

Taw – Torridge Estuary Management Plan

Report 2: Stakeholder Issues

North Devon AONB and Biosphere Service
Bideford Station • East the Water • Bideford

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Abbreviations

AONB	Area of Outstanding Natural Beauty	LNR	Local Nature Reserve
BAP	Biodiversity Action Plan	MCZ	Marine Conservation Zone
Defra	Dept for Environment, Food and Rural Affairs	MoD	Ministry of Defence
DSFC	Devon Sea Fisheries Committee	NDABS	North Devon AONB and Biosphere Service (formerly NDCCS)
FLAG	Fisheries Local Action Group	NDC	North Devon Council
IFCA	Inshore Fisheries and Conservation Authority	NDCCS	Northern Devon Coast and Countryside Service
LCA	Landscape Character Area	NE	Natural England
LCT	Landscape Character Type	RSPB	Royal Society for the Protection of Birds
LDF	Local Development Framework	SSSI	Site of Special Scientific Interest
LDU	Landscape Description Units	TDC	Torridge District Council

5. Background

The following issues have been raised by the participants who attended the consultation events at the Civic Centre, Barnstaple and the Bideford and District Angling Club, Bideford. The issues that have been raised through direct contact with the facilitators of the refresh of the Estuary Plan have also been included.

The revised aims are listed below with the relevant original aims from the 1999 Estuary Management Plan (EMP), the Biosphere Reserve aims and North Devon Coast Area of Outstanding Natural Beauty (AONB) Management Plan themes (Table 1).

Table 1 Showing the relationship between the original EMP aims, the revised EMP aims and the BR and AONB strategies.

EMP 2010 Aim no.	EMP 1999 Aim nos.	BR Strategy	AONB Management Plan
1	1 & 3	1	4.1.3
2	2 & 9	2	4.1.1
3	7, 8, & 10	3	4.1.2.
4	11	4	4.1.4, 4.1.3.
5	4, 13 & 14	5	4.2.5,
6	5 & 6	6	4.2.2, 4.2.6
7	12	7	4.3.1
8	N/A	8	4.3.2



Aim 1. To reverse the decline in biodiversity

Terrestrial and aquatic habitats

The main concern around the Taw Torridge Estuary relates to the disturbance to wildlife (both flora and fauna) and farm stock through misuse of the foreshore and salt marshes, Instow beach area, Northam Burrows and Braunton Burrows by dog owners, vehicle owners and recreational activities.

Irresponsible dog owners are believed to be neglecting to remove dog faeces and allowing dogs to roam freely in areas which are sensitive to wildlife. Four wheel drive vehicles, motorbikes and beach buggies are using Crow Point, Airy Point and the Yelland area as off road sites. Kite surfing, operating close to the shore at Saunton Sands is perceived as disturbing feeding birds.

Collaboration between Devon Wildlife Trust (DWT) and North Devon Council (NDC) has produced a map of the green infrastructure for North Devon district. This covers open spaces, sports parks, protected woodlands, Local Nature Reserves (LNR), footpaths and cycle ways. The other remit was to locate areas that are unsuitable for development but which could be used to extend reserves or develop country parks for public use.

Several sites for habitat creation were located around the estuary area. The predominant ones were near the Gaia Home Farm Marsh/ Royal Society for the Protection of Birds (RSPB) Isley Marsh area. This would link these areas with other reserves and protected woodlands in the locality. The introduction of these areas as reserves may also go some way to addressing flooding issues (see Aim 4). The green infrastructure mapping project has also located suitable areas for buffer zone planting which would help with a reduction in diffuse pollution. A similar Green Infrastructure study is currently being performed by Torridge District Council (TDC) for the Torridge District.

It is through habitat creation and management that the issues of loss of habitat through rising sea levels will be addressed. Coastal squeeze and reduction of the intertidal zone in freshwater areas along with habitat disturbance will be alleviated if there is not only an increase in suitable habitats for wildlife but also public areas for recreation, such as dog walking away from these sensitive zones.

Biodiversity Action Plans (BAP) are used to protect and enhance the biodiversity of the area. These need to be dynamic in structure and have to be updated regularly to ensure they are fit for purpose for the area over which they are used. These plans act at

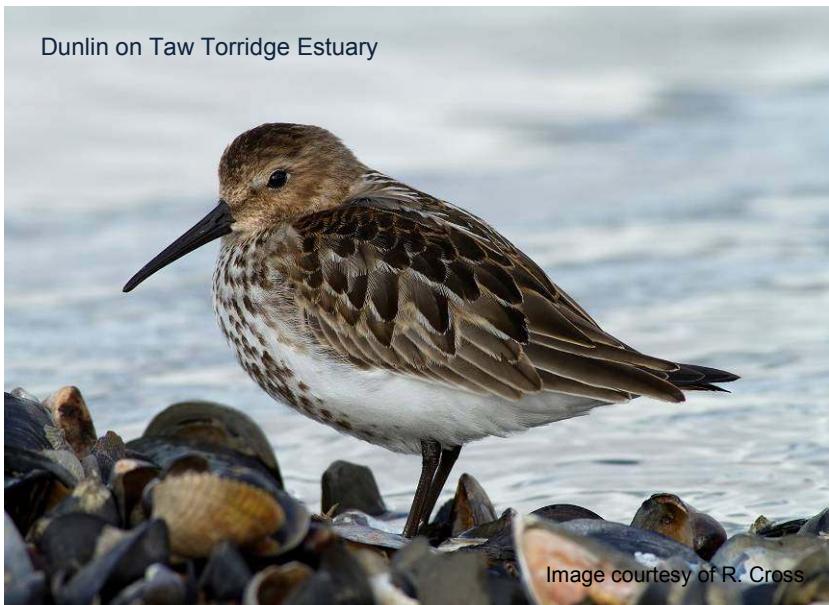
a regional, county wide and local level and need to be implemented at all these levels to be effective. The Biosphere Reserve BAP is in preparation and the relevant chapters are: Estuaries, Dunes and Coastal Flood Plain Grazing Marsh.

Updated and relevant BAPs will address pertinent issues such as: scrub encroachment which impacts the special flora of the Site of Special Scientific Interest (SSSI) dune systems of the estuary; habitat disturbance and resource exploitation that effects the biodiversity of the area.

The Torridge Estuary SSSI contains three units. Two of these units (River Taw & River Torridge) are favourable. The remaining unit (Two Rivers Estuary Mouth and the Skern) are in an unfavourable declining condition. Of the six units at Northam Burrows three units are unfavourable declining, one unit is unfavourable no change, one unit is unfavourable recovering and one unit is favourable. Of the units of Braunton Burrows: Broad Sands and Crow Point are unfavourable declining; Saunton Sands is favourable and the rest of the units of Braunton Burrows are in an unfavourable recovering condition. There are also concerns regarding the amount of grazing that is performed during the summer months on Northam Burrows. This is one of the issues that have lead to an unfavourable condition for some of the units of the Northam Burrows SSSI.

Lundy Island has been designated a Marine Conservation Zone (MCZ). Work by Finding Sanctuary and the Biosphere Reserve Marine Working Group is being undertaken to establish whether this designation can be applied to within the estuary. This would result in the introduction of new bylaws to protect conservation aspects, which were the reason for the designation, from

detrimental activity. Continued collaborations by local groups with Finding Sanctuary, to establish where important marine areas are located, would benefit this process.



Birds

Concern was expressed by stakeholders that there is only one bird reserve found on the estuary. There is only one RSPB bird reserve (Isley Marsh), which is advertised on the RSPB website but this is not the only effort that has been made by both regional and national organisations to improve the estuary area for birds. Devon Birds, the RSPB and the Gaia Trust have all made efforts to increase suitable roosting areas through the designation of areas as reserves.

Devon Birds planned to improve the Kenwith Valley Local Nature Reserve (LNR) in the summer of 2010 and have already improved the scrapes at the Bradiford site. The privately owned site at Velator is well managed by Devon Bird volunteers, although this area is not accessible to the general public. The RSPB and Gaia Trust are hoping to collaborate on access and interpretation at the adjoining Isley Marsh/ Home Farm Marsh site. It is hoped that this will go some way to educating dog owners about the effects that loose dogs have on birds and wildlife of the reserves. There are hopes that the RSPB will involve their volunteers in a monitoring program in the Ashford area, near the Bradiford Reserve. This will be to assess the suitability of the area as a reserve or park so that contentious activities can be prevented at the Bradiford Reserve. This level of collaboration between stakeholders makes for better and more efficient management of the reserves around the estuary and needs to be encouraged within the revised plan.

The regional decline in migratory birds, which was highlighted in the initial combined issues report in 1999, is still perceived as a problem. The British Trust for Ornithology is conducting a four year national program (ending in 2010-11) to survey for wintering and breeding birds for the whole of the country. This will be performed at a tetrad level (4km^2) which will then be aggregated into a 100km^2 resolution grid, where at least 8 out of the 25 tetrads in each 100km^2 will be quantitatively surveyed. This will result in the publication of a BTO bird atlas.

Devon Bird Watching and Preservation Society (DBWPS) are conducting a follow-up tetrad level survey. It is hoped that, given enough support, this will result in a Devon atlas at a 4km^2 grid resolution.

There are also regular counts of estuary birds performed as part of the Wetlands Birds Survey (WeBS) which is jointly run by the BTO, RSPB, Wildfowl & Wetlands Trust (WWT) & Joint Nature Conservation Committee (JNCC). It is hoped that these surveys will provide detailed information on regional and national bird population which will give a better understanding of the impacts that are due to climate change and those that are due to regional effects.

Aim 2. To conserve and celebrate our heritage and culture and best landscapes

Heritage and culture

Stakeholders are concerned that sensitive archaeological sites may become submerged as a result of rising sea levels before proper assessment has been performed. Local Archaeological groups such as North Devon Archaeological Society and Devon Archaeological Society have undertaken several archaeological field surveys for the estuary, as have the AONB. This work is ongoing and has resulted in several publications with more planned in the future. The new Heritage Gateway website is being used as a method for distribution information of the archaeological interest in Devon.



Image courtesy of NDABS

There are concerns about the future of the Kathleen and May, Brunswick wharf and Richmond Dry dock. These are seen as an integral part of the maritime heritage of the estuary and if this aspect of the estuary can be promoted with reference to past trade with the Americas, lime production, etc it may encourage tourist interest to the area. In 2006 a desk based study was undertaken for the North Devon Coast AONB partnership which collated and recorded all known archaeological assets for the AONB area. This resulted in a further 1279 sites added to the Devon Historic Environment Record for the AONB area. This baseline survey needs to be extended to cover the estuary area so that any future threats to important historical sites are properly assessed and also that any opportunities for education and research are not overlooked.



There is perceived to be a lack of collaboration between local museums especially those with a vested interest in maritime heritage and culture.

Best Landscapes

There was a proposal for a marina and shore side development at Knapp House which raised concerns about increased river traffic and environmental impacts. At present this has been withdrawn but this does not mean that it will not be reintroduced in the future. The local development framework is being developed by TDC and NDC to be a guidance document for planners in North Devon and Torridge Areas and it is this that will be used to guide future development around the estuary. The local plans for TDC and NDC which also guide planners in the area will be used until then.

One of the issues raised as part of the Local Development Framework (LDF) was the redevelopment of the estuary frontage, where current estuary side development does not recognise the value of an estuary side location. Although a lot has been achieved through street scene improvements at Barnstaple and Bideford Quaysides it is hoped that more can still be done. With limited change of use for industrial areas such as wharves

The renovation of Appledore Quay is still not complete with tests being undertaken to assess the different types of cladding that are to be used. There are concerns that the methods used for these tests are flawed. Whether or not these concerns are valid remains to be seen but the quayside improvement at Appledore will be completed.

In 1999 there was a landscape character assessment of the AONB resulting in one Landscape Character Area (LCA) with further studies resulting in two Landscape Character Types (LCT) and six Landscape Description Units (LDU) for the AONB estuary area. A landscape character assessment has been performed for the whole of the Biosphere Reserve (October 2010) including the estuary. This will help with the future management of the estuary.

Braunton Great Field and Marsh is designated heritage coast and as such is protected by ENV3 and ENV5 policies of the NDC local plan. The LDF strategy backs the proposed AONB extension to expand into Braunton Great Field and Marsh therefore affording a greater degree of protection to this site. This EMP also supports the change of designation for this historically and environmentally important site



Aim 3. To use our resources wisely

Water Quality

Some mussel beds in the Torridge are still designated class B by the environment agency. This may be associated with the bathing water quality failures at Instow beach or due to other faecal contaminants. This is being addressed by Natural England (NE), Dept for Environment, Food and Rural Affairs and North Devon AONB and Biosphere Service (NDABS) who are collaborating to promote Catchment Sensitive Farming. This is easier in the Taw catchment which has been designated a Nitrate Vulnerable Zone (Nitrate Pollution Prevention Regulations 2008), so will have access to funding, but not in the Torridge catchment area which is not a Nitrate Vulnerable Zone (NVZ). The designation of the Torridge is under investigation and may well be included in the NVZ in future.

However a more effective approach would be to declare the catchment as 'sensitive'. This will enable resources to be applied which will support farmers to reduce nitrate, phosphate, sediment and bacteriological run-off.

The shell fish water investigation for the estuary is being performed by the Environment Agency (EA) and is due to be completed by 2012. This investigation will look at the discharges that affect the Taw and Torridge rivers and estuary and will guide future actions related to water quality.

The impact and local response to an oil spill was raised during the consultation events. There is an Oil Pollution Contingency Plan

that is circulated and used by relevant parties but this needs to be updated and tested accordingly.

The presence and quantity of litter within the estuary has been highlighted as of concern. Marine litter research performed in 2006/2007 showed that the predominance of marine litter is from beach visitors (32%) and fishing/shipping (38%) with very little (2%) from inland sources. The 'bin it don't flush it' and 'leave behind only footprints' campaigns were used to address the problem of marine litter and the continuation of these campaigns will encourage better public awareness of the impacts of litter on the marine environment.

Fish/Shellfish

There is confusion over whether there has been an increase or decrease in migratory fish, specifically salmonids. Greenland and Irish Sea fisheries have reduced their fishing efforts and this has resulted in an increase in adult fish but there are still problems with the recruitment of young fish. The gravels in the spawning grounds are deoxygenated due to silting through poor land management but catchment sensitive farming and diffuse pollution reduction, in the upper Torridge catchment, upper Mole and Okement, is being promoted and this should reduce silting. There are also efforts to increase fish stock through the introduction of young fish by the River Torridge Fisheries Association. Until the fish stock recover sufficiently it is unlikely that salmon fishing in the estuary will be reintroduced.

Increased netting at the estuary mouth is due to a law enabling anyone to fish with a net but this is not for Salmon or Sea Trout. This activity is monitored and regulated by the EA, where the EA

have the ability to confiscate gear including boats, trailers and cars used to tow trailers from anyone found landing illegal catch.

On 1st April 2011 the Devon and Severn Inshore Fisheries and Conservation Authority (IFCA) take over the management of the Taw Torridge estuary fisheries as the Devon Sea Fisheries Committee (DSFC) will be disbanded. The Devon and Severn IFCA will take over management of the Taw Torridge Estuary from the EA for Seafish only; the EA will retain responsibility for salmon and sea trout, elvers and some other fresh water fish which live near to saline waters. They will also maintain responsibility for certain protected species such as Shad and Lamprey. The Devon and Severn IFCA will have jurisdiction over all tidal waters out to the median line with Wales and up to the tidal limits within the Taw Torridge estuary. There will also be powers for the new IFCA around the land based boundaries as well.

The designation of shellfish harvesting areas is undertaken by local council environmental health officers on behalf of the Food Standards Agency with input from Centre for Environment, Fisheries & Aquaculture Science (CEFAS), Weymouth. There are 6-7 fishermen currently harvesting mussels within the Taw Torridge Estuary with beds found around the mouth of the estuary and in the River Taw.

North Devon+ is currently seeking funding for a Fisheries Local Action Group for North Devon (FLAG). This would give a voice to the different groups and commercial ventures that undertake fishing in Northern Devon

There have been several stakeholder comments regarding the location and extent of crab tiling in the estuary. Crab tiling is a process where tiles or drain pipes are dug into the intertidal area to encourage crabs to hide, whilst shedding their exoskeleton prior to growth. These are called 'peeler' crabs and they are collected from the tiles, during this process, for bait. The areas that are suitable for crab tiling have been documented and mapped and these areas are included in the crab tiling code of conduct. There is also a bait digging code of conduct. Both of these codes are voluntary but they were seen to be poorly advertised. There was concern expressed that the 'voluntary' aspect of these codes was insufficient and regulation for these activities needs to be introduced. Further investigation has shown that in general the bait digging and crab tiling codes are adhered to but the location of the crab tiling zones and bait digging areas needs to be re-investigated and the code maps updated.



Aim 4. To tackle on a local, national and international basis the issues relating to climate change

The realignment of the pebble ridge at Northam has been discussed at great length by participants in the consultation events. The Shoreline Management Plan, which is a comprehensive, well researched document addresses this issue. The plan is to allow the pebble ridge to become aligned to the dominant wave direction whilst protecting the former landfill site. This will produce a natural stability, reducing the transport of cobbles away from the ridge and will go some way to improving the condition of the SSSI for Northam Burrows.

It has been suggested that areas such as Horsey Island and Crow Point, which are defended at present, need to be researched as areas which could undergo managed realignment. SMP2 recommends that both Horsey Island and Crow Point undergo realignment to address future sea level rise. There are also concerns that there are commercial and social resources sited in areas that are at risk from sea level rise and that these are being protected at cost to the ratepayer. Research in the form of the Braunton Marsh Study¹, the Taw-Torridge Estuaries: Geomorphology and Management Report² and the Shoreline Management Plans 1³ and 2⁴ have already been completed.

¹ Manning C. 2007, Braunton Marsh Management Study. Report to: Taw Torridge Estuary Forum, [online] http://www.TTEF.org.uk/Braunton_Burrows_File/management_study_for_braunton_2.htm

² Pethick, J. 2007, The Taw-Torridge Estuaries: Geomorphology and Management Report. Report to: Taw-Torridge Estuary Officers Group [online] <http://www.northdevonbiosphere.org.uk/assets/Resources/Documents/Research/Taw-Torridge-and-approaches-coastal-evolution-study.pdf>

³ North Devon and Somerset Shoreline Management Plan 1 [online] <http://www.ndascag.org/SMP1.html>

These studies are used to guide actions related to sea level rise, such as realignment, within the Estuary. A Flood Risk Management Strategy, which is being performed by the EA, is underway and will also be used to guide future flood defences and biodiversity mitigation. NDC has been in discussion with the EA to assess the location and suitability of future and current flood defences. This research will be used to guide bidding for future flood defence projects.

The education of the public and councillors of the issues related to climate change such as cost to taxpayers, development issues and habitat loss and mitigation opportunities is perceived to be inadequate. This is being addressed by the Biosphere Reserve strategy⁵ and the AONB Management Plan⁶ but also needs to be included as part of the revised estuary management plan, as it is the land surrounding the estuary which will be directly affected by a rise in sea level.

From time to time there are pressures on local authorities for a tidal barrage system within the Estuary. There is a concern that although this will fit the 'renewable energy' remit there is little known about the effects such a venture would have on the estuary, Biosphere Reserve and AONB area. There needs to be guidance on this as the impacts on the environment and economy

⁴ North Devon and Somerset Shoreline management Plan 2 [online]
http://www.ndascag.org/NDAS_SMP2_Summary_July2010EMF_15062010.pdf

⁵ North Devon Biosphere Reserve, Our strategy for sustainable development ,2008-2012, [online]
<http://www.northdevonbiosphere.org.uk/assets/Resources/Documents/Biosphere-Reserve-Documents/NDBR-Strategy-Final-Version.pdf>

⁶ North Devon Areas of Outstanding Natural Beauty, Management Strategy 2009 -2014
http://www.northdevoncoast.org.uk/pdf/management_strategy.pdf

are unknown. A study to outline the impacts and feasibility of the renewable energy contribution of the estuary needs to be performed. This document could be used to guide the Local Authorities in future planning applications regarding the impact of renewable energy sited within or near to the estuary

The future use of the estuary for the planned Atlantic Array wind farm, is yet to be confirmed. The use of Richmond dry dock as an emergency dry dock for maintenance, the use of the shipyard for construction and the development of the Yelland power station as an operations and maintenance base have all been suggested as future possibilities. This is dependent on coastal landing points and available infrastructure with strong reference to the impact on the landscape and ecology of the area.



Aim 5. To develop and strengthen a robust economy that enhances the environment

Shipping

The shipping to Bideford is in decline but this is seen as a response to the economic downturn. This will result in a loss of manpower hours but this is being absorbed through natural wastage. There are no problems to shipping through silting of the river and navigable channel with larger ships using the harbour in recent years. The harbour master is optimistic that as the global economic climate improves the use of the port will increase again. He is also investigating other sustainable means of encouraging ships to the port which will bring in much needed income.

There is a problem with mud build up affecting the Appledore shipyard/ Hanson dredge area. Dredging within the estuary can only be performed after proper appraisal of the impacts on the environment and if filling of the navigable channel is prevented. The Bideford harbour master and business concerns are working with the EA and NE to try to formulate a protocol for small scale maintenance dredging within the estuary. This is to ensure that future maintenance dredging is enabled with little impact to the environment or economy.

Tourism

There are many festivals that occur within the region during the 'tourist season' but little appears to be done to attract visitors to the area out of season. The proposed surf bus and lockers for water sports enthusiasts may attract 'out of season' tourists as there has already been a rise in water sports enthusiasts to the area.

The scenery and wildlife that are found around the estuary and coastal environment along with the recreation associated with these areas such as bird watching, kayaking, walking, etc, could be used to attract more tourists to the area. Participants in the consultation process felt that too little was being done to protect this aspect of the economy.

There are now many varied festivals that are thriving in the area such as the Exmoor walking festival, Appledore Arts and the Bideford water festival, Appledore and Instow regatta and Bideford regatta but more needs to be done to promote the aspects of tourism, such as bird watching and coastal walking specific to the estuary, which would encourage more tourists in the 'off' season.



The distribution of information, about the estuary, via the Internet has been overlooked in the past. Many visitors and residents use

the internet to search for information about an area that they plan to visit. This needs to be incorporated into any future plans to distribute information about the area and promote the estuary as a tourist venue. The AONB, Biosphere and Taw Torridge Estuary Forum websites and the developing Explore the Coast and North Devon websites could be used to promote the estuary as a tourist site.

Inappropriate development estuary side would affect the character of the landscape and, as a consequence, one of the main attractions to tourists. The Regional Spatial Strategy and housing targets have been rescinded by the coalition government but there will be the introduction of new housing targets in the future. Any future development that is located estuary side must have appropriate environmental safeguards and a proven need for an estuary side location. Change of use, especially in commercial areas such as ports and wharves, must be restricted to allow for future use of the estuary for sustainable freight transport and/or recreation.

Ministry of Defence

The 11 (Amphibious Trials and Training) Squadron Royal Marines at Instow has used the river, to trial amphibious craft, for the past 68 years. It is the only base that develops amphibious vehicles and teaches the use of these vehicles in the country. The base and estuary is also used by external concerns who wish to train end-of-course skilled coxswains but this is monitored closely by the Ministry of Defence (MoD), as they would be held directly responsible for any misdemeanours within the estuary during these training exercises.

There are standing orders in place which have been developed to ensure the safety of the Marines and other users of the estuary and to protect the wildlife of the estuary. These are dynamic documents that are reviewed and amended as necessary by the MoD should an incident occur and also on an annual basis.

These standing orders are considered fit for purpose by the MoD and the 11 Sqn staff are available and willing to discuss their content to ensure best practice and to minimise the environmental impact of their activities.

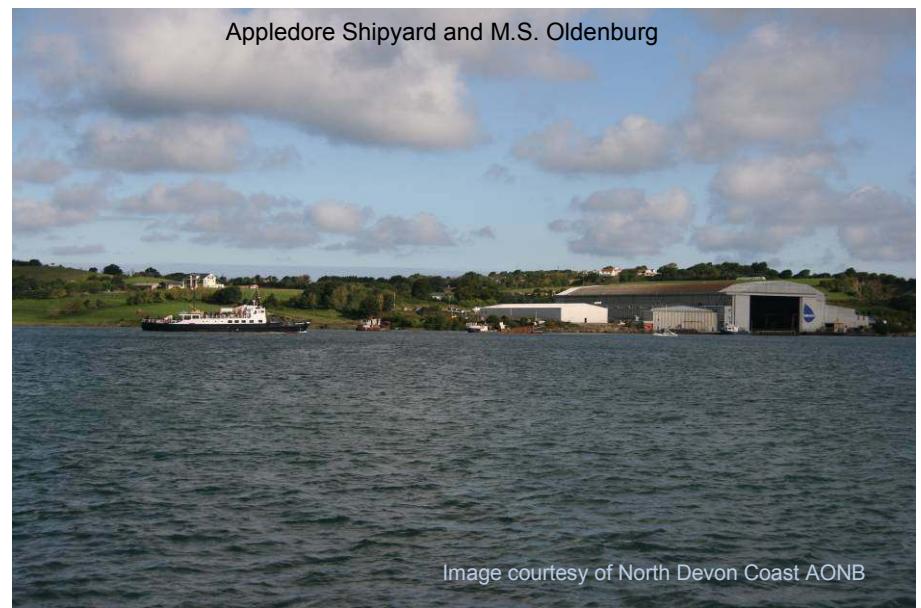


Image courtesy of North Devon Coast AONB

Aim 6. To have a safe, strong and healthy community in North Devon.

Stakeholders feel that there is limited access and opportunities for people with disabilities to use the Taw and Torridge rivers for recreational activities. The cataloguing of access points and uses for the whole of the estuary may go some way to helping with this, through the mapping of access points that are considered suitable for disabled users. An audit of all users of the estuary would identify any socially excluded groups and would help to establish equitable use of the estuary as would ensuring that any publications are suitable for all

Issues were raised by participants about training and safety issues on the river. There is no national regulation regarding training to use leisure water craft. The RYA have several courses which cover the safety and good handling of such craft. The promotion of these courses may go some way to improving safety on the river.

There are concerns that some owners of fast leisure craft, such as jet skis, are not following the estuary code and this not only disrupts non powered users but can result in accidents. Leisure craft owners who are inexperienced or lacking knowledge of the estuary have run aground, in some cases at speed, at times of low water. The estuary code recommends that there are no powered craft in the river three hours before or after high water and although this was introduced for environmental issues it may help to prevent accidents if it is promoted for safety reasons also.

The mooring of craft in the Taw Torridge estuary is guided by the mooring code of conduct. This is a voluntary mooring code but

with an increase in leisure craft to the area there are starting to become conflicts between boat owners. The spreading of mooring into, or very near to, navigable channels has also been raised by some stakeholders and as this could result in collisions or disturbance to boat owners it needs to be addressed before a serious incident occurs.

The recent incident involving the Severn Sands ship, which broke free from its moorings, has highlighted the problem of a lack of authority in the Taw estuary. The estuary has no governing authority, (except in the area of the harbour) which is attended to by the Bideford harbour master. TDC lease the riverbeds of the Torridge from the Crown Estate and these are managed by the Bideford harbour master.

The lease of the foreshore of the Taw has been surrendered back to the Crown Estate by NDC leaving no local authority responsible for the River Taw. This has resulted in an increase in houseboats found in the Heanton/ Velator area which are deemed to be causing problems of access and possible pollution, as is the dumping of ships such as the Severn Seas. There are also concerns that the limited use of the waterfront area in Barnstaple has resulted in the unnecessary road transport, to Bideford, of boats that need to be lifted by crane onto the river.

The identification of who is responsible for the Taw river foreshore and quay area with an agent in place to monitor, control, educate and enforce bylaws, if needed, may help to resolve present conflicts and problems in respect of houseboats/ leisure craft, unrestricted mooring and waterfront usage.

Maritime crime is believed to be a problem on the Estuary. To combat this it would be prudent to encourage boat users to register craft and participate in Marine Crime Watch. This would involve the boating community in the prevention of crime.

The sustainable limit of recreational use still needs to be investigated for the Taw Torridge Estuary, to understand what impact recreation has on the estuary environment. The Taw Torridge Estuary Forum has members within recreational groups and organisations that could be used in any future research.

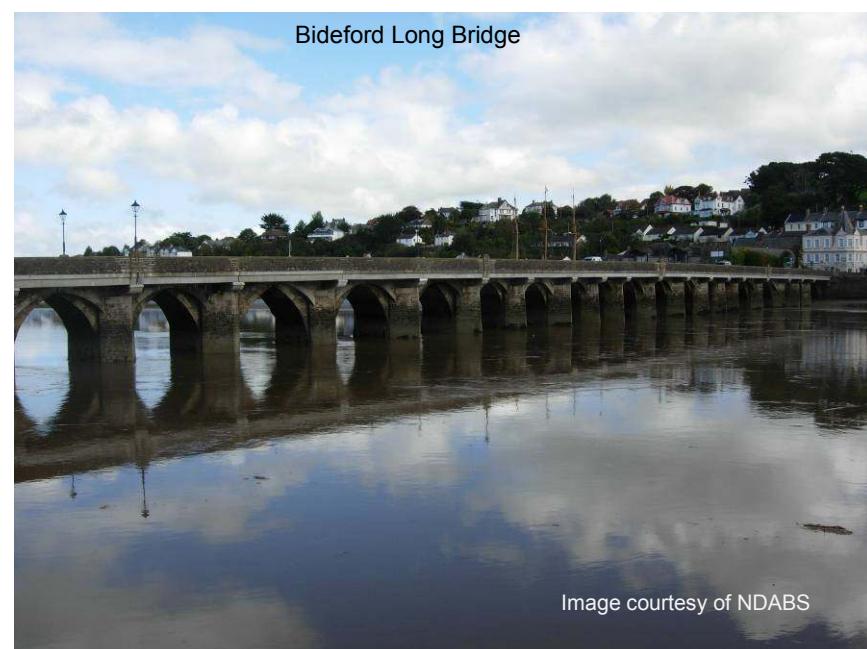
There is an Enjoying Water strategy⁷ for the South which aims to 'maximise the economic, environmental and social benefits of water-based recreation in the South West'⁴. There is a habitat disturbance study being performed in the Exe Estuary as part of the Enjoying Water Strategy and the methodology for this will available for use in the Taw Torridge Estuary by the end of 2010. A similar study performed in the Taw Torridge estuary would establish how water sports within the estuary affect wildlife.

The Blue Gym⁸ campaign is a way to encourage exercise and activity related to coastal and inland waters. This is a resource that can be used to promote the use of the Taw Torridge Estuary as an area for recreation, training courses, and coast and river based activities.

There are concerns that the gates found on the Tarka Trail at Yelland power station are not suitable for cyclists. This is not the

case; the gates have been designed for disabled users so can be opened with one hand by lifting a latch. These gates are there to prevent accidents between motorised vehicles that use the road and the young children that use the Tarka Trail, so will remain in place.

The fouling of public areas by dogs has become a nuisance in recent years with 'hotspots' on Braunton and Northam Burrows, areas of the Tarka trail and the South west coast path and some beaches. There needs to be enforcement of the bylaw related to the fouling of footpaths by dogs for this to be reduced.



⁷ Enjoying Water 2009- 2014 [online] <http://www.environment-agency.gov.uk/static/documents/leisure/Enjoyingwater.pdf>

⁸ Blue Gym [online] <http://www.bluegym.org.uk/>

Aim 7. To be a community of learning for the wider world

The estuary is an undervalued resource for local educational institutions. Access to resources and information about the estuary needs to be improved and advertised via local and regional media and the internet. Local educational institutions need to be encouraged to use the estuary as a resource for learning.

There is no education centre related to Braunton Burrows although there have been attempts to address this by the landowners and the Biosphere Reserve/ AONB team. Braunton Burrows is the core area for the Biosphere Reserve and as such is a valued area for research and education. An all weather education centre for Braunton Burrows for use by local and visiting educational institutions would be an asset to the Taw Torridge Estuary, the North Devon Biosphere Reserve and AONB.

The 'Explore Braunton' project has been introduced by the AONB for residents, visiting public and school children as an educational tool. This uses GPS multimedia explorers to guide three themed walks around Braunton. These are kept at local schools during term time and at the Braunton Countryside Centre and Saunton Sands car park outside of term time. The promotion of this resource would go some way to addressing the lack of an education centre at Braunton Burrows, for the time being.

There are many benefits to mankind that arise as a consequence of the ecosystems found in the estuary. These can include benefits, or services, such as nutrient cycling, food production,

recreation and culture; these are known as ecosystem services. A study is being performed by a Ph.D student in collaboration with Plymouth Marine Laboratory and Bath University, on the ecosystem services provided by the Taw Torridge estuary, how they are valued and the implications of marine renewable energy generation. Supporting this study will help gain better understanding of not only the ecosystem services but the renewable energy contribution of the estuary.

Many visitors to the area use the internet as a tool to establish the whereabouts of LNRs, bird hides and walks. There is a distinct lack of information about the estuary to be found via the internet. The location of nature reserves etc needs to be mapped and published freely so residents and visitors understand where resources are sited and how they can be accessed.



Aim 8. To develop organisation and delivery mechanisms

There are several voluntary organisations that work towards maintaining the estuary environment and educating both residents and visitors about the area. Some of these organisations have found that they are working 'in spite of' each other rather than with each other. There needs to be a method of interaction between these groups so resources and manpower can be combined for the greater good of the estuary. This will also mutually benefit the different volunteer organisations that work so hard for the estuary. The Taw Torridge Estuary Forum has members within some of the voluntary organisations that use the estuary and could be used as a point of contact between these organisations.

Image courtesy of NDABS

The public perception of what has been achieved against the original plan was one of the main concerns of the facilitators at the consultation events. A lot of good work has been done by local authorities, local user groups, voluntary organisations and regional and national organisations towards the management of the estuary. There is a considerable gap in communication between the stakeholders of the estuary. The Biosphere Reserve, Taw Torridge Estuary Forum and AONB along with the volunteer organisations that contribute to the management of the estuary are all conduits for information to the wider public. They all have websites and or newsletters and so, if possible, could be used to disseminate information about what has been achieved and what is being planned regarding the continued management of the estuary.

There seems to be a lack of knowledge about where to go regarding day to day occurrences within the estuary, for example,

recreational activities, planning issues and illegal activities. Several stakeholders have suggested the reintroduction of an estuary officer, although what this job will entail is somewhat undecided. To some the estuary officer is a warden who will address contentious issues and deal with them accordingly and to others he/she will be a conduit for information about who to turn to regarding day to day issues, such as the location of LNRs.

Unfortunately, with the current economic climate and continual budget cuts for local and regional authorities and organisations, the reintroduction of a paid officer is unrealistic. Another method needs to be developed that can be introduced and maintained for little cost. A readily available knowledge database of the estuary area, that could be part of a wider 'who is who' of the AONB and Biosphere Reserve, needs to be undertaken. This would give a comprehensive and accessible method through which stakeholders could ascertain who they need to contact regarding these day to day issues.

If there is no authority in the form of an estuary officer there needs to be clear delegation of the 'estuary officer' role to an existing local authority or organisation. The role of this organisation would be to monitor the estuary, prevent or restrict damaging activities, be a point of contact for other stakeholders and to enforce laws/bylaws applicable to the estuary.

Since the demise of the position of an estuary officer the overall coordination has been dispersed between the staff of NDABS (formerly the Northern Devon Coast and Countryside Service) according to their skills. The work achieved by the Service as an individual organisation or in partnership with other organisations has been extensive and it is suggested that the service be

recognised and publicised as a point of contact for estuarine issues, outside the harbour area, with the support of the local authorities when enforcement is needed.

The Taw Torridge Estuary Forum is undergoing change and updating its policies in response to: the Marine and Coastal Access Act; the need for housing in the area and climate change. This will re-establish its important role to local authorities and organisations and as such should be supported within the revised plan.

If the estuary is declared an MCZ the enforcement of the bylaws will be the duty of IFCA, in the first instance. This will alter the balance of key responsibilities in the estuary; therefore a review of the appropriate coordinating body for the management of the estuary will be needed.



Volunteers at Braunton Burrows

