

## ECR Monitoring Blueprint Document Control System (DCS)

### Terms of Reference

The nature of the ECA Regional Monitoring Blueprint means that it will develop iteratively during the initial years of activity in the East Channel Region. With this in mind a document control system has been implemented in order that recipients of the Blueprint can keep track of current versions and the changes made between issues.

The Blueprint DCS has been developed on the following basis:

- **An issue of a complete version of the Blueprint will occur annually following the Annual ECEN Stakeholder meeting, when all amendments and comments regarding the previous years monitoring activities have been incorporated into the document.**
- **Between annual issues of the complete Blueprint, issues of updated component sections and Specification and Operating Procedures may be necessary. Where necessary, interim updates will be made on a quarterly basis which will comprise new versions of sections to which changes have been made.**

### Blueprint Version Numbering

- **Complete Blueprint version numbering will be carried out as follows:**

**Version numbers will be provided for the overall Blueprint document based on the year to which they relate as follows:**

First issue Baseline version designated v0.0  
First issue Year 1 version designated v1.0  
First issue Year 2 version designated v2.0 etc

**If Blueprint versions are amended and re-issued in their entirety during the year then their designations will be changed incrementally as follows:**

Second issue Baseline version designated v0.1  
Second issue Year 1 version designated v1.1  
Second issue Year 2 version designated v2.1 etc

**Version Numbers will be appended with the date on which they were released. Therefore complete numbering format will be as follows:**

v(Year).(Issue) DDMMYY

**eg Complete issue of Blueprint in Year 2 (2007-8) of activity on July 1<sup>st</sup> would be designated v2.0 010707.**

## Section Version Numbering

- Updated section version numbering will be undertaken on the following basis:

**Each section within the Blueprint will be individually identified in the header of the document as follows:**

First issue version of Section 1 designated SEC1 v1  
Subsequent issue of Section 1 designated SEC1 v2

and incrementally thereafter.

First issue version of ecological monitoring SOP designated EMSOP v1  
Subsequent issue of ecological monitoring SOP designated EMSOP v1

and incrementally thereafter.

**Version number of component sections will also be appended with the date of issue. Therefore, as an example, format for version numbering of the first re-issue of Section 3 in a year would be:**

SEC3 v2 DDMMYY

- Version numbering will be contained in the top right of the header of the document.
- A log of changes between versions will be provided with each issue. The log information will be provided in tabular format under the following headings:

Basis for Changes	Blueprint Version and/or Specific Section	Section	Comments Received	Summary of Changes	Requirement for Further Work

- A request for comments will be forwarded with each issue in order that a dialogue is maintained and subsequent versions of the Blueprint and component sections are amended accordingly.

## Page Numbering

- **Page numbering employs a section identifier. The page number will make reference to the Section and the page number within that section as follows:**

Each individual section page numbering will begin with page 1.

Page numbers for Section 3 will be preceded by the number 3 and will progress incrementally from 1. eg 3.1, 3.2, 3.3 etc.

SOP and Annex page numbering will also employ a prefix identifier and begin with page 1 in each case.

Page numbers will appear in the bottom right hand corner of the page.

## Document Control Log

### Blueprint Version v0.3 071005 Table of comments received related to v0.1 260405 and related changes to v0.3 071005

Basis for Changes	Item or Section of Blueprint v0.1 260405	Section	Comments Received	Summary of Changes	Requirement for Further Work
Comments made during meeting between CEFAS/ECA 060605 CEFAS Lab, Burnham.	Overall Blueprint Structure	NA	Overall structure of the Blueprint was discussed and revision was requested to provide greater clarity.	Structure has been amended to provide standalone ecological and physical monitoring sections.	None.
Comments made during meeting between CEFAS/ECA 060605 CEFAS Lab, Burnham.	Objectives of the Blueprint Document – Chapter 4 v0.1	Section 4	Scale of the document was not clear.	Summary of scale of the document now provided in v0.3 Section 1 And related tables.	None.
Comments made during meeting between CEFAS/ECA 060605 CEFAS Lab, Burnham.	Plume Study – Chapter 5 v0.1	Section 5.1.2.	Thresholds appear to have been set against the REA model – query whether model has been validated.	None specific.	Development of plume study rationale and methodology ongoing.
Comments made during meeting between CEFAS/ECA 060605 CEFAS Lab, Burnham.	Tracer Study – Chapter 5 v0.1	Section 5.1.3.	Technical aspects of the tracer study need further consideration – eg volume of tracer, sampling methodology, contingency in the event of storms. Potential transport rates are unknown. Use of word hypothesis should be reconsidered.	Emu has had further discussions with CEFAS regarding the methodology and basis for determination of tracer volumes to be used. Further draft of tracer study completed – now included in Section 5 v0.3.  Hypotheses remain but likely to be superseded by testing of predictions as contained in v0.3	Development of tracer study rationale and methodology ongoing.  Emu to maintain dialogue with CEFAS.
Comments made during meeting between CEFAS/ECA 060605 CEFAS Lab, Burnham.	Seabed Sediment Studies – Chapter 5 v0.1	Section 5.1.4.	Lack of contingency plan if sediment released by the dredging process does not behave as predicted. Hypothesis related to seabed sediment study should be made clearer.	Sampling array has been amended to ensure that stations further to the north and south of the extraction area are included. Draft baseline array for seabed sediment study provided in v0.3 SOP section.  Hypothesis amended and provided in Section 5 v0.3.	Completion of baseline sampling for seabed sediment survey.  Development of SOP for repeat surveys.

Basis for Changes	Item or Section of Blueprint v0.1	Section	Comments Received	Summary of Changes	Requirement for Further Work
Comments made during meeting between CEFAS/ECA 060605 CEFAS Lab, Burnham.	Seabed Sediment Studies – Chapter 5 v0.1	Section 5.1.4.	Queries regarding v0.1 Figure 5 and its intended message.	Caption altered to provide more clarity of purpose for Figure. Figure now presented in v0.3 as Figure 4.	None.
Comments made during meeting between CEFAS/ECA 060605 CEFAS Lab, Burnham.	Seabed Sediment Studies – Chapter 5 v0.1	Section 5.1.4.	Queries regarding v0.1 Figure 3. Sampling sites should be amended to cover a wider area – more north-south coverage. Samples needed to provide information on un-impacted areas needed and a clearer plan/rationale for sampling is needed.	Sample array amended accordingly to increase north-south spatial coverage. Far field sampling sites included in array that will ensure that information on non-impacted areas is collected. A draft SOP for the seabed sediment study has been provided which includes a brief description/rationale for choice of sites.	Comments received from CEFAS regarding draft specification and array for baseline survey. Emu/ECA to provide clarification in response to comments. Final version of SOP for baseline seabed sediment samples to be issued.
Comments made during meeting between CEFAS/ECA 060605 CEFAS Lab, Burnham.	Biological Sampling – Chapter 5 v0.1	Section 5.2.1.	SOPs provided were useful starting point but details needed to be finalised.	Ecological survey SOP amended in discussion with CEFAS and provided in v0.3. Minor amendments required following completion of baseline regional survey field work.	None.
Comments made during meeting between CEFAS/ECA 060605 CEFAS Lab, Burnham.	Biological Sampling – Chapter 5 v0.1	Section 5.2.2.	Identification of species from video may be difficult.	None.	QC procedures for review of video footage to be completed.
Comments made during meeting between CEFAS/ECA 060605 CEFAS Lab, Burnham.	Biological Sampling – Chapter 5 v0.1	Section 5.2.3.	Sections related to fisheries should be combined for clarity.	Biological monitoring Section 4 v0.3 describes basis for fisheries sampling. Revised ecological monitoring SOP contains specific fisheries sampling sections.	None.
Comments made during meeting between CEFAS/ECA 060605 CEFAS Lab, Burnham.	Biological Sampling – Chapter 5 v0.1	Section 5.2.3.	Reference to recruitment should be removed.	Revised Section 4 v0.3 provides no reference to assessment of recruitment.	None.



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Comments made during meeting between CEFAS/ECA 060605 CEFAS Lab, Burnham.	Biological Sampling – Chapter 5 v0.1	Section 5.2.3.	Difficult to assess scallop due to high variability. Number of sampling sites should be increased (baseline number 50).	Number of sampling stations increased – new array provided in Figures v0.3.	None.
Comments made during meeting between CEFAS/ECA 060605 CEFAS Lab, Burnham.	Biological Sampling – Chapter 5 v0.1	Section 5.2.3.	Compilation of international landings data for key commercial species would form useful part of reporting process.	None.	Compilation of landings data to be specified in reporting requirements.
Comments made during meeting between CEFAS/ECA 060605 CEFAS Lab, Burnham.	Biological Sampling – Chapter 5 v0.1	Section 5.2.3.	Benefit will be gained from linking beam trawl survey with CEFAS work and historic time series data.	Beam trawl survey undertaken in August/September to link in with CEFAS work. No specific changes to Blueprint.	Reporting to include consideration of time series data.
Comments made during meeting between CEFAS/ECA 060605 CEFAS Lab, Burnham.	Biological Sampling – Chapter 5 v0.1	Section 5.2.3.	Hypothesis related to variation in herring larval biomass due to dredging will be difficult to test.	Reference made to compilation of historical ICES data in Section 4 v0.3.	Reporting to include compilation of time series data.
Comments made during meeting between CEFAS/ECA 060605 CEFAS Lab, Burnham.	Biological Sampling – Chapter 5 v0.1	Section 5.3.	Development of thresholds will only be possible with at least 5 years of data.	Section 4 v0.3 has been developed to account for apparent lack of conceptual model in v0.1. Biological monitoring is now based on conceptual model utilising impact hypotheses, detectable differences, theoretical frameworks, thresholds and actions.	None.
Comments made during meeting between CEFAS/ECA 060605 CEFAS Lab, Burnham.	Survey Methods – Chapter 6 v0.1	6.1.1.	More information besides tides would be needed to address hydrodynamic issues.	Brief description regarding the wave climate of the region provided in Section 3 v0.3. Assumption is that wave climate in the region is unlikely to have any significant influence on the transport of sediment.	Further consideration to effects of waves on physical monitoring studies will be undertaken during component monitoring studies.
Comments made during meeting between CEFAS/ECA 060605 CEFAS Lab, Burnham.	Physical Monitoring Studies – Chapter 7 v0.1	Section 7.1.	Uncertainty that the assumption that Area 473 East is representative of the whole region is valid.	Section 5 v0.3 provides basis for choice of Area 473 East as regional type site. Also refers to that fact that licence specific monitoring studies in other DPAs will be utilised to modify the findings of studies undertaken at the regional type site (473 East).	None.

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Comments made during meeting between CEFAS/ECA 060605 CEFAS Lab, Burnham.	Physical Monitoring Studies – Chapter 7 v0.1	Section 7.3.	Clarification required as to the definition of TDS.	TDS (Tonnes Dry Solids) referred to in amended Overspill/Plume study sections when issued.	None.
Comments made during meeting between CEFAS/ECA 060605 CEFAS Lab, Burnham.	Physical Monitoring Studies – Chapter 7 v0.1	Section 7.5.	Calculations regarding the amounts of tracer to be used should be presented.  Clearer sampling strategy required prior to survey.	Basis for choice of tracer volume/weight provided to CEFAS during ongoing discussions.  Exact specification of tracer study ongoing.	Finalisation of tracer injection and sampling protocols to be completed.  Final version of tracer study section of the Blueprint to be completed in discussion with CEFAS.
Comments made during meeting between CEFAS/ECA 060605 CEFAS Lab, Burnham.	Physical Monitoring Studies – Chapter 7 v0.1	Section 7.6.	Statistical analysis of sediment samples is required where appropriate.	Discussion of relevant statistical methods for sample analysis ongoing.  Reference to methods of analysis will be provided in relevant SOPs for seabed sediment sample analysis.	Issue SOPs related to analysis of seabed sediment samples.
Comments made during meeting between CEFAS/ECA 060605 CEFAS Lab, Burnham.	Biological Monitoring Studies – Chapter 8 v0.1	Entire section	None.	Discussions with Emu and CEFAS resulted in standalone biological monitoring Section 4 v0.3.	None.
Comments made during meeting between CEFAS/ECA 060605 CEFAS Lab, Burnham.	Biological Monitoring Studies – Chapter 8 v0.1	Section 8.6	Value exists in combining the ECA regional surveys with the BGS/CEFAS mapping project in the English Channel.	Reference made to integration of data sets wherever possible.	ECA to maintain dialogue with BGS and secure use of relevant data to inform regional monitoring.
Comments made during meeting between CEFAS/ECA 060605 CEFAS Lab, Burnham.	Physical Monitoring Studies – Chapter 8 v0.1	Section 8.9	Value of workshop questioned in light of submission of SOPs.	No further requirement workshop. SOP related to sample analysis developed and presented as draft version in v0.3.	Finalisation of SOP for benthic sample analysis.
Comments made during meeting between CEFAS/ECA 060605 CEFAS Lab, Burnham.	Physical Monitoring Studies – Chapter 9 v0.1	Section 9	Consideration should be given to inclusion of French authorities in review process.	Reference made to potential inclusion of French authorities the review process in Section 6 v0.3.	None.

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Comments made during meeting between CEFAS/ECA 060605 CEFAS Lab, Burnham.	Reporting and Review Process – Chapter 9 v0.1	Section 9	Requirement for a strictly defined review period.	Further discussion of suitable review period between the ECA and CEFAS concluded that 8 weeks would be acceptable. This period has now been written into the process.	None.
Comments made during meeting between CEFAS/ECA 060605 CEFAS Lab, Burnham.	General Issues	NA	The Blueprint needs to describe how staggered issuing of GVs will be dealt with.	Reference made to repeat biological sampling in relation to staggering of GV issue v0.3. Note provided that reference stations would be sampled every year.  Physical monitoring is less of an issue in this respect as all activity takes place in Area 473 East.	None.
Discussions between JNCC and EN and the ECA during meeting 130605, QPA, London.	ECA BAP – Section 2 v0.1	Section 2	Need to ensure that reference is made to preserving the best examples of Sublittoral S & Gs. Basic classification needs to be split into MNCR sub-classes.	Reference made in BAP that habitat plans will work towards developing a better understanding of the occurrence and distribution of MNCR sublittoral sands and gravels classifications.	None
Discussions between JNCC and EN and the ECA during meeting 130605, QPA, London.	Habitat and Species Actions Plan	Annex	Reference needed in HAPs and SAPs	First versions of HAPs and SAPs under development and will include reference lists.	Finalisation of HAPs and SAPs by December 2005.
Discussions between JNCC and EN and the ECA during meeting 130605, QPA, London.	ECA BAP – Section 2 v0.1	Section 2	Remove Statutory Nature Conservation Advice to Annex.	Statutory Nature Conservation Advice provided as an annex to Blueprint.	None.
Discussions between JNCC and EN and the ECA during meeting 130605, QPA, London.	Reporting and Review Process – Chapter 9 v0.1	Section 9	TWG needs to be more clearly defined and differences between it and the ECEN Stakeholder group should be clarified.	Reporting and review process text amended to clarify the terms of reference for the TWG and ECEN Stakeholder Group.	None.
Discussions between JNCC and EN and the ECA during meeting 130605, QPA, London.	Ecological Monitoring SOP v0.1	NA	Specify that 500kHz sidescan will be employed as standard.	Specification of sidescan sonar specified as 500kHz.	None.



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Discussions between JNCC and EN and the ECA during meeting 130605, QPA, London.	Biological Monitoring Studies and SOP – Chapter 8 v0.1	Section 8 and SOP	Adapt regional sidescan array to tie in reference areas.	Regional sidescan reference areas specified in Blueprint and SOP.	None.
Discussions between JNCC and EN and the ECA during meeting 130605, QPA, London.	ECA BAP – Section 2 v0.1	Section 2	BAP/HAP/SAP etc should be discussed with the lead EN contact to account for statutory requirements of the UKBAP.	Reference made to requirement in BAP.	ECA to discuss specific requirements with EN during development of ECA HAPs and SAPs.

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