The Natural Capital Initiative

Towards no net loss and beyond

Addressing practical challenges for biodiversity offsetting in the UK

A one day inter-disciplinary workshop,
organised by the Natural Capital Initiative

INFORMATION AND BRIEFING NOTE

To be read by all participants before the event

Tuesday 22nd June 2010, 10 am – 5:30 pm
(registration and coffee from 9.30am)

Charles Darwin House, 12 Roger Street
London, WC1N 2JU

Chairperson: Dr. Paul Rose, Science Director, Joint Nature Conservation Committee

Towards no net loss and beyond workshop series

This series of workshops will address some of the most urgent and cross-cutting challenges for the potential large scale implementation of biodiversity offsetting in the UK, bringing together individuals with a broad range of expertise and perspectives.

The aim of this first workshop is to identify some practical challenges for the further implementation of biodiversity offsetting in the UK, and to work out how these may best be resolved.

The other workshops in the series will cover the following topics:

- Addressing scientific and environmental information challenges for biodiversity offsetting in the UK (29th September, 2010);
- Scoping the potential for offsetting of impacts on ecosystem services (7th December, 2010)

Detailed discussion of the topics for the other workshops will be avoided at the event on 22nd June. The programmes for the second and third workshops will, however, be informed by the discussions at the first workshop.

Workshop venue

The workshop will be held on the ground floor of Charles Darwin House, Central London (WC1N 2JU). Click here for location details. A reception desk will be visible immediately on arrival. The reception desk telephone number is 020 7685 2500.

Principal contacts

Your principal contacts are two members of the Secretariat of the Natural Capital Initiative:

- Dr. Bruce Howard, NCI Science Policy Liaison (brwa@ceh.ac.uk, tel. 01491 692426),
- Ceri Margerison, Policy Officer, British Ecological Society (ceri@britishecologicalsociety.org, tel. 020 7685 2510).

Workshop output

Following the workshop, the Secretariat of the Natural Capital Initiative will prepare a report of 10-15 pages describing the event, the topics discussed and the key messages arising. This will record the breadth of views and perspectives expressed, as well as summarise the main ideas to emerge from the discussion. The report will place emphasis on common issues raised by multiple participants.

Points made in the report will not be attributed to individuals or organisations. The report may use illustrations or examples used in the presentations or other briefing material, if the original authors are agreeable. Those drafting the report will retain editorial control, aiming to provide a fair reflection of workshop discussions.

The primary audience for the report will be public policy representatives and their advisors. A draft will be sent to all participants for comment. A list of workshop participants (name and affiliation only) will be included in the report. Anyone not wishing their name to be on this list should contact the organisers by 30th June 2010.

Workshop format

The organisers of the workshop have designed a highly interactive and inter-disciplinary programme, with all participants expected to contribute. The presentations by individuals are intended to remind participants of the basic issues for consideration and inform the discussions. Given the inter-disciplinary and multi-sectoral nature of the workshop, technical terms and acronyms must be avoided where possible and explained where their use is essential.

All participants must abide by the Chatham House Rule. Following the workshop, views expressed during the day must not be attributed to anyone present at the workshop in a way that suggests that they expressed this view on 22nd June. (It is acknowledged that many workshop participants publish their views and perspectives in other forums, and that these can be referenced where not bound by the Chatham House Rule.)

During the workshop, views and ideas expressed by individual participants must not be taken to be those of their employer, unless they clearly indicate that they wish this to be the case.

Display of participant's publications and posters

If you have printed material that relates specifically to your organisations' activities with respect to biodiversity offsetting, this can be displayed on a table at the venue. There is limited space for the display of posters, with the prior agreement of the organisers. Please contact the organisers in advance if you would like to bring printed material or posters for display.

Biodiversity offsetting: a brief summary

Definition and goal

Measurable conservation outcomes resulting from actions designed to compensate for significant residual adverse biodiversity impacts arising from development plans or projects after appropriate prevention and mitigation measures have been taken. Source: the Business and Biodiversity Offsets Programme (BBOP).[1]

The goal of offsetting is to achieve no net loss, or preferably net gain, of biodiversity with respect to species composition, habitat structure and ecosystem services.[2]

Status of offsetting worldwide

Much work has been done around the world regarding biodiversity offsetting. The Business and Biodiversity Offsets Programme (BBOP) has been involved in leading this and its website provides further details. Some key examples are:

- **Germany:** Planning system uses a biodiversity banking system for compensation
- **USA**: Well-established offsetting system for wetland development
- **Australia**: Banking systems used in Victoria and New South Wales.

Elsewhere, there is a pilot biodiversity 'credit' system in **France**, offsetting in **Sweden** for certain projects (e.g. roads), compensation regimes in **Brazil**, two systems in **South Africa** and limited use on specific projects in the **UK**, **Poland**, **Hungary**, **Bulgaria** and the **Czech Republic** (see recent report to the EC on habitat banking, led by eftec and the Institute for European Environmental Policy).

There is also European-level interest in habitat banking as a mechanism for achieving offsetting: see the recent report for the European Commission on this topic.

Current state of offsetting within the UK

Biodiversity offsetting has been applied in the UK for a number of years on a site-specific basis in relation to developments such as housing, quarrying and coastal realignment projects. It has been evaluated in relation to large infrastructure schemes such as the Severn Tidal Barrage.

A scoping study for the design and use of biodiversity offsetting in England was commissioned by Defra and published in April 2009[2]. The Conservative Party Manifesto (pre-coalition) mentioned the introduction of 'conservation credits', perhaps referring to the implementation of a system akin to habitat banking. There is no explicit mention on 'conservation credits' in the Coalition agreement for the new Westminster Government (as of May 2010). The Environment Bank has made proposals for the implementation of habitat banking in the UK. Details are provided by Briggs et al. (2009).

The current status of biodiversity offsetting in the UK planning process

This subject is covered in detail by a Government Circular and the Defra Scoping Study on the design and use of biodiversity offsets in England, and briefly outlined below.

Development which would have an adverse affect on Internationally Designated Sites (*cSACs, SACs, pSPAs, SPAs and Ramsar Sites*) is subject to restrictions and only allowed if "*compensatory measures are taken to ensure the overall coherence of Natura 2000 is protected*." (see the above-mentioned Government Circular.

Other designated sites do not require offsetting by law. The European SEA and EIA directives, concerning assessments in the planning process, outline that developers should "*where possible offset any adverse effects on the environment*". A Guide to Good Practice, published by Defra, the ODPM and English Nature (2006), states that "*Compensation measures… will normally involve off-site measures to offset losses within the development site or to offset residual effects*

on affected wildlife sites" (see the above-mentioned Defra Scoping Study for further information).

However, the language in UK policy is open to interpretation as the word '*should*' is used with regard to biodiversity considerations, mitigation and offsetting, rather than the more compelling language of '*must*' or '*shall*'.

Bibliography for further reading

Note that inclusion or exclusion of references in the list below does not imply anything about the views expressed in the publications.

Bailey, N., Lee, J.T. and Thompson, S. (2006) Maximising the natural capital benefits of habitat creation: spatially targeting native woodland using GIS. *Landscape and Urban Planning*, **75**(3-4): 227-243.

Briggs, B.D.J., Hill, D.A. and Gillespie, R. (2009) Habitat banking - how it could work in the UK. *Journal for Nature Conservation,* **17**: 112-122.

Burgin, S. (2008) BioBanking: an environmental scientist's view of the role of biodiversity banking offsets in conservation. *Biodiversity Conservation,* **17**: 807-816.

Carroll, N., Fox, J. and Bayon, R. (eds) (2007) *Conservation and Biodiversity Banking. A Guide to Setting Up and Running Biodiversity Credit Trading Systems*. Earthscan: London. 320p.

eftec, IEEP et al. (2010) The use of market-based instruments for biodiversity protection –The case of habitat banking – Technical Report.

Hill and Gillespie (2007) Habitat banking – a new look at nature and development mitigation. *Town and Country Planning*, **76**(4): 121-125.

J. Treweek and S. Thompson: 'A review of ecological mitigation measures in UK environmental statements with respect to sustainable development'. *International Journal of Sustainable Development & World Ecology*, 1997, Vol. 4, pp.40-50.

Levitt, T. (2010) What is biodiversity offsetting and how would it work? The Ecologist on-line. 9th June. (Accessed 10th June 2010).

REMEDE (2008) Compensation in the form of Habitat Banking. Short Case Study Report. Resource Equivalency Methods for Assessing Environmental Damage. Sponsored by the EU Sixth Framework Programme.

Riddell, K. and Fargher, F. (2000) Developing wildlife 'Habitat Banking' in the United Kingdom. A proposed framework for compensating habitat losses associated with coastal projects and proposals in line with the EC Habitats Directive. *Periodicum biologorum*, **102**: 163-171.

Treweek et al. (2009) Scoping study for the design and use of biodiversity offsets in an English Context. Final Report to Defra (Contract NE 0801).

A summary of key messages in selected publications relating to biodiversity offsetting

Note: These are summaries only. Original documents should be referred to wherever possible.

Key messages from the Defra funded scoping study: **Treweek *at al.* (2009) 'Scoping Study for the Design and Use of Biodiversity Offsets in an English Context'**

Existing legislation, such as the CROW and NERC Acts, drives a compensatory approach for protected sites. An offsetting scheme could be used to drive this approach to non-designated sites. Current EU regulations are unlikely to accommodate an offsetting scheme, especially for non-designated sites. Currently, existing requirements for enhancements are open to interpretation under the 'Biodiversity Duty'; whether Local Authorities (LAs) will interpret the duty to allow offsetting to take place remains to be seen. 'No net loss' can be achieved by supplementing existing law with clearer guidance on offsetting.

Clear lessons can be learned from examples from South Africa, the US and Australia; any offsetting scheme must provide stakeholders with clearly defined (and legally/financially/institutionally secure) rules and objectives. Whilst the market can support moves towards 'no net loss' via a voluntary approach, regulation is needed for it to flourish. Monitoring and enforcement are also key to success.

Pilot projects could be run to establish benefits, and the costs to LAs and developers. More detailed research into the feasibility of introducing mitigation and conservation *banks* in the UK would be useful. Credit-trading systems have issues as they rely on valuing an inherently heterogeneous resource. Using the Community Infrastructure Levy (CIL) to fund biodiversity enhancement is explored. Drawbacks include the reluctance of LAs to charge developers, and the lack of biodiversity considerations in green infrastructure decisions.

A system based on UK BAP species and habitats, where stringent requirements for priority habitats/species are combined with a simpler approach for locally important ones is preferred. Looking forward, drafting and using 'when and how' offsetting guidelines could be enough to achieve no net loss.

Key messages from the article: **Briggs, Hill and Gillespie (2009) 'Habitat Banking: How it could work in the UK'**, Journal for Nature Conservation, **17**: 112-122.

The existing UK planning system currently requires mitigation rather than compensation, which is problematic, especially when combined with vague requirements in the EU Habitats Directive. UK LAs prescribe rather than enforce mitigation measures and undertake insufficient monitoring. Developers' environmental statements frequently lack ecological content. Similar problems are reported worldwide.

Advantages of habitat banking are clear; there is more potential to link small habitat patches into larger networks, which is greatly needed in the UK because of high development pressures. Secondly, a model whereby habitat restoration/creation is done by professionals would take the burden off developers, present their costs up-front, and create higher quality habitat at a lower cost.

A review of suitable habitat types found some types of grassland, saltmarsh, freshwater reedbeds and mudflats are easiest to create in the shortest time, whilst woodland and heathlands have more varied success rates. Sites with complex geology are unsuitable. Matching the abiotic environment closely to the desired outcome is needed. There have been some successes with species-based banks.

Practical considerations explored in the paper focus on the methods available to calculate the number of 'compensation credits' a developer must buy, and how to calculate the monetary value of these. The crudest measure uses size, where an established convention requires the creation of an area of equal size or larger than the area lost. This is infrequently used as it overlooks habitat function, and the potential technical, legal, political and economic constraints a site may present. Attaching monetary value to credits needs to consider various costs; land purchase, creating and managing new habitat, and administrating the bank.

Two models are possible in the future; firstly a regional model could entail 10-year agreements between habitat banks and LAs, and the use of CIL money to fund land purchase and restoration. Alternatively, *wetland*-specific banks to

manage these restoration projects could be used, such as those in place in the US. Using a habitat banking organisation to manage compensation projects funnels their expertise to benefit biodiversity. Pilot projects are needed to advise the development of appropriate guidelines and methods.

Key messages from the report: **eftec, IEEP *et al* (2010) 'The use of market-based instruments for biodiversity protection – The case of habitat banking – Technical Report for DG Environment'**

The desirable characteristics of a future EU-wide habitat banking system are explored, alongside how one might be created within the existing EU laws, policies and institutions, recommending further legal guidance where needed. Worldwide examples are reviewed and guidelines for creating a UK system are developed.

Slightly different habitat banking systems are considered to be suitable for four categories of habitat (critical, strictly protected, protected and widespread), which are identified in terms of their legal status, compensation drivers and potential markets. An equivalency approach is also outlined for each category, and the possibility of substitution between categories is indicated. It is not deemed feasible to use habitat banking to compensate for loss of critical habitat, however for the other categories it could be. For the lower priority categories additional legislation or guidance is needed, potentially combined with more monitoring capacity.

An independently regulated EU system is desirable; it could create cross-border habitats and facilitate cross-border trading of credits by developers, by providing certainty and transparency. Feasibility of a system would require local authorities working within a common framework to deliver biodiversity objectives, which needs to stem from the creation, implementation and enforcement of new EU policy mechanisms and guidance.

As the credit supply cannot yet be predicted in advance; further work should assess the availability of suitable EU land. Ensuring equivalency of debits and credits is important, as experience shows how such equivalency can affect the balance between oversimplification and overregulation in a habitat banking system. Whatever the equivalency method(s) ultimately selected (e.g. resource to resource, service to service or value to cost or to value), their application could be through bespoke calculations for more complicated damage cases and for more protected resources; or a simplified (fee in lieu of credit) system for more widespread biodiversity.

Public bodies are recommended to deliver certification and monitoring tasks to ensure legislative requirements to protect habitats are properly fulfilled. Given the existing expertise across the EU these functions were deemed entirely manageable to deliver the functions of a habitat bank.

Overall, habitat banking is recommended to make developers responsible for their damaging activities, and to make the costs of remedial work clear. A system could bring about further investment in conservation, and exploit economies of scale. These benefits are valid only if habitat banking is used to compensate for residual damage; habitat banking can supplement existing legal and economic policies, but cannot replace them.

Key messages from the **REMEDE (2008)** Case Study **'Compensation in the form of Habitat Banking'**:

Habitat banking should only be used when other compensation options are lacking, however there *are* advantages with these systems. Habitat banking should be incorporated into the existing EU Directives on Habitats, Environmental Impact Assessment and Environmental Liabilities. The latter Directive focuses on remediation actions *after* pollution or other damage takes place (or is imminent to take place), whilst the Habitats and EIA Directives focus on putting remediation in place *before* damage occurs.

Land registers are recommended when operating a habitat bank, to be managed by a private entity or other administrative body. The concept and limitations of 'eco-scores' are reviewed; these are used in Germany to assess damage and necessary remediation, using the condition and features of the habitat to make an assessment. Before and after damage occurs an eco-score is calculated based on four criteria: vulnerability, likeliness of remediation, similarity to the ideal habitat and disturbance. By contrast, Habitat Equivalency Analysis, recommended for unique habitats, provides a more detailed assessment by drawing on baselines, species numbers and ecosystem service loss.