

Case study	Cardiff Bay Barrage and the Gwent levels Nature Reserve (compensatory habitat)		
Location	Cardiff, South Wales		
	<i>Development planning example</i>		<i>Development control example</i> X
A	Summary of the issues		
<p>The Cardiff Bay barrage is an example of a major infrastructure project, permitted by an Act of Parliament. A similar project now would probably be authorised by an Order made under the Transport & Works Act (which was not in place at the time). It is of a similar size in terms of effect on the marine environment to port projects that would now be authorised by the Infrastructure Planning Commission (IPC), although the barrage itself does not fall within the categories of development regulated by the IPC.</p> <p>This case provides an example of a regeneration-led project which was regarded as essential to delivery of the land-based plan for Cardiff Bay area of the city, so has strong links to the terrestrial planning system. Loss of the Taff/Ely SSSI and proposed SPA inter-tidal habitat in the bay triggered a requirement for compensatory coastal habitat, so clear links between land-use and marine spatial planning aspects are shown in this case.</p> <p>Tidal exclusion means that the boundary of a marine plan would potentially be moved by this construction, although the Local Authority boundary already included all of the barrage and the impoundment. Links to the planning remit of the EA at the permitting and design stage included consultation responses on designs for migratory fish, recreation, flooding (groundwater levels), water quality management facilities etc. Links to the planning remit of CCW included its opposition to the loss of SSSI and proposed SPA habitat and assistance in identifying the provision and management of compensatory habitat.</p> <p>Issues to explore include:</p> <ul style="list-style-type: none"> • The barrage was permitted by an Act, as the process was started before the Transport and Works Act 1992 was introduced. This is still an option that is sometimes adopted by developers (Crossrail being a good example) but the barrage would now quite probably be permitted through a T&W Act Order plus deemed planning consent. How would this change the process? • The issue of 'overriding public interest' was raised in this case. Economic regeneration of south Cardiff was considered by the UK government to be a consideration of overriding public interest to that of conserving the SPA in Cardiff Bay. • The question arises as to powers of CCW fully to protect nature conservation designations particularly government plans which have an 'overriding public interest' • IPC role in such cases should ensure that issues of nature conservation and damage to a European designation or SSSI will be properly considered by a panel of experts who shouldn't be able to 'side line' the issue of compensation in order to achieve a government objective that is based on the justification of an 'overriding public interest' (economic regeneration) • With government policy for energy generation (windfarms and wave energy) will the reasons of overriding public interest based on economic grounds or need to provide sustainable energy be used repeatedly to achieve government targets but threaten to impact upon marine conservation zones etc. • CPO powers were used by the Land Authority for Wales (now incorporated into WAG) to secure land for the Reserve. WAG have such CPO powers and use them in the terrestrial environment – are there any circumstances in which the MMO would have use for such CPO powers? 			
B	Description of the plan or development		
<p>The Cardiff Bay Barrage is a 1km long tidal exclusion barrage that impounds freshwater from the Rivers Taff and Ely in the Cardiff Bay area, creating a constant high water level designed to encourage redevelopment of the surrounding land, which includes former dock areas. The barrage is provided with sluices to release river flows, three navigation locks and a fish pass.</p> <p>Proposal for Cardiff Bay Barrage represented the first government sponsored proposal involving the total loss of an SSSI situated on the mouth of the Taff river (the location of the barrage). Provision of alternative compensation was initially considered desirable but following opposition from both government and non government conservation bodies and active interest from Europe came to be considered essential. The first firm proposal was identified in 1985 but despite incorporation in two Bills failed to become law in 1992. The final boundaries of the compensation site which is now the Gwent Levels Wetlands Reserve were not approved by Europe until December 1995. The Reserve which has now been constructed is itself two thirds existing SSSI and it is intended to achieve SPA status</p>			

alongside the Severn estuary.

C *Description of the baseline environment and constraints*

Cardiff Bay lies immediately adjacent to the Severn Estuary and has always been considered important for nature conservation both in its own right and because of its contribution to the significance of the Severn Estuary as a whole. The inter-tidal mud flats of Cardiff Bay were rich in invertebrates, giving a sheltered location in adverse weather conditions and providing feeding grounds for a number of species of birds during the winter months. Since the mud flats were at a higher level than the mud flats along the foreshore of the adjacent Severn Estuary they were exposed earlier by the tide and covered later than that elsewhere, providing longer feeding times. The two areas together occupied about 20 sq km but historically were identified as contiguous but separate Sites of Scientific Interest.

The Severn Estuary was notified as a SSSI in 1976 under the National Parks and Access to the Countryside Act 1949 and re-notified in 1989 under s.28 of the Wildlife and Countryside Act 1981.

The Taff/Ely Estuary SSSI within Cardiff Bay was notified in 1980, under the National Parks and Access to the Countryside Act 1949 and re-notified under the Wildlife and Countryside Act (1981) in 1983. It extended the SSSI by a further 165 ha and comprised mudflats and salt marshes within the major part of the River Taff Estuary and part of the River Ely Estuary. The 1983 citation states '*The Taff/Ely Estuary provides feeding grounds for 8000 birds during the winter months and has the highest density of waders for any site of its size in the Severn estuary complex. Dunlin, redshank and curlew are the principal species along with smaller numbers of knot, grey plover, ringed plover, shelduck, mallard and widgeon*'.

In 1985 the UK government recognised that the Severn Estuary had been identified as qualifying for designations as a 'wetland of international importance' under the Ramsar Convention on Wetlands of International Importance especially as Waterfowl Habitat and for protection in the SPA category. In 1991 the Secretaries of State for the Environment and Wales decided that the proposed Lower Severn Estuary SPA should not include the Taff/Ely SSSI. The designation of the Severn Estuary (excluding Cardiff Bay) as a SPA and Ramsar site was finally confirmed in 1995.

Large areas of the Gwent Levels between Newport and Cardiff are also SSSIs, two of them lying within Gwent Levels Wetlands Reserve at Nash and Goldcliff both for the rich aquatic invertebrate fauna, plant species and communities present in the drainage ditches or reens which are rare or absent on other levels systems. There was no pre-existing ornithological special interest on the Levels.

D *Description of the planning baseline*

See E below

E *Description of the plan development process (for development planning cases) or the authorisation process (development control cases) – under the existing system*

Earliest consideration of a barrage across the Taff was in early 1980s. Some compensation was considered desirable. In 1985 came an announcement of a Barrage across the Taff/Ely Estuary, generating opposition from the conservation lobby. Cardiff Bay Development Corporation was established in 1987 by Local Government Planning and Land Act 1980 and made three attempts to take a bill to construct the Barrage through Parliament. This was, only successful in Nov 93 after government support for the measure. Alternative feeding ground proposals appeared in both of the two later Bills but were finally dropped by the Select Committee in February 1992 as too costly, too experimental and too damaging to the landowners' interests

A decision was made in 1991 by Secretaries of State for Wales and Environment to delete Cardiff Bay from the Lower Severn Estuary SPA. (NCC had proposed the Lower Severn Estuary including Taff/Ely SSSI as an SPA in 1990). There was a complaint to Europe from WWF re breach of birds directive and threat by RSPB to urge EC to take legal action against UK government if suitable alternative feeding grounds were not found. Europe maintained a close interest in the issue and did not close the WWF complaint file until February 1996

Three and a half years work by government agencies (Cardiff Bay Development Corporation, Land Authority for Wales, Welsh Office and Countryside Council for Wales), and by non government organisations (particularly RSPB but also WWF on behalf of other local conservation interests) eventually produced a site considered acceptable by all parties including Europe.

Acquisition, planning consent and construction of the compensatory habitat (SSSi and SPA)

The site is 438 hectares with 3 separate but adjoining habitat types – reed bed, wet grassland and saline lagoons. It is probably single largest constructed site in the UK with an aim to attract at least 2 species of waders in national numbers. Only part of the site forms a true replacement as feeding ground – the vast majority is aimed at attracting species other than those displaced from Cardiff Bay. There is preservation of existing SSSI interest but loss of

historic landscape.

A planning application was submitted for the compensatory habitat - Gwent Level Nature Reserve.

A Steering Group of all interested parties was set up by CBDC at the invitation of the SoS.

ES and details were submitted July 1996.

Acquisition of majority of reserve by agreement.

Appeal against non-determination and CPO was made 16 Jan 1997, with a public inquiry in May 1997. High Court challenge by landowners to delay inquiry date was not heard. 2 week inquiry.

Evidence was given by the Welsh Office (unusually), RSPB, WWT, CCW as well as LAW and consultants.

There was a Lands Tribunal case with some landowners. Construction contract was let by CBDC with practical monitoring and overseeing by CCW, RSPB, WWT.

F Implication of planning proposals under the Marine and Coastal Access Bill

Proposals in the Bill in relation to the partners include:

CCW - Potential remit changes

- CCW to provide consultation responses on marine plans in addition to LDPs and the Wales Spatial Plan etc.
- Increased requirement for CCW staff to be involved in collaboration of WAG with local authorities and other organisations such as Cardiff Harbour Authority
- Continue to work closely with WAG and Defra to ensure that the Marine Bill is fit for purpose from a Welsh perspective.
- (Potentially) greater responsibility for management of designated coastal/marine sites in Wales and role in development of MCZs and develop programmes to enable designations of MCZs by end of 2012.
- CCW and WAG to establish stakeholder-led regional projects based on the Finding Sanctuary model in the South West
- Contribute to and be consulted on the development of marine plans.
- Potential powers to bring about prosecutions for damage to coastal/marine sites.

EA – Potential remit changes

- Be involved in and consulted on development of marine plans
- Continue its licensing/permitting/consenting functions in line with Marine Plans
- New responsibilities re Conservation Orders
- Byelaw enforcement and cross-warranting will be in cooperation with IFCAs instead of SFCs
- Greater enforcement responsibilities re nature conservation
- EA are proposed to have power to make emergency byelaws in response to situations such as drought, high temperatures, reduced fish populations returning or water pollution.

The Bill modernises inshore fisheries and environmental management arrangements in England and Wales by replacing the Sea Fisheries Committees. Inshore Fisheries and Conservation Authorities (IFCAS) will be replacing sea fisheries management including in estuaries which was previously undertaken by the EA who had responsibility for Cardiff Bay Barrage 17 year management scheme which ended in 2008). The EA will be a consultee to IFCAS and the membership structure will included 21 seats which in Wales CCW and WAG will have a seat each as well as the EA. The current process for proposing and making byelaws will be updated and IFCAS will be required to consult the EA, CCW and NE.

G Inputs of project partners and lessons learnt

	EA	NE	CCW	NT
Involvement	✓		✓	
Inputs	EA consultee on the scheme and responsible for sea fisheries management		CCW tasked to protect important conservation interests, notify and protect	

	<p>scheme. Responsible for migratory fish</p>		<p>SSSIs, identify potential SPAs forced to oppose government sponsored measure and petition against proposal in Parliament active involvement in alternative site for SSSI/SPA✓</p>	
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The Gwent Levels Wetland Reserve would not have happened without European legislation and complaints to the European Parliament including from, CCW which prompted close European scrutiny.

CCW

CCW has responsibilities under the Wildlife & Countryside Act 1981 for issuing consents and assents to owners, occupiers and section 28G authorities for potential damaging operations to the feature(s) of the Severn Estuary and Gwent Level SSSI. Conditions can be attached to such authorisations to address management issues CCW also have statutory responsibilities with respect to the production of SSSI site management statements a various responsibilities relating to the management of SSSI.

As statutory advisors CCW provides advice on appropriate grazing regimes (and other management) for salt marsh in strategic documents.

Under the Conservation (Natural Habitats &c) Regulations 1994 CCW provides advice for plans and projects affecting the Severn Estuary Ramsar site, SPA and SAC. CCW is a statutory consultee for other authorisation in the Gwent Levels Nature Reserve including such as land drainage consents issued and discharge consents issued by the EA and on any planning applications.

The 15 year period that the Cardiff bay barrage episode unfolded coincided with a period of growing concern about the increasing awareness of the national and international importance of conservation issues, particularly in Europe. The Habitats Directive was formulated and adopted as a powerful instrument for site conservation, although the Habitats Regulations, intended to implement its provisions in the UK, have paradoxically diluted the UK conservation bodies' responsibilities. CCW's role, for example, in respect of European marine sites such as the Severn Estuary SPA is one of advising, with a corresponding transfer of responsibilities to the relevant or competent authority away from the conservation body and with no mechanism for appeal or review by CCW. The decision to discharge dredged aggregates into a European site to form a barrage lies for example with Defra/WAG which issues the license, not with CCW which can only advise on the implications of the activity.

There is a requirement under the Cardiff Bay Barrage Act (1993) to preserve and promote flora and fauna within Cardiff Bay. Cardiff Harbour Authority works closely with CCW and EA to achieve this.

Environment Agency

The construction of the Cardiff Bay Barrage has meant there have been and will continue to be many issues requiring the active involvement of Environment Agency Wales. The Agency has a duty in particular to ensure that matters relating to water quality, flood defence and fisheries issues are properly addressed. In order to take account of these issues, the former National Rivers Authority (NRA) ensured that environmental protection measures were built into the Cardiff Bay Barrage Act 1993 as well as in various Side Agreements.

The Agency has had to commit additional resources to ensure that these conditions are adequately complied with by setting up the Cardiff Bay Team that together tackle the wide-ranging environmental issues.

Regular liaison since the early 1990s with Cardiff Bay Development Corporation (CBDC) and now Cardiff Harbour Authority (CHA) and their consultants has given the Agency a thorough understanding of the issues and put it in a strong position as a regulator.

The construction contract for the Barrage commenced in May 1994 and in November 1999 the Barrage was structurally complete with the Bay being impounded with saltwater on 4th November 1999. The intention at the time was to dredge the Bay during the saline impoundment and then fill with freshwater in March 2000. However, CBDC ceased its operational role on 31st March 2000 and was replaced by Cardiff County Council (CCC) as a new Harbour Authority. CBDC's choice of Barrage operator was Thames Water but in December 1999 the then First Secretary of State, Alun Michael MP, chose CCC. The decision was taken therefore to prolong saltwater impoundment for an additional year so that CCC could have time to establish a Harbour Authority. Cardiff Bay was

officially impounded with freshwater at the beginning of April 2001, however it was already predominantly freshwater due to the high flows in the Taff and Ely during the proceeding winter months. The Barrage was opened to the public on 2nd June 2001.

The transfer agreement between CBDC, Cardiff City Council and the National Assembly for Wales was signed in 2000. The transfer included environmental responsibilities. Not all of the Agency's environmental concerns were addressed in the transfer arrangements and it was therefore proposed that CCC and the Agency enter a Side Agreement covering outstanding issues.

Dredging

The Agency worked closely with Cardiff Bay Development Corporation and then Cardiff Harbour Authority to ensure that adequate precautions were in place to protect water quality during the removal of the 600,000m³ of fine silt.

Ecology

On an environmental health issue, the Agency has been involved with Cardiff Harbour Authority's trial use of larval insecticide to reduce the problem.

Waste Regulation

The Agency has ensured that all material is collected and disposed of safely in the most appropriate manner with waste management licences being determined as necessary.

Land Quality

As a consequence of previous industrial activities there are areas of contaminated land around the bay. The EA is continuing to work closely with local authorities, the Harbour and developers to ensure proper environmental protection measures are adopted.

H

The effect the marine planning system may have on the way partners get involved, to their effectiveness in the process and to the staff resources required

CCW

CCW will have an extended role as a result of the Marine Bill which will include:

- (Potentially) greater responsibility for management of designated coastal/marine sites in Wales and role in development of MCZs and development of programmes to enable designations of MCZs by end of 2012.
- CCW and WAG to establish stakeholder-led regional projects based on the Finding Sanctuary model in the South West
- contribute to and be consulted on the development of marine plans.
- potential powers to bring about prosecutions for damage to coastal/marine sites.

This extended role by CCW may result in it requiring additional staff and with expertise of the marine environment in order to undertake the role in the development of MCZs and develop programmes to enable designations of MCZs by the end of 2012.

Environment Agency

EA will have reduced role with IFCAS taking the role of managing sea fisheries management in the estuaries and its role with the Cardiff Bay since a 17 year fisheries management plan ended in 2008.