

**WYG Environment**

part of the WYG group



**QinetiQ**

**HSE MSER Phase 2**

**Mitigation and Compensation Land  
Methods and programming  
statement**

**Date 23/10/2009**

**WYG Environment Planning Transport**

**creative minds safe hands**

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**MITIGATION/COMPENSATION LAND  
METHODS AND PROGRAMMING STATEMENT  
HSE MSER PHASE 2  
for  
QinetiQ**



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## 1.0 INTRODUCTION AND BACKGROUND

### 1.1 Introduction

The Ministry of Defence facility on Foulness Island near Shoeburyness holds a range of Battery sites, which comprise explosives firing and testing areas and associated buildings. All buildings being used for explosive operations must comply with the Health and Safety Executive (HSE) licensing regulations (Manufacture and Storage of Explosives Regulations, 2005) and must be suitable for purpose. The MoD/QinetiQ operates a number of sites across the Shoeburyness area that all are subject to HSE licensing. A planning application to construct a number of safety features (referred to MSER 2), including earth traverses, pipelines and pendine walls, was granted full planning permission on 29<sup>th</sup> September 2009 (Application No. 09/00398/Ful).

As compensation for the loss of important habitats within the Foulness Island Special Protection Area (SPA), SSSI and Ramsar site a number of mitigation projects have been proposed in comprehensive mitigation package prepared as part of the battery works programme (WYG, 2009).

The planning permission is subject to a number of Conditions including Condition 4 which specifically relates to the proposals in the mitigation package. This Condition states:

*Prior to commencement of the development hereby approved a method statement which details the methods and timescales by which new habitats will be created to mitigate the adverse effects of the proposal hereby approved together with a monitoring scheme for such new habitats as may be created has been submitted and approved in writing by the Local Planning Authority.*

*Reason: In order to secure through the creation of new habitats adequate mitigation against any adverse effects of the development on the foulness Island SSSI, SPA and Ramsar site.*



The aim of this statement is to provide an initial broad programme of works, which is a precursor to a necessarily prolonged consultation, planning and design process for the creation of the wetland mitigation areas in the Foulness Island SPA.

## **1.2 Background**

The cumulative loss of characteristic SPA/Ramsar/SSSI habitat at Q, K, DAT and Shelford Batteries is considered to be significant and therefore it is important to enhance existing and replace similar coastal grassland and wetland habitats on Foulness Island.

As stated in the mitigation package, a number of basic principles apply to the mitigation work required for the replacement of characteristic SPA/Ramsar/SSSI habitats. These are:

- The replacement of lost habitats should result in a net gain in the biodiversity interest on Foulness Island and not necessarily on a 1:1 or 1:2 loss to replacement ratio;
- The created and/or restored habitats should contribute to the conservation of the integrity of the network of important bird feeding nesting and roosting sites across Foulness Island;
- The created and/or restored habitats should also take into account the ecological requirements of the other Ramsar/SSSI notable invertebrate and vascular plant species;
- The mitigation work associated with the MSER 2 project should also contribute towards bringing the specific SSSI Units on Foulness Island back into favourable condition;
- The latter should be achieved by the development of an overarching ecological management plan for SSSI Unit 4 (Waking Stairs) and other SSSI Units as necessary.



### 1.3 Consultation

Initial discussion and consultation with the MoD/Defence Estates, QinetiQ, Environment Agency and Natural England have resulted in four locations on Foulness Island for this work.

However, there is a requirement for further consultations with the Environment Agency, due to the flood defence and land drainage consent implications, as well as with Natural England and RSPB over the design of the scheme.

### 1.4 Scheme locations

The locations for the mitigation schemes are given below with a broad description of the work involved.

- **Ware Corner (Fig. 1 Appendix A)**, near Courts End on the Crouch River Estuary– widen and extend ditches to create a predator-free island for bird nesting purposes, especially avocets (*Recurvirostra avosetta*), and re-profiling of ditches to enhance for characteristic invertebrates and vascular plants;
- **Area between P and N Butts (Fig. 2 Appendix A)** – create shallow wet scrapes and a ditch system in open, low-quality grazing marsh areas, the latter to enable control of water levels and for predator control purposes. The borrowdyke/delph ditch system will also be linked to the new ditch network. Reduce scrub cover and create open coastal grazing marsh providing continuity with Q Battery site through to N Butts of characteristic open grazing marsh habitat;
- **Q Battery (Fig. 2 Appendix A)** – re-profile existing shallow scrape to east of Battery construction area to create a deeper central area and shallow 'fingers'. This will enhance the site as bird nesting area particularly avocet and other notable waders and waterfowl species and assist in predator control;



- **N Butts (Fig. 3 Appendix A)** – introduce scrub management regime to enhance site for nesting birds and reptiles, the latter as a receptor area for the translocated reptiles from the various Battery sites. The area is already an important reptile site and the above work will bolster the existing habitat and enhance the area generally for reptiles and nesting birds.

## 2.0 OUTLINE PROGRAMME OF WORK

### 2.1 Ware Corner

- Undertake topographical survey of the ditch system at Ware Corner (January 2010);
- Ecological assessment of ditch affected by works, including macrophytes, invertebrate and water vole survey (Spring/early summer 2010);
- Consultation, design and planning of ground works (January – March 2010);
- Implementation of ditch works (September/October 2010).

### 2.2 Area between P and N Butts

- Undertake topographical survey of the site (January 2010);
- Implement scrub management works (Jan/Feb 2010);
- Ecological assessment of the zone of influence of the works, including bird, badger, reptile, amphibian and water vole surveys (Spring/early summer 2010);
- Consultation, design and planning of ground works (January – March 2010);
- Implementation of scheme works (September/October 2010).

### 2.3 Q Battery

- Undertake topographical survey of the site (January 2010);
- Undertake brief ecology check on site to update summer 2009 information and review ecological assessment as required (Spring/early summer 2010);
- Consultation, design and planning of ground works (January – March 2010);
- Implementation of scheme works (September/October 2010).



## 2.4 N Butts

- Produce management plan for the site (Jan/Feb 2010);
- Implement scrub management works and reptile hibernaculum construction (Jan/Feb 2010).

## 2.5 Consultation and design process

The consultation, design and planning process is critical to the success of the three wetland creation schemes and the process by which this will be undertaken will be as follows:

	<b>Work Item</b>	<b>Comments</b>
<b>1</b>	<b><u>Outline design for discussion and agreement and for submission to Local Planning Authority (LPA), Natural England and Defence Estates</u></b>	To include <ul style="list-style-type: none"> <li>• site visit</li> <li>• consultations with QQ/MoD/DE, NE, RSPB and Ecology/Landscape consultant;</li> <li>• minor amendments to agreed scheme</li> <li>• production of plan/s in colour</li> </ul>
<b>2</b>	<b><u>Detail Design &amp; Tender Documents</u></b>	Prepare detailed design/ construction plans for the three areas, including liaison regarding final design approval with MoD/DE, NE and RSPB.  Prepare specifications for the three areas in accordance with an agreed and appropriate contract such as Minor Works Contract.
<b>3</b>	<b><u>Topographical survey</u></b>	A detailed topographical survey of the sites in question and its context within the surrounding area





<p><b>4</b></p>	<p><b>Preparation of Pre-Construction Information</b></p>	<p>It shall contain as a minimum:</p> <p><u>Description of the Project</u></p> <ul style="list-style-type: none"> <li>• Outline construction programme</li> <li>• Details of the Client, Designers, CDM Coordinator and other consultants</li> <li>• The extent and location of existing service records and plans (to be supplied by MoD)</li> </ul> <p><u>Environmental Restrictions and Existing On-Site Risks</u></p> <ul style="list-style-type: none"> <li>• Safety hazards,</li> <li>• Health hazards,</li> </ul> <p><u>Significant Design and Construction Hazards</u></p> <ul style="list-style-type: none"> <li>• Significant design assumptions and suggested work methods, sequences or other control measures</li> <li>• Arrangements for co-ordination of ongoing design work and handling design changes</li> <li>• Information on significant risks identified during design</li> <li>• Materials requiring particular precautions</li> </ul>
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<p><b>5</b></p>	<p><b>Prepare a select tender list</b></p>	<p>Pre-approval assessment to be included covering:</p> <ul style="list-style-type: none"> <li>• Financial status (DnB report etc)</li> <li>• Establish CDM competence</li> <li>• Evidence of H&amp;S record</li> <li>• Members of Utilities Vendor Database (UVDB)</li> <li>• CIS details</li> </ul>
<p><b>6</b></p>	<p><b>Tender Process</b></p>	<p>QQ/MoD/Consultant will prepare and issue the tender invitation documents.</p> <ul style="list-style-type: none"> <li>• Tenders to be commercially assessed by QQ/MoD/Consultant</li> <li>• QQ/MoD to award contract</li> </ul>



<b>7</b>	<p><b><u>Stage 4. Contract Implementation</u></b></p>	<p>Including:</p> <ul style="list-style-type: none"> <li>• Appointment of CDM Coordinator</li> <li>• initial site meeting</li> <li>• Designer to attend site for a minimum of one day a week for a presumed six week construction period providing advice to the Supervising Officer on:             <ul style="list-style-type: none"> <li>(i) the quality and</li> <li>(ii) progress of the works in relation to the detailed design</li> </ul> </li> <li>• Consultant to assist Supervising Officer in preparing and agreeing snagging lists for the works</li> <li>• Consultant to advise on issue of certificate of substantial completion</li> <li>• Consultant to inspect the works and prepare a defect report prior to the end of the defects liability period and make recommendations</li> </ul>
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<b>9</b>	<b><u>Post Construction</u></b>	<p>Update the Health and Safety File - form of the file will be supplied by MoD/QQ.</p> <p>Items to be included are:</p> <ul style="list-style-type: none"> <li>• As built drawings, and details of design criteria and assumptions</li> <li>• Residual hazards and how they are to be future managed</li> <li>• Details of materials used, their location, design life and potential risk to cause harm</li> <li>• Details on maintenance</li> <li>• Details and location of any services</li> </ul>
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## 2.6 Programme timing

The timings of work for each area are given in the Sections 3.1 – 3.4 above. The principles behind devising this timing programme are:

- to avoid the avocet and other notable wader and waterfowl breeding period at the Ware Corner site;
- to avoid disturbance to over wintering wader and waterfowl in the Q Butts area;
- to ensure sufficient time to undertake additional ecological surveys in spring and early summer 2010 and subsequent mitigation works if required at the Ware Corner and N and P Butts area

Some works, particularly the new Q Battery scrape, can be undertaken at a similar time to the main Battery works at this site before the end of March 2010, since the area has already been investigated and subsequently cleared of any ecological constraints. The other mitigation sites, namely Ware Corner and the area between N and P Butts, will require further ecological investigation and possible mitigation works before the wetland creation project commences.



## **2.7 Monitoring**

A monitoring programme will be implemented at all the newly created wetland sites to assess changes in bird breeding and over wintering activity. This work will follow the standard Wetland Bird Survey (WeBS) scheme which monitors non-breeding waterbirds in the UK. The principal aims of WeBS are to identify population sizes, determine trends in numbers and distribution and to identify important sites for waterbirds. Breeding avocet surveys will be undertaken specifically at Ware Corner and will follow the standard approach as noted in Gilbert et al (1998)

## **3.0 REPORT CONDITIONS**

For a detailed review of the extent and limitations of this report, attention is drawn to the report conditions in Appendix B and the WYGE proposal document forwarded previously.

## **4.0 DOCUMENTS CONSULTED**

Gilbert, G., Gibbons, D.W., and Evans, J. (1998) Bird Monitoring Methods – a manual of techniques for key UK species. RSPB pub.

WYG Environment (2009) HSE MSER Phase 2 Ecological Mitigation package. Internal contract report



## **Appendix A**

### **Locations of mitigation schemes**



**Figure 1 Ware Corner - wetland creation scheme (ditch widening, extending and re-profiling works)**



**Figure 2. Land between P and N Butts and the Q Battery scrape**





**Figure 3. N Butts scrub management scheme area**



## **Appendix B**

### **Report Conditions**



**WYG ENVIRONMENT**

**REPORT CONDITIONS**

HSE QQ MSER Ph 2 – mitigation works methods statement

*This report is produced solely for the benefit of QinetiQ and no liability is accepted for any reliance placed on it by any other party unless specifically agreed in writing otherwise.*

*This report is prepared for the proposed uses stated in the report and should not be used in a different context without reference to WYGE. In time improved practices, fresh information or amended legislation may necessitate a re-assessment. Opinions and information provided in this report are on the basis of WYGE using due skill and care in the preparation of the report.*

*This report refers, within the limitations stated, to the environment of the site in the context of the surrounding area at the time of the inspections. Environmental conditions can vary and no warranty is given as to the possibility of changes in the environment of the site and surrounding area at differing times.*

*This report is limited to those aspects reported on, within the scope and limits agreed with the client under our appointment. It is necessarily restricted and no liability is accepted for any other aspect. It is based on the information sources indicated in the report. Some of the opinions are based on unconfirmed data and information and are presented as the best obtained within the scope for this report.*

*Reliance has been placed on the documents and information supplied to WYGE by others but no independent verification of these has been made and no warranty is given on them. No liability is accepted or warranty given in relation to the performance, reliability, standing etc of any products, services, organisations or companies referred to in this report.*

*Whilst skill and care have been used, no investigative method can eliminate the possibility of obtaining partially imprecise, incomplete or not fully representative information. Any monitoring or survey work undertaken as part of the commission will have been subject to limitations, including for example timescale, seasonal and weather related conditions.*



*Although care is taken to select monitoring and survey periods that are typical of the environmental conditions being measured, within the overall reporting programme constraints, measured conditions may not be fully representative of the actual conditions. Any predictive or modelling work, undertaken as part of the commission will be subject to limitations including the representativeness of data used by the model and the assumptions inherent within the approach used. Actual environmental conditions are typically more complex and variable than the investigative, predictive and modelling approaches indicate in practice, and the output of such approaches cannot be relied upon as a comprehensive or accurate indicator of future conditions.*

*The potential influence of our assessment and report on other aspects of any development or future planning requires evaluation by other involved parties.*

*The performance of environmental protection measures and of buildings and other structures in relation to acoustics, vibration, noise mitigation and other environmental issues is influenced to a large extent by the degree to which the relevant environmental considerations are incorporated into the final design and specifications and the quality of workmanship and compliance with the specifications on site during construction. WYGE accepts no liability for issues with performance arising from such factors.*

**WYG Environment Planning Transport Ltd.**



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1	23 <sup>rd</sup> 2009	October Draft
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