

10 Year Periodic Review of UK Biosphere Reserves

Overview and summary report



by **Hambrey Consulting**

for

DEFRA

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This overview and associated site and meeting reports were prepared by John Hambrey, Sue Evans and Martin Price

Many other people assisted in their preparation through attendance at meetings, phone discussions and provision of information. A full list is provided as Annex 2.

1 Introduction and background

1.1 The origin and nature of biosphere reserves

The origin of Biosphere Reserves goes back to the "Biosphere Conference" organized by UNESCO in 1968, the first intergovernmental conference to seek to reconcile the conservation and use of natural resources, thereby foreshadowing the present-day notion of sustainable development¹. In 1973, the concept of Biosphere Reserves was formally established within UNESCO's Man and the Biosphere (MAB) programme. Their functions were to conserve biodiversity and provide facilities for research, education and training.

The MAB philosophy and programme was substantially revised at the 1995 Seville Conference that created a "*Statutory Framework of the World Network of Biosphere Reserves*" and associated criteria for designation. According to Article 3 of this framework, Biosphere Reserves (BRs) are expected to be "*sites of excellence to explore and demonstrate conservation and sustainable development on a regional scale*". BRs are expected to combine three functions: conservation; sustainable development; and logistic support (education, training, exchange etc)

Management of BRs is conceived within a threefold zonation – a **core area** of high biodiversity value subject to some form of legal protection; a **buffer zone** managed in such a way as to secure the qualities of the core while at the same time encouraging sustainable use; and a **transition area**, which may include urban areas, in which the ethos of sustainable development can be pursued more broadly, and where the links and inter-dependencies with the core and buffer zones can be explored and demonstrated.

The most recent interpretation of the nature and purpose of biosphere reserves is to be found in the Madrid Action Plan (MAP: UNESCO, 2008), which includes the following vision statement: "*The World Network of Biosphere Reserves of the Man and the Biosphere Programme consists of sites of excellence to foster harmonious integration of people and nature for sustainable development through participation, knowledge, well-being, cultural values and society's ability to cope with change, thus contributing to the [Millennium Development Goals]*".

The term Biosphere Reserve is therefore a misnomer: the designation is neither restrictive nor exclusive, except in so far as a legally designated core zone is required. Taken as a whole, it is not a protected area as defined by the International Union for the Protection of Nature (IUCN). Rather it is the *only* global designation – or accreditation – for an area demonstrating excellence in sustainable development in practice.

Governance of Biosphere Reserves is highly variable, ranging from relatively autonomous facilitating teams, through a variety of representative and participatory structures, to relatively formal and powerful institutions – and there is no international consensus or, indeed, guidance on the best governance model. This diversity has been allowed, if not encouraged by UNESCO to maximise the opportunities for learning and demonstration. There is one key proviso however. The Statutory Framework specifies the need for participatory decision-making structures, involving

¹ UNESCO MAB "Biosphere Reserves in a nutshell".

a wide range of stakeholders, as well as provisions for a “management policy or plan for the area as a biosphere reserve”.

1.2 Status of BRs in the UK

In 1976, the UK Government put forward thirteen National Nature Reserves (NNRs) to be part of the World Network of Biosphere Reserves. All were designated by UNESCO.

A UK review was carried out in 1998 and published in 1999, following which 4 reserves were de-listed because it appeared unlikely that they could meet the revised criteria in the Statutory Framework. The remaining Biosphere Reserves in the UK are:

- Taynish, Scotland
- Beinn Eighe, Scotland
- Silver Flowe/Merrick Kells and Cairnsmore of Fleet in Galloway, Scotland
- Loch Druidibeg, Scotland
- Dyfi Valley, Wales
- Moorhouse-Upper Teesdale, England
- North Norfolk Coast, England
- Branton Burrows-North Devon, England

Of these, Branton Burrows has been expanded and developed to meet the new criteria and was officially redesignated in 2002. An expanded Dyfi Valley Biosphere Reserve, Wales has been proposed to UNESCO for redesignation under the new criteria. Several feasibility studies have been undertaken in respect of a new-style BR based around the existing Silver Flowe/Merrick Kells and Cairnsmore of Fleet BRs, and there is significant local interest in progressing this to full UNESCO designation/accreditation.

The remaining five BRs, though still formally members of UNESCO's World Network of Biosphere Reserves, have, to date, not been redeveloped in line with the new criteria, and are in a sense “in limbo”, with both redesignation and delisting as possible options. We refer to them below as “lapsed” BRs.

1.3 Purpose and methodology

This report and associated exercise for DEFRA/UKMAB are designed to assess the current status and activities of the 5 “lapsed” BRs, and the degree to which there is the desire and potential to expand, redevelop and redesignate them to meet the new criteria; or whether they should be delisted.

The study team made visits to five UK Biosphere Reserves, talked with local people, held scoping meetings with key stakeholders, and undertook follow-up research and further discussion where appropriate. The meetings and discussions served several purposes: to explain the BR concept; to gauge the potential of the area as a BR; and to help make an initial assessment of local interest in a BR over a wider area.

The sites (and visiting consultants/UK MAB) included

- Taynish, Mid-Argyll, Scotland (Martin Price, Sue Evans)
- Beinn Eighe, Wester Ross, Scotland (Sue Evans, John Hambrey)
- Loch Druidibeg, South Uist, Scotland (John Hambrey, Sue Evans, Richard Butler)
- Moorhouse – Upper Teesdale, North Pennines, England (John Hambrey, Andrew Bell)

- North Norfolk Coast, England (John Hambrey, Andy Rowland)

Five site reports have been produced, presented as a separate Appendix. Their purpose is to present a preliminary assessment of each area, and alternative possibilities for taking forward a biosphere reserve, against the formal “Seville” criteria. This should serve as a resource for local people, the UK MAB Committee and the MAB Programme and inform any possible initiatives. The assessment should also serve as a starting point for a full proposal for an expanded BR to UNESCO, should local people and organisations decide they wish to progress the concept.

2 Status of the existing Biosphere Reserves

None of the BRs we visited were “active” in the sense that the designation was being used to underpin initiative and activity in the area of conservation and development, though some research may have been partly related to BR status.

In all cases, the existing BR boundary was coincident with a National Nature Reserve, and the area and its functions were understood in this light. In other words, these are NNR of high conservation value, with historic BR status, but are not functioning as a Biosphere Reserve as defined by the UNESCO criteria, and do not fulfil the aspirations set down in the Madrid Action Plan..

3 Perspective of local people

Meetings with local people were not rigorously representative, and attendance varied widely between sites. In most cases, we sought representation of the following:

- Local councillor
- Community councillor
- Council development officer
- Scottish Natural Heritage (SNH)/Natural England (NE)
- Local marketing organisation/enterprise company
- Area of Outstanding Natural Beauty (AONB) or National Scenic Area (NSA) Chair or executive
- Farming, fisheries and forestry
- Tourism/local business
- Others as recommended by any of the above

Attendance was fair in South Uist, Beinn Eighe and North Norfolk, and poor in Taynish and North Pennines. Although far from fully representative, a wide range of views was expressed and serve as an indicator of local appetite for the idea.

Most local people (other than SNH/NE and conservation specialists) were unaware of the existence of the BR, and their perspective is therefore evolving. Most of the meetings were taken up with explaining in detail the nature of the new BRs and their desirability, or otherwise, in general terms. Detailed discussion of specific opportunities or details of possible boundaries was therefore limited. A summary of each meeting was distributed both to participants and to other local stakeholders, in order to check that the outcomes of the meeting were accurately represented and to allow input from additional stakeholders – some of whom were also contacted by telephone for further discussion. Thus, the conclusions below represent a wider range of views than those expressed at the meetings.

At all the sites except for Taynish, the view of local people might be summarized as follows:

*This appears to be an interesting idea and might enhance the profile of the area generally, and encourage sustainable tourism in particular.....
.... But the last thing we need is more bureaucracy and management plans.*

In most cases, there was also the feeling that the opportunity to confirm the designation under the new criteria should not be thrown away lightly, and that the potential costs and benefits should be explored more thoroughly. There was concern, however, that the scoping meeting was not representative, and much wider consultation would be required to take this forward.

At Taynish, there was limited appetite for taking the BR forward, and this broadly corresponded to the limited opportunities identified by the consultants.

4 Opportunity and potential

A summary for each site, taken from the site reports, is presented as Annex 1.

All the sites, except for Taynish, appear to have significant potential as “new style” BRs. They are all outstanding in terms of landscape and biodiversity. These values are recognised and strongly protected through national, European and international designation, including National nature Reserve (NNR), Site of Special Scientific Interest (SSSI), Natura 2000, Ramsar and the historic BR status itself. In most cases, the wider area around the existing BR is also subject to an exceptional degree of designation.

4.1 Zoning

Apart from Taynish, there are several clear and viable alternatives in terms of size and zoning. In most cases, the existing NNR/BR should serve as an excellent core zone. Other designated sites offer opportunities for “ready made” (and therefore non controversial) buffer zones within the surrounding area. All except Taynish show a good gradation of human intervention and have opportunities in terms of bringing in significant communities to a wider transition area. In the case of both North Pennines and North Norfolk, there are particular opportunities to include relatively deprived areas. These opportunities are necessarily less in the case of the more sparsely populated Scottish sites, but there are opportunities nonetheless.

4.2 Organisation

All areas have existing partnership-type organisations with a focus on marketing, sustainable development and environmental quality in potential transition areas. In South Uist, Storas Uist (the crofters land buy-out organisation) offers a ready-made management organisation covering an area that would make a fine BR. In North Norfolk, the AONB Partnership serves as a possible starting point, though it would need to link up with appropriate community partnerships if the transition zone were to include more deprived urban areas, and with the European Marine Site management group if it were to include marine areas. In the North Pennines, there are several alternative models, based around the Council/community partnerships, LEADER action groups and/or the AONB partnership. In Wester Ross, the Wester Ross Alliance offers a possible starting point, together with the Wester Ross Brand organisation. In mid-Argyll (Taynish) there is the Dalriada project, with many similar aims to a BR (though this may be a double-edged sword). In most cases, there are

sustainable development and management plans associated with these various organisations.

4.3 Added value

Added value is likely to be mainly in terms of:

- enhanced image/profile for tourism, especially outdoor/adventure tourism;
- enhanced sense of place and pride, which may underpin a more attractive and dynamic economy more generally;
- strengthened awareness of natural values - especially locally - and strengthening of associated (local and national) educational opportunities.

Added value in most areas is likely to be modest, since existing institutions are already delivering many BR objectives. In this sense, renewed accreditation as a BR might be seen as an accolade for existing environmental quality, management practice, and sustainable development initiative. If continued BR status were to be pursued, it would be both feasible and desirable to keep organisational arrangements as simple as possible, involving minor adaptations of existing provisions.

There may be opportunities for greater added value in those cases where it is feasible to bring in more deprived urban areas. It would be something of a shock for some deprived communities to find themselves part of a Biosphere Reserve, and this in itself would enhance opportunities for education, awareness raising and sustainable development initiative.

5 Assessment against article 4 criteria

With the probable exception of Taynish, it is arguable that all existing BRs - if extended as suggested in the site reports - would score well overall against the UNESCO criteria without significant new management initiative, although more detailed work would be required in each case to explore opportunities for added value in terms of sustainable development and education. The net benefit to local people is less clear, and would depend to a great degree on the efficiency and dynamism of organisational arrangements, and the inclusiveness of the new transition zone.

6 Strengths and weaknesses of alternatives in terms of area and scope

Those alternatives based on existing AONB/NSA areas are unlikely to add much value - beyond an extra accolade. The objectives of these areas, and the management partnership approach, are broadly in line with what would be required for a BR. Equally there would be minimal costs. These are therefore "low risk - low impact models".

If these areas were extended to include more communities, and especially deprived communities, this would increase opportunities for added value:

- by extending ownership and pride in the core and buffer areas to a much broader constituency;
- by generating more opportunities for education and awareness-raising;

- by enhancing the overall profile of a wider area and, perhaps, promoting vitality and inward investment where it is most needed.

However, extension across existing organisational boundaries would complicate management and potentially increase transaction costs. There would be a danger of layers of strategies and plans and cross-referencing exercises.

7 Minimising duplication and bureaucracy

A possible way round the dangers inherent in creating new organisations would be to use the mechanism used in many French Regional Parks (some of which are also BRs). The various parties (ranging from national government and regional councils to business organisations small NGOs) sign up to an agreed set of principles, or *Charter*. This implies minimal meetings, strategies and plans (beyond the many that already exist) and maximum use of the accolade by the partners. If partners fail to demonstrate that they are living up to the principles, they can be excluded from any of the potential benefits and, in particular, from use of the logo.

This approach also has the substantial advantage of extending “ownership” to all relevant organisations, while avoiding some of the problems of local politics. As we have noted, it would be costly and inefficient in most cases to create a “new” BR partnership. Equally, allocation of responsibility for the BR to an existing organisation has significant disadvantages. Added value is likely to be limited; some groups may feel excluded or disempowered; there may be competition and jealousy between existing organisations.

8 The way forward

We believe there is good potential for a new-style BR in all areas other than Taynish. In most cases, a revitalised BR would be based around the existing BR/NNR as core area, supported by buffer zone largely coincident with other existing conservation designations. There are a range of alternatives for the wider transition area with different strengths and weaknesses, and the definition of such zones would depend critically on local opinion and associated organisational arrangements. Added value is likely to be modest, and would depend entirely on the dynamism and enthusiasm of local partners, and the need to keep administrative costs to the bare minimum.

The outstanding question is therefore one of local support. In each area, our meetings were limited and not fully representative; the nature of a BR is not widely understood; and local politics and institutions are complex and different. Nonetheless, there was clear interest in all areas other than Taynish for exploring the opportunity further.

The process for taking this forward will depend on local circumstances, but there will need to be some form of facilitation. There are two possible approaches in terms of roles – and funding.

- a) UKMAB/DEFRA take a low profile. Our overview and site reports are widely circulated with a covering note explaining the opportunities, and local organisations or individuals are encouraged to take things forward as they see fit, and request assistance as appropriate.
- b) UKMAB/DEFRA/relevant Scottish agencies take on a more proactive facilitation role, perhaps through part funding (with local partners) institutional

analysis, organising and facilitating more comprehensive public consultation and public meetings, facilitating local agreement on how to take things forward, and assisting in the preparation of a full bid for BR status.

Prior to, or as part of this process, local interests in some areas may wish to see more in-depth analysis of potential costs and benefits, perhaps along the lines of the potential value added study undertaken for Galloway. Results from such a process are necessarily rather speculative, but may be useful for further informing the debate. Whether such studies go ahead, and how, will depend critically on funding.

While it is probably desirable that local organisations part-fund such a process, there is a danger of “appropriation” by the most powerful and most (initially) interested. A well-designed independent and sensitive facilitation process is likely to be a pre-condition for a successful outcome (irrespective of funding for further social-economic analysis), and a significant funding role for DEFRA/UKMAB/relevant Scottish agencies to ensure such independence is therefore desirable.

The costs of such a process would depend on its scope: the inclusion or otherwise of further detailed socio-economic analysis; the number of alternatives explored; the extent to which preparation of a bid was included. Something between £15,000 and £40,000 for each site might be anticipated depending upon scope and ambition.

Recommendations

1. Relevant site reports (and possibly also this overview report) to be circulated to relevant councils and all consultees in the process so far, with a covering letter from UKMAB.
2. The covering letter should comment briefly on the opportunities identified, and suggest that interested/concerned parties should get together to discuss whether or not they wish to pursue the maintenance/development of BR status, or allow the site to be de-listed – and respond to UKMAB accordingly, within, say, 6 months.
3. The covering letter should also offer assistance according to the means available. Ideally this would include:
 - Basic advice and assistance from UKMAB on all aspects of BR status
 - Offer of funding or part funding of independent research and facilitation service to:
 - i. undertake more detailed institutional and cost-benefit analyses where this is considered necessary;
 - ii. facilitate broad agreement between partners on basic principles and commitments; and
 - iii. draw up a detailed proposal for continued BR status, should this be required.

Annex 1: Summary analysis for each site

For more detail see the site reports prepared as a separate appendix



Map 1: Existing Biosphere Reserves in the UK

Beinn Eighe and Wester Ross

1. The existing Biosphere Reserve at Beinn Eighe in Wester Ross no longer meets the revised UNESCO criteria. Although of exceptional ecological quality it fails to encompass sufficient gradation of human intervention or opportunity for sustainable development
2. It would be possible to extend the current Beinn Eighe Biosphere Reserve (BR) /National Nature Reserve (NNR) into a new-style BR - if local people and the wider Wester Ross business community wished to do this. Seemingly remote but actually quite accessible - and with an economy underpinned by tourism and extensive land management - Wester Ross might benefit from the BR accolade and could possibly qualify as a new-style reserve with little if any change to existing organisational structures or management.
3. The geographic situation of the current reserve is such that, partly by virtue of it being a very large mountain, it is already a well-known feature of the Kinlochewe/Torridon/Loch Maree area and plays a part in attracting visitors to the area. The existing reserve would serve as a very fine core area. Although well protected by national and international legislation it is fully accessible to the agile, thanks to Scottish access legislation. It has fine research and educational facilities, a visitor centre, informative trails and community-minded management.
4. A buffer zone of surrounding Sites of special Scientific Interest (SSSIs) and sensitively managed land already exists, and the exact size of this, or indeed of any of the other zones, would be a matter for detailed local discussion.
5. Several viable alternatives present themselves in terms of a suitable transition zone. The existence of both the Wester Ross Alliance, and the Wester Ross Brand suggests that Wester Ross itself may not be too large an area for a BR. A larger area has the advantage of bringing a wider range of potential benefits to a broader constituency; although the costs of securing support and mobilising associated initiative may be higher than for a smaller area.
6. It is apparent that local business organisations are determined to better market Wester Ross. Given the importance of tourism to this area and the relative lack of any other local produce it would seem that the greatest potential benefit of a new-style BR here would be as an extra marketing label for tourism providers – or as a reinforcement of existing labels. This is perfectly valid as an example of sustainable development: it has been the focus of the economy of this region for some years; it maintains a large sector of the economy; and it provides an inspiring destination that is so different to the rest of the UK as to be a real alternative to overseas holidays.
7. There is always the risk that benefits might be marginal and initial costs would need to be kept to a minimum to avoid the risk of unproductive expenditure of any kind. Careful thought would need to be given as to how to effectively include the BR tag in publicity so that it was seen as an extra accolade for the area as it already is, rather than as a new entity altogether. Including the UNESCO logo in existing publicity might be a cost-effective way forward.
8. Our initial impression, based on discussions at a meeting held in Kinlochewe, and follow-up discussions by phone, suggests that there is significant interest in exploring the various options for taking this forward. It is possible that the council and business community might want to move quite fast, and take advantage of the possible increase in UK tourists arising from the current financial situation. If so advice from UK Man and the Biosphere (MAB) Committee should be sought,

but we would urge that any proposed organisational arrangements be kept as simple as possible.

9. Equally, based on further deliberations, the local community and other stakeholders may see relatively little added value over and above the Wester Ross Brand and the National Scenic Area status, and may decide instead to focus their efforts on these and other initiatives. A key consideration would be the time and cost required to gain broad levels of support from a wide range of communities scattered over a large area.

Loch Druidibeg and the Uists

- 1) The existing Biosphere Reserve (BR) at Loch Druidibeg in South Uist, Western Isles, no longer meets the revised UNESCO criteria. Although of exceptional ecological quality it fails to encompass sufficient gradation of human intervention or opportunity for sustainable development
- 2) It would be possible to expand the current BR (also a National Nature Reserve - NNR) into a new-style BR covering a much larger area. This might encompass S Uist and Benbecula, and possibly also N Uist.
- 3) The current reserve itself well meets the criteria for a *core area*.
- 4) There are sufficient SSSIs in the surrounding area to achieve a satisfactory, if somewhat scattered *buffer zone* without affecting existing land management.
- 5) A wider *transition zone* covering the remainder of the islands would offer opportunities for sustainable development. Given the nature of existing land ownership and management organisations, the whole of South Uist and Benbecula suggests itself as an obvious transition zone, though a larger area including North Uist might also be considered. It would be possible to extend this transition zone into the sea, including the fishing industries that are so vital to these islands.
- 6) The community land buy-out of South Uist and Benbecula confers the advantage that one landowner, Storas Uibhist, which has active sustainable development plans already, owns almost all the land on S Uist and a good part of Benbecula, and would serve as an obvious starting point for organisational structures. This, combined with the close historical relationship between crofting land use and wildlife interests, now encouraged by various management plans, makes this essentially a Biosphere Reserve already. An expanded BR would score well against all the UNESCO criteria (see Table 1, section 5.8 for a summary preliminary assessment).
- 7) The issue is therefore primarily one of costs and benefits. The added value of BR designation is unclear.
 - a. Although designation would probably strengthen the existing niche special interest and wildlife holidays, there are significant constraints on further tourism development. The area is not easily accessible, although recent introduction of road-equivalent tariff may improve the situation.
 - b. Storas Uibhist already has sustainable development plans, and a large estate to run.
 - c. The nature of the land, climate and access to markets is a significant constraint on agricultural opportunity.

- 8) Further work would be required to weigh up the overall costs and benefits, but a critical issue would be the level of local support. This is a complex, inter-woven community just coming to terms with being its own landlord, with all the diplomatic and practical difficulties this entails. Hopefully this report, written necessarily without the benefit of knowledge of the complex community interactions, will be of some use to Storas Uibhist and others in their deliberations, and to UK Man and the Biosphere (MAB) in terms of facilitation and advice.

Moorhouse-Upper Teesdale and the North Pennines

1. The existing Biosphere Reserve at Moor House-Upper Teesdale in the North Pennines no longer meets the revised UNESCO criteria. Although of exceptional ecological quality it fails to encompass sufficient gradation of human intervention or opportunity for sustainable development.
2. There is however good potential to redesignate a Biosphere over a larger area, with the existing Biosphere Reserve serving as the core area, nearby Natura 2000 sites or SSSI serving as buffer zone, and a wider transition zone encompassing a range of land use types, villages and towns.
3. The report makes a preliminary assessment of the potential of three alternative extended areas in terms of rating against the UNESCO BR criteria, and in terms of potential social, economic and environmental benefit:
 - a) Upper Teesdale extending down the valley to include Barnard Castle;
 - b) Upper Teesdale and Weardale, encompassing also Barnard castle and Bishop Auckland;
 - c) The area encompassed by the existing Area of Outstanding Natural Beauty (AONB) but including also significant communities which were excluded from the AONB.
4. All of these areas have strengths and weaknesses which are discussed more fully in the report. Upper Teesdale and Barnard Castle has the advantage of a strong sense of identity and economic coherence. Bringing in Weardale increases the opportunity for including more deprived communities and the range of possibilities for sustainable development initiatives, but may be less coherent and more complex to manage. The AONB has the advantage of encompassing a major ecological system and with a ready made management partnership. However, to bring in more people and increase opportunities for sustainable development, some of the towns around its periphery currently excluded from the AONB would have to be included, adding complexity in terms of management arrangements and increasing transaction costs.
5. The potential added value of a biosphere reserve in the North Pennines include:
 - a) A general enhancement of the image and profile of the area as a place of high environmental quality where innovative sustainable development is actively encouraged;
 - b) Strengthened sense of pride and ownership of the high environmental values of the area, particularly amongst those currently outside the AONB, and especially those in more deprived areas;

- c) Strengthened educational and sustainable development opportunities through this sense of pride;
- d) Improved access to funding and investment opportunities related to sustainable development;
- e) Quality labelling initiatives for products from the BR.

The degree to which such benefits might be realised through BR designation, and the best organisational structures to deliver them require further research.

6. There already exist in the North Pennines a large number of organisations and management mechanisms to promote biodiversity conservation and sustainable development. The key to a successful BR here would be to add value to these existing structures and mechanisms while avoiding any unnecessary layers of bureaucracy. In this sense the designation could be seen as an accolade for existing environmental quality management and sustainable development initiative which might further strengthen these through awareness, pride and opportunity.
7. A possible organisational model is offered by some of the Regional Parks in France which rely on a *charter* – or set of agreed principles – as the basis for agreement between public bodies and stakeholders. Multi-layered and detailed strategies and management plans are not required and would be counter-productive.

North Norfolk

1. The existing Biosphere Reserve in North Norfolk no longer meets the revised UNESCO criteria. Although of exceptional ecological quality it fails to encompass sufficient gradation of human intervention or opportunity for sustainable development.
2. There is however good potential to redesignate a Biosphere over a larger area, with the existing Biosphere Reserve serving as the core area, the wider North Norfolk Coast SSSI serving as a buffer zone, and a range of options for a wider transition zone.
3. The report makes a preliminary assessment of the potential of three alternative areas in terms of rating against the UNESCO BR criteria, and in terms of potential social, economic and environmental benefit:
 - a) The area encompassed by the existing Area of Outstanding Natural Beauty (AONB);
 - b) The AONB area but including significant communities which were excluded from the AONB;
 - c) The AONB area, supplemented as above, in combination with the European Marine Site.
4. The larger areas all score well against the UNESCO criteria, and if actively pursued would probably achieve BR status. Option a) has the advantage of a ready made and largely suitable organisational and management structure, and an established sense of identity. Option b) has the advantage of including more people, and therefore more opportunities for sustainable development and

education, but a possible disadvantage in terms of more complex organisational requirements. Option c) would comprise a remarkable biosphere reserve in ecological terms, but additional opportunities for sustainable development would be limited, and organisation more complex still.

5. The potential added value of a biosphere reserve in North Norfolk include:
 - A general enhancement of the image and profile of the area as a place of high environmental quality where innovative sustainable development is actively encouraged;
 - Strengthened sense of pride and ownership of the high environmental values of the area, particularly amongst those currently outside the AONB, and especially those in more deprived areas;
 - Strengthened educational and sustainable development opportunities through this sense of pride;
 - Improved access to funding and investment opportunities related to sustainable development;
 - Quality labelling initiatives for products from the BR
6. The degree to which such benefits might be realised through BR designation, and the best organisational structures to deliver them require further research, but to maximise them would probably require option b) or c) in terms of area/inclusiveness.
7. There already exist in North Norfolk a very large number of organisations and management mechanisms to promote biodiversity conservation and sustainable development. The key to a successful BR here would be to add value to these existing structures and mechanisms while avoiding any unnecessary layers of bureaucracy. In this sense the designation could be seen as an accolade for existing environmental quality management and sustainable development initiative which might further strengthen these through awareness, pride and opportunity.
8. A possible organisational model is offered by some of the Regional Parks in France which rely on a *charter* – or set of agreed principles – as the basis for agreement between public bodies and stakeholders. Multi-layered and detailed strategies and management plans are not required.

Taynish and Mid-Argyll

1. The existing Biosphere Reserve (BR) at Taynish in mid-Argyll no longer meets the revised UNESCO criteria. Although of exceptional ecological quality it fails to encompass sufficient gradation of human intervention or opportunity for sustainable development.
2. Although it might be possible to redesignate a Biosphere over a larger area, with the existing Biosphere Reserve serving as the core area, the configuration of such a BR is not obvious and local support for the idea appears to be limited.
3. This report makes a preliminary assessment of the potential of two alternative extended areas in terms of rating against the UNESCO BR criteria, and in terms of potential social, economic and environmental benefit.
4. The current BR (also a National Nature Reserve NNR) itself well meets the criteria for a *core area*.

5. There are sufficient SSSIs in the surrounding area to achieve a satisfactory, if somewhat scattered *buffer zone* without affecting existing land management or causing local inconvenience.
6. The scope and extent of a wider *transition zone* is less obvious (taking into account cultural, ecological, geographic, demographic and economic factors). Possibilities include a modest area encompassing Knapdale, and across east to Lochgilphead and north to the Crinan Canal; or a much larger area covering the whole of mid-Argyll.
7. In terms of ecological quality these larger areas would score well against the UNESCO criteria, and existing conservation management is relatively strong; but the potential for added value in terms of the promotion of sustainable development, education and awareness is less clear.
8. Taynish BR/NNR itself is literally out on a limb. Although a tiny gem of an NNR, it is not significant in economic or land-use terms, it can only be accessed with difficulty, and it is not well known.
9. Potential organisational arrangements are also uncertain. Our initial impression is that local organisations that might be involved in a BR are not particularly enthusiastic. The Dalriada Project in neighbouring Kilmartin is relevant here. This is a landscape based sustainable development initiative with many similar objectives to those of a BR. It has received council backing and significant lottery funding. Our impression is that there is limited appetite for an additional similar initiative.

Silver Flowe/Merrick Kells and Cairnsmore of Fleet

1. The existing Biosphere Reserve (BR) at Silver Flowe/Merrick Kells and Cairnsmore of Fleet in south-west Scotland no longer meets the revised UNESCO criteria. Although of exceptional ecological quality it fails to encompass sufficient gradation of human intervention or opportunity for sustainable development
2. However, several feasibility studies have been undertaken in respect of a new-style Biosphere based around the existing Silver Flowe/Merrick Kells and Cairnsmore of Fleet Biospheres; therefore, this was not considered to be one of the 5 “lapsed” Biosphere Reserves in the UK which were subject to the Periodic Review. It was felt, however, that the Review should reflect the activity that has been ongoing to develop a new style biosphere in SW Scotland through inclusion of a summary in this annex.
3. In 2004 Scottish Natural Heritage commissioned Hambrey Consulting to consider the feasibility of re-designating the existing biosphere under the new criteria – looking at possible zone boundaries, the potential benefits of the designation to the region (and especially to the Galloway Forest Park), to suggest how the low awareness of the Biosphere concept might be addressed and to suggest structures and costs for taking the initiative forward. This report was completed in April 2005 and recommended, amongst other things, that the Biosphere proposal should be explored further and that a group should be established to take this forward.
4. Since 2005, as a result, East Ayrshire Council, South Ayrshire Council and Dumfries and Galloway Council along with Scottish Natural Heritage and Forestry

Commission Scotland have been pursuing the concept of a modern biosphere reserve in SW Scotland.

5. As the concept is untried in Scotland the partners have been keen to ensure a rigorous approach to understanding the potential benefits, and also to ensure that a biosphere contributes added value. To aid this understanding, two major studies have been undertaken.
6. The first, "Working Towards a Galloway and Southern Ayrshire Biosphere Reserve", funded in part through LEADER and supported by partners, undertook an extensive consultation exercise aimed at engaging communities in understanding the opportunities that a biosphere might bring. The conclusions were a very positive general support for the principle of biosphere, but a strong feeling that it should not be agency led.
7. The study also identified a potential fundamental barrier to any engagement with the biosphere model in terms of the difficulty of quantifying the added value that biosphere status can deliver and any consequential financial implications. This has been addressed through a further study by economists Mackay Consultants to identify the socio-economic potential of a Galloway and Southern Ayrshire biosphere. In a series of future scenarios based on potential investment over a 10 year period a return or leverage of 6:1 could be expected, that is for every £1 spent an additional £6 could be generated. The conclusion to the study suggests that substantial financial benefit could accrue to the area with biosphere status.
8. The proposal has been prepared in conjunction with the two existing biospheres in the UK and with the full support and backing of the UKMAB Committee who advise Defra on the suitability for submission.
9. Partners are now working to intensify public, community and other stakeholder engagement to identify further biosphere champions, take ownership of the biosphere concept and drive it forward towards submission.