would be significant.

Conversely, some frontages may exhibit a lower relative priority where either the Standard of Protection is higher or the hinterland is less sensitive (e.g. undeveloped or low-value land uses). For example, at Hoo (HHH12), only a small area is predicted to flood during the 1 in 200 year return period for future year 2125 climate change scenario, yet the site accommodates one of the largest proposed development capacities (i.e., 1801 units). As a result, the development layout can be readily configured to avoid the modelled flood extent while still delivering a substantial number of units.

This combined assessment provides a clear and transparent basis for prioritising investment and aligns with the EA's risk-based approach to flood risk management.

4.6 Implications for Planning and Investment

The findings of this assessment have important implications for both spatial planning and infrastructure delivery. In particular:

- Locations with low or declining SoP may constrain development unless improvements to defences are secured.
- The identification of high-risk frontages provides a clear basis for targeting developer contributions toward flood defence upgrades.
- The evidence supports the demonstration of deliverability for development allocations within the Local Plan.

This is particularly important in the context of the Local Plan being previously found unsound, as it enables the Council to clearly demonstrate how flood risk will be managed and mitigated to support housing delivery.

4.7 Limitations

The indicative SoP vulnerability assessment is subject to the following limitations:

- Crest level data are incomplete and of variable accuracy
- No detailed hydraulic modelling or breach analysis has been undertaken specifically for this study.
- Defence condition has been assessed at a high level only.
- Future changes in climate, asset condition, or land use may alter risk over time.

Despite these limitations, the assessment provides a strategic overview of flood defence performance and associated risks, appropriate to inform the next stage of more detailed investigations.

5 IDENTIFICATION AND PRIORITISATION OF FRONTAGES

Building on the preceding analysis of defence condition, crest levels, flood compartmentation, and vulnerability, this section identifies and priorities flood defence frontages requiring further investigation or intervention.

The purpose of this prioritisation is to provide a clear, evidence-based framework to guide future investment decisions, inform the targeting of developer contributions, and support the deliverability of development proposed within the emerging Local Plan.

5.1 Approach to Prioritisation

A structured, risk-based approach has been adopted to prioritise frontages across the study area. This approach reflects both the likelihood of defence underperformance and the potential consequences of flooding.

The following criteria have been considered:

- Indicative Standard of Protection (SoP): Frontages with low or uncertain SoP, particularly under climate change scenarios.
- Defence Condition: Areas where visible deterioration or lack of maintenance may affect performance.
- Crest Level and Overtopping Risk: Locations where crest levels are close to or below modelled extreme water levels.
- Defence Continuity: Presence of gaps, transitions, or reliance on informal or third-party structures.
- Consequences of Flooding (Vulnerability): Nature and density of receptors within the hinterland, including residential areas, infrastructure, and allocated development sites.
- Strategic Importance: Role of the frontage in protecting larger flood compartments or enabling key growth areas.

Each frontage has been assessed qualitatively against these criteria, drawing on the GIS analysis and site appraisal findings.

5.2 Priority Categories

Based on the assessment, frontages have been grouped into three priority categories.

5.2.1 High Priority

Frontages identified as high priority typically exhibit a combination of:

- Low or declining standard or protection
- Evidence of poor condition or structural uncertainty
- Potential overtopping pathways or low crest levels
- High consequence of flooding, including urban areas or key development sites

These frontages represent areas where there is both a higher likelihood of defence exceedance and significant potential impacts, and therefore require early and detailed investigation.

Taking these factors into consideration, two frontages have been designated as high priority:

- Strood
- St Mary's Island

Both areas contain flood defences which have been identified as poor condition. This finding is also consistent with the historic flood record for the study area. The Strategic Flood Risk Assessment produced in 2006/2008 by Mott MacDonald and referenced in the Scott Wilson Report (2011) records that, during the 1953 East Coast flood, water levels reached approximately 4.85m AODN at Rochester Bridge and 4.22m AODN at Strood Pier, with Strood town centre among the areas inundated; further tidal flood events affecting the area were also recorded in 1927, 1949, 1960 and 1965. Consequently, Strood has historic evidence of flooding and a key consideration when prioritising flood defences to be upgraded.

In addition, based on the analysis presented above, these areas are currently shown to flood under current-day scenarios (i.e., 1 in 200 year return period). When considering the impact of climate change under the 1 in 200 year return period for future year 2125, the extent and depth of flooding increases noticeably, further elevating the level of risk. Furthermore, these locations currently have site allocations as part of the emerging Local Plan which provide a large number of units for future development. These conditions collectively justify their classification as high priority and highlight the need for early, detailed assessment and intervention planning.

5.2.2 Medium Priority

Medium priority frontages generally:

- Provide a moderate level of protection under present-day conditions.
- May be vulnerable under future climate scenarios.
- Exhibit some uncertainty in condition or continuity.
- Protect areas of moderate sensitivity or future development potential.

These areas may not require immediate intervention but should be subject to further assessment and monitoring, particularly in the context of planned growth.

Taking these factors into account, two frontages have been classified as medium priority:

- Medway City Estate
- Historic Dockyard / Gillingham

Although the flood defences in these locations are also recorded as being in poor or unknown conditions, both areas are predicted to remain dry under current day conditions (i.e., 1 in 200 year return period). However, when future climate change is considered (i.e., 1 in 200 year return period for future 2125), these frontages are shown to become inundated, indicating an emerging increase in flood risk over the long term. Both locations also contain site allocations within the emerging Local Plan, contributing a substantial number of proposed residential units and therefore elevating their strategic importance.

In the case of the Historic Dockyard / Gillingham, while the allocated development sites in Gillingham lie outside the modelled flood extent, investing in the frontage defences would provide wider system

benefits. In particular, strengthening this frontage would help to protect the flood compartment at St Mary's Island (Flood Cell 1), thereby supporting the protection of both existing properties and future development within the compartment.

5.2.3 Low Priority

Low priority frontages generally are those where:

- The indicative SoP is relatively higher
- Defence condition appears adequate
- Consequences of flooding are comparatively limited (e.g. undeveloped or low-value land uses)

These areas are not considered a priority for short-term intervention but should be considered within longer-term strategic planning.

Based on the above criteria, two frontages have been classified as low priority:

- Rochester
- Chatham

Although the condition of the existing defences in these locations is recorded as unknown, both frontages are associated with relatively small flood cells. Importantly, the majority of site allocations within these zones are located outside the modelled flood extent when considering the impact of climate change. As a result, the potential consequences of flooding are comparatively limited, and the immediate need for intervention is low. Nevertheless, these frontages should continue to be monitored and incorporated into longer-term strategic planning, particularly as development proposals evolve and as further information on flood defence conditions becomes available.

Table 5-1 below provides the frontages and their assigned priority category in context with allocated sites within the emerging Local Plan.

Location	Indicative SoP	Condition	EA Crest Level	Defence Continuity	Hinterland Vulnerability	Strategic Importance	Priority Category
Strood Frontage	Low	Poor	4.04 – 4.50m AODN	Generally continuous	High (urban area)	High	**High**
St Mary's Island Frontage	Moderate	Poor	4.80 – 6.02m AODN	Fragmented / Partial reliance on third party	High (residential + site allocations)	High	**High**
Medway City Estate	Low - High	Poor or Unknown	3.73 – 6.19m AODN	Discontinuous / High Variability	Medium (industrial + site allocations)	Medium	**Medium**
Historic Dock Yard / Gillingham Frontage	High	Unknown	5.60m AODN	Generally continuous	High (urban area, mixed land use)	Medium	**Medium**
Rochester	High	Unknown	5.76 – 7.70m AODN	Generally continuous	High (urban area, mixed land use)	Low	**Low**
Chatham	High	Unknown	4.14 – 4.75m AODN	Fragmented	High (urban area, mixed land use)	Low	**Low**

Table 5-1 Evaluation of the flood defences in key areas within Medway to assist with priority categorisation.

5.3 System Interdependencies and Flood Compartments

The prioritisation process has also considered the interconnected nature of flood risk within defined compartments.

In many cases, the performance of a single frontage influences flood risk across a wider area. As such:

- Improvements at key locations may reduce risk across entire compartments.
- Conversely, failure at a critical weak point could lead to widespread flooding.

This highlights that prioritisation should not be viewed solely at the asset scale, but rather in the context of system behaviour and catchment-wide risk reduction.

5.4 Implications for Planning and Developer Contributions

The identification of priority frontages provides a direct link between flood risk management and spatial planning. In particular:

- High priority frontages often correspond with areas where development is proposed or required to meet housing needs.
- The need for defence improvement in these locations provides a robust basis for securing developer contributions toward flood risk management infrastructure.
- The evidence presented supports the demonstration that flood risk can be appropriately managed, which is essential in progressing a sound and deliverable Local Plan.

Without targeted intervention in these priority areas, there is a risk that development capacity may be constrained, further impacting the Council's ability to meet housing allocations.

5.5 Recommendations for Next Steps

For frontages identified as High Priority, it is recommended that the following next steps are undertaken:

- Detailed topographic and crest level surveys.
- Structural condition assessments.
- Hydraulic modelling, including overtopping and breach analysis.
- Development of improvement options and feasibility studies.
- Preparation of cost estimates to inform funding and developer contribution mechanisms.

Medium priority frontages should be subject to further data collection and periodic review, while low priority areas should be retained within the wider strategic framework for long-term planning.

6 RECOMMENDATIONS AND CONCLUSIONS

The purpose of this High Level Appraisal study is to provide a strategic reassessment of the flood defence infrastructure along the Medway frontage, integrating desk-based reviews, site appraisals, and GIS-based technical analysis. The study has established a proportionate but robust evidence base to support spatial planning, flood risk management, and infrastructure investment decisions.

6.1 Summary of Key Findings

The assessment demonstrates that the existing flood defence network is highly variable in type, condition, and performance, reflecting its incremental development over time.

Key findings include:

- The indicative standard of protection (SoP) varies significantly across the study area, with several frontages providing only a limited margin of protection under present-day conditions.
- When climate change allowances are considered, the effective SoP is reduced further, increasing the likelihood of overtopping in the future.
- Evidence of localised deterioration, low crest levels, and defence discontinuities has been identified in a number of locations.
- Flood risk is strongly influenced by system behaviour, with individual weak points having the potential to affect wider flood compartments.
- Many areas located behind the defences, including existing communities and proposed development sites, are highly vulnerable to flooding.

These findings indicate that, while the defence network continues to provide an important function, there are clear areas where performance may be insufficient to support future growth without intervention.

6.2 Implications for Spatial Planning

Flood risk represents a critical constraint to development along the Medway waterfront. The variability in defence performance, combined with increasing pressures from climate change, introduces uncertainty regarding the safety and deliverability of sites within defended floodplain areas.

This is particularly significant in the context of the emerging Local Plan. The Medway Local Plan 2041 was submitted for examination in December 2025, with Phase 1 hearings anticipated for September 2026. Following consultee comments, there are particular challenges relating to deliverability and the ability of the Council to meets its identified housing requirements. Many of the sites required to meet these needs are located within areas that are dependent on flood defences.

The findings of this study therefore highlight that:

- Targeted improvements to flood defences are likely to be necessary to enable development in key locations
- Without such improvements, the capacity to deliver housing allocations may remain constrained
- A clear and evidence-based strategy is required to demonstrate that flood risk can be managed in accordance with national planning policy.

6.3 Implications for Funding and Developer Contributions

The EA has identified the need for greater clarity regarding how flood defence improvements will be funded, particularly in areas where development is proposed.

This study provides a direct evidence base to support this requirement by:

- Identifying frontages where intervention is required
- Demonstrating the relationship between defence performance and development risk
- Highlighting areas where investment would unlock or enable development

As such, the findings can be used to:

- Support the development of a targeted developer contribution strategy
- Provide justification for proportional contributions linked to the scale and location of development.
- Identify further studies required to quantify the investment needed to upgrade the defences.

6.4 Recommended Next Steps

In order to build upon the findings of this High-Level Appraisal study, the following staged approach is recommended:

6.4.1 Immediate Actions

- Undertake targeted topographic and crest level surveys in priority areas to address key data gaps
- Confirm asset ownership and maintenance responsibilities, particularly where third-party defences are relied upon
- Establish a consistent asset register aligned with GIS outputs

6.4.2 Short-Term Actions (Priority Frontages)

For frontages identified as High Priority, it is recommended that:

- Detailed structural condition assessments are undertaken
- Hydraulic modelling and sensitivity testing are completed to better understand overtopping and breach behaviour
- Feasibility studies and options appraisals are initiated to identify viable defence improvement measures

These studies should focus on locations where intervention would deliver the greatest reduction in flood risk and enable development.

6.4.3 Medium- to Long-Term Actions

- Develop a strategic flood defence investment plan, aligned with Local Plan phasing
- Establish a funding framework, including mechanisms for securing developer contributions
- Consider adaptive approaches to flood risk management, recognising the long-term impacts of climate change

- Maintain and update the GIS evidence base as new data and studies become available

6.5 Overall Conclusions

This study has demonstrated that flood defence infrastructure along the Medway frontage is not uniform in performance and, in some locations, may be insufficient to meet future requirements without intervention.

By identifying areas of potential underperformance and linking these to the vulnerability of the hinterland, the appraisal provides a clear and defensible basis for:

- Prioritising investment in flood defences
- Supporting the delivery of development within flood risk areas
- Responding to EA requirements regarding funding and long-term sustainability.

Importantly, the study establishes the strategic link between flood risk management and housing delivery, providing Medway Council with the evidence needed to progress a more robust and deliverable Local Plan.

Targeted improvements to flood defences, supported by an appropriate funding strategy, will be essential to unlocking development potential along the Medway waterfront and ensuring that future growth is both sustainable and policy compliant.