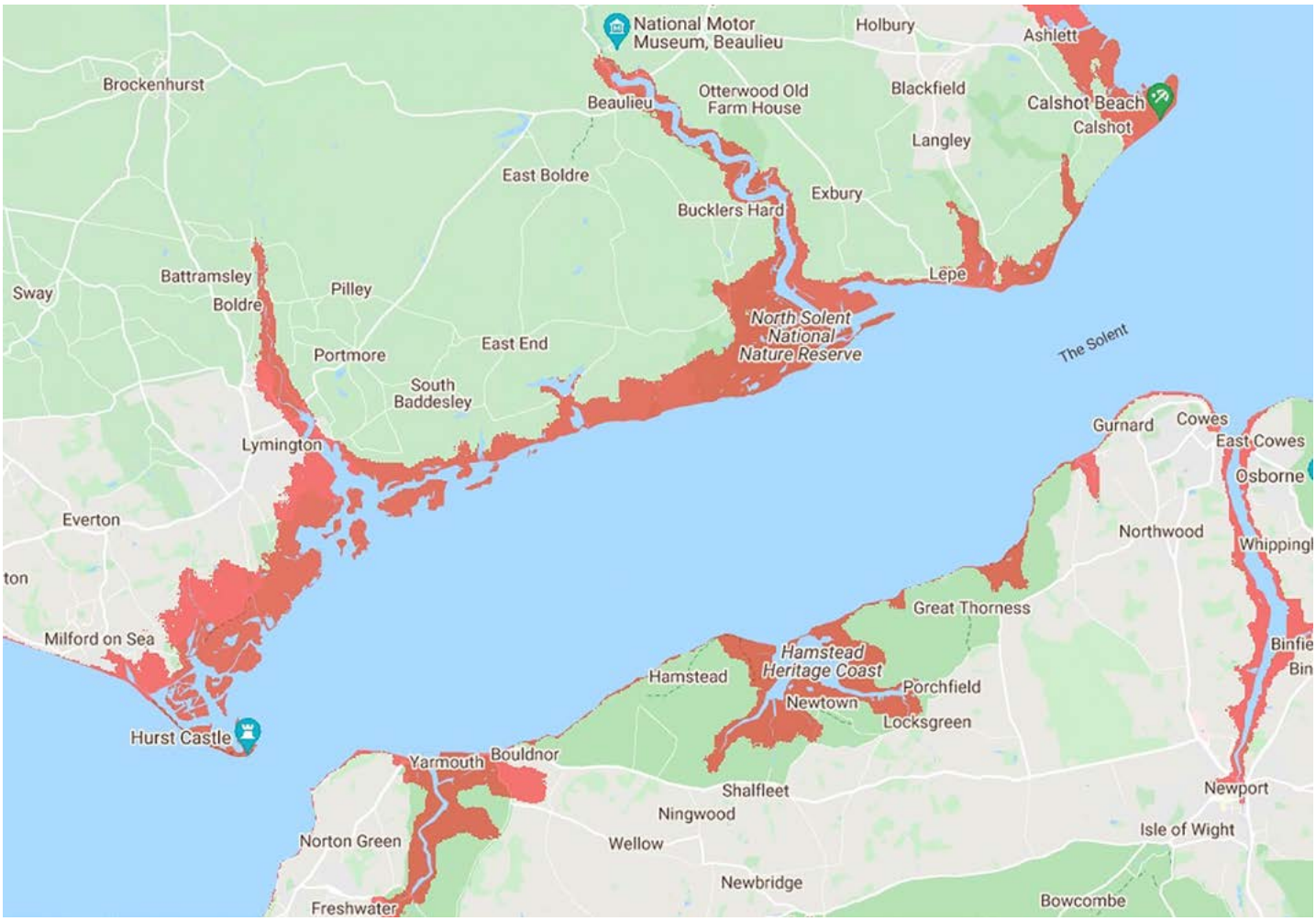
Solent Protection Society

News

Protecting the Solent and its Environment for Future Generations Autumn **2021**

Anticipating Sea Level Rise



This map of the Western Solent is produced by kind permission of "Climate Central" and shows areas potentially subject to flooding by 2050

There have been many articles published recently predicting the future extent of tidal flooding and some show an horrific picture. It is important therefore to understand how these scenarios are derived. In simplistic terms we start with a "Digital Terrain Model" (DTM). This is the computer equivalent of a physical model of the land and every pixel is assigned a height. Then you take a "predicted" water level and you ask the computer to colour in everything below that level, which is very similar to taking a traditional Ordnance Survey map and colouring everything below the 5-metre contour.

As you will see there are assumptions that need to be understood to decide how useful the map is. Firstly, let's look at "water level" predictions.

Water level predictions

As we all know the water level around the coast is tidal, with high tides occurring twice daily, spring and neap tides on the Lunar Cycle and bigger springs at the equinox. There are other complicated factors that result in small variations over a longer cycle of 18.6 years. These tidal levels are shown in tide tables and can be predicted many years in advance. As they vary locally, tables are predicted for the nearest major port.
However, if you read the tide table carefully you will find notes to the effect that tides are calculated under "average weather conditions" so, "tide table" tides take no account of unusual weather conditions.

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If the atmospheric pressure is high, sea level is slightly depressed and vice-versa. However, there is a more pronounced effect when the low-pressure system moves at about the same rate as the natural tidal movement, producing what is known as a tidal surge or storm surge. In the case of the Solent, if a depression follows the English Channel it can result in the observed tide being up to about a metre above the tide-table tide.

The same low-pressure systems also generate strong winds; hence large waves, and the combined effect of storm surges and large waves can lead to flooding if there are not adequate defences. Surge predictions are produced continuously by the "National Tidal and Sea Level Facility" (https://www.ntslf.org/) and used, in combination with wave forecasting, by the Meteorological Office and the Environment Agency to generate Coastal Flood warnings.

Sea Level Rise

There is much talk about sea level rise, but sometimes with little clarity about what it means in practice. There are two distinct mechanisms that produce a rise in local sea level, geological (Isostatic) and climatic (Eustatic).

Following the last Ice age, which covered the North of England and Scotland, the northwest of Britain is rising and the southeast sinking, tipping about a line roughly from Cornwall to the Wash. This is why ordnance datum (ODN) is based at Newlyn in Cornwall, which shows no change. Before 1921 Ordnance Datum Liverpool was used and since Liverpool is rising there are variations between the two. In the Solent area the land is sinking by about 1mm a year, and this is fairly constant.

The Eustatic sea level rise has two major components, thermal expansion and melting of ice on land. As the sea temperature increases it expands and so the total volume of seawater in the world increases causing a general rise. As ice on land melts and drains into the sea it also causes an increase in the total volume of water in the oceans and consequently sea level rise.
Melting of floating ice does not directly increase sea level, but unfortunately it does have another effect. As seawater is much darker that ice, it absorbs more of the sun's radiation and so creates a general rise in the temperature of the oceans.

Rates of Sea Level Rise

There are lots of different estimates of sea level rise, both historically and for the future, but future predictions are only estimates and depend on assumptions made, particularly on Greenhouse Gas emissions. Historically, in the Solent there has been a consistent sea level rise since the last ice-age of about 2mm per year, but there is strong evidence that this has now increased and is currently between 3mm and 4mm per year.

In August 2021 the Intergovernmental Panel on Climate Change (IPCC) issued a major report on all aspects of Climate Change. Chapter 9, entitled "Ocean, cryosphere, and sea level change", concludes that global sea level rose faster in the 20th century than over the previous three millennia. IPCC estimate that global sea level increased at a rate of 2.3mm per year at the start of the 20th century but further increased to 3.7mm per year from 1971 to 2018. These are global figures and local factors need to be added. IPCC conclude that by 2050 global sea level is likely to rise by about 200mm (6mm per year) increasing to 600mm (8.5mm per year) by 2100. The further ahead we look, the more uncertainty, as some factors are now impossible to mitigate. We need to plan for these future increased sea levels.

We should also plan for flexibility as, with increased understanding, it is certain that the estimates will need to be revised.

The Further effect of Sea Level Rise

As described earlier, flooding in most of England is caused by a combination of tidal and meteorological events, so sea level rise does not simply cause flooding, but increases the frequency of flooding. There are other effects which, in the longer-term, are also potentially serious.

The natural consequence of rising sea levels would be for marshes and beaches to move inland, however, since Victorian times, most of our coastline has been "managed". In effect we have a Victorian coastline with a 21st century foreshore. This generally makes it difficult for natural processes to continue with the result that both marshes and beaches will be lost in a process known as "Coastal Squeeze". This in turn allows larger waves to reach any sea defences and so cause an increased probability of both flooding and coastal erosion.

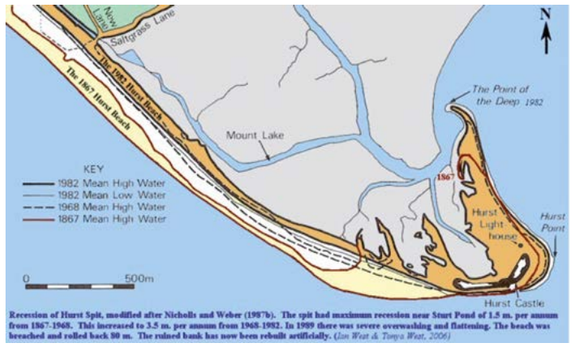
We have all seen the spray which results from a large wave hitting a near vertical seawall, but roughly the same amount of energy is also directed downwards and will erode the beach below. This will continue until the beach is below low-tide level. The same process happens with salt marsh, but in a low-energy environment (smaller waves) over a much longer timescale. The long-term effect, particularly if seawalls are retained in their current orientations, will be the loss of our beaches with all the economic consequences for coastal towns.

There is another effect that is often neglected. In all coastal towns the surface water from roads and sometimes rivers, is discharged to sea through sluices or tide-flaps. These allow water to drain out at low tide but stop the seawater coming back at high tide. Consequently, marshes have been drained and in some cases land "reclaimed" to only just above low neap tide level. The marshes at Bembridge are such an example. As the sea level rises the period over which water can drain reduces and unless there are major changes in the surface and highway drainage systems, for example the installation of more storage or pumps, surface water flooding will occur more frequently. As almost all climate change scenarios predict increases in rainstorms, the combined effect will lead to more flooding, particularly in low-lying coastal towns. Sadly, this effect has not been widely recognised and it is likely that some serious incidents will occur before it is seen as a national priority.

The Evolution of Hurst Spit

Following the collapse of a section of Hurst Castle, it is interesting to consider the long-term evolution of Hurst Spit before coming to conclusions on its future and that of the castle that sits on the end. The coastline between Christchurch and Hurst Spit has been subject to much study, from geography students, serious academic research and major consultancies working for both the Local Authorities and the Environment Agency. The following account tries to distil some of this study to give a relatively simple explanation of a complex situation. For those who wish to investigate further there are some references to papers available on the internet. See 'Further reading' on the back page.

Spits are formed when Littoral Drift causes a change in direction of a coastline. In the case at Hurst, Littoral Drift is from West to East, from Christchurch to Milford-on-Sea, and so the sands and gravels that are eroded from the soft cliffs, particularly at Barton-on-Sea, become a shingle feed for the Spit. The northern recurve at the eastern end of the spit is caused by tidal flows in and out of the Solent and basically it is formed from an excess of shingle needed to form the Spit that falls into deeper water and is transported by tides. Shingle is also transported South and deposited on the Shingles Bank, where it is thought to remain rather than coming back into circulation.



Recession of Hurst Spit, modified after Nicholls and Weber (1987b). The spit had maximum recession near Stunt Pond of 1.8 m. per annum from 1867–1968. This increased to 3.5 m. per annum from 1968–1982. In 1989 there was severe overwashing and flattening. The beach was breached and rolled back 80 m. The ruined bank has now been rebuilt artificially. (Jon West & Tonya West, 2006)

Hurst Spit will naturally become dynamically stable, what is eroded from the Spit should be replaced from erosion from the cliffs between Barton-on-Sea and Milford-on-Sea. As the Spit aligns with the beaches it will move landward, north in the case of Hurst, at the natural rate of erosion of the cliffs. There is much literature on these erosion rates and the quantity of material they produce, but over the last 100 years the natural rate appears to be a little over 1 metre per year. It should be noted that this is not a linear process but occurs in chunks when there is a major storm, causing the Spit to roll back by tens of metres at a time.

Hurst Castle was first built between 1541 and 1544. At that time there would have been no coastal protection works between Christchurch and the Spit which would have been in dynamic equilibrium fed by erosion along the coast.

From the beginning of the 1800s until the start of the 20th century there was a small community of houses on the Spit around the castle including a pub! This suggests that in those years it was relatively stable.

The first Groynes were built at Milford-on-Sea in 1857 and there is reference to drainage works for Highcliffe Castle gardens following the construction of the "New Castle" there in 1830. The first coast protection works were constructed in Victorian times when the railway promoted the development of coastal resorts. As in most of Britain, this part of the coastline started to be fixed by engineering and although erosion still occurred, the result was a reduction in the feed of natural material to Hurst Spit.

Over the years the coastal protection works have become more intensive and although offering some protection to Barton-on-Sea and Milford-on-Sea they have, over time, reduced the feed of sand and shingle to the Spit.

There is a very good record of the geological history on the website of Hurst Spit History which shows a number of interesting aspects. The pictures taken in 1958 and 1979, when storms over washed the Spit, show clearly the shingle deposited behind the Spit. If it had been left alone it would have reformed, but in a new position. The author suggests that in 1979 the Spit was pushed back by twelve metres in places. So, taking both events into account this could amount to twenty-five metres total.

The Spit was subsequently rebuilt using dredged shingle and bulldozers, there are two significant effects of this:

1. The Spit is now clearly some distance seaward of its natural (dynamically stable) position. Estimates of how much vary, but probably between 25 and 100 metres.

2. In a natural spit the shingle is graded by the waves depositing it. This has two advantages; it is more densely packed than can be achieved by bulldozer and has better natural drainage.

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It is also worth noting that the cost of this rebuild was justified, not to protect the Castle, but because the Spit provides protection to the seawall from Keyhaven to Lymington and hence defence against flooding to Lymington and the surrounding area.

As a result of the lessening of the supply of shingle which is probably aggravated by higher sea levels and increased storminess, coupled with slight changes in wind direction caused by Climate Change, the shingle to the East of the castle has disappeared and this has caused the undermining and subsequent collapse of part of the Castle as shown in the photos.

What of the Future?

The two Shoreline Management Plans (SMPs) for this area The North Solent SMP and Poole and Christchurch Bay (2 Bays) SMP both have a "Hold the Line" (HTL) policy for Hurst Spit, but as outlined earlier this should not be taken to mean protection of the Castle.

English Heritage, as owners of Hurst Castle will need to determine its future. This may involve the protection or removal of a portion of its structure or to simply abandon it to the sea.

Please see 'Further reading online' on the back page.

Hurst Spit – the Future

Shoreline Management Plans (SMPs) and Projects

A previous page outlined the history and evolution of Hurst Spit, and this article starts to explain how the future will be decided.

Coastal Groups and SMPs

Coastal groups are voluntary organisations consisting of Local Authorities, the Environment Agency and other interested organisations for seven English Coastal areas. These groups were established in 2008 by the Department of Environment, Food and Rural Affairs (DEFRA) and the map shows their location around the country. The locations were chosen to represent and coincide with coastal processes.

In the Solent the relevant Coastal Group is the Southern Coastal Group which is responsible for the area from Lyme Regis to Selsey Bill. Uniquely the Southern Coastal Group is supported by a political group of elected councillors, known as SCOPAC (Standing Conference on Problems Associated with the Coastline). They have a good website https://southerncoastalgroup-scopac.org.uk/ which is summarised in this article.

The main activity of the Coastal Groups has been to devise and monitor Shoreline Management Plans (SMPs). The first SMPs (SMP1) were completed by 2000 and a second round (SMP2) were completed by 2010. There is currently an "SMP-refresh" (SMP-R) project taking place, which is not intended to be a revision, but to consider where external circumstances such as legislation and Climate Change have significant effects on the SMP policies.

This image is reproduced from the Southern Coastal Group website

This image is reproduced from the Southern Coastal Group website. Please see 'Further reading online' on the back page.

It is important to remember that SMPs are strategic policy documents and are aspirational, so an SMP policy is the desired coastal policy for that length of coastline but may not be achievable due to lack of funding and other possible constraints.

More specifically within our Solent Protection Society area these three SMPs are relevant:

No	Name	Western Boundary	Eastern Boundary
13	North Solent SMP	Hurst Spit	Selsey Bill
14	Isle of Wight		
15	Poole and Christchurch Bay SMP Known as 2 Bays SMP Christchurch Bay SMP	Durlston Head	Hurst Spit

The links accessible via "Further reading online" on the back page will take you to the relevant complete SMP, and although they all follow DEFRA/Environment Agency guidance, the formats do vary. They are large documents containing much useful information. However, the main purpose is to devise Coastal Management Policy Options for each of the lengths of coastline for three time periods, also known as Epochs.

The time periods are:

(a) present day (0-20 years)

(b) medium-term (20-50 years)

(c) long-term (50-100 years)

And the possible policy options are:

Hold the existing defence 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.

A policy of HTL does not mean that public funding is secured or guaranteed. Nor should it be assumed that it is safe to develop behind existing defences or additional defences are promoted.

Advance the existing defence 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). A policy of MR does not mean that public funding is secured or guaranteed.

No Active Intervention (NAI)

A decision not to invest in providing or maintaining defences. A policy of NAI does not prevent the continued maintenance of existing defences to enable continued use of existing structures while they are structurally sound.

These are intended to be the only possible policy options, though in a few cases additional details have been added.

It is not easy to find the policy option for a particular length of coastline – for instance in the North Solent SMP they are in the Summary Booklet and Hurst Spit is Policy Unit reference 5F01 – and the booklet shows the "Hold The Line" policy option for all three epochs.

In the case of 2 Bays SMP the final policies are in Section 5 Policy Summary and Hurst Spit is Management Unit CBY7 also showing "Hold The Line" for all three epochs.

What does a "Policy Option" mean?

The outputs of the SMP are "Policy Options" for each length of coastline and for each epoch. It is, however, important to realise that the chosen policy may not necessarily be followed. As SMPs were essentially devised using existing data and very broad economic analysis, they are not intended to be the definitive solution, but a guide for the future.

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In some cases, the Policy Options are described as “aspirational”, as these would apply in an ideal world with no constraints, in particular the availability of sufficient finance. Although these are intended to be the “best” way to manage the coastline, there is no consideration of whether funding can be justified or whether it is indeed appropriate for public funding. There is, therefore, another mechanism which enables policy options to be taken forward to become projects.

Coastal Strategies

It must be remembered that the SMPs are devised using only existing data and the current understanding of Coastal Processes. The funding of SMPs does not allow for new research or detailed survey work, but at the same time there is extensive Coastal Monitoring being conducted in our area by the Channel Coast Observatory, one of several regional Coastal Monitoring stations, which collect coastal data in a systematic format.

Also, Policy Options selected by the SMP are very generic and could be achieved in many ways. For instance, a “Hold the Line” policy option could be achieved by various different engineering operations. These can be roughly divided between “Hard Engineering” and “Soft Engineering” solutions. Hard Engineering is what we generally think of as traditional civil engineering; in the coastal situation the use of concrete or steel to construct seawalls. Soft Engineering is management of mobile sediments to achieve the same aim. Recharging with shingle or sand, or management of saltmarshes, provides a more natural protection.

There are of course examples that span both categories. For instance, the construction of groynes (rock or timber) will control the movement of sand or shingle, and this may include recharge (bringing in more shingle) or recycling (mechanically moving shingle from the downdrift end). The broad decisions required to establish the appropriate action need to consider the financial and environmental benefits, or harm, of strategic options as well as what will be most effective action to achieve the policy option. Funding for Coastal Schemes is mainly provided out of general taxation through DEFRA and prioritised on their behalf by the Environment Agency. To obtain funding, it is necessary to analyse the benefits and ensure that any proposal meets the priorities which prevail at the time.

In most cases powers to do work (note powers not responsibilities) rest with a few different authorities, generally the Environment Agency for coastal flooding and the Maritime Local Authority (District or Unitary) for erosion protection. Additionally, Natural England and English Heritage and other Landowners often have an interest, so Coastal Strategies are almost always conducted by a consortium of Authorities with the help of a firm of Consulting Engineers who provide technical support. Coastal Strategies also have extensive local consultations, to ensure that any proposal enjoys local support and that all points of view have been considered. However, consultees need to be aware that if scheme costs escalate, there is a risk that it will not go ahead, as other schemes elsewhere in the country may then have a higher priority.

Local Coastal Strategies

Taking Hurst Spit as an example, there are two Coastal Strategies that are currently being considered that will help to determine its future.

The Hurst Spit to Lymington Project is being led by the Environment Agency because the major perceived threat is coastal flooding, but additionally in conjunction with New Forest District Council as the maritime district council, Hampshire County Council as the major landowner, and Natural England

Images copied from the project website

which has responsibility for the Heritage asset at Hurst Castle. These stakeholders are supported by Jeremy Benn Associates Consulting, a major consulting engineer specialising in the maritime field. The Strategy is in its early stages and there is much information on the project website.

Images copied from the project website

The Christchurch Bay and Harbour FCERM Strategy

The Flood and Coastal Erosion Risk Management (FCERM) team is being led by Bournemouth, Christchurch and Poole Council, as a maritime District Council, together with New Forest District Council and the Environment Agency. They are supported by AECOM Consultants, another major consulting engineer.

This strategy has only recently started, and it should be noted that both the above strategies cover Hurst Spit itself. However, as Hurst Spit is naturally fed by sand and shingle from Christchurch Bay, this is probably the most important Coastal Strategy for the future of the Spit and the Castle.

Members of the Solent Protection Society Council are on the liaison groups for both of these Coastal Strategies, and we will continue to keep Members informed as they are developed.

The Solent Freeport

In the 2021 March budget, the Solent was shortlisted as the potential site for one of eight Freeports to be set up in the United Kingdom. The Government’s Freeport ‘Bid Prospectus’ set out the overall scale of a Freeport and demonstrated how the maximum ‘outer boundary’, a 45km circle, could fit with the geography of local port facilities, regeneration sites, existing storage facilities and the motorway infrastructure that services them.

The Government’s proposed model allows for multiple sites to be designated within the overall Freeport. The model also ensures that businesses looking to invest in Freeports will have increased options available to help them secure an optimal location that works for them, signalling changes to the planning system for ‘Local Development Orders’ and the relaxation of ‘Permitted Development Rights’ within the Freeport outer boundary.

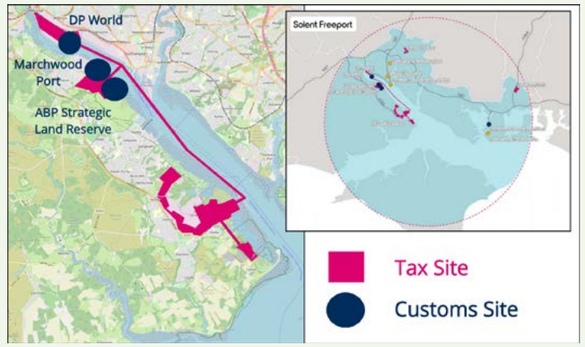
The Solent Freeport will be an area designated by the government where companies associated with the Freeport have distinct tax advantages. Companies that operate within Freeports do not have to pay import taxes on products until they move them outside the outer boundary and into the full UK market. They can avoid paying certain taxes altogether if they bring in goods through the ports and airports to store or manufacture on sites within the boundary before re-exporting them again.

While customs rules and tax rules will occupy business, the subject most likely to affect individual Solent Protection Society members is that of planning. The relaxation of planning regulations within Freeports are aimed at removing restrictions and delays for development within the new Freeport outer boundary. In their initial response to the prospectus, the Solent Freeport consortium welcomed the intent to relax regulations but went on to suggest that the process for securing the necessary permissions would remain ‘time intensive and requires skills that many Councils do not possess’, suggesting that the Government improve the process further by imposing ‘strict time limits on the delivery of approvals’. Warning of weaknesses in collaboration between the various local authorities involved, the consortium recommended ‘the establishment of a special Virtual Planning Authority’ to act as a higher level ‘coordinating institution’.

This is a direction which Solent Protection Society believe should be pursued with great caution. There are other controversial projects in the Solent region already proceeding with minimal public consultation under ‘accelerated’ planning approaches, for example the Aquind Interconnector project near Portsmouth and the Southern Water desalination plant proposal at Ashlett Creek.

That map indicates a ‘Portsmouth Gateway Cluster’ of sites to the east, an ‘Airport Cluster’ to the north, but more significantly the ‘Southampton Water Cluster’ which we’ve detailed in the main part of the image. Three Freeport ‘customs sites’ are shown, with a fourth at Portsmouth. The Southampton sites are ‘DP World’ at the existing Container Port, ‘Marchwood Port’ at the Solent Gateway site and a third described as ‘ABP Strategic Land Reserve’ at Dibden Bay.

While each of these port areas are also noted as ‘tax sites’ in the Solent LEP proposal, the proposal also includes Freeport tax sites surrounding the Fawley refinery complex and including the Fawley Waterside development at the former Calshot power station. The Fawley complex is linked to the main port tax sites by a secure corridor running up Southampton Water.



The Solent Freeport tax and customs locations by Southampton Water, showing, inset, the map submitted with the Solent LEP Freeport bid

ABP, owners of the Port of Southampton, and Solent Gateway, operators of the former Marchwood Military Port to the north of Dibden Bay, are influential members of the Solent Freeport Board and would be significant beneficiaries of the Freeport changes. By moving the existing vehicle import/export facility from the West Quay side to Marchwood, ABP would free up more space for the lucrative cruise business. Developing Dibden Bay as a second container port on the western shore, would then enable ABP to double the freight capacity of the Port of Southampton.

This would not be a new proposal, the previous attempt in 2004 having been overturned after a long planning battle in the face of strong local protest. The Solent Freeport consortium are mindful of this and issued a thinly veiled warning in their bid response.

The further deregulation of planning regulations proposed within the Freeport and the extension of permitted development rights accorded to ports would, according to the Solent Freeport team, still not be enough “to act as an incentive to potential investors and allow for the greater freedoms or coordination in higher-level planning required to ensure Freeport success”.

In what can only be seen as a threat to existing environmental protections, the Solent LEP underlined their commercial concern by observing that ‘existing environmental regulations along much of the UK coastline supersede Permitted Development Rights’, and could once more obstruct their development plans.

The aggressive expansion of the Port of Southampton to enable ABP to compete with Teesport for a place in the top three UK commercial ports by tonnage might be welcome news for shareholders, but if environmental protections are overturned in the process, the collateral damage to the Solent region would be immense.

Solent Protection Society were active in campaigning against the development of a new container port at Dibden Bay in 2004 and will resist any new attempt to undermine the environmental regulations which protect the shoreline of the Solent.

Please see ‘Further reading online’ on the back page.

Planning

Is there housing development near you, if so, what is its Environmental Impact?

As we look around us at the volume of new building work in progress, continually eating into our countryside, we need to decide how this problem can be resolved. The Government has ambitions to build over 300,000 homes but their methods of calculating housing need by algorithms has been brought into question.

The legislation controlling the impact of development on our precious countryside, our rivers and the environment as a whole, needs to be questioned. We need to be reassured that development does not cause environmental damage and that no net loss of countryside habitat results.

Presently all development is controlled through the **Town and Country Planning Act** which was first published in 1947. This has been supported by the National Planning Policy Framework, last revised in 2019 and Planning Policy Guidelines (PPGs). The control of local development is handled by each Local Planning Authority (LPA) in the form of a **Local Plan**.

The present planning system, administered by each LPA, has become too complex, too slow and uncoordinated. Each Planning Authority has its own "Local Plan" and methods of collecting developer contributions (Infrastructure Levies). There is a multitude of specialist reports required to accompany each planning application, which not only increases the cost, but slows the decision process.

The new document, published August 2020, is titled **Planning for the Future**. It has been out to public consultation and is presently going through parliamentary procedures. A recent supplementary briefing paper, **Planning Policy Changes in England 2020 with future reforms** (10 March 2021) summarises the many objections and comments received from Local Government Associations, the CPRE, professional organisations and other stakeholders. The revisions are a complete rewriting of Planning Law and have many radical changes to streamline and speed up the planning process. It is unlikely this new planning legislation will become law before 2023, if at all given current speculation.

The Local Plan, prepared by the LPA, will be the fundamental document identifying land available for development, local environmental issues and local design codes, etc. Housing development is proposed to be divided into areas of **Growth, Renewal** and **Protected**.

The **Growth** areas are identified by the LPA as **Designated Area Approval** and presumes that development will automatically have Outline Planning Consent and give more certainty for developer land purchase. It also presumes that the LPA have carried out all the environmental assessments of the land in question called the **single statutory sustainability test**. This also applies to Ports, Airports and major commercial developments.

Housing is eating into our countryside

The Renewal area refers to Brownfield Sites, previously developed land, and incorporates a change of use of existing redundant buildings. **Protected** land includes Areas of Outstanding Natural Beauty, National Parks, wildlife habitats, ancient woodlands, and others, where no development is permitted. It includes strategic gaps between built-up areas and appropriate land use. The LPA is required to produce an easily understood coloured zone plan for comment by the local community entitled **Stewardship of our Countryside** and to involve the local community in its decisions.

The new document provides for a National Development **Infrastructure Levy**, adjusted for local Area differences, which provide funds to the LPA, to include the provision of "offset land" to mitigate for nitrate generation, habitat loss, flooding, local community facilities, road structure and other infrastructure.

The Government has already introduced a range of **permitted development rights** (PDRs), which do not require planning approval. These include conversion of existing buildings for new use and have expanded the extension rights to existing domestic

Development can be designed to be sensitive to the environment

dwellings. There are several PDRs for small scale new buildings, such as a home office within the curtilage of a dwelling site, but with height and boundary restrictions. A requirement for "Local Community Consultation" is part of the PDRs, including unneighbourly objections.

The new planning document calls for Sustainable Development, which should produce net gains in biodiversity, a low carbon footprint and be "zero carbon ready". It should consider climate change, value green spaces and make "beautiful places". Planning will be granted on a "fast track" process through Local Authority Policies, which have the benefit of local knowledge and land management.

Retain green spaces to support local habitat

There is also some protection through the **Environment Bill 2019** which advocates "environmental net gains" of at least 10%. This requires a developer to assess the Local Environment and to ensure that natural land resources, such as green spaces for wilding, remain undisturbed. This "net gain" could be achieved offsite or included in the proposed development. **The Countryside Act** also prevents developments which would otherwise be proposed in rural areas especially in areas designated "green belt".

Natural England (NE) has developed a Biodiversity Metric "net gain" calculator. This considers local fauna and habitat, biodiversity, and rewilding corridors to which it applies a percentage formula to enable Local Authorities (LAs) using this information to ensure that any new development does not degrade its local environment.

The problem here is that only one in five LAs have trained Chartered Environmental personnel who can responsibly assess proposals put forward by developers and their "expert" consultants. Put simply, a developer can buy land off-site and improve its diversity metric, by planting trees and wildflowers and so meet the rewilding requirement.

The Planning Process will still be within the administration of the LPA but it will be structured more by **National Policy and design guidance** and will have one single National developer **Infrastructure Levy** adjusted for local Area differences. Much housing development does not visually enhance the countryside and often lacks "greening" of the site.

The document calls for a framework for improved design quality **"Beautiful Homes"**, and an increase in both landscaping and natural wildlife habitats. The design of new development is to be based on a "National Design Guide", with appropriate local variations together with Local Design Codes.

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This is not the answer, dense poor design, plastics used for cladding and no "Greening"

CONCLUSION

The Solent Protection Society have concerns that these latest apparent good intentions and controls to protect our environment will not be sufficiently effective. The streamlining and fast tracking of the planning process, the automatic granting of planning in Growth Areas, permitted development rights on Brownfield sites, coupled with the increased permitted development rights on private housing, flats and any redundant commercial buildings may well worsen the current situation.

Even Sustainable Drainage is adding to our over stretched wastewater systems. Surface water run-off and its resultant sewage discharges, the release of nitrates and phosphates through the sewer system, results in further pollution to our water systems.

It is difficult to see how the Government's ambitions to build over 300,000 homes can result in anything other than damage to our Environment. The change from discretionary "case by case" planning decisions to **FastTrack Designated Area automatic approval** is a radical change that puts into question how the local community can comment on new development and its effect on the local environment.

We need to see that new development closely follows the latest guidelines and is enforced by law. Local Authorities need experts to establish accurate Local Plans and ensure they follow their own guidelines without pressure from the development itself. More public awareness, and subsequent meaningful comment, needs to be made, not only from organisations such as the Solent Protection Society, but by the general public. Comment needs to be environmentally sound and not the "NIMBY" statements that are so often expressed.

We should all work together to achieve a better Built Environment. By encouraging our local community to become more involved in planning issues and by working together with our LPA we will successfully protect our Environment in the short and long term.

Design can be innovative, use natural materials and blend into the environment

It is not clear how the National Environmental tests will be developed, and how one test will incorporate all the varying specialisations into one statutory report. This is an area of considerable concern to SPS.

Development always has a way of meeting legislation and finding ways to satisfy the LPA. The recent Nitrate offset is a perfect example of manipulation (set-off) to achieve Nitrate Neutrality. New housing continues to follow traditional designs and has little to offer in terms of innovation to soften the visual impact on the countryside. It is not energy efficient and burning fossil fuel for heating is adding to air pollution. Targeting the "Zero Carbon Ready" requirement is proving difficult to achieve, as the Building Regulation insulation requirements are not consistent with using traditional building design.

Kevin McCloud's environmentally sensitive, low carbon housing with photovoltaic roof

Untreated Sewage Spills into the Solent are a threat to Public Health

Southern Water Services Limited has pleaded guilty to 51 counts of discharging untreated sewage into controlled coastal waters. The offences were committed at 17 separate sites. They were committed over a 6-year period, from January 2010 to December 2015. In that period there were a total of 6,971 discharges of untreated sewage into controlled waters resulting in Southern Water being fined £90m.

It is worth repeating the judge's words at the hearing on 9th July 2021: ***"Each of the 51 offences, seen in isolation, shows a shocking and wholesale disregard for the environment, for the precious and delicate ecosystems along the North Kent and Solent coastlines, for human health and for the fisheries and other legitimate businesses that depend on the vitality of the coastal waters. Each offence does not stand in isolation. It is necessary to sentence the company for the totality of the offences to which it has pleaded guilty. But even that does not reflect this Defendant's criminality. That is because the offences are aggravated by its previous persistent pollution of the environment over very many years. It has 168 convictions and cautions, including numerous offences of discharging untreated sewage, and including offences committed at a number of the sites that are covered by the current indictment."***

The Solent Protection Society has been in regular contact with Southern Water during 2021 in an attempt to understand how Southern Water again finds itself as one of the two worst performing water companies for sewage discharges; the other being South West Water.

In June we posted an article on the SPS website illustrating "Southern Water Beachbuoy", the much-improved real-time monitoring of discharges into the seas around our coast. The data is limited to those spills which might affect "bathing water" beaches as these come under more stringent legislation.

It's worth noting that the definition of a 'bathing beach' is somewhat stretched. For example, both Langstone Harbour and Chichester Harbour have icons within them, selection of which displays the surrounding combined sewer outfalls. Given that precedent, we will be working with our contacts at Southern Water to seek similar coverage for Portsmouth Harbour, Southampton Water and the main estuaries of the Western Solent.

It is well worth looking at this website if you have not done so. Just put 'beachbuoy' into Google and it should come up. Combined Sewage Outfalls (CSOs) are pipes that carry both sewage and rainwater and which discharge directly to a watercourse without any treatment. Most of the drainage systems around the Solent, indeed across the country, contain CSOs.

During May and June this year we logged all the spills into the waters of the Solent including the weather conditions at the time. As we have a number of bathing beaches in the area this gives us a reasonable understanding of the frequency with which pollution is discharged.

Not everywhere is covered in which other water based leisure activities take place. So, for example, the top of Southampton Water, the Western Solent and Portsmouth Harbour are not monitored although there are many CSOs that could affect these leisure activity waters.

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So what were the results?

In **May** there were discharges on **11** days from some **24** different CSOs with a total run time of over **185** hours.
In June there were discharges on **12** days from some **45** different CSOs with a total run time in excess of **750** hours.
So, in these two months alone, sewage was being discharged into the Solent for the equivalent of nearly 40 days.
Spills in the month of June were far more intensive than in May. There were many more occasions when spills ran for over 10 hours in a day and the Isle of Wight suffered particularly badly at the end of the month. Some spills ran continuously for two and in some cases three days. It was quickly apparent that these spills were triggered almost exclusively by rainfall, and this did not need to be heavy rain or a storm.

From a layman's point of view there would simply appear to be inadequate storage capacity in the system to deal with normal rainfall and certainly not a storm. Indeed, in August, when there were storms, the CSOs were unable to cope which resulted in serious flooding in parts of the Isle of Wight and around Langstone Harbour. So, not only are they failing to prevent flooding, they cause unacceptable pollution. Additional housing proposed in the region will only make matters worse.

The CSOs that discharge most frequently are Cowes/Gurnard, Stokes Bay to Southsea, Langstone Harbour, Ryde, Bembridge and Sandown. Within those areas some CSOs are of course more frequently discharging than others but these are the initial areas of concern from the data received to date. These outfalls also correspond with data gathered nationally by the Rivers Trust and, we imagine, by the Environment Agency.

The Solent Protection Society have written to the CEO of Southern Water to ask that Beachbuoy monitoring data is extended to other water leisure activity areas of the Solent not currently covered by Beachbuoy. We are pleased to see that Lepe and Calshot beaches have recently been added which will give more data about the southern end of Southampton Water.

Not only will this be in the interests of water users but it is also crucial to the marine environment and the Marine Protected Areas around the Solent. While transparency has improved, both the Environment Agency and our monitoring shows there is still much to do to improve actual discharges. We will be pursuing ways to reduce these raw sewage discharges in the short and long term future, which will almost certainly need further legislation.

Beware entering the water after rainfall and check Beachbuoy!!

Release History

RYDE | SIMEON STREET RYDE | Search | Clear

Event ID	Site Number	Bathing Site	Outfall	Last Activation Start	Last Activation End	Duration (hrs)	Activity
437364	12618	RYDE	SIMEON STREET RYDE	29/06/2021 11:29 AM	29/06/2021 11:46 AM	0.28	Not Reviewed
437020	12618	RYDE	SIMEON STREET RYDE	29/06/2021 00:37 AM	29/06/2021 03:00 AM	2.38	Not Reviewed
336495	12618	RYDE	SIMEON STREET RYDE	03/02/2021 10:52 AM	03/02/2021 13:48 PM	2.93	Reviewed
329854	12618	RYDE	SIMEON STREET RYDE	30/01/2021 05:28 AM	30/01/2021 13:58 PM	8.50	Reviewed
328099	12618	RYDE	SIMEON STREET RYDE	28/01/2021 22:55 PM	29/01/2021 00:02 AM	1.12	Reviewed
326232	12618	RYDE	SIMEON STREET RYDE	28/01/2021 02:30 AM	28/01/2021 06:47 AM	4.28	Reviewed
323405	12618	RYDE	SIMEON STREET RYDE	24/01/2021 18:15 PM	25/01/2021 01:40 AM	7.42	Reviewed
323064	12618	RYDE	SIMEON STREET RYDE	24/01/2021 12:05 PM	24/01/2021 12:41 PM	0.60	Reviewed
323053	12618	RYDE	SIMEON STREET RYDE	24/01/2021 11:41 AM	24/01/2021 12:04 PM	0.38	Reviewed
323020	12618	RYDE	SIMEON STREET RYDE	24/01/2021 11:02 AM	24/01/2021 11:40 AM	0.63	Reviewed
318743	12618	RYDE	SIMEON STREET RYDE	20/01/2021 22:25 PM	21/01/2021 00:53 AM	2.47	Reviewed
318400	12618	RYDE	SIMEON STREET RYDE	20/01/2021 14:59 PM	20/01/2021 18:51 PM	3.87	Reviewed
317069	12618	RYDE	SIMEON STREET RYDE	19/01/2021 04:22 AM	19/01/2021 05:00 AM	0.63	Reviewed

Solent Gateway

Solent Gateway, who have a lease from the Ministry of Defence to operate and develop the Marchwood Military Port, have submitted a planning application to the New Forest District Council (NFDC) to redevelop the existing Port.

There are concerns among the residents of Marchwood that more intensive use of this site will have a detrimental effect on local infrastructure, especially road and rail.

Solent Protection Society has been looking at the marine aspects of the plan and has submitted the following letter to NFDC.

Solent Gateway. Planning application to NFDC ref: 21/11156.

"I am writing for and on behalf of the Solent Protection Society. https://solentprotection.org/

Solent Protection Society (SPS) does not object in principle to the further intensification of use of this site but is concerned to ensure there is sufficient mitigation of the impact.

Our comments are under three areas.
1 Landscape
2 Drainage
3 Highway infrastructure

Landscape

SPS are pleased to see the applicant has proposed additional landscaping to the boundaries of the site where it controls the land. Our particular concern is the view from the sea, in this case the wide River Test and the view as seen from the water and across from Southampton. There is not much that can be done about the actual dock area other than to request that container stacking is kept to the minimum in this area.

However, the land either side is crucial to maintaining the important waterside tree planting that is the principal characteristic of the western side of Southampton Water. To this extent the tree planting to the south east of the dock area is very important and appears to be further enhanced in the digital view in the application documents.

It will screen the site on the approach up Southampton Water. This land is outside the boundary of the site and part of Dibden Bay with its SSSI protections. ***These may not be adequate however given the pressure alluded to in the application and we would ask NFDC to consider placing a blanket TPO (if there is not one at present) on the area of land to the south east as far as the footpath that runs east west across the Dibden Bay site. Part of this land is the historic landfill site, the SINC and bird protection area but it is the trees that are particularly important visually and for habitat enhancement.***

Drainage

The major issue here is the storm drainage from the large hard standing areas on the site. 29Ha we understand. The application states that most if not all of the outfalls discharge directly into the River Test and hence to Southampton Water and the wider Solent area and its many marine protected areas, particularly the adjacent Dibden Bay. Given the potential for contamination from fuel oils and other pollutants and the very significant increase in heavy vehicle movements ***it is imperative that adequate pollution protection measures are in place before discharges reach the water course. These should be conditioned in any approval that is given together with a legal requirement to independently test the water quality at regular intervals in both dry weather and wet and to report to NFDC and EA.***

According to the documents only two of the various outfalls into water courses are protected by petrol interceptors. We do not consider this adequate given the increased usage and the poor state of water quality in the area.

Highway infrastructure

While outside SPS's immediate interest we note that the significant increase in heavy goods vehicle movement on the surrounding road network is going to add to an already inadequate system.

Given the numerous draft or outline proposals for increased development down the length of the western side of Southampton Water (some of which we have serious concerns about) ***we consider a substantial financial contribution should be made by this development towards the upgrading of the road network beyond the immediate site entrances.*** *We would hope NFDC would liaise with HCC on the size of such a contribution to be conditional by legal agreement".*

The Solent Protection Society hope that NFDC will consider our submission sympathetically and, if they approve the plan, include the various conditions we have suggested to protect the marine environment.

Totland Pier

The Totland Pier development is an interesting issue of land and sea-based works in a Marine Conservation Zone (MCZ).

In 2021 there was a second of two planning applications for Totland Pier. The first in 2020 was to repair the pier and build a two-storey restaurant on the pier head. The principal concern of the Solent Protection Society (SPS) was that Totland Pier is in the Marine Conservation Zone off the West Wight Solent coast and the pier head itself is close to an important seagrass habitat.
The difficulty here was that the restaurant is expected to attract many visiting boaters whose indiscriminate anchoring could seriously damage the seagrass bed. SPS, along with Natural England and the Isle of Wight Councils's ecology officer, raised these concerns with the Council and with the Marine Management Organisation (MMO) which oversees Marine licences.

To be fair, the applicant was aware of the issue and had made some proposals. The objective then was to get these proposals into the form of obligations.

The application was eventually approved with significant conditions on how boats should be anchored and educational duties on the applicant to explain the importance of the seagrass beds to the public and to visiting boat owners.

The second application was to enlarge the pier head which would bring it even closer to the seagrass bed. SPS, although concerned, decided to take a neutral position and the application was eventually approved with further conditions on marine protection.

It is an interesting case study on the interaction between land-based planning applications through the local authority, in this case the Isle of Wight Council (IWC), and marine licence applications through the MMO governed by the South Marine Plan. Set out below are some of the comments submitted by SPS, Natural England and The Ecology officer of the IWC. These give a feel for the issues and the likely impact on the MCZ and how the Statutory Consultees view the issue, which is worth noting for the future.

SPS comment:

The Society would prefer that the pier head was not extended within the Marine Conservation Zone, however, we welcome the additional information provided by the dive survey and ecological report.

In the light of these reports, we are neutral on whether the pier head is extended. We support the efforts by the owner to repair and restore the existing structure and provide a high-quality commercial use that hopefully will safeguard its future and promote employment and environmental tourism.

The seagrass beds are of high ecological value. They hold protected species such as seahorse and have an important role in carbon capture. Effects on the seagrass and to a lesser extent the rocky reef habitat is the Achilles Heel of the proposal. To this extent the conditions imposed on the earlier application by IWC and MMO, keeping visiting boats away from the seagrass beds, are crucial. We would suggest that the main seagrass bed is marked by buoys.

The small patch of seagrass beneath the proposed extension may well not survive the works, so relocating it, if possible, and keeping the pier structure consistent may well be preferable, though Natural England's view will be important here.

We have some suggestions as to where marine life can be promoted under the pier structure and this we would encourage. Although these suggestions may not be suitable for individual planning conditions, a general condition to promote further biodiversity beneath the pier may well be.

Extension to the pier head well underway

Suggestions are:

- Join with Blue Marine to install oyster cages.
- Provide lobster and crab habitat beneath the pier.
- There will be some loss in biodiversity by removing old and presumably rotted wooden piles. These would be home to many interesting creatures. Rather than discarding these piles could they be placed on the seabed as habitat?
- Installation of Vertipools, developed by Artecology on the Isle of Wight, to piles to provide habitat for marine intertidal species.

Natural England Comment:

Natural England has already returned comments in relation to Marine/MCZ impacts. The following comments are from the Terrestrial Section.

Paragraph 3.5 of the Ecological Assessment states that the "site lies within the proposed Solent and Dorset Coast SPA" which is a Special Protection Area relating to wild birds now designated. The pier is not remote from the SPA but lies directly within it. A Construction Environment Plan has been produced.

Natural England recommend that this is agreed in writing with the local planning authority and ensures that the following is included:

- Personnel involved in the piling works, and the general pier project, should be informed of the significance of the marine habitat surrounding the pier.
- Routes and moorings used for the transport and installation of the piles should be selected to minimize risks of damage and disturbance to known seagrass areas.
- Piling and associated decommissioning, should be undertaken with due consideration of the risks of sediment mobilization in the vicinity of high priority habitats, and necessary safeguards put in place (assessment of weather and tide conditions and direction).
- All reasonable precautions will be undertaken to ensure no pollutants enter the water body.
- Seabed clearance within the piling zone should be undertaken carefully in order to leave adjacent areas undisturbed. Anthropic debris should be removed from the site in line with overall mitigation measures for the pier. Large aggregate should be replaced or moved to nearby areas of similar bed cover.

Ecology Officer comment:

Various planning applications have been submitted for this site and approval for development of a café at the pier head has been granted. This proposal is to extend the pier head by 160m2 through installation of further piles and decking. This will provide additional outdoor seating associated with the café.

It is noted that a MMO marine license (No. L/2020/00337/1) was granted for the proposed extension to the pier where the scheme includes a floating pontoon and 15 swing moorings to the north. Natural England have now removed objections to the planning proposals based on information contained within the marine license. These comments take into account the documents there as well as those submitted with the planning application.

The piling is now designed to ensure that the area of identified Zostera is clear of any new structure and two of the piles are offset. As such, the MCZ Assessment completed by the MMO concludes that direct impacts to the seagrass are avoided. Indirect impacts such as shading are screened out from the assessment because Zostera is shown to be on the outer perimeters of the pier and had established with the pier already present.

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I advise that a Zostera translocation project plan is secured to ensure the long-term survival of this species. This was originally proposed through development, but an assessment has not been submitted this time. The MMO license process recognises this approach as suitable compensation for any losses. This is a novel approach for seagrass conservation and as such little is known about the best methods. Therefore, a monitoring strategy should accompany translocation plans and this will inform future evidence on plans and activities requiring mitigation.

Translocation is required to meet the aims of the National Planning Policy Framework where paragraph 174 states *"b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity"*. Also, paragraph 175 which states *"d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity".*

Protection and enhancement of Zostera also contributes to policy DM12 of the local plan where *"the Council will support proposals that conserve, enhance and promote the landscape, seascape, biodiversity and geological interest of the Island. Development proposals will be expected to: 1. Protect the integrity of international, national and local designations relating to landscape, seascape, biodiversity and geodiversity and the reasons for these designations and the weight given to them and enhance their features of interest wherever possible. Whereby translocation and monitory should further our understanding of this species for conservation."*

The lessons learned

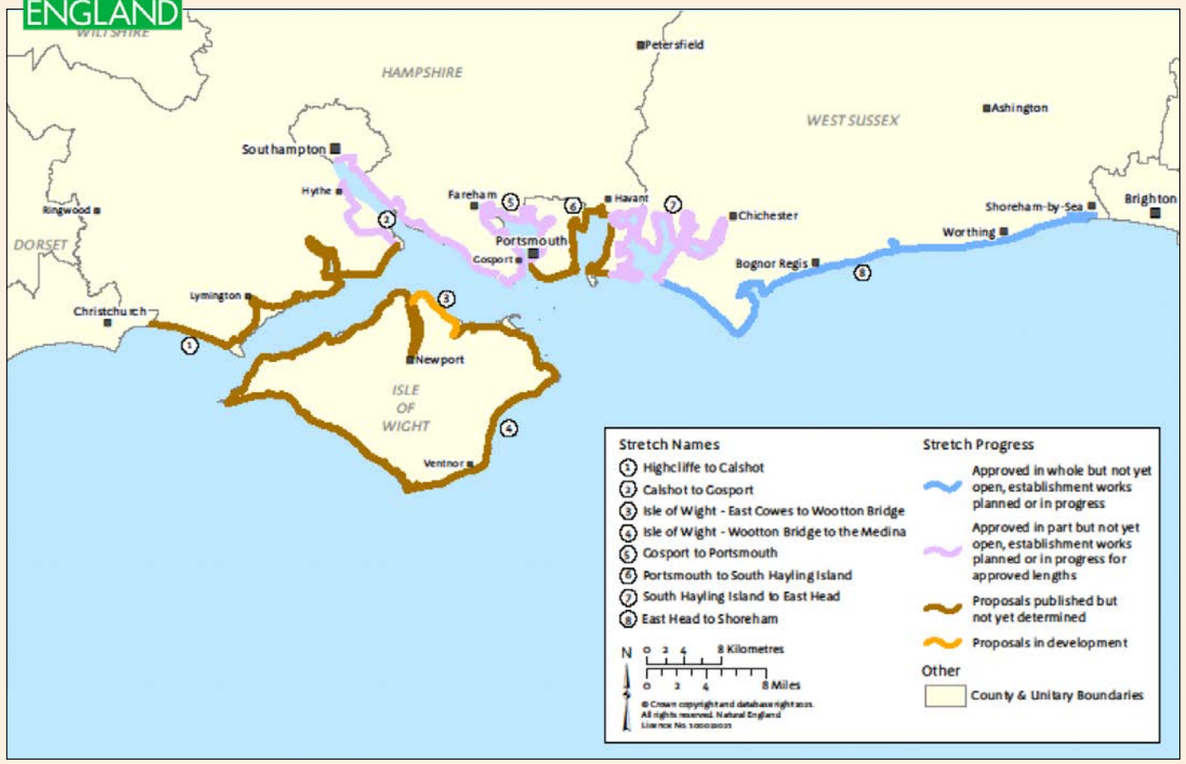
The Solent Protection Society is concerned with the area from the Needles to Selsey Bill which includes many tidal rivers and harbours. It contains lots of situations where marine and terrestrial interests overlap and finding the right balance is always going to be a judgement. This case shows that the various agencies and an informed applicant can work together to find that balance. We wish the project well and hope the pier is restored.

Shoreside café in use and pier work commenced Sept 2021

Coastal Path Update

England Coast Path - Stretch Progress

South Hub Team - 18th March 2021



In last year's newsletter we gave a comprehensive report on the work by Natural England to formulate proposals for the English Coastal Path South, together with our comments on the sections that had come out for consultation in 2020. This covers all the Solent coast including the whole of the Isle of Wight.

Only one short but significant section between East Cowes and Wootton Bridge on the Isle of Wight had not been published for consultation.

We regret to say that little progress has been made since. No new small parts, let alone full sections (there are 7 in all affecting the Solent), have been approved by the Government except for a short section out to Selsey Bill. The East Cowes to Wootton Bridge section has still not come forward for consultation, and as far as we know, no consultation date has been fixed. Two possible dates have come and gone during 2021.

We would urge the Government, now post Covid, to get the process back on track so that the various local authorities can start implementing the necessary site works. Natural England has carried out a very worthwhile and significant task of review and costed proposals; this effort should not be wasted.

While many of the paths already exist in some form there are improvements, and a lot of new routes proposed, where the view of the Solent from the shore will be much better for the enjoyment of all who wish to walk our fascinating Solent coastline.

A busy year for the SPS Pollution Group

In our Autumn 2020 Newsletter we highlighted the many sources of pollution within the Solent. In 2021 our Pollution Group decided to concentrate on Southern Water's very poor record and the number of occasions untreated sewage were spilled into our inland and coastal waters. Initially Southern Water was very reluctant to issue detailed information on the amount and frequency of these spills through Combined Sewer Overflows (CSOs) and refused to give information on the location of these outfalls.

The Environment Agency (EA) is responsible for monitoring spills, but to our alarm we found that Water Authorities are in certain circumstances, licensed to discharge untreated sewage to prevent it backing up the combined sewers. While a safety valve is clearly needed this defect seems to run regularly. The reporting, and indeed testing of waters, is always historic, and presently it is two years behind as the 2019 figures are only recently available.

Finding the data

Our Pollution Group began an investigation to build a data file for the Solent area. We looked at several agency websites, including those of Southern Water, the Rivers Trust and the Environment Agency, for locations of the CSOs, their discharge frequency and monitoring. Through detailed research it was found the Rivers Trust published details of all waste outlets with annual hourly total times. The Environment Agency also gave details of annual hazardous releases for 2019 but because of Covid no figures are available for 2020.

It is probably fair to outline the problems that are leading to these spills. Our current Victorian sewerage system is for the most part a combined system, that is it discharges foul sewage and surface water combined. Historically by combining the two systems, surface water would flush the foul. However, with increased rainfall and population, the system would appear to be regularly overloaded which has led to a combination of raw sewage and surface water, spilling directly into our rivers and estuaries. This is separate from the criminal activity committed by Southern Water by deliberately sending water to CSOs which gave rise to their recent £90 Million fine. The effects of these raw sewage spills into our water, directly effects our health. They can cause serious illness such as e coli, and harm sea life including the fish that we eat, they damage plant life such as seagrass and causes algae to build on the surface of the water which starves marine life of oxygen.

Spills also affect our inland water and bathing beaches and impact on other water activities. Present data indicates that the situation is deteriorating, this caused by heavier rainfall as a result of our changing weather patterns and global warming.

At the end of July 2021, the Environment Agency published its annual wastewater report for 2020 which again criticised Southern Water's record. Our pollution group is of the opinion that these two actions, the build-up of fines and the further poor annual reports from the EA, have encouraged Southern Water to radically seek to change its performance and improve its public relations.

What have we done to push for more action?

At the end of 2020 we sent letters to local Members of Parliament in support of Phillip Dunne's Sewage (Inland Waters) Bill and received an encouraging number of positive responses. Unfortunately, this bill has been delayed by Covid and Parliamentary time, but it is now being considered by Government for inclusion in the draft Environment Bill.

In August 2020 Southern Water reacted to the pending fines and criticism with a "Pollution Incident Reduction Plan" formulated under their "Water for Life" initiative. This includes more recent pollution reduction performance figures including a record of machinery breakdowns and facility inspections, although this has been hampered by Covid.

A complete restructuring of the Company Executive team together with further investment were promised. Some of this has materialised, quote "there has been a strong and demonstratable cultural shift in Southern Water".
Any significant improvement in outcomes will, however, take time and will need the involvement of many parties and the Government to ensure fruition.

What of the Future?

As part of SPS's current Stakeholder presence we will continue to monitor Southern Water's CSOs discharges. We will push for better legislation and legal duties on water companies to ensure that our inland and coastal waters are regularly and adequately tested and comply with the full letter of the law.

Protected and Conservation Areas

There are many different designations of Protected Areas and many different Government departments and Non-Governmental Organisations play a part. The aim of this article is to give an overview of the various ways in which our valuable habitats, species and natural features are protected in the Solent, to explain what each protection is designed to achieve, and to show which parts of the Solent are affected.

The Marine Management Organisation, created under the Marine and Coastal Access Act 2009 (MCAA), has the most comprehensive role in marine protection through its Marine Plans and Marine Licensing work. The Solent lies entirely within the South Marine Plan Area and so any proposed developments are required to conform with the Marine Plan objectives and policies. Some of these policies are aimed at aiding sustainable economic development but some are directly concerned with conservation and protection. The following describes the various types of Protected Areas found in the Solent.

A **Special Area of Conservation (SAC)** is defined in the European Union's Habitats Directive (92/43/EEC). It is also known as the Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora. These protect the 220 habitats and approximately 1,000 species considered to be of European interest following criteria set out in the directive. They are chosen by the member states from the Sites of Community Importance designated as SAC and legislation assures the protection of these natural habitats.

SACs complement Special Protection Areas and together form a network of protected sites across the European Union called Natura 2000.

Post Brexit the UK must continue to meet our International legal obligations. SACs in the Solent are shown in dark blue on the map. Those on the mainland shore and on the north coast of the Isle of Wight are collectively designated the "Solent Maritime SAC" and generally comprise:

- Sea inlets (14%)
- Tidal rivers, Estuaries, Mud flats, Sand flats, Lagoons (including saltwork basins) (59%)
- Salt marshes, Salt pastures, Salt steppes (23%)
- Coastal sand dunes, Sand beaches, Machair (0.5%)
- Shingle, Sea cliffs, Islets (3%)
- Broad-leaved deciduous woodland (0.5%)

Special Protection Areas

The whole Solent and large parts of the New Forest are included in a Special Protection Area classified in accordance with Article 4 of the EC Birds Directive, which came into force in April 1979. SPAs are classified for rare and vulnerable birds (as listed on Annex I of the Directive), and for regularly occurring migratory species. The Royal Society for the Protection of Birds owns, leases, or manages three areas in the Solent. These are Bembridge Harbour and the valley of the river Yar; the central third of Langstone harbour and the land between Bracklesham Bay and Selsey Bill.

Marine Protected Areas

The Government's aim is to develop an ecologically coherent and well-managed network of Marine Protected Areas. This network will be made up of Sites of Special Scientific Interest, Ramsar sites and Marine Conservation Zones (MCZs).

Special Protection Areas

Sites of Special Scientific Interest

Most of the northern coast of the Isle of Wight and the mainland coast of the Solent is designated as a Site of Special Scientific Interest (SSSI). The land notified as SSSI under the Wildlife and Countryside Act (1981) are the finest sites for wildlife and natural features in England supporting many characteristics, rare and endangered species, habitats and natural features.

Ramsar Sites

As with SSSIs, most of the coastline of the Solent, including the northern part of Portsmouth Harbour and the whole of Langstone and Chichester harbours, are designated Ramsar sites. A Ramsar site is a Wetland designated under the Convention on Wetlands of International Importance the Ramsar Convention of 1973, especially as a Waterfowl Habitat. Ramsar is the name of the city in Iran where the treaty was signed in 1971. The convention has now 168 member countries, and over 2100 sites.

Marine Conservation Zones (MCZ)

MCZs protect a range of nationally important marine wildlife, habitats, geology and geomorphology. Each MCZ is established by a legal order made by the Department of Environment, Food and Rural Affairs (DEFRA) under the Marine and Coastal Access Act 2009 and further protected under the UK Habitat Regulations 2021. Each order designates an area as an MCZ, it defines that area, lists the features being protected within that area, and specifies the conservation objective or objectives of the MCZ. Generally, each MCZ has one conservation objective.

The objective applies to all the features being protected and each is to be in favourable condition. Site-specific conservation advice is published by Natural England after the designation of the MCZ.

Within MCZs the MCAA does not include a provision for the establishment of management coordination schemes. Public authorities are free to establish management or liaison groups, and to develop management schemes for MCZs with other stakeholders and regulators in those cases where they see the advantage of co-operation to manage current or future activities which may impact the wellbeing of a site.

Management measures required within MCZs are decided on a site-by-site basis and will depend on the reason for the designation. Public authorities have responsibility for identifying and enforcing the most effective form of management of the

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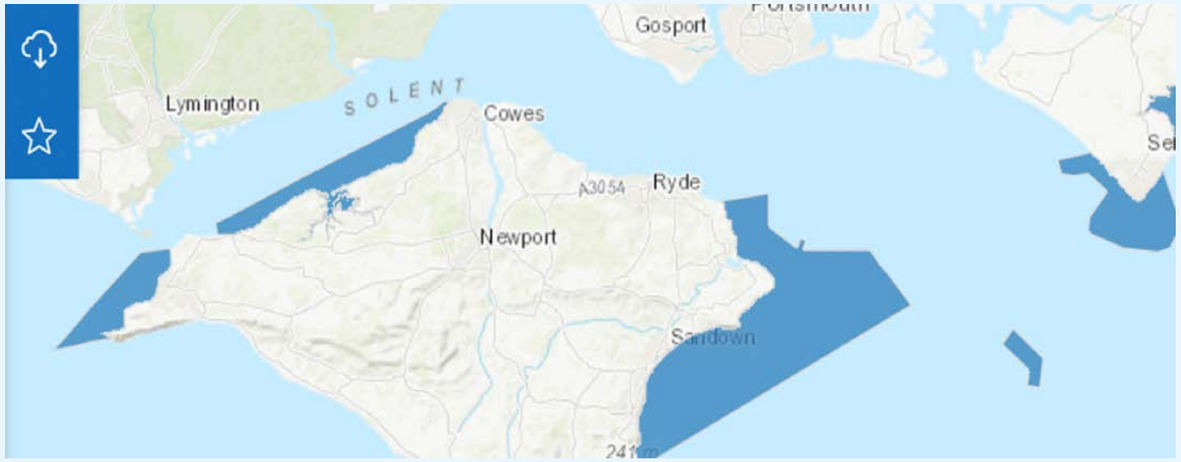
MCZ in relation to the activities for which they are responsible, drawing on the advice and guidance provided by Natural England. (see Appendix 1 on page 21)

There are four MCZs in the Solent: The Needles, Yarmouth to Cowes, Bembridge, and Selsey Bill and the Hounds hugging the western edge of the Bill as shown on this map.



Marine Conservation Zones

Which features are protected in an MCZ?

The Needles MCZ protects a number of rare and fragile habitats including chalk on the seabed, shallow water (infralittoral) rock and soft sediments which support communities of algae, sponges, sea squirts and delicate anemones. It is a highly productive area biologically and an important seagrass bed (Zostera marina) with snakelocks, anemones, Stalked Jellyfish and a spawning and nursery area with a range of fish species including common smelt, bass, sole, pout, mullet lobsters and whelks. The site protects seagrass beds in both Totland and Colwell Bays.

A Stalked Jellyfish

This site is considered to be one of the top three for seagrass beds in the Isle of Wight. This habitat supports species such as the sea hare, a marine mollusc. Rare and threatened species such as the fan shaped algae, commonly known as Peacock's Tail, can be found in the intertidal areas at Colwell Bay.

Records of the tiny Stalked Jellyfish have been found at Alum Bay. Stalked Jellyfish typically spend their life attached to seaweed or seagrass.

The site is also important for the Native Oyster, a species which has declined in numbers across the UK in recent years.

Areas of Outstanding Natural Beauty

An Area of Outstanding Natural Beauty (AONB) is land protected by the Countryside and Rights of Way Act 2000 (CROW Act). It protects the land and conserves and enhances its natural beauty. Local areas classified as AONB are Chichester Harbour and its surrounding land, and more than one third of the land on the North coast of the Isle of Wight.

Conclusion

Although the Solent comprises a relatively small proportion of the English Coast it includes a multitude of designated conservation areas built up over many years by both UK and European legislation in addition to International agreements. The intention of this overview has been to clarify some of their relationships and purposes.

Appendix 1

The responsibility for the management of MCZs is spread between seven different authorities, as listed in the following table. Responsibility for each type of Conservation and Protection area is also spread between authorities.

Regulators

This table lists the authorities responsible for MCZs and the activities they manage.

Lead regulator	What it manages
Inshore Fisheries and Conservation Authorities (IFCAs)	• Fisheries in the inshore area (0-6 nautical miles (nm)) including commercial fisheries and recreational sea angling
Marine Management Organisation (MMO)	• Fisheries in the 6-12nm area • Fisheries: enforcement of national and EU legislation • Licensable activities such as dredging and disposal of dredged material, removal of gravel below mean high water springs, subsea cables (up to 12nm), construction (including renewables below 100MW generating capacity, ports and coastal protection) • Harbour Orders and Harbour Empowerment Orders • Section 36 of the Electricity Act 1989 and safety zones for offshore renewable energy installations consents • Enforcement of licensable activity and other consents (including deemed marine licences) • Development of marine plans • Activities requiring a wildlife licence
Environment Agency (EA)	• Fisheries for migratory and freshwater fish • Coastal protection and flood management • Water quality • Permitted discharges from terrestrial sources
Department of Energy and Climate Change (DECC)	• Oil and gas related activities • Renewable energy related activities
Harbour Authorities and local planning authorities	• Harbour authorities have management responsibilities for the port and coastal waters within their jurisdiction • Local authorities manage activities at the coast. These include coastal recreation, tourism, economic regeneration, flood protection and planning on coasts and estuaries For further information contact your local authority or IFCA
Department for Transport (DfT)	• Ports, shipping, harbours, ship pollution and offshore safety
Natural England (NE)	• Public access

Japanese Knotweed *(Fallopia japonica)*
Another threat to Solent estuaries

Japanese Knotweed has been in the news again. This invasive species spreads rapidly, taking over rough or bare ground and outcompeting other nearby plants. So seriously is the rampant growth of this plant taken that mortgage companies will refuse mortgages to properties where it is found. It costs millions to developers, personal loss to houseowners and threatens the biodiversity of Solent estuaries.

So, what is it and where does it come from, and furthermore, how does it affect Solent waters?

Receiving a Gold Medal at a plant show in Utrecht in 1847, this plant was introduced as a garden plant. It continued to be highly valued for its decorative architectural features and was sold by nurseries in this country until the middle of the last century. The species' invasive potential and its capability for causing extensive damage to infrastructure, became clear.

For this is a plant that spreads rapidly, it can grow through tarmacadam, damage foundations and colonise derelict sites. Growing densely to a height of 2 metres and more, Japanese Knotweed shades out local varieties of plants and is capable of releasing allelochemicals that inhibit the root growth of other species. A mere 7 grams. of rhizome can generate a new colony and this extraordinary characteristic means that attempts at mechanical destruction merely chops up the rhizomes with the potential of increasing and spreading the colony. It is now an offence under the Wildlife and Countryside Act to introduce it into the wild.

On the Solent, the chief concern regarding Japanese Knotweed is its ability to colonise rough ground, river banks and estuarine edges. Not only can it inhibit drainage, blocking vital ditches, but it greatly limits the diversity of local plant species on which other species depend. Many insects are dependent on specific plant species and the loss of those plants due to shading can affect the diet of the estuarine birds that depend on those insects. Disruptions to the food chain such as this cause an overall loss of biodiversity. Japanese Knotweed is resistant to most chemicals, or certainly to any chemical that is safe to use close to a water habitat. The Environment Agency states that it is "indisputably the UK's most aggressive, destructive and invasive plant".

Portsmouth and Southampton are considered two of the worst areas in the country for Japanese Knotweed and the ease with which the rhizomes break up and can travel is a threat to our precious estuaries. It is already found on the Medina River, the Western Yar estuary and close to Bembridge Harbour. Inland, both on the mainland and the Isle of Wight, there are worrying Japanese Knotweed hotspots so vigilance is key.

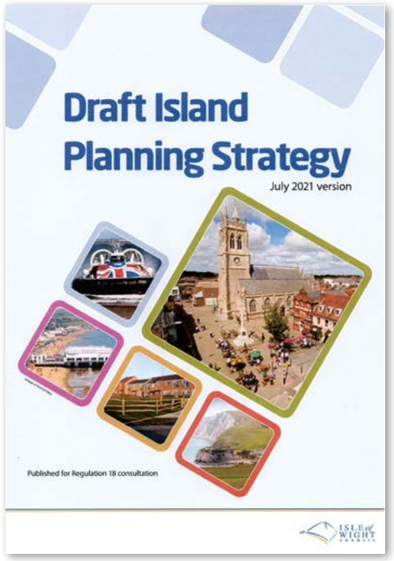
Please report this species wherever you may find it, especially if it is close to an estuary or a watercourse.

IoW Publishes a revised Draft Island Planning Strategy

The Isle of Wight Council has published its latest attempt to produce an updated Local Plan to guide planning decisions for the next 15 years. It is an improved version in a number of respects which the Solent Protection Society (SPS) will comment on in more detail by the consultation date of 1st October 2021.

The first Local Plan was published in 2018 using the now infamous housing algorithm that saw the government mandatorily demanding nearly 10,000 extra houses on the Island, an increase of approximately 15%, when a realistic requirement for the affordable housing need was about 2000.

SPS was rightly concerned that this would overload infrastructure leading to increased pollution into the Solent.



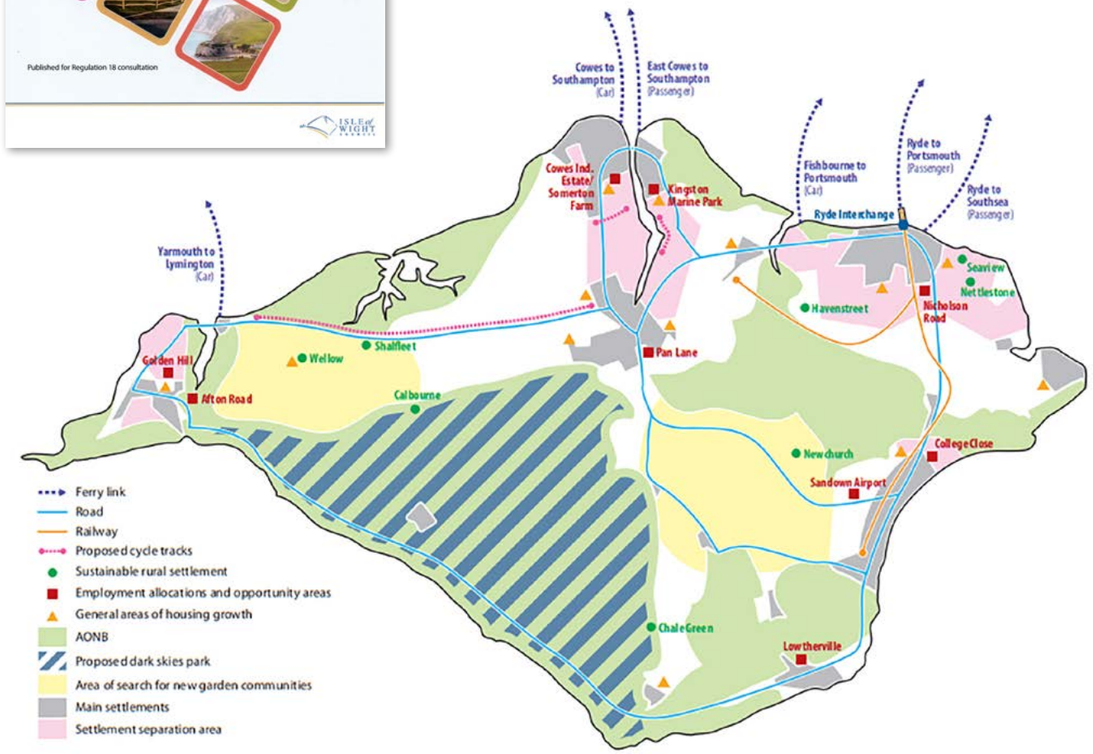
The plan did not get beyond the consultation stage as the Government's draft housing White Paper ran into a political storm. The guidance was changed to return to the pre 2018 algorithm, but this has still produced in the latest draft, a requirement for nearly 7,300 houses.

This is still too many in our view and caused by a flawed calculation mechanism. The plan suggests this is achievable by the construction industry, but this should not be a basis for setting policy. Perhaps the rumours that the government is about to drop mandatory targets will enable Local Planning Authorities to look objectively at their own requirements. We hope so.

Elsewhere in this newsletter there is a more detailed article about planning, but we believe this draft Island Planning Strategy has a lot to commend it. There are good environmental policies strengthening landscape and seascape, an acknowledgement that infrastructure must be considered in a wider context than an individual site and clearer designations about where development 'growth' is appropriate with a tightening of settlement boundaries to protect green space.

We will of course be commenting on the Island's housing issue and given the evidence we now have on the inadequate nature of the sewage system which discharges untreated sewage directly into the Solent, we will be making an even stronger case for improvement before any further load is added.

The original Draft Island Planning Strategy proposal from 2018



Further reading on-line

Further reading for several of these articles is available on our website at this reference,

solentprotection.org/newsletter-links

where the web links referenced by each article can be found.

The Beaulieu River

DONATIONS

To enable us to continue our important work, the Solent Protection Society need more funds over and above our modest membership subscriptions. Please consider making a donation now to help us to protect the Solent for future generations.

GIFT AID

Under the Gift Aid scheme, for every £1 you give, either as a subscription or donation, we are able to recover 25% from HMRC. All we need is an email from you confirming that you are a current UK taxpayer. This is based on the understanding that if you pay less Income Tax and/or Capital Gains Tax in the current tax year than the amount of Gift Aid claimed on all your donations it is your responsibility to pay any difference. We have your address on file already, but please notify us if you change your address, you want to cancel your Gift Aid notification or no longer pay sufficient tax on your income and/or capital gains.

PLEASE TREAT ALL MY SUBSCRIPTIONS/DONATIONS UNTIL FURTHER NOTICE AS GIFT AID.

I confirm that I pay an amount of income tax/capital gains tax at least equal to the tax that Solent Protection Society (registered charity No. 1154317) will reclaim on my subscription/donations and on all other donations to charities or community amateur sport clubs.

LEGACIES – PLEASE THINK OF THE SOCIETY AND ITS WORK

In addition to the very welcome donations over past years, from time to time we have also received very generous bequests from those who have had an interest in what we have been doing. If you are updating your Will and would like to remember the Society this would be appreciated. Equally if you have already made a Will you can make a provision for a bequest either by executing a formal codicil to the Will or by leaving a letter of direction to your executors.

SNIPPETS

- Hythe Pier has been Listed Grade II, one of six seaside gems Listed this year by Historic England. It stretches 640 metres from the centre of Hythe into the channel of Southampton Water. It was opened in 1881, but a ferry has operated in this locality since the Middle Ages.

- Solent sea bins can be found increasingly around the Solent, especially in marinas. A Seabin is an award-winning piece of technology that helps remove litter from the marine environment. It sits in the water, attached to a structure like a pontoon, and floats up and down with the tide. By drawing in and filtering water from the surface, the device catches a wide range of items from large plastic bottles to microplastics as small as 2mm. A single Seabin can collect over one tonne of litter each year – the equivalent of 50,000 plastic bottles or 40,000 drink cans.

- The Marineff project is a collaboration between France and the UK with the goal of developing coastal infrastructure to enhance and protect the ecological status of cross-channel coastal waters. Artificial rockpools were installed a year ago in Poole Harbour, Bouldnor (Isle of Wight) and the River Hamble. The results are shortly to be published.

- The Southsea Coastal Scheme is the UK's largest local authority-led coastal defences project, worth more than £100 million. It will stretch for 4.5km from Old Portsmouth to Eastney, and help to reduce the risk of flooding to more than 10,000 homes and 700 businesses. The work around Southsea Castle will begin in earnest in early 2022.

- Southern Water dumps controversial £600 million desalination plant – to the delight of New Forest East MP Julian Lewis.

To join the Society please contact:
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email: secretary@solentprotection.org www.solentprotection.org/membership Registered charity No.1154317