



National Environmental Assessment Service

Internal Environmental Assessment



APPENDIX D

EAP

Environmental Action Plan

Project name	Southmoor Managed Realignment Scheme
Project 1B1S reference	ENV0000680C
Region and Area	Havant, Hampshire
Date	30 June 2017
Version number	1
Author	E San Martin

Revision history

Revision date	Summary of changes	Author	Version number
30 June 2017	First draft for review	E San Martin	1

EAP Approvals

Name	Signature	Title	Date	Version

Distribution

Name	Title	Date	Version
			1
			1
			1
			1
			1
			1

Purpose

The draft Environmental Action Plan (EAP) at the end of this Appendix summarises the actions required to implement the project in accordance with the Environmental Statement (ES) that has been prepared following Environment Agency EIA guidance. It sets out generic and specific objectives and targets defining the way in which the Environment Agency wishes the ES, and its findings, to be addressed during the implementation phase of the project (e.g. prior to construction, during construction and post-construction phases). All works will be carried out in line with Environment Agency requirements and there will be an Environmental Clerk of Works (ECW). It also details roles and responsibilities of those involved in the proposed works and refers to all temporary and permanent works. The assigned responsibilities are indicative only at this stage and will be agreed during the detailed design stage of the construction phase.

Contractual Status

The EAP forms part of the contract or work documentation and is incorporated within the specification and/or as Works Information. The NEAS Officer will have agreed that the EAP is satisfactorily integrated and will advise the Environmental consultant on the number of copies to be provided.

Summary of Environmental Action Plan Procedures

The Work Instruction for the EAP details the procedures to follow with regard to the EAP. The EAP details how the EIA process will continue through to the completion of the proposal and how the protection, conservation, mitigation and enhancement measures for this proposal will be delivered by the Contractor on behalf of the Environment Agency. It forms part of the published ES objectives, and as such forms the Environment Agency's commitment to deliver environmental outputs in the form specified.

Communicating the EAP

Prior to the commencement of the construction works, the NEAS Officer/Environmental Consultant/ECW will explain the EAP to the implementation team. Monitoring and programme arrangements will also be advised.

Roles

Each action in the table below has **one** named person / party who is responsible for ensuring that the action is implemented. It is ultimately the contractor's responsibility for ensuring the EAP commitments are delivered.

The NEAS Officer is responsible for agreeing any changes to the EAP and for signing off, or agreeing to sign off of actions.

The contractor and Project Manager are responsible for advising the NEAS Officer on any changes to method statements or the planned construction work as these may result in changes to the EAP or additional consultation with statutory consultees. NEAS will assess the significance of these changes and determine the appropriate course of action.

The contractor is also responsible for implementing good environmental practice on site, in line with their own Environmental Management System (EMS). Typical issues include:

- Any working hour restrictions;
- Dust suppression measures;

- Traffic management;
- Site waste management;
- Materials management;
- Maintenance of the carbon calculator;
- Vehicle maintenance and management;
- Pollution prevention and control (including storage, refuelling and incident response);
- Response procedures e.g. services strike, contaminated land;
- Hazardous materials handling and storage;
- Noise management; and
- Securing and delineation of working areas including signage.

Environmental Audits

The appended template should be used when undertaking any site audits during construction. Such audits can be undertaken by NEAS or delegated by NEAS to the ECW or other individuals. Technical assistance can be obtained from functional staff as appropriate. Site audits can potentially highlight good practice and can be separate to the review of EAP actions as undertaken in progress meetings.

Environmental Incident Reporting system

All environmental incidents must be reported to the Environment Agency Incident Hotline 0800 80 70 60 at the earliest opportunity and then to the ECC Project Manager, Site Supervisor, Environment Agency Project Manager and NEAS Officer. In addition, near misses must be reported via the hotline where there was/is the potential for a significant impact and where lessons can be learned.

Initial reports for such incidents and near misses must be followed by a written report using the contractor's in-house forms. This must include the following information (project/location, date, contractor, NIRS reference number, details of what happened, cause of incident, lessons learned). This final and comprehensive investigation report is to be provided by the Contractor to the ECC Project Manager, Environment Agency Project Manager and Safety, Health and Environment Manager within 14 days.

Summary of scope of works

Full details of the works involved in the Southmoor Managed Realignment Scheme can be found in Section 3 of the ES. The location of the scheme is shown in Figure 1 (Appendix A of the ES).

In summary, the works will involve building new defences inland from the coast, undertaking a deliberate breach of the existing seawall and allowing a new intertidal area to form seaward of these new defences. This option will provide improved long term protection in terms of design life compared to the 'Do Nothing' and 'Do Minimum' options. The scheme will create new intertidal and freshwater habitats which are expected to continue to attract visitors to this site. New footpaths, which are Disability Discrimination Act 2005 (DDA) compliant, will be provided along the top, or foot, of the proposed embankments.

Relevant contact details

Project Sponsor	
Project Executive	
Project Manager	Tony Haffenden [REDACTED]
NEAS	Pippa Lewis p [REDACTED]
ECW	
Contractor	
Site Supervisor	
Asset Performance	
Outline Design & Environmental Consultant	Elena San Martin (ABPmer) [REDACTED] Robert Beaumont (AECOM) [REDACTED]
Biodiversity	

Environmental Action Plan

Ref. No.	Objective	Action	Responsibility	Reference to further information	Progress and Further Action	Sign off and date
Prior to construction (Pre)						
General						
<i>0.1 - Pre</i>	To have all necessary consents in place	Obtain all necessary consents from relevant regulators and add all conditions to EAP as required to ensure they are discharged.	NEAS Officer and Environment Agency Project Manager.	Consents tracker document.		
<i>0.2 – Pre</i>	To manage site waste effectively, reducing potential harm to the environment and human health	Prepare a site waste management plan prior to commencing work on site. This will include consideration of waste types and quantities that are likely to be produced during the course of the project, with management actions including re-use, recycling, recovery and disposal, and a declaration that waste will be managed appropriately.	Contractor.	Design stage Site Waste Management Plan.		
Population, access and transport						
<i>1.1 - Pre</i>	To manage the permanent diversion of public rights of way	Re-routing of Footpath 45 to be agreed with Hampshire County Council's Public Rights of Way (HCC PRoW) Officer in advance of works commencing. Advertise changes four weeks prior to the start of the works. Signage to include a map of the modifications and contact details for	Environment Agency Project Manager.			

Southmoor Managed Realignment Scheme - Environmental Action Plan

Ref. No.	Objective	Action	Responsibility	Reference to further information	Progress and Further Action	Sign off and date
		members of the public to obtain further information.				
1.2 – Pre	To minimise disruption to local transport network	Develop a Traffic Management Plan in consultation with the Local Planning Authority and Highway Authority to address deliveries to site, site access and controls.	Environment Agency Project Manager and Contractor.	Possible planning condition.		
1.3 – Pre	To minimise disturbance/disruption to local communities	Confirm working hours for works with HBC prior to construction.	Environment Agency Project Manager and Contractor.	Possible planning condition.		
Biodiversity, flora and fauna						
2.1 - Pre	To mitigate loss or damage of coastal grassland habitat and notable plant species	In advance of construction works, confirm replacement coastal grassland and freshwater habitat to be created in consultation with Natural England, Hampshire and Isle of Wight Wildlife Trust (HIWWT) and Havant Borough Council (HBC). This will include confirming whether hydrological regimes are appropriate in the western HIWWT field to support freshwater habitats.	NEAS Officer, Ecological Mitigation Officer and Environmental Consultant.	Ecological mitigation strategy and Ecological mitigation meeting minutes (Appendix D1).		
2.2 – Pre	To mitigate loss or damage of notable plant species	Confirm the methods for translocating and propagating notable plants within the site boundary and/or to other suitable sites in the local area, in discussion with HBC and HIWWT.	NEAS Officer, Ecological Mitigation Officer and Environmental Consultant.	Ecological mitigation strategy and Ecological mitigation meeting minutes (Appendix D1).		
2.3 – Pre	To minimise loss of habitat for terrestrial breeding birds	Discuss and agree an appropriate future cattle grazing regime with HIWWT which will support	NEAS Officer, Ecological Mitigation Officer and Environmental Consultant.	Ecological mitigation strategy and Ecological mitigation meeting minutes (Appendix D1).		

Southmoor Managed Realignment Scheme - Environmental Action Plan

Ref. No.	Objective	Action	Responsibility	Reference to further information	Progress and Further Action	Sign off and date
		ground nesting breeding species. Confirm the approach for replanting hedgerows that are lost during construction and improving remaining hedgerows with greater species diversity. The proposed design for thinning/lowering of the scrub/tree line between the western HIWWT field and the managed realignment area will also need to be confirmed.				
2.4 – Pre	To prevent death, injury or disturbance to breeding birds	In advance of construction works, vegetation that potentially supports breeding birds will be cleared outside of the peak overwintering period and nesting season (February to March).	NEAS Officer, Ecological Mitigation Officer and Environmental Consultant.	Ecological mitigation strategy and Ecological mitigation meeting minutes (Appendix D1).		
2.5 - Pre	To mitigate loss or damage to protected reptile species and their supporting habitat	Establish on site enhancement of retained suitable habitats for reptiles (including maintaining an appropriate grazing regime and creation of artificial hibernacula), in consultation with Natural England, HIWWT and HBC. Translocate individuals from breach and inundated areas to previously enhanced receptor sites. Allow gradual displacement of reptiles to surrounding suitable and previously enhanced habitats by strimming vegetation to different height.	NEAS Officer, Ecological Mitigation Officer and Environmental Consultant.	Ecological mitigation strategy and Ecological mitigation meeting minutes (Appendix D1).		

Southmoor Managed Realignment Scheme - Environmental Action Plan

Ref. No.	Objective	Action	Responsibility	Reference to further information	Progress and Further Action	Sign off and date
2.6 - Pre	To increase public's awareness of the site's nature conservation importance during operation	In advance of construction works, discuss potential location and nature of viewing platform and interpretation boards with HIWWT.	NEAS Officer, Ecological Mitigation Officer and Environmental Consultant.			
Water environment						
4.1 - Pre	To minimise reduction in water quality during construction	Develop a Construction Environmental Management Plan (CEMP) in consultation with HBC prior to construction. This will include agreed proposed working practices and environmental controls.	Environment Agency Project Manager, Contractor and ECW.	CEMP.		
4.2 - Pre	To prevent any culvert blockages and/or silting up of breach	Develop a robust inspection and maintenance regime to monitor the changes in bed levels at the culvert and breach.	Environment Agency Project Manager and Environmental Consultant.	Asset management system.		
Landscape and Visual						
6.1 - Pre	To minimise landscape and visual impacts of construction works	Photograph the site prior to site compounds etc. being installed. Agree access routes with HBC and survey conditions of tracks/road prior to construction.	Environment Agency Project Manager, Contractor and ECW.			
Air quality and noise						
7.1 - Pre	To minimise reduction in local air quality through generation of dust during construction	Develop a Construction Environmental Management Plan (CEMP) in consultation with HBC prior to construction. This will include agreed proposed working practices and	Environment Agency Project Manager, Contractor and ECW.	CEMP.		

Southmoor Managed Realignment Scheme - Environmental Action Plan

Ref. No.	Objective	Action	Responsibility	Reference to further information	Progress and Further Action	Sign off and date
		environmental controls.				
7.2 - Pre	To minimise noise and vibration during construction	Develop a CEMP in consultation with HBC. This will include an agreed schedule for noise and vibration monitoring and established noise and vibration limits, as well as a number of potential mitigation measures.	Environment Agency Project Manager, Contractor and ECW.	CEMP.		
During construction (Dur)						
General						
0.3 - Dur	To comply with Site Waste Management Plan	Segregate waste, reuse, recycle and dispose. Undertake regular audits of Site Waste Management Plan and undertake corrective actions. .	Contractor.	Site Waste Management Plan.		
Population, access and transport						
1.4 - Dur	To reduce the health and safety risks during construction	Clearly define (e.g. fencing) all site compounds and working area boundaries for the duration of the works in each section. Use signage at appropriate points warning of possible hazards (e.g. construction traffic).	Contractor.	Contractor contract.		
1.5 - Dur	To reduce potential health and safety risk associated with the main breach	Advertise breach four weeks prior to breaching. Signage to include a clear diagram and explanation of the risks associated with tidal flows across the breach and potential for stranding.	Contractor.	Contractor contract.		

Southmoor Managed Realignment Scheme - Environmental Action Plan

Ref. No.	Objective	Action	Responsibility	Reference to further information	Progress and Further Action	Sign off and date
1.6 – Dur	To mitigate the temporary closure of footpath 49 during construction	Signage and notices will be used to divert pedestrians along footpath 49 to use alternative routes (e.g. footpath 45) during construction.	Contractor.			
1.7 – Dur	To mitigate the extinguishment and diversion of footpath 45	Provide a new footpath network in discussion with Hampshire County Council's Public Rights of Way Officer. Upgrade footpath to be improve access for all (i.e. Disability Discrimination Act 2005 (DDA) compliant). Provide a viewpoint and agree its form and location with interested parties, namely Natural England, HIWWT and HBC.	Contractor, ECW and Environment Agency Project Manager.			
1.8 – Dur	To mitigate loss of existing coastal access route	Under the Marine and Coastal Access Act, Natural England has been consulted and the new footpath network that will be constructed as part of scheme will provide a new coastal access route. This footpath will be DDA compliant to improve access for all. A viewpoint will be provided and its form and location will be agreed with interested parties, namely Natural England, HIWWT and HBC.	Contractor and ECW.			
1.9 – Dur	To communicate information about the works and respond to queries from the public	Review and implement Communications Plan for construction phase.	Environment Agency Project Manager.	Communications Plan.		
Biodiversity, flora and fauna						

Southmoor Managed Realignment Scheme - Environmental Action Plan

Ref. No.	Objective	Action	Responsibility	Reference to further information	Progress and Further Action	Sign off and date
2.7 - Dur	To mitigate loss or damage of coastal grassland habitat and notable plant species	Embankments will be seeded with a coastal grassland seed mix. Freshwater habitat will be created in the western playing field by restoring and contouring borrow pit areas to form ponds with 'scrapes'.	Contractor, ECW and Ecological Mitigation Officer.	Ecological mitigation strategy and Ecological mitigation meeting minutes (Appendix D1).		
2.8 - Dur	To maximise creation of saltmarsh relative to saline lagoons	Scrapes and/or channel(s) will be excavated that connect the breach to the internal creek system.	Contractor, ECW, and Ecological Mitigation Officer.	Ecological mitigation strategy and Ecological mitigation meeting minutes (Appendix D1).		
2.9 - Dur	To mitigate for dust emissions and potential pollution events to habitats and species	Adhere to CEMP which will include careful working practices that prevent impacts from dust emissions, pollution incidents including runoff into wetland habitats during construction.	Contractor, ECW and Ecological Mitigation Officer.	CEMP.		
2.10 - Dur	To provide additional high tide roosting areas within the site during operation	Small floating rafts (approximately 4 m by 4 m) will be placed within the areas that remain wet in the managed realignment area at low water (saline lagoons). Suitable material excavated from the breach and/or the scrapes/channel(s) will be landscaped to create potential high tide roosting areas in the form of artificial small island(s) within the managed realignment area.	Contractor, ECW and Ecological Mitigation Officer.	Ecological mitigation strategy and Ecological mitigation meeting minutes (Appendix D1).		
2.11 - Dur	To mitigate loss or damage of notable plant species	In accordance with methods agreed at detailed design, translocate and propagate notable plants within the site boundary and/or to	Contractor, ECW and Ecological Mitigation Officer.	Ecological mitigation strategy and Ecological mitigation meeting minutes (Appendix D1).		

Southmoor Managed Realignment Scheme - Environmental Action Plan

Ref. No.	Objective	Action	Responsibility	Reference to further information	Progress and Further Action	Sign off and date
		other suitable sites in the local area.				
2.12 – Dur	To minimise loss of habitat for terrestrial breeding birds	Replant hedgerows that are lost during construction and improve remaining hedgerows with greater species diversity. Thin and lower the scrub/tree line between the western HIWWT field and the managed realignment area in accordance with methods that have been agreed at detailed design stage.	Contractor, ECW and Ecological Mitigation Officer.	Ecological mitigation strategy and Ecological mitigation meeting minutes (Appendix D1).		
2.13 – Dur	To minimise disturbance of breeding birds	If any active nests are found during works, the works will cease, the area with the nests will be left in situ and an appropriate buffer zone will be established. Any active nest will be left intact until it has been confirmed by the ecologist that the young have fledged and the nest is no longer in use.	Contractor, ECW and Ecological Mitigation Officer.	Ecological mitigation strategy and Ecological mitigation meeting minutes (Appendix D1).		
2.14 - Dur	To mitigate loss or damage to protected reptile species and their supporting habitat	The breach in the seawall will take place on a neap tide in September (i.e. during the reptile active period). This will allow reptiles to be naturally displaced gradually towards the extremities of the areas that are to be inundated.	Contractor, ECW and Ecological Mitigation Officer.	Ecological mitigation strategy and Ecological mitigation meeting minutes (Appendix D1).		
2.15 - Dur	To reduce noise, visual and light disturbance to birds during construction	All construction works to be undertaken between April and early October, outwith the main overwintering period. An	Contractor, ECW, and Ecological Mitigation Officer.	Ecological mitigation strategy and Ecological mitigation meeting minutes (Appendix D1).		

Southmoor Managed Realignment Scheme - Environmental Action Plan

Ref. No.	Objective	Action	Responsibility	Reference to further information	Progress and Further Action	Sign off and date
		ecological watching brief will ensure disturbance and damage during construction is kept to a minimum. Adhere to British Standards for construction noise. Minimise use of floodlighting and apply downlighting wherever possible.				
2.16 – Dur	To avoid physical disturbance to habitats supporting birds	Prevent disturbance and damage to supporting habitats, where possible. Undertake the main breach outside the winter and spring period to avoid an impact on overwintering and breeding birds. Work patterns and timings will also be varied to avoid disturbance, damage or destruction of nesting attempts during the land profiling.	Contractor, ECW, and Ecological Mitigation Officer.	Ecological mitigation strategy and Ecological mitigation meeting minutes (Appendix D1).		
2.17 – Dur	To enhance the new freshwater and bird roosting habitat.	Under ecological supervision, the existing scrub/tree line will be thinned and reduced in height along the permissive footpath (the green lane) to provide clear lines of sights for roosting birds.	Contractor, ECW, and Ecological Mitigation Officer.	Ecological mitigation strategy and Ecological mitigation meeting minutes (Appendix D1).		
2.18 – Dur	To minimise disturbance to birds during operation	Dog proof fencing will be erected around the western playing field and managed realignment area to minimise disturbance to sensitive wildlife during operation.	Contractor, ECW, and Ecological Mitigation Officer.	Ecological mitigation strategy and Ecological mitigation meeting minutes (Appendix D1).		
2.19 – Dur	To mitigate for dust emissions and potential pollution events to fish	Adhere to CEMP which will include careful working practices that prevent	Contractor, ECW and Ecological Mitigation	CEMP.		

Southmoor Managed Realignment Scheme - Environmental Action Plan

Ref. No.	Objective	Action	Responsibility	Reference to further information	Progress and Further Action	Sign off and date
	species within the River Lavant	impacts from dust emissions, pollution incidents including runoff into wetland habitats during construction.	Officer.			
Water environment						
4.3 - Dur	To minimise reduction in water quality in the watercourses within the application site boundary, including the River Lavant	Adhere to CEMP which will include careful working practices that prevent impacts from dust emissions, pollution incidents including runoff into wetland habitats during construction. Adhere to Environment Agency incident reporting and best practice guidelines. Use effective sustainable drainage systems to minimise pollution, contamination and sedimentation impacts on receiving waters.	Contractor and ECW.	CEMP.		
4.4 - Dur	To reduce potential health and safety risk associated with the flood flow hazard at the culvert and breach	Display signage by the culvert and either side of the restricted access area around the breach in advance of the completion of the construction works. Signage will need to include a clear diagram and explanation of the risks associated with flood flows.	Contractor and Environment Agency Project Manager.	Contractor contract.		
Cultural heritage and archaeology						
5.1 - Dur	To mitigate impact on archaeological features/deposits	An archaeological watching brief will be present during all the excavation works.		Possible planning condition.		
Landscape and Visual						

Southmoor Managed Realignment Scheme - Environmental Action Plan

Ref. No.	Objective	Action	Responsibility	Reference to further information	Progress and Further Action	Sign off and date
6.2 - <i>Dur</i>	To minimise landscape and visual impacts of construction site	Good housekeeping (e.g. tidy policy) will be kept on site to ensure there are no valid complaints and that these are dealt with in a proper and timely manner.	Contractor and ECW.			
6.3 - <i>Dur</i>	To minimise landscape and visual impacts of embankments	Embankments will be formed with slopes of 1:3 and seeded with a coastal grassland seed mix. The main embankment will be aligned along the curved route of Footpath 49 and will link with naturally higher ground to the north-west and north-east of the managed realignment area. It will also pass through an existing gap in the permissive footpath (the green lane), thereby avoiding the need to remove any existing trees. The eastern embankment in the Mill Lane Field will be formed parallel to the River Lavant and constructed behind (east) of existing riverside vegetation.	Contractor and ECW.			
6.4 - <i>Dur</i>	To minimise landscape and visual impacts of ponds and scrapes	Within the western playing field, the borrow pit areas will be carefully restored and contoured as attractive landscape features to form ponds with 'scrapes'.	Contractor and ECW.			
Post construction (Post)						
General						
0.4 - <i>Post</i>	To leave no waste on site	Remove waste on site as per Site Waste	Contractor.	Site Waste Management Plan.		

Southmoor Managed Realignment Scheme - Environmental Action Plan

Ref. No.	Objective	Action	Responsibility	Reference to further information	Progress and Further Action	Sign off and date
		Management Plan.				
Population, access and transport						
<i>1.10 - Post</i>	To reduce the health and safety risks post construction	Routine inspections and maintenance of new access routes.	Environment Agency and HIWWT.	Management Plan.		
Biodiversity, flora and fauna						
<i>2.20 - Post</i>	To minimise disturbance of breeding birds	Post construction mitigation will be undertaken to assess the success of the habitat creation and ecological mitigation measures in respect of breeding birds.	Environment Agency and HIWWT.	Management Plan.		
<i>2.21 - Post</i>	To mitigate loss or damage to protected reptile species and their supporting habitat	Post construction mitigation will be undertaken to assess the success of the habitat creation and ecological mitigation measures in respect of reptiles.	Environment Agency and HIWWT.	Management Plan.		
<i>2.22 - Post</i>	To mitigate loss or damage of notable plant species	Post construction mitigation will be undertaken to assess the success of the habitat creation and ecological mitigation measures in respect of notable plant species.	Environment Agency and HIWWT.	Management Plan.		
<i>2.23 - Post</i>	To manage saline intrusion as a result of equipment failure	Outfall structures will be included in the Environment Agency's maintenance programme.	Environment Agency	Asset management system.		
<i>2.24 - Post</i>	To provide successful habitat creation and ecological mitigation	Undertake post project monitoring to assess the success of the habitat creation and ecological mitigation aspects of the proposed scheme.	Ecological Mitigation Officer.	Ecological mitigation strategy.		

Southmoor Managed Realignment Scheme - Environmental Action Plan

Ref. No.	Objective	Action	Responsibility	Reference to further information	Progress and Further Action	Sign off and date
Water environment						
4.5 – Post	To prevent any culvert blockages and/or silting up of breach	Monitor changes in bed levels at the culvert and breach.	Environment Agency Project Manager.	Asset management system.		
Landscape and Visual						
6.5 - Post	To minimise visual and landscape impacts post construction	All construction materials will be removed post construction and landscape reinstated in line with pre-construction photographic record of the site.	Contractor, ECW and Environment Agency Project Manager.	Pre-construction photos.		

Environmental audit record

Project			
Project Manager:			
Location			

Site Visit Audit Details

Visit During/Post Construction:		Date of Visit:		Time of Visit:	
Audit Officer:		Photos taken (y/n):		Referenced to Pre-Photos(y/n):	

Does the Site Supervisor have an up to date copy of the EAP? Yes / No

General comments

AECOM

Meeting Minutes

AECOM
Scott House
Alencon Link
Basingstoke
RG21 7PP
www.aecom.com

01256 310200 tel
01256 310201 fax

Subject	Southmoor Scheme – Mitigation Meeting	
Date	12/10/2017	
Time	10:00 – 13:00	
Location	Havant County Council Office	
Attendees	Tony Haffenden (TH) Adam Cave(AC) Chris Lycett(CL) John Durnell (JD) Tim Calloway (TC) Rachel Jones (RJ) Ed Roswell (ER) Elena San Martin (ESM) Adrian Wright (APW) Isla Hoffmann Heap (IHH)	Environment Agency (EA) EA HIWWT HIWWT RSPB Natural England Eastern Solent Coastal Partnership ABPmer AECOM AECOM
Prepared	13/10/2017	
Prepared by	Adrian Wright / Elena San Martin / Isla Hoffmann Heap	
Distribution	TBC	

Agenda Items

1. Introduce the proposed scheme;
2. Identifying the change in habitat types;
3. Understand the current ecology assemblages on site and surrounding areas;
4. Discuss key risks posed by the scheme during construction and operation;
5. Review potential mitigation measures;
6. Consider environmental enhancements that form part of scheme;
7. Other issues?

Meeting Notes

Scheme Design

- **APW – Overview of scheme** (confirmed plan is not to import material, use of lime to strengthen clay material, provided description of breach and earth embankment locations, dimensions, provide overview of revised coastal path network, fencing, breach position, size and number), the closure of exiting culvert, ES and planning application due for submission early November with an at least 16 week determination period following validation;
- **ESM** provided a description of the expected habitat losses and gains;
- **IHH/ER** provided a description of the on site ecology based on the baseline survey findings. **IHH** confirmed that there are bat surveys still outstanding but these are not anticipated to change findings to date. The results of these surveys will be included in the final ES;;

- **APW** suggested that grazing would be removed based on prior discussions with HIWWT regarding access challenges and also potential environmental impact on reptile suitable habitat. **JD/TC** stressed the importance of grazing for the management of the Orchid Field and the saltmarsh and suggested that this should continue but at a greatly reduced stocking rate to have a limited impact on reptile assemblages. Limited/reduced grazing will be included within the scheme ES. Grazing regime will need to be considered accordingly to balance these requirements;
- **AC** asked how the banks will be maintained. **APW** confirmed that grazing was not perceived as the option to maintain grassed banks. **JD/CL** agreed that the HIWWT could undertake some strimming and allow banks to grow allowing some increases in biodiversity (**Mitigation Measure** carried forward into Ecological Mitigation Strategy);
- **AC** – Asked about potential beneficial use of the breach material. **APW** confirmed that the material was tested during the GI works and could be used within the scheme if appropriate i.e. toe protection;
- **ESM** confirmed that the scheme aims to primarily deliver saltmarsh habitat and as such the current design of the breach and scrapes/channel(s) connecting the breach to the internal creek system reflects this. **JD/RJ/TC/CL** asked if this material and potential excess material from the borrow site could be used to create irregular shapes islands within the scheme. This would have minimal impacts on the predicted habitat extents and would provide a potential high tide roost for waders. This proposal was agreed and included as an environmental enhancement in the ES. The design of any island(s) will be considered in the detail design stage (**Mitigation Measure** carried forward into Ecological Mitigation Strategy);
- **JD** asked if the mudflat areas could be designed to be saline lagoons. **ESM** agreed that this was possible by altering the sill level of the breach and the profile of the connecting scrapes/channels and could be considered at the detailed design stage (**Mitigation Measure** carried forward into Ecological Mitigation Strategy);
- The loss of coastal grazing marsh and high tide roosts were discussed. Following the meeting, **TH** has confirmed that the loss of this habitat has been accounted for in the Regional Habitat Creation Programme and already agreed with NE through the IROPI agreement that was made at the strategic level;
- **TC/JD** recommended opening (thinning) the tree line between the Southmoor MR site and the HIWWT western field to create sight lines. This is already included as an enhancement measure in the ES and will be considered further at detailed design (**Mitigation Measure** carried forward into Ecological Mitigation Strategy);
- **TC** discussed the possibility of creating a ditch around the landward perimeter of the new embankments (as was done for Medmerry). This could be considered at the detailed design stage but is not currently included in the outline design plan for the proposed scheme.

Southmoor Big Field SINC

- **ER/IHH** discussed moving the existing fence line in the HIWWT western field northwards towards existing dry ditch or further to allow coastal grassland habitats to spread further north.

Habitats in general

- **RJ** identified that there is no longer a requirement for no net loss, but for a net gain.

Orchid Field to the North

- APW confirmed orchid field would also be fenced to prevent access.

Divided Sedge

- IHH suggested that if conditions created in the HIWWT western field were not suitable to support translocated divided sedge that the HIWWT, ESCP and/or RSPB may have suitable sites that it could be translocated to. ER/ JD agreed;
- JD suggested turf stripping. Need to investigate further if the plant requires specific mycorrhizal conditions? (i.e. is it suitable for translocation?).

Reptiles

- IHH/ER confirmed that there is up to a significant population of common lizard, on the site and slow worm that may require translocation;
- CL confirmed that north east section of the Western HIWWT Field is currently an area of brambles that could be enhanced (partially cleared) to provide areas for potential reptile relocation (**Mitigation Measure** carried forward into Ecological Mitigation Strategy);
- TH confirmed that the EA are in discussion with the landowner (R. Carroll) to purchase the field to the north east of the Southmoor site. ER/IHH/JD agreed that this would make a suitable site for reptiles if enhanced (**Mitigation Measure** carried forward into Ecological Mitigation Strategy);
- IHH explained that reptiles will be translocated from the area immediately landward of the breach and along the main northern embankment, with reptiles at the breach location, the eastern SSE embankment, embankment within Mill Lane Field and the site compound to be displaced. Dependent on the extent of the borrow area, reptiles will be translocated/ displaced. This will be confirmed at the detailed design stage (**Mitigation Measure** carried forward into Ecological Mitigation Strategy);
- IHH confirmed that the site will be breached during the autumnal neap tides (late September – after reptile breeding season and before temperatures drop and they become more slow moving/ go into hibernation) to allow reptiles to move out of the inundation area (**Mitigation Measure** carried forward into Ecological Mitigation Strategy);
- JD/TC questioned why there were a low number of reptiles within the main scheme. IHH confirmed that this is most likely due to the historic flooding of the site;
- JD/TC/AC noted that the new banks being constructed would provide additional habitat for the reptiles;
- TC suggested that additional embankments could be created as reptile habitat enhancements within the scheme area. During the Medmerry works the contractor (under RSPB supervision), were given an element of freedom to create features beyond those previously identified within the planning application;
- JD/ TC suggested the use of reptile corridors within the area to be inundated to aid their movement out of the area;
- IHH stated that detailed reptile mitigation strategy will be outlined in the Ecological Mitigation Strategy for the scheme at the detailed design stage.

Nesting Birds

- ER/ IHH/ TC discussed Cetti's warbler nesting on site (along with skylark, meadow pipit, chaff chaff, and linnet);

- IHH mentioned that vegetation clearance is proposed to take place Feb/ March to minimise overlap with peak overwintering bird period. TC commented that skylarks will nest all year around and lapwing will nest early in the year so watching brief will be required. Vegetation will need to be cleared along the route of the works areas, plus around them;
- TC suggested a traffic light system for access to areas following nesting bird checks;
- TC explained that from experience at Medmerry, lapwing, ringed plover and little ringed plover nest in disturbed materials. These species are not disturbed by machinery but are by people. At Medmerry they had an ecological watching brief for the archaeological watching brief (rather than the excavators). At Medmerry they used hawk kites as deterrents, but these did not work for little ringed plover who nested in heavily disturbed areas;
- TC suggested looking at Medmerry Ecological Mitigation Strategy for more examples;
- TC/JD suggested that a ruderal mix could be planted along the banks of the new embankments which would support a number of terrestrial birds, including linnets and scrub warblers.

Bats

- AC: asked about bats on site: IHH explained that there were no roosts confirmed but trees to be impacted that are at risk of supporting bats will need to be done so under supervision of a licenced bat ecologist and in accordance with the Ecological Mitigation Strategy. Scheme will be beneficial for bats due to increased air borne invertebrates around newly created wet areas. Suggested where hedgerows are enhanced for birds, these could also be enhanced for bats by including night flowering species. JD suggested potentially enhance linear features along the River Lavant to improve connectivity for barbastelle bats.

Borrow Site

- APW confirmed that the win material from the HIWWT Western Field would require some lime conditioning and that this process is safe with no leaching of the lime material;
- All parties agreed that the drawing showing a box for the borrow site could be misleading and lead to opposition. Further designs will be developed to consider representing this as a conceptual plan of what it might look like (**Mitigation Measure** carried forward into Ecological Mitigation Strategy);
- APW suggested that someone like TC/JD would be present during the extraction of the borrow material in order to design the area to optimise potential site functionality (**Mitigation Measure** carried forward into Ecological Mitigation Strategy); JD: identified that if clay dries it will crack;
- IHH/ESM/JD/CL agreed that the site is very dry and does not have a fresh water source i.e. natural ditch/stream. The hydrology of the site is significantly different to the Southmoor site, CL confirmed that only some of the recent 5m deep trial holes contained water illustrating how dry the site is;
- All agreed that the scheme is unlikely to have any fresh water source except for rain sources;
- JD asked if the borrow site could be lined in some fashion to help retain water potentially bentonite or clay. , this option can be considered during detailed design (**Mitigation Measure** carried forward into Ecological Mitigation Strategy);

- JD discussed that the Environment Agency will need to apply for a licence from the HIWWT as soon as possible for the works to proceed. TH to look into this;
- JD said that HIWWT will be concerned with the method and potential destruction of the site. APW/TH confirmed that should the site not be possible to landscape to benefit wildlife, plan B would be to import the material. APW confirmed that this would require amending our planning application so would have some additional implication regarding programme and costs.