



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*

SUMMARY REPORT **FOR POLICY MAKERS**

Workshop held on Tuesday 22nd June, 2010
at Charles Darwin House, London

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Summary report for policy makers on the first 'Towards no net loss, and beyond' workshop, 22nd June,
2010. 19p.

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Summary

This report summarises the views and ideas expressed during a workshop to identify practical challenges for the further implementation of biodiversity offsetting in the UK, and to work out how these may be resolved. The event involved 41 participants from a wide range of organisations. It was organised by the Natural Capital Initiative; an independent forum for discussion of policy and practice aligned with the ecosystem approach.

'Biodiversity offsetting' means the delivery of measurable conservation outcomes to compensate for the residual ecological impacts of development. It applies where all means of avoiding impacts, and reducing their severity, have been used. Biodiversity offsets can potentially be applied for development in terrestrial, freshwater, coastal or marine environments. They can take the form of 'case by case' (site-specific) offsets and habitat or species banking, or can proceed via *in lieu* fees. Increased biodiversity offsetting could be a contributor to the protection and enhancement of UK biodiversity, especially at sites not already protected by law for their biodiversity value.

Key messages were derived from the workshop:

1. In developing any new policy framework for effective biodiversity offsetting, carefully engage interest groups, the public and decision-makers.
2. Current methodologies, tools and evidence are sufficient to begin encouraging increased use of biodiversity offsetting. It is, however, still necessary to evaluate current scientific knowledge needs to improve the effectiveness of additional measures to increase the use of biodiversity offsetting.
3. Much can be learned from existing experience of both biodiversity offsetting and ecological restoration in the UK and internationally, alongside new pilot studies.
4. Reinforcing and integrating current public policy to manage the environmental impacts of development could enable a significant increase in biodiversity offsetting.
5. In designing biodiversity offsetting schemes, understand the capacity and role of local authorities to assist with their implementation.
6. In designing biodiversity offsetting schemes, much can be learned from existing voluntary and compulsory initiatives to protect the environment.
7. In designing biodiversity offsetting schemes, manage risks and avoid unintended consequences.
8. The potential for two or more 'tiers' of biodiversity offset should be investigated.
9. Measures to increase biodiversity offsetting are reliant on good quality biodiversity information. Improvements in information provision could have the added benefit of more coordinated monitoring of habitat quality and spending on conservation measures.
10. The spatial distribution and longevity of the costs and benefits of biodiversity offset schemes will require close cooperation between all interest groups, including local authorities.
11. Consider offsetting for ecosystem services in addition to biodiversity.

Each of the key messages is described in more detail on Pages 4 to 9, including practical suggestions for ways forward. They are not listed in any order of priority.

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The Natural Capital Initiative (NCI)

NCI aims to support the development of UK science, policy and practice aligned with the ecosystem approach; a way of looking at whole ecosystems in decision making and for valuing the goods and services they provide. In relation to this aim, NCI is:

- Providing an independent and inclusive forum for debate;
- Identifying gaps in science, policy and its implementation and facilitating the debate about how to address these gaps;
- Liaising with, and informing, key government, research council and other initiatives, and
- Engaging the public and inspiring the next generation.

NCI is a partnership between the [British Ecological Society](#), the [Centre for Ecology and Hydrology](#) and the [Society of Biology](#). NCI is a member of the International Year of Biodiversity UK partnership.

Introduction

This report

This report has been prepared by the Natural Capital Initiative (NCI) as a summary of the views and ideas expressed by participants at our workshop on 22nd June, 2010, to assess practical aspects of possible large scale use of biodiversity offsetting in the UK. In particular, the report was prepared to assist policy makers evaluating the topic.

The event involved 41 participants from 31 organisations either actively evaluating, or with interest in, the increased use of biodiversity offsetting across the UK. NCI is an independent forum. Therefore, omission or inclusion of a view or idea in this summary report should not be used to infer any judgement on its value, or any position of NCI. **The views and ideas expressed are not necessarily those of all individuals or organisations present at the workshop.**

Information and views about the increased use of biodiversity offsetting in the UK have been given in a variety of other forums. It is important that these are taken into account when assessing the potential contribution of biodiversity offsetting mechanisms toward biodiversity goals. A list literature that may be useful in informing thinking about biodiversity offsetting in the UK is available on the [NCI website](#).¹

Biodiversity offsetting

Biodiversity offsetting is an approach to the provision of compensation for the ecological impacts of development in cases where avoidance of impacts, or reduction in their severity, is not possible.² It has been defined as follows:

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: [Business and Biodiversity Offsets Programme](#).

Biodiversity offsets can take the form of ‘case by case’ (site-specific) offsets and habitat or species banking, or can proceed via *in lieu* fees. They can potentially be applied for development in terrestrial, freshwater, coastal or marine environments. Development may include minerals extraction, built development, or other change of land use where there is a potential for biodiversity loss.

Biodiversity offsetting may also be applied to compensate for accidental damage to biodiversity (i.e. after it has occurred). This includes as actions that may be required due to the [Environmental Liabilities Directive](#).

There is a wealth of experience in the implementation of biodiversity offsetting worldwide.³ A recent report on the application of habitat banking (one mechanism for delivering biodiversity offsetting)

¹ <http://www.naturalcapitalinitiative.org.uk/>

² The ‘mitigation hierarchy’ still applies – see DCLG (2006) [Environmental Impact Assessment: A guide to good practice and procedures](#). A consultation paper. 90p.

summarises experience in Europe.⁴ Biodiversity offsetting has been applied in the UK for a number of years on a site-specific basis in relation to developments such as major ports, housing, quarrying and coastal realignment projects. Its use is being evaluated for application to large infrastructure schemes, such as the Severn Tidal Barrage.

The 2010 Draft Defra Structural Reform Plan includes a commitment to “*assess the scope for actions to offset the impact of development on biodiversity*”.⁵ Public policy surrounding biodiversity offsetting developed by previous Governments is reviewed in the Defra Scoping Study on the Design and Use of Biodiversity Offsets in England.⁶ Under the Habitats Directive (92/43/EEC), development that cannot avoid an adverse affect on sites designated for their international conservation importance requires compensatory measures. For other sites (representing the vast majority of land development in the UK) offsetting is encouraged by public policy, but not required in law. The European Environmental Impact Assessment Directive (85/337/EEC) states that developers should: “*where possible offset any significant adverse effects on the environment*”.⁷ The Strategic Environmental Impact Assessment Directive contains a similar instruction.

‘Towards no net loss, and beyond’ workshop series

This series of workshops was organised by NCI to address some of the biggest cross-cutting challenges for the potential large scale implementation of biodiversity offsetting in the UK.

1. Practical challenges for the further implementation of biodiversity offsetting (22nd June, 2010)
2. Addressing scientific and environmental information challenges for biodiversity offsetting (29th September, 2010);
3. Scoping the potential for offsetting of impacts on ecosystem services (7th December, 2010)

These workshops intend to make a contribution to these challenges by bringing together individuals with a broad range of expertise and perspectives.

Workshop 1 – practical challenges for implementation

The aim of this first workshop was:

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 workshop programme and a list of participants are provided in **Annexes A** and **B** of this report.

³ See Ecosystem Marketplace (2010) [State of Biodiversity Markets. Offset and Compensation Programs Worldwide](#). 76p.

⁴ eftec, IEEP *et al.* (2010) [The use of market-based instruments for biodiversity protection – the case of habitat banking](#). Technical Report. 264p.

⁵ Defra (2010) [Draft Structural Reform Plan](#). Published 16th July 2010.

⁶ Treweek, J. *et al.* (2009) [Scoping Study on the Design and Use of Biodiversity Offsets in England](#). Final Report to Defra (Contract NE 0801). 131p.

⁷ Council Directive of 27th June 1985 on the [Assessment of the Effects of Certain Public and Private Projects on the Environment](#). 85/337/EEC.

Design and structure of the workshop

Following a literature review, the NCI Secretariat contacted the authors of published studies on biodiversity offsetting. After assessing work to date on the topic and key organisations involved, representatives of advocacy groups, business, research institutions and public bodies were contacted to develop a workshop programme.

Based on this consultation, NCI sent a flyer outlining the aims of the workshop to experts and interest groups; including business, NGOs, agencies, central government and local authorities. We aimed for a balance of different types of organisation, perspective and expertise to be present at the event. A briefing document was sent to all participants, summarising the concept of biodiversity offsetting, current literature and key issues.

The workshop was conducted under the [Chatham House Rule](#). Short briefing presentations (summarised in **Annex C**) set the context for group discussion of questions (**Annex D**). Participants were assigned to groups to ensure balanced representation of different types of organisation and areas of expertise. Each group was led by a facilitator, and discussions were recorded by a scribe. Dr. Paul Rose of the Joint Nature Conservation Committee Chaired the plenary sessions. The notes of both plenary and discussion group sessions informed production of this report.

The following key messages are not listed in any order of priority.

Key messages

- 1. In developing any new policy framework for effective biodiversity offsetting, carefully engage interest groups, the public and decision-makers.**
 - a. **Local Planning Authority (LPA)** involvement in the development of any policy framework to increase the use of offsetting is vital. LPAs could be asked to nominate a member of staff as a 'biodiversity champion'. This person would be responsible for keeping themselves and others informed about developments in this area, and forming a network with other LPAs and organisations.
 - b. **Land owners** are central to decisions about whether development proposals proceed. They also have an important role in making sites available to offset the residual impacts of development projects. The views of both public and private land-owners need to be taken into account when designing mechanisms to increase the use of biodiversity offsetting.
 - c. **Businesses**, including developers, are an increasingly important source of investment in biodiversity. This could be encouraged by accreditation for business initiatives that reduce biodiversity loss.
 - d. **Public** understanding of the value of biodiversity has strong implications for the general acceptance of measures to increase biodiversity offsetting. This understanding relates to both the intrinsic value of biodiversity and its role in underpinning human well being. Perceptions and experiences of how the presence of individual species, such as newts, affects development proposals are influential in forming opinions on the value of biodiversity.
 - e. Members of the public need to know how loss of local biodiversity might be offset, especially if the offset sites are a long distance away. Transparent mechanisms are needed to show how decisions are made, and how trade-offs are negotiated. Sites used to offset for development impacts could be linked to educational projects, serving not only to increase public appreciation of the value of nature in general, but also to understand the contribution of biodiversity offsetting mechanisms. Communities could be involved in managing offset sites, where they have appropriate capacity and expertise.
 - f. In developing any policy framework for increased biodiversity offsetting, care should be taken in communicating to the public what biodiversity offsetting is and what it is not. The term habitat or biodiversity 'banking' may result in confusion by the public with the UK Government's plans for a 'Green Investment Bank'.
 - g. The technical expertise in **professional membership organisations**, such as the Institute of Ecology and Environmental Management, would be valuable in developing workable approaches to biodiversity offsetting.

- 2. Current methodologies, tools and evidence are sufficient to begin encouraging increased use of biodiversity offsetting. It is, however, still necessary to evaluate current scientific knowledge needs to improve the effectiveness of additional measures to increase the use of biodiversity offsetting.**
 - a. The effect of climate change on the biodiversity of sites used to offset the residual impacts of development needs to be assessed. In order to ensure protect biodiversity in the long-term, this consideration should be built into the design of biodiversity offsetting schemes.
 - b. Testing and development of habitat assessment methods such as Habitat Hectares is required to ensure that increased biodiversity offsetting delivers the intended outcomes.

- 3. Much can be learned from existing experience of both biodiversity offsetting and ecological restoration in the UK and internationally, alongside new pilot studies.**
 - a. Valuable information has come from development projects in the UK that have involved biodiversity offsets. Examples include development around the Dorset Heaths, Thames Basin Heaths as well as Project Pinewood.⁸ There is a need to consolidate and communicate this experience.
 - b. Experience gained from ecological restoration and habitat creation projects is also valuable in determining what greater use of biodiversity offsetting could (and could not) achieve. Examples include the Environment Agency's Regional Habitat Creation Programmes⁹, as well as schemes funded by the [Aggregate Levy Sustainability Fund](#). Investigations into compensatory measures for major infrastructure projects should also be taken into account.
 - c. The experience of formal offsetting mechanisms in other countries, such as the US Wetland Banking system, should be taken into account in any measures to increase the use of biodiversity offsetting in the UK. The [Business and Biodiversity Offsets Programme](#) is a valuable source of guidance for producing a UK biodiversity offsetting system.
 - d. Biodiversity offsetting mechanisms and methods need to be tested in pilot schemes. This includes methods for assessing the biodiversity value of sites used in offsetting, such as Habitat Hectares.¹⁰ A pilot habitat banking scheme in the Thames Headwaters is being developed, involving [Wiltshire Wildlife Trust](#) and the [Environment Bank Ltd](#). Appropriate scientific input into, and oversight of, these pilots is important if they are to provide evidence to inform policy decisions.

⁸ For a summary of Project Pinewood, see the summary of the presentation by Neil Harwood in Annex C to this report.

⁹ Environment Agency Regional Habitat Creation Programmes (RHCP's) are national land banking and offsetting programmes which have been set up to deliver the habitat required as part of the environmental obligations of Flood and Coastal Risk Management schemes.

¹⁰ Land affected by a development or proposed for an offset to be mapped and classified into 'parcels', each of which is allocated to a single habitat category and scored with respect to its conservation priority (or 'quality') and its condition. For more information on Habitat Hectares, see Defra (2009) [Scoping Study on the Design and Use of Biodiversity Offsets in England](#). 131p.

4. Reinforcing and integrating current public policy to manage the environmental impacts of development could enable a significant increase in biodiversity offsetting.

- a. Planning officials and developers are controlled primarily by what they are obliged to do, rather than what they are encouraged to do. Therefore, strengthening of the wording in current public policy documents could enable greater use of offsetting. For example, Planning Policy Statement 9 (Biodiversity and Geological Conservation) uses the word 'should' in relation to the need for compensatory measures for development impacts that cannot be mitigated or prevented.¹¹ The word 'must' would be more likely to deliver favourable outcomes for biodiversity. Similarly, public policies that require planning authorities to 'have regard' for biodiversity, such as the [Biodiversity Duty](#)¹², do not result in increased use of available approaches to deliver outcomes, such as biodiversity offsetting.
- b. As a result of (a.) above, changes to wording in existing public policy could contribute towards increased biodiversity offsetting. The extent to which any changes would result in effective use of biodiversity offsetting needs to be evaluated, along with the feasibility of making these changes. Public policy that supports biodiversity protection and enhancement provides an important context for increased biodiversity offsetting.
- c. Current policy, such as the Habitats Directive, is effective in requiring compensatory measures where it is deemed that impacts of development projects on Natura 2000 sites¹³ cannot be avoided. This assists in creating a 'level playing field' for developers.
- d. For development projects outside protected sites current implementation of public policy does not compensate effectively for biodiversity loss. This includes the design and implementation of agreements between LPAs and developers under Section 106 the Town and Country Planning Act 1990.
- e. Environmental Impact Assessment policy and guidance might enable increased use of biodiversity offsetting if accompanied by a national policy to prevent or reverse the decline in biodiversity. An example is the Institute of Ecology and Environmental Management [guidance on Ecological Impact Assessment](#).
- f. Funds arising from existing initiatives to regulate and manage the impacts of development could support the greater use of biodiversity offsetting. These include funds arising from Section 106 agreements, the [Community Infrastructure Levy](#)¹⁴ and the [Aggregate Levy Sustainability Fund](#). These options must be reviewed.

¹¹ Office of the Deputy Prime Minister (2005). [Planning Policy Statement 9 \(Biodiversity and Geological Conservation\)](#). Key principle 1 (vi): "Where a planning decision would result in significant harm to biodiversity and geological interests which cannot be prevented or adequately mitigated against, appropriate compensation measures should be sought." (Page 3 of 8.)

¹² Section 40 of the [Natural Environment and Rural Communities Act](#), 2006.

¹³ [Natura 2000](#) is the European network of sites protected for nature conservation.

¹⁴ DCLG (2010) [Community Infrastructure Levy](#). An overview. 16p.

5. In designing biodiversity offsetting schemes, understand the capacity and role of local authorities to assist with their implementation.

- a. If biodiversity offsetting is to be used more frequently, Local Planning Authorities (LPAs) will have an important role in assisting with this. To fulfil this role effectively, however, LPA's sense of responsibility for conserving and enhancing biodiversity needs to be increased.
- b. The formation of partnerships between LPAs and other organisations to deliver biodiversity offsetting schemes may be an appropriate way forward. For example an independent and audited broker organisation that administers offsetting could reduce the workload of LPAs in relation to offsetting.
- c. The limitations of LPA financial and technical resources need to be taken into account. Local government cannot be expected to provide all of the technical expertise required for administration and regulation of biodiversity offsetting mechanisms. For instance, only around a third of local authorities in England currently employ a professional ecologist. The scope for LPAs to use consultants to provide technical support in the administration of offsetting mechanisms needs to be considered.
- d. A network to provide support on biodiversity offsetting between LPAs could help to build technical capacity.
- e. If LPAs are to play a role in the operation of biodiversity offsetting, this would require close cooperation between authorities, and the interest groups they engage with.

6. In designing biodiversity offsetting schemes, much can be learned from existing voluntary and compulsory initiatives to protect the environment.

- a. Lessons can be learned about levels of participation, unintended consequences, and governance. Initiatives requiring evaluation include: the [Landfill Tax](#), the [Aggregates Levy Sustainability Fund](#), the [BRE Environmental Assessment Method](#), the [Community Infrastructure Levy](#) and emissions trading schemes.

7. In designing biodiversity offsetting schemes, manage risks and avoid unintended consequences.

- a. Funds raised through biodiversity offsetting schemes should be used to compensate for residual development impacts, such as through habitat creation or restoration. Money raised through biodiversity offsetting must not be used to fund nature conservation activities that could have, or would have, been funded by other means. Biodiversity offsetting does not substitute for the need to find ways of funding the management of existing or planned nature conservation sites for reasons other than compensating for the residual impacts of new development.

- b. Biodiversity offsetting schemes that reward restoration should exercise caution as this could act to create perverse incentives. For example, owners of high biodiversity value land may purposely allow/permit the degradation of their land in order to receive the financial rewards associated with restoration. Measures to increase biodiversity offsetting must be carefully co-ordinated with existing initiatives that support conservation objectives, such as agri-environment schemes.
- c. A clear understanding of the meaning and implementation of 'in perpetuity' agreements is vital. If funding for the offsetting of biodiversity loss from a development project is to be fixed over a period of time, a transparent and comprehensive plan must detail what is to occur beyond this period. Landowners' priorities change, and they may seek to use the offset sites for other purposes at the end of the funding term. If this occurs the value of the offset will be lost. The scope for permanent changes to property rights will need to be clarified if 'in perpetuity' agreements are to be achieved.

8. The potential for two or more 'tiers' of biodiversity offset should be investigated.

- a. Whilst protection of habitats considered to have high biodiversity value is important, the cumulative effect of smaller impacts on sites perceived to be less valuable contributes significantly to biodiversity loss. Accordingly, different tiers of offset could deal with different challenges.
- b. A system of fees *in lieu* as well as 'bespoke' offsets may be appropriate for development impacts on areas of relatively high value biodiversity where it is necessary to follow more specific and detailed management actions.
- c. The relative costs of implementing different methods should be reviewed to establish the optimal approach. Clear guidance about when each tier of offsetting is appropriate should be given. Assessing biodiversity impacts for relatively small development projects may involve excessively high a transaction costs that are impractical for 'bespoke' offsets. A fee paid to a conservation organisation for habitat restoration activities *in lieu* of a 'bespoke' offset site may provide an effective way of overcoming this problem.

9. Measures to increase biodiversity offsetting are reliant on good quality biodiversity information. Improvements in information provision could have the added benefit of more coordinated monitoring of habitat quality and spending on conservation measures.

- a. Systems for access to up-to-date and scientifically-verified biodiversity information are vital to underpin increased biodiversity offsetting. If measures to increase the use of biodiversity offsetting could be used to bring about improved integration of existing biodiversity data, this would support the achievement of wider biodiversity goals.
- b. To support increased use of biodiversity offsetting, Local Planning Authorities (LPAs) should be required to use established habitat survey methods, such as the [Integrated Habitat System](#).

- c. A national record of how much of the proceeds of Section 106 agreements are being allocated, and where, would also be useful to inform spending on conservation measures.
- d. Clarity is needed over the requirements to which LPAs have to adhere regarding the annual reporting of biodiversity losses and gains that result from planning decisions. This clarity will make the data LPA's produce more comparable and comprehensive.. The current [Biodiversity Action Reporting System](#) is a suitable model.
- e. Learning from the management and monitoring of sites used to offset for development impacts could provide much needed knowledge about habitats.

10. The spatial distribution and longevity of the costs and benefits of biodiversity offset schemes will require close cooperation between all interest groups, including local authorities.

- a. Biodiversity offset sites may be remote from those living or working close to a development site. This is especially the case in urban areas, where the social benefits of locally-accessible biodiversity tend to affect large numbers of people. Measures are needed to ensure that Local Planning Authorities and other organisations work together to ensure an effective and acceptable spatial distribution of the biodiversity offset sites. In doing this, ecological factors (such as the connectivity of sites and the effects of climate change) will also need to be considered alongside social criteria.

11. Consider offsetting for ecosystem services in addition to biodiversity.

- a. If offsetting for the unavoidable ecological impacts of development focuses solely on biodiversity, compensation for loss of ecosystem service provision may not be complete. (Ecosystem services are the wider benefits derived from the natural environment for human welfare.) Mechanisms complimentary to biodiversity offsetting, which compensate for the residual impacts of development on ecosystem service provision, should be investigated.
- b. While ecosystem services can be measured, the links between biodiversity and ecosystem services need to be demonstrated more clearly. Offsetting for ecosystem services will not necessarily achieve the requirements for protecting biodiversity.

Annexes

Annex A – Workshop programme

Session	Time	Activity	Speaker
	09:30 – 10:00	Registration and coffee	
Introduction			
	10:00 – 10:30	Introduction to the day	Bruce Howard, NCI
		Introduction from the Chair	Paul Rose, JNCC
		Biodiversity offsetting – what it is and what it might be for	Andrew Dodd, RSPB
		<u>Questions</u>	
Session 1 – Mechanisms for offsetting, their practicality and potential in the UK context			
Part A - Scoping the mechanisms for operating offsetting	10:30 – 11:05	<u>Briefing talk 1</u> – Overview of the basic classes of offset	Marianne Darbi, Leibniz Institute of Ecological and Regional Development
		<u>Briefing talk 2</u> – A suggested approach for how offsetting could be developed in the UK	David Hill, Environment Bank Ltd.
		<u>Questions</u> (points of clarification only)	
Part B - Requirements for changes in public policy and practice	11:05 – 11.45	<u>Briefing talk 3</u> – Overview of UK policy and planning regulations as they relate to offsetting	Jo Treweek, Independent Consultant
		<u>Briefing talk 4</u> – Public policy challenges around the increased use of biodiversity offsetting in England	Bronwen Jones, Defra
		<u>Briefing talk 5</u> – Implementation of development control policy on the ground: how this works at present	Mike Oxford, Association of Local Government Ecologists
		<u>Questions</u> (points of clarification only)	
	11:45 – 11:50	<i>Refreshments and splitting into breakout groups</i>	
	11.50 – 13.00	Small group discussion to consider practical mechanisms for offsetting in the UK	
<i>Lunch</i>	13:00 – 13:45	<i>Poster boards. Comments and views board available for use.</i>	
	13.45 –	<u>Plenary session</u> (report back and	

Session	Time	Activity	Speaker
	14.30	synthesis from the discussion groups)	
Session 2 – Methods to assess biodiversity loss and gain			
	14.30 - 15.00	<u>Briefing talk 1</u> – Overview of current methods to assess biodiversity loss and gain	Jo Treweek, Treweek Environmental Consultants
		<u>Briefing talk 2</u> – A worked example of how a methodology has been applied	Neil Harwood, ARUP
		<u>Questions</u> (points of clarification only)	
	15.00 – 15.45	Small group discussion to discuss the practicality of available methods and contribution to ‘no net loss’ of biodiversity.	
	15:45 – 16:05	<i>Refreshments</i>	
	16.05 – 16.45	<u>Plenary session</u> (report back and synthesis from the discussion groups)	
Concluding discussion			
	16.45 – 17.15	Concluding discussion	Led by Paul Rose, JNCC
	17.15 – 17.30	Summing up and next steps	Bruce Howard, NCI

Annex B – List of participants

Jayne	Ashley	Sustainable Development Commission
Bill	Butcher	WGB Environment
Marianne	Darbi	Leibniz Institute of Ecological and Regional Development
Lesley	Davies	Aylesbury Vale District Council
Ian	Dickie	Eftec
Andrew	Dodd	RSPB
Deanna	Donovan	Joint Nature Conservation Committee
Katherine	Drayson	Oxford Brookes University
Bob	Edmonds	SLR Consulting Ltd
Megan	Ellershaw	Natural England
Mark	Everard	Environment Agency
Rob	Gillespie	Environment Bank
Andrea	Graham	National Farmers' Union
Rosie	Hails	Natural Capital Initiative / Centre for Ecology and Hydrology
Julian	Harlow	Natural England
Jim	Harris	Cranfield University
Neil	Harwood	Arup
Leanne	Hepburn	University of Essex
David	Hill	Environment Bank
Bruce	Howard	Natural Capital Initiative / Centre for Ecology and Hydrology
Carrie	Hume	Wildfowl and Wetlands Trust
Bronwen	Jones	Defra
Adrian	Jowitt	Natural England
Paul	Leonard	Independent consultant
Ian	Manley	Marshalls plc
Ceri	Margerison	Natural Capital Initiative / British Ecological Society
Alan	Maries	Mineral Industry Research Organisation
Mike	Oxford	Association of Local Government Ecologists
Amy	Parrott	Environment Agency
Christian	Parsons	Bangor University
Paul	Rose	Joint Nature Conservation Committee
Tom	Simpson	Department of Communities and Local Government
Mark	Stevenson	Defra
Laura	Sutcliffe	Natural Capital Initiative
Helen	Temple	The Biodiversity Consultancy
Stewart	Thompson	Oxford Brookes University
Jo	Treweek	Treweek Environmental Consultants
Graham	Tucker	Institute for European Environmental Policy
James	Vause	Defra
Bill	Watts	Environment Agency
Heather	Webb	Biodiversity Partnership for Bedfordshire
Jonathan	Wentworth	Parliamentary Office of Science and Technology
Kirsty	Wilmot	British Ecological Society

Note: the above list does not include participants who wished to remain anonymous, or were able to be present for only a small part of the day.

Annex C - Summary of the introductory and briefing talks, as provided by the speakers

Biodiversity offsets: what are they and what might they be for?

Andrew Dodd, Head of Site Conservation Policy, RSPB

With the failure to halt biodiversity loss at a UK and EU level by 2010, and rolling forward of the target to 2020, there is increased interest in finding additional tools to tackle biodiversity loss. Biodiversity offsets (offsets) are one group of measures being studied closely.

Offsets are actions to compensate for residual, unavoidable harm to biodiversity, typically from built development and land-use change, after all efforts have been made to mitigate damaging impacts. They aim to ensure no net loss of the affected biodiversity and, preferably, a net gain. The big idea behind offsets is to move habitat compensation from the ad hoc to the mainstream. There are three main types of offset with a part to play:

Type	Approach	Responsibility	Compensation before / after damage
Developer-responsible	Case by case	Developer	After
Banking	Aggregated	3 rd party	Before
In lieu-fee	Aggregated	3 rd party	After

Designing an offset system poses many challenges if it is to avoid inadvertently causing more biodiversity loss. Some key issues must be addressed and transparent, informed choices made including:

- Biodiversity to be covered
- 'Like for like' compensation or something else?
- Defining 'no net loss' and 'net gain'
- Proximity of compensation to damage
- Who regulates and enforces and do they have the skills and capacity?

A set of clear principles will be needed to test any offset system proposed to make sure it delivers on its promise to help halt biodiversity loss.

Overview of the basic classes of offset

Marianne Darbi, Researcher, Leibniz Institute of Ecological and Regional Development

The presentation provided an introduction to biodiversity offset approaches worldwide. A general distinction was made between **mandatory** biodiversity offsets, which are required by certain legal and/or planning provisions (environmental legislation and liability), and **voluntary** biodiversity offsets, which often build on business initiatives and Corporate Social Responsibility and can exceed these requirements or exist completely independent from them.

Liability for damages, stipulated under various sectoral laws (environment, water, mining, waste, forest), has resulted in different mandatory offsetting schemes worldwide. The German Impact Mitigation

Regulation, the US Wetland Mitigation and the Brazilian Project Developers Offsets were presented as examples.

The growing interest in voluntary biodiversity offsets was highlighted. A number of institutions have set up initiatives and defined standards, e.g. [Business and Biodiversity Offset Program](#) and [Energy and Biodiversity Initiative](#). Voluntary biodiversity offsets open up new possibilities and biodiversity markets for business, presenting operational advantages, access to capital and the 'first mover' competitive advantage. Besides, they provide wider benefits, such as for nature conservation organisations.

Four core parameters were identified to describe pool and banking models for implementing biodiversity offsets: (1) form of organisation/legal form, (2) area of influence and clients, (3) availability and safeguarding of offset sites and (4) financing and cost recovery. A number of challenges were highlighted (see box). It was noted that the limits between mandatory and voluntary biodiversity offsets become blurred. On the one hand, the market plays an increasingly important role, but on the other hand, a regulatory framework is often the starting point. Biodiversity offsets are at the interface of government, business and society.

Challenges for the introduction of biodiversity offsets

- *Valuation of biodiversity:* How to balance the biodiversity loss and the required compensation?
- *Socio-economic issues:* How can social and economic mechanisms be integrated in the compensation process?
- *Enhancement versus preservation:* Is preservation already compensation?
- *Comprehensive or selective approach:* Can compensation be cut down on major projects (road planning, mining etc.) or do we need an overall approach to combat biodiversity loss?
- *Monitoring and follow up:* How to ensure long term efficiency of offsets?
- *Liability and funding:* Who is held liable for the implementation of Biodiversity Offsets and who pays?

A suggested approach for how offsetting could be developed in the UK

Professor David Hill, Chairman of Environment Bank Ltd.

The Environment Bank has spent three years evaluating international approaches to biodiversity offset markets in the context of introducing a scheme in the UK. The driver for change is an overly complex domestic planning system that gives limited outcomes to biodiversity. Large-scale biodiversity initiatives, including the recommendations from the Lawton Review, will require private investment such as through a biodiversity offset market.

Our approach is as follows: The local planning authority would require that developments purchase credits from a Financial Institution (FI) such as the Environment Bank. The accredited FI would assess the impact of the development that requires offsetting based on metrics such as 'habitat hectares', appropriately weighted to provide insurance for replicability, trading-up, time to maturity/functionality etc. This would be converted into a credit value capturing land prices, costs of habitat creation and management, any income foregone, programme management costs and monitoring. The FI would source receptors sites, building up a database of geographically literate sites and areas from which projects would be selected. Receptor sites could be brought forward at the same time as development projects. The FI would contract with a range of key delivery bodies (such as NGOs, land management

companies and landowners) and would audit their delivery of habitat created and managed in perpetuity based on a management plan. Monitoring would provide feedback to the local authority. Provision of an independent facility through the FI would ensure that the local authority and NGOs are not conflicted in the planning process and would provide a vehicle that would be able to receive investments from third parties wishing to trade in credits, thereby leveraging greater funding for the natural environment. The FI would be accredited and audited by central government. The approach could be applied across the full range of development sectors.

Papers and articles written over the past three years can be accessed via www.environmentbank.com.

UK laws and policy supporting use of biodiversity offsets in England

Dr. Jo Treweek, Treweek Environmental Consultants Ltd.

This presentation explored the extent to which current UK laws and policies might support use of biodiversity offsets in England, by reviewing European requirements for compensation under the Birds and Habitats Directives and also requirements under UK Planning Policy Statements and the 'Biodiversity Duty'. Key conclusions were that, while relevant UK laws and policies allow offsets to be used, the policy intent is open to interpretation. Some of the financial and legal mechanisms required to deliver offsets in practice also remain unclear.

The 'Biodiversity Duty', for example, places an obligation on local planning authorities and developers to 'have regard' to the conservation of biodiversity, but the extent of this requirement is not clearly defined and although it allows for significant residual adverse effects on biodiversity to be offset, this is not obligatory. As a result it is not regular practice for developers to propose 'no net loss' biodiversity offsets for their proposals.

To support greater use of biodiversity offsets in the UK, it would be necessary to establish a clear "no net loss" policy intent and to strengthen requirements to demonstrate achievement of no net loss in practice for a wider range of developments.

Conservation Credits – issues for policy makers

Bronwen Jones, Deputy Director, Wildlife and Conservation, Defra

The talk focused on high level questions for policy makers and Ministers; the political context; and next steps. The Conservative Manifesto contained an explicit commitment to introduce conservation credits: no such commitment appeared in the Coalition Agreement. However, given what that document says about protection of habitats, the forthcoming Lawton report, and reduced public spending, conservation credits remains relevant. It will need to work with the grain of the localism agenda, the push for more private and voluntary sector activity and radical planning reforms.

Key questions are: whether there is a viable market in biodiversity offsetting without any further regulation to create demand; and what degree of regulation of the market would be appropriate to manage risks. In addition there are implementation issues: timing, phasing in (including the practicality of local piloting) and reconciling some conflicting design criteria (for example how to meet biodiversity

goals yet keep the system simple). Important next steps in addressing these issues are to get better evidence; learn from other countries' experience; and to involve stakeholders.

Implementation of development control policy on the ground: how this works at present

Mike Oxford, Project Officer, Association of Local Government Ecologists

Several problems face Local Planning Authorities (LPAs) when attempting to negotiate compensatory ecological measures:

- Over 60% of LPAs do not have in-house ecological expertise, and hence do not have the relevant professionals to assess the need for and to negotiate, appropriate compensation measures;
- There is widespread lack of familiarity amongst planning officers of the detailed contents of relevant government policy guidance and advice on biodiversity;
- There is often poor understanding of how ecological issues may arise in development and how they may be addressed within the planning process – and how adverse impacts may be avoided, mitigated or compensated;
- Many LPAs are reliant upon the advice they receive from Statutory Nature Conservation Organisations (e.g. Natural England) especially when they have no in-house expertise.

In addition, LPAs often struggle to ensure that compensatory measures deliver what they promise:

- Detailed biodiversity compensation measures need to be incorporated into scheme designs earlier;
- Following from this, there is considerable variation in the level of commitment by developers to implement in full any biodiversity measures that are required by planning conditions or obligations;
- Added to (5) LPAs have insufficient resources to monitor compliance and take enforcement action where necessary;
- Also, government performance targets encouraging planning decisions to be made as quickly as possible, meaning that quality of design (especially a problem for biodiversity, which can often be an afterthought at best) is sacrificed for the sake of meeting targets.

Planning mechanisms do not currently lend themselves to securing all the elements required to deliver sustainable biodiversity conservation:

- There needs to be clear government guidance on exactly how Section 106 agreements or the Community Infrastructure Levy (or another mechanism) can be used to secure adequate contributions for biodiversity conservation;
- LPAs find it extremely difficult to secure long-term funding necessary to support the maintenance and management of biodiversity resources in perpetuity;
- There is often a lack of ecologically qualified supervisory staff to ensure that biodiversity measures are adequately implemented after planning consent has been granted;
- There is not enough ecological monitoring - and preparation and resourcing of contingencies should initial plans and proposals not reach stated objectives etc.

Finally, many biodiversity issues become controversial because scheme design does not take account of local political objectives (or tensions and conflicts), and also do not involve local communities in shaping the proposals – that might otherwise present opportunities to bring nature closer to people.

Measuring biodiversity loss and gain

Dr. Jo Treweek, Treweek Environmental Consultants Ltd.

To determine what constitutes a reasonable and fair biodiversity offset, we need to consider whether losses (due to impacts) and gains (due to offsets) balance out to achieve “no net loss” as a minimum. This presentation explored the need for any system of biodiversity offsets to be supported by a transparent and robust approach to measuring biodiversity loss and gain.

The challenge is to develop methods which will be straightforward to apply in practice without sacrificing the precision required to ensure that all important aspects of biodiversity are captured. In the absence of an agreed, universal measure of biodiversity and for entirely pragmatic reasons, most offset systems are habitat-based (Treweek *et al.*, 2010). A possible method was presented, which requires land affected by development or proposed for an offset to be mapped and classified into “habitat parcels”, in which each parcel is allocated to a single habitat category and scored with respect to its “quality” and its condition. The presentation also considered how such a method, in combination with certain “offset rules” might be used to support the requirements of the UK Biodiversity Action Plan. Thus offsets might be considered inappropriate for habitats with a “no loss” BAP target, but used to deliver gains in area or condition of priority habitats. Such an approach could result in demonstrable gains in biodiversity whilst allowing the flexibility needed to use offsets for different scales of development or for cumulative impacts.

Treweek, J. R., Butcher, B. and Temple, H. (2010, in press) Biodiversity offsets: possible methods for measuring biodiversity losses and gains for use in the UK. In Practice, Number 69, September 2010. IEEM, Winchester.

A worked example of how a methodology has been applied: Project Pinewood

Neil Harwood, Associate, Arup Ltd.

Project Pinewood represents one of the first development proposals in the UK to formally pilot the concept of biodiversity offsetting and to apply the methodology for calculating and implementing offsetting requirements developed by the Business and Biodiversity Offset Program.

The project is located in Buckinghamshire on a site adjacent to Pinewood Studios comprising a mosaic of green belt land and various grassland, hedgerow and woodland habitat types. Whilst significant effort was made to avoid and retain ecological interest on site, the overall residual impact was likely to remain negative without additional offsetting contributions. Calculations as to the level of offsetting need focused on habitat area and quality, habitat function, and key species use, as well as the use of an appropriate multiplier to take account of the time lag and risk associated with implementing the offset.

As a result, additional measures were committed to create compensatory habitats in two off-site locations. These adhered to the principles of offsetting through ensuring that the offset sites were within 5 km of the project site and linked to it through wider green networks, the habitats to be created replicated those to be lost or damaged, that these would be quick to develop and gain in ecological value, and that habitat creation focused on works that could not have gone ahead without the positive contribution of the project.

Annex D – Questions addressed in the discussion groups

Session 1 – Mechanisms for offsetting, their practicality and potential in the UK context

- What are the most practical mechanisms for offsetting in the UK, from the point of view of:
 - Current policy and realistic changes to it,
 - Implementation,
 - Delivery of ‘no net loss’ for biodiversity?
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Session 2 – Methods to assess biodiversity loss and gain

- How far do the available methods go towards achieving ‘no net loss’ of biodiversity?
 - What are the pros and cons of available methods in terms of their practicality for implementation in the next 5 years?
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