



## SAVE OUR SOUTH COAST ALLIANCE

# STREAMS, DITCHES AND WETLANDS IN THE CHICHESTER DISTRICT

By

Dr. Carolyn Cobbold, Bsc Mech Eng., FRSA  
Richard C Pratt, BA(Hons), PGCE, MSc(Arch), FRGS

Despite the 'duty of cooperation' set out in the National Planning Policy Framework<sup>1</sup>, there is mounting evidence that aspects of the failure to deliver actual cooperation have been overlooked in the recent White Paper<sup>2</sup>. Within the subregion surrounding the Solent, it is increasingly apparent that the development pressures are such that we risk losing sight of the natural features that underscore not only the attractiveness of the area but also the area's natural health itself. This paper seeks to focus on the aquatic connections which maintain the sub-region's biological health, connections which are currently threatened by overdevelopment. The waters of this sub-region sustain not only the viability of natural habitat but also the human economy of employment, tourism, recreation, leisure, and livelihoods. All are at risk. The paper is a plea for greater cooperation across the administrative boundaries of specifically the eastern Solent area. The paper is divided in the following way.

1. **Highlands and Lowlands in our estimation of worth**
2. **The Flow of Water from Downs to Sea**
3. **Wetlands and Their Global Significance**
4. **Farmland and Fishing**
5. **2011-2013: Medmerry Realignment Scheme**
6. **The Protection and Enhancement of Natural Capital in The Land 'In Between'**
7. **The Challenge to Species in The District's Wildlife Corridors**
8. **Water Quality**
9. **Habitat Protection and Enhancement at the Sub-Regional Level**
10. **The policy restraints on the destruction of natural capital**
11. **The policy proposals to set aside such restraint on development**
12. **A time to make irreversible decisions**

### **Highlands and Lowlands in our estimation of worth**

Since Victorian romanticism took William Wordsworth to its heart, the English have taken the uplands to be a place of pilgrimage: for holidays, rambles, adventures, exertions and for teaching the next generation about 'the great outdoors'. However, a minority cherished the lowlands and the wetlands. The canoeists,

---

<sup>1</sup> Paragraphs 24-27,

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/810197/NPPF\\_Feb\\_2019\\_revised.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/810197/NPPF_Feb_2019_revised.pdf)

<sup>2</sup>

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/907647/MHC\\_LG-Planning-Consultation.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/907647/MHC_LG-Planning-Consultation.pdf)



## SAVE OUR SOUTH COAST ALLIANCE

wildfowling and the anglers revelled in the marshes, streams and rivers. Later appreciation grew of the importance of the wetlands around the British Isles as hugely significant for the biodiversity that keeps the planet healthy. Protection has ensued and belatedly the Norfolk Broads were effectively designated a National Park in 1988 and Chichester Harbour an Area of Outstanding Natural Beauty (AONB) in 1964. By contrast the Highland National Parks had all been designated in 1949 following discussions begun before the Second World War. Within the Chichester District there is heavy restraint on development within the local National Park and AONB. This is reinforced by the provisions of the National Planning Policy Framework (NPPF) [paragraph 172], and its interpretation by planning inspectors and district planners. These currently are virtually immutable.

In the Chichester District we enjoy the best of both worlds and both are afforded the protection, for our uplands of a National Park status (the Downs and Weald), established in 2010, and for the littoral, that of an AONB (Chichester Harbour) as well as other scientific designations, which protect both Chichester and Pagham Harbours. By contrast the protections afforded to other elements of our watercourses and wetland features by other designations are more mutable and this flows from the provisions of para 171 of the NPPF.

This paper sets out the case for greater protection of riverine and littoral areas and more restraint on development in the vicinity of these vital aquatic margins. The current ambitions of central government to use house-building as an engine for national economic renewal threatens to fragment habitats and irreversibly remove the room for future options for a greener more sustainable arrangement of our spatial economy. In particular it plans to concentrate development in a linear sprawl that isolates our higher and more protected Downs and Weald from the current intertidal zones of coasts and harbours. It underestimates the impact of the challenges facing the future management of these areas in the face of climate change and sea-level rises. It stores up for future generations problems that will be costly if not impossible to fix. It virtually ignores the natural connections between the higher land and the lowest land in terms of valuing for nature the water courses and water storage areas.

Natural England's (NE) comment in their National Character Area (NCA) profile: 126. South Coast Plain<sup>3</sup>  
"The high rate of urbanisation, coupled with a continued reduction of agriculture and grasslands and combined with coastal squeeze, has led to increasing fragmentation of semi-natural habitats. Farlington Marshes, for example, is surrounded by motorways and housing on three sides while threatened by the rising sea on the other." It would be tragic if other areas met the same fate.

### **The Flow of Water from Downs to Sea**

Progressive urbanisation of the coastal plain since the middle of the last century has led to much greater demands for potable water for expanded settlements. This has stressed the natural watercourses leading to interruptions of flow in smaller streams and greatly reduced flows in larger water courses. English Nature's 2014 assessment commented:

"The main abstractions in the Arun and West Sussex Streams are for public water supply followed by industry and agriculture while in the west, it is for public water supply followed by fish farming and watercress growth. Consequently, summer flows are naturally low. Exploitation of the aquifer to supply

---

<sup>3</sup> Natural England 2014 <file:///C:/Users/user/AppData/Local/Temp/126%20South%20Coast%20Plain.pdf>



## SAVE OUR SOUTH COAST ALLIANCE

potable water is seriously threatening this natural resource of chalk rivers and spring fed fens and fen-grasslands that are dependent upon the continual supply of unpolluted chalk spring water. This is likely to be an increasing problem as drought caused by climate change and increasing population put extra pressure on water supply.”<sup>4</sup>

### **Wetlands and Their Global Significance.**

Chichester’s coastal plain is the last significant stretch of undeveloped coastal hinterland between Southampton and Eastbourne, containing internationally important areas of wetland in Chichester and Pagham Harbours and Medmerry. Wetlands are one of the ecosystems most under threat globally and in the UK, both from coastal development and sea level rise. These biodiverse habitats are also one of the most effective for CO2 sequestration. As a result, wetlands have a huge natural capital as a vital resource globally. Leaving space for Chichester’s wetlands, and associated species, to migrate inland and to merge with one another is probably one of the most important and sustainable land use functions of the area. Making space for water is not only good for biodiversity and CO2 absorption, it also provides important flood mitigation which is of huge social and economic benefit to the local communities. Allocation of the land for the future migration of wetlands will also benefit the green/outdoor/natural tourism economy which already forms a major part of the area’s revenues and employment.

The UN [Millennium Ecosystem Assessment](#)<sup>5</sup> determined that [environmental degradation](#)<sup>6</sup> is more prominent within wetland systems than any other ecosystem on Earth. Wetlands are the most effective carbon sinks on Earth. They reduce the intensity of waves, storm surges, and tsunamis, shielding the 60 per cent of the global population that lives and works along coastlines from flooding, property damage and loss of life. In 2016, the UK government funded the establishment of the ‘Blue Forests’ initiative run by British organisation, Blue Ventures. The aim of the project is to reduce deforestation of mangroves habitat, create new sustainable livelihoods, support community health and women’s empowerment and increase climate resilience in coastal communities. So why is the UK government condoning building on low lying coastal hinterlands that will be needed in the future for wetland migration/conversion?

Wetlands play an irreplaceable role in regulating the global climate, maintaining the global hydrological cycle, protecting the ecosystem diversity, and safeguarding human welfare. Wetland ecosystems can not only bring indirect services to human beings, but also bring direct economic values to human beings. The value per ha of wetland ecosystem services ranks first among all kinds of ecosystems, and the total values of wetland ecosystem services account for 47% of the values of the global ecosystem. Therefore, it is one of the most important and productive ecosystems. Davidson estimated that wetlands around the world had degraded by about 87% since 1700 in data existing regions, and the degradation mainly occurred in the 20th and early 21st centuries. The OECD (Organization for Economic Co-operation and Development) and Ramsar have both estimated that the world had lost 50% of its wetlands since 1900. Ramsar Convention Secretariat reported a 35% reduction of global wetlands with data available between 1970 and 2015.

---

<sup>4</sup> Natural England 2014 <file:///C:/Users/user/AppData/Local/Temp/126%20South%20Coast%20Plain.pdf>

<sup>5</sup> [https://en.m.wikipedia.org/wiki/Millennium\\_Ecosystem\\_Assessment](https://en.m.wikipedia.org/wiki/Millennium_Ecosystem_Assessment)

<sup>6</sup> [https://en.m.wikipedia.org/wiki/Environmental\\_degradation](https://en.m.wikipedia.org/wiki/Environmental_degradation)



## SAVE OUR SOUTH COAST ALLIANCE

Since most of the services provided by wetland ecosystems have not been traded in the economic market, the value of wetland ecosystems continues to be neglected or underestimated by stakeholders, government, and public. Wetlands not only contain the value of biodiversity as habitats for plant animal and fish species, but also can bring many environmental services or functions. Thus, wetland policy has begun to shift from encouraging development to protecting habitat and promoting rational utilization.

Ramsar Sites are wetland reserves. The area of a Ramsar Site and the actual area of wetland in a site are two different concepts. In general, the area of a Ramsar Site will not change unless it is expanded, adjusted, or merged with other protected areas. Marine/coastal wetlands are most affected by pollution and climate change, which may be due to the economic development of coastal cities and sea level rise caused by climate warming.<sup>7</sup>

Chichester District already has two important Ramsar Sites, Chichester and Pagham Harbours, and the potential for further designations such as Medmerry Harbour. However, predicted sea level rise means that the future integrity of its wetlands needs to be recognised in Local Plans going forward by allowing space for creation, expansion, migration and merger of coastal wetlands in the district.

### **Farmland and Fishing**

Food production, through agriculture, horticulture and fishing is, along with tourism, the major economic sector on the peninsula and coastal plain. The NCP commented on this significance.

“Food provision: The fertile soils of the lower plain support intensive arable farming and horticulture, with some dairy, beef and poultry. Permanent grassland is a feature of the poorer quality land. Mixed farming occurs on the thicker gravel deposits.

“Fish are an important food source. Shellfish are harvested from the harbour areas and fish landed from the open sea. During the oyster fishing season of 2012/13, 60 tons of oysters were harvested from Chichester Harbour. The harbours are also vital nursery areas for species including bass, bream, mullet, sole and plaice.”<sup>8</sup>

Maintaining as much land as possible for growing food and maintaining healthy seas for fish, will help the environmental, economic and social resilience of the community as it adjusts and transitions with rising sea levels. Farmers have managed the drainage of this low-lying area, maintaining and digging ditches and ponds, for centuries. As ground water and sea levels rise and rainfall intensifies, farmers will help the area adjust and can provide land for future wetland migration as is needed. Wetlands, farming, fishing and

---

<sup>7</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6571829/>

<https://freshwaterhabitats.org.uk/news/uk-government-taken-to-court-over-unprotected-wetlands/>

<https://www.dur.ac.uk/research/news/item/?itemno=35217>

<https://www.nature.com/articles/s41467-018-05080-0#Fig1>

<sup>8</sup> NE 2014 <file:///C:/Users/user/AppData/Local/Temp/126%20South%20Coast%20Plain.pdf>



## SAVE OUR SOUTH COAST ALLIANCE

---

tourism will symbiotically enhance the area's ability to cope with climate change providing it with more opportunity than risk in the short to medium and long term.

The NE's NCP noted in 2014:

"IFCA identified 22 species of fish within Chichester Harbour. A survey carried out in 2004 by the University of Portsmouth recorded 32 species, with sand and painted gobies and black bream the most abundant. Also numerous at some sites were bass, ballan wrasse and corkwing wrasse. Several species, such as the bass, bream, mullet, sole and plaice use the harbour as a nursery area with a large percentage of juveniles making up the survey samples. The Solent oyster population has declined in the last decade and shows no sign of broad scale recovery. The Chichester oysters are considered to be a component of this wider population. The native oyster fishery has been locally important in Chichester Harbour since at least Roman times."<sup>9</sup>

There have been significant gains for nature in terms of newly created wetlands as a consequence both of the Environment Agency's (EA) policy of 'managed retreat' of coastline and of planning agreements on developments within the region and as a result of lost wildlife areas elsewhere (notably Medmerry Nature Reserve, Cobnor and West Wittering Estates). It should be emphasised that these net gains for natural wetland habitat are in reality replacements for those lost elsewhere. It is a promise of Government planning policy that housing developments should produce a net gain for nature. This should be an opportunity to safeguard and enhance the quantity and quality of wet wilderness. But will it? Currently there is little evidence of the planned compensatory net gains for nature at a strategic level. It may be argued that these may take place at the planning application/negotiation stage, but these are invariably *ad hoc* and without effective monitoring of implementation.

### **2011-2013: Medmerry Realignment Scheme.<sup>10</sup>**

---

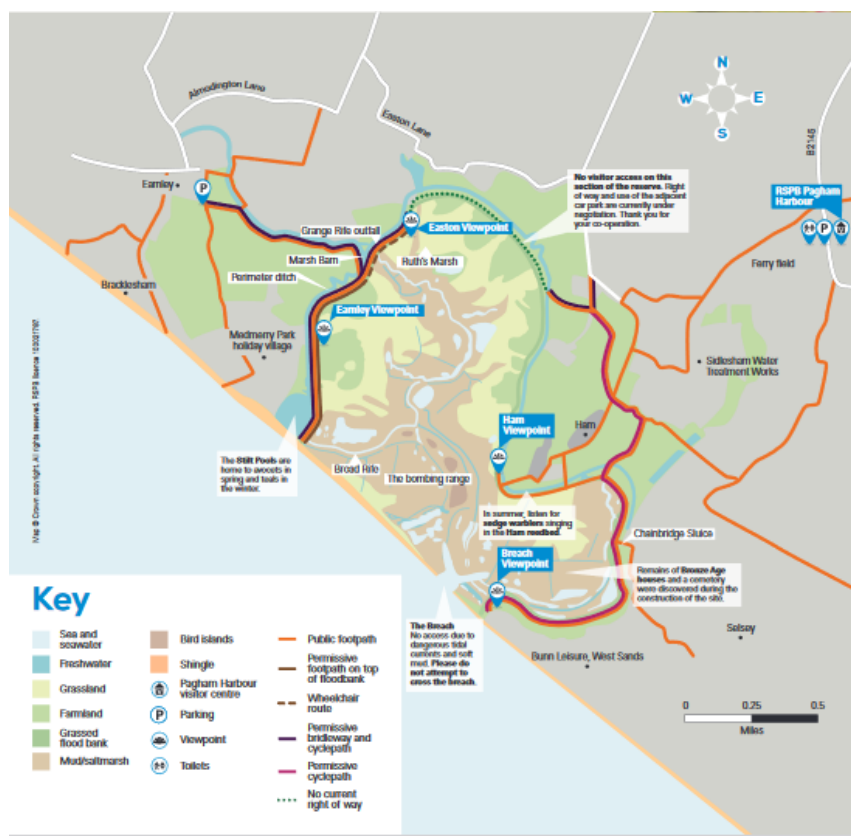
<sup>9</sup> NE 2014 <file:///C:/Users/user/AppData/Local/Temp/126%20South%20Coast%20Plain.pdf>

<sup>10</sup> Map from RSPB Medmerry.

## SAVE OUR SOUTH COAST ALLIANCE

The construction of Europe's largest coastal realignment scheme was the result of a community led

initiative in which two local residents invited Dutch specialists in coastal and water management, planning, engineering and ecology to visit the area and recommend ways of increasing its resilience to climate change – the Going Dutch project.<sup>11</sup> The Dutch recommended managed realignment as the most sustainable form of sea defence, and a way of creating valuable intertidal and wetland habitat, enhancing the environment to benefit both wildlife and the local area's tourism economy. By providing compensatory habitat for the expansion of Southampton's container port, the whole £28 million project was funded by the Association of British Ports, demonstrating the economic value of natural capital. The Environment Agency built 7 km of new flood embankment on higher ground before breaching the existing shingle bank



defence, creating more sustainable flood risk management and 183 hectares of intertidal habitat to compensate for Natura 2000 site loss elsewhere in the Solent plus over 300 ha of additional wetland habitats.

The scheme has created an accessible nature reserve in collaboration with the RSPB and local community. It is also enabling the creation of new access routes and viewpoints for walkers, cyclists and horse riders linking Selsey and Bracklesham under the auspices of GLAM, Green Links Across the Manhood, a Manhood Peninsula Partnership sub group set up in 2013. The Medmerry site is now part of the UK school curriculum as an example of coastal management and climate change adaptation. It has received over 16 major national and international awards for engineering, environmental enhancement and community engagement.<sup>12</sup> It has proved to be successful in attracting visitors of all species, from water voles and rare birds to birdwatchers, walkers, locals and visitors.<sup>13</sup>

<sup>11</sup> <http://peninsulapartnership.org.uk/abd/wp-content/uploads/2012/12/Going-Dutch-book-a.pdf>

<sup>12</sup> <http://www.rics.org.uk/training-events/awards/rics-awards-2015-south-east/>; <http://envirep.co.uk/coastal-realignment-scheme-wins-2014-better-public-building-award/>; <http://www.cieem.net/news/187/2014-cieem-award-winners-presented-with-trophies-at-award-ceremony><http://www.dredgingtoday.com/2015/05/19/medmerry-scheme-bags-hat-trick-of-awards/><http://www.nce.co.uk/awards/bci-awards/flood-defence-schemes-take-top-honours-at-british-construction-industry-awards/8670806.article>

<sup>13</sup> <https://www.google.co.uk/amp/s/www.chichester.co.uk/news/five-years-nature-reserve-incredible-success-our-wildlife-578475%3famp>  
<https://community.rspb.org.uk/placetovisit/paghamharbour/b/weblog/posts/breeding-success-at-rspb-medmerry>  
[http://www.rarebirdalert.co.uk/v2/Content/Black-winged Stilt chicks hatch at Cliffe.aspx?s\\_id=58136823](http://www.rarebirdalert.co.uk/v2/Content/Black-winged%20Stilt%20chicks%20hatch%20at%20Cliffe.aspx?s_id=58136823)





## SAVE OUR SOUTH COAST ALLIANCE

### **The Protection and Enhancement of Natural Capital in The Land 'In Between'.**

Other lowland riparian and coastal natural elements are not protected to anything like the same extent. Indeed, the very connections between Downs and Harbours along the chalk streams, ponds and open drainage ditches which act as stepping stones for wildlife is threatened by unrestrained house-building. This is the land 'in-between'. Allowing development right up to the boundaries of the Sites of Special Scientific Interest, Special Area of Conservation Special Protections Areas, RAMSAR sites, will mean that when the 'coastal squeeze' occurs as a result of predicted sea level rises, there will be nowhere for the naturally occurring species of birds, animals, insects and plants to go. Rates of extinction or near extinction will inevitably rise.

Responding to the September 2020 announcement by HM Government of ambitions to protect natural areas, Henri Brocklebank of the Sussex Wildlife Trust said:<sup>14</sup>

"Here in Sussex we know that around 27% of our land is in conservation ownership, or is designated for wildlife, or is mapped as being a 'priority' habitat. That should mean that we've nearly hit our target? But this is no measure of functional and connected nature, it is not an index of nature's recovery. It is in fact a perfect reflection of the shifting baseline of nature. If we think that we are in a good place for wildlife, think again.

In Sussex we have numerous internationally important wildlife sites that are not in favourable condition for wildlife. We have national treasures of sites that are struggling to maintain their wildlife value and our suite of 600+ local wildlife sites is under constant threat. If we look at maps of this 27% we see little connection, and failing ecosystem services, like water quality, flood resilience and species diversity."

Some of the landscape and ecosystem features of the 'in-between' land have huge significance, yet are without effective protection. Chalk streams are rare on planet earth. Yet no less than six cross the West Sussex coastal plain within the District of Chichester. These are, from west to east: The River Ems, Ham Brook, Cutmill/Newells Lane, Bosham Stream and delta, Fishbourne and the River Lavant and delta. Of these, Hambrook and Newells Lane are able to support commercial water cress beds near their spring sources. Both the Ems and Bosham Stream were sufficient to support water mills through Georgian times into the modern period and were modified with mill races. There are numerous other rifes which cross the coastal plain to the south-east of the City of Chichester including the Pagham and Aldingbourne Rifes.

Even some distributaries of the chalk streams have significant contributions to natural capital and have been documented locally. An example from Bosham is the 'The Leat', a distributary from the Bosham Millstream.<sup>15</sup>

Chichester District Council Revised Local Plan has an appendix on Wildlife Corridors which affords a few hundred metres of 'protection' to only four of the above chalk streams. CDC already acknowledges the importance of some chalk streams and has proposed a designation of wildlife corridor to some, but not all of them. The current proposal omits other linear opportunities to offset habitat fragmentation consequent

---

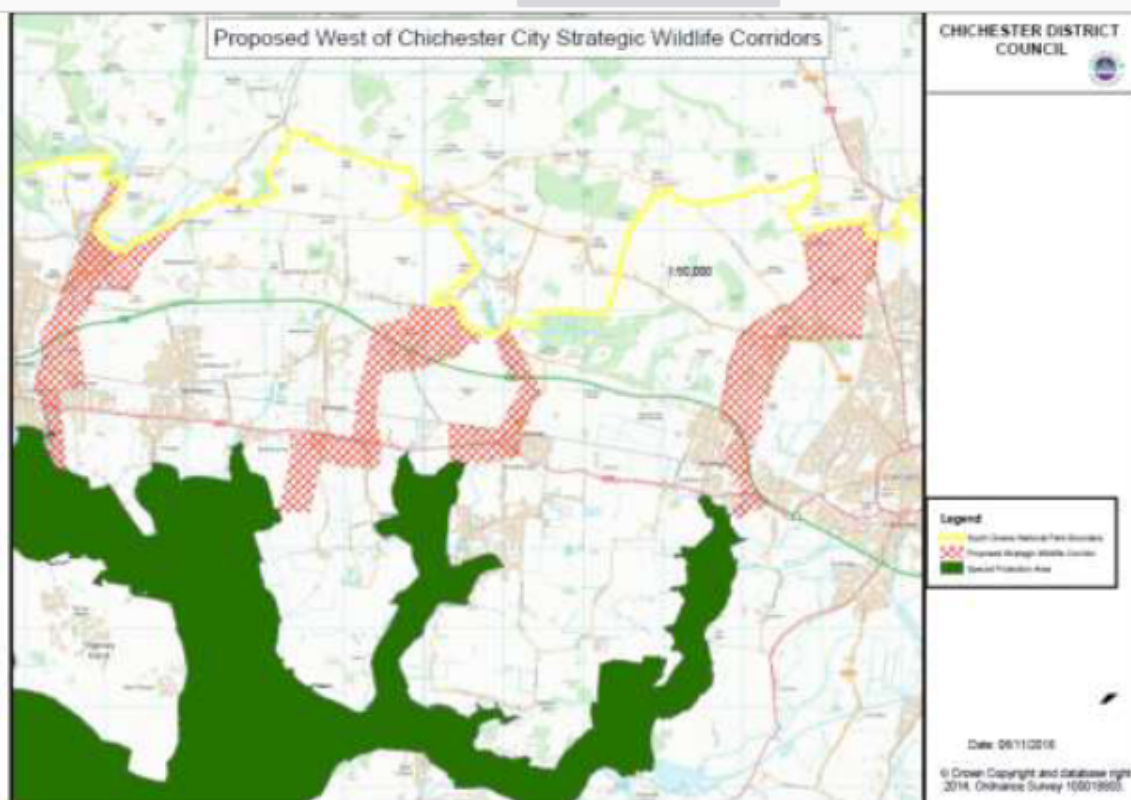
<https://www.google.co.uk/amp/s/amp.theguardian.com/environment/2020/sep/08/country-diary-sleeping-spoonbills-refuse-to-be-disturbed>

<sup>14</sup> <https://sussexwildlifetrust.org.uk/news/category/henri-brocklebank>

<sup>15</sup> <https://www.boshamassociation.org.uk/DocumentStore/The%20Leat%20Aug%2016.pdf>

## SAVE OUR SOUTH COAST ALLIANCE

upon proposed housing development. The chalk stream protective buffers are down to 200m widths over several stretches. However, the Newells Lane ditch system straddling the boundary of Bosham and Chidham & Hambrook that debouches to Cut Mill Rythe including the braided streams and ditches through Green Lane/Meadow Farm/Drift Lane area is omitted altogether. Ecologically this mirrors the Bosham/Broadbridge millstream system which does have wildlife corridor protection including straddling the A259. Ham Brook is already impacted by developments at various points along its course.



This lack of more serious protection has not gone unnoticed. In 2014 the Worldwide Wildlife Fund produced its report on England's chalk streams.<sup>16</sup> It is worth quoting from three passages.

"Only 12 out of England's 224 chalk streams are protected and of these only 15% (by length) are classed as adequately protected and meeting conservation objectives; half are classed as unlikely to meet conservation targets without changes to management or external pressures."

"While all chalk streams should be capable of supporting a healthy population of brown trout, the most recent data showed observations on just a third of chalk streams."

"In 2004 the Environment Agency, Natural England and the UK Biodiversity Action Plan Steering Group for Chalk Rivers published the 'State of England's Chalk Rivers' report<sup>2</sup>. It was the first comprehensive

<sup>16</sup> <https://www.wwf.org.uk/where-we-work/uk-rivers-and-chalk-streams>  
[http://assets.wwf.org.uk/downloads/wwf\\_chalkstreamreport\\_jan15\\_forweb.pdf?\\_ga=2.22557042.81920042.1601301812-751430116.1601301812](http://assets.wwf.org.uk/downloads/wwf_chalkstreamreport_jan15_forweb.pdf?_ga=2.22557042.81920042.1601301812-751430116.1601301812)





## SAVE OUR SOUTH COAST ALLIANCE

assessment of the health of chalk streams, looking at water quality, quantity, morphological and ecological indicators – assessing their physical state and the environmental impact.”

“The report showed 161 chalk rivers in varying degrees of health but all under pressure. It set out a vision, and actions needed to achieve it: “Chalk rivers should be protected or restored to a quality which sustains the high conservation value of their wildlife, healthy water supplies, recreation opportunities and their place in the character and cultural history of the landscape.” Since then there has been a growing view that smaller chalk streams, chalk stream headwaters and winterbournes (rivers that only flow when groundwater levels are high) should also be recognised. On this basis 224 chalk streams have been identified... Only a handful of chalk streams are given special protections – the Itchen, the Avon, the Lambourn and the Wensum are designated as international Special Areas of Conservation (SACs), and a further eight are designated as nationally important Sites of Special Scientific Interest (SSSIs).”

### **The Challenge to Species in The District’s Wildlife Corridors.**

Brown Trout and sticklebacks are keystone species in Chalk Streams. With the Rivers Ems and Lavant reduced to the status of winterbournes, through the over abstraction by water companies, at present only the Bosham Stream and Pagham Rife support a small population of brown trout. There are hopes too for restoration of habitat along the River Ems. Prolonged spells of drought threaten even this population, although abstraction is absent except for consented field irrigation. Alas sticklebacks have not been seen even here for many years. The Pagham Rife is one of several freshwater rifes which flow into Pagham Harbour which is an internationally important site for bird conservation, designated as a Specially Protected Area, a Site of Special Scientific Interest, and a RAMSAR site. It is designated under the Water Framework Directive as waterbody ID number GB 107041012880, collectively known as the “Western Streams”. When previously assessed by the Environment Agency at a site in South Mundham, approximately 2km downstream of Runcton, the stream was failing water quality objectives for both phosphates and dissolved oxygen; it was also assessed as being in poor condition for fish.

<https://www.wildtrout.org/content/south-coast-sea-trout-project>

Water Vole have been associated with the chalk streams and rifes of the district, but here too the threats are great. Mink, a primary predator elsewhere in the country, having escaped or released from fur farms several decades ago, are not a feature of the picture here. But other issues including the suburbanisation of the areas through which the streams flow, especially the hard-shouldering of the banks, the disturbance of this shy creature and culverting have all played a part in its demise. Remaining populations are keenly monitored by wildlife officers.

A range of avians are reliant upon the riverine corridors including resident and migratory ducks, moorhen, coot, kingfisher, little egret, grey heron. In summer the streams and pools provide insect food for bats, swallows and house martins. Development adjacent to and in the proximity of these linear natural resources, will fragment the habitat and degrade ecosystem, reducing genetic diversity within all species.

Reptiles such as toads, frogs, lizards and snakes should not be marooned in redoubts of wildness. The recent close cutting of a Bosham meadow in August 2020 after many years’ ‘neglect’ saw dozens of grass snakes displaced through a road and ten village gardens to seek sanctuary in a cemetery one-quarter of a mile away. With the infilling, crimping and asphyxiation of ponds, streams and ditches, wildlife in general, but particularly reptiles and mammals become dependent upon ponds and water features in suburbanised



## SAVE OUR SOUTH COAST ALLIANCE

gardens. Domestic boundaries need to be 'porous' to allow animal movement. Modern housing developments rarely take this into account and local planning authorities rarely make such provisions a condition of consent. But water courses and their associated soft banks are invaluable in facilitating such movement. A tendency for householders to build out over adjacent water courses is not helpful to that water course being a wildlife corridor.

The chalk streams and beads of copses, coverts, ponds, hedges, spinneys and new field margins provide continuing opportunities for seed dispersal, insect, bird and animal movements between the nationally important designated protection areas. The Sussex Biodiversity Research Centre records all bat flight routes, wetland linkages and connections between Barn Owl habitats. Fields to the south and east of Broadbridge play host to in excess of 100 different bird species. The Solent Special Area of Conservation (SAC) identifies the zone of influence for bird species (especially geese and waders) for which the area is important but restraint is weak as is evidenced by the Chichester District Council's intent to increase house building in this area to over a thousand a year for ten years.

### Water Quality.

We have seen how essential Water Quality is to the health of the bio-region. Discharges from land to sea remain a matter for concern on two fronts: effluent and nutrients<sup>17</sup>. This has led to water companies being singled out for particular criticism and penalties by the Environment Agency (see below). It has also led to the designation of the nitrate sensitive area of the Solent and Chichester Harbour.<sup>18</sup>

Environment Agency Environmental Performance Assessment (EPA) results 2019 for water and sewerage companies						
Metric and units	Pollution incidents (sewerage) - per 10,000km of sewer	Serious pollution incidents (sewerage) - per 10,000km of sewer	Discharge permit compliance (STW & WTW) - percentage	Self-reporting of pollution incidents - percentage	National Environment Programme - percentage of plan delivered	Security of Supply Index (SoSI) - score
Red, amber, green, thresholds	≥50 red >25 amber ≤25 green	≥1.5 red >0.5 amber ≤0.5 green	≤97 red <99 amber ≥99 green	≤55 red <75 amber ≥75 green	≤97 red >97 amber ≥99 green	100 green <100 but ≥99 amber <99 red
Anglian Water	35 ↓	1.6 ↓	98.6 ↑	71 ↑	100 →	99 ↓
Northumbrian Water <sup>1</sup>	15 ↓	0.7 ↓	96.6 ↓	80 ↓	100 →	100 →
Severn Trent Water	26 ↑	0.3 ↑	99.6 ↑	78 ↓	99.2 →	100 →
Southern Water	116 ↓	1.8 →	98.8 ↓	87 ↑	99.6 ↓	100 ↑
South West Water	105 ↓	0.6 ↑	98.7 →	76 ↓	97.4 ↓	100 →
Thames Water	30 ↓	1.4 ↓	99.7 ↑	78 ↑	99.3 ↓	100 ↑
United Utilities	28 ↓	0 ↑	98.5 ↓	90 ↑	99.7 ↑	100 →
Wessex Water	22 ↑	0.3 ↑	98.5 ↓	85 ↑	100 →	100 →
Yorkshire Water	35 ↑	1.3 ↑	97.5 →	73 →	99.2 ↓	100 →
Sector	37 ↓	0.9 →	98.7 ↑	80 ↑	98.4 ↓	99.9 ↑

Metric status	Performance description
Red	Performance significantly below target
Amber	Performance close to or slightly below the target
Green	Performance better than target

Performance star rating	Star rating description
****	Industry leading company 5 or more green metrics and no red metrics
***	Good company 1 or more green metrics and no red metrics
**	Company requires improvement 1 or 2 red metrics and/or zero green metrics
*	Poor performing company more than 2 red metrics

Performance change	Change compared to last year
↑	Improving within class
↑↑	Improved a class
↑↑↑	Improved by 2 classes, e.g. from red to green
→	About the same
↓	Deteriorating within class
↓↓	Deteriorated a class
↓↓↓	Deteriorated 2 classes, e.g. from green to red

<sup>1</sup> Northumbrian Water had 6 discharge permit compliance metric failures. Three of these were due to sample shortfalls associated with laboratory analysis not meeting quality control standards and are not associated with any known environmental impact

<sup>17</sup> [https://5d0e6579-f20c-40a0-acbf-8c4ac274613b.filesusr.com/ugd/dae4df\\_4e50c308b6b1463dba41ab92f21b547e.pdf](https://5d0e6579-f20c-40a0-acbf-8c4ac274613b.filesusr.com/ugd/dae4df_4e50c308b6b1463dba41ab92f21b547e.pdf)

<sup>18</sup> [http://apps.environment-agency.gov.uk/static/documents/nvz/NVZ2017\\_ET2\\_Chichester\\_Langstone\\_Portsmouth\\_Datasheet.pdf](http://apps.environment-agency.gov.uk/static/documents/nvz/NVZ2017_ET2_Chichester_Langstone_Portsmouth_Datasheet.pdf)



## SAVE OUR SOUTH COAST ALLIANCE

Moreover, Natural England's 2014 NCP noted of Chichester Harbour:

"Serious concerns have been raised at the ability of waste water treatment facilities to cope with current and future housing development. The quality of water in Chichester Harbour is not statutorily assessed as bathing water and is not therefore monitored in accordance with the EC Bathing Water Directive by the regulator. However, the discharge of sewage into the Harbour may have environmental health implications particularly for people enjoying activities on the water such as sailing and kayaking. There have been a number of efforts to improve water quality in this area including Portsmouth Water's Downs and Harbours Clean Water Partnership."<sup>19</sup>

### **Habitat Protection and Enhancement at the Sub-Regional Level.**

The Solent Basin can be seen as a complete bio-region, surrounded by chalk escarpments, with natural harbours and intense economic activity. Standing on any of the many vantage points on the South Downs, whether it be The Trundle, Kingley Vale, Stoke Clump or Portsdown Hill, the essential unity of the sub region is apparent.

The balance between the needs of humans and those of nature are tipped legally in favour of the former. Some spaces which are quite extensive are afforded landscape protection for the benefit of the humans. In these areas, nature fairs better, but in the rest of the area, nature is on the retreat with few legal measures to protect it. There is an expectation in the NPPF that local planning authorities should consider a duty to cooperate. In fact, very little such occurs as the latest White Paper acknowledges, whilst doing nothing to address the problem. There are some co-operations and the Solent Special Protection Area has delivered additional protections for over-wintering birds, specifically Brent Geese and waders in general. Some cooperation has been broached on nitrate run-off which affects the whole Solent and its adjacent harbours. However, the restraints on new development within the National Park and the AONBs funnels development pressures into the 'in-between' lands as we have seen. There should be wider coordination to protect and enhance the natural capital within this area. The importance of the drainage system for wildlife around this whole basin cannot be underestimated. But it is left to voluntary organisations to document this wider picture of nature in the region. Eels, oysters, sea trout, bass, seals all have their champions. Water quality, land and coastal management have vital roles to play.

This approach owes a lot to the theory of bioregionalism expressed recently by Sarah P. Church, (2014).<sup>20</sup> This theory seeks to bring together a number of approaches, in particular expressed cogently as "city-islands in a sea of biodiversity", but bringing together place identity, urban design, neighbourhood-oriented stewardship, the intrinsic value of nature, social equity and empowerment. But more than anything it means starting the planning process with an assessment of natural capital, how its elements are interrelated and how it will shape and remodel the existing built form and that envisaged from development. It is much more than that envisaged in the current White Paper (September 2020) of considering design, layouts and green infrastructure as an adjunct to achieving housing numbers.

The Solent and its water catchment together is a bio-region straddling County, District and Parish boundaries. The map below shows designations across the sub-region, taken from the current CHAONB

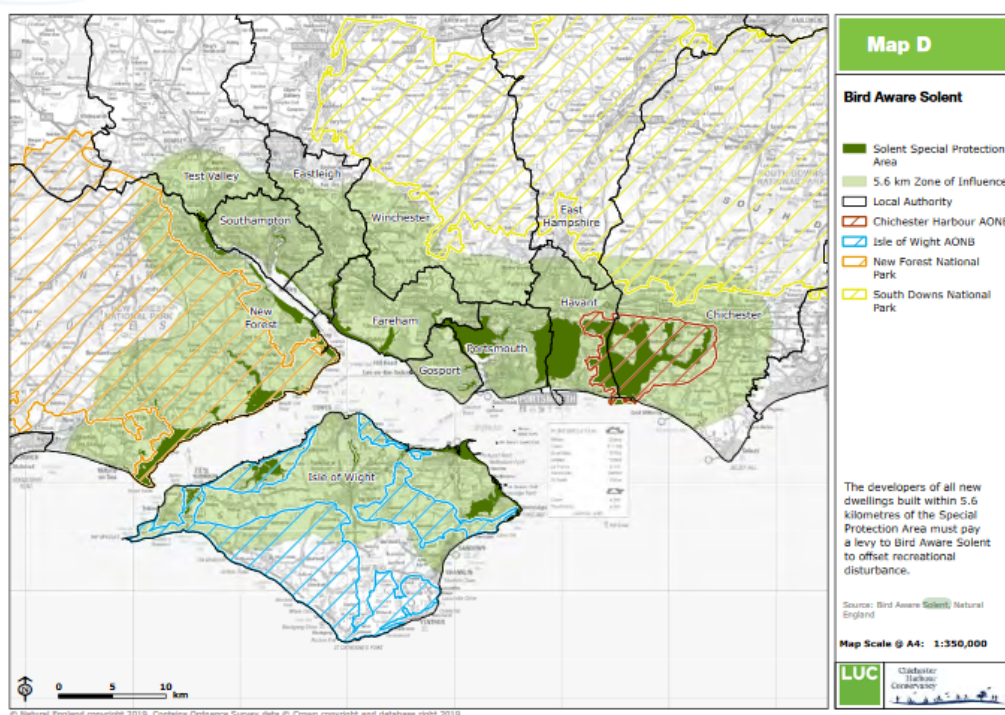
<sup>19</sup> Natural England 2014 <file:///C:/Users/user/AppData/Local/Temp/126%20South%20Coast%20Plain.pdf>

<sup>20</sup> <https://journals.openedition.org/sapiens/1691>

## SAVE OUR SOUTH COAST ALLIANCE

management plan. From it one can see the natural relationship between Downs, streams, harbours and Solent. The pressures for linear development along the coastal plain have been overwhelming further east and further west, but hitherto the relationship has been so far salvaged through restraints on development through policies of settlement areas, settlement gaps and anti-coalescence. All this is threatened by developments in current spatial planning policy. Seeing this physical entity at this scale as a bioregion has beneficial consequences for managing urban development and harmonising with nature. The map overleaf gives some indication of the unity of the Solent Bio-region.

Chichester Harbour Management Plan (2019-2026)  
Appendix: Maps



Just to return to the issue of chalk streams as an example in the bio-region. The following significant chalk streams all of which debouch to the Solent from Wessex and the Isle of Wight are listed in the aforementioned report:

River Test\*: flows into Southampton Water

Bourne Rivulet

River Swift

River Dever

River Anton

Pilhill brook

Wallop brook

Somborne stream

River Dun

River Itchen\*†: flows into Southampton Water

Tichborne

River Alre

Candover brook





## SAVE OUR SOUTH COAST ALLIANCE

River Meon:	flows directly into the Solent
Whitewool stream	
River Ems:	flows into Chichester Harbour (Sx)
River Lavant:	flows into Chichester Harbour (Sx)
Isle of Wight	Caul Bourne

The freshwater catchment of the Solent gives a clue to the urgency of seeing environmental challenges in an integrated way and addressing them in a spirit of cooperation, placing nature at the centre. The obvious environmental qualities of this sub-region, its opportunities for outdoor recreation and the qualities of existing settlements, many of which have historic cores and many attractive localities, have created additional demand for housing. In this context beautiful nature is its own worst enemy unless demand is managed. The current planning system for the area provides for a measure of restraint, but is currently under review (see the White Paper Review elsewhere on this website).<sup>21</sup>

### **The policy restraints on the destruction of natural capital**

Several aspects of state regulation seek to protect the natural environment of this bio-region. These are National Planning Policy, the mechanisms available to quangos Natural England and the Environment Agency and the policies of the local planning authorities which should be 'consistent with national policy.'<sup>22</sup>

We should recall that the National Planning Policy Framework (NPPF) clearly states:

"170. minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;"<sup>23</sup>

In terms of prescription, amongst other things the NPPF states:

"174. To protect and enhance biodiversity and geodiversity, plans should: a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation;"

Chichester District in 2018, received the planning authority's consultant's assessment of the local plan policies, the Habitat Regulations Assessment (HRA):<sup>24</sup>. In relation to the issue of over abstraction by water companies of chalk streams, the HRA notes:

"The Local Plan area is supplied with water from the Environment Agency's Arun and Western Streams catchment, which currently assesses groundwater availability as being 'restricted' in terms of supplies from

---

<sup>21</sup> Town & Country Planning Journal September/October 2020 Vol 89 No 9/10 Special Issue on the Planning White Paper.

<sup>22</sup> National Planning Policy Framework paragraph 35d

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/810197/NPPF\\_Feb\\_2019\\_revised.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/810197/NPPF_Feb_2019_revised.pdf)

<sup>23</sup> [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/810197/NPPF\\_Feb\\_2019\\_revised.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/810197/NPPF_Feb_2019_revised.pdf)

<sup>24</sup> Chichester Local Plan Review Chichester District Council Project number: 60549754 November 2018 (AECOM Infrastructure & Environment UK Limited) [https://www.chichester.gov.uk/media/30918/Habitat-Regulations-Assessment-Chichester-Local-Plan-Review/pdf/Chichester Local Plan Review HRA Issue V2 9 Nov 2018 \(2\).pdf](https://www.chichester.gov.uk/media/30918/Habitat-Regulations-Assessment-Chichester-Local-Plan-Review/pdf/Chichester%20Local%20Plan%20Review%20HRA%20Issue%20V2%209%20Nov%202018%20(2).pdf)





## SAVE OUR SOUTH COAST ALLIANCE

the Chichester chalk. Freshwater flows into Chichester Harbour arise from the Chichester Rifes - the River Lavant, River Ems, Fishbourne Springs, Bosham Stream, Cutmill Creek, Ham Brook, and the springs at Warblington. The Habitats Directive (HD) review of consents investigated the impact of abstraction on freshwater flows to the SPA and the abstraction management strategy noted that any new licence would need to consider impacts on this conservation site. The review of consents process identified that no changes to licences were required in order to maintain integrity of the Arun Valley SAC/ SPA/ Ramsar sites. Within the Local Plan area two water companies are operational in terms of supply:"

This assessment goes on:

"Coastal Squeeze

3.32 Rising sea levels can be expected to cause intertidal habitats (principally saltmarsh and mudflat) to migrate landwards. However, in built-up areas, such landward retreat is often rendered impossible due the presence of sea walls and other flood defences.

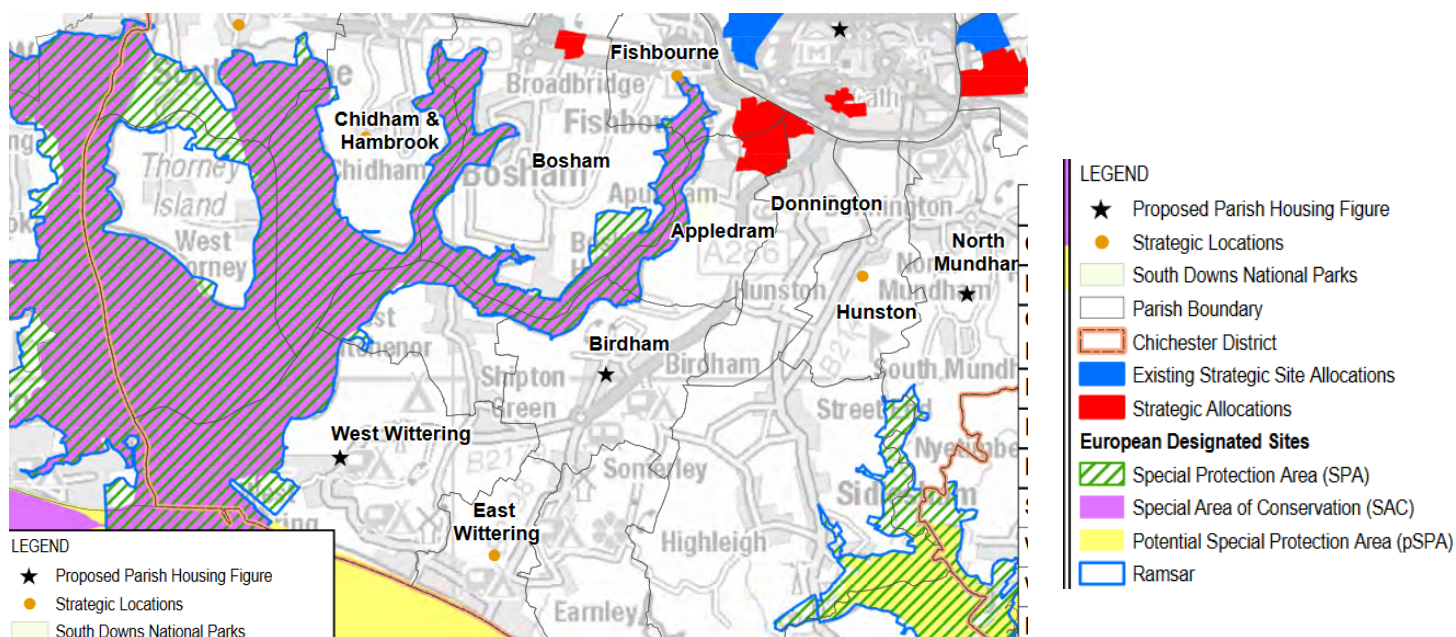
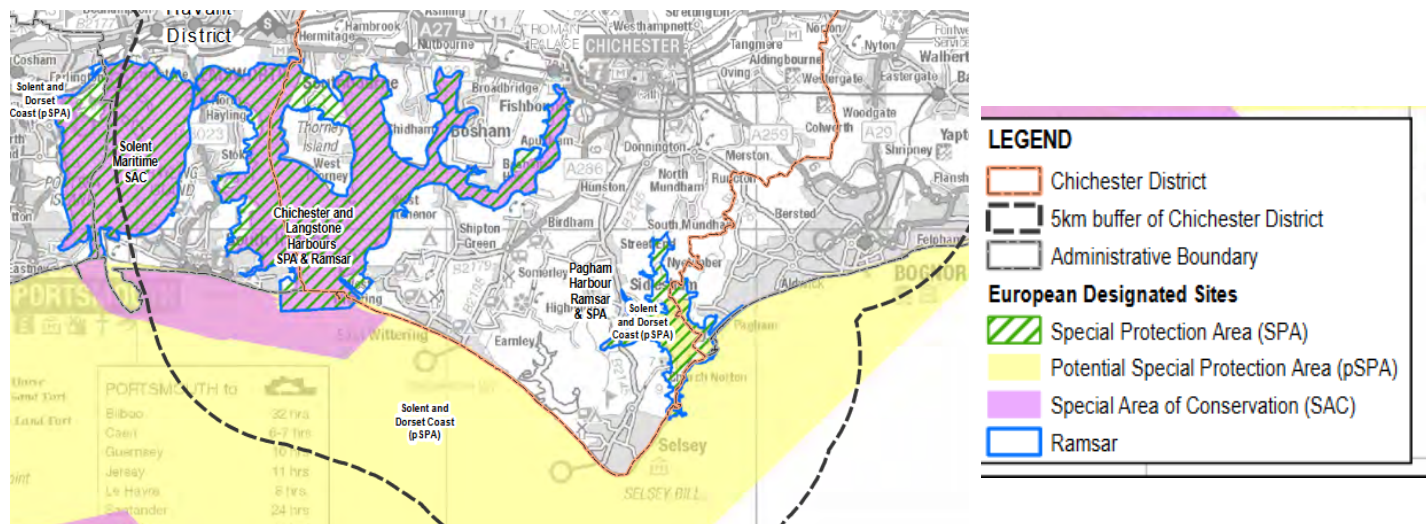
3.33 In addition, as development frequently takes place immediately behind the sea wall, flood defences often cannot be moved landwards to accommodate managed retreat of threatened habitats. The net result of this is that the quantity of saltmarsh and mudflat adjacent to built-up areas will progressively decrease as sea levels rise. This process is known as 'coastal squeeze'. In areas where sediment availability is reduced, the 'squeeze' also includes an increasingly steep beach profile and foreshortening of the seaward zones.

3.34 The North Solent Shoreline Management Plan (SMP- ed) units for Chichester and Langstone Harbours indicate that there will be a combination of 'Hold the Line', 'Managed Realignment' and 'Adaptive Management' strategies. An HRA of the draft plan indicated that Hold the Line will have no effect on habitats behind the defences, whilst Managed Realignment is likely to "have a significant detrimental effect resulting in loss of designated terrestrial habitats including coastal grazing marsh, saline lagoons and grasslands." Managed Realignment is proposed in the short term for part of Chichester Harbour. Although Hold the Line is the preferred approach for the majority of the shoreline, the SMP notes that further studies on Chichester and Langstone Harbours may lead to revision of this for significant lengths of shoreline in the inner harbours.

3.35 The South Downs SMP for areas fronting Pagham Harbour identifies a mix of Hold the Line and Managed Realignment strategies. The SMP states that a Managed Realignment strategy is being adopted to maintain the integrity of the harbour with its nature conservation value as a primary consideration.

**3.36 In order to conclude that development in the Local Plan area would not lead to a significant adverse effect as a result of coastal squeeze, it will be necessary to conclude that the Local Plan would not require the SMP (or resulting Coastal Strategy) policies for the frontage to be altered and would not be situated in such as position as to require new defences in currently undefended parts of the coastline or locate development in areas planned for managed realignment in the SMP or the Environment Agency Regional Habitat Creation Programme." (Emphasis added - ed)**

## SAVE OUR SOUTH COAST ALLIANCE



In 2014 Natural England (NE) set out its Statements of Environmental Opportunity for the South Coast Plain.<sup>25</sup> These included:

- Engaging early in the scoping of new developments to ensure that they maximise their contribution to sustainable development.
- Seeking to maintain and enhance areas of open countryside in this heavily urbanised NCA, to preserve the distinct settlement pattern and ensure that local communities have access to greenspace for their wellbeing and enjoyment.

<sup>25</sup> Natural England 2014 <file:///C:/Users/user/AppData/Local/Temp/126%20South%20Coast%20Plain.pdf>



## SAVE OUR SOUTH COAST ALLIANCE

---

- Encouraging a strategic approach to the planning of land use around Chichester and Langstone harbours and the Manhood Peninsula to address the pressures of climate change and development, ensuring that natural processes continue to function and the comparatively wild and tranquil character is retained.
- Ensuring that development and its associated infrastructure (including light, noise and air pollution) does not intrude on the special qualities of Chichester Harbour Area of Outstanding Natural Beauty (AONB) and the South Downs National Park; and ensuring that the landscape character within these areas and their settings is conserved, restored, reinforced or created as appropriate to reflect the ambitions of their respective management plans.

Specifically:

- SEO 3: Manage and significantly enhance the area's rivers and chalk streams and their wetland valley habitats to provide resilience against climate change and improve flood protection and water quality, particularly in the internationally designated sites such as Chichester and Pagham harbours, for the benefit of local communities and wildlife.
- Among which the NE list
  - Expanding and re-linking lowland meadows, flood plain grazing marsh, saline lagoons and other wetland habitats found on the flood plains of the rivers Meon, Adur and Arun and the chalk streams, to enhance adaptation to climate change, increase flood storage capacity, improve water quality and provide wildlife corridors for biodiversity.
  - Seeking opportunities to restore natural river geomorphology, bringing rivers back into continuity with their flood plains and re-creating backwaters as a refuge for aquatic species in times of drought.
  - Creating wide grassland buffer strips running across slopes and alongside watercourses in areas of arable production, especially within the Arun priority catchment, to provide a buffer to soil erosion and nutrient run-off thereby further helping to improve river water quality.
  - Working to improve and protect the area's chalk streams, for example by reviewing ecological designations and expanding areas of semi-natural habitat in chalk stream flood plains, within the NCA and upstream. This will act as pollution filtration while also providing biodiversity benefits and information about chalk stream ecology and the negative impacts of unsustainable water use.

Intriguingly NE have limited geographical priorities for action as is evidenced by the following objectives:

- Targeted expansion of woodland on steeper slopes and adjacent to watercourses to reduce soil erosion, especially within the catchments of the Arun and Meon and the Pagham and Chichester harbours, which may also provide a local source of wood fuel where managed by coppicing.
- Restoring hedgerow boundaries, where they will help to impede cross-land flows within the catchments of the Arun and Meon. This will aid improvements in water quality and provide food sources for pollinating insects, as well as restoring the character of native hedgerows and traditional field patterns – especially where lost in peri-urban areas.

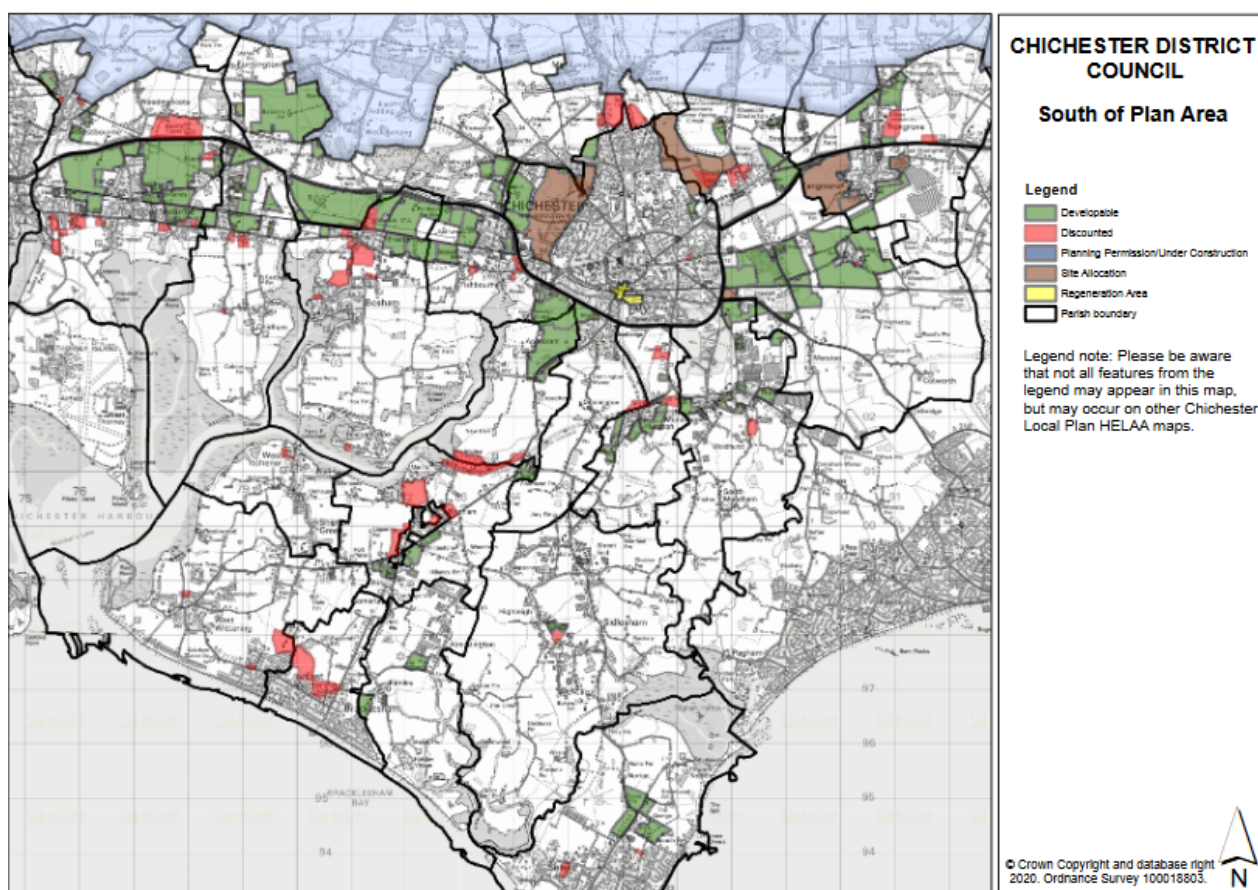
But as we have seen the smaller streams connecting to important rifes and thence to channels also need protection. Currently they lack any and are set to be overwhelmed by development pressures as we shall next see.

**The policy proposals to set aside such restraint on development.**



## SAVE OUR SOUTH COAST ALLIANCE

Despite these habit assessments underscoring national planning policy's precautionary policies, Chichester District Planning Processes are prepared to countenance developments which would rupture for ever the relationship between our higher land and our watery sites. The latest Housing-and-Economic-Land-Availability-Assessment (HELAA) has set out the developable plots and many are concentrated in the East/West corridor at the foot of the Downs from the spring line to the edge of the protective designations of the coast.<sup>26</sup> This thought experiment is set out in map-form. Not all of these sites will be developed, but sadly it demonstrates a lack of strategic defence of nature. Such developments, if followed through, would result in a number of irreversible consequences. Essentially what is evident is a linear unplanned city, a sprawl from Emsworth to Chichester, already dubbed 'Emschester'.



These consequences can be listed as follows

1. De-contextualising the historic settlements of the district.
2. Undermine the distinctiveness of settlement.
3. Fundamentally undermining the environmental attractions of the district.
4. Negatively impacting on the tourism and recreational attractions of the district.
5. Further fragmenting the habitats that connect upland and lowland ecosystems.
6. Throttling remnant wildlife corridors.

<sup>26</sup> <https://www.chichester.gov.uk/article/29759/Housing-and-Economic-Land-Availability-Assessment>



## SAVE OUR SOUTH COAST ALLIANCE

---

7. Stressing the water supply and exacerbating over abstraction of the chalk aquifer and degrading the chalk streams.
8. Overloading the capacity to process run-off waste and sewage.
9. Additional nitrate release into already sensitive water and wetland areas.
10. Limiting the scope for coastal managed retreat, exacerbating coastal squeeze and reducing wetland habitat in the face of climate change and rising ambient sea levels.
11. The unplanned suburbanisation of a cathedral city set amongst distinct historic villages and hamlets.

### **A time to make irreversible decisions**

If we do not properly plan for development with a view to retaining and enhancing our self-knowledge of the identity of our localities, in particular knowledge of their dependency on energy sources, drainage, water supplies, sewerage disposal, food supplies, economic and recreational opportunities, our natural surroundings, the potentiality and the limits of growth, then free-for-all development will plan for us. The human connection with nature is what has historically shaped the culture of our district. It's future viability as a connection is at a cross-roads now. Our streams, ditches and wetlands deserve better than is currently promised. Save our South Coast.

CC + RP for SOSCA  
14/10/20