

Preliminary Environmental Information Report

Calderdale Energy Park

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Table of contents

25	SUMMARY	1
25.1	Introduction	1
25.2	Summary of Chapters 8 - 23	1
25.3	Summary of In-Combination Climate Impact Assessment	35
25.4	Summary of Cumulative Effects	36
	Table 25-1: Summary of Preliminary Assessments (Construction Phase)	2
	Table 25-2: Summary of Preliminary Assessments (Operational and Maintenance Phase)	15
	Table 25-3: Summary of Preliminary Assessments (Decommissioning Phase)	27
	Table 25-4: Summary of ICCI Assessment	35

25 Summary

25.1 Introduction

25.1.1 This Chapter provides a summary of the preliminary assessments reported within **Chapters 8 – 23** and in **Chapter 24: Cumulative Effects** to:

- Confirm the effects/receptors assessed, the preliminary assessment conclusions and their significance (where appropriate);
- Outline the conclusions of the In-Combination Climate Impact assessment, in particular whether with future predicted climatic conditions there is a change in the significance of effects identified in relevant technical aspects; and
- Outline cumulative effects, in particular how such effects differ from effects individually/for the Proposed Development in isolation.

25.2 Summary of Chapters 8 - 23

25.2.1 A summary of the conclusions from the technical aspect chapters for the construction, operational and maintenance and decommissioning phases is provided in **Tables 25-1 to 25-3**.

25.2.2 Where possible and relevant, the ranges in residual effects (and their significance) are presented in **Tables 25-1 to 25-3**. Where commas are used below, this denotes that there are multiple conclusions on different receptors/receptor groups within the assessment.

25.2.3 Details on the receptors / receptor groups are provided in the relevant technical aspect chapters.

Table 25-1: Summary of Preliminary Assessments (Construction Phase)

Construction Phase		
Technical Aspect / Likely Significant Effect		Residual Effect / Significance
Chapter 8: Biodiversity		
South Pennine Moors Special Area of Conservation (SAC) and South Pennine Moors Site of Special Scientific Interest (SSSI) Priority Habitats (blanket bog, dry heath, wet heath etc.)	Direct land take and land use change resulting in degradation and / or loss of habitat	Significant effects cannot be ruled out
	Changes in surface and sub-surface hydrology resulting in degradation and / or loss of habitat (including irreplaceable habitats)	Significant effects cannot be ruled out
	The introduction of toxic pollutants or sediments into the environment resulting in changes, loss or damage to terrestrial or freshwater environments and the species they support	Not Significant
	Dust deposition resulting in degradation and/or loss of habitat (including irreplaceable habitats)	Not Significant
	Changes in air quality resulting in degradation and / or loss of habitat	Significant effects cannot be ruled out
	Changes in levels of recreational pressure resulting in degradation and / or loss of habitat	Significant effects cannot be ruled out
Local non-statutory designated sites	Direct land take and land use change resulting in both permanent and temporary degradation and / or loss of habitat	Not Significant

Construction Phase		
Technical Aspect / Likely Significant Effect		Residual Effect / Significance
	The introduction of toxic pollutants into the environment resulting in changes, loss or damage to terrestrial or freshwater environments and the species they support	Not Significant
	Changes in air quality as a result of vehicle emissions resulting in degradation and / or loss of habitat	Not Significant
Priority Habitats: Rivers	Direct land take and land use change resulting in degradation and / or loss of habitat	Significant effects cannot be ruled out
	Changes in surface and sub-surface hydrology resulting in degradation and / or loss of habitat	Significant effects cannot be ruled out
	The introduction of toxic pollutants or sediments into the environment resulting in changes, loss or damage to terrestrial or freshwater environments and the species they support	Not Significant
Protected species: Bats	Direct land take and land use change resulting in degradation and / or loss of habitat	Significant effects cannot be ruled out
	Indirect habitat loss and degradation	
Protected species: Amphibians	Direct land take and land use change resulting in degradation and / or loss of habitat	Significant effects cannot be ruled out
	Indirect habitat loss and degradation	

Construction Phase		
Technical Aspect / Likely Significant Effect		Residual Effect / Significance
Protected species: Reptiles	Direct land take and land use change resulting in degradation and / or loss of habitat	Significant effects cannot be ruled out
	Indirect habitat loss and degradation	
Protected species: Otter and Water Vole	Direct land take and land use change resulting in degradation and / or loss of habitat	Significant effects cannot be ruled out
	Indirect habitat loss and degradation	
	Construction activity resulting in disturbance of fauna resulting in displacement or a reduction in productivity / survival rates	
CHEGD Fungi Assemblage	Direct land take and land use change resulting in degradation and/or loss of habitat	Significant effects cannot be ruled out
	Indirect habitat loss and degradation	
Invertebrates Assemblage (including White clawed crayfish)	Direct land take and land use change resulting in degradation and / or loss of habitat	Significant effects cannot be ruled out
	Indirect habitat loss and degradation	
Fish Assemblage	Direct land take and land use change resulting in degradation and / or loss of habitat	Significant effects cannot be ruled out
	Indirect habitat loss and degradation	
Chapter 9: Ornithology		

Construction Phase		
Technical Aspect / Likely Significant Effect		Residual Effect / Significance
Habitat loss and alteration	South Pennine Moors Phase 2 Special Protection Area (SPA)	Likely significant adverse effect at the international scale
	South Pennine Moors SSSI	Likely significant adverse effect at the national scale
	Merlin	Likely significant adverse effects at the local level
	Golden plover	Likely significant adverse effect at the local scale (Breeding and non-breeding)
	Other waders (common sandpiper, curlew, dunlin, lapwing, oystercatcher, redshank, snipe)	Likely significant adverse effect at the local scale (Curlew, dunlin, lapwing, redshank, snipe and oystercatcher - breeding) Not Significant (Common sandpiper - breeding and curlew, dunlin, lapwing, redshank, snipe and oystercatcher - non-breeding)
	Other raptors and owls (barn owl, goshawk, hen harrier, kestrel, marsh harrier, peregrine, red kite, short-eared owl)	Likely significant adverse effect at the national scale (Short-eared owl and marsh harrier - breeding, hen harrier - breeding and non-breeding) Likely significant adverse effect at the regional scale (Peregrine) Likely significant adverse effect at the local level (Short-eared owl - non-breeding, breeding other raptors/owls - breeding)

Construction Phase		
Technical Aspect / Likely Significant Effect		Residual Effect / Significance
		Not Significant (Goshawk, marsh harrier and other raptors/owls - non-breeding)
	Waterfowl (greylag goose and mallard)	Not Significant
	Gamebirds (red grouse)	Likely significant adverse effect at the regional scale
	Passerines and relatives (wheatear, whinchat, dipper, grey wagtail, stonechat and priority passerines and relatives group)	Not Significant (Dipper and grey wagtail, woodland-associated passerines) Likely significant adverse at the local scale (Upland open-ground passerines)
Disturbance/ displacement	South Pennine Moors Phase 2 SPA	Likely significant adverse effect at the international scale
	South Pennine Moors SSSI	Likely significant adverse effect at the national scale
	Merlin	Likely significant adverse effect at the national scale (Breeding) Not Significant (Non-breeding)
	Golden plover	Likely significant adverse effect at the regional scale (Breeding) Not Significant (Non-breeding)
	Other waders (common sandpiper, curlew, dunlin, lapwing, little ringed plover, oystercatcher, redshank, snipe)	Likely significant adverse effect at the regional scale (Curlew, dunlin, lapwing,

Construction Phase	
Technical Aspect / Likely Significant Effect	Residual Effect / Significance
	<p>oystercatcher, redshank and snipe - breeding)</p> <p>Likely significant adverse effect at a local scale (Common sandpiper)</p> <p>Not Significant (Little ringed plover, curlew, dunlin, lapwing, oystercatcher, redshank and snipe - non-breeding)</p>
Other raptors and owls (barn owl, goshawk, hen harrier, hobby, kestrel, marsh harrier, peregrine, red kite, short-eared owl)	<p>Likely significant adverse effect at the national level (Short-eared owl, hen harrier - breeding, hen harrier - non-breeding)</p> <p>Likely significant adverse effect at the regional scale (Marsh harrier - breeding)</p> <p>Likely significant adverse effect at the local scale (Red kite, kestrel - breeding)</p> <p>Likely significant adverse effect at the regional scale (Peregrine - non-breeding)</p> <p>No significant effects (Barn owl, goshawk and hobby - breeding, short-eared owl, marsh harrier, barn owl, kestrel, red kite and goshawk - non-breeding)</p>
Waterfowl (greylag goose and mallard)	<p>Likely significant adverse effect at the local scale (Breeding)</p> <p>Not Significant (Non-breeding)</p>
Gamebirds (red grouse)	<p>Likely significant adverse effect at the regional scale (Breeding and non-breeding)</p>

Construction Phase		
Technical Aspect / Likely Significant Effect		Residual Effect / Significance
	Breeding passerines and relatives (wheatear, whinchat, dipper, grey wagtail, stonechat, priority passerines and relatives group)	Not Significant (passerine species, common crossbill and open-habitat breeders)
Competition from birds displaced by the Proposed Development	North Pennine Moors SPA	Not Significant
Chapter 10: Hydrology, Hydrogeology, Geology and Peat		
Erosion and sedimentation		Minor adverse / Not Significant
Alteration of flow, natural drainage patterns / runoff volumes and rates – groundwater flows		Significant effects cannot be ruled out
Potential pollution events affecting groundwater and surface water quality		Minor adverse / Not Significant
Peat instability		Significant effects cannot be ruled out
Loss of peat / carbon loss		Significant effects cannot be ruled out
Risk of flooding from all sources to site users and off-site people and property		Minor adverse / Not Significant
Potential pollution events associated with the generation of foul water onsite		Not Significant
Chapter 11: Carbon and Climate Change		

Construction Phase		
Technical Aspect / Likely Significant Effect		Residual Effect / Significance
Part A: Greenhouse Gas (GHG) emission assessment	GHG Emissions	Significant beneficial ¹
Part B: Climate resilience assessment	Flooding (pluvial and fluvial)	Negligible – minor adverse / Not Significant
	Extreme weather events	Negligible – minor adverse / Not Significant
	Heatwaves and chronic temperature increase	Minor adverse / Not Significant
Chapter 12: Landscape and Visual		
Physical effects on physical landscape fabric		Potential for significant adverse effects to occur
Effects on landscape character and visual amenity		No greater than those identified for the operational and maintenance phase (refer to Table 25-2)
Chapter 13: Historic Environment		
Direct effects on archaeological remains		Not Significant (for buried archaeological remains) Significant (for Vaccary Walls)
Changes within the setting of heritage assets		Not Significant / No effect

¹ Note that the GHG assessment has considered emissions from all phases of the Proposed Development and GHG savings/reductions from the operation of the Proposed Development. Therefore, a net overall conclusion is presented.

Construction Phase		
Technical Aspect / Likely Significant Effect		Residual Effect / Significance
Chapter 14: Transport and Access		
Transport-related effects (severance, driver delay, pedestrian delay, non-motorised user amenity, fear and intimidation, road safety and large loads)		Negligible / Not Significant
Chapter 15: Noise and Vibration		
Construction noise		Not Significant
Construction traffic noise		Not Significant
Chapter 16: Air Quality		
Construction dust		No likely significant effects
Construction road traffic on human health		Not Significant
Construction road traffic on ecological sites		Not Significant
Non-Road Mobile Machinery (NRMM) on ecological sites		Cannot rule out likely significant effects
Chapter 17: Socio-Economics and Tourism²		
Increase in employment and Gross Value Added (GVA)	Calderdale	Significant (Beneficial)
	Yorkshire & Humber	Not Significant
	UK	Not Significant

² Note that for the purposes of Socio-Economics and Tourism, the 'development and construction' phase has been considered to account for expenditure prior to the commencement of construction works onsite.

Construction Phase	
Technical Aspect / Likely Significant Effect	Residual Effect / Significance
Chapter 18: Human Health	
Open space, leisure and play	Minor adverse / Not Significant
Transport modes, access and connections	Minor adverse / Not Significant
Community identity, culture, resilience and influence	Negligible adverse / Not Significant
Employment, income and training	Minor beneficial / Not Significant
Housing	At this stage significant effects cannot be ruled out
Health and social care services	At this stage significant effects cannot be ruled out
Air quality	Minor adverse / Not Significant
Noise and vibration	Minor adverse / Not Significant
Water quality or availability	Minor adverse / Not Significant
Chapter 19: Aviation and Radar	
Effects on Primary Surveillance Radars (PSRs)	None
Manchester Airport Instrument Flight Procedures (IFP)	Not Significant
Blackport Airport IFPs	Not Significant
Leeds Bradford Airport IFPs	Not Significant

Construction Phase	
Technical Aspect / Likely Significant Effect	Residual Effect / Significance
BAE Systems Warton IFPs	Not Significant
Military low flying	Not Significant
NATS En Route plc (NERL) Pole Hill Doppler Very High Frequency Omnidirectional Range (DVOR)	Not Significant
Chapter 20: Major Accidents and Disasters	
Accident involving high-consequence dangerous Goods	Not Significant
Accidental fire or explosion at an onshore Major Accident Hazard Pipeline	Not Significant
Fires / wildfires	Not Significant
Risks associated with onsite activities, such as dropping equipment or falls from working at height	Not Significant
Utilities / services strike	Not Significant
Subsidence and unstable ground	Not Significant
Unexploded Ordnance	Not Significant
Chemical release	Not Significant
Chapter 21: Shadow Flicker – n/a³	
Chapter 22: Materials and Waste	

³ Effects during the construction phase have been ‘scoped out’ for Shadow Flicker.

Construction Phase		
Technical Aspect / Likely Significant Effect		Residual Effect / Significance
Construction materials		Cannot rule out likely significant effects
Construction inert and non-hazardous waste		Cannot rule out likely significant effects
Construction hazardous waste		Likely Not Significant
Chapter 23: Other Environmental Matters		
Loss of Best and Most Versatile (BMV) agricultural land		Not Significant
Construction activities could lead to localised contamination of soils from potential spills or leakages from construction plant during operation or refuelling activities; Direct contact with contaminated soil or ground water and chemical attack on existing buildings, structures and services; Spillage and leakage from	Human health and the built environment receptors	Negligible / Not Significant
	Controlled water receptors (groundwater)	Negligible / Not Significant
	Controlled water receptors (surface water and surface water abstractions)	Minor adverse / Not Significant

Construction Phase	
Technical Aspect / Likely Significant Effect	Residual Effect / Significance
<p>construction activities could have a direct impact on groundwater, resulting in pollution of the underlying aquifers. Pollution run-off during construction activities may occur which could also impact the surface watercourses; and Excavation activities could lead to mobilisation of existing contaminants in the soil or shallow groundwater (if present) potentially creating a new / preferential pathway to the underlying aquifer</p>	
<p>Effects from the Bradford West Cable Corridor and the Access Routes</p>	<p>Not Significant</p>

Table 25-2: Summary of Preliminary Assessments (Operational and Maintenance Phase)

Operational and Maintenance Phase		
Technical Aspect / Likely Significant Effect		Residual Effect/Significance
Chapter 8: Biodiversity		
South Pennine Moors SAC and South Pennine Moors SSSI Priority Habitats (blanket bog, dry heath, wet heath etc.)	Changes in levels of recreational pressure resulting in degradation and/or loss of habitat	Significant effects cannot be ruled out
Protected species: Bats	Collision with turbine blades resulting in injury or death	Significant effects cannot be ruled out
Fish Assemblage	Effects of electro-magnetic fields and heat produced by transmission cables beneath watercourses	Significant effects cannot be ruled out
Chapter 9: Ornithology		
Habitat loss and alteration – resulting from routine maintenance	South Pennine Moors Phase 2 SPA	Not Significant
	South Pennine Moors SSSI	
	Merlin	
	Golden plover	

Operational and Maintenance Phase		
Technical Aspect / Likely Significant Effect		Residual Effect/Significance
	Other waders (common sandpiper, curlew, dunlin, lapwing, little ringed plover, oystercatcher, redshank, snipe)	
	Other raptors and owls (barn owl, goshawk, hen harrier, kestrel, marsh harrier, peregrine, red kite, short-eared owl)	
	Waterfowl (greylag goose and mallard)	
	Gamebirds (red grouse)	
	Passerines and relatives (wheatear, whinchat, dipper, grey wagtail, stonechat and priority passerines and relatives group)	
Habitat loss and alteration - resulting from cessation of driven grouse moor management	South Pennine Moors Phase 2 SPA	Likely significant adverse effect at the international scale
	South Pennine Moors SSSI	Likely significant adverse effect at the national scale
	Merlin	Likely significant adverse effects at relative levels of geographic importance (all breeding species other than breeding passerine species of woodland / scrub dependence)
	Golden plover	
	Other waders (common sandpiper, curlew, dunlin, lapwing, little ringed plover, oystercatcher, redshank, snipe)	

Operational and Maintenance Phase		
Technical Aspect / Likely Significant Effect		Residual Effect/Significance
	Other raptors and owls (barn owl, goshawk, hen harrier, kestrel, marsh harrier, peregrine, red kite, short-eared owl)	Likely significant beneficial effect (Passerine species of woodland / scrub dependence - breeding)
	Waterfowl (greylag goose and mallard)	
	Gamebirds (red grouse)	
	Passerines and relatives (wheatear, whinchat, dipper, grey wagtail, stonechat and priority passerines and relatives group)	
	Non-breeding species	Likely significant adverse effect at the national scale (Hen harrier) Likely significant beneficial effect (Passerine species of woodland / scrub dependence) Likely significant adverse (for all other non-breeding species)
Death / injury due to collision with turbines	South Pennine Moors Phase 2 SPA	Likely significant adverse effect at the international scale
	South Pennine Moors SSSI	Likely significant adverse effect at the national scale
	Merlin	
	Golden plover	

Operational and Maintenance Phase		
Technical Aspect / Likely Significant Effect		Residual Effect/Significance
	Other waders (curlew, dunlin, lapwing, oystercatcher, redshank, snipe)	Likely significant adverse effects at relative levels of geographic importance (refer to Chapter 9: Ornithology)
	Other raptors and owls (goshawk, hen harrier, hobby, kestrel, marsh harrier, peregrine, red kite, short-eared owl)	
	Waterfowl (greylag goose, mallard, pink-footed goose, whooper swan)	
	Gamebirds (red grouse)	
	Gulls (black-headed gull, common gull, great black-backed gull, herring gull, lesser black-backed gull)	
Disturbance / displacement – operational maintenance works	South Pennine Moors Phase 2 SPA	Not Significant
	South Pennine Moors SSSI	
	Merlin	
	Golden plover	
	Other waders (common sandpiper, curlew, dunlin, lapwing, little ringed plover, oystercatcher, snipe)	
	Other raptors and owls (barn owl, goshawk, hen harrier, hobby, kestrel, marsh harrier, peregrine, red kite, short-eared owl)	

Operational and Maintenance Phase		
Technical Aspect / Likely Significant Effect		Residual Effect/Significance
	Waterfowl (greylag goose, mallard, pink-footed goose, whooper swan)	
	Gamebirds (red grouse)	
	Gull species (black-headed gull, common gull, great black-backed gull, herring gull, lesser black-backed gull)	
Disturbance / displacement – tourism / recreation	South Pennine Moors Phase 2 SPA, South Pennine Moors SSSI, Merlin, Golden plover, other waders (common sandpiper, curlew, dunlin, lapwing, little ringed plover, oystercatcher, snipe), other raptors and owls (barn owl, goshawk, hen harrier, hobby, kestrel, marsh harrier, peregrine, red kite, short-eared owl), waterfowl (greylag goose, mallard, pink-footed goose, whooper swan), gamebirds (red grouse) and gull species (black-headed gull, common gull, great black-backed gull, herring gull, lesser black-backed gull)	Significant effects cannot be ruled out
Disturbance / displacement - other	South Pennine Moors Phase 2 SPA	Likely significant adverse effect at the international scale
	South Pennine Moors SSSI	Likely significant adverse effect at the national scale
	Merlin	Likely significant adverse effect at the national scale (Breeding)

Operational and Maintenance Phase	
Technical Aspect / Likely Significant Effect	Residual Effect/Significance
	Not Significant (Wintering)
Golden plover	Likely significant adverse effect at the regional scale (Breeding) Not Significant (Non-breeding)
Other waders (common sandpiper, curlew, dunlin, lapwing, little ringed plover, oystercatcher, snipe)	Not Significant (Little ringed plover - breeding) Likely significant adverse effect at the local scale (Common sandpiper - breeding) Likely significant adverse effect at the regional scale (Curlew, dunlin, lapwing, oystercatcher, redshank and snipe - breeding) Not Significant (Non-breeding - waders)
Other raptors and owls (barn owl, goshawk, hen harrier, hobby, kestrel, marsh harrier, peregrine, red kite, short-eared owl)	Likely significant adverse effects at the national level (Short-eared owls and hen harrier - breeding, hen harrier - non-breeding) Likely significant adverse effects at the regional scale (Peregrine and red kite - breeding, peregrine - non-breeding) Likely significant adverse effect at the local scale (Kestrel - breeding) Not Significant (Other raptors (barn owl, goshawk and hobby) - breeding) Not Significant (All other raptor and owl species - non-breeding)

Operational and Maintenance Phase		
Technical Aspect / Likely Significant Effect		Residual Effect/Significance
	Waterfowl (greylag goose, mallard, pink-footed goose, whooper swan)	Not Significant (Breeding and non-breeding)
	Gamebirds (red grouse)	Not Significant
	Gull species (black-headed gull, common gull, great black-backed gull, herring gull, lesser black-backed gull)	Not Significant
Competition from birds displaced by the Proposed Development	North Pennine Moors SPA	Not Significant
Chapter 10: Hydrology, Hydrogeology, Geology and Peat		
Erosion and sedimentation		Minor adverse / Not Significant
Alteration of flow, natural drainage patterns / runoff volumes and rates – groundwater flows		Significant effects cannot be ruled out
Potential pollution events affecting groundwater and surface water quality		Minor adverse / Not Significant
Risk of flooding from all sources to site users and off-site people and property		Significant effects cannot be ruled out
Potential pollution events associated with the generation of foul water onsite		Not Significant
Chapter 11: Carbon and Climate Change		

Operational and Maintenance Phase		
Technical Aspect / Likely Significant Effect		Residual Effect/Significance
Part A: GHG emission assessment	GHG emissions	Significant beneficial ⁴
Part B: Climate resilience assessment	Flooding (pluvial and fluvial)	Minor adverse / Not Significant
	Extreme weather events	Negligible – minor adverse / Not Significant
	Heatwaves	Negligible / Not Significant
	Chronic temperature increase	Negligible / Not Significant
	Drought and reduced summer rainfall	Negligible / Not Significant
	Increased precipitation	Negligible / Not Significant
	Subsidence or ground movement	Negligible / Not Significant
Chapter 12: Landscape and Visual		
Physical effects on physical landscape fabric		Not Significant
Effects on landscape character		A range of Significant and Not Significant effects
Effects on landscape designations		Potential for significant adverse effects to occur

⁴ Note that the GHG assessment has considered emissions from all phases of the Proposed Development and GHG savings/reductions from the operation of the Proposed Development. Therefore, a net overall conclusion is presented.

Operational and Maintenance Phase		
Technical Aspect / Likely Significant Effect		Residual Effect/Significance
Effects on visual amenity		Likely to be significant adverse effects
Residential visual amenity assessment		Likely to be significant adverse effects
Assessment of 'hours of darkness' visual effects		Likely to be significant adverse effects
Chapter 13: Historic Environment		
Direct effects on archaeological remains		Minor adverse / Not Significant
Changes within the setting of heritage assets		Minor adverse / Not Significant
Chapter 14: Transport and Access – n/a⁵		
Chapter 15: Noise and Vibration		
Operational wind turbine noise		Not Significant
Operational substation noise		Not Significant
Chapter 16: Air Quality – n/a⁶		
Chapter 17: Socio-Economics and Tourism		
Increase in employment and GVA	Calderdale	Not Significant
	Yorkshire & Humber	Not Significant
	UK	Not Significant

⁵ Effects during the operational and maintenance phase have been 'scoped out' for Transport and Access.

⁶ Effects during the operational and maintenance phase have been 'scoped out' for Air Quality.

Operational and Maintenance Phase	
Technical Aspect / Likely Significant Effect	Residual Effect/Significance
Impacts on tourism economy	No noticeable adverse impacts
Chapter 18: Human Health	
Open space, leisure and play	Minor adverse / Not Significant
Community identity, culture, resilience and influence	Minor adverse / Not Significant
Employment, income and training	Negligible beneficial / Not Significant
Noise and vibration	Minor adverse / Not Significant
Water quality or availability	Minor adverse / Not Significant
Shadow flicker	Negligible adverse / Not Significant
Wider societal infrastructure and resource	Moderate beneficial / Significant
Chapter 19: Aviation and Radar	
Leeds Bradford Airport PSR	Anticipated to be Not Significant
Manchester Airport PSR	Anticipated to be Not Significant
BAE Systems Warton PSR	Anticipated to be Not Significant
NERL Clee Hill, Claxby and St. Anne's PSRs	Anticipated to be Not Significant
Met Office Hamledon Hill PSR	Anticipated to be Not Significant
Manchester Airport IFPs	Not Significant
Blackpool Airport IFPs	Not Significant

Operational and Maintenance Phase	
Technical Aspect / Likely Significant Effect	Residual Effect/Significance
Leeds Bradford Airport IFPs	Anticipated to be Not significant
BAE Systems Warton IFPs	Anticipated to be Not Significant
Military low flying	Anticipated to be Not Significant
NERL Pole Hill DVOR	Not Significant
Chapter 20: Major Accidents and Disasters	
Aviation collision	Not Significant
Fire / wildfires	Not Significant
Risks associated with onsite activities, such as dropping equipment or falls from working at height	Not Significant
Chemical release	Not Significant
Ice throw	Not Significant
Wind turbine collapse	Not Significant
Chapter 21: Shadow Flicker	
Shadow flicker	Not Significant
Chapter 22: Materials and Waste	
Operation and maintenance materials	Likely Not Significant
Operational and maintenance inert and non-hazardous	Likely Not Significant

Operational and Maintenance Phase		
Technical Aspect / Likely Significant Effect		Residual Effect/Significance
Operation and maintenance hazardous waste		Likely Not Significant
Chapter 23: Other Environmental Matters		
Maintenance works (such as servicing of electrical equipment) could result in spillages and leakages of oil, fuel and other chemicals, which could result in pollution of controlled waters; and Direct contact with contaminated soil or ground water and chemical attack on future buildings, structures and services	Human health and built environment receptors	Negligible / Not Significant
	Controlled water receptors (groundwater)	Negligible / Not Significant
	Controlled water receptors (surface water and surface water abstractions)	Minor beneficial to Minor adverse / Not Significant
Effects from the Bradford West Cable Corridor and the Access Routes		Not Significant

Table 25-3: Summary of Preliminary Assessments (Decommissioning Phase)

Decommissioning Phase		
Technical Aspect / Likely Significant Effect		Residual Effect / Significance
Chapter 8: Biodiversity		
South Pennine Moors SAC and South Pennine Moors SSSI Priority Habitats (blanket bog, dry heath, wet heath etc.)	Direct land take and land use change resulting in degradation and / or loss of habitat	Significant effects cannot be ruled out
	Changes in surface and sub-surface hydrology resulting in degradation and / or loss of habitat	
	The introduction of toxic pollutants into the environment resulting in changes, loss or damage to terrestrial or freshwater environments and the species they support	
	Dust deposition resulting in degradation and/or loss of habitat	
	Changes in air quality as a result of vehicle emissions resulting in degradation and / or loss of habitat	
Local non-statutory designated sites	The introduction of toxic pollutants into the environment resulting in changes, loss or damage to terrestrial or freshwater environments and the species they support	Not Significant
Priority Habitats: Rivers	The introduction of toxic pollutants into the environment resulting in changes, loss or damage to terrestrial or freshwater environments and the species they support	Significant effects cannot be ruled out

Decommissioning Phase		
Technical Aspect / Likely Significant Effect		Residual Effect / Significance
Protected species: Bats	Direct land take and land use change resulting in degradation and / or loss of habitat	Significant effects cannot be ruled out
	Indirect habitat loss or degradation	
Protected species: Amphibians	Direct land take and land use change resulting in degradation and / or loss of habitat	Significant effects cannot be ruled out
	Indirect habitat loss or degradation	
Protected species: Reptiles	Direct land take and land use change resulting in degradation and / or loss of habitat	Significant effects cannot be ruled out
	Indirect habitat loss or degradation	
Protected species: Otter and Water Vole	Direct land take and land use change resulting in degradation and / or loss of habitat	Significant effects cannot be ruled out
	Indirect habitat loss or degradation	
	Decommissioning activity resulting in disturbance of fauna resulting in displacement or a reduction in productivity / survival rates	
CHEGD Fungi Assemblage	Direct land take and land use change resulting in degradation and / or loss of habitat	Significant effects cannot be ruled out
	Indirect habitat loss or degradation	

Decommissioning Phase		
Technical Aspect / Likely Significant Effect		Residual Effect / Significance
Invertebrates Assemblage (including White clawed crayfish)	Direct land take and land use change resulting in degradation and / or loss of habitat	Significant effects cannot be ruled out
	Indirect habitat loss or degradation	
Fish Assemblage	Direct land take and land use change resulting in degradation and / or loss of habitat	Significant effects cannot be ruled out
	Indirect habitat loss or degradation	
Chapter 9: Ornithology		
Habitat loss and alteration	All Important Ornithological Features (IOFs)	Not Significant
Disturbance / displacement	All IOFs	Not Significant (all IOFs other than ground nesting waders, raptors and wintering hen harrier) Likely significant effects at relative level of geographical importance (Ground nesting waders, raptors and wintering hen harrier)
Effects related to the Bradford West Cable Corridor		No significant adverse effects
Effects related to the northern section of the Western Access Route		Significant effects cannot be ruled out
Chapter 10: Hydrology, Hydrogeology, Geology and Peat		
Erosion and sedimentation		Minor adverse / Not Significant

Decommissioning Phase		
Technical Aspect / Likely Significant Effect		Residual Effect / Significance
Alteration of flow, natural drainage patterns / runoff volumes and rates – groundwater flows		Significant effects cannot be ruled out
Potential pollution events affecting groundwater and surface water quality		Minor adverse / Not Significant
Peat instability		Significant effects cannot be ruled out
Loss of peat / carbon loss		Significant effects cannot be ruled out
Risk of flooding from all sources to site users and off-site people and property		Minor adverse / Not Significant
Potential pollution events associated with the generation of foul water onsite		Not Significant
Chapter 11: Carbon and Climate Change		
Part A: GHG emission assessment	GHG emissions	Significant beneficial ⁷
Part B: Climate resilience assessment	Flooding (pluvial and fluvial)	Negligible – minor adverse / Not Significant
	Extreme weather events	Negligible / Not Significant
	Heatwaves and chronic temperature increase	Minor adverse / Not Significant
Chapter 12: Landscape and Visual		

⁷ Note that the GHG assessment has considered emissions from all phases of the Proposed Development and GHG savings/reductions from the operation of the Proposed Development. Therefore, a net overall conclusion is presented.

Decommissioning Phase		
Technical Aspect / Likely Significant Effect		Residual Effect / Significance
Landscape and visual effects		Potential for significant adverse effects
Chapter 13: Historic Environment		
Effects on archaeological remains and changes in setting of heritage assets		Effects are unlikely to be significant
Chapter 14: Transport and Access – n/a⁸		
Chapter 15: Noise and Vibration		
Decommissioning noise		Not Significant
Decommissioning road traffic noise		Not Significant
Chapter 16: Air Quality		
Demolition dust impacts on ecological receptors		A significant effect cannot be ruled out
Chapter 17: Socio-Economics and Tourism		
Increase in employment and GVA	Calderdale	Not Significant
	Yorkshire & Humber	
	UK	
Chapter 18: Human Health		
Open space, leisure and play		Minor adverse / Not Significant

⁸ Effects during the decommissioning phase have not been considered for Transport and Access.

Decommissioning Phase	
Technical Aspect / Likely Significant Effect	Residual Effect / Significance
Transport modes, access and connections	Minor adverse / Not Significant
Community identity, culture, resilience and influence	Negligible adverse / Not Significant
Employment, income and training	Minor beneficial / Not Significant
Housing	At this stage significant effects cannot be ruled out.
Health and social care services	At this stage significant effects cannot be ruled out.
Air quality	Minor adverse / Not Significant
Noise and vibration	Minor adverse / Not Significant
Water quality or availability	Minor adverse / Not Significant
Chapter 19: Aviation and Radar	
Effects on PSRs	None
Manchester Airport IFPs	Not Significant
Blackport Airport IFPs	Not Significant
Leeds Bradford Airport IFPs	Not Significant
BAE Systems Warton IFPs	Not Significant
Military low flying	Not Significant

Decommissioning Phase		
Technical Aspect / Likely Significant Effect		Residual Effect / Significance
NERL Pole Hill DVOR		Not Significant
Chapter 20: Major Accidents and Disasters		
Same as construction phase above.		Not Significant
Chapter 21: Shadow Flicker – n/a⁹		
Chapter 22: Materials and Waste		
Decommissioning materials		Likely Not Significant
Decommissioning inert and non-hazardous waste		Likely Not Significant
Decommissioning hazardous waste		Likely Not Significant
Chapter 23: Other Environmental Matters		
Loss of BMV agricultural land		Not Significant
Decommissioning activities could result in minor	Human health and built environment receptors	Negligible / Not Significant
	Controlled water receptors (groundwater)	Negligible / Not Significant

⁹ Effects during the decommissioning phase have been ‘scoped out’ for Shadow Flicker.

Decommissioning Phase		
Technical Aspect / Likely Significant Effect		Residual Effect / Significance
localised contamination of soils associated with potential spills and leakages from plant; and The spills and leakages on soil may also directly affect the groundwater resulting in potential pollution of the underlying aquifers. Silt run-off during earthworks could also affect the surface watercourses	Controlled water receptors (surface water and surface water abstractions)	Minor beneficial to Minor adverse / Not Significant
Effects from the Bradford West Cable Corridor and the Access Routes		Not Significant

25.3 Summary of In-Combination Climate Impact Assessment

25.3.1 In accordance with good practice guidance, as part of **Chapter 11: Carbon and Climate Change**, consideration has been given to whether the conclusions of the preliminary assessments of likely significant effects are likely to change with future climatic conditions, known as In-Combination Climate Impacts (ICCI). A summary of the outputs of this assessment is provided in **Table 25-4**.

Table 25-4: Summary of ICCI Assessment

Technical Topic*	Any ICCI that Alter the Significance of Effects?	Potential ICCI Effect
Biodiversity	No	Not Significant
Ornithology	No	Not Significant
Hydrology, Hydrogeology, Geology and Peat	No	Not Significant
Landscape and Visual	No	Not Significant
Historic Environment	No	Not Significant
Transport and Access	No	Not Significant
Noise and Vibration	No	Not Significant
Air Quality	No	Not Significant
Socio-economics and Tourism	No	Not Significant
Human Health	No	Not Significant
Aviation and Radar	No	Not Significant
Major Accidents and Disasters	No	Not Significant
Shadow Flicker	No	Not Significant
Material and Waste	No	Not Significant
Other Environmental Matters	No	Not Significant

* Note that carbon and climate change is not included within the table above.

25.4 Summary of Cumulative Effects

25.4.1 The findings of the cumulative effects assessment in **Chapter 24: Cumulative Effects** are summarised below:

- Intra-project effects – the conclusions are a mixture of not significant and that significant effects cannot be ruled out at this stage across the construction, operational and maintenance and decommissioning phases; and
- Inter-project effects (including for Other Developments, the consideration of works at the Bradford West Substation and for Other Wind Turbine Schemes) – the conclusions are a mixture of not significant and that significant effects cannot be ruled out at this stage across the construction, operational and maintenance and decommissioning phases.

25.4.2 Further detailed information will be provided in the ES.

