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## Cover Note

Net Gain welcomes the following positive feedback from the Science Advisory Panel, and will be publishing our formal response in due course.

This document provides the response by the MPAs Science Advisory Panel to our Regional Stakeholder Groups 3rd iteration of Marine Conservation Zones. The content of this document represents the views of the Science Advisory Panel, and is not intended to represent the views and opinions of the Net Gain team. The Science Advisory Panel provide advice on how to meet the requirements of the Ecological Network Guidance, however it remains the responsibility of the Regional Stakeholder Group to determine how to interpret the advice.

Joanna Redhead May 2011.

## Science Advisory Panel Response to the Net Gain 3rd iteration Report

### 1. Overview

- 1.1. The Report is clear and comprehensive and well-written, with good presentation of the data, and additional information for the draft Marine Conservation Zones (dMCZs). Stakeholder views and the rationale for each dMCZ are provided. The careful consideration of our comments made after the 2nd iteration presentations is acknowledged and appreciated. It is helpful to see the comments of the Stakeholder Advisory Panel (StAP).
- 1.2. 22 dMCZs and 12 Broad Areas of Interest described in the 2<sup>nd</sup> Iteration have been refined into 16 dMCZs (but some have subdivisions) with a good level of support from the stakeholders. Eight potential Reference Areas have been identified and are to be refined during the next round of meetings. Stakeholders have defined the features for inclusion in draft Conservation Objectives for each site. Vulnerability assessments, management measures and the corresponding Impact Assessment remain to be completed for the dMCZs and Reference Areas.
- 1.3. We note that other Regional Projects have made assumptions about management measures which have yet to be verified. Notwithstanding the use of their PRISM and PISA tools it seems likely that Net Gain will go through a similar process to develop such draft measures – it is the responsibility of Management Authorities such as the Marine Management Organisation (MMO) and Inshore Fisheries and Conservation Authorities (IFCAs) to set them. We also note the anxiety expressed by the Renewables Sector that the implications remain too uncertain for them to assess the feasibility/desirability of co-location on a site by site basis. We believe that minimisation of such uncertainties is essential before the draft final recommendations are made and seek a specific action for this purpose in paragraph 4.2.
- 1.4. We note that existing/planned Marine Protected Areas (MPAs) make a substantial contribution to the emerging Net Gain network and that there is an intention to explore the feasibility of siting Reference Areas in such existing/planned protected areas. This is helpful and welcome. However, there is concern that management regimes to provide adequate protection are not yet in place and enforced throughout existing/planned MPAs, although some features of interest are protected in principle, as confirmed by the Gap Analysis. This is not a matter to be resolved by ISCZ or stakeholders but an assumption is made in paragraph 4.4 that management of MCZs and existing and planned MPAs will be brought to the same level.
- 1.5. The identified network of dMCZs appears to meet the design principles for Representativity, Replication and Adequacy for broad-scale habitats (BSH) and Features of Conservation Interest (FOCI), although we will need to look at this again when the draft final recommendations are made available – see also comments in section 2.8. The

tabulations and accompanying notes that enable this judgement are well presented. The secondary criterion for Connectivity between similar habitats (at EUNIS level 2) also seems likely to be satisfied, although we warn that small sites that do not meet the viability criteria cannot be used for the purpose of creating such Connectivity. Most of the dMCZs and suggested Reference Areas are Viable, with the exception of NG1a and NG1d, the rationale for which is obscure.

## 2. Detailed comments

- 2.1. This iteration is based on a set of Regional Hub and StAP meetings, but we have the impression from comments in the report that another set of discussions is required. There seemed to be good links within the different parties in a hub but Net Gain need to be sure of the links between the Hubs. The descriptions of the discussions undertaken by the Regional Hubs in reaching a consensus view on the rationale for, scope and designations for the individual dMCZs is very illuminating and helpful. The meetings showed a good progression from one day to the next with summarising of the findings overnight. However, we are still not sure that the Gap Analysis, FOCI, BSH and Areas of Additional Ecological Importance (AAEI) are all being combined and considered together.
- 2.2. Specifically, notwithstanding their undoubted commitment and the recorded efforts of Net Gain and others to carry out a prioritisation based on ecological considerations, we remain concerned that largely un-quantified<sup>1</sup> socio-economic issues based on stakeholder views are having a strong influence on the choice of individual sites at the earliest stage of each discussion. At the very least this runs the risk of closing off discussion of options before they can be evaluated. The objective should be to maximise ecological benefits, guided by the seven ENG design principles concerning BSH and FOCI and the occurrence of AAEI, whilst minimising quantified socio-economic costs. We appreciate the difficulty of carrying out the required task but the primary purpose of MCZs is to conserve habitats and species that are representative and important indicators of ecological health; protection of unproductive areas of the seabed will not accomplish that.
- 2.3. It is disappointing that the role of AAEI in the selection and designation of MCZs is still uncertain. Net Gain demonstrated the correct use of these data in prioritising MCZ choice in their 2nd iteration, and were commended for it. The advice in Annex 1, which is supported by the Statutory Nature Conservation Bodies (SNCBs), is offered to assist both in prioritising and designating sites to maximise their ecological contribution.
- 2.4. We ask for clarification of the rationale for dropping the BAI from further consideration and whether this was due mainly to socio-economic and contentious issues.
- 2.5. We regret that efforts have not been made to accommodate regional biogeography in the Net Gain region. Ecological communities differ from north to south in this region and we recommend that examples of the different broadscale habitats are included to the south and north of the Flamborough-Helgoland Front. For this purpose we recommend that Net Gain liaise with Balanced Seas to ensure, as far as possible at this late stage, that examples of the different broadscale habitats are protected in the southern part of the region, as well as the northern part.
- 2.6. We are reminded that much local knowledge has been used by stakeholders. Net Gain have to be confident that this information can be defended and supported openly. Stakeholders have suggested (e.g. under NG15) that the source and confidence in the data should be recorded, especially for contentious issues. We agree with this.
- 2.7. **Reference Areas.**
  - 2.7.1. We offer advice on the selection of Reference Areas in Annex 2
  - 2.7.2. It is our understanding that the designation of such Areas will be for one or more specific features (BSH or FOCI) but in all cases the conservation objective will be to

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<sup>1</sup> i.e. Before an Impact Assessment is prepared

achieve reference condition for the feature(s), requiring all extraction, deposition or human-derived disturbance to be removed, wherever feasible, within the boundaries of Reference Areas. In other words, the management measures will be the same for all Reference Areas, irrespective of their designation.

- 2.7.3. A Reference Area at Spurn Point has been rejected as the feature (the Binks) was deemed to be highly mobile (although it is not, as it is a terminal moraine) whereas wreck areas are considered as possible sites. These decisions should be reviewed noting our advice in Annex 2.
- 2.7.4. There is discussion by stakeholders as to whether pelagic fishing is an extractive industry and so can be included/excluded in Reference Areas (e.g. NG15). We advise that it is clearly an extractive industry, and interdependencies between species under, at and above the seabed are complex but clearly exist, so on precautionary grounds, pelagic fishing must be excluded in a reference area designated for a BSH or FOCI.

## **2.8. Replication and Representativity**

- 2.8.1. These criteria are mostly met for 11 of the 14 FOCI habitats but Net Gain has to question the ones not met due to lack of evidence (e.g. horse mussel beds) or confidence in the data (deep sea mud areas). We encourage Net Gain to consider whether they should be included if they are not south-western North Sea communities. It should be sufficient to add caveats. Although the designation of Scottish Sites lags that being pursued by Net Gain, efforts to keep in touch with emerging thinking north of the border should continue, to the extent possible. *Modiolus* beds, sea pen areas and deep sea muds will be more common in the northern North Sea. There is also a question of the adequacy of the modelled data (also raised by stakeholders) and whether these are sufficient on which to base the designations; our view is that they need to be supported by verifiable data, such as survey or photographic evidence, for this purpose.
- 2.8.2. For representativity and replication of species FOCI, the inclusion of single records of FOCI species adds unnecessary complication; these are not really North Sea species and to all intents and purposes do not exist (and it would be impossible to design a management scheme to cover them).
- 2.8.3. Many tables consider the influence of the sites for common eel and smelt. Given that it is the estuaries which are of most obvious importance for these, then the species need not be considered specifically for offshore and coastal sites (e.g. NG7 is considered by stakeholders as a good site for eels – but this is far away from the coast and so may be no more important than any other part of open water<sup>2</sup>. Similarly, the presence of native oyster at NG16/17 seems to be an isolated example. Net Gain need to question the data regarding whether this constitutes a reef (probably associated with a man-made structure?).

## **2.9. Response to queries addressed to the SAP on Specific Sites and related matters**

- 2.9.1. It would be useful to have an explanation in the legends or headers of what the numbers represent in all tables. Information is given but it is scattered, so at the moment, the tables do not stand alone. It is also confusing that some entries are numerate; others are only recorded as 'present'. Hopefully these deficiencies will be corrected through the action requested at 4.1.
- 2.9.2. The original **NG2.01** was based on an existing MPA - the Outer Thames Estuary Special Protected Area (SPA), designated for the red-throated diver. This SPA affords some protection. It would be helpful to know whether Net Gain think this is

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<sup>2</sup> See "The European Eel *Anguilla Anguilla* (L.) and Marine Conservation Zones" contact Steve Colclough - Senior Technical Advisor, Marine Fisheries, Environment Agency. - 02083104817

satisfactory for the benthic communities and what kind of communication they have had with Balanced Seas.

- 2.9.3. (P40.) We suggest that the option of **NG1** is preferable to the composite NG1a-d because NG1a does not meet the viability criterion and it is unclear what benefits NG1d would deliver to the network. That is not to rule out further efforts to optimise NG1 so as to meet the design principles for BSH and FOCI whilst giving preference to AAEI. A proposed cable route has been used to delimit the areas but co-location can be accepted and with mitigation the cable route will not be a problem (nor does it have to be so big – on a map, a cable route is shown as a large area but in reality is narrow). The renewables sector has asked for a buffer zone – this shows that co-location has to be tackled/agreed but there is no ecological justification for having a buffer zone.
- 2.9.4. Net Gain need to consider the validity and usefulness of the ‘Biodiversity Hotspot 26’ as an AAEI which would justify an MCZ designated for the underlying BSH, with compensating savings elsewhere if necessary.
- 2.9.5. Given the low confidence in the BSH in the **NG2** Cromer Shoal Chalk Beds, it would be helpful to know whether there are now any more reliable data available.
- 2.9.6. It would be helpful to have an indication of the level of confidence for **RALW1** and **RALW3** BSHs, and whether there are any more reliable data available on the underlying seabed. Reliable data will be essential if designation is to take place.
- 2.9.7. (P53) The protection afforded by a Reference Area would be greater than that afforded by a Special Area of Conservation (SAC), in requiring all extraction, deposition or human-derived disturbance to be removed, wherever feasible, within its boundaries. In principle, we support the siting of Reference Areas in European Sites, such as SACs, as a means of obtaining multiple compatible benefits from a single location. We do not believe that occasional low flying aircraft would preclude selection of a site as a Reference Area. We comment in Annex 2 on the selection of Reference Areas subject to past disturbance or, if they have been disturbed, where recovery is likely. We note, in passing, that MCZs are not to be designated to protect mobile species such as birds, but as indicated in Annex 1 the existence of foraging birds and high densities of cetaceans are indicators of ecological productivity and hence an AAEI.
- 2.9.8. (P64) Clause 117 of the Marine and Coastal Access Act is very clear the MCZs can be designated for marine flora or fauna, marine habitats or types of marine habitat, and features of geological or geomorphological interest. Designation of a site for cetaceans<sup>3</sup> or birds by MCZs is not advised because they are protected by other means.
- 2.9.9. (P69/70) The implications of the discussion on site boundaries for **NG6** are not immediately obvious but we agree that there is a need to minimise the complexity of site boundaries.
- 2.9.10. (p73) We consider that the connectivity of **NG7** will be achieved provided the Dogger Bank SAC is designated. NG7 is linked to a Dutch site and the management measures of the three sites will need to be compatible. Net Gain should consider simplifying NG7’s shape, e.g. by making it a triangle.
- 2.9.11. (P77 ) **NG8** has a similar and corresponding site to the south of the Humber entrance (**NG5**) – the two sites are separated only to avoid the Humber shipping lane but as such shipping will not affect the seabed we suggest that there are no ecological reasons for 2 separate sites. The possibility of including the Humber Estuary as a dMCZ was raised in discussion. We suggest that it has sufficient designations to protect it as AAEI and should/will have been included through the Gap Analysis.

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<sup>3</sup> “Natural England & JNCC supplementary advice to regional MCZ projects on cetaceans” – February 2011

- 2.9.12. (p81/2) We welcome the careful consideration of the pros and cons of maintaining separation of **NG8** and **NG9**. Eliminating the narrow gap between them would certainly make the management and protection more coherent. The corridor is sought for fishing and an area for a windfarm. Again, we recommend that the feasibility of co-location should be investigated, by limiting the most damaging activities, to produce a more coherent network for site management with possible ecological and overall socio-economic benefits, through joint, sustainable use of the seabed.
- 2.9.13. (p89) the viability of **NG11** is questioned because it is subject to subsidence from potash mining. However, we consider that the subsidence does not detract from the relevance of the site for nature conservation because subsidence is not different to other changes (e.g. due to storms) the cause of which cannot be managed, although the consequences have to be managed.
- 2.9.14. (p93) In assessing the case for and extent of **NG12**, the Flamborough-Helgoland front should be regarded as an AAEI for high productivity, and associated ecological vigour. A site including the front's mean position would be designated for its BSH and given priority accordingly in meeting targets for adequacy and representativity. Some conflict with fishing is inevitable because of the associated productivity. This should be resolved through the conservation objectives/management measures and in the Impact Assessment.
- 2.9.15. In the discussion of **NG13**, Stakeholders asked why no dMCZ has been considered along the Durham coast – Net Gain has to be clear that, based on previous iterations, if there is no good reason for including an area then it does not need to be included.
- 2.9.16. The discussion of **NG14** suffers from misunderstanding of the significance and interpretation of AAEI. Reference should be made to Annex 1 and paragraph 2.9.4. It seems to us that conservation objectives for the site would be to maintain the BSH and FOCI for which it is designated and the ecological function which makes it an AAEI
- 2.9.17. **NG16/NG17**. There are still queries here regarding the nature of the bed (it is designated as sands but may be mixed sediments or muds), the value of the species FOCI (oysters, quahog etc.) as being representative of the area, confidence in the data, and the need for the area if the Dogger Bank pSAC is going ahead. Following the request by Net Gain of the SAP for clarification, we suggest that because of their size and the exceedance of adequacy targets for their BSH, NG16/NG17 may not be defensible as dMCZ if the Dogger Bank pSAC goes ahead. We ask Net Gain to consider reducing their size in order to create a pMCZ in the area between and slightly inshore of NG16/NG12, an area of high productivity. This area also reveals a gap in connectivity for A5 sublittoral sediment – Figure 5.8. Designation of a dMCZ for A4 here would also ensure the whole area is connected under the guidelines for this attribute.

### 3. Actions required by Net Gain

- 3.1. The detailed comments in section 2.4 to 2.9 raise issues that require consideration; those in 2.1 to 2.3 are advisory. Most of the comments in 2.9 respond to queries from stakeholders.
- 3.2. In particular, Net Gain are asked to review their selection of Reference Areas in the light of advice in Annex 2, noting the comments made about conservation objectives and management measures of such Areas in 2.7.
- 3.3. It is understood that the vulnerability assessment is (or was when the 3<sup>rd</sup> iteration report was prepared) at an early stage. In paragraph 4.2 we point to relevant action that needs to be taken by others, but Net Gain also needs do more to develop specific insights that go

beyond assessing whether an activity has the potential to affect a feature but whether ‘this activity in this area will affect this feature’. There is also a need to consider the fall back position for not having sufficient evidence. Table 5.7 gives the current assessment of activities within the dMCZ network but records these as YES, x (no) and – (no information) – this distinction is too coarse and uninformative. The ‘no information’ records could be changed easily (e.g. there are no coastal power stations anywhere other than Sizewell and Hartlepool and in the estuaries; the windfarm areas are now known). Similarly the YES designation could be easily changed to High, Medium and Low. Management of the site and activities on seasonal grounds has been proposed and should be included because of the nature of several uses and users.

- 3.4. The SAP expects **all of the guidelines of the ENG to be fulfilled completely** by the draft final recommendations. Where specific requirements cannot be met, for example because of a lack of replicates in the region, this will need to be explained.
- 3.5. Net Gain is asked to review their use of AAEL in the light of the advice given in Annex 1, noting that this advice is endorsed by the SNCBs.
- 3.6. Although the period of active data collection has been concluded all Regional Projects should capture supplementary information wherever it is available. The stricture on using Best Available Evidence continues to apply.
- 3.7. There are 12 Coastal GCR sites and 3 geological/geomorphological sites in the project area that could be protected by MCZs. Entries are included in the individual site descriptions but a summary table, of the kind included in section 5 of the Net Gain Report for BSH and FOCI, is required in the draft final recommendations.

#### **4. Actions sought of Defra and the SNCBs**

- 4.1. The Regional Projects have clearly made progress towards using a more common terminology and graphics but, for the final reports, we expect a fully agreed common terminology and layout for reports and associated material recalling that the information will be in the public domain. The SNCBs are asked to ensure that this is achieved.
- 4.2. A concerted effort must be made by the SNCBs and probably the MMO and other relevant authorities to validate or otherwise the assumptions being made by stakeholders concerning the activities (including co-locations) that will be permitted in the various p/dMCZs in order to achieve the stated conservation objectives. The results of this work must be available before the Regional Project draft final recommendations are prepared.
- 4.3. Doubts continue to be expressed about the role of the Gap Analysis. In particular, it is still not clear what habitats and species are actually protected within existing MPAs, which is essential information for Regional Projects to come to a view on how much of a given feature should be protected outside the existing MPA network. SNCB views are sought and should be made available widely.
- 4.4. All regional projects are benefitting from MPAs designated in response to European legislation which, with SSSIs, RAMSAR sites and MCZs, will contribute to an ecologically coherent network. The SAP assumes that management regimes will be put in place in all cases to ensure that all types of MPAs will achieve the conservation objectives implied by their inclusion in the overall UK ecologically coherent network.
- 4.5. To assess the network of MPAs and MCZs recommended by the Regional Projects it would be helpful for us to have access to Marxan outputs based on best available data on broadscale habitats and FOCI, constrained by the requirements of the ENG. To examine influences on the choices that have been made by the Regional Projects we request, if possible, that the Marxan results compare 1) inclusion vs. exclusion of existing MPAs, 2) inclusion vs. exclusion of Areas of Additional Ecological Importance, and 3) inclusion vs. exclusion of data on socio-economic costs. We understand that the latter will not be

possible if data on the spatial distribution of those costs are unavailable and that Impact Assessments may not be available when we need to provide our advice to Defra. Nevertheless, it may be possible to use surrogates to help explain differences between the recommended and Marxan-derived networks in our advice. Given that the requested Marxan runs will require time and specialist expertise we suggest that such work should be done under contract and ask Defra to consider providing the funds for this.

**SAP advice on the use of Areas of Additional Ecological Importance (AAEI)****in the design of an ecologically coherent network of Marine Protected Areas.**

1. It is not the role of the Science Advisory Panel to determine policy but we are required to advise the Regional Projects, and ultimately Ministers, on the extent to which Regional Project network proposals are consistent with guidance as expressed in the Ecological Network Guidance (ENG) and supplementary advice provided by the Statutory Nature Conservation Bodies (SNCBs) and accepted by Defra. The primary purpose of this note is to offer our advice with regard to the use of AAEI because it seems to us that available guidance on AAEI is not being followed adequately or consistently.
2. AAEI are a particularly important concept in the design of the Marine Protected Area (MPA) network because alongside the numerical ENG Guidelines that inform that process, stakeholders are required to resolve two parallel prioritisation processes. These are the maximisation of ecological benefit and the minimisation of socio-economic cost. There are tools to assist these decisions, such as Marxan, but they require adequate data on the benefit and cost and ultimately resolution will depend upon informed human judgement. It does not help that AAEI data have only just begun to be available in a coherent form<sup>4</sup> and quantitative socio-economic data are still highly uncertain. Cost avoidance has understandably been at the forefront of the industry stakeholders' minds since the outset. Hopefully this has been counterbalanced by strong arguments provided by conservation stakeholders to maximise ecological benefits. Careful interpretation of available data and the Guidelines concerning AAEI are essential if sound judgements are to be reached.
3. The SAP has consistently advocated early application of Guidelines 20 and 21 in the selection of Marine Conservation Zones (MCZs) within a network of MPAs as described in section 5.2, amplified by Annex 2, of the ENG. As required by that guidance, AAEI are to be used to **rank or prioritise** MCZs required to 'protect'<sup>5</sup> an appropriate area, number and distribution of replicates of identified Broad Scale Habitats (BSH) and Features of Conservation Importance (FOCI), in line with the seven design principles in the ENG. Note that paragraph 5.2.4 explicitly precludes the designation of MCZs simply on the basis of AAEI.
4. The species and habitat FOCI that can be used to identify areas for designation are not limited to those listed in the ENG and the SAP has also consistently encouraged the Regional Projects to protect additional habitats and species of local or regional interest. It is clear that any MCZ

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<sup>4</sup> E.g. the data layer developed by The Wildlife Trusts in autumn 2010 which identifies areas of additional ecological importance and the datasets provided by MB102, which map benthic biodiversity for both species and biotopes.

<sup>5</sup> As defined in section 4.7 of the ENG

chosen for a locally or regionally important species must be justified on the basis that an area subject to enforceable management measures is an appropriate way to deliver identified conservation benefits. Box 1 in Annex 2 of the ENG describes a process that was undertaken to assess which mobile FOCI fall into that category. This resulted in the identification of the three mobile species listed in the ENG. That was definitive in one sense but again the list is not formally closed. The Guidelines and accompanying text do encourage selection of areas suitable for key lifecycle stages of all species not just those listed as FOCI in the ENG.

## 5. Current SAP advice in interpreting the ENG

- 5.1. *Where there are options for the location of MCZs that fulfil the seven design principles of the ENG for BSH or FOCI, priority should be given to those that are located in areas of additional ecological importance. MCZs chosen in this way should be designated for the relevant BSH or FOCI and should have conservation objectives to maintain the designated feature in a way that supports the AAEL.*
- 5.2. The process described in 5.1 is attempting to protect important ecosystem functions that lead to high productivity, biodiversity and sustainable populations solely by protecting benthic features. The efficacy of such protection is difficult to assess, except where the benthos is closely involved in the function, as when it supports spawning and nurseries. Here the conservation objective could be to maintain the substrata in a form which makes them suitable for these functions. Where the guidelines for the design principles are met in full by other MCZs in the network, the conservation objective should be to protect the relevant habitat at least during key seasons (connected to spawning and nursery activities). If a confounding activity/ pressure can have a lasting effect on the habitat the management measures necessary to achieve the conservation objective should apply at all times.
- 5.3. Sustained high productivity in an area suggests that ecosystem processes are working well there even if the details are obscure. In this case, by way of an example, the conservation objective for an area of subtidal sand supporting a rich and diverse fishery might be to maintain the population of prey such as sandeels.
- 5.4. It is important to recognise that the identification of AAEL on the grounds that they are used preferentially by predators such as seabirds and basking sharks<sup>6</sup>, are useful as a means of identifying areas of high prey density<sup>7</sup>, and hence ecological productivity, but they do not justify protection of the predator species there.

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See also the 'Supplementary Advice to the Ecological Network Guidance on Cetaceans' provided by the SNCBs which makes relevant but more general points about the (non) use of MCZs for the protection of cetaceans.

<sup>7</sup> The SAP's advice in the response to the 1<sup>st</sup> iteration proposals to use fishing effort data in an analogous manner was ruled in admissible under the terms by which such data were provided by the industry

## Reference Areas

The SAP is concerned that progress toward identifying Reference Areas has been slow and patchy across the Regional Projects. It is also concerned that the processes used to identify candidate Reference Areas to date have tended towards choice of small and marginal areas of little perceived value to stakeholders, and therefore possibly containing poor examples of the habitats to be protected. This approach may lead to the selection of Reference Areas that are sub-optimal from the perspective of their core objective. This is, and we quote from the Draft Guidance on Reference Areas:

“Reference Areas provide a key opportunity to demonstrate the unimpacted state of a broad range of marine features, in the context of prevailing environmental conditions. For Reference Areas to be an effective control against which it is possible to assess the effects of pressure, the human activities within them need to be managed so that impacts are minimised at the site. Definitions also cover activities that occur outside of the Reference Area, but which may impact upon the feature(s) within. This means that they will be areas where all extractive, depositional and/or disturbing and damaging activities are excluded.”

The SNCBs have confirmed<sup>8</sup> that:

- 1) Reference Areas will be designated for one or more specific broad-scale habitats and FOCI.
- 2) Each will be given a conservation objective to reach reference condition.
- 3) In order to allow broad-scale habitats and FOCI **to achieve reference condition, all extraction, deposition or human-derived disturbance would be removed, wherever feasible<sup>9</sup>, within the boundaries of reference areas.**

The SNCB Guidance document<sup>10</sup> for regional MCZ Projects elaborates activities that are considered to be extractive, depositional, or induce unacceptable levels of disturbance.

In order to achieve these aims, it is important that Reference Areas are chosen to be representative of the different broadscale habitats and FOCI present within each region. They should not be poor examples that are selected because they are places that nobody values. We ask Regional Projects to keep in mind the following points in coming to decisions about the size and location of Reference Areas.

- 1) Reference Areas should conform to the Viability criterion for MPAs in the Ecological Network Guidance so as to be large enough to sustain viable examples of their component habitats or FOCI over the long term. This means that Reference Areas chosen to represent a broad-scale habitat should generally have a minimum diameter of 5km, and the average size should be between 10 and 20 km in diameter, to match that of MCZs receiving lower levels of

<sup>8</sup> “Interim note on reference areas: key principles” March 2011

<sup>9</sup> ‘Wherever feasible’ is included in this context as recognition that there may be some circumstances where it is simply not practicable to prevent absolutely all human-derived impact, such as diffuse pollution, in a reference area.

<sup>10</sup> [http://www.naturalengland.org.uk/Images/MCZ-regional-guidance\\_tcm6-23451.pdf](http://www.naturalengland.org.uk/Images/MCZ-regional-guidance_tcm6-23451.pdf)

protection. Reference Areas smaller than this, with a minimum dimension of 1 to 5 km, may still be valuable in a network but such choices should be exceptional and based on a robust scientific case.

- 2) Reference Areas chosen primarily for FOCI should conform to the guidance in Table 7 of the ENG. Where the FOCI to be protected are quite small in area (perhaps as small as 100m across) and do not occur or only occur as poor examples elsewhere in a Region, and where they do not occur with other more extensive examples of habitats and FOCI, a protected area may be small, provided that area can still be easily identified by users of the sea, and where edge effects are likely to be minimal. In these cases, broad-scale habitats overlapping with FOCI and occurring within the reference area will require a conservation objective to meet reference condition even if the size of the reference area will fall below the minimum viability criteria. However, a viable reference area (i.e. > 5km in minimum dimension) for each such broad-scale habitat will need to be identified elsewhere. Examples of where smaller reference areas may be appropriate include offshore reefs or islets, or intertidal features. The ENG provides general guidance on the selection of MCZ buffer zones/safety margins (section 6.3 and Annex 11). However we believe that precautionary principle should be applied to small Reference Areas that are likely to have limited resilience. Accordingly we suggest that boundaries should be preferably 500m away from the feature and never less than 100m, except for those parts of a protected area bounded by land.
- 3) In view of their particular role in furthering scientific understanding of human effects on marine habitats and species, places with existing survey and monitoring data might be favoured over places with little data.
- 4) Following from Point 3, such places might well lie within existing marine protected areas, such as Special Areas of Conservation. Given that extensive areas of certain habitats lie within SACs, Regional Projects should look closely at options for siting Reference Areas within them.
- 5) Regional projects might also consider accessibility of sites in reaching decisions. Reference Areas need to be sufficiently accessible for scientific research and monitoring. However, it may be impossible for places that are too easily accessed and intensively used to recover to an unimpacted state. Such places would therefore fail to fulfil the core function of Reference Areas.
- 6) Ideally the quality of the features within Reference Areas at designation should be broadly comparable to the quality in other Marine Conservation Zones. However, attention is drawn to section 6.2 of the ENG and the particular role of Reference Areas as benchmarks, suffering minimal disturbance, against which ecosystem change in other locations can be assessed through scientific study. The SAP therefore suggests that, where possible, Reference Areas should be areas where disturbance of the relevant broad-scale habitat or FOCI together with the 'other features' for protection is believed to have been minimal in the past or where recovery is likely if damaging activities are prohibited.
- 7) Reference Areas should, apart from being typical of the habitat being protected and, where possible, hosting FOCI species, include species that may provide an indication of quality or of change in the biotopes present. Such species are likely to be those that are known or likely to be sensitive to particular pressures/activities or are ecological engineers.

- 8) While areas with wrecks may have gained some de facto protection from exploitation in the past, if Reference Areas are to be established around wrecks they should be sufficiently large to include areas of habitat that are representative of conditions outside the wreck.