

THE SEVERN BARRAGE DIGEST

FRONTIER ECONOMICS

Following the January publication of the terms of reference for the feasibility study by BERR a group of nongovernmental organisations commissioned a study by FRONTIER ECONOMICS. The commissioning group were:

1. Angler's Conservation Association
2. Royal Society for the Protection of Birds
3. Salmon and Trout Association
4. The National Trust
5. The Wildfowl and Wetlands Trust
6. United Usk Fishermen's association
7. WWF – UK
8. Wye and Usk Foundation
9. Wye Salmon Fisheries Owner's Group

The report, published in June 08, focuses narrowly on two inter-related facets of the proposal. The first is the framework used by government to decide how to intervene in support of its commitments to reduce CO2 emissions. The second is how the government could apply a standard framework to understand the costs and benefits of a Severn estuary barrage. They argue that only a clear understanding of the role of Government and its application of the framework can allow meaningful comparative analysis of alternatives take place.

The report notes that there is a well established protocol for the Government to decide whether or not and how to support projects or initiatives with tax payer's money. This Treasury guidance for use by all departments is known as the Green Book. Page 1 of this publication states:

“The Government is committed to continuing improvement in the delivery of public services. A major part of this is ensuring that public funds are spent on activities that provide the greatest benefits to society, and that they are spent in the most efficient way.”
(p. v) ... *“All new policies, programmes and projects, whether revenue, capital or*

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regulatory, should be subject to comprehensive but proportionate assessment, wherever practicable, so as to promote the public interest? (p. 1).

The template applied to meet this objective is known by the catchy little acronym of ROAMEF.

1. Rationale – justifying costly intervention. Generally Government intervenes in two types of circumstances. Firstly when it has concerns over distributional issues and secondly when the market fails to deliver a particular product or service.
2. Objectives – the objective of any intervention must be the solving of the problem identified in the rationale.
3. Assessment – cost / benefit analysis of potential ways of intervening to meet the objectives.
4. Measurement, Evaluation and Feedback – these last three stages of the framework are concerned with measuring the impact of the intervention after it has occurred, evaluating its success in meeting the objectives and feeding that back into the decision making process.

Any decision on whether and what type of support a Severn Barrage should receive from Government has to be a result of the application of ROAMEF. Justification for any barrage should stem from it being the least cost option and the Frontier report maintains that this is simply not the case.

The report concludes that a barrage would be hugely and disproportionately expensive and that Government support could not be justified as there are far better opportunities for renewable technology development that would prove more cost effective. Report author Mathew Bell claims that even using the most conservative estimates of costs eg. not including the compulsory purchase price of land in Cardiff or Weston or the compensatory habitats that would have to be created, the barrage would be one of the most expensive options for carbon free generation that there is.

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The Frontier report also rejects the SDC position on public funding and ownership. Such a move would require a rewriting of Treasury rules governing state ownership as it is hard to think of reasons for public sector involvement in a Severn Barrage project that would not be equally applicable to other projects or assets in the private sector.

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THE THREAT TO MARITIME INDUSTRY.

As public concern about climate change grows, the impact of emissions from all sources, not just electricity generation, is coming under increased scrutiny. Emissions from Heavy Goods Vehicles have increased by 33% since 1990 and now represent a quarter of all greenhouse gases from the UK. Cutting freight miles is seen as increasingly important in the fight to cut CO2. Given that 95% of all freight in this country arrives by sea the links between ports, the inland distribution network and logistics is of central importance. The docks at the mouth of the river Avon already form an important transit point for coal, timber, aviation fuel, animal feed and motor vehicles, handling 650,000 cars a year.

It is forecast that by 2030 containerised freight into this country will triple and the predominant issue is the way in which this growth can be managed in an environmentally sustainable way. Port location is central to any such analysis and recent work has shown that regional ports like Bristol are often closest to where containers complete their journeys and are unloaded. The Port of Bristol has earmarked investment of £500m for a cargo terminal serving a new generation of giant container ships, and has submitted the proposals to Whitehall.

Developing Bristol's container capacity will mean fewer lorry miles and lower emissions by road or rail. It has been estimated that increasing the capacity at Bristol Port could save 50 million HGV kilometres every year. Bristol is closer to the destinations of container traffic than any other Southern based port. Its average distance to the whole market is 420 kilometres compared with 430 for the London ports, 473 for Southampton and 529 for Felixstowe.

In recent history containerised shipping has rapidly outgrown the supporting infrastructure. When the ship lock for accessing Avonmouth was built in the 1980s, the average cargo ship weighed in at around 80,000 tonnes. The new lock was considered "future proof" with its immense capacity for ships of up to 130,000

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tonnes. But in the last 25 years the size of these freighters has nearly doubled and is set to go on rising. The port has to expand to meet present and future needs.

Expansion proposals are for a new terminal to be developed on an existing brownfield site previously occupied by an oil jetty. It would provide four deep water berths for new generation ships of up to 16 metres draught. The terminal will have direct links to the motorway and railway networks. It is estimated that this expansion will create 1,800 jobs and protect a further 8,000.

The Sustainable Development Commission Report says “There could be significant adverse economic impacts on a port or set of ports as a result of any barrage because of displacement of port activity or a limit to expansion.”

The Bristol Port Company believes a barrage could delay ships by up to four hours on return journeys by forcing them to take detours and having to wait to pass through locks. It has also warned that it could change the estuary, reducing the density of the water, lowering the water level at spring tide by a metre and increasing sediment. That could make it harder for large boats to reach the docks. This could reduce the number of days on which ships could visit the port. In these circumstances, the cargo owner is almost certain to elect to unload the ship elsewhere in the UK or on the continent.

The creation of a barrage would be a major blow to the Bristol Port Company’s expansion plans and indeed to the future viability of all four ports upstream of the proposed line. Bristol is not the only port that would be affected. Gloucester / Sharpness, Cardiff and Newport are all commercial ports and although Bristol has the lion’s share, between them they handle 3% of Britain’s maritime trade. In 2004 this amounted to 17.2 million tons of freight supporting 15,000 jobs with many more in the port based ancillary companies. Should the barrage be built, the implications for shipping are highly damaging. Port, road and rail transport, distribution, manufacturing, retail and consumer interests are all dependent on the existence of a properly functioning shipping element of the Bristol Channel logistics chain.

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FISHING

The importance of fishing activity in the Severn estuary and its tributaries has yet to be calculated accurately in economic terms. Salmon and Eel are the most important species commercially speaking and much work has been undertaken recently to halt their decline. There is also commercial fishing for white fish species on the estuary using a variety of methods. Species include cod, whiting, bass and sole.

However the value of the recreational angling sector in both the Severn estuary and the wider country has been greatly neglected until recently when pressure from angling groups seeking to protect and enhance the environment that sustains them has brought the issue to the attention of Government.

The Government report **Net benefits: A sustainable and profitable future for UK fishing**. (pmsu,2004) makes the point that the recreational angling sector is equally, and in some cases, more important economically than many commercial fishing practices. The report states that sea and freshwater angling is a significant contributor to local economies, particularly in coastal areas and that management policy should recognise this fact. Where the importance of the recreational angling sector has been studied in other countries around the world it has often revealed surprising results.

In Wales efforts to capitalise on the angling sector potential has led to a profitable partnership between Environment Agency Wales and the Welsh Tourist Board with their FISHING WALES campaign. Their figures reveal that a total of 58,687 fishing trips to Wales in 2004-5 was worth £69 million to the economy. The Welsh Assembly minister Carwyn Jones noted that the additional income from angling most benefited the rural economy and attached great importance to its retention. Confusingly, this welcome admission of the importance of angling to the economy is at variance with the stance taken by the largely, pro- barrage Assembly.

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Recreational fishing for Salmon and other species is significant socially and economically for communities adjacent to the Severn and should be valued not only in terms of their current input but also for their potential contribution to the future prosperity of the region. Whilst the costs incurred by anglers in pursuit of their sport include the obvious rods, reels, tackle, bait, clothing and travel the extent of their impact on the economy goes even further. It is a huge industry encompassing a diverse range of businesses eg. Charter boat operators, fishing tackle and clothing manufacturers, tackle shops, bait suppliers, boat builders and chandlers, guest houses and hotels, pubs, restaurants and marinas.

The Wye and Usk foundation was formed in the mid 90s in response to the rapid decline in salmon on the Wye. It bid successfully for funding from Europe and the UK Government to tackle the various issues that were threatening fish and the river environment. The Foundation recognised the threats from the Common Agricultural Policy, intensive forestry and the urban demands on abstraction and have set about rectifying many of the identified problems at a cost to date of some £5,375,373.

This input is only now starting to show a return. Current estimates of the value of Severn Fisheries are still depressed and have not yet taken into account the improvements in their management. In considering its potential for the future as a productive fishery it is helpful to make comparisons with the Tweed in Scotland. Recent improvements there, which mirror those on the Wye and Usk, have made this the premier recreational salmon fishing river in Europe, conferring considerable benefits to the local economy. It is estimated that the Severn estuary and its tributary rivers offer three times this potential by virtue of size alone.

The impacts of a barrage on fishing activities in this area would include immediate and catastrophic declines in some species, restrictions on the movements of fishing boats and damage to the commercial viability of the fishing methods employed. It would effectively block access for salmon to 24% of their spawning ground in England and Wales.

Any full appraisal of the effects of a barrage must incorporate a review of the current fishing practices in and around the Severn and its tributaries. It should take in the

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wide spectrum of fishing activities such as trawling, recreational angling and sea fishing and their social and economic values. Well managed fishing is an environmentally sustainable form of tourism from which the Severn and its dependent tributaries benefit enormously. It offers the opportunity to extend the traditional visitor season and gives financial reward to a wide range of local beneficiaries. The threat posed to angling tourism by a barrage on the Severn is a serious one and merits serious examination.

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DREDGING FOR AGGREGATES

The Severn estuary is home to a regionally important aggregates industry that annually dredges 1.5 million tons of building sand. Most of this comes from licensed areas in the estuary and the Bristol Channel. It has been estimated that 1700 jobs are associated directly or indirectly with sand extraction in the estuary, mainly in South Wales. Currently it is anticipated that dredging activities will move further off shore with about 800,000 tonnes of aggregate coming from the inner Bristol Channel and the estuary by 2015.

A Severn barrage would affect this industry in a number of ways, both ongoing and during construction. During the construction phase the project would require large amounts of aggregates for fill and concrete and there are arguably advantages from sourcing this locally including reduced emissions from transport. However the upward pressure of demand in this instance would surely lead to price rises which would have a negative impact locally and nationally depending on the extent to which demand could be met by increases in supply. There are already concerns that current levels of dredging are affecting the tourist beaches of South Wales.

After construction, changes in the sedimentary regimes could quite possibly affect the quality of the sand resources. An anticipated decrease in the turbidity of the water would most likely lead to a modification of the seabed, presently a sand based substrate, mixing it with mud. This would bring additional environmental costs to abstraction and so affect commercial viability. Short term economic gain for a small section of industry would come at the price of environmental degradation and the long term prosperity of the wider community dependent on tourism etc.