

13 Water Management

Indicator	Latest Data	Previous Data	Trend
Watercourses	1 (6.27 km) River Alver	1 (6.27 km) River Alver	↔
Overall river water quality for the River Alver	Bad (2019)	Bad (2014)	↔
Overall water quality for the Solent	Moderate (2019)	Moderate (2014)	↔
Overall water quality for Portsmouth Harbour	Moderate (2019)	Moderate (2014)	↔
Flood Zone 2 area	48.57 ha (2020)	53.62 ha (2018)	↓
Flood Zone 3 area	314.66 ha (2020)	380.68 ha (2018)	↓
Net dwelling completions within Flood Zone 2/3	71 (4 years – 2016/17 to 2019/20)	6 (4 years- 2012/13 to 2015/16)	↑

Watercourses

The River Alver is the only watercourse in Gosport Borough, with a total length of 6.27 km and a catchment area of 1550.21 ha.

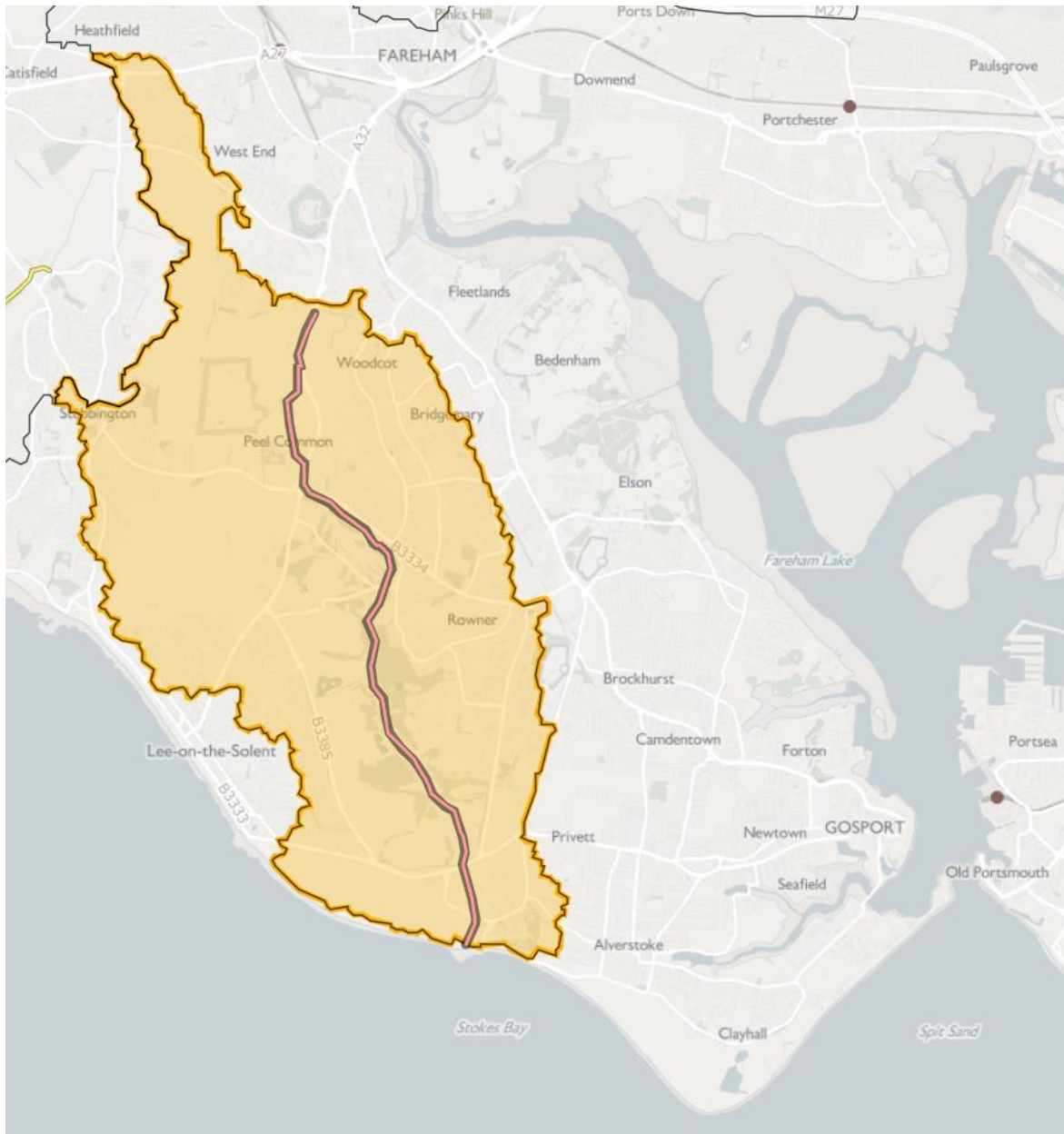


Figure 13.1: Alver Valley and its catchment area (Source: Environment Agency Catchment Data Explorer)

The course of the river itself has changed due to military requirements and it currently enters the sea through an outfall at Browndown rather than near Fort Gilkicker as it once did. The Alver Outfall represents the seaward limit of the River Alver. A combination of stop logs, sluice gates and tidal flaps act as measures to maintain the water levels within the River Alver and prevent saltwater intrusion from the sea. As a result, the River Alver has no tidal limit and is a freshwater watercourse, however there is a tidal influence as the watercourse can become tide locked at high tides.

River water quality

Water quality is known to be an issue in the River Alver. The water course is currently failing under the Water Framework Directive, with pollution derived from leachate from the 224-hectare site of contaminated land adjacent to the water course.

The Cycle 2 classifications (the second cycle of river basin planning under the Water Framework Directive, running from the publication of the river basin plans in 2015 until 2021) for the Alver River are shown in Figure 13.2. Full information can be found on the Environment Agency’s Catchment Data Explorer online: <https://environment.data.gov.uk/catchment-planning/WaterBody/GB107042011370>

The Alver has achieved ‘Bad’ overall between 2014 and 2019.

Classification Item	2013	2014	2015	2016	2019
Overall Water Body	Moderate	Bad	Bad	Bad	Bad
Ecological	Moderate	Bad	Bad	Bad	Bad
Biological quality elements	-	Bad	Bad	Bad	Bad
Hydromorphological Supporting Elements	Supports Good	Supports Good	Supports Good	Supports Good	Supports Good
Physico-chemical quality elements	Moderate	Moderate	Moderate	Moderate	Moderate
Specific pollutants	High	High	-	-	
Chemical	Good	Good	Good	Good	Fail
Priority substances	Does not require assessment	Does not require assessment	Does not require assessment	Does not require assessment	Good
Other Pollutants	Does not require assessment	Does not require assessment	Does not require assessment	Does not require assessment	Does not require assessment
Priority hazardous substances	Does not require assessment	Does not require assessment	Does not require assessment	Does not require assessment	Fail

Figure 13.2: Cycle 2 Classifications (Source: Environment Agency Catchment Data Explorer)

Solent Water Quality

The Cycle 2 classifications (the second cycle of river basin planning under the Water Framework Directive, running from the publication of the river basin plans in 2015 until 2021) for the Solent are shown in Figure 13.3.

Classification Item	2013	2014	2015	2016	2019
Overall Water Body	Moderate	Moderate	Moderate	Moderate	Moderate
Ecological	Moderate	Moderate	Moderate	Moderate	Moderate
Chemical	Fail	Fail	Fail	Good	Fail

Figure 13.3: Cycle 2 Classifications (Source: Environment Agency Catchment Data Explorer)

There are several reasons given for why the Solent has not achieved good status and reasons for deterioration, there are shown in Figure 13.4.

Reason Type	SWMI	Activity	Category	More	Classification Element
RNAG	Unknown (pending investigation)	Unknown (pending investigation)	Sector under investigation	Details	Dissolved Inorganic Nitrogen
RNAG	Physical modification	Other (not in list, must add details in comments)	Sector under investigation	Details	Mitigation Measures Assessment
RNAG	Suspect data	Not applicable	No sector responsible	Details	Tributyltin Compounds
RNAG	Physical modification	Flood protection - structures	Sector under investigation	Details	Angiosperms

Figure 13.4: Reasons for not achieving good status and reasons for deterioration (Source: Environment Agency Catchment Data Explorer)

Portsmouth Harbour Water Quality

The Cycle 2 classifications (the second cycle of river basin planning under the Water Framework Directive, running from the publication of the river basin plans in 2015 until 2021) for Portsmouth Harbour are shown in Figure 13.5.

Classification Item	2013	2014	2015	2016	2019
Overall Water Body	Moderate	Moderate	Poor	Moderate	Moderate
Ecological	Moderate	Moderate	Poor	Moderate	Moderate
Chemical	Fail	Fail	Good	Good	Fail

Figure 13.5: Cycle 2 Classifications (Source: Environment Agency Catchment Data Explorer)

There are several reasons given for why Portsmouth Harbour has not achieved good status and reasons for deterioration, there are shown in Figure 13.6.

Reason Type	SWMI	Activity	Category	More	Classification Element
RNAG	Point source	Sewage discharge (continuous)	Water Industry	Details	Dissolved Inorganic Nitrogen
RNAG	Diffuse source	Poor nutrient management	Agriculture and rural land management	Details	Macroalgae
RNAG	Point source	Sewage discharge (continuous)	Water Industry	Details	Macroalgae
RNAG	Diffuse source	Poor nutrient management	Agriculture and rural land management	Details	Dissolved Inorganic Nitrogen
RNAG	Diffuse source	Coastal Background DIN	No sector responsible	Details	Dissolved Inorganic Nitrogen
RNAG	Physical modification	Coastal squeeze	Sector under investigation	Details	Angiosperms
RNAG	Diffuse source	Coastal Background DIN	No sector responsible	Details	Macroalgae
RNAG	Suspect data	Not applicable	No sector responsible	Details	Hydrological Regime

Figure 13.6: Reasons for not achieving good status and reasons for deterioration (Source: Environment Agency Catchment Data Explorer)

PfSH Integrated Water Management Study

Growth capacity

In May 2018, the Partnership for South Hampshire (PfSH) (formerly PUSH) published the Integrated Water Management Study (IWMS) to assess the implications from the planned growth in the region for the water resource and water quality environment.

The IWMS addressed the capacity of existing wastewater treatment works (WwTWs) to deal with the forecast growth from development. For Gosport Borough, the IWMS states the growth areas in the Gosport Borough Council area are predicted to drain to the Peel Common WwTW. Although overall no significant impact or deterioration is predicted due to future housing growth, the Peel Common WwTW may require improvements by 2025 to increase capacity in the WwTW, which will be subject to review in 2022. Sewer capacity upgrades are also likely to be required at this WwTW. The catchment has nitrate problems and catchment level nitrate measures are required now.

The Peel Common WwTW discharges into the Solent, which the IWMS reports to be achieving 'Moderate' Water Framework Directive water body status. Elements not achieving 'good' status include Angiosperms (Moderate) and Dissolved Inorganic Nitrogen (Moderate).

Designated Sites

In addition to the above, the IWMS considered the potential for future growth to impact on the interest features and conservation objectives of the designated sites within the PfSH area or downstream thereof. The following summarises the findings for the Portsmouth Harbour SPA and Ramsar site directly adjacent to Gosport Borough, although it is worth noting that all designated sites in the wider sub-region are of relevance:

Portsmouth Harbour SPA and Ramsar site

Portsmouth Harbour is a large estuary used for industry and designated for its bird interest. As with the neighbouring Chichester and Langstone Harbours, the harbour is composed of intertidal mudflats and sandflats along with seagrass beds, saltmarsh, shallow coastal waters, coastal lagoons and coastal grazing marsh. Evidence provided by the EA and Natural England indicate that there is a eutrophication problem in the harbours and that measures are required now to reduce nitrate input.

Water use and supply

Gosport Borough’s water is supplied by Portsmouth Water. The majority (88%) of the water supplied by Portsmouth Water to the overall area it supplies is derived from the local chalk aquifer¹.

Portsmouth Water supplies an area of 868 square kilometres with a population of around 722,000 across West Sussex and Hampshire.

Portsmouth Water extracts an average of around 170 Megalitres per day from boreholes, natural springs and one river. Within Portsmouth Water’s supply area there are a number of ephemeral and perennial chalk streams and rivers which in addition to their global rarity, are diverse ecosystems which support a wide range of wildlife. The importance of these habitats is recognised internationally by the European Commission’s Habitats Directive.

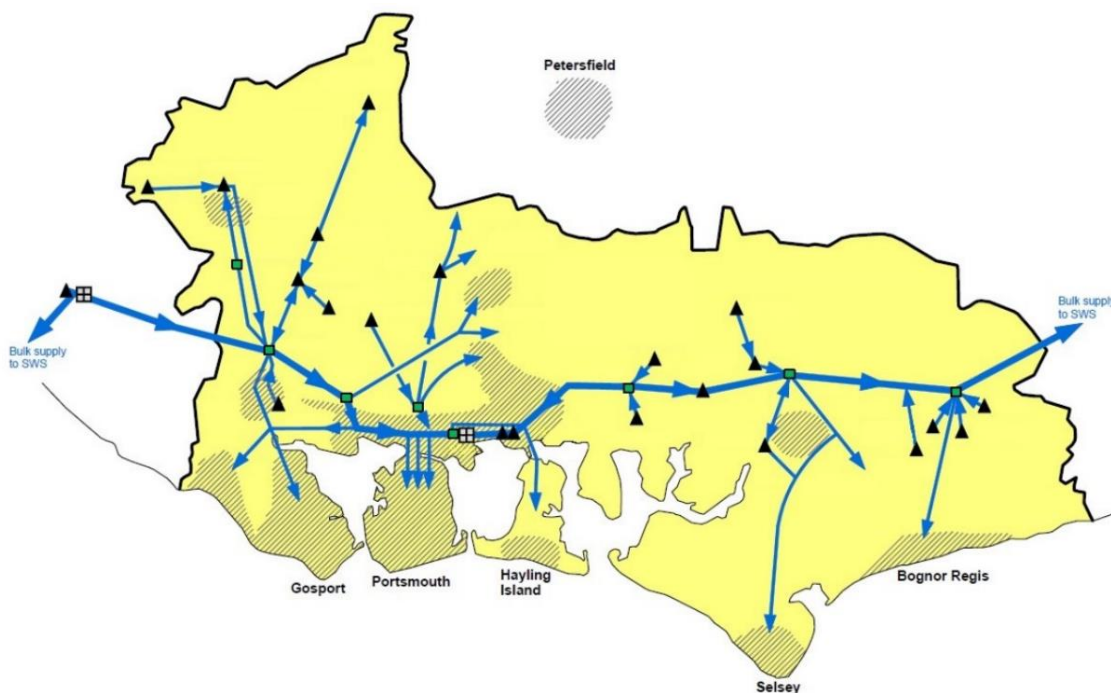


Figure 13.7: Portsmouth Water Area of Supply (Portsmouth Water 2019)

¹ Portsmouth Water Resources Management Plan 2019, Available from: <https://www.portsmouthwater.co.uk/wp-content/uploads/2019/11/Final-Water-Resources-Management-Plan-2019.pdf>

Compliance with EC Bathing Waters Directive

The Solent Water Quality Award Scheme was launched in 1992 to provide an indicator of satisfactory water quality at bathing beaches and other recreational waters around the Solent. The scheme supplements various other beach awards, including the Blue Flag, which deal with other criteria in addition to water quality.

There are designated bathing water sites in Gosport. Between May and September, weekly assessment measures current water quality. Annual ratings classify each site as excellent, good, and sufficient or poor based on measurements taken over a period of up to four years.

Lee-on-the-Solent

The bathing water at Lee-on-the-Solent beach is gently shelving. Over 1km of beach faces south-west, across the end of Southampton Water and the Solent and is sheltered from the wind by the Isle of Wight. The beach is predominantly shingle with some sand intermixed.

The beach is situated in a low-lying peninsula area. The natural drainage (hydrological) catchment area surrounding the bathing water is approximately 140 hectares. There are no streams within the beach area but the River Meon discharges approximately 3km to the north-west and the River Alver 3km to the south-east. The rivers Test and Itchen enter the sea via Southampton Water.²

Current water quality (in 2020) is classified as 'excellent', based on samples taken between 2016 and 2019.

Stokes Bay

The bathing water at Stokes Bay is a gently shelving beach facing south-west across the Solent, sheltered from the wind by the Isle of Wight. The beach is predominantly shingle with some sand exposed at low tide.

The bathing water is situated in a low-lying peninsula area. The natural drainage (hydrological) catchment surrounding the bathing water is approximately 1200 hectares. The River Alver discharges into the north-west of the bathing water and the entrance to Portsmouth Harbour is 3.5km to the east past Gilkicker Point.³

Current water quality (in 2020) is classified as 'excellent', based on samples taken between 2016 and 2019.

² Lee-on-the-Solent: <http://environment.data.gov.uk/bwq/profiles/profile.html?site=ukj3305-16800>

³ Stokes Bay: <http://environment.data.gov.uk/bwq/profiles/profile.html?site=ukj3305-16700>

Flood Risk

The Government's Planning Practice Guidance provides a Sequential Test to enable Local Planning Authorities to apply a risk-based approach to site allocations within their authority boundary. The test classifies land into one of four flood risk zones based on the annual probability of river and sea flooding, ignoring the presence of flood defence measures. The Flood Zones are shown on the Environment Agency's '[Flood Map for Planning \(Rivers and Sea\)](#)'. The Flood Zones are as follows:

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)

Figure 13.8: Flood Zones (Source: Flood Risk and Coastal Change PPG, Reference ID: [7-065-20140306](#), Date accessed: 18/11/2020)

Strategic Flood Risk Assessment

As Gosport is a low-lying coastal borough it is at risk of flooding. The Partnership for South Hampshire (PFSH) (formerly PUSH) published a Strategic Flood Risk Assessment (SFRA) for the South Hampshire sub region in 2007. The SFRA has been used to inform the preparation of development plans and to assist developers in the preparation of site-specific flood risk assessments where these are required.

In 2016 the SFRA was updated by the Eastern Solent Coastal Partnership (ESCP) (now Coastal Partners) on behalf of PFSH and the revised mapping layers and 2016 guidance document for Gosport will be used to prepare the SFRA for the revised Gosport Borough Local Plan.

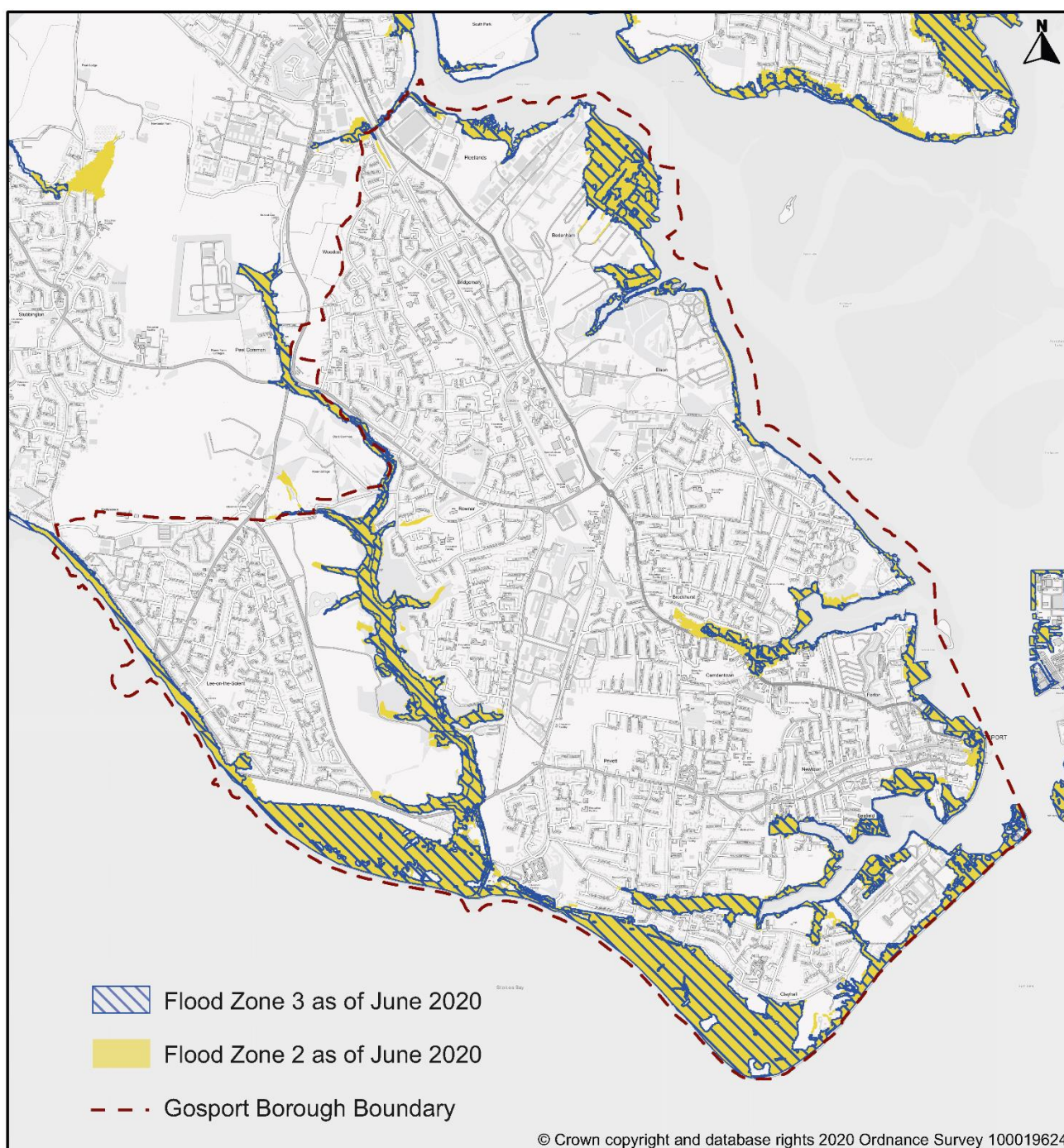
The PFSH SFRA Guidance Report is available on the Gosport Borough Council website along with a link to the PFSH mapping output layers: <https://www.gosport.gov.uk/article/1299/Strategic-Flood-Risk-Assessment>

Gosport Borough Flood Risk

The amount of Gosport Borough in Flood Zone 2 and 3 is shown in Figure 13.9. The latest flood maps using data provided by the Environment Agency are shown below.

Flood Zone	2018 area (ha)	2019 area (ha)	2020 area (ha)
Flood Zone 2	53.62	54.18	48.57
Flood Zone 3	380.68	381.48	314.66
Total	434.3	435.66	363.23

Figure 13.9: Amount of Gosport Borough in Flood Zone 2 and 3 (Environment Agency)



Dwelling completions within Flood Zones

The Council consults the Environment Agency on all applications in Flood Zones 2 and 3 and on planning proposals for sites exceeding 1 hectare in Flood Zone 1.

The number of dwellings built in Flood Zones 2 and 3 since the start of the Gosport Borough Local Plan (2011-2029) plan period in 2011 is shown in Figure 13.10:

Year	Total dwelling completions (net)	Total completions within Flood Zone 2/3
2011/12	339	0
2012/13	75	0
2013/14	-33	0
2014/15	32	4
2015/16	180	2
2016/17	161	3
2017/18	219	68
2018/19	58	0
2019/20	135	0
Total	1,166	77

Figure 13.10: Net dwelling completions within Flood Zones 2/3 (2011 to 2020) (GBC Monitoring)

Coastal Defence

North Solent Shoreline Management Plan (NSSMP)

The North Solent SMP (which covers the coastline from Selsey Bill to Hurst Spit) was adopted in December 2010. It sets out the management of the North Solent coastline over the next 100 years. The document was prepared on behalf of the Coastal Local Authorities and the Environment Agency, and with the support of other local and regional organisations with various responsibilities and powers for managing the coast.

The SMP provides broad scale assessment of the coastal flooding and erosion risks and advice to operating authorities and private landowners on the management of their defences. It is a non-statutory policy document for coastal flood and erosion risk management planning. The coastline is sub divided into Policy Units (shown in Figure 13.11), based on natural sediment movements rather than administrative boundaries.

The plan considers objectives, policy setting and management requirements for 3 main time periods:

- From present day (taken nationally as being 2005) 0 – 20 years (short term) (Epoch 1);
- Medium-term 20 – 50 years (medium-term) (Epoch 2); and
- Long-term 50-100 years (long-term) (Epoch 3).

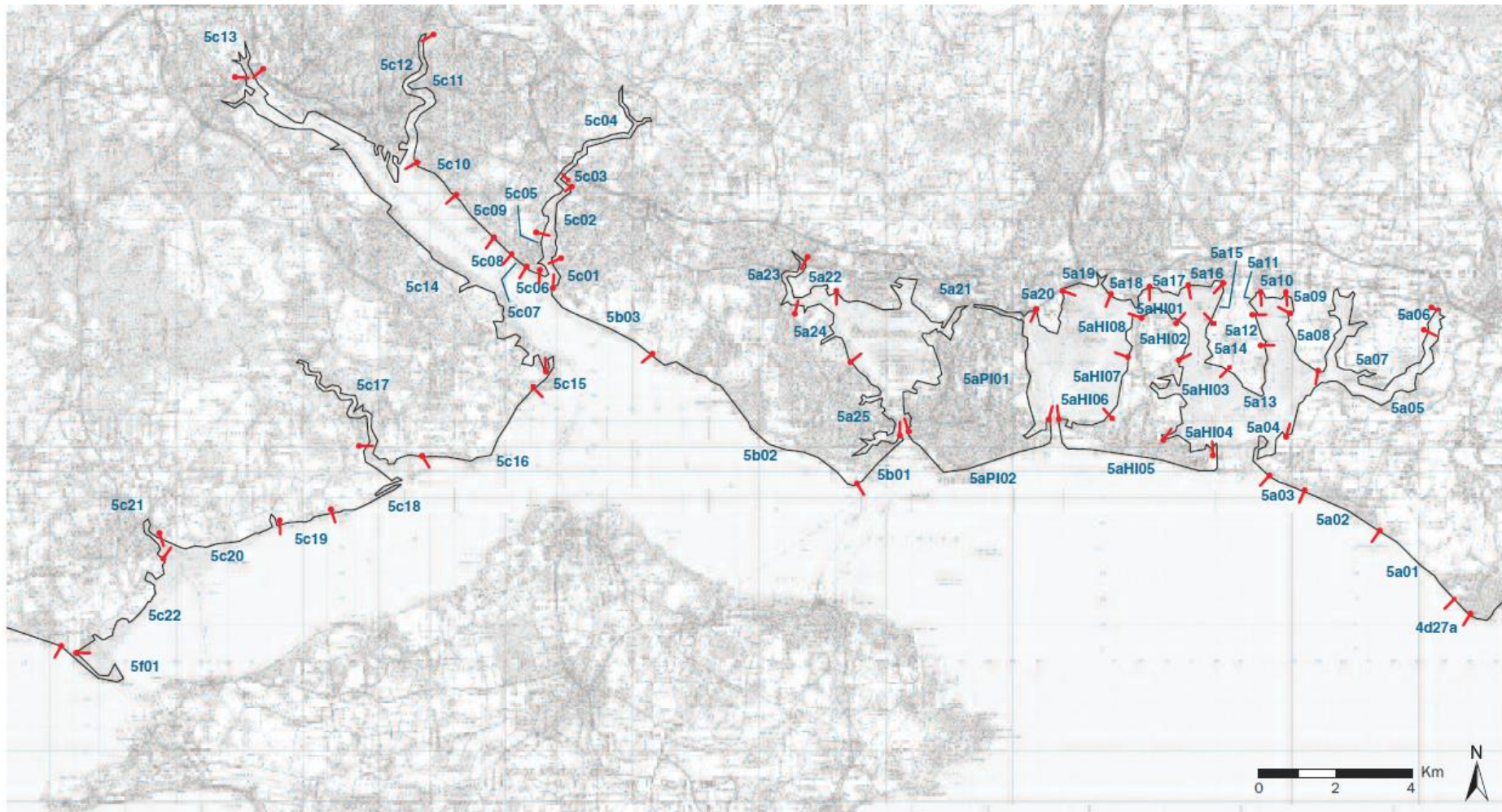
The Plan also sets out four generic DEFRA policy options available to each shoreline Policy Unit:

- **Hold The Line (HTL):** Maintain or upgrade standard of protection provided by defences. This policy should cover those situations where work or operations are carried out in front of the existing defences (such as beach recharge, rebuilding the toe of a structure, building offshore breakwaters, etc.) to improve or maintain the standard of protection provided by the existing defence line. This policy also involves operations to the back of existing defences (such as building secondary floodwalls) where they form an essential part of maintaining the current coastal defence system.
- **Advance The Line (ATL):** construct new defences seaward of existing defences. Use of this policy should be limited to those policy units where significant land reclamation is considered.
- **Managed Realignment (MR):** allowing the shoreline to move backwards or forwards, with management to control or limit movement (such as reducing erosion or building new defences on the landward side of the original defences).
- **No Active Intervention (NAI):** a decision not to invest in providing or maintaining defence.

Gosport Borough’s coastline is divided into several Policy Units which are shown in Figure 13.11 on the following page. In summary the management policies adopted in the NSSMP for those Policy Units in Gosport Borough are:

Policy Unit reference	Start of unit	End of unit	Epoch 1 0 – 20 years	Epoch 2 20 – 50 years	Epoch 3 50 – 100 years
5A24	Fleetlands (MoD Boundary)	Quay Lane (MoD Boundary)	HTL	HTL	HTL
5A25	Quay Lane (MoD Boundary)	Portsmouth Harbour entrance (west)	HTL	HTL	HTL
5B01	Portsmouth Harbour entrance (west)	Gilkicker Point	HTL	HTL	HTL
5B02	Gilkicker Point	Meon Road, Titchfield Haven	HTL	HTL	HTL
HTL = Hold The Line					

North Solent Shoreline Management Plan - final policy unit boundaries



5F01 Policy Unit Name
— Policy Unit Boundary



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Figure 13.11: NSSMP policy unit boundaries (Source: NSSMP 2010)

River Hamble to Portchester Flood and Coastal Erosion Risk Management (FCERM) Strategy

The Eastern Solent Coastal Partnership (now called Coastal Partners (CP)) prepared the River Hamble to Portchester Flood and Coastal Erosion Risk Management (FCERM) Strategy. The Strategy covers 58km of coastline which stretches from Portchester Castle to Burrige (on the east bank of the River Hamble). It includes the Gosport and Lee-on-the-Solent coastline. The strategy was adopted by Gosport and Fareham Councils in April 2015 and was approved by the Environment Agency (EA) in April 2016. The Strategy identifies a series of Strategy Management Zones (SMZs) and puts forward an action plan of planned works to be delivered.

The Gosport Borough area is covered by two SMZs (called SMZ2 and SMZ3) which are shown on the following page in Figure 13.12. SMZs covers the area from Fareham Creek to Gilkicker Point and SMZ3 covers the area from Gilkicker Point to Titchfield Haven.

The Strategy recommended three priority schemes in three areas of Gosport. These are Forton, Seafield and Alverstoke. The latest information on these schemes can be found in the Council's Authority Monitoring Report (AMR) which is available online: www.gosport.gov.uk/amr

The initial assessment of the flood and erosion defence infrastructure required is set out in the Council's Infrastructure Delivery Plan (IDP) which is also available online: www.gosport.gov.uk/infrastructure

Coastal Change

Local Councils should identify areas likely to be affected by physical changes to the coast and refer to this area of change as a Coastal Change Management Area (CCMA). The starting point for determining whether such an area is required is the adopted North Solent Shoreline Management Plan (NSSMP). As detailed above, the NSSMPs adopted policy for the Borough's coastline is Hold The Line and the Borough does not currently have any CCMA's.



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Figure 13.12: Strategy Management Zones (Source: River Hamble to Portchester Coastal Flood and Erosion Risk Management Strategy, Coastal Partners)