# Net Gain

## Final Recommendations Report Addendum

## 15 September 2011

**Release 1.0**

**Net Gain**
**The North Sea Marine Conservation Zones Project**
**The Deep Business Centre**
**Tower Street**
**Hull, HU1 4BG**

## Document version control tables

**Build status**

| Release | Date | Author | Reason / comments | Amended sections |
|---|---|---|---|---|
| 1.0 | 15th September 2011 | S Barnard | Corrections of four (4) errors or omissions:<br>transposed area values (potentially affecting viability assessments) for sites NG13 & 13a;<br>incorrect area values for highly mobile SOCI (smelt) feature in site NG1c; and<br>incorrect Conservation Objectives for subtidal sediment features in site NG5; and<br>omission of Conservation Objective table for subtidal sands and gravels at site NG5. | Tables 4.1, 6.1, 7.5, 7.31, 7.32 & 7.33;<br>Annex 2 |
| | | | | |

**Distribution**

| Copy | Release | Issue date | Issued to |
|---|---|---|---|
| Electronic | 1.0 | 15th September 2011 | Natural England; JNCC; Defra; SAP; Net Gain RSG; Net Gain Web Site |
| | | | |

## Section 1 Introduction

Since submitting the Final Recommendations Report, Net Gain has become aware of some minor errors in, and omissions from, the text of the report. This Addendum provides corrections or additional information to address these points, and should be read in conjunction with the original report. Each point is dealt with in turn, below.

## Section 2 Addendum 1

The first error relates to Table 4.1 (p.38 of the original report). In Table 4.1, figures provided for 'Site size' for sites NG13 and NG13a had become transposed.

The site area for site NG13 should have been recorded as 198.75km$^2$ and site NG13a should have been 0.44km$^2$. The corrected table is presented below.

**Table 4.1 Summary table of rMCZs and features recommended for designation**

| Site name | Site size | Features recommended for designation |
|---|---|---|
| NG 1b, Orford Inshore | 71.95km² | A5.4: Subtidal mixed sediments |
| NG 1c, Alde Ore Estuary | 12.24km² | Estuarine rocky habitats<br>Sheltered muddy gravels<br>Smelt |
| NG 2, Cromer Shoal Chalk Beds | 315.64km² | A3.1: High energy infralittoral rock<br>A3.2: Moderate energy infralittoral rock<br>A4.2: Moderate energy circalittoral rock<br>Subtidal chalk |
| NG 4, Wash Approach | 724.52km² | A5.2: Subtidal sand<br>A5.4: Subtidal mixed sediments<br>Subtidal sands and gravels |
| NG 5, Lincs Belt | 175.50km² | A5.1: Subtidal coarse sediment<br>A5.2: Subtidal sand<br>A5.4: Subtidal mixed sediments<br>Peat and clay exposures<br>Subtidal sands and gravels |
| NG 6, Silver Pit | 168.09km² | A5.2: Subtidal sand<br>A5.4: Subtidal mixed sediments<br>Ross worm (*Sabellaria spinulosa*) reefs<br>Subtidal sands and gravels |
| NG 7, Markham's Triangle | 200.13km² | A5.1: Subtidal coarse sediment<br>A5.2: Subtidal sand |
| NG 8, Holderness Inshore | 307.14km² | A2.4: Intertidal mixed sediments<br>A5.1: Subtidal coarse sediments<br>A5.2: Subtidal sand<br>Peat and clay exposures<br>Subtidal chalk<br>Subtidal sands and gravels<br>Ross worm (*Sabellaria spinulosa*) reefs |
| NG 9, Holderness Offshore | 1,176.10km² | A5.1: Subtidal coarse sediment<br>A5.4: Subtidal mixed sediments |

Continued over ...

| Site name | Site size | Features recommended for designation |
|---|---|---|
| NG 10, Castle Ground | 3.70km² | A1.1: High energy intertidal rock<br>A1.2: Moderate energy intertidal rock<br>A1.3: Low energy intertidal rock<br>A2.1: Intertidal coarse sediment<br>A2.2: Intertidal sand and muddy sand<br>A2.3: Intertidal mud<br>Intertidal underboulder communities |
| NG 11, Runswick Bay | 67.92km² | A3.1: High energy infralittoral rock<br>A3.2: Moderate energy infralittoral rock<br>A4.1: High energy circalittoral rock<br>A4.2: Moderate energy circalittoral rock<br>A5.1: Subtidal coarse sediment<br>A5.2: Subtidal sand<br>A5.4: Subtidal mixed sediments<br>Ocean quahog (*Arctica islandica*) |
| NG 12, Compass Rose | 551.56km² | A4.2: Moderate energy circalittoral rock |
| NG 13, Coquet to St Mary's | 198.75km² | A1.2: Moderate energy intertidal rock<br>A1.3: Low energy intertidal rock<br>A2.1: Intertidal coarse sediment<br>A2.2: Intertidal sand and muddy sand<br>A2.3: Intertidal mud<br>A2.4: Intertidal mixed sediments<br>A3.1: High energy infralittoral rock<br>A3.2: Moderate energy infralittoral rock<br>A4.2: Moderate energy circalittoral rock<br>A5.1: Subtidal coarse sediment<br>A5.2: Subtidal sand<br>A5.3: Subtidal mud<br>A5.4: Subtidal mixed sediments<br>Intertidal underboulder communities |
| NG 13a, Aln Estuary | 0.44km² | A2.3: Intertidal mud<br>A2.5: Coastal saltmarshes and saline reedbeds<br>A3.1: High energy infralittoral rock<br>Estuarine rocky habitats<br>Sheltered muddy gravels<br>Subtidal sands and gravels |
| NG 14, Farnes East | 944.92km² | A4.2: Moderate energy circalittoral rock<br>A5.1: Subtidal coarse sediment<br>A5.2: Subtidal sand<br>A5.3: Subtidal mud<br>A5.4: Subtidal mixed sediments<br>Peat and clay exposures |

Continued over ...

| Site name | Site size | Features recommended for designation |
|---|---|---|
| NG 15, Rock Unique | 492.07km² | A4.3: Low energy circalittoral rock<br>A5.1: Subtidal coarse sediment<br>A5.2: Subtidal sand<br>Subtidal sands and gravels |
| NG 16, Swallow Sand | 4,746.12km² | A5.1: Subtidal coarse sediment<br>A5.2: Subtidal sand<br>Subtidal sands and gravels |
| NG 17, Fulmar | 2, 437.12km² | A5.1: Subtidal coarse sediment<br>A5.2: Subtidal sand<br>Subtidal sands and gravels<br>Ocean quahog (*Arctica islandica*) |

## Section 3 Addendum 2

The second error relates to Table 7.5 (p.97 of the original report). In Table 7.5, figures provided for the area covered within site NG1c by the highly mobile SOCI (smelt) feature is incorrect.

The correct area value for smelt within site NG1c should have been recorded as 12.24km$^2$. The corrected table is presented below.

**Table 7.5 Features proposed for designation within NG1c, Alde Ore Estuary**

| Feature type | Feature name | Area covered within site (for broad-scale habitats and habitats of conservation importance) |
|---|---|---|
| Broad-scale habitat | n/a | n/a |
| Habitat of conservation importance | Estuarine rocky habitats | 4 points |
| Habitat of conservation importance | Sheltered muddy gravels | 1 point |
| Species of conservation importance | Smelt (*Osmerus eperlanus*) | 12.24km² |
| Geological feature | Orfordness (subtidal) | 12.23km² |
| Other feature | n/a | n/a |

## Section 4 Addendum 3

The third point relates to the Vulnerability Assessments and Conservation Objectives for the subtidal sediments at site NG5, 'Lincs Belt'.

Subsequent to the production of the Draft Final Recommendations report further discussions were held with Natural England the EA and it was concluded that the features experienced only 'low exposure' to pressures arising from beach replenishment activity at the site (and were not 'exposed' to these pressures to the point where they were having an impact on the site features, as stated in the draft final report). Consequently, the Vulnerability Assessment should have been revised to 'Low vulnerability' and the Conservation Objective to 'Maintain' for the Final Recommendations Report.

This error affects the site features & Conservation Objectives summary table (presented as Table 6.1 on p.76 of the original report); the Conservation Objective tables presented in the Site Assessment Document (SAD) for site rMCZ NG5 (Tables 7.31, 7.32 and 7.33); and the content of Annex 2 as it relates to pressures arising from beach replenishment activity at site rMCZ NG5.

The corrected version of Table 6.1 is presented below.

**Table 6.1 Summary table of sites and conservation objectives**

| Site name | Feature | Conservation objective |
|---|---|---|
| NG 1b, Orford Inshore | A5.4: Subtidal mixed sediments | Recover |
| NG 1c, Alde Ore Estuary | Estuarine rocky habitat | Maintain |
| | Sheltered muddy gravels | Maintain |
| | Smelt (*Osmerus eperlanus*) | Maintain |
| NG 2, Cromer Shoal Chalk Beds | A3.1: High energy infralittoral rock | Maintain |
| | A3.2: Moderate energy infralittoral rock | Maintain |
| | A4.2: Moderate energy circalittoral rock | Maintain |
| | Subtidal chalk | Maintain |
| NG 4, Wash Approach | A5.2: Subtidal sand | Maintain |
| | A5.4: Subtidal mixed sediments | Maintain |
| | Subtidal sands and gravels | Maintain |
| NG 5, Lincs Belt | A5.1: Subtidal coarse sediment | Maintain |
| | A5.2: Subtidal sand | Maintain |
| | A5.4: Subtidal mixed sediments | Maintain |
| | Peat and clay exposures | Maintain |
| | Subtidal sands and gravels | Maintain |
| NG 6, Silver Pit | A5.2: Subtidal sand | Recover |
| | A5.4: Subtidal mixed sediments | Recover |
| | Ross worm (*Sabellaria spinulosa*) reefs | Maintain |
| | Subtidal sands and gravels | Recover |
| NG 7, Markham's Triangle | A5.1: Subtidal coarse sediment | Recover |
| | A5.2: Subtidal sand | Recover |
| NG 8, Holderness Inshore | A2.4: Intertidal mixed sediments | Maintain |
| | A5.1: Subtidal coarse sediment | Maintain |
| | A5.2: Subtidal sand | Maintain |
| | Peat and clay exposures | Maintain |
| | Subtidal chalk | Maintain |
| | Subtidal sands and gravels | Maintain |
| | Ross worm (*Sabellaria spinulosa*) reefs | Maintain |

| Site name | Feature | Conservation objective |
|---|---|---|
| NG 9, Holderness Offshore | A5.1: Subtidal coarse sediment | Recover |
| | A5.4: Subtidal mixed sediments | Recover |
| NG 10, Castle Ground | A1.1: High energy intertidal rock | Maintain |
| | A1.2: Moderate energy intertidal rock | Maintain |
| | A1.3: Low energy intertidal rock | Maintain |
| | A2.1: Intertidal coarse sediment | Maintain |
| | A2.2: Intertidal sand and muddy sand | Maintain |
| | A2.3: Intertidal mud | Maintain |
| | Intertidal underboulder communities | Maintain |
| NG 11, Runswick Bay | A3.1: High energy infralittoral rock | Maintain |
| | A3.2: Moderate energy infralittoral rock | Maintain |
| | A4.1: High energy circalittoral rock | Maintain |
| | A4.2: Moderate energy circalittoral rock | Maintain |
| | A5.1: Subtidal coarse sediment | Maintain |
| | A5.2: Subtidal sand | Maintain |
| | A5.4: Subtidal mixed sediments | Maintain |
| | Ocean quahog (*Arctica islandica*) | Maintain |
| NG 12, Compass Rose | A4.2: Moderate energy circalittoral rock | Recover |
| NG 13, Coquet to St Mary's | A1.2: Moderate energy intertidal rock | Maintain |
| | A1.3: Low energy intertidal rock | Maintain |
| | A2.1: Intertidal coarse sediment | Maintain |
| | A2.2: Intertidal sand and muddy sand | Maintain |
| | A2.3: Intertidal mud | Maintain |
| | A2.4: Intertidal mixed sediments | Maintain |
| | A3.1: High energy infralittoral rock | Maintain |
| | A3.2: Moderate energy infralittoral rock | Maintain |
| | A4.2: Moderate energy circalittoral rock | Maintain |
| | A5.1: Subtidal coarse sediment | Maintain |
| | A5.2: Subtidal sand | Maintain |
| | A5.3: Subtidal mud | Maintain |
| | A5.4: Subtidal mixed sediments | Maintain |
| | Intertidal underboulder communities | Maintain |
| NG 13a, Aln Estuary | A2.3: Intertidal mud | Maintain |
| | A2.5: Coastal saltmarshes and saline reedbeds | Maintain |
| | A3.1: High energy infralittoral rock | Maintain |
| | Estuarine rocky habitats | Maintain |
| | Sheltered muddy gravels | Maintain |
| | Subtidal sands and gravels | Maintain |
| NG 14, Farnes East | A4.2: Moderate energy circalittoral rock | Maintain |
| | A5.1: Subtidal coarse sediment | Maintain |
| | A5.2: Subtidal sand | Maintain |
| | A5.3: Subtidal mud | Recover |
| | A5.4: Subtidal mixed sediments | Maintain |
| | Peat and clay exposures | Maintain |

| Site name | Feature | Conservation objective |
|---|---|---|
| NG 15, Rock Unique | A4.3: Low energy circalittoral rock | Maintain |
| | A5.1: Subtidal coarse sediment | Maintain |
| | A5.2: Subtidal sand | Maintain |
| | Subtidal sands and gravels | Maintain |
| NG 16, Swallow Sand | A5.1: Subtidal coarse sediment | Maintain |
| | A5.2: Subtidal sand | Maintain |
| | Subtidal sands and gravels | Maintain |
| NG 17, Fulmar | A5.1: Subtidal coarse sediment | Maintain |
| | A5.2: Subtidal sand | Maintain |
| | Subtidal sands and gravels | Maintain |
| | Ocean quahog (*Arctica islandica*) | Maintain |

Within Annex 2, all records for site NG5 that relate to subtidal sediment features (subtidal coarse sediment, sand, mixed sediment and sands & gravels) ***and*** to pressures caused by beach replenishment activity should have their 'Exposure' field set to 'Not exposed' and their 'Vulnerability Assessment and Conservation Objective' field set to 'Low vulnerability - CO set to maintain'.

Corrected Conservation Objective tables (Tables 7.31, 7.32 and 7.33) are presented below:

**Conservation objectives**

**Table 7.31 Conservation objectives for site NG 5, A5.1: Subtidal coarse sediment**

| **Conservation Objective** | |
|---|---|
| 1<br>Maintain/ recover | Subtidal coarse sediment is widespread around the British Isles and mainland Europe. Subject to natural change, maintain the Subtidal coarse sediment in favourable condition, such that the: |
| 2<br>Attributes and parameters (indicated by *) of feature | **<u>Habitat</u>**<br><br>the<br>• extent,<br>• diversity,<br>• community structure,<br>• natural environmental quality*, and<br>• natural environmental processes*<br><br>representative of Subtidal coarse sediment in the biogeographic region are maintained, such that the feature makes its contribution to the network. |
| **Advice on operations** | |
| 3<br>Pressures | Subtidal coarse sediment is sensitive to the pressures:<br>**Pressure** — **Sensitivity** — **Confidence**<br>Physical loss (to land or freshwater habitat) — H — L<br>Physical removal (extraction of substratum) — L-H — L<br>Surface abrasion: damage to seabed surface features — NS-H — L |

| | | | |
|---|---|---|---|
| | Physical change (to another seabed type) | M | L |
| | Salinity changes - local | L-M | L |
| | Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm | L-M | L |
| | Structural abrasion/penetration: Structural damage to seabed >25mm | L-M | L |
| | Introduction or spread of non-indigenous species & translocations (competition) | NS-M | L |
| | Removal of non-target species (lethal) | NS-M | L |
| | Siltation rate changes (high) | NS-M | L |
| | Siltation rate changes (low) | NS-M | L |
| Human activities | Human activities which cause these pressures will need to be managed if they prevent the conservation objectives from being achieved to ensure the rMCZ contributes to an ecologically coherent and well-managed network of Marine Protected Areas. | | |

**Table 7.32 Conservation objectives for site NG 5, A5.2: Subtidal sand**

| **Conservation Objective** | |
|---|---|
| 1<br>Maintain/ recover | Subtidal sand is widespread around the British Isles and mainland Europe. Subject to natural change, maintain the Subtidal sand in favourable condition, such that the: |
| 2<br>Attributes and parameters (indicated by *) of feature | **Habitat**<br><br>the<br>• extent,<br>• diversity,<br>• community structure,<br>• natural environmental quality*, and<br>• natural environmental processes*<br><br>representative of Subtidal sand in the biogeographic region are maintained, such that the feature makes its contribution to the network. |
| **Advice on operations** | |
| 3<br>Pressures | Subtidal sand is sensitive to the pressures listed below: |

| **Pressure** | **Sensitivity** | **Confidence** |
|---|---|---|
| Physical change (to another seabed type) | H | L |
| Physical loss (to land or freshwater habitat) | H | L |
| Siltation rate changes (high) | H | L |
| Physical removal (extraction of substratum) | L-H | M |

| | | | |
|---|---|---|---|
| | Siltation rate changes (low) | M | L |
| | Temperature changes - regional/national | M | L |
| | Salinity changes - local | L-M | L |
| | Structural abrasion/penetration: Structural damage to seabed >25mm | L-M | L-M |
| | Introduction or spread of non-indigenous species & translocations (competition) | NS-M | L |
| | Removal of non-target species (lethal) | NS-M | H |
| | Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm | NS-M | L |
| | Surface abrasion: damage to seabed surface features | NS-M | L |
| | Water flow (tidal & ocean current) changes - regional/national | NS-L | L |
| | Water flow (tidal current) changes - local | NS-L | L |
| Human activities | Human activities which cause these pressures will need to be managed if they prevent the conservation objectives from being achieved to ensure the rMCZ contributes to an ecologically coherent and well-managed network of Marine Protected Areas. | | |

**Table 7.33 Conservation objectives for site NG 5, A5.4: Subtidal mixed sediments**

| **Conservation Objective** | |
|---|---|
| 1<br>Maintain/ recover | Subtidal mixed sediment is widespread around the British Isles and mainland Europe. Subject to natural change, maintain the Subtidal mixed sediments in favourable condition, such that the: |
| 2<br>Attributes and parameters (indicated by *) of feature | **Habitat**<br><br>the<br>• extent,<br>• diversity,<br>• community structure,<br>• natural environmental quality*, and<br>• natural environmental processes*<br><br>representative of Subtidal mixed sediments in the biogeographic region are maintained, such that the feature makes its contribution to the network. |
| **Advice on operations** | |
| 3<br>Pressures | Subtidal mixed sediments is sensitive to the pressures:<br>**Pressure** — **Sensitivity** — **Confidence**<br>Physical change (to another seabed type) — H — L<br>Physical loss (to land or freshwater habitat) — H — L<br>Physical removal (extraction of substratum) — H — L<br>Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm — H — L |

| | | | |
|---|---|---|---|
| | Structural abrasion/penetration: Structural damage to seabed >25mm | H | L |
| | Introduction of microbial pathogens (disease) | NS-H | L |
| | Salinity changes - local | NS-H | L |
| | Removal of non-target species (lethal) | M | M |
| | Siltation rate changes (high) | M | L |
| | Surface abrasion: damage to seabed surface features | M | L |
| | Temperature changes - local | M | L |
| | Temperature changes - regional/national | M | L |
| | Introduction or spread of non-indigenous species & translocations (competition) | L-M | M |
| | Water clarity changes | NS-M | L |
| | Removal of target species (lethal) | L | M |
| | Water flow (tidal & ocean current) changes - regional/national | NS-L | L |
| | Water flow (tidal current) changes - local | NS-L | L |
| | Wave exposure changes - local | NS-L | L |
| | Wave exposure changes - regional/national | NS-L | L |
| Human activities | Human activities which cause these pressures will need to be managed if they prevent the conservation objectives from being achieved to ensure the rMCZ contributes to an ecologically coherent and well-managed network of Marine Protected Areas. | | |

## Section 5 Addendum 4

The fourth point relates to the Conservation Objectives for the subtidal sands and gravels at site NG5. Although this feature is proposed for designation, and a Vulnerability Assessment has been completed, the Conservation Objectives were omitted from the report. The missing Conservation Objective table is provided below:

**Table 7.33(a) Conservation objectives for site NG 5, Subtidal sands and gravels**

| **Conservation Objective** | |
|---|---|
| 1<br>Maintain/ recover | Subtidal sands and gravels are on the UK List of Priority Species and Habitats (UK BAP). Subject to natural change, maintain the Subtidal sands and gravels in favourable condition, such that the: |
| 2<br>Attributes and parameters (indicated by *) of feature | **<u>Habitat</u>**<br><br>the<br>• extent,<br>• diversity,<br>• community structure,<br>• natural environmental quality*, and<br>• natural environmental processes*<br><br>representative of Subtidal sands and gravels in the biogeographic region are maintained, such that the feature makes its contribution to the network. |
| **Advice on operations** | |
| 3<br>Pressures | Subtidal sands and gravels are sensitive to the pressures: |

| **Pressure** | **Sensitivity** | **Confidence** |
|---|---|---|
| Physical loss (to land or freshwater habitat) | H | L |
| Surface abrasion: damage to seabed surface features | NS-H | M-H |
| Physical change (to another seabed type) | M | H |
| Physical removal (extraction of substratum) | M | H |

| | | | |
|---|---|---|---|
| | Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm | L-M | H |
| | Structural abrasion/penetration: Structural damage to seabed >25mm | L-M | M-H |
| | Introduction or spread of non-indigenous species & translocations (competition) | NS-M | L |
| | Removal of non-target species (lethal) | NS-M | L-M |
| | Removal of target species (lethal) | NS-M | L |
| | Siltation rate changes (high) | NS-M | M-H |
| | Siltation rate changes (low) | NS-M | M-H |
| | Salinity changes - local | L | |
| Human activities | Subtidal sands and gravels is sensitive to the pressures listed below. Human activities which cause these pressures will need to be managed if they prevent the conservation objectives from being achieved to ensure the rMCZ site contributes to an ecologically coherent and well-managed network of Marine Protected Areas. | | |

**--- END ---**