

IROPI: National politics v environmental decisions

Abstract

As a public body responsible for flood risk management in England and Wales, the Environment Agency often needs to gain consent under the European Habitats Directive to implement schemes which impact upon nature conservation sites of international importance. This paper considers the challenges faced by the Environment Agency when progressing schemes which impact upon the European designated sites, as highlighted by the Redcar flood alleviation scheme in the north east of England. Although the environmental assessment process showed an unavoidable significant adverse effect, 'imperative reasons' exist to decide in favour of people and property. The Habitats Directive dictates that in this situation, compensation measures, in the form of compensatory habitat, must be provided. The paper discusses how a logical, step-wise process needs to be followed, which needs to achieve a balance between protecting people, property and nature conservation interests. If the process is followed correctly, and the critical organisations are consulted throughout, then a successful outcome can be achieved.

Introduction

The Environment Agency is the public body responsible for flood risk management in England and Wales, as established by the Environment Act 1995. The principle aim of the Environment Agency in discharging its functions is to protect or enhance the environment to support the achievement of sustainable development. The Environment Act also places both general and specific duties on the Environment Agency with regard to conservation, including promotion of the conservation of flora and fauna dependent on the aquatic environment.

In carrying out its flood risk management duties, achieving the objective of protecting biodiversity in urban coastal locations, which can require hard-engineered flood defence solutions along the seafront, can present many challenges for the Environment Agency in achieving the right balance between protecting people and property, and protecting flora and fauna. The challenges tend to be greater in locations where European nature conservation designations, termed: 'Natura 2000 sites', are situated in close proximity to locations considered for coastal defences. This was a fundamental objective to be addressed as integral to the Environment Agency's coastal flood alleviation scheme for Redcar.

Overview of the Redcar Flood Alleviation Scheme

The town of Redcar is situated in the north east of England, to the north east of Middlesbrough, approximately 5km to the south east of the Tees Estuary. Redcar is an area that is vulnerable to flooding and coastal erosion, particularly as a result of severe storm events from the North Sea. Historically the Redcar seafront has suffered from wave overtopping and coastal erosion causing damage to the sea wall defences.

A significant proportion of the foreshore of Redcar seafront is designated under the European Union Directive on the Conservation of Wild Birds (the Birds Directive), namely the Teesmouth and Cleveland Coast Special Protection Area, which is also a Ramsar Site, designated under the Ramsar Convention. In the UK, the Birds Directive is implemented under the Conservation (Natural Habitats) Regulations (hereafter referred to as the Habitats Regulations), and the responsibility for protection of Special Protection Areas lies with Natural England.

A map showing the location of the Redcar flood alleviation scheme, the Teesmouth and Cleveland Coast Special Protection Area, and the proposed site for compensatory habitat is included as Figure 1.

Figure 1 Location Map of the Redcar Flood Alleviation Scheme



The existing sea wall and concrete revetment along the Redcar seafront, protecting the town from coastal erosion and flooding, have degraded over time due to storm damage and erosion, to a state where they are at imminent risk of failure, meaning that the town of Redcar is likely to suffer increasingly frequent and severe flooding and sea wall damage, exacerbated by the effects of climate change. This prompted the need for the Environment Agency, working closely with Redcar and Cleveland Borough Council (the local planning authority), to investigate the long term solutions for the Redcar seafront to provide protection from flooding and coastal erosion. As part of the studies it was established that over 1,200 properties were at risk of flooding and 200 properties were at risk from coastal erosion.

Appraisal of Alternatives and Selection of Preferred Option

Due to the proximity of the Teesmouth and Cleveland Coast Special Protection Area (SPA) conservation designation, any long term solution for the Redcar flood alleviation scheme was likely to create a potential adverse impact on the SPA. As required by the Habitats Regulations, and also the environmental impact assessment, the alternative solutions for the scheme needed to be considered. As part of the environmental impact assessment process, appraisal of alternative solutions for the Redcar scheme was carried out, with the aim of achieving a balance between protecting the local community and assets, and protecting the nature conservation interests. Natural England was involved in discussions from the outset, and each of the potential alternatives was appraised to establish the potential impacts on the SPA. Similarly, key interested parties, organisations and businesses from the local area were consulted as part of the appraisal process. Potential alternatives considered were:

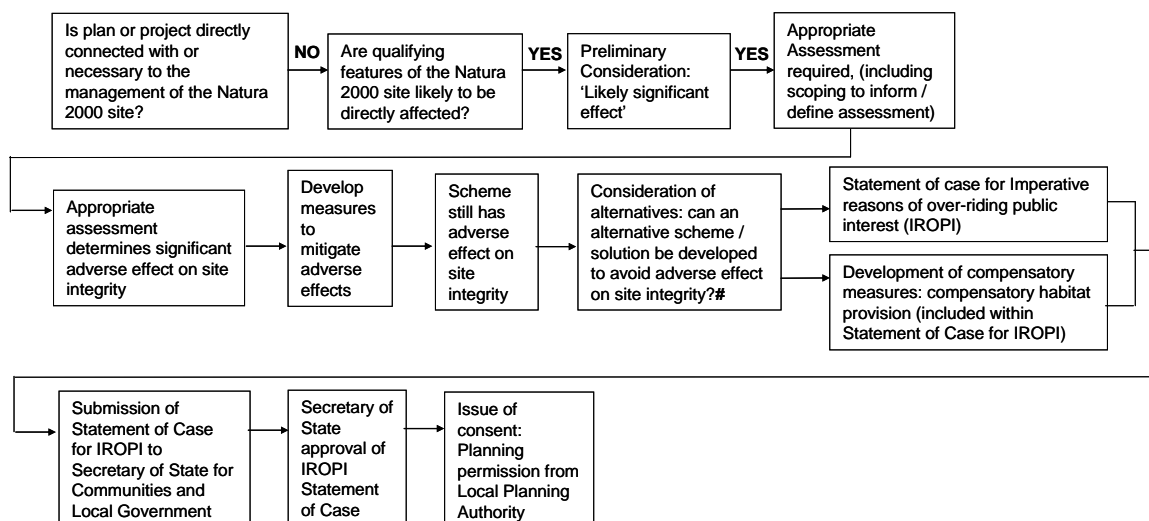
- *Creation of an offshore breakwater* – which would reduce inshore wave energy, leading to the deposition of sediments in the sheltered area between the breakwater and the foreshore; Natural England expressed concerns that an offshore breakwater would encourage sand deposition over the important (SPA designated) bird feeding grounds.
- *'Beach recharge' combined with rock groynes* – which would result in a beach that would absorb wave energy, but was not considered to be a sustainable solution due to the requirement to replace the beach material in perpetuity. The groyne locations would have to be constructed within the designated SPA, at which Natural England expressed concern in relation to the impact on the designated birds foraging area.

- *Managed Retreat of the existing defences in line with sea level rise* – this was discounted because sea level rise predictions would result in the need to retreat the defences, meaning the loss of the Redcar Promenade, the frontage buildings and businesses, the main coastal road, and major buried services including foul and storm sewer infrastructure. The implication of this option would be major disruption, loss to existing key infrastructure and loss of opportunity for economic regeneration. While there would be benefits for the natural environment and the SPA, the option was considered unrealistic in terms of the impact on society and the local economy.
- *Replacement and improvement of the existing sea wall and revetment along the existing line of defence* - this was the preferred option selected, and comprised the replacement and raising of the height of the existing sea wall, replacing the failing revetment with a new revetment, improving the standard of protection against flooding and maintaining the defence along its existing line along Redcar's seafront. Although this solution would provide the long term protection of Redcar town, residential properties, businesses and infrastructure, construction of the defences would potentially impact on the SPA.

Appropriate Assessment under the Habitats Regulations

The Habitats Regulations place a statutory duty on planning authorities in England and Wales to meet the requirements of the Birds Directive. Because the Redcar scheme is unconnected with nature conservation management of the SPA, and the proposed scheme could have a significant adverse effect on the site, the Habitats Regulations require an Appropriate Assessment to be undertaken. An Appropriate Assessment was therefore carried out to establish whether the scheme would have a significant adverse effect on the integrity of the SPA. An overview of the Appropriate Assessment process, as followed for the Redcar scheme, is presented in the following figure (Figure 2), and discussed in the subsequent text.

Figure 2 Summary of the Appropriate Assessment Process followed for the Redcar Scheme¹



Note: consideration of alternatives is required at this stage for the purpose of the IROPI submission. However, the alternative solutions for the Redcar scheme were addressed earlier on as part of the EIA process (during scoping).

The Appropriate Assessment was carried out through close consultation and discussion with Natural England. In order to inform the Appropriate Assessment, over-wintering bird surveys were carried out to establish the bird use of the foreshore in the area adjacent to the Redcar sea defences. The bird surveys identified the Redcar foreshore area to be of significant value as a foraging resource for an assemblage of wading birds at low tide, including significant proportions of the overall bird populations of the Teesmouth and Cleveland Coast SPA.

¹ Figure adapted from figures within MOD (2006) and English Nature (November 1999).

(Redshank, Ringed Plover and Knot). The potential impacts of the scheme were predicted to be significant for a number of reasons, summarised as follows:

- Direct impact on SPA bird populations through habitat loss caused by encroachment of the new revetment into the SPA
- Direct impact on SPA bird populations through human disturbance, due to a potential increase in visitor numbers and alterations in access to the foreshore
- Direct impact on SPA bird populations, through short-term construction disturbance, on birds using either the sea defences, primarily as a high tide roost, or the adjacent coastline, as a low tide feeding site
- Indirect impact on SPA bird populations using the adjacent coastline, as a low tide feeding resource, through long-term coastal squeeze.

Mitigation measures were drawn up to reduce the impacts on the SPA, which were developed and agreed with Natural England:

- Reduction in the number of accesses to the beach, focused on the most sensitive areas of the SPA site
- Provision of interpretation / information boards at key access points to the beach from the promenade to inform people of the SPA designation and the sensitivity of the beach areas for bird populations
- Changes to working methods, comprising timing to avoid key over-wintering periods in the most sensitive areas of the SPA site, and restrictions on the working areas for mechanical equipment on the foreshore
- Restrictions on the footprint of the coastal defence revetment on the foreshore.

Adoption of the above mitigation measures was sufficient to enable the Appropriate Assessment to conclude, in agreement with Natural England, that the direct impacts of the scheme would not have a significant adverse effect on the integrity of the Teesmouth and Cleveland Coast SPA. However, an unavoidable indirect impact, deemed to have significant adverse effect on the integrity of the SPA, was predicted because of gradual long-term habitat loss as a result of coastal squeeze. Coastal squeeze is caused by maintaining the line of hard-engineered sea defences, combined with long-term sea level rise, resulting in the gradual loss over time of inter-tidal habitat. Along the Redcar foreshore, areas of inter-tidal habitat are designated as SPA, and are used by the SPA bird populations, predominantly as a foraging / feeding resource. Modelling predictions for the Redcar study area estimated that over 4 hectares of inter-tidal habitat within the SPA could be lost due to coastal squeeze over the next 100 years. No mitigation was possible for these long term habitat losses.

The Habitats Regulations require that any development predicted to have a significant adverse effect on the integrity of a Natura 2000 site is only permissible where there is no alternative solution, and there are imperative reasons of over-riding public interest for the development, including those of a social or economic nature.

In order to achieve planning consent for the Redcar scheme, the case for imperative reasons of over-riding public interest (termed 'IROPI') had to be proven. The process for gaining approval of a case for IROPI in England, is through the issue of a statement of case to the Secretary of State for Communities and Local Government². See Figure 2 for the relationship of IROPI to the Appropriate Assessment process.

² Note that this is when the consent for a scheme / development is a planning permission (as is the case for the Redcar FAS), and the Competent Authority under the Habitats Regulations is the Local Planning Authority.

Making the Case for Imperative Reasons of Over-riding Public Interest

The Environment Agency has developed a template which provides a framework for the information required to enable the Secretary of State to determine cases of IROPI under the Habitats Regulations, for Environment Agency projects such as flood alleviation schemes. This template was completed for the Redcar scheme's IROPI submission, using the information gathered during the scheme options appraisal, the environmental impact assessment and the Appropriate Assessment. The document presents in logical sequence a description of the scheme, details of the negative effects of the scheme on the Teesmouth and Cleveland Coast SPA, a summary of the mitigation proposed, and the alternative solutions considered. The document then describes the reasons of 'over-riding public interest', which is essentially a statement of the imperative need for the scheme to proceed, despite its significant adverse effect on the SPA.

In the case of the Redcar scheme, the failure to proceed with the scheme would have resulted in both serious risk to human health and public safety, and unacceptable social / economic consequences, the two very much being inter-related. Without the proposed scheme there would be a significant risk to life due to wave over-topping of the current sea wall during storm events and from flooding. There are currently over 1,200 properties with a greater than 1% annual risk of flooding (1 in 100 year flood event), and of these, over 200 properties fall within the coastal erosion risk area. As sea levels rise and more frequent storm waves occur, this risk will only increase over time. Failure to protect Redcar from flooding and erosion would also result in a significant loss to its local economy and population. The provision of new and improved coastal defences is a fundamental element underpinning Redcar and Cleveland Borough Council's plans to regenerate Redcar. Without the coastal defence, important tourism, amenity and recreation assets, commercial fishing assets and heritage assets would be lost. The implications of re-designing and upgrading infrastructure to cope with losses due to flooding and erosion were likely to have been too detrimental to ensure the future survival of Redcar as a town. These 'imperative reasons' were documented in the IROPI statement of case submitted to the Secretary of State.

Compensatory measures

The Habitats Regulations dictate that compensatory measures must be provided to balance a plan or projects predicted significant adverse effects, in order to ensure that the integrity of the SPA site, and therefore the Natura 2000 network, is maintained. In the case of the Redcar scheme, compensatory inter-tidal habitat for designated bird species will be provided as part of a managed realignment scheme within the Tees Estuary. The outline design phase of this compensatory habitat project is currently underway, with the Environment Agency working closely with Natural England to ensure that the compensatory habitat needs for the SPA are met.

Conclusion

The EU Habitats and Birds Directives, implemented by the Habitats Regulations in the UK, place a statutory requirement on developers to consider potential impacts on Natura 2000 sites. This can often present a challenging and prolonged process for the Environment Agency in carrying out the necessary assessments for its flood alleviation schemes. A logical, step-wise process needs to be followed, which needs to achieve a balance between protecting people and property, and nature conservation interests. Figure 2, presents a summary of the step-wise process followed for the Redcar scheme. Early and continual consultation throughout the process with critical organisations, particularly Natural England, is crucial in achieving a successful outcome, as was the case for Redcar.

In urban coastal locations adjacent to Natura 2000 sites, the only feasible flood defence solutions to protect communities and critical infrastructure may comprise maintaining the line of hard-engineered sea defences. Resultant long-term sea level rise and coastal squeeze losses for designated inter-tidal habitat may be unavoidable. In this event the case for over-riding public interest for the scheme needs to be proved. Ultimately the decision over the protection of local communities, property and infrastructure, versus adverse impacts on international conservation designations rests with the Secretary of State.

The Habitats Regulations dictate that, where significant adverse effects are unavoidable, compensation measures must be provided. In order for the Environment Agency to meet its statutory duty where flood alleviation schemes result in designated inter-tidal habitat losses, it must spend public money on compensatory habitat. It could be argued that this money would be better spent on protecting communities from flooding. However, in reality compensatory habitat provision may be a legal necessity, and should therefore be considered as a component of overall project costs for flood alleviation schemes affecting Natura 2000 sites.

References

English Nature (November 1999) [now Natural England]; Habitats Regulations Guidance Note No. 3: The Determination of Likely Significant Effect under The Conservation (Natural Habitats &c) Regulations 1994.

Environment Agency (October 2008); Redcar Flood Alleviation Scheme, Environmental Statement, Final Report, October 2008.

Environment Agency (October 2008); Habitats Directive, Information to the Secretary of State according to Regulations 49(5) and 51(2) of the Habitats Regulations: Redcar Flood Alleviation Scheme, October 2008.

E3 Ecology (October 2008); Redcar Flood Alleviation Scheme, Assessment of Impacts on Teesmouth and Cleveland Coast SPA and Ramsar Site, Final Report, October 2008.

MOD (December 2006); Sustainability and Environmental Appraisal Tools Handbook: Section 5: Appropriate Assessment <http://www.mod.uk/NR/rdonlyres/4AB1C1B3-AECE-48D2-B5D6-C4F9544AD019/0/desect5AA.pdf>