Planning Application Response

Ecology

To: Mary Thompson  
From: Dr Sue Lawley, MCIEEM, CEnv  
Details: A flood alleviation scheme to reduce flood risk in Oxford etc. The creation of new and improved habitat for flora, fauna and fisheries, and change of use of land to provide exchange for existing open space. Works will include extraction of some sand and gravel for reuse on the site and exportation from the site  
Location: North of the A420 Botley Road to south of the A423 ring road, running predominantly between the A34 to the west & the Oxford to London railway line to the east, including land between the A4144 Abingdon Road to the to the west & the River Thames  
Reference: MW.0028/18  
Date: 18 July 2018

Introduction

My previous responses, discussions and site visit have identified detailed areas of work required (for example Creeping Marshwort mitigation). The following response refers to these previous comments and details where information and / or proposed actions are adequate and where further action etc is needed.

Comments

A list of documents reviewed is appended at the end of this response.

Previous comments on the scope of the environmental statement have raised the following points (grey text), which in my opinion have been adequately addressed in the submitted ES:

The scope of the area to be included needs to cover all land and structures that are directly or indirectly affected by the scheme, including hydrological effects, movement of vehicles, plus the effects of mitigation work. It is now clear that this is the case, although it should be noted that any additional works / adjustments to the scheme including mitigation may require further survey etc.

Local Wildlife Sites (LWS) and Sites of Local Importance for Nature Conservation (SLINC) to be considered in the ES. This has now been done, however it should be noted that Oxford City Council and the Thames Valley Environmental Records Centre (TVERC) completed a re-
survey of sites and criteria review for SLINCS in 2017. SLINCS have therefore been replaced by Oxford City Wildlife Sites (OCWS), and this should be noted / updated.

The scheme should take opportunities to re-naturalise river habitats by the creation of backwaters, riffles etc, and remove barriers to fish migration. This has been achieved with the removal of weir at Towles Mill and the creation of riffle features in many sections of stream throughout the scheme.

Issues that need to be addressed further are discussed below:

**Hinksey Meadows Local Wildlife Site / MG4a grassland**

Loss of habitat - probable reduction of, and hydrological damage to, MG4 grassland at this site remains a major concern.

Figure 2 of the MG4a Grassland Mitigation Strategy shows a triangle of habitat (highlighted yellow) that appears to be isolated from the remaining grassland during construction phase and which is therefore likely to decline in condition. The calculated habitat loss therefore appears to understate the situation.

The MG4a Grassland Mitigation Strategy has gone some way towards exploring options for mitigation, but due to current lack of clarity on land tenure the translocation option is not yet secure (5.2, 6th paragraph).

The Groundwater Model Update examined the possible benefit of installing additional riffles and concluded:

*The modelling suggests that the weirs will help to maintain groundwater levels beneath Hinksey Meadow. The simulated effect of the scheme is to cause a fall in groundwater levels beneath part of the Meadow area of up to 11 cm in scenario A and up to 2 cm in scenario B. In the remainder of the Hinksey Meadow area, a slight rise in groundwater level is simulated.*

The MG4a Grassland Mitigation Strategy cites FMP as advising that Hinksey Meadow is towards the dry end of the ecological tolerance of MG4a grassland. This apparently indicates that installation of the ‘scenario B’ riffles would be likely to benefit the grassland.
It would be helpful to have Floodplain Meadows Partnership’s response to this updated groundwater model. If FMP confirm this view this option should be pursued from the outset.

The following are issues that will need to be clarified, preferably through a condition requiring a clear method statement:

- Management of the remaining grassland at Hinksey Meadow during the scheme works, including assurance that the triangle of land can be managed adequately.
- Secured locations for translocated grassland and 15 hectares of new meadow. Option (2) in 5.2 (storing turves) is unlikely to be successful as acknowledged in the text and should not be seen as suitable mitigation.
- Evidence of viability of future management of Hinksey Meadow, translocated grassland and new meadows. (Response by OPT has raised concerns regarding stock fencing at Hinksey Meadow that need to be addressed.)
- The detailed methodology for translocation, including specialist machinery to be used submitted as ES C6 Appendix B should be included as part of the method statement.
- Arrangements for management of all sites, including watering, during the Construction phase.
- The wording in places in Sections 5 and 6 of the MG4a Grassland Mitigation Strategy is indefinite (‘should’, ‘may’, etc.). The method statement will need to be clearer.

The proposed long-term monitoring of the meadow areas is welcomed. What financial arrangements will be made for making any necessary adjustments (such as installation of additional riffles)? This should be covered by S106 or similar.

**Creeping marshwort (Apium repens)**

The Creeping Marshwort Mitigation Strategy demonstrates that progress has been made on options for securing the future of this species, and this is welcomed. However, the strategy at present does not contain clear actions / schedule of work / locations for growing on of plants. These all require clarifying and I therefore suggest that approval of a final version of this strategy or a method statement is made a condition.

**Kennington Pit / Whorled Water-milfoil**

Surveys carried out for the application clearly indicate that this pool is very important, the EA Biological Summary Report quotes the Freshwater Habitats Trust as stating that ‘Kennington Pit is one of the richest ponds in Oxfordshire for its plant life, and one of the
most important freshwater sites in the county’. The Freshwater Invertebrate survey (4.1.1) noted that the site is one of the few locations that is free of invasive non-native invertebrate species.

It is therefore very regrettable that the scheme will still result in the loss of 52% of the pit. The Whorled Water-Milfoil Mitigation Strategy refers to temporarily growing on this species so that it can be re-instated in the pit, however it does not identify permanent habitat creation for the species or mitigate for the loss of Kennington Pit. There should be an aspiration that at least some of the ponds created during the scheme will be of high quality for biodiversity, supporting whorled water-milfoil and excluding fishing.

I am also concerned that proposed management of the Pit by tree removal, while apparently a benefit to biodiversity, will open up access to illegal fishing that will damage biodiversity. In addition, opening the pit up may also increase pollutants by removing the filtering effect of vegetation. How will these effects be managed?

**Tree removal**

I note concerns expressed in the County Council’s arboricultural consultant’s response regarding excessive tree removal, including many category U trees. This is also a biodiversity concern as many poorer quality trees (in arboricultural terms) are often of importance for biodiversity as they may have rot holes, cracks and other features used by invertebrates, bats and birds. Collapsed willow pollards also provide ideal resting places for otter. Consideration should also be given to restoring pollard willows, which are a traditional feature of waterside. When carefully carried out, this can have a high success rate even where trees are much damaged.

**Long term management and monitoring**

The long-term management and monitoring of the scheme and created habitats should be secured to ensure that ecology benefits in the long term.

The intention to ensure 100 year management of the scheme through creation of a charitable organisation is welcomed. This needs to be secured through S106 or similar.

The Landscape and Habitat Management Plan (LHMP) provides adequate detail of the broad management input needed for each habitat type.

The Post-construction Monitoring Plan (ES table 14.1) is welcomed. This should be worked up into a detailed monitoring plan for the 25 year period. This detail should incorporate monitoring suggested by the Floodplain Meadows Partnership in their advice. Negative indicators should also be monitored, e.g. weed species, bare ground, with acceptable levels
(e.g. % cover) defined. This should also cross refer to any remediation measures in the LHMP and set trigger points where remediation should start (e.g. low proportions of weed species in newly created grassland habitats may be expected, but if they continue to spread should be controlled)

**Habitat restoration**

Imported seed sources should be avoided, using natural regeneration, locally harvested seed or green hay. Local sources have the advantage of creating a market for important sites and thus strengthening their viability. I acknowledge that considerable effort has gone into grassland restoration proposals and that this is a large area to cover. The MG4a Grassland Mitigation Strategy clearly refers to use of green hay for creation of MG4a grassland, although the ES 8.3.2 refers to seed mixes in the same context. Source material intended for other habitats is apparently less clear. I believe the intention is to prefer local seed sources, however expediency may indicate otherwise as the scheme progresses. I therefore suggest a condition is used to cover:

- MG4 grassland creation is by use of green hay from within 5km of the project area
- other grassland and marsh creation either to use hay or locally –harvested seed of similar local provenance, or by natural regeneration from the seed bank.
- as a last resort brought in seed should be specified and submitted for approval by the MPA

**Construction Environment Management Plan (CEMP)**

On a scheme of this extent, in order to reduce environmental impacts I would expect to see a plan of how construction will be managed in environmental terms. An Environmental Action Plan (EAP) has been submitted which is divided into pre-construction, construction and post-construction phases. This clearly identifies the role of the Ecological Clerk of Works and actions and avoidance measures to protect species and habitats. There appear to be a few omissions however:

PR32 (creeping marshwort) should refer to obtaining a licence for this work from Natural England.

Hedgehogs and other small mammals are referred to in Annex 1 Additional Phase 1 Habitat Surveys and elsewhere, but are not referred to in the EAP. Reasonable avoidance measures should be included to prevent harm to these species; these are similar to those for badgers such as providing escape ramps from excavations. They possibly need to be applied more widely than badger measures.

Other comments relating to EAP are in the species table below.
Need for updated protected species surveys after 12 months

Protected species surveys are generally valid for 12 months so if works are planned to occur more than 12 months after the date of the initial survey then the survey will need to be updated. These should be referenced in the ES and allowed for in the CEMP where appropriate. The EAP covers protected species and pre-construction surveys; however these may not be adequate if the start of site clearance is delayed for more than 12 months. It is therefore suggested that a condition is attached for updated surveys of protected species after twelve months if the scheme has not commenced.

Net gain for biodiversity

There should be a net gain of biodiversity over the entire scheme. The Environmental Statement (table 8.4) gives a breakdown of net losses and gains to habitats as calculated using a metric developed by TVERC, and the text confirms that overall the metric indicates a net gain to biodiversity. This is welcomed; however I was unable to find details of how the calculation was carried out, for example I am unable to confirm that updated habitat information is included, especially where additional survey noted habitats were better than previously thought. The applicant should submit this information (e.g. completed TVERC spreadsheet.)

Data generated

Information generated from the various habitat and species surveys (existing and future work) should be made available to TVERC. Ideally species data should be summarised as an annex to reports; a suitable format for this can be specified if required. I would welcome confirmation that this has been done. Additionally, can habitat GIS layers be made available to TVERC?

Survey methodology

Survey reports generally do not identify surveyors or state their qualifications (e.g. reptile survey, otter and water vole survey.) Surveyors should be named otherwise reports are not compliant with best practice guidance (CIEEM Guidelines for Ecological Report Writing paragraphs 5.15, 5.17; BS42020 para. 6.71). It is also not acceptable to use the name of a consulting company subcontractor (e.g. Hazlewood consultants, Breeding Bird Survey.)

To avoid the need to re-write reports this information should be submitted for all reports as an annexe to the ES, stating clearly the report or section, name of surveyor and their qualifications and licence number where applicable.
<table>
<thead>
<tr>
<th>Species / group</th>
<th>Comment</th>
<th>Suggested action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bat species</td>
<td>Surveys have covered general bat activity in the project area (transect surveys), tree inspection including climbing work, and emergence surveys of buildings and trees with potential for roosts. The EAP refers to re-surveys, method statement, licence requirements and reflects survey recommendations.</td>
<td>Under EAP C20 further action I suggest adding ECoW to check new installations to ensure lighting is appropriate in key locations as the scheme progresses</td>
</tr>
<tr>
<td>Water vole</td>
<td>Survey effort is considered adequate and has found no evidence of water vole in the area. EAP contains precautionary measures.</td>
<td>The survey report recommendation for pre-construction survey is found in the EAP (PR30); however the report also recommended further checks 4 weeks before starting work and this should be added to the EAP.</td>
</tr>
<tr>
<td>Otter</td>
<td>Surveys have identified presence of otter and indicates that otter should be assumed to be present on all watercourses. Further checks for occupied holts and possible need for licence are noted in EAP. C17 of EAP contains good practice for avoiding harm</td>
<td>None needed</td>
</tr>
<tr>
<td>Badger</td>
<td>Surveys have identified two main concentrations of badgers. The EAP contains measures to protect badgers, including possible sett closures and pre-construction surveys that are in line with recommendations from survey reports</td>
<td>None needed</td>
</tr>
<tr>
<td>Great crested newt (GCN)</td>
<td>Surveys have ruled GCN out of project area</td>
<td>None needed</td>
</tr>
<tr>
<td>other amphibia including</td>
<td>Measures to protect other</td>
<td>None needed</td>
</tr>
<tr>
<td>Animal Type</td>
<td>Remarks</td>
<td>Notes</td>
</tr>
<tr>
<td>---------------------------------</td>
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<tr>
<td>toads</td>
<td>amphibia are included in survey recommendations and EAP</td>
<td></td>
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<tr>
<td>Reptiles including slow worm</td>
<td>As amphibia</td>
<td>None needed</td>
</tr>
<tr>
<td>Bird species</td>
<td>Surveys have covered both breeding and wintering bird activity. Measures in the EAP to undertake vegetation clearance outside breeding season etc. Species will be displaced from the area due to loss of habitat etc.</td>
<td>It is suggested that pre-construction planting of shrub species in areas away from the works would ensure that replacement foraging and nesting habitat becomes available much sooner than with post-construction planting. (The first and third bullet under section 6 of the wintering bird report relate only to nesting birds and could be deleted.)</td>
</tr>
<tr>
<td>Fish species including bullhead</td>
<td>Surveys have been completed and several species identified. Impacts are kept to a minimum through EAP. Long-term benefits identified through creation of riffles etc</td>
<td>None needed</td>
</tr>
<tr>
<td>Aquatic invertebrates including depressed (compressed) river mussel</td>
<td>Surveys have been completed and several species identified. Impacts are kept to a minimum through EAP. Long-term benefits identified through creation of ponds etc</td>
<td>None needed</td>
</tr>
</tbody>
</table>

**Conclusion**

Conditions are recommended for:

- Method statement for Hinksey Meadow
- Method statement for creeping marshwort
- Green hay and seed sources to be used for MG4 grassland, other grassland and marsh habitats, with approval required for commercially purchased seed as a last resort
- Further protected species update surveys if the start of the scheme is delayed
Further information on the following is required:

- Environmental Action Plan minor amendments
- Details of biodiversity net gain calculation
- How possible negative results (fishing, pollution) from removal of surrounding vegetation will be dealt with at Kennington Pit.
- Floodplain Meadows Partnership’s response to updated hydrology models would be invaluable
- Details of survey operatives for all ecology reports
- Confirmation that species and habitat GIS data are available to TVERC.
Annexe - List of documents that I have reviewed for this response:

- Annex 1 Additional Phase 1 Habitat Surveys (CH2M, 2017)
- Aquatic Invertebrate and Mussel Survey (AECOM, October 2016)
- Badger assessment (CH2M, Dec 2016)
- Badger technical note (CH2M, Jan 2017)
- Bat surveys (CH2M, November 2016 & January 2017; Greena, February 2018)
- Breeding bird survey (CH2M, Feb 2018)
- Creeping Marshwort Mitigation Strategy (CH2M, March 2018)
- Ecological Appraisal (CH2M, July 2015)
- Ecological Appraisal (CH2M, December 2016)
- Ecological Appraisal Annex 1 Additional Phase 1 Habitat Surveys (CH2M, Feb 2018)
- Ecological Assessment of Hinksey Pond North and Hinksey Pond South (EA, Dec 2017)
- Environmental Statement (ES) (CH2M, March 2018)
- Fisheries survey (Hull International Fisheries Institute, October 2016)
- Floodplain Meadows Partnership advice regarding hydrology
- Floodplain Meadows Partnership: assessment of impacts on species-rich floodplain meadow habitat (March 2018)
- Final Hydrology Report (CH2M, )
- Groundwater Model Update (ESI, Feb 2018)
- Invasive Species Survey (Ecology Link, Oct 2016)
- Kennington Pit – Biological Summary Report (Environment Agency, Jan 2017)
- Landscape and habitat management plan and appendices (Gillespies, March 2018)
- MG4a Grassland Mitigation Strategy (CH2M, February 2018)
- National Vegetation Classification Survey (CH2M, Dec 2016)
- Phase 1 Habitat Survey (CH2M, Feb 2018)
- Plans and drawings, including Landscape and Habitat Management Plan plans.
- Reptile Survey (CH2M, Dec 2016)
- Reptile survey of additional sites (CH2M, Feb 2018)
- River Habitat and River Corridor Surveys (JBA Consulting, Jan 2018)
- Soils and Agricultural Quality (Land Research Associates, March 2018)
- Soil Resources Report (Land Research Associates, March 2018)
- Turf translocation - MG4 Grassland -Outline Methodology (Alaska, undated)
- Water Vole and Otter Survey Report (CH2M, Dec 2016)
- Whorled Water-Milfoil Mitigation Strategy (CH2M, March 2018)
- Wintering bird survey (CH2M, Feb 2018)
European Protected Species (to include in Committee/Delegated reports as an Annex, not on Decision Notices)

The Local Planning Authority in exercising any of their functions, have a legal duty to have regard to the requirements of the Conservation of Species & Habitats Regulations 2010 which identifies 4 main offences for development affecting European Protected Species (EPS).

1. Deliberate capture or killing or injuring of an EPS
2. Deliberate taking or destroying of EPS eggs
3. Deliberate disturbance of a EPS including in particular any disturbance which is likely
   a) to impair their ability –
      i) to survive, to breed or reproduce, or to rear or nurture their young, or
      ii) in the case of animals of a hibernating or migratory species, to hibernate or migrate; or
   b) to affect significantly the local distribution or abundance of the species to which they belong.
4. Damage or destruction of an EPS breeding site or resting place.

1 OTTER

Our records, the habitat on and around the proposed development site and ecological survey results indicate that a European Protected Species is likely to be present.

The mitigation measures detailed within the Environmental Action Plan and the Otter and Water Vole Survey are considered to be convincing and in your officers opinion will secure “offence avoidance” measures.

The recommendation

Your officers consider that sufficient information has been submitted with the application which demonstrates that measures can be introduced which would ensure that an offence is avoided. The application is therefore not considered to have an adverse impact upon protected species provided that the stated mitigation measures are implemented.
Our records and/or the habitat on and around the proposed development site and/or ecological survey results indicate that a European Protected Species (Bat species) is likely to be present.

The proposed development is likely to result in an offence under the Conservation of Species & Habitats Regulations 2010.

Officers therefore have a duty to consider whether the proposal would be likely to secure a licence. To do so the proposals must meet with the three derogation tests which are:

- There are imperative reasons of overriding public interest (e.g. health and safety, economic or social)
- There is no satisfactory alternative
- The action will have no detrimental impact upon population of the species concerned e.g. because adequate compensation is being provided.

Your officers are of the opinion that the submitted evidence satisfies the three derogation tests because:

The scheme is designed to achieve flood relief for health and safety, economic and social reasons

Detailed hydrological modelling has been submitted that asserts there is no reasonable alternative.

Measures are detailed that will ensure there is no detrimental effect on bat species

The recommendation

The evidence submitted clearly demonstrates that the three derogation tests are likely to be met and given this, your officers are of the opinion that Natural England are likely to grant a licence. As such the LPA do not need to consider this matter further. It is however recommended that a note be appended to the decision advising the applicant as to the need to secure a licence before commencing development
CREEPING MARSHWORT

Our records and ecological survey results indicate that a European Protected Species (Creeping Marshwort, *Apium repens*) is likely to be present.

Your officers would therefore recommend the following conditions to secure the implementation of the offence avoidance measures to ensure that no offence is committed — a condition for submission of a detailed mitigation strategy for the species.

The recommendation

Your officers consider that sufficient information has been submitted with the application which demonstrates that measures can be introduced which would ensure that an offence is avoided. The application is therefore not considered to have an adverse impact upon protected species provided that the stated mitigation measures are implemented.