

# Cottam Solar Project

## Environmental Statement Chapter 23 Summary of Significant Effects Revision A

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~~January~~[November](#) 2023

### Issue Sheet

Report Prepared for: Cottam Solar Project Ltd.  
~~DCO Submission~~  
[Examination Deadline 2](#)

### Environmental Statement Chapter 23: Summary of Significant Effects [Revision A](#)

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## 23 Summary of Significant Effects

### 23.1 Summary and Introduction

- 23.1.1 Cottam Solar Project is a proposed solar photovoltaic (PV) array electricity generating facility and electrical storage facility, each with a total capacity exceeding 50 megawatts (MW), and an export connection to the National Grid (the Development).
- 23.1.2 An Environmental Statement (ES) has been prepared on behalf of the Applicant in relation to an application to be made to the Secretary of State (SoS) for Department for Business, Energy & Industrial Strategy (BEIS), under Section 37 of the Planning Act 2008.
- 23.1.3 The Application is for a Development Consent Order (DCO) for the construction, operation and maintenance, and decommissioning of Cottam Solar Project. The Development is classified as a Nationally Significant Infrastructure Project (NSIP) under the Planning Act 2008. An Environmental Impact Assessment (EIA) has been undertaken for the Development and as such The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations) apply.
- 23.1.4 This Summary of Significant Effects forms part of the application to PINS for a DCO for the Scheme. Its purpose is to summarise significant residual effects of the Scheme identified within the technical chapters of the ES [EN010133/APP/C6.1].
- 23.1.5 Each technical chapter considers in detail the beneficial and adverse residual effects of the Scheme after the implementation of mitigation measures, both through the design of the Scheme ('embedded mitigation') and through further measures ('additional mitigation'). This assessment covers the construction, operation and decommissioning phases of the Scheme.
- 23.1.6 Each effect is described in the technical chapters in terms of the scale of the effect (for example, major or moderate), in terms of the nature of the effect (adverse, beneficial or neutral), and in terms of the significance of the effect (significant, not significant).
- 23.1.7 A summary of the significant residual effects identified in the technical chapters is set out in Table 23.1. This does not include effects the scale of which are 'negligible' or 'minor' nor effects which are 'neutral' in nature.
- [23.1.8 The table has now been updated to reflect the assessment of 60 year operational lifetime and whether this affects the residual effects previously identified in the assessment.](#)

Table 23.1: Schedule of Significant Effects

ES Chapter [Doc. Ref]	Phase of Development	Description of effect	Significance of potential effect prior to mitigation	Additional mitigation	Significance of residual effect	<a href="#">Changes to the significance of residual effects as a result of a 60-year operational lifetime (if any)</a>
Climate Change <a href="#">[EN010133/APP/C6.2.7 Revision A REP-014]</a>	Operation	Generation of electricity with low GHG intensity	Major beneficial significant	None	Major beneficial, significant	<a href="#">It is noted that CCR baseline predictions from UKCP18, will expire in 2079. The main aspects in the baseline predictions that are likely to change post 2079 is the flood risk baseline or additional emissions arising from additional replacement materials as a result of maintenance activities during operation. However, the effects are not likely to be significant particularly when considered against the benefits of the overall low carbon energy generation associated with the operation of the Scheme (which would only be lost at the point of decommissioning).</a>

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ES Chapter [Doc. Ref]	Phase of Development	Description of effect	Significance of potential effect prior to mitigation	Additional mitigation	Significance of residual effect	<a href="#">Changes to the significance of residual effects as a result of a 60-year operational lifetime (if any)</a>
<a href="#">Landscape and Visual Impact Revision A</a> [EN010133/ <a href="#">APP EX2/C6.2.8 A</a> ]	Operation (Year 15)	Landscape: RLCT 4a Unwooded Vales, quality of field boundaries: <del>Cottam</del> <a href="#">All Sites. All solar array fields.</a>	Minor beneficial, not significant	New and augmented hedgerows and new shelterbelt and scattered tree planting; grassland	Moderate beneficial, significant	<a href="#">No change</a>
	<del>Operation (Year 15)</del>	<del>Landscape: RLCT 4a Unwooded Vales, quality of field boundaries: Cottam 2.</del>	<del>Minor beneficial, not significant</del>	<del>New and augmented hedgerows and new shelterbelt and scattered tree planting; grassland</del>	<del>Moderate beneficial, significant</del>	
	<del>Operation (Year 15)</del>	<del>Landscape: RLCT 4a Unwooded Vales, quality of field boundaries: Cottam 3a and 3b.</del>	<del>Minor beneficial, not significant</del>	<del>New and augmented hedgerows and new shelterbelt and scattered tree planting; grassland</del>	<del>Moderate beneficial, significant</del>	
<a href="#">Landscape and Visual Impact Revision A</a> [EN010133/ <a href="#">EX2/C6.2.8 A</a> ]	Operation (Year 15)	Landscape: Character of land use: All Sites. All solar array fields.	Minor beneficial, not significant	New and augmented hedgerows and new shelterbelt and scattered tree planting; grassland; restoration of historic field patterns where possible.	Moderate beneficial, significant	<a href="#">No change</a>
<a href="#">Landscape and Visual Impact Revision A</a> [EN010133/ <a href="#">EX2/C6.2.8 A</a> ]	<a href="#">Construction, Operation (Year 1)</a> , Operation (Year 15)	Landscape: Character of land use: All substation sites.	Moderate adverse, significant	Allow existing hedgerows to grow out. New grassland, new hedgerows and new hedgerow trees.	Moderate adverse, significant <a href="#">at Year 15</a>	<a href="#">No change</a>
<a href="#">Landscape and Visual Impact Revision A</a> [EN010133/ <a href="#">EX2/C6.2.8 A</a> ]	Operation (Year 15)	Landscape: Character of the topography and watercourses: All Sites, All solar array fields.	Minor beneficial, not significant	Grassland buffers, scattered tree belts, reinforcement of historic field patterns.	Moderate beneficial, significant	<a href="#">No change</a>

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ES Chapter [Doc. Ref]	Phase of Development	Description of effect	Significance of potential effect prior to mitigation	Additional mitigation	Significance of residual effect	<a href="#">Changes to the significance of residual effects as a result of a 60-year operational lifetime (if any)</a>
<a href="#">Landscape and Visual Impact Revision A [EN010133/EX2/C6.2.8_A]</a>	<a href="#">Construction, Operation (Year 1), Operation (Year 15)</a>	Landscape: Character of the topography and watercourses; All substation sites.	Moderate adverse, significant	Allow existing hedgerows to grow out. New grassland, new hedgerows and new hedgerow trees.	Moderate adverse, significant at <a href="#">Year 15</a>	<a href="#">No change</a>
<a href="#">Landscape and Visual Impact Revision A [EN010133/EX2/C6.2.8_A]</a>	<a href="#">Construction</a>	<a href="#">Landscape: Communications and Infrastructure: All Sites. All solar array fields.</a>	<a href="#">Moderate adverse, significant</a>	<a href="#">Planting and landscape mitigation measures.</a>	<a href="#">Moderate adverse, significant</a>	<a href="#">No change</a>
<a href="#">Landscape and Visual Impact Revision A [EN010133/EX2/C6.2.8_A]</a>	<a href="#">Operation (Year 15)</a>	Landscape: Character of national and locally designated landscapes: All Sites; All solar array fields.	Minor beneficial, not significant	Grassland buffers, scattered tree belts, reinforcement of historic field patterns. New and augmented hedgerows and new shelterbelt planting.	Moderate beneficial, significant	<a href="#">No change</a>
<a href="#">Landscape and Visual Impact Revision A [EN010133/EX2/C6.2.8_A]</a>	<a href="#">Operation (Year 15)</a>	Landscape: Character of ancient woodlands and natural designations: All sites: All solar array fields.	Minor beneficial, not significant	New and enhanced hedgerow planting, irregularly spaced hedgerow trees and new shelterbelts.	Moderate beneficial, significant	<a href="#">No change</a>
<a href="#">Landscape and Visual Impact Revision A [EN010133/EX2/C6.2.8_A]</a>	<a href="#">Operation (Year 1) (Cumulative)</a>	<a href="#">Landscape: Substation Sites Cottam 1 West A, Cottam 1 West B, Cottam 2, Cottam 3a and 3b Substation Sites.</a>	<a href="#">n/a</a>	<a href="#">n/a</a>	<a href="#">Moderate Adverse Significant</a>	
<a href="#">Landscape and Visual Impact Revision A [EN010133/EX2/C6.2.8_A]</a>	<a href="#">Construction</a>	<a href="#">Visual: Combined Effects of noise, dust and visual effects: Viewpoints, Transport, Residential Receptors and PRoW Receptors.</a>	<a href="#">N/A</a>	<a href="#">N/A</a>	<a href="#">Significant effects identified at construction stage only.</a>	<a href="#">No Change</a>

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ES Chapter [Doc. Ref]	Phase of Development	Description of effect	Significance of potential effect prior to mitigation	Additional mitigation	Significance of residual effect	<a href="#">Changes to the significance of residual effects as a result of a 60-year operational lifetime (if any)</a>
<a href="#">Landscape and Visual Impact Revision A</a> [EN010133/EX2/C6.2.8_A]	Construction	<a href="#">Visual: Combined effects of Individual Assessment topics, overlap with Cultural Heritage Topic, Glint and Glare Topic and Ecology Topic: Viewpoints, Transport Receptors, Residential Receptors, PRoW Receptors.</a>	N/A	N/A	<a href="#">Significant effects identified at construction stage only.</a>	No Change
<a href="#">Landscape and Visual Impact Revision A</a> [EN010133/EX2/C6.2.8_A]	Construction	<a href="#">Combined Effects of Different Works of the Scheme: Viewpoints, Transport Receptors, Residential Receptors, PRoW Receptors</a>	N/A	N/A	<a href="#">Significant effects identified at construction stage and Year 1 only.</a>	No Change
<a href="#">Landscape and Visual Impact Revision A</a> [EN010133/EX2/C6.2.8_A]	<a href="#">Construction, Operation (Year 1), Operation (Year 15)</a>	Visual: Viewpoints: Cottam 1 ( <a href="#">VP10, VP12, VP23, VP32, LCC-C-D</a> ) Cottam 2 ( <a href="#">VP49</a> ) Cottam 3a ( <a href="#">VP63</a> ) Cottam 3b ( <a href="#">VP56, VP58</a> )	Moderate adverse <del>-4</del> , <a href="#">Significant</a>  Moderate-major adverse, significant -	Scattered tree planting, new and augmented hedgerows, additional hedgerow trees, shelterbelt	Moderate beneficial, significant <a href="#">at Year 15</a>  <a href="#">Moderate-major beneficial.</a>	<a href="#">No change</a>

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ES Chapter [Doc. Ref]	Phase of Development	Description of effect	Significance of potential effect prior to mitigation	Additional mitigation	Significance of residual effect	<a href="#">Changes to the significance of residual effects as a result of a 60-year operational lifetime (if any)</a>
					<a href="#">significant at Year 15</a>	
<a href="#">Landscape and Visual Impact Revision A [EN010133/EX2/C6.2.8_A]</a>	<a href="#">Construction, Operation (Year 1), Operation (Year 15)</a>	Visual: Viewpoints: Cottam 1 (VP04, <del>VP4</del> <a href="#">VP07, VP11, VP13, VP15, VP19, VP39</a> , LCC-C-G, LCC-C-H, LCC-C-J) Cottam 2 ( <a href="#">VP49</a> ) Cottam 3a (VP60, LCC-C-T) Cottam 3b (VP59)	<a href="#">Major adverse, significant</a>  Moderate-major adverse, significant <del>4</del>	New and augmented hedgerows, shelterbelt, scattered tree planting, grassland, hedgerow trees, strengthening of field boundaries	Moderate adverse, significant <del>at Year 15</del>  Moderate-major adverse, significant <a href="#">at Year 15</a>	<a href="#">No change</a>
<a href="#">Landscape and Visual Impact Revision A [EN010133/EX2/C6.2.8_A]</a>	<a href="#">Construction (Cumulative), Operation (Year 1) (Cumulative)</a>	Visual: Viewpoints: Cottam 1 (LCC-C-D)	<a href="#">Cumulative: Moderate adverse, significant</a>		<a href="#">Cumulative: Moderate adverse, significant</a>	<a href="#">No change</a>
<a href="#">Landscape and Visual Impact Revision A [EN010133/EX2/C6.2.8_A]</a>	<a href="#">Construction, Operation (Year 1), Operation (Year 15)</a>	Visual: Transport receptors: Cottam 1 ( <a href="#">T072, T074, T110, T119, T120, T122, T127</a> ) Cottam 2 (T040, T045) Cottam 3a (T016, <a href="#">T019</a> ) Cottam 3b (T021, <a href="#">T163</a> )	Moderate adverse, significant  Moderate-major adverse, significant	Planting, including grass seeding, hedgerows and hedgerow trees	Moderate adverse, significant <a href="#">at Year 15</a>  <a href="#">Moderate-major adverse, significant at Year 15</a>	<a href="#">No change</a>

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ES Chapter [Doc. Ref]	Phase of Development	Description of effect	Significance of potential effect prior to mitigation	Additional mitigation	Significance of residual effect	<a href="#">Changes to the significance of residual effects as a result of a 60-year operational lifetime (if any)</a>
<a href="#">Landscape and Visual Impact Revision A</a> [EN010133/EX2/C6.2.8_A]	<a href="#">Construction, Operation (Year 1), Operation (Year 15)</a>	<a href="#">Visual: Public rights of way and access: Cottam 1 (Fill/86/1, Fill/767/1, Stow/83/1, TLFe/31/2)</a>	<a href="#">Major adverse, significant</a>	<a href="#">Planting of a new hedgerow, Intermittent tree planting</a>	<a href="#">Moderate-major adverse, significant at Year 15</a>	<a href="#">No change</a>
<a href="#">Landscape and Visual Impact Revision A</a> [EN010133/EX2/C6.2.8_A]	<a href="#">Construction, Operation (Year 1), Operation (Year 15)</a>	<a href="#">Visual: Public rights of way and access: Cottam 3b (Pilh/20/1)</a>	<a href="#">Major adverse, significant</a>	<a href="#">Planting of a new hedgerow, Intermittent tree planting</a>	<a href="#">Moderate-Major beneficial, significant at Year 15</a>	<a href="#">No change</a>
<a href="#">Ecology and Biodiversity</a> [EN010133/APP/C6.2.9-044]	<a href="#">Construction, Operation</a>	<a href="#">Hedgerows and trees – PV and BESS Sites</a>	<a href="#">Adverse</a>	<a href="#">Habitat reinstatement and enhancement.</a>	<a href="#">Beneficial, significant at District level</a>	<a href="#">No change</a>
<a href="#">Ecology and Biodiversity</a> [EN010133/APP/C6.2.9-044]	<a href="#">Construction, Operation</a>	<a href="#">Hedgerows and trees – Cable Installation</a>	<a href="#">Adverse in the medium term</a>	<a href="#">Implementation of protection and good practice surrounding hedgerow removal and reinstatement; buffer zones and enhancement measures</a>	<a href="#">Adverse, significant at Site level</a>	<a href="#">No change</a>
<a href="#">Ecology and Biodiversity</a> [EN010133/APP/C6.2.9-044]	<a href="#">Construction, Operation</a>	<a href="#">Grassland (Including Arable Field Margins, Lowland Meadow, Floodplain Grazing Marsh and Traditional Orchard)</a>	<a href="#">Neutral</a>	<a href="#">Creation of the protective buffer zones; remediation of lowland meadow and floodplain grazing marsh grassland habitats</a>	<a href="#">Beneficial, significant at District level</a>	<a href="#">No change</a>
<a href="#">Ecology and Biodiversity</a> [APP-044]	<a href="#">Construction, Operation</a>	<a href="#">Ditches and Watercourses – PV and BESS Sites</a>	<a href="#">Adverse in the short to medium term</a>	<a href="#">Implementation of protection and good practice ditch crossing and reinstatement; buffer zones and enhancement measures.</a>	<a href="#">Beneficial, significant at Local level</a>	<a href="#">No change</a>

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ES Chapter [Doc. Ref]	Phase of Development	Description of effect	Significance of potential effect prior to mitigation	Additional mitigation	Significance of residual effect	<a href="#">Changes to the significance of residual effects as a result of a 60-year operational lifetime (if any)</a>
				<a href="#">Cessation of agricultural practices and implementation of ditch management measures.</a>		
Ecology and Biodiversity [ <del>EN010133</del> /APP/ <a href="#">C6.2.9-044</a> ]	Construction, Operation	Ponds	Adverse	Creation of new ponds, enhancement of retained ponds	Beneficial, significant at Local level	<a href="#">No change</a>
Ecology and Biodiversity [ <del>EN010133</del> /APP/ <a href="#">C6.2.9-044</a> ]	Construction, Operation	Bats	Neutral	Adoption of development free buffers at field boundaries; construction protocols; protocols for removal of trees; grassland, scrub, tree and hedgerow creation.	Beneficial, significant at District level	<a href="#">No change</a>
<a href="#">Ecology and Biodiversity [APP-044]</a>	<a href="#">Construction, Operation</a>	<a href="#">Otter and Water Vole</a>	<a href="#">Adverse, short to long term</a>	<a href="#">Implementation of buffer zones, use of directional drilling, supervision of impacting works by ECoW and reinstatement of all temporarily impacted habitats. Watercourse management/enhancement of buffer habitat and cessation of agricultural practices for long term benefit.</a>	<a href="#">Beneficial, significant at Local level</a>	<a href="#">No change</a>

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ES Chapter [Doc. Ref]	Phase of Development	Description of effect	Significance of potential effect prior to mitigation	Additional mitigation	Significance of residual effect	<a href="#">Changes to the significance of residual effects as a result of a 60-year operational lifetime (if any)</a>
<a href="#">Ecology and Biodiversity [APP-044]</a>	<a href="#">Construction, Operation</a>	<a href="#">Polecat and Hedgehog</a>	<a href="#">Adverse, short term</a>	<a href="#">Buffer zones and supervision of impacting work by ECoW. Habitat creation within buffer zones and enhancement of hedgerow habitats for long term benefit.</a>	<a href="#">Beneficial, significant at District level</a>	<a href="#">No change</a>
Ecology and Biodiversity <a href="#">[EN010133/APP/C6.2.9-044]</a>	Construction, Operation	Harvest mice	Adverse	Grassland habitat creation and management, hedgerow and tree planting; field margin buffer zones	Adverse, significant at Site level	<a href="#">No change</a>
<a href="#">Ecology and Biodiversity [APP-044]</a>	<a href="#">Construction, Operation</a>	<a href="#">Brown Hare</a>	<a href="#">Adverse, short term</a>	<a href="#">Cessation of arable practices and creation of extensive grassland, scrub and hedgerow/tree habitat.</a>	<a href="#">Beneficial, significant at Local level</a>	<a href="#">No change</a>
Ecology and Biodiversity <a href="#">[EN010133/APP/C6.2.9-044]</a>	Construction, Operation	Reptiles	Adverse	Protective construction-phase measures; field margin buffer zones and habitat creation.	Beneficial, significant at Local level	<a href="#">No change</a>
<a href="#">Ecology and Biodiversity [APP-044]</a>	<a href="#">Construction, Operation</a>	<a href="#">Amphibians</a>	<a href="#">Adverse, short term</a>	<a href="#">Wide buffer zones around breeding ponds and around optimal terrestrial habitat. Creation of new extensive terrestrial and pond habitat; enhancement of dispersal corridors for long term benefit.</a>	<a href="#">Beneficial, significant at Local level</a>	<a href="#">No change</a>

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Ecology and Biodiversity <a href="#">[EN010133/APP/C6.2.9.044]</a>	Construction, Operation	Breeding Birds: skylark, yellow wagtail, grey partridge and quail	Adverse	Creation of optimal foraging habitat of diverse grassland types; provision of areas of open, undeveloped land for set-aside habitat	Adverse, significant at Local level	<a href="#">No change</a>
Ecology and Biodiversity <a href="#">[EN010133/APP/C6.2.9.044]</a>	Construction, Operation	Breeding Birds: lapwing and curlew	Adverse	Creation of wetland and grassland breeding habitats.	Beneficial, significant at least at Site level	<a href="#">No change</a>
Ecology and Biodiversity <a href="#">[EN010133/APP/C6.2.9.044]</a>	Construction, Operation	Breeding Birds – Other Species	Adverse	Measures to be taken during the cabling work, including timing of work near potential nesting sites, monitoring, information to staff and buffering; area reserved for foraging habitat of turtle dove; planting of hedging, trees and woody vegetation	Beneficial, significant at Local-District level	<a href="#">No change</a>
<a href="#">Ecology and Biodiversity [APP-044]</a>	<a href="#">Construction, Operation</a>	<a href="#">Overwintering Birds</a>	<a href="#">Adverse, short to long term</a>	<a href="#">Measures to limit undue disturbance to wintering flocks during construction. Provision of a proportion of alternative open habitat suitable for foraging winter flocks.</a>	<a href="#">Adverse, significant at Site level</a>	<a href="#">No change</a>
Ecology and Biodiversity <a href="#">[EN010133/APP/C6.2.9.044]</a>	Construction, Operation	Invertebrates	Adverse	Measures to minimise the risk of pollution, run-off and dust deposition; reinstatement of habitat losses; prescriptions on working methods; retained and	Beneficial, significant at Local level	<a href="#">No change</a>

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ES Chapter [Doc. Ref]	Phase of Development	Description of effect	Significance of potential effect prior to mitigation	Additional mitigation	Significance of residual effect	<a href="#">Changes to the significance of residual effects as a result of a 60-year operational lifetime (if any)</a>
				protected buffer zones and the grassland habitats		
Ecology and Biodiversity <a href="#">[EN010133/APP/C6.2.9-044]</a>	Construction, Operation	Badgers	Adverse	Requirements for fencing installation; information provided to contractors; measures to reduce the probability of incidental mortality	Beneficial, significant at Site level	<a href="#">No change</a>
Hydrology, Flood Risk and Drainage <a href="#">[EN010133/APP/C6.2.10-045]</a>	No significant residual effects are predicted during construction, operation and decommissioning of the Scheme					<a href="#">The Hydrology, Flood Risk and Drainage Assessments do not identify any significant effects for water resources during operation. The Flood Risk Assessment, while not time-limited, assumes an operational lifetime of 40 years for the purpose of the Environmental Impact Assessment.</a>  <a href="#">The peak river flow allowances for the Witham Management Catchment for the Higher 2050s is 15%. However, the</a>

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ES Chapter [Doc. Ref]	Phase of Development	Description of effect	Significance of potential effect prior to mitigation	Additional mitigation	Significance of residual effect	<a href="#">Changes to the significance of residual effects as a result of a 60-year operational lifetime (if any)</a>
						<p><a href="#">assessment considered a 20% uplift in flows, as this was the uplift allowed for within the available Environment Agency (EA) datasets. Given that a conservative approach has been adopted for most of the epoch in which the Proposed Development will operate and considering potential changes in climate change allowances in the future, the Applicant considers the Scheme has been designed appropriately.</a></p> <p><a href="#">The EA defines three climate change epochs (2020s, 2050s, and 2080's) and states:</a></p> <p><a href="#">• 'For development with a lifetime up to 2060, use the central allowance for the 2050s epoch (2022 to 2060).'</a></p>

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ES Chapter [Doc. Ref]	Phase of Development	Description of effect	Significance of potential effect prior to mitigation	Additional mitigation	Significance of residual effect	<a href="#">Changes to the significance of residual effects as a result of a 60-year operational lifetime (if any)</a>
						<p>• <a href="#">For development with a lifetime between 2061 and 2100, use the central allowance for the 2070s [sic 2080] epoch (2061 to 2125).</a></p> <p><a href="#">If the Scheme is still operational into the 2080s epoch, a 32% allowance in flows for the Witham Management Catchment must be considered.</a></p> <p><a href="#">In this scenario, hydraulic modelling will need to be undertaken to consider a 32% uplift in river flows, in consultation with the Environment Agency. It is highly likely that updated modelling will show an increase in flood extents and depths. As such, the parts of the Scheme constructed in areas already shown to be at risk or areas currently adjacent</a></p>

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ES Chapter [Doc. Ref]	Phase of Development	Description of effect	Significance of potential effect prior to mitigation	Additional mitigation	Significance of residual effect	<a href="#">Changes to the significance of residual effects as a result of a 60-year operational lifetime (if any)</a>
						<a href="#">to areas at risk may need to be altered to ensure that flood storage and conveyance is maintained for all main rivers.</a>  <a href="#">For example, this could involve removing the first row of panels on a Photovoltaic (PV) table or removing the racking system and associated infrastructure from the modelled extent. The requirement to do this modelling and any consequential alterations at the relevant time will be included in the OEMP.</a>
Ground Conditions and Contamination <a href="#">[EN010133/APP/C6.2.11-046]</a>					No significant residual effects are predicted during construction, operation and decommissioning of the Scheme	<a href="#">No change</a>
Minerals <a href="#">[EN010133/APP/C6.2.12-047]</a>					No significant residual effects are predicted during construction, operation and decommissioning of the Scheme	<a href="#">No change</a>

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ES Chapter [Doc. Ref]	Phase of Development	Description of effect	Significance of potential effect prior to mitigation	Additional mitigation	Significance of residual effect	<a href="#">Changes to the significance of residual effects as a result of a 60-year operational lifetime (if any)</a>
Cultural Heritage- <del>[EN010133/APP/6.2.13-048]</del>	Construction, Operation	Medium-term and long-term and reversible effect on Thorpe medieval settlement (NHLE 1016978)	Moderate adverse	Landscape mitigation proposals which should reach maturity by Year 15	Moderate adverse, significant	<a href="#">No change</a>
Cultural Heritage- <del>[EN010133/APP/6.2.13-048]</del>	Construction	Permanent and irreversible effect on Non-Designated Archaeological Remains - AR22a (undated possible kiln)	Slight to Large Adverse (depending on	Strip, Map and Sample (SMS) excavation and 'preservation by record'	Slight to large adverse, (potentially) significant	<a href="#">No change</a>
Cultural Heritage- <del>[EN010133/APP/6.2.13-048]</del>	Construction	Permanent and irreversible effect on Non-Designated Archaeological Remains - AR24 (RB settlement & Anglo-Saxon cemetery)	Slight Adverse	Full open area excavation of burials, (alongside embedded mitigation to achieve preservation <i>in situ</i> (of RB settlement remains) through solar panel installation design	Large adverse, significant	<a href="#">No change</a>
Cultural Heritage- <del>[EN010133/APP/6.2.13-048]</del>	Construction	Permanent and irreversible effect on Non-Designated Archaeological Remains - AR67 to AR75	Uncertain, but likely to range from Neutral up to Large Adverse	Strip, Map and Sample (SMS) excavation and 'preservation by record'; Embedded mitigation to achieve preservation <i>in situ</i> by horizontal directional drilling; Watching Brief scalable to SMS excavation and 'preservation by record'	Neutral to moderate adverse, (potentially) significant	<a href="#">No change</a>
Cultural Heritage- <del>[EN010133/APP/6.2.13-048]</del>	Operational	Long-term reversible effect on Non-Designated Archaeological Remains - AR07, AR23, AR25, AR26, AR28, AR35, AR37, AR38,	Negligible to major beneficial	Embedded mitigation to achieve preservation <i>in situ</i> ; Informative trenching	Slight to large beneficial, (potentially) significant	<a href="#">No change</a>

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ES Chapter [Doc. Ref]	Phase of Development	Description of effect	Significance of potential effect prior to mitigation	Additional mitigation	Significance of residual effect	<a href="#">Changes to the significance of residual effects as a result of a 60-year operational lifetime (if any)</a>
		AR41, AR42, AR43, AR45, AR46, AR47, AR48, AR49, AR50, AR52, AR54, AR55, AR56				
Cultural Heritage <del>[EN010133/APP/6.2-13-048]</del>	Operational	Long-term reversible effect on Non-Designated Archaeological Remains - AR24 (RB settlement & Anglo-Saxon cemetery)	Slight to large beneficial	Embedded mitigation to achieve preservation <i>in situ</i> of RB settlement remains (Anglo Saxon cemetery already excavated and removed during construction)	Slight to large beneficial, significant	<a href="#">No change</a>
Cultural Heritage <del>[EN010133/APP/6.2-13-048]</del>	Operational	Long-term reversible effect on Non-Designated Historic Buildings - HB11: Turpin Farm, Fillingham	Moderate adverse	Landscape mitigation proposals which should reach maturity by Year 15	Moderate adverse, significant	<a href="#">No change</a>
Cultural Heritage <del>[EN010133/APP/6.2-13-048]</del>	Operational	Long-term reversible effect on Non-Designated Historic Landscape - Ancient Enclosures HLI20759, HLI20786, HLI21000 and HLI21001	Moderate to large adverse, significant	None	Moderate to large adverse, significant	<a href="#">No change</a>
Cultural Heritage <del>[EN010133/APP/6.2-13-048]</del>	Operational	Long-term reversible effect on Non-Designated Historic Landscape - Parliamentary Planned Enclosures HLI156 and HLI19276	Moderate adverse, significant	None	Moderate adverse, significant	<a href="#">No change</a>

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Cultural Heritage <del>[EN010133/APP/C6.2.13-048]</del>	Operational	Long-term reversible effect on Non-Designated Historic Landscape - Military Airfield HLI18742	Moderate adverse, significant	None	Moderate adverse, significant	<a href="#">No change</a>
Cultural Heritage <del>[EN010133/APP/C6.2.13-048]</del>	Operation	Cumulative effect on views from the Lincoln Edge that contribute to the significance of heritage assets	Possible moderate adverse, significant	None	Possible moderate adverse, significant	<a href="#">No change</a>
Transport and Access <del>[EN010133/APP/C6.2.14-049]</del>	No significant residual effects are predicted during construction, operation and decommissioning of the Scheme					<a href="#">No change</a>
Noise and Vibration <del>[EN010133/APP/C6.2.15-050]</del>	No significant residual effects are predicted during construction, operation and decommissioning of the Scheme					<a href="#">No change</a>
Glint and Glare <del>[EN010133/APP/C6.2.16-051]</del>	No significant residual effects are predicted during construction, operation and decommissioning of the Scheme					<a href="#">No change</a>
Air Quality <del>[EN010133/APP/C6.2.17-052]</del>	No significant residual effects are predicted during construction, operation and decommissioning of the Scheme					<a href="#">No change</a>

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Socio-Economic, Tourism and Recreation <del>[EN010133/ [APP/C6.2-18-053]</del>	Construction (Cumulative), Decommissioning (Cumulative)	Construction sector employment: Increase in construction employment opportunities generated from Scheme construction	n/a	None	Peak cumulative moderate beneficial, significant at Local level	<a href="#">No change</a>
Socio-Economic, Tourism and Recreation <del>[EN010133/ [APP/C6.2-18-053]</del>	Construction, Decommissioning, Decommissioning (Cumulative)	Accommodation and services sector employment: Increase in demand for temporary accommodation units	Medium-term temporary major-moderate beneficial, significant at Local level  <del>Cumulative: n/a</del>	<del>None</del>  None	Medium-term temporary major-moderate beneficial, significant at Local level  <del>Cumulative: Not substantively different</del>	<a href="#">No change</a>
			<del>Cumulative: n/a</del>	<del>None</del>	<del>Cumulative: Not substantively different</del>	<a href="#">No change</a>
Socio-Economic, Tourism and Recreation <del>[EN010133/ [APP/C6.2-18-053]</del>	Construction, Construction (Cumulative)	Economic activity and employment: Changes in overall employment opportunities generated from Scheme construction	Medium-term temporary moderate-minor beneficial, not significant at Local level  <del>Cumulative: n/a</del>	Promotion of local recruitment and procurement, education and skills uplifting, apprenticeship and training schemes  <del>None</del>	Medium-term temporary moderate beneficial, significant at Local level	<a href="#">No change</a>

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ES Chapter [Doc. Ref]	Phase of Development	Description of effect	Significance of potential effect prior to mitigation	Additional mitigation	Significance of residual effect	<a href="#">Changes to the significance of residual effects as a result of a 60-year operational lifetime (if any)</a>
					Cumulative: Not substantively different	
			<a href="#">Cumulative: n/a</a>	<a href="#">None</a>	<a href="#">Cumulative: Not substantively different</a>	<a href="#">No change</a>
Socio-Economic, Tourism and Recreation <del>[EN010133/ [APP/C6.2-18-053]</del>	Construction, Construction (Cumulative)	Accommodation stock (construction): Increase in accommodation occupancy for temporary or short-term workers	Medium-term temporary major-moderate beneficial, significant at Local level  <a href="#">Cumulative: n/a</a>	<del>None</del>  None	Medium-term temporary major-moderate beneficial, significant at Local level  <a href="#">Cumulative: Not substantively different</a>	<a href="#">No change</a>
			<a href="#">Cumulative: n/a</a>	<a href="#">None</a>	<a href="#">Cumulative: Not substantively different</a>	<a href="#">No change</a>
Socio-Economic, Tourism and Recreation <del>[EN010133/ [APP/C6.2-18-053]</del>	Construction (Cumulative)	Accommodation stock (housing): Increase in accommodation requirement for workers and families	n/a	None	Peak cumulative moderate beneficial, significant at Local level	<a href="#">No change</a>

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Socio-Economic, Tourism and Recreation <del>[EN010133/ [APP/6.2.18-053]</del>	Construction, Construction (Cumulative)	Access to employment (IMD): Changes in overall employment opportunities generated from Scheme construction	Medium-term temporary moderate beneficial, significant at Local level  Cumulative: n/a	Promotion of local recruitment and procurement, education and skills uplifting, apprenticeship and training schemes  None	Medium-term temporary major-moderate beneficial, significant at Local level  Cumulative: Not substantively different	<a href="#">No change</a>
			Cumulative: n/a	None	Cumulative: Not substantively different	<a href="#">No change</a>
Socio-Economic, Tourism and Recreation <del>[EN010133/ [APP/6.2.18-053]</del>	Construction, Construction (Cumulative)	Access to education (IMD): Increase in sector-based skills training and qualification opportunities	Medium-term temporary moderate-minor beneficial, not significant at Local level  Cumulative: n/a	Promotion of education and skills uplifting, apprenticeship and training schemes  None	Medium-term temporary moderate beneficial, significant at Local level  Cumulative: Not substantively different	<a href="#">No change</a>
			Cumulative: n/a	None	Cumulative: Not substantively different	<a href="#">No change</a>

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Socio-Economic, Tourism and Recreation- <del>[EN010133/ [APP/6.2-18-053]</del>	Construction (Cumulative)	Construction economy: Economic impacts on existing construction economy	n/a	None	Peak cumulative moderate beneficial, significant at Local level	<a href="#">No change</a>
Socio-Economic, Tourism and Recreation- <del>[EN010133/ [APP/6.2-18-053]</del>	Construction (Cumulative)	Accommodation economy: Economic impacts on existing accommodation economy	n/a	None	Peak cumulative moderate beneficial, significant at Local level	<a href="#">No change</a>
Socio-Economic, Tourism and Recreation- <del>[EN010133/ [APP/6.2-18-053]</del>	Construction, Construction (Cumulative)	Economic prosperity: Total GVA and GVA/head change associated with construction of Scheme	Medium-term temporary moderate-minor beneficial, not significant at Local level  <u>Cumulative: n/a</u>	Promotion of local recruitment and procurement  <del>None</del>	Medium-term temporary moderate beneficial, significant at Local level  <u>Cumulative: Not substantively different</u>	<a href="#">No change</a>
			<u>Cumulative: n/a</u>	<u>None</u>	<u>Cumulative: Not substantively different</u>	<a href="#">No change</a>
Socio-Economic, Tourism and Recreation- <del>[EN010133/ [APP/6.2-18-053]</del>	Construction, Construction (Cumulative)	Resident and working population income: Changes in overall employment opportunities	Medium-term temporary moderate-minor beneficial, not	Promotion of local recruitment and procurement	Medium-term temporary moderate beneficial,	<a href="#">No change</a>

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		and personal income from Scheme construction	significant at Local level  <del>Cumulative: n/a</del>	<del>None</del>	significant at Local level  <del>Cumulative: Not substantively different</del>	
			<del>Cumulative: n/a</del>	<del>None</del>	<del>Cumulative: Not substantively different</del>	<del>No change</del>
Socio-Economic, Tourism and Recreation <del>[EN010133/APP/C6.2.18-053]</del>	Construction, Construction (Cumulative)	Local tourist attractions (landscape): Impacts from construction noise, traffic, and views on desirability and use	Peak medium-term temporary moderate adverse, significant at Local level  <del>Cumulative: n/a</del>	Landscape planting set out in OLEMP, and in OOEMP. Traffic impacts to be minimised through CTMP/OCEMP measures.	Peak medium-term temporary moderate adverse, significant at Local level  <del>Cumulative: Not substantively different</del>	<del>No change</del>
			<del>Cumulative: n/a</del>	<del>None</del>	<del>Cumulative: Not substantively different</del>	<del>No change</del>
Socio-Economic, Tourism and Recreation <del>[EN010133/APP/C6.2.18-053]</del>	Construction (Cumulative)	<del>Public Rights of Way</del> <del>Long-distance recreation routes</del> : Impacts from construction noise, traffic, views, and diversions and closures of	n/a	Working with other developers to seek to ensure that relevant the impacts to affected <del>Public Rights of Way</del> and long-distance recreation routes are mitigated and kept to a minimum	Peak cumulative moderate adverse, significant at Local level	<del>No change</del>

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		routes on <del>PRE</del> <a href="#">Wlong-distance recreational route</a> desirability and use			<a href="#">(Trent Valley Way)</a>	
Socio-Economic, Tourism and Recreation- <del>[EN010133/ [APP/C6.2-18-053]</del>	Operation (Cumulative)	Energy sector employment: Increase in energy sector employment opportunities generated from Scheme operation and maintenance	n/a	None	Long-term cumulative moderate adverse, significant at Local level	<a href="#">No change</a>
Socio-Economic, Tourism and Recreation- <del>[EN010133/ [APP/C6.2-18-053]</del>	Decommissioning (Cumulative)	Energy sector employment: Conclusion of energy sector employment generated from Scheme operation and maintenance	n/a	None	Peak cumulative moderate adverse, significant at Local level	<a href="#">No change</a>
Socio-Economic, Tourism and Recreation- <del>[EN010133/ [APP/C6.2-18-053]</del>	Decommissioning (Cumulative)	Economic activity and employment: Changes in overall employment opportunities generated from Scheme decommissioning	n/a	None	Peak cumulative moderate beneficial, significant at Local level	<a href="#">No change</a>
Socio-Economic, Tourism and Recreation- <del>[EN010133/ [APP/C6.2-18-053]</del>	Decommissioning (Cumulative)	Construction economy: Economic impacts on existing construction economy	n/a	None	Peak cumulative moderate beneficial, significant at Local level	<a href="#">No change</a>

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Socio-Economic, Tourism and Recreation- <del>[EN010133/APP/C6.2-18-053]</del>	Decommissioning (Cumulative)	Economic prosperity: Total GVA and GVA/head change associated with decommissioning of Scheme	n/a	None	Peak cumulative moderate beneficial, significant at Local level	<a href="#">No change</a>
Socio-Economic, Tourism and Recreation- <del>[EN010133/APP/C6.2-18-053]</del>	Decommissioning (Cumulative)	Resident and working population income: Changes in overall employment opportunities and personal income from Scheme decommissioning	n/a	None	Peak cumulative moderate beneficial, significant at Local level	<a href="#">No change</a>
Soils and Agriculture <del>[EN010133/APP/C6.2-19</del> <a href="#">Revision A [REP-010]</a>	Operation	Recovery of soil organic matter under extended fallow	Moderate beneficial significant	None	Moderate beneficial, significant	<a href="#">No change</a>
Soils and Agriculture <del>[EN010133/APP/C6.2-19</del> <a href="#">Revision A [REP-010]</a>	Operation	Transfer of arable land to new diversified enterprise	Moderate beneficial significant	New land for local sheep grazers	Moderate beneficial, significant	<a href="#">No change</a>
Waste <del>[EN010133/APP/C6.2-20-055]</del>	Decommissioning	Potential effect of waste disposal from <del>the Scheme</del> <a href="#">and cumulatively cumulative development on landfill capacity in Nottinghamshire</a>	Moderate/large adverse significant	None	Moderate/large adverse, significant	<a href="#">No change</a>

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Other Environmental Matters <a href="#">[EN010133/APP/C6.2.21-056]</a>	No significant residual effects are predicted during construction, operation and decommissioning of the Scheme					<a href="#">No change</a>

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