



The Sizewell C Project

6.3 Volume 2 Main Development Site Chapter 14 Terrestrial Ecology and Ornithology Appendix 14D Off-site Developments Assessment

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Plates

None provided.

Figures

None provided.

1. Off-site Developments Assessment

1.1 Introduction

1.1.1 This appendix of **Volume 2** of the **Environmental Statement (ES)** (Doc Ref. 6.3) presents an assessment of the potential effects on terrestrial ecology and ornithology features arising from the construction and operation of the proposed off-site developments, including the off-site sports facilities at Leiston, the fen meadow compensation sites south of Benhall and east of Halesworth and, if required, the marsh harrier habitat improvement area (Westleton). They are referred to throughout this appendix as the ‘off-site developments’ or ‘the proposed development’.

1.1.2 Detailed descriptions of the proposed development sites (referred to throughout this volume as the ‘site’ as relevant to the location of the works), the proposed off-site development works and different construction and operational phases are provided in **Chapters 1–4** of this volume of the **ES**. A glossary of terms and list of abbreviations used in this chapter is provided in **Volume 1, Appendix 1A** of the **ES** (Doc Ref. 6.2).

1.1.3 This assessment has been informed by data from the following sources follows:

- a review of ordnance survey (OS) mapping aerial photographs;
- a review of data held by the Multi-Agency Geographic Information for the Countryside (MAGIC) website (Ref 1.1) (<https://magic.defra.gov.uk/MagicMap.aspx>); and
- a review of the Fen Meadow Mitigation Study, provided in **Appendix 14C4** of this volume.

1.2 Legislation, policy and guidance

1.2.1 **Volume 1, Appendix 6J** of the **ES** provides a description of legislation, policy and guidance relevant to the assessment of terrestrial ecology and ornithology effects of the Sizewell C Project. There is no further legislation, policy and guidance over and above that described in **Volume 1, Appendix 6J** of the **ES** is deemed relevant to the assessment of effects associated with the off-site development works.

1.3 Methodology

a) Scope of the assessment

1.3.1 The generic Environmental Impact Assessment (EIA) methodology is detailed in **Volume 1, Chapter 6** of the **ES**. The full method of assessment for terrestrial ecology and ornithology that has been applied for the Sizewell C Project is included in **Volume 1, Appendix 6J** of the **ES**.

1.3.2 The scope of this assessment has been established through a formal EIA scoping process undertaken with the planning inspectorate. A request for an EIA scoping opinion was initially issued to the planning inspectorate in 2014, with an updated request issued in 2019. Comments raised in the EIA Scoping Opinion received in 2014 and 2019 have been taken into account in the development of the assessment methodology. These are detailed in **Volume 1, Appendices 6A to 6C** of the **ES**.

1.3.3 This section provides specific details of the terrestrial ecology and ornithology screening exercise, as detailed below, methodology applied to the assessment of the proposed off-site development works screened in, and a summary of the general approach to provide appropriate context for the assessment that follows.

1.3.4 Where the proposed off-site development works are considered to have the potential for likely significant effects, these have been screened in for further assessment. The scope of assessment considers the impacts of the construction and operational use of the proposed off-site developments.

b) Consultation

1.3.5 The scope of the assessment has also been informed by ongoing consultation and engagement with statutory consultees throughout the design and assessment process. A summary of the comments raised specifically regarding the assessment of off-site developments and SZC Co.'s responses, or directly relevant to them, are detailed in **Table 1.1**.

Table 1.1: Summary of consultation responses that have informed the scope and methodology of the terrestrial ecology and ornithology assessment.

Consultee	Date	Comment	SZC Co. response.
Environment Agency	27 September 2019	Government requires developers to contribute to and enhance the natural and local environment. The 25 Year Environment Plan (published in 2018) confirms Government’s move to embed an ‘environmental net gain’ principle for development. We will work with you to help identify how and where ‘environmental net gain’ can be delivered as part of your development proposals.	Biodiversity Net Gain calculations have been completed as part of the development assessment. In accordance with the Biodiversity Net Gain approach, the areas of the Sizewell Marshes SSSI impacted by the proposal and the compensatory habitats provided for the loss of fen meadow have been excluded from the assessment.
Environment Agency	27 September 2019	Temporary loss of an additional 0.37 hectares (ha) of SSSI compared with the Stage 3 proposals in this location.	Land take for the development will result in the loss of approximately 0.7ha of fen meadow. A fen meadow strategy has been developed to identify sites in Suffolk on which good quality, permanent fen meadow would be developed to compensate for the permanent loss of fen meadow habitat from within Sizewell Marshes SSSI, associated with the construction of the main platform and the diversion of the Sizewell Drain.
Environment Agency	27 September 2019	Fen meadow compensation land site 1 is located adjacent to the River Fromus which is designated a main river. It is also located in Flood Zone 3. The areas of land indicated in this consultation show the total size of the parcels of land included in the red line boundary for fen meadow creation instead of showing the quantum within each parcel with suitable conditions to successfully create fen meadow. It will be necessary to secure additional funding to ensure the fen meadow loss is compensated for in the future if these sites fail.	The constraints are noted and will be considered as more detailed proposals are developed. The application boundary extends to the appropriate field boundaries and includes access considerations. The quantum of fen meadow within each boundary will be maximised and this be clearer as more detailed proposals are developed. In the event of failure to deliver fen meadow habitats, additional funding would be provided to deliver fen meadow habitats in other locations.
Environment Agency	27 September 2019	Fen meadow compensation land site 2 is located adjacent to the Walpole River which is designated a main river. It is also located in	The constraints are noted and considered as more detailed proposals are developed.

Consultee	Date	Comment	SZC Co. response.
		Flood Zone 3 near Halesworth which is a community that has a history of flooding.	<p>The application boundary extends to the appropriate field boundaries and includes access considerations.</p> <p>The quantum of fen meadow within each boundary will be maximised and this be clearer as more detailed proposals are developed.</p> <p>In the event of failure to deliver fen meadow habitats, additional funding would be provided to deliver fen meadow habitats in other locations.</p>
Natural England	3 October 2019	<p>We note that three areas of off-site land have been proposed at Stage 4 to mitigate for the loss of marsh harrier (internationally and nationally important) foraging habitat as a result of the proposed development.</p> <p>As a first principle, we advise that the existing biodiversity value of these areas (including for protected and priority habitats and species) must be assessed and any impacts avoided, mitigated or compensated. We understand that one or more of the proposed parcels of land are in existing agri-environment schemes which deliver benefits for wildlife. Consideration must therefore be given to any impacts on the scheme and implications for the agreement holder.</p> <p>In terms of their role as marsh harrier mitigation, we note that these areas are referred to as 'compensation' within the Stage 4 Consultation document; it should be noted that, in HRA terms, the implementation of European site compensation measures can only be considered once it has been demonstrated that mitigation is not possible, that there are no alternatives and once 'imperative reasons of overriding public interest' have been concluded.</p>	<p>The potential off site marsh harrier mitigation sites have been reduced to one possible location at Westleton.</p> <p>The impacts on the Westleton site are reviewed briefly below. If required the area of land would be managed specifically to enhance communities of small mammals and birds and no adverse impacts on biodiversity are expected.</p> <p>A Shadow Habitats Regulations Assessment Report (Doc Ref. 5.10) has been produced in which the impacts to marsh harrier have been assessed and which concludes that the potential for an adverse effect of the integrity of the Minsmere to Walberswick SPA cannot be completely excluded in relation to this species.</p>

Consultee	Date	Comment	SZC Co. response.
		<p>Clarification is therefore needed within the shadow HRA/ RIAA in this context.</p> <p>We understand that these areas are additional to the core on-site mitigation area which was proposed at Stage 3, and have been put forward in case the on-site habitat provides insufficient foraging for marsh harriers. We advise that the necessary assessments to quantify the amount of foraging resource to be lost to the development, both in terms of Sizewell Marshes SSSI and the surrounding arable land, should be confirmed as soon as possible so that the mitigation/ compensation requirements can be clearly defined. This should factor in interference of auditory cues used by marsh harrier to capture their prey which might also affect their foraging behaviour. These assessments should provide clarification on whether these off-site areas would be implemented from the outset, or be set aside as contingency to be triggered into use should monitoring of the core on-site mitigation area show that it provides insufficient mitigatory foraging for marsh harriers.</p> <p>As stated in our Stage 3 Consultation response, we welcome the general principle of providing alternative foraging habitat as mitigation for impacts, including provision of dry habitats (as described in paragraph 5.10.5 of the Stage 4 Consultation document) to support large populations of marsh harrier prey species across the northern part of the EDF Energy Estate in advance of construction. As we have previously advised, the creation of wetland habitat would be preferable as part of this approach if at all possible and this should be fully explored for both</p>	<p>The derogation documentation is presented alongside the main Shadow Habitats Regulations Assessment Report and forms part of the application. The marsh harrier habitats created are therefore regarded as compensation within that context.</p> <p>SZC Co. does not believe that the offsite marsh harrier habitat improvement area at Westleton would be required, based upon the assessment methodology which excludes 'displacement from arable'. The onsite habitats are considered sufficient, particularly given the wetland elements now included (see below). However the Westleton site is included to allow for the possibility that there is an alternative conclusion reached during the planning process.</p> <p>Areas of reedbed and wet woodland are to be created within the marsh harrier improvement area in the north of the EDF Energy Estate within one of the areas designated for flood compensation and will further enhance this area for marsh harriers, beyond what can be achieved solely with even very diverse, well managed, dry habitats. These habitats would be planted in the first winter of construction. SZC Co. is keen to work with Natural England and other parties to optimise these habitats.</p>

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Consultee	Date	Comment	SZC Co. response.
		<p>the on-site (see comment 10 below on Flood Compensation Areas (FCAs)) and additional off-site areas proposed at Stage 4.</p> <p>We would welcome clarification on this within the EIA and shadow HRA/ RIAA and would be keen to provide further advice on the details of the habitat creation once these points have been confirmed.</p>	
Natural England	3 October 2019	<p>As acknowledged in the Stage 4 Consultation document, the proposed development would lead to a permanent loss of Sizewell Marshes SSSI notified habitat extent, including fen meadow among other habitat types (see our Stage 3 response for our full detailed advice on this).</p> <p>Firstly, it should be acknowledged that it will be extremely difficult to create fen meadow of the same quality to that which will be destroyed within the SSSI.</p> <p>Secondly, the exact amount of fen meadow which would be destroyed by the proposals has yet to be confirmed, but we understand it to be in the region of 0.5 ha as referenced in the Stage 4 Consultation document. We advise that this figure should be confirmed as soon as possible and that it should include all areas which would be permanently lost to the footprint of the main platform itself, and through wider construction works in and around the SSSI. It should also take account of impacts to the remaining habitat adjacent to that which will be destroyed, and any additional losses from this. In terms of compensating for this loss, we welcome the work that has been carried out since the project restart by SZC Co. and its consultants to identify potential compensation sites.</p>	<p>Land take would also result in the loss of approximately 0.7ha of fen meadow A. Fen meadow strategy has been developed to identify sites in Suffolk on which new, good quality, permanent fen meadow would be developed to compensate for the permanent loss of fen meadow habitat from within Sizewell Marshes SSSI, associated with the construction of the main platform and the diversion of the Sizewell Drain (see above).</p> <p>For permanent fen meadow compensation areas, with mitigation in place in the form of an appropriate construction method statement and operational management plan, no likely significant effects associated with the construction and operation of these sites have been identified.</p> <p>The sites identified appear to have suitable hydrological regimes which could be modified, although fen meadow establishment would also depend on appropriate management potentially including the import of “green hay” from Sizewell Marshes SSSI or other areas of fen meadow and potentially some use of turf transfer from the</p>

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Consultee	Date	Comment	SZC Co. response.
		<p>Again, as a first principle, we advise that the existing biodiversity value of these areas and the wider catchment (including for protected and priority habitats and species) must be assessed and any impacts avoided, mitigated or compensated. Furthermore, the works present opportunities for wider biodiversity enhancements including wider river restoration etc.; as we have raised a number of times since the Stage 1 Consultation (2013), holistic headwater seepage, floodplain and river restoration is likely to be the most successful and sustainable approach to providing this compensatory habitat.</p> <p>In line with our previous advice, the compensation sites must represent restoration of former fen meadow rather than enhancement of existing fen meadow. We advise that this restoration should be to base-rich groundwater-fed fen/fen meadow of which M22 <i>Juncus subnodulosus-Cirsium palustre</i> is a particular type. The M22 fen meadow is found across much of the UK and its composition varies considerably according to geography and other environmental factors. This type of vegetation normally occurs alongside other base rich groundwater-fed fens, including some that are rarer and support rarer species, such as M9 <i>Carex rostrata-Calliergon cuspidatum/giganteum mire</i>, which would occur in slightly wetter and slightly lower nutrient conditions than M22. If the restorations could create the range of conditions in which these vegetation complexes occur, the result would be far richer and probably more resilient than trying to create 'M22' only. Some turf/topsoil removal would certainly be required in order to do this. Some of the species in the best 'M22' at Sizewell, such as <i>Eriophorum angustifolium</i>, are more typical of M9-type conditions</p>	<p>part of Sizewell Marshes SSSI subject to land-take. Further assessment to maximise the extent of fen meadow, and potentially wet woodland at these sites is ongoing. Natural England's detailed points are noted and will be considered further as the next phase of study at these two sites is taken forward.</p>

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		<p>and we advise that this is what should be aimed for in at least some of the restoration sites.</p> <p>Natural England suggests that the environmental parameters would need to be in line with local high quality M22 stands, otherwise there may be issues concerning a mismatch of, for example, groundwater levels and rainfall that then causes problems for the developing habitat (e.g. should a lower groundwater level be identified as working, this may be due to a higher rainfall which supports the system). The nature of the M22 sites means that they are frequently on valley bottoms on peat or on flushes, with the currently identified sites being the former. We advise that the long term viability of the compensation sites will need to be investigated, for example:</p> <ul style="list-style-type: none"> • How dependable are the water supplies and water chemistry? We advise that this should include at least consideration of nutrient status of groundwater, particularly N concentration, and current groundwater abstraction pressures on the aquifer; • Is there a risk from sea level rise causing flooding, changes to hydraulic gradients or inundation with saline/brackish water? • What are the implications from climate breakdown and the potential impacts of the longer growing seasons, droughts, winter flooding, higher winter water-tables, altered flow regimes, greater fluctuation in the water table levels, nutrient enrichment from peat mineralisation and reduced dilution rates? • How can the restored areas be made resilient to such pressures? We advise that this is likely to be through 	

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		<p>renaturalising the system, thereby allowing movement of habitat and species along hydrological and chemical gradients;</p> <p>We advise that the extent of compensatory habitat required is 9x that which would be destroyed by the development; this is considered a suitable multiplier given the complexity of habitat type to be lost, the risk and uncertainty involved in the habitat restoration being successful and the time to fully functioning habitat. Furthermore, once a satisfactory compensation figure is agreed, we advise that contingency measures must be considered should the fen meadow habitat restoration prove unsuccessful. A management and monitoring plan should also be included in the DCO application submission to secure the long-term management of the sites.</p> <p>We understand that SZC Co. are currently undertaking further detailed feasibility studies for these compensation sites. Once these studies have been completed, we would be keen to provide further advice at the earliest opportunity.</p>	
Natural England	3 October 2019	<p>As acknowledged in the Stage 4 Consultation document, along with reedbeds, ditches and fen meadow, wet woodland is one of the habitats within Sizewell Marshes SSSI which would be destroyed by the development of the main power station platform.</p> <p>As highlighted in our Stage 3 Consultation response, “<i>although not a notified feature of Sizewell Marshes SSSI itself...the wet woodland which will be lost is both a NERC Act section 41 priority habitat and an important habitat for the invertebrate assemblage for</i></p>	<p>Since Phase 4 consultation, 0.7ha of wet woodland is now proposed to the west of the Grove in the marsh harrier habitat improvement area.</p> <p>Further wet woodland opportunities are as follows:</p> <ul style="list-style-type: none"> • Creation of wet woodland within the Aldhurst Farm habitat compensation area. • Allowing the reedbed proposed in the marsh harrier habitat improvement area, to develop into reed-bed in the longer term, via natural successional processes.

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		<p><i>which the SSSI is notified; mitigation/compensation for this loss will therefore need to be considered</i>".</p> <p>This issue does not appear to have been addressed any further in the Stage 4 Consultation which is disappointing. We therefore seek clarification on how this significant omission will be addressed within the EIA and are keen to discuss this further with SZC Co. at the earliest opportunity.</p>	<ul style="list-style-type: none"> Creation of wet woodland at one of offsite Fen Meadow locations (see above).
Natural England	3 October 2019	<p>The Stage 4 Consultation document shows two parcels of land which have been identified as potential FCAs which are proposed to mitigate the loss of floodplain volume at the SSSI crossing. One of these is adjacent to Minsmere SAC, SPA, Ramsar site and SSSI and the other to Sizewell Marshes SSSI.</p> <p>Again, as a first principle, we advise that the existing biodiversity value of these areas (including for protected and priority habitats and species) must be assessed and any impacts avoided, mitigated or compensated. This must include full assessment of potential hydrological impacts to the internationally and nationally designated sites within the shadow HRA/ RIAA and EIA.</p> <p>For the FCA which is proposed adjacent to Minsmere, this is also within the core on-site marsh harrier mitigation area. This could potentially compromise the effectiveness of that mitigation by reducing the habitat extent and introducing of a source of disturbance the wider area. However, if appropriately designed, it could also offer potential for wetland habitat creation (as outlined in paragraph 5.12.6 of the Stage 4 Consultation document) which could be of benefit in terms of marsh harrier foraging mitigation (see</p>	<p>The two FCAs are no longer required for this function. However, as noted above, one of these areas would be used to create both wet woodland and additional reedbeds.</p> <p>The potential impacts of creating both the wetland area and a temporary water storage area are assessed in both the HRA and ES as relevant.</p>

Consultee	Date	Comment	SZC Co. response.
		<p>our comment 7 above). This must also be assessed within the shadow HRA/ RIAA and EIA.</p> <p>As acknowledged in paragraph 5.12.3, the FCAs present the potential for wider biodiversity enhancements which could compliment the surrounding habitats and species. We would be keen to discuss this further with SZC Co. at the earliest opportunity.</p>	
Natural England	3 October 2019	<p>As we continue to advise, it is imperative that the proposed Sizewell C Project as a whole avoids, mitigates and/or compensates for impacts on habitats and species of high biodiversity value including designated sites, protected species and priority habitats and species. This should essentially represent no 'biodiversity net loss' in these regards.</p> <p>Whilst not explicitly stated in the Stage 4 Consultation document, we understand and welcome that SZC Co. has, since Stage 3, committed to delivering 'biodiversity net gain' over and above this through the Sizewell C Project.</p> <p>The biodiversity net gain approach has been developed to not only help halt declines in wildlife by conserving what habitats and species are left, but begin the task of restoring some of what has been lost. In simple terms, biodiversity net gain calculations would, using the recently released Defra biodiversity net gain metric 2.0, compare the current biodiversity value of the habitats within your development red line boundary to be lost (excluding designated sites and priority habitats) with the biodiversity value of the forecast habitats to be created following development, with the intention</p>	<p>Biodiversity Net Gain calculations, using net gain metric 2.0, have been undertaken as part of this assessment which have resulted in a net gain in biodiversity once the habitats defined in the Operational Landscape Masterplan and in the Outline Landscape and Ecology Masterplan are in place.</p> <p>The Biodiversity Net Gain report is provided at Appendix 14E of this volume.</p>

Consultee	Date	Comment	SZC Co. response.
		<p>being to demonstrate an overall increase in biodiversity value (minimum 10 %).</p> <p>This approach fits well with your existing commitment to enhance the biodiversity value of the wider EDF Energy Estate by returning currently arable land (generally lower biodiversity value) back to seminatural habitats such as grassland and heathland post-construction (generally high biodiversity value). As stated within our Stage 3 Consultation response, we welcome this commitment and agree that a project of this scale presents excellent opportunities for SZC Co., as a custodian of the Suffolk Coast, to provide a long-term environmental legacy which would be hugely beneficial to wildlife and people in the local area. Possible socio-economic and environmental benefits of such a legacy could include:</p> <p>Enabling wildlife to adapt to the challenges of the future including habitat fragmentation, climate change etc.;</p> <p>Providing a wealth of natural capital benefits such as flood prevention, improved air quality, improved soils, clean water etc.;</p> <p>Providing inspiration and enjoyment for people through regular access to a high quality natural environment, improving community health and wellbeing (both mental and physical). This should include enhancement of public access where practical (i.e. where it would not compromise the biodiversity interest) and could also involve local stewardship of any new habitat creation.</p> <p>Furthermore, the government recently announced in June 2019 that it would legislate for net zero greenhouse gas emissions by 2050. Achieving net zero emissions globally is essential to meeting commitments under the Paris Agreement to hold the level of climate change to substantially less than 2 °C and pursue efforts to limit it</p>	

Consultee	Date	Comment	SZC Co. response.
		<p>to 1.5 °C above the pre-industrial average. Creation of semi-natural habitats can help mitigate climate change by adopting practices which promote carbon storage and reduce emissions. In addition to enhancing the biodiversity value of the local area, semi natural habitats such as grassland and heathland would take up and store significant amounts of carbon in soils and vegetation and act as a 'Natural Climate Solution'. See Carbon storage by habitat: Review of the evidence of the impacts of management decisions and condition of carbon stores and sources (NERR043) for more information on the specifics for grassland and heathland.</p> <p>In addition to the considerable ecological benefits, such an approach would also be hugely important as a landscape and visual mitigation measure in this part of the Suffolk Coast and Heaths AONB, commensurate with its nationally designated status. Establishing a strong landscape character which reinforces and lifts the landscape quality can help to indirectly mitigate those significant impacts of the scheme which cannot be directly mitigated by altering the design or location of buildings or by screening. This is therefore the only way in which the Sizewell C Project can provide for landscape net gain.</p> <p>We are keen to discuss this further with SZC Co. at the earliest opportunity to ensure that biodiversity net gain is achieved and the long-term environmental legacy fully realised.</p>	

c) Environmental screening

1.3.6 An environmental screening exercise was undertaken to identify which of the off-site development works may give rise to environmental effects that could potentially be significant. This concluded that the fen meadow compensation off-site development works should be taken forward to the assessment of likely effects on water voles.

1.3.7 The sports facilities at Leiston and the marsh harrier habitat improvement area (Westleton) have been screened out of the terrestrial ecology and ornithology assessment as they are not likely to give rise to significant environmental effects.

1.3.8 **Table 1.2** provides a summary of the environmental screening exercise.

Table 1.2: Summary of environmental screening exercise.

Proposed off-site developments.	Summary of Potential Effects.	Screened In or Out of the Assessment.
Sports facilities at Leiston.	Additional flood lighting may affect bats foraging along mature tree line, but no obvious roost features identified and area already relatively well lit.	Screened out.
Fen meadow compensation site south of Benhall.	Potential for water voles to be affected by works to restore fen meadow. May support ground nesting birds.	Habitat restoration works likely to occur outside of bird breeding season. Screened in for water voles.
Fen meadow compensation site east of Halesworth.	Potential for water voles to be affected by works to restore fen meadow. May support ground nesting birds.	Habitat restoration works likely to occur outside of bird breeding season. Screened in for water voles.
Marsh harrier habitat improvement area - west of Westleton.	Arable fields contain ponds likely to support great crested newts. Arable fields likely to support ground nesting birds.	Habitat creation works will likely involve the sowing of dense grass crop so activities no more invasive than standard agricultural operations and will be timed to occur outside of bird breeding season. Screened out.

d) Study area

1.3.9 Due to the discrete nature of the works, the study area has focused on the area encompassed by the site boundary.

e) Assessment scenarios

- 1.3.10 The fen meadow habitat creation would be permanent and maintained for both the construction and operational phase of the main development site. Fen meadow creation would take place as soon as possible upon receiving a DCO. Although remote from the main development site, these works can be regarded as forming part of the early works of the construction phase for the main development site and would be operational (the management of the fen meadow habitat) for the duration of both the construction and operational phases of the main development site.

f) Assessment criteria

- 1.3.11 As described in **Volume 1, Chapter 6** of the **ES**, the EIA methodology considers whether impacts of the proposed off-site developments would have an effect on any resources or receptors. Assessments broadly consider the magnitude of impacts and value/sensitivity of resources/receptors that could be affected in order to classify effects.

- 1.3.12 A detailed description of the assessment methodology used to assess the potential effects on terrestrial ecology and ornithology arising from the proposed off-site developments is provided in **Volume 1, Appendix 6J** of the **ES**.

g) Assessment methodology

- 1.3.13 Due to the discrete nature of the works the assessment has been based on a review of readily available web-based information, as well as the information collated within Wood (Ref. 1.2) in the Fen Meadow Compensation Study.

h) Assumptions and limitations

- 1.3.14 The following assumption has been made in this assessment:
- that the habitat creation works would be undertaken outside of the bird breeding season.

1.4 Assessment of effects

- 1.4.1 As identified in **section 1.3c** of this chapter, the two fen meadow compensation sites are considered to have the potential to result in **significant** environmental effects and have therefore been assessed in further detail. The sports facilities and marsh harrier habitat improvement area (Westleton) are considered not likely to result in significant environmental effects during their construction or operation.

- 1.4.2 The main impact arising from the fen meadow creation would be the potential for the works required to impact on water levels which may disturb or cause incidental mortality to water voles (if present).
- 1.4.3 **Table 1.3** summarises the outcome of the assessment of the likely effects of the off-site development works screened into the assessment. For each site, the baseline environment is described, and any environmental design and embedded mitigation is outlined, and a summary of the likely effects, before and after any additional mitigation and monitoring (if required) is provided.

Table 1.3: Summary of the assessment of effects for off-site developments.

Baseline environment.	Environmental design and embedded mitigation.	Assessment of effects.	Additional mitigation and monitoring.	Residual effect.
Fen meadow compensation site adjacent to Benhall.				
<p>Current baseline: Species poor flood plain grassland of local/less than local value but ditches and river support habitat suitable for water voles.</p> <p>Future baseline: Following habitat creation fen meadow will still be able to support water voles.</p> <p>Assuming restoration works are successful, the value of the site is likely to increase botanically and for water vole.</p>	<p>Construction: Development of a bespoke reasonable avoidances measures construction method statement. Before construction works commence a baseline survey would be carried out to establish presence and distribution of water voles and burrows. Engineering works would be designed to avoid disturbance or harm to water voles.</p> <p>Operation: Development of an operational management plan. Future management will ensure maintenance of conditions suitable for water voles.</p>	<p>Construction: Potentially significant depending on scale of construction works.</p> <p>Operation: Habitat creation likely to be beneficial for water voles and significant.</p>	<p>Construction: None envisaged.</p> <p>Operation: Execution of an operational management plan. Monitoring to ensure continued presence of water voles (if present).</p>	<p>Construction: No residual effects.</p> <p>Operation: Residual beneficial effects.</p>

Baseline environment.	Environmental design and embedded mitigation.	Assessment of effects.	Additional mitigation and monitoring.	Residual effect.
Fen meadow compensation site adjacent to Halesworth.				
<p>Current baseline: Species poor flood plain grassland of local/less than local value but ditches and river support habitat suitable for water voles.</p> <p>Future baseline: Following habitat creation fen meadow will still be able to support water voles.</p> <p>Assuming restoration works are successful, the value of the site is likely to increase botanically and for water vole.</p>	<p>Construction: Development of a bespoke reasonable avoidances measures construction method statement. Before construction works commence a baseline survey would be carried out to establish presence and distribution of water voles and burrows. Engineering works would be designed to avoid disturbance or harm to water voles.</p> <p>Operation: Development of an operational management plan. Future management will ensure maintenance of conditions suitable for water voles.</p>	<p>Construction: Potentially significant depending on scale of construction works.</p> <p>Operation: Habitat creation likely to be beneficial for water voles and significant.</p>	<p>Construction: None envisaged.</p> <p>Operation: Execution of an operational management plan. Monitoring to ensure continued presence of water voles (if present).</p>	<p>Construction: No residual effects.</p> <p>Operation: Residual beneficial effects.</p>

References

- 1.1 Natural England. Ancient Woodlands (England) Inventory. MAGIC, 2019. (Online) Available from: <https://data.gov.uk/dataset/9461f463-c363-4309-ae77-fdcd7e9df7d3/ancient-woodlands-england>.
- 1.2 Wood. 2019. Sizewell C. Fen Meadow Compensation Study – Reports of Visits to Target Sites 2019.