Terrestrial EMMP

General comments
The baseline data and the objectives should be provided in a numerical format so that the subsequent monitoring work can determine whether there has been a change from the baseline and whether the objectives have been met.

The primary objective of Area A is to mitigate an adverse effect on the Humber Estuary designated site due to the loss of foraging and roosting habitat utilised by curlew. This is not clear in the EMMP with the bird objectives focusing on farmland birds. Whilst use of this area by farmland birds is welcomed, it is not the primary function of the habitat and this should be made clearer.

We note that several of the habitats will take some time to develop e.g. GCN habitat – 6 months, water vole habitat – at least 12 months, plus the wet grassland in Area A. In order to mitigate the predicted impact, this will need to be factored into the timetabling of the terrestrial development works.

We advise that monitoring at North Killingholme Haven Pits is included in this EMMP.

Baseline:
SPA birds - spp/nos/ behaviour – ie feeding or roosting (inc NKHP)
Breeding birds - as per updated impact assessment
Water voles - as per ES
Bats - foraging as per ES
Habitat - Station Road LWS - as per ES
Area A - existing soil inverts

Objectives
SPA Birds - birds displaced from development site (subject to decreasing site trends where relevant and taking account of the potential impact of loss of fronting mudflat) present in Area A. Bird numbers at NKHP to remain as per the baseline (subject to decreasing site trends where relevant and taking account of the potential impact of loss of fronting mudflat).
Breeding birds - as per EX11.27 and landscape masterplans (update EMMP as suggested on teleconf - which areas will be planted, with what spp/ mixes, what area in ha).
Water voles - as per EX11.26
Bats - as per landscape masterplans
Habitats - provision of habitat to meet LWS criteria – discussion with NLC
Area A - Wet grassland -
HLS prescriptions - HK14 as guidance
Sward height - max 10cm by 1 August
Invert biomass - as per OLHF targets as provided at 1.2.2 in EX 28.2 (40.35g/m2 wet weight and 7.94g/m2 dry (ashfree) Weight) N.B *Existing targets in the terrestrial EMMP aren't from most recent OLHF report EX 28.2*
Soil wetness at appropriate times of year

Monitoring
SPA birds - spp/nos/ behaviour - once per month on Area A, TTTC, flightpaths. Birds on fronting intertidal to determine whether predicted disturbance buffers were accurate and to determine links between remaining intertidal and use of Area A (include in this EMMP or the compensation EMMP)
Disturbance and noise levels - as per yet to be agreed requirement – Natural England to provide advice on this ASAP. Noise monitoring should also be undertaken to verify predicted construction and operation noise – Area A and NKHP.
Breeding birds - using adapted CBC methodology across relevant areas of development site

Water voles - suitable monitoring at regular intervals to determine success of mitigation
Bats - as deemed appropriate
Area A - habitat - Sward height - max 10cm by 1 August
Invert biomass - as per OLHF targets (40.35g/m2 wet weight and 7.94g/m2 dry (ashfree) Weight)
Soil wetness at appropriate times of year - HK14

Monitoring should be undertaken for at least 10 years, but some monitoring could be reduced during this period subject to agreement.

Triggers
Provide some outline details on:
Triggers signalling departure from agreed objectives must include:
Failure to meet objectives once habitat is functional
Disturbance identified from construction or operation works

Env steering group
Chaired by independent body eg Humber INCA who would have the deciding vote if disagreement between the parties

Include outline details as to how changes in management etc will be implemented as identified through the monitoring work and ESG.

Creation of an environmental management and monitoring manager to oversee works.

Reporting
Initially (first year) quarterly summarised updates indicating performance against objectives to be provided on an FTP website for Env Steering Group to review.
Meeting - every 6 months
Formal report - every year

NB. Natural England advises that all GCN information will be in the EPS licence so there is no need to provide detailed information on this spp in the EMMP.

Compensation EMMP

General comments

Natural England is disappointed that the EMMP has not been populated with baseline data, numerical objectives and some detail of the proposed monitoring work and remedial action that may need to be implemented. This is a key task that we have made clear must be completed before the end of the examination period. The section on baseline data includes too much written information that should be in the Environmental Statement, for example paragraph 19. The EMMPs should only include some introductory text to each section and then provide numerical information in tables so that the baseline data can be easily compared with the subsequent monitoring data and the compensation objectives. Without these targets, there is the risk that the applicant will not be able to demonstrate that the compensation site is providing the same ecological function as the habitat lost and consequently it will not be possible to determine whether the coherence of the Natura 2000 network has been maintained.

The EMMP does not recognise that the compensatory habitat is also being provided due to impacts on the Special Area of Conservation and therefore there is a need to incorporate data and objectives on the intertidal habitat; for example to cover biotopes, topography, saltmarsh species, signs of nutrient enrichment, sediment characteristics etc.

There are a number of errors in the document; for example the loss of subtidal habitat is not due to dredging activities (paragraph 8); it is our understanding that some piling is required within the compensation site (paragraph 86); and it is not possible to include the "area of the channel cut through the existing saltmarsh" (paragraph 44) in the calculation of the total area of the compensation site as this is within the designated site boundary. In addition the wet grassland objectives appear to focus on breeding waders for eg paragraph 98 refers to a sward height for spring nesting waders. The primary function of this habitat is the provision of compensation for SPA passage and overwintering waders, and the objectives must focus on this. Any subsequent use by breeding waders is welcomed but this is not the key objective of the site.

Baseline data

Killingholme

- Birds - spp/ nos/ behaviour - TTTC + WeBS data - HT and LT
- Inverts – *as highlighted on the teleconf, NE believes there are some issues with the baseline data; this needs to be resolved. It may be necessary to undertake additional monitoring to agree a new baseline.*

Cherry Cobb Sands

- Birds - on adjacent intertidal - spp, nos, behaviour - TTTC + WeBS data - HT and LT, existing flightpaths. Also adjacent fields, where relevant
- Habitat - general LIDAR of adjacent habitats

Natural England advises that the local WeBS co-ordinator should be contacted and asked if they can request the local counters to record flightlines of godwits whilst they undertaking their regular WeBS counts.

Wet grassland
Existing soil inverts

Objectives

Birds – numerical - birds displaced from Killingholme (peak count from the data and/ or from more recent WeBS) subject to decreasing site trends, if relevant
The objective should cover the whole compensation package, but be reported on separately

Habitat -
Intertidal - presence of functional mudflat and saltmarsh habitat.

- At commencement of the scheme, the provision of **at least 88ha** of mudflat habitat ie compensation to loss ratio of 2:1.
- The extent of mudflat habitat that is to be sustained will be **at least 44ha** (ie compensation to loss ratio of 1:1) but only if the mudflat is ecologically functional ie the mudflat is meeting its objectives for bird usage and/or its objectives for mudflat physical and ecological quality.
- In the event that the mudflat is not ecologically functional in terms of these quality objectives, as signalled by the stated triggers for action, then relevant remedial actions will be implemented to ensure the compensation site meets the required extent and quality objectives.

Functionality to include water content, depth, topography, infaunal communities, 600 inundations per year - *advice from NE's specialist was 450-600 as a minimum to limit saltmarsh growth, therefore our advice is 450 inundations is too low*
Use baseline at Killingholme plus relevant bullets in non-technical summary, para 1.3.2, *although clarity is required as to why depth is suggested to be a minimum of 100mm when RSPB advised 150mm at the hearings.*

Wet grassland -
As per relevant bullets in non-technical summary para 1.3.2
Sward height - max 10cm by 1 August
HLS prescriptions - HK14 as guidance
Invert biomass - as per OLHF targets (40.35g/m2 wet weight and 7.94g/m2 dry (ashfree) Weight)
Soil wetness at appropriate times of year (critically post-breeding moult)

Monitoring

Birds on the RTE, MR and wet grassland - spp, nos, behaviour, flightpaths, monthly TTTC - simultaneous for each habitat so several vantage points/ surveyors required
Birds on adjacent foreshore/ fields
Birds on remaining mudflats - area E – or include in terrestrial EMMP
Disturbance at CCS

Habitat
Saltmarsh - extent, spp
Mudflat - extent, depth, benthics - spp, biomass, particle size distribution, organic content AFDW, bathymetric, topography, tidal inundations, redox depth, ephemeral algal growth, water temperature, temperature at 10cm depth
Breach - erosion outside the site

Wet grassland
Sward height - max 10cm by 1 August
Invert biomass - as per OLHF targets (40.35g/m2 wet weight and 7.94g/m2 dry (ashfree) Weight)
Soil wetness at appropriate times of year (critically post-breeding moult)

Monitoring should be undertaken for at least 10 years, but some monitoring could be reduced during this period subject to agreement. Monitoring intensity should reflect the novel aspects of RTE management - ie may need to increase frequency following intrusive mgt works.

Remedial measures

Provide some outline details on:
Management - adjustment to existing RTE cells etc - inundations, flows,
Active mgt - eg reducing sediment height through ploughing, dredging etc, inundation channel - dredging etc
Disturbance - eg from public accessing site
Creation of additional compensation habitat

Triggers

Provide some outline details on:
Triggers signalling departure from agreed objectives must include:
Failure to meet objectives once habitat is functional
Not meeting predicted mudflat variables within the timescales set out in EX 28.3 part 3

Env steering group

Chaired by independent body eg Humber INCA who would have the deciding vote if disagreement between the parties

Include outline details as to how changes in management etc will be implemented as identified through the monitoring work and ESG.

Creation of an environmental management and monitoring manager to oversee works.

Reporting

Initially (first 3 years) monthly summarised updates indicating performance against objectives to be provided on an FTP website for Env Steering Group to review.
Meeting - every 6 months
Formal report issued for comment every year

Marine EMMP

Baseline:
Intertidal work to look at habitat change - LIDAR or GPS rover approach
Dredging requirements - as agreed with the MMO
Predictions of underwater noise?
Subtidal benthics?

Objectives
Rates of erosion and deposition as predicted
Construction noise levels as predicted?

Monitoring
Intertidal - erosion and deposition
Subtidal benthics?
Noise levels - underwater during piling works

Triggers
Provide some outline detail on:
Triggers signalling departure from agreed objectives must include:
Failure to meet objectives
Not meeting predicted habitat change

Env steering group
Chaired by independent body eg Humber INCA who would have the deciding vote if disagreement between the parties

Include outline details as to how changes in management etc will be implemented as identified through the monitoring work and ESG.

Creation of an environmental management and monitoring manager to oversee works.

Reporting
Initially (first year) quarterly summarised updates indicating performance against objectives to be provided on an FTP website for Env Steering Group to review.
Meeting - every 6 months
Formal report - every year

NB It is acknowledged that mitigation has been agreed to avoid underwater impacts from piling, however Natural England believes it would be useful to inform future developments if underwater noise monitoring could be undertaken during construction works.

Natural England 5 November 2012