

Dogger Bank C/Sofia Onshore Works Application

Appendix 4 - Ecology Assessment

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1 Introduction

1.1 Purpose of the Report

This Report accompanies the Environmental Appraisal which is submitted to support the planning application (the Application) made by Doggerbank Offshore Wind Farm Project 3 Projco Limited (the Projco) and Sofia Offshore Wind Farm Limited (SOWFL) (the Applicants), for consent pursuant to Section 62 of the Town and Country Planning Act 1990 as amended¹.

A Development Consent Order (2015 DCO) was granted for Dogger Bank Wind Farm C (previously known as Dogger Bank Teesside A Offshore Wind Farm) and Sofia Offshore Wind Farm (previously known as Dogger Bank Teesside B Offshore Wind Farm) (the Applicants' Projects), including the onshore transmission works required to export electricity to the grid in August 2015.

The Application includes five areas of alternative and additional infrastructure to the consented 9 kilometres (km) buried onshore grid connection, spanning from the landfall for Dogger Bank Wind Farm C (DB-C) and Sofia Offshore Wind Farm (Sofia) to the National Grid at Lackenby Substation (the Works).

This Report addresses the potential effects on ecological features arising from the Works. The baseline for the assessment includes information from the 2014 Environmental Statement (ES)² and surveys and studies undertaken in 2020 to inform the Application. The scope of the assessment has been determined through consultation with Natural England, reference to good practice guidelines, and professional judgement.

The information presented in this Report demonstrates that there is no alteration to the realistic worst case as assessed and accepted within the 2014 ES (see Section 4.2 and Table 7.1). It can be concluded with a very high degree of confidence that there will be no increase in effects on relevant ecological features from those identified within the 2014 ES.

1.2 Development Context

For the ease of reference, the Works, as shown in Figure 1.2 (a – c) of the Environmental Appraisal, is split into areas as below:

- Area 1 – A174 Crossing;
- Area 2 – South of Kirkleatham Memorial Park;
- Area 3 - Wilton East;
- Area 4 - Main Welfare Hub south of Wilton; and
- Area 5 - HVAC Cable Corridor.

1.3 Document Structure

This Report is structured as follows:

¹ UK Government (1990) Town and Country Planning Act 1990 [Online] Available at: <http://www.legislation.gov.uk/ukpga/1990/8/contents> (Accessed June 2020)

² Forewind (2014) Dogger Bank Teesside A & B ES

- Introduction;
- Methodology;
- Baseline for Assessment;
- Assessment of Potential Effects;
- Mitigation and Enhancement;
- Cumulative Effects; and
- Summary and Statement of Change/No Change.

This Report is supported by Annex A: Ecology Survey Report 2020 and accompanying figures. It should be read in conjunction with Chapter 25 Terrestrial Ecology of the 2014 ES. Where relevant to this Report, references to specific parts of the aforementioned documents are provided.

2 Methodology

2.1 Introduction

This Section provides an overview of the scope of the assessment, including those potential effects which have been scoped out and the assessment methods. It also provides a summary of the legislation and policies relevant to terrestrial ecology. This assessment uses the same scope as the 2014 ES as applicable to the Works in relation to the identification of Important Ecological Features (IEFs) and the assessment of potential effects.

Given the location and limited extent of the Works, and using the consented 2015 DCO as a baseline, this Report has been scoped proportionately in terms of its study area and the ecological features warranting assessment.

2.2 Effects Scoped Out

The assessment and mitigation presented in the 2014 ES and the conditions set out in the 2015 DCO provide rationale for scoping out several potential effects as they are either not relevant to the Application or will be at such low levels that they do not require assessment.

2.2.1 Operational Phase

The majority of the potential ecological effects identified in the 2014 ES were associated with the construction phase, and no operational effects were predicted for most of the receptors considered in the assessment (Designated Sites, Hedgerows, Breeding Birds, and Wintering Birds). Bats were considered to be potentially sensitive to and affected by lighting on the converter stations, however the converter stations are not included within the Works. Consequently, potential effects arising during the operation of the Works are not considered further in this assessment.

2.2.2 Decommissioning Phase

Decommissioning activities are considered to be of a similar character to those of construction and are not assessed separately within this Report.

2.3 Policy and Guidance

2.3.1 Legislation, Policy and Guidance

The following legislation, policy and guidance relevant to the assessment of the ecological effects of the Works has been introduced or revised since the 2014 ES:

- The Conservation of Habitats and Species Regulations 2017 (as amended) (“the Habitat Regulations”)³;
- National Planning Policy Framework (NPPF) (2019)⁴;
- Redcar and Cleveland Local Plan (2018)⁵;
- South Tees Supplementary Planning Document (SPD) (2018)⁶;
- South Tees Regeneration Master Plan (2019)⁷;
- Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal (2019)⁸; and
- The Environment and Wildlife (Legislative Functions) (EU Exit) Regulations 2019⁹.

2.4 Scope of Baseline Studies

2.4.1 Study Area

The ecology study areas are shown in Figure 1.1. The survey areas and assessments undertaken in the 2014 ES covered the complete length of the onshore cable corridor and associated works as consented by the 2015 DCO. Where feasible and applicable, those aspects pertinent to the Works have been included in the baseline for consideration of potential effects.

2.4.2 Desk Study

Up-to-date information about designated sites and records of legally protected and notable habitats and species was sought from various sources. Full details are provided in Annex A: Ecology Survey Report 2020.

³ UK Government. *The Conservation of Habitats and Species and Planning (Various Amendments) (England and Wales) Regulations 2017* [Online] Available at: <http://www.legislation.gov.uk/ukxi/2018/1307/contents/made> (Accessed June 2020)

⁴ UK Government (2019) *National Policy Planning Framework 2019* [Online] Available from: <https://www.gov.uk/government/publications/national-planning-policy-framework-2> (Accessed June 2020)

⁵ Redcar and Cleveland Local Plan, Adopted May 2018 [Online] Available at: <https://www.redcar-cleveland.gov.uk/resident/planning-and-building/strategic%20planning/Documents/Local%20Plan%20Adopted%20May%202018.pdf> (Accessed June 2020)

⁶ South Tees SPD, adopted May 2018 [Online] Available at: <https://www.southteesdc.com/wp-content/uploads/2019/04/South-Tees-Area-SPD-Adopted-May-2018.pdf> (Accessed June 2020)

⁷ South Tees Regeneration Master Plan. November 2019 [Online] Available at: www.southteesdc.com/wp-content/uploads/2020/01/South-Tees-Master-Plan-Nov-19-2.pdf (Accessed June 2020)

⁸ CIEEM (2019) *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine*. Chartered Institute of Ecology and Environmental Management, Winchester.

⁹ UK Government. *The Environment and Wildlife (Legislative Functions) (EU Exit) Regulations 2019 No. 473* [Online]. Available at: <http://www.legislation.gov.uk/ukxi/2019/473/contents/made> (Accessed June 2020)

2.4.3 Ecology Surveys

Several studies have been repeated or updated in 2020 in order to provide an up-to-date and comprehensive baseline against which to assess the effects of the Works. The scope of the 2020 studies has been determined by the design of the Works, the scope of the 2014 ES, advice from Natural England, and prevailing good practice.

Where relevant, information from the 2014 ES baseline is summarised in the relevant sections to provide rationale for scope of the 2020 surveys and to provide context for the 2020 survey results. The following surveys have been completed in 2020, and their rationale, methods and results are presented in Annex A - Ecology Survey Report 2020:

- Phase 1 Habitat Survey;
- Great Crested Newt Habitat Suitability Index (HSI) assessment and presence/absence surveys;
- Initial Badger Assessment;
- Bat Roost (Tree) Potential Assessment; and
- Riparian Mammals (Otter and Water Vole) survey.

2.5 Assessment Methodology

The assessment of ecological impacts follows the Chartered Institute for Ecology and Environmental Management (CIEEM) Guidelines for Ecological Impact Assessment (EclA) in the UK and Ireland. EclA is a systematic and repeatable process of identifying, quantifying and evaluating the potential effects of development-related or other proposed actions on habitats, species and ecosystems (collectively termed 'ecological features').

EclA can be applied to projects of any scale and is not limited to providing the ecological component of an Environmental Impact Assessment (EIA). It is equally applicable to determining how a project accords with relevant planning policy and legislation where an EIA is not required.

The assessment considers the sensitivity of receptors within the Study Area and magnitude of any potential effects as a result of the Works, as detailed in Tables 2.1 and 2.2.

Table 2.1: Receptor Sensitivity / Ecological Value

Level of Importance	Sensitivity	Criteria
International	Very High	<ul style="list-style-type: none"> • The population has little or no ability to absorb change without fundamentally altering its present character (i.e. the population of a rare and sensitive species in significant decline). • An internationally designated site (e.g. a Special Area of Conservation (SAC)) or a site meeting criterion for international designations. • Species present in internationally important numbers (> 1 % of biogeographic populations).
National	High	<ul style="list-style-type: none"> • The population has low ability to absorb change without fundamentally altering its present character (i.e. the population of an uncommon or rare species in decline, or a common species in significant decline) • A nationally designated site (e.g. a Site of Special Scientific Interest (SSSI)) or a site meeting criterion for national designations.

Level of Importance	Sensitivity	Criteria
		<ul style="list-style-type: none"> Species present in nationally important numbers (> 1 % English population). Large areas of priority habitats listed on Annex I of the Habitats Directive and smaller areas of such habitats that are essential to maintain the viability of that ecological resource.
Regional	Medium	<ul style="list-style-type: none"> The population has moderate capacity to absorb change without substantially altering its present character. (i.e. an uncommon or rare but stable species, or a common/widespread but declining species) Species present in regionally important numbers (> 5 % North East population). Sites not meeting criteria for SSSI selection but of greater than the regional criteria below. Large areas of priority Biodiversity Action Plan (BAP) habitat.
Local	Low	<ul style="list-style-type: none"> The population is tolerant of change without detriment to its character (a common/widespread species population that is stable, or an uncommon species is improving). A species or habitat of low conservation value. Local Nature Reserves or non-statutory designated sites (Local Wildlife Sites). Areas of habitat or species considered to appreciably enrich the ecological resource within the area local to the Works.
Less than Local Importance	Negligible	<ul style="list-style-type: none"> The defined population is resistant to change (any population that is improving its range and abundance) Population of little conservation value. Usually widespread and common habitats and species. Loss of such a species from the Works would not be detrimental to the ecology of the local area.

Table 2.2: Magnitude of Effect

Level of Importance	Criteria
High	A fundamental change to the baseline condition of the asset, leading to total loss or major alteration of character.
Medium	A material, partial loss or alteration of character.
Low	A slight, detectable, alteration of the baseline condition of the asset.
Negligible	A barely distinguishable change from baseline conditions.

A conclusion on the level of potential effect is drawn based on the receptor sensitivity and the magnitude of effects identified. In accordance with CIEEM guidance, this is made by professional judgement.

Following this assessment, consideration is given to the potential effects from the Works to determine if they are different from those identified within the 2014 ES which were considered acceptable.

3 Baseline for Assessment

The baseline for assessment includes a combination of results from the 2014 ES and the more recent Annex A: Ecology Survey Report 2020, and these reports provide full and detailed results. The following sections summarise and combine the results into a single, coherent baseline appropriate for the Works which, where relevant, highlights any notable differences.

Further comparisons between the 2014 ES and the 2020 survey results are provided in Annex A: Ecology Survey Report 2020. This section also identifies IEFs to be considered in the subsequent assessment of effects.

3.1 Designated Sites

There are eight statutory designated sites within 5 km of the Works (Figure 1.2). The 2014 ES concluded that none of these sites had ecological connectivity to the 2015 DCO Limits and this conclusion remains unchanged for the Works, despite the expansion southwards of the Teesmouth and Cleveland Coast SPA (formerly pSPA) into the Redcar to Saltburn Coast Local Wildlife Site (LWS).

There are seven non-statutory designated LWS within 2 km of the Works. The 2014 ES identified two LWS but considered only a smaller (1 km) search area; the five additional sites are all within the expanded search area. The 2014 ES concluded that the works in 2015 DCO have the potential to impact only one LWS, Redcar to Saltburn Coast LWS, which bordered the eastern boundary of the 2015 DCO.

Redcar to Saltburn Coast LWS (which includes part of the Teesmouth and Cleveland Coast SPA (formerly pSPA) is located 1.5 km east of the Works and is important for its bird assemblage. The 2014 ES concluded that effects to these birds during construction, operation and decommissioning of the works in the 2015 DCO (which included a much larger area and sensitive coastal areas not currently affected by the Works) would not be significant with the implementation of mitigation. Given the 2014 ES mitigation and the more restricted extent of the Works, as well as the large separation distance from the LWS and habitats of importance for coastal birds, further assessment of effects to the Redcar to Saltburn Coast LWS and Teesmouth and Cleveland Coast SPA (formerly pSPA) is scoped out of Report. In keeping with the 2014 ES, the remaining statutory and non-statutory designated sites all lack clear ecological connectivity to the Works and further assessment of them is also scoped out of this Report.

Annex A: Ecology Survey Report 2020 provides a summary of the designated sites.

3.2 Habitats

The area within the Works is dominated by common and widespread habitats typical of the agricultural and built-up landscape. The habitats within the area of Works include a more restricted subset of those identified in the 2014 ES. The habitats within the area of Works are shown in Figures 3.1 to 3.3 of Annex A and described in detail in Annex A: Ecology Survey Report 2020.

Hedgerows were the only habitat identified as a Valued Ecological Receptor (VER) in the 2014 ES and this remains the case for the Works. The hedgerows are species-poor and either intact or defunct and none qualify

as 'Important' under the Hedgerow Regulations. However, they are included in the LBAP and are considered an integral part of the agricultural landscape in which they provide connectivity and habitat resources.

3.3 Species

3.3.1 *Great Crested Newt*

The desk study returned two records of great crested newt, the most recent of which was located 1.7 km south of the 2015 DCO Limits in Dunsdale. Surveys for the 2014 ES recorded no great crested newts in 13 water bodies within 500 m of the 2015 DCO.

The 2020 surveys identified 21 water bodies within 500 m of the Works; of these, nine were considered suitable for great crested newt and subject to further detailed surveys but the species was absent from them all (Annex AA, Figures 3.4 to 3.6). Great crested newt is considered to be absent from the zone of influence of the Works and therefore is excluded from further assessment.

3.3.2 *Reptiles*

The desk study returned several records of common lizard and slow worm, all of which were more than 1 km from the 2015 DCO. Habitats with potential to support foraging and sheltering reptiles, such as scrub, woodland and grassland, were present but limited in the 2015 DCO Limits and surrounding area in both 2013 and 2020. However, detailed surveys for the 2014 ES recorded no reptiles and these species were therefore considered to be absent.

Given the more restricted extent of the Works compared with the 2014 ES, there is even less potential for the impacted habitats to support reptiles or for Works to affect them, consequently they are excluded from further assessment.

3.3.3 *Riparian Mammals*

The 2014 ES desk study returned five records of water vole, the nearest of which was 50 m from the 2015 DCO. Subsequent surveys of 49 watercourses for the 2014 ES recorded no evidence of water vole, despite the presence of suitable habitat. No evidence of otter or water vole was recorded during the 2020 survey (Annex A, Figures 3.10 to 3.12).

Given the lack of confirmatory evidence of otter and water vole from the two time periods and from the desk studies, it is reasonable to conclude that these species are absent from the Works area. Otter and water vole are excluded from further assessment; however, given the legal protection afforded to otters, mitigation is proposed to safeguard the species during construction.

3.3.4 Badger

The desk study returned three records of badger within 2 km of the 2015 DCO Limits. Surveys undertaken for the 2014 ES recorded some evidence of badgers within 500 m of the 2015 DCO Limits, including a main sett. However, the 2020 surveys recorded no evidence of badger activity throughout the survey area and the previously identified sett, and two other newly identified setts, were not active (Annex A, Figure 3.8).

Badgers are considered to be absent from the Works area, but, due to the availability of suitable habitats and the dispersive nature of the species, their continued absence cannot be assumed. Badgers are excluded from further assessment, however given the legal protection afforded to badgers, mitigation is proposed to safeguard the species during construction.

3.3.5 Bats

The desk study returned two records of bat roosts (common pipistrelle and soprano pipistrelle) approximately 640 m and 75 m outside the 2015 DCO Limits. The 2014 ES included a habitat assessment, tree potential roost assessment, and bat transects. Habitats across the 2015 DCO Limits had variable potential for foraging and commuting bats, the greatest potential being associated with the limited areas of woodland and linear features (e.g. hedgerows and ditches). The transect surveys recorded a limited amount of activity from an assemblage of common and widespread species dominated by common pipistrelle; other species (soprano pipistrelle, *Myotis* species and noctule bats) comprised only 3% of all recorded activity.

A tree roost assessment in 2020, specifically focused on trees scheduled for removal within the area of Works, determined that all had negligible roost potential. No buildings or structures with roost potential were recorded. Given the low level of bat activity and limited potential for impacts from the Works, no further activity surveys were undertaken in 2020. Further rationale for the scope of bat surveys is provided in Annex A: Ecology Survey Report 2020.

3.3.6 Breeding Birds

Surveys undertaken for the 2014 ES recorded a diverse assemblage of breeding birds associated with a mosaic of habitats, particularly scrub and wetlands, which was considered valuable in the context of the industrial and intensive agricultural landscape. Numerous Birds of Conservation Concern (BoCC) (e.g. Red- and Amber-listed species) were recorded breeding including house sparrow, grey partridge, skylark, spotted flycatcher, song thrush, starling, marsh tit, linnet, yellowhammer and grasshopper warbler.

Given that the habitats within the survey area have not changed since the 2014 ES, it is reasonable to conclude that the breeding bird assemblage within the area within the Works will also remain unchanged. However, the area within the Works is much smaller than that considered in the 2014 ES and it will therefore support a less diverse assemblage, in terms of both species and abundance. Nonetheless, the assemblage is likely to include BoCC of some value.

3.3.7 Wintering Birds

Wintering bird surveys were undertaken for the 2014 ES and identified some arable fields and foreshore supporting notable numbers of golden plover and lapwing. The 2014 ES concluded that effects to wintering birds during construction, operation and decommissioning, which included a much larger area and sensitive coastal areas not currently affected by the Works, would be not significant with the implementation of mitigation.

Given the 2014 ES mitigation and the comparatively restricted extent of the area within the Works, as well as the large separation distance from the coastal designated sites (Teessmouth and Cleveland Coast SPA (formerly pSPA) and Redcar to Saltburn Coast LWS) and sensitive areas of importance for wintering birds, it is reasonable to exclude wintering birds from further assessment in this Report. No further surveys are necessary to support this conclusion.

4 Assessment of Potential Effects

4.1 Summary of 2014 ES Potential Effects

The 2014 ES identified the following IEFs warranting detailed impact assessment:

- Redcar to Saltburn Coast LWS;
- Hedgerows;
- Bats;
- Breeding birds; and
- Wintering birds.

No residual significant effects were identified for any of the above features. In order to achieve this, the works in 2015 DCO were subject to a sensitive design process ('Embedded Mitigation') with respect to ecological features, and mitigation was set out to address the few remaining low magnitude and minor effects.

In addition, mitigation was proposed for badgers and otters to reduce the likelihood of legal offences during construction. Further details of the assessment of effects and associated mitigation are presented in Chapter 25 of the 2014 ES.

4.2 Effects as a Result of the Works

4.2.1 Hedgerows

The effect of hedgerow removal (medium sensitivity) during construction was assessed in the 2014 ES to be highly localised, temporary and reversible, and insignificant. The area within the Works contains a much more limited resource of the same types of species-poor, intact and defunct hedgerows as assessed for the 2014 ES therefore the effects of their removal will be proportionately lower in magnitude. Mitigation and enhancement measures were secured through the 2015 DCO to safeguard and improve hedgerows during and after construction and substantially the same measures (outlined in Section 5) will be secured for the Works through planning conditions.

4.2.2 Bats

No bat roosts (medium sensitivity) will be affected by the Works.

Some habitats, such as hedgerows, ditches and woodland, have the potential to support foraging and commuting bats, but these habitats are relatively limited in extent. The majority of the Works area is open arable and built-up land with only limited potential to support bats. The effects of habitat loss and disturbance from night-time working on bats were assessed in the 2014 ES and characterised as temporary, reversible and low magnitude.

The Works area contains a more limited resource of the same types of habitats as assessed in the 2014 ES, therefore the effects of their loss will be proportionately lower in magnitude. Mitigation and enhancement measures were proposed in the 2014 ES to safeguard bats during construction and substantially the same measures (outlined in Section 5) will be secured for the Works through planning conditions.

4.2.3 Breeding Birds

The 2014 ES identified loss of hedgerows and construction disturbance as the principal impacts to breeding birds (medium sensitivity). Hedgerow removal during the bird nesting season could potentially lead to the loss of nests, eggs and chicks. Construction noise and visual disturbance could also deter birds from nesting close to the Works. These effects were assessed to be low magnitude and not significant.

The area within the Works contains a more limited resource of hedgerows (and other bird habitats) and the Works will be more limited in extent and duration compared with those assessed in the 2014 ES. Consequently, the effects to birds will be proportionately lower in magnitude. Nonetheless, mitigation and enhancement measures were proposed in the 2014 ES to safeguard breeding birds during construction and to reduce the likelihood of legal offences, and substantially the same measures (outlined in Section 5) will be secured for the Works through planning conditions.

5 Mitigation and Enhancement

5.1 Summary of 2014 ES Mitigation

As noted in Section 4.1, mitigation measures were secured through the 2015 DCO. Substantially the same mitigation measures will be secured for the Works through planning conditions. This assessment incorporates the secured mitigation measures (2015 DCO) and considers further measures if required. A summary of these mitigation measures is provided below.

5.1.1 Hedgerows

- The working areas will be clearly marked out to prevent any unnecessary damage or disturbance to land outside the construction footprint;
- Vegetation clearance shall be undertaken outside of the breeding bird season (early March to end of August inclusive, with seasonal variation). If this is not possible, an ecologist will check the area for active nests prior

to clearance. Any active nests will be left in situ with an appropriate buffer within which no works will be undertaken until the nest is no longer occupied; and

- Following construction, hedgerows will be reinstated as soon as possible. Hedgerows will be replanted with native, regionally appropriate, species-rich planting.

5.1.2 Bats

- The working areas will be clearly marked out to prevent any unnecessary damage or disturbance to land outside the construction footprint;
- Where night-time lighting is required, low pressure sodium lamps will be used (instead of mercury or metal halide lamps). The lighting should be directional and spill minimised through the use of hoods, cowls, louvres or shields. Ideally, movement sensors will be used to reduce the overall duration that lighting is on each night;
- Following construction, hedgerows will be reinstated as soon as possible. Hedgerows will be replanted with regionally appropriate, species-rich planting; and
- Should any trees require removal, a visual bat assessment and further surveys (if required) will be undertaken. Mitigation will be designed and a licence (if required) obtained from Natural England prior to construction.

5.1.3 Breeding Birds

- The working areas will be clearly marked out to prevent any unnecessary damage or disturbance to land outside the construction footprint;
- Ideally, any vegetation clearance will be undertaken outside the breeding bird season (early March to end of August inclusive, with seasonal variation). If this is not possible, a suitably qualified ecologist or ornithologist will check the area prior to clearance for active nests;
- Should an active nest be found during construction, works will cease immediately and a minimum exclusion zone of 10 m will be set up around the nest until the young have fledged;
- If the bird is a Schedule 1 species (not anticipated since none have been recorded during surveys), then work will cease and Natural England will be consulted with regard to an appropriate course of action to avoid disturbance to this species;
- Ensure construction plant and traffic activity is kept to designated access road to avoid disturbance to ground nesting birds; and
- Following construction, reinstatement to their former condition of all habitats, including hedgerow replanting with regionally appropriate, species-rich planting.

5.1.4 Badger

To reduce the likelihood of legal offences:

- A walkover survey will be undertaken within 50 m of all construction areas to ensure that no new badger setts have been constructed prior to commencement of construction;
- Should a badger sett be identified, appropriate mitigation (e.g. UK protected species mitigation licence) would be implemented, where required, prior to works commencing; and
- A means of escape (e.g. plank of wood) will be provided in any excavations left open overnight.

5.1.5 Otter

To reduce the likelihood of legal offences:

- During the construction phase of works, the construction compounds will be securely fenced to prevent otters entering the compounds. There will be strict adherence to pollution prevention guidelines, in order to minimise the risk of pollution;
- During a pre-construction survey for otters, the watercourses that will be crossed by the Works will be re-assessed for their potential to support otter;
- Should any watercourse be considered suitable for the species, an otter survey will be undertaken and if otter signs are detected, appropriate mitigation would be implemented and a UK protected species mitigation licence (if required) obtained from Natural England in advance of works taking place.

5.2 Mitigation and Enhancement Measures

5.2.1 Ecological Clerk of Works

- 5.2.2 The 2014 ES specified the appointment of an ECoW to provide toolbox talks to contractors, supervise vegetation clearance prior to construction, and oversee key construction activities. Full details of the role of the ECoW will be detailed in the CEMP that will reflect the requirements of the 2014 ES and will be secured by planning condition.

5.2.3 Bats

Trees requiring removal will be subject to pre-commencement checks consisting of an initial ground-level, visual assessment to assess their suitability for bats. Any tree found to have greater than low suitability for roosting bat will be subject to an aerial inspection by a tree climber and, upon completion of this, if evidence of bats or potential roost sites are recorded, further nocturnal surveys will be conducted. If needed, mitigation will be developed and an European Protected Species Mitigation licence obtained from Natural England to facilitate works. Any tree identified to have low bat suitability will be soft felled in line with Bat Conservation Trust guidelines.

6 Cumulative Effects

Cumulative effects can result from collective actions taking place over a period of time or concentrated in a specific location. They are particularly important since ecological features may be exposed to background levels of threat or pressure and close to critical thresholds where further impacts could cause irreversible decline.

6.1 Summary of 2014 ES Cumulative Projects

The 2014 ES assessed the cumulative effects of 32 separate developments, including all phases of the Applicants' Projects operating concurrently. Potential cumulative effects from eight developments on habitats, bats and birds were identified but all were assessed to be minor and insignificant.

The Works will have very low magnitude effects on a restricted range of ecological features and are unlikely to contribute to additional cumulative effects with these developments.

6.2 Additional Cumulative Effects

Two additional developments received planning permission between 2014 and 2020.

- Residential Development [R/2017/0833/FFM] - Demolition of existing bungalow and erection of 16 semi-detached dormer bungalows 1.4 km from the Works. Assessed to have a potentially net positive effect on bats and birds – the two species groups with greatest potential for cumulative effects due to their mobility – and thus, will not contribute to adverse cumulative effects with the Works.
- Commercial Change of Use [R/2016/0379/FFM] - Change of use from a social club to a community hub with commercial units as a mixed-use development, 0.7 km from the Works. The change of use will retain a building and create soft landscaping to complement existing habitats and has no potential to contribute to adverse cumulative effects with the Works.

7 Summary and Statement of Change/No Change

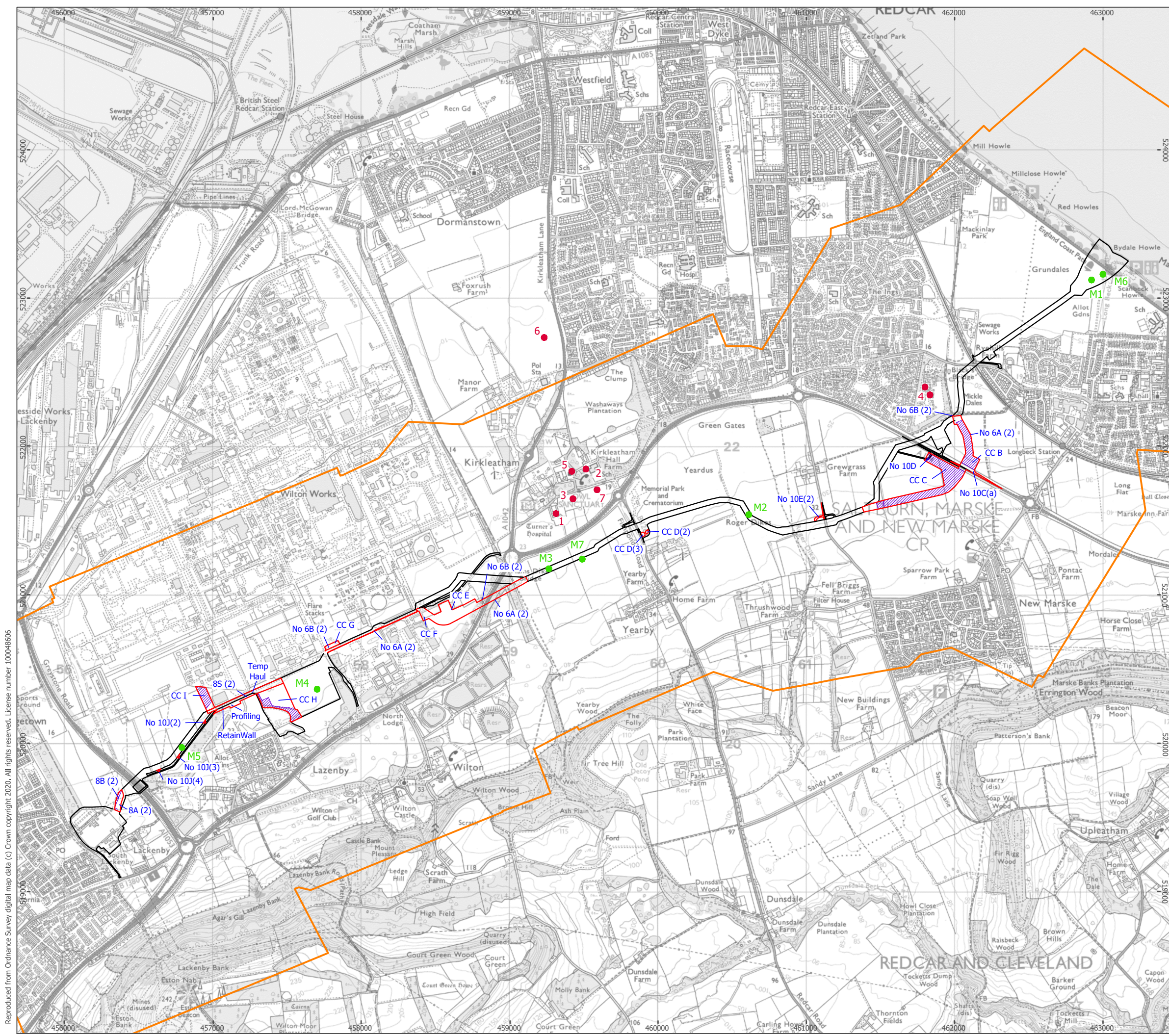
The comprehensive baseline established by the 2014 ES and the Annex A: Ecology Survey Report 2020 have enabled a robust assessment of the ecological impacts of the Works.

This assessment demonstrates that the Works give rise to no new or materially different impacts than those identified within the 2014 ES and will not give rise to any new likely significant effects. All identified impacts were of low magnitude and subsequently assessed as of equal or lesser magnitude than those identified in the 2014 ES.

Mitigation measures were secured through the 2015 DCO, and substantially the same mitigation measures will be secured for the Works through planning conditions. Table 7.1 provides a summary of the residual (i.e. mitigated) effects of both of the 2014 ES and the Works on IEFs relevant to the Works.

Table 7.1: Summary and Statement of Change/ No Change

Ecological Feature	2014 ES Effect	Effects as a Result of the Works	Change/No Change
Designated Sites	Minor adverse	Negligible	No change (lesser magnitude of effect)
Hedgerows	Minor beneficial	Minor beneficial	No change
Bats	Minor adverse	Negligible	No change (lesser magnitude of effect)
Breeding Birds	Minor adverse	Negligible	No change (lesser magnitude of effect)



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Legend
DCO Limits
planning boundary
Study Area
areas requiring geophysical survey
additions to 2014 DCO ES baseline data
2014 DCO ES areas for mitigation

1:25,000 Scale @ A3
0 0.5 1km
NORTH

ARCUS
Produced By: Ref: Pr No. -REP-Dr. No.
Checked By: Date: 14/05/2020

Archaeology Assessment
Figure 1: Archaeology
Dogger Bank C/ Sofia Onshore Works Application