West Itchenor Sea Wall



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1. Description

The West Itchenor Sea Wall, labelled as 'New Lipchis Way' on some maps, runs for about 400m from the east side of Itchenor Sailing Club . The wall is topped by a foot path which at the west end returns up to The Street via Club Lane, and to the east returns up to Spinney Lane.

On the sea side of the wall is marsh of varying height below the high tide level. On the land side is a basin where the lowest levels incorporate a fresh water rife. This large area is below the normal high tide level and with the benefit of sluice gates, allows rain water run-off from the fields and land to the south to drain northwards regardless of tide level and collect for discharge into the sea at low tide.

The area behind the wall is largely owned by a number of private houses and a trust. Much of the area has been allowed to remain as a natural fresh water habitat, while some of the areas closer to adjoining properties have been turned to lawn, albeit subject to occasional flooding. Some owners have sought to reduce flooding by building up levels on their land, which reduces the potential capacity of the 'lake', and probably also reduces the natural diversity of the ecosystem.

The sub-sea level zone behind the sea wall also contains important elements of Village infrastructure including:

- Gravity and pumped sewer lines
- Storm water rifes and drainage ditches
- Electrical substations
- Communications and IT cabling and junctions
- The main and only public road servicing West Itchenor, and the only all-tide emergency access to the Chichester branch of the Harbour.

Over the centuries several houses have been built which rely on the sea wall to control tidal water levels, and the existence of the low land behind the wall to collect rain water run off at a level well below high tide.

2. History

The mainly flat lands of West Itchenor drain through ditches and rifes to Chichester Harbour. The most defined network of channels drain to either side of the Church, itself built on a small hillock. In the Middle Ages, chalk and other building materials were brought by barge up the rife on the high tide and distributed locally.

Barge trade stopped when the tidal area of the rife was blocked by a sea wall. The introduction of the wall was probably motivated by the need to provide better drainage to the hinterland of fields. By constructing a wall to keep the high tide out, drainage could be maintained throughout the tidal cycle, and a drier agricultural landscape, not impacted by salt water, could be maintained, thus allowing better arable crop yields.

The earliest record of the sea wall found so far in the Parish documents is a Grant dated 6th October 1616 from Richard Ernlie of Cakeham to Richard Smith of Birdham of land and buildings, including the below high tide area, to include:

"a messuage, barn, 15a[acres]. of arable, ***and 2a[acres]. of marsh, sometimes drowned by the sea, but now walled or banked in, in West Itchenor, in occupation of John Ive…***"

In March 1839, J Butler, surveyor, produced a map of the Parish of Itchenor which shows the wall (see below), the rife and a sluice gate slightly to the east of its present location.

Records document the maintenance and improvement of the wall, during 1896-7, noting labour hours and the tonnage of stone and mud used.

In 1907 there are further records detailing labour and materials used 'working on the sea field and bank and repairing sluice.' Residents will recognize some of the names of those involved, including Mr. G Haines, G Haines Junior, and Mr. Darley. The majority of the work was paid for by "His Grace", a reference to the Duke of Richmond, and also Mr. Darley and Mr Winter (or Mr Osborn). Payments were in proportion to the area of land owned by each of the three, 26 acres in total at a cost of £83. 4s 6d.



Map produced in March 1839 by J. Butler, a surveyor.

In 1908 G Haines invoiced Mr. Curry for the hire of a mud barge, cost of shingle and time for the use his boat for 'getting the mud-barge about'

The process of maintaining and improving the wall continued through the 20th Century. The last major work was the reinforcement of the sea wall side of the earth berm with a piled retaining wall and concrete paviours, and the installation of a new sluice gate. The sluice gate is managed by the Environment Agency .

So we find that the sea wall has been in place, for over 400 years and with its existence ensured by regular maintenance, the design of infrastructure improvements, such as the introduction of paved roads, surface drainage and sewerage have all been done on the basis that the sea wall will continue to exist. Property development has also been carried out, much of it in the 1930's, with the same presumption.

3. Current Policies for the Maintenance and Improvement of the Sea Wall.

Current Policy for the Sea Wall is summarised in a chart within the Environment Agency approved Shoreline Management Plan 13 – Selsey Bill to Hurst Spit prepared in 2010. The report was written by the New Forest District Council. The Policy is 'Hold the Line' but with the added note "No Public Funding Available". This policy is also referenced and defined in the Joint Chichester Harbour – Area of Outstanding Natural Beauty Supplementary Planning Document Approved 16th May 2017, an extract from which is reproduced below.

"Hold the Line / Hold the Line (No Public Funding Available)

25.8 Maintain: defences are maintained at their current levels, but as sea levels rise, flood risk increases over time.

25.9 Sustain: existing defences are raised and strengthened as sea levels rise keeping the level of flood risk the same as it is now.

25.10 Improved: new defences are installed or existing defences are improved. Managed realignment schemes allow controlled change in the shape of the Harbour's shoreline. The existing line of defence is removed or breached, and a new structure constructed landwards, allowing the land in-between to become inundated, creating new intertidal habitat.

25.11 There are five discrete types of defence that can be used:

1. Surface layer structure - construction of a protective layer to a coastal slope that is otherwise naturally stable. The protective layer is sufficiently robust to resist tidal and wave action. It can apply to both erosion and flood protection and can be combined with bed formation and embankment formation.

2. Bed formation - the raising of foreshore levels using a compatible material to reduce the exposure of the coastal slope to wave action. This only applies to erosion protection but can be combined with a surface layer structure, an embankment formation, a gravity structure or a piled structure.

3. Embankment formation - the raising of ground levels using bulk materials to form a barrier against flooding. (A similar concept can be used to form groynes on the foreshore, constructed in natural stone). An embankment mainly applies to flood protection. It can be a secondary defence behind an existing defence and it can be combined with a gravity structure or a piled structure.

4. Gravity structure - a heavy-duty rigid construction that uses hard materials, relies on its weight for its stability, and forms a

barrier against coastal erosion and flooding. It can be a secondary defence behind an existing defence or combined with a piled structure.

5. Piled structure - construction works that rely on their embedment into the underlying ground for their stability, and form a barrier against coastal erosion and flooding. (A similar concept can be used to form groynes on the foreshore). A piled structure can be a secondary defence behind an existing structure and can be combined with a surface layer structure or a gravity structure.

25.12 Each one can be used as a standalone defence or in combination with others. They can be used in various sizes to suit the local situation or their combination with other types of defence. The overall difference between the various options mainly relates to the particular way in which they function and their general impact on the surrounding environment."

Development in West Itchenor, as in other areas of the country is determined in part by the application of the National Planning Policy Framework. Reference is made to this in the December 2023 Level 1 Strategic Flood Risk Assessment ('SFRA') prepared by consultants and published by Chichester District Council. Of particular significance is the NPPF guidance that minimum finished ground floor levels must be 300mm above estimated river or sea flood levels. When meshed with the projected tide and storm levels referenced in the Shoreline Management Plan, this results is a minimum ground floor level of 4.7m OOD for all new dwellings, and most works requiring planning permission to existing dwellings. Given that parts of critical infrastructure and many buildings are below this level, then if the Sea Wall is to continue to meet its historical function, it will need to be raised progressively to 4.7m OOD, which is about equivalent to a 7.4m tidal water level.

4. The 6th April 2024 Event:

On 6th April 2024 West Itchenor experienced a high tide of about 6.1m. The projected tide was 5.4m, but with moderately low pressure and a southerly wind, though no significant rain, the sea wall was over topped by up to about .4m for a period. This resulted in the land which is normally protected flooding to an approximate dept of up to 2m and corresponding with about a 4m tidal level. Several areas of the sea wall were damaged, most commonly by the partial collapse of the back of the wall which is currently steeper than the natural slope for an earth structure (about 27º). There was also considerable erosion to the footpath surface running along the top sof the wall. Buildings at both ends of the wall were impacted. The Grade 2 Listed Itchenor Sailing Club flooded by about 35cm, and several buildings along the Street that back onto the land behind the sea wall flooded, some seriously. The access road to Spinney lane was impassable, and some outbuildings flooded.

Notably, this event took place without the added pressure of storm water running off the fields and into the 'holding lake' awaiting low tides to drain to the sea. On other occasions, historically, it has been the land run off that has caused significant local flooding.

During the period of the flood, the sewerage pumping stations shut down, and a combination of sewerage and flood water ran into the lake and some homes. According to Southern Water, the pumped mains are equipped with overload sensors which progressively shut down the pumps down the line, and so any area below the flood level is liable to sewage overspill.

The level of water in 'the lake' was determined by the period that the sea wall was over-topped. On this occasion it remained about 2m below the actual high tide, but if the wall was significantly breached, as one would expect if it were not repaired and reinforced, then flooding of dwellings and critical

infrastructure would be a daily occurrence, not something related only to unusually high tides or stormy weather.

5. Recent Progress

Following the over-topping event, the WIPC established a Flood Sub Committee, headed by Peter Taylor. At the request of the Sub-Committee, WIPC retained surveyors to provide accurate levels along the top of the sea wall, and in various places around West Itchenor that were impacted or might be impacted if the sea wall failed to protect the village.

The Sub Committee assembled available data, from the EA and various other sources, to determine the current state of flood policy for the sub-region. It became apparent that the original Flood Studies for the region approved in 2010 envisaged that detailed sub-regional studies would be commissioned immediately thereafter. This would have included a study of Chichester Harbour. However, this work was never commissioned.

Having become aware of the Local Authorities partnership, Coastal Partners, the WIPC Sub Committee contacted them and was invited to a meeting in September 2024. It transpired that Coastal Partners, as the relevant coordinating agency, was bidding for EA funds to carry out the sub-regional study in order to develop long term policy for each of the various areas around Chichester Harbour originally envisaged in 2010. However, whilst hoping to start in January 2025 what would have been a five year programme, Coastal Partners were advised in December 2024 that funding would not be available until 2027. We had offered to be a case study and this was welcomed by Coastal Partners partly because the West Itchenor Sea Wall represented in microcosm, many of the issues which had to be reconciled in the area as a whole. Had the study gone ahead, we would have looked to crystalise the medium and long term plans for West Itchenor using this vehicle.

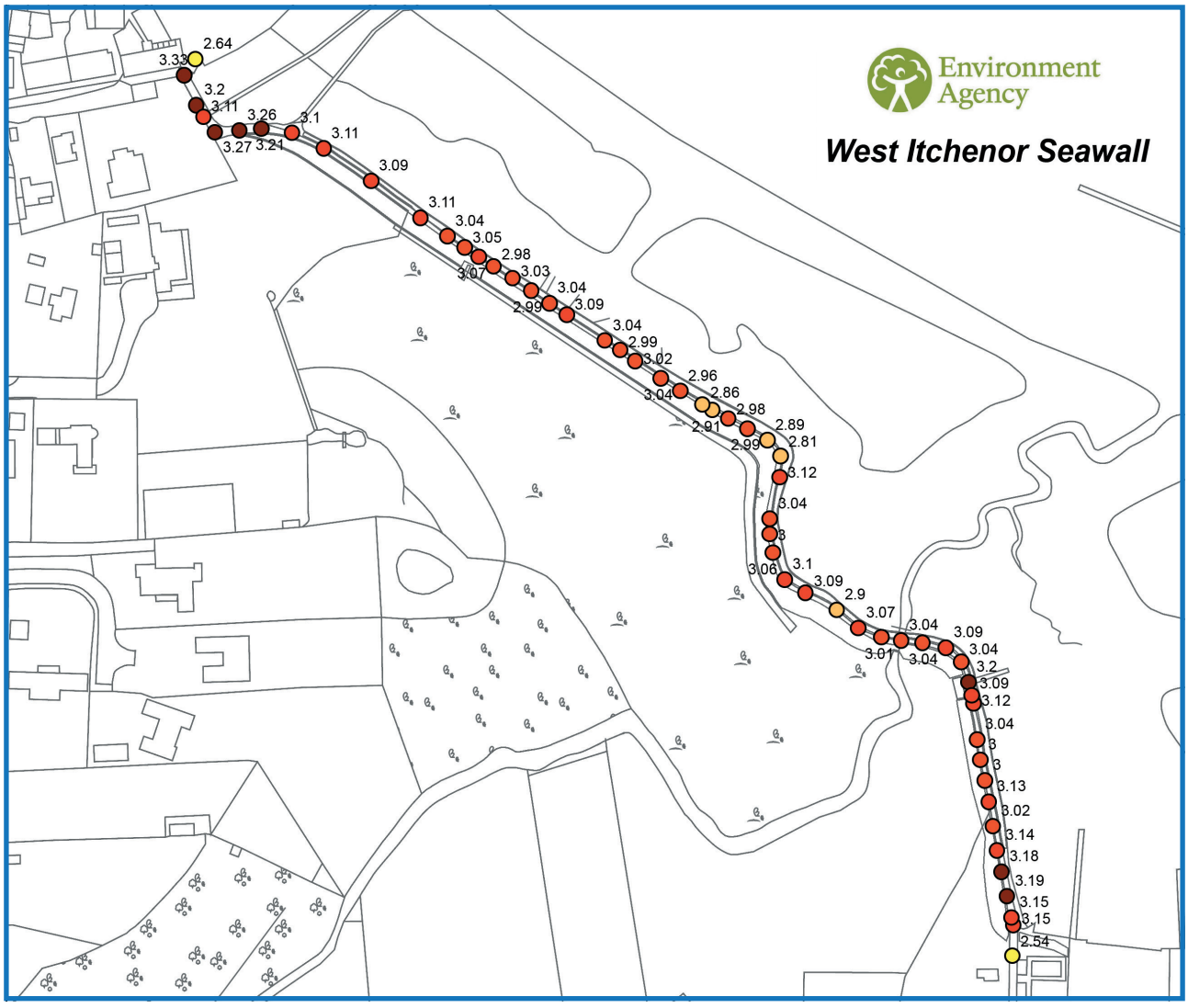
Coastal Partners explained to us that proposals to improve sea defences needed to show positive outcomes against a range of variables which included increasing eco-system diversity and productivity in saline and fresh water ecologies, as well as protecting infrastructure and property in a cost effective way. Of course, not all areas would provide the same outcomes. Some areas could cope with ‘managed retreat’ strategies, while others, such as the current flood barriers in Portsmouth, focus on the protection of highly and densely populated neighbourhoods. The aim was, taking the whole sub-region into consideration, to gain an overall positive outcome in all the relevant fields.

Historically, EA has taken responsibility for the seaward face of the West Itchenor Sea Wall, with the placement of concrete paviours on the face to control erosion, and the installation and maintenance of the sluice gate. WIPC wrote to EA to advise them that in the view of WIPC, the recent over-topping had damaged the fabric of the sea wall, increasing the likelihood of catastrophic failure through further over-topping events, and also risked damaging infrastructure and property which was in turn a potential threat to lives in the village. EA responded and a joint visit between EA and WIPC representatives took place in January 2025 to inspect the wall, revise its reported status and agree remedial measures. Following a second visit, it was agreed that EA would repoint the paviours, and level the top surface to 3.3m AOD throughout (it is at this level at the western end, but subsidence and erosion seems to have reduced the eastern end to about 2.9m AOD). Most recent indications are that funding has been agreed and that this ‘short term’ repair should take place during Summer 2025.

Discussions with stakeholders in other local areas have shed further light on the role and position of Natural England as a statutory consultee.

Their terms of reference have seemingly caused several local initiatives to stall for a considerable period. However, there are two derogations which Natural England will accept: 1. That there is 'no alternative' and 2. that there is an 'over-riding public interest' case for carrying out the proposed flood prevention initiative.

In the light of the actions of EA to assist with short term repairs, but the delay in funding to Coastal Partners which in effect means that medium and long term strategies for our area are very unlikely to be formulated and approved in under 7 years, that is, until 2032, WIPC consider that it was necessary to retain consultants so that the village can move ahead in the development of its own Sea Wall programme for the medium and to some extent for the long term. WIPC hope to work with EA, and other interested parties, both directly, and via Chichester District Council, through the Planning process, to agree and implement a programme of works to the Sea Wall to ensure the safety and amenity of the village residents and visitors.



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