

17. Summary

Introduction

- 17.1 The purpose of this Chapter is to provide a summary of the assessments reported within **Technical Chapters 6 – 15** and **Chapter 16: Assessment of Cumulative Effects**, to:
- Confirm the effects assessed, the conclusions and whether these are Significant or Not Significant; and
 - Outline cumulative effects, in particular how such effects differ from effects individually / for the Project for Assessment in isolation.
- 17.2 Through delivering these objectives, Rochdale Metropolitan Borough Council (RMBC) and Rossendale Borough Council (RBC) should have sufficient information on environmental impacts to inform their decision-making processes.

Summary of Technical Chapters 6 – 15

- 17.3 Each of the **Technical Chapters 6 – 15** reports the assessments with a tabular summary. All effects reported on in **Technical Chapters 6 – 15** are summarised for both the construction and operational stages in **Tables 17.1** and **17.2**, respectively, where:
- Not Significant residual effects were identified – denoted by ✖;
 - Significant adverse residual effects were identified – denoted by ✔; and
 - Significant beneficial residual effects were identified – denoted by ✔.
- 17.4 Where possible and relevant, the ranges in the residual effects (and their significance) are presented in **Tables 17.1** and **17.2**. Where commas are used below, this denotes that there are multiple conclusions on different receptors / receptor groups within the effect assessment.
- 17.5 Details of the receptors are provided in the relevant **Technical Chapters 6 – 15**.

Table 17.1: Summary of residual effects during construction

Technical topic / likely significant effect		Residual effects	Significance
Chapter 6: Transport and Access			
Transport-related effects	Severance	Negligible adverse, Minor adverse	✖
	Driver delay	Negligible adverse	✖
	Pedestrian delay	Negligible adverse, Minor adverse	✖
	Non-motorised user amenity	Negligible adverse, Minor adverse	✖

Technical topic / likely significant effect		Residual effects	Significance
	Fear and intimidation	Negligible adverse / Minor adverse	✗
	Road safety	Negligible adverse / Minor adverse	✗
	Abnormal loads	Negligible adverse / Minor adverse	✗
Chapter 7: Noise and Vibration			
	Disturbance associated with construction noise	Not Significant	✗
Chapter 8: Shadow Flicker – Not applicableⁱ			
Chapter 9: Ecology			
	Knowl Moor SBI and Scout Moor BHS	Negligible adverse	✗
Degraded blanket bog habitat	M25 <i>Molinia caerulea</i> – <i>Potentilla erecta</i> mire, M20 <i>Criophore vaginatum</i> blanket and raised mire and M3 <i>Eriophorum angustifolium</i> bog pool	Minor to moderate beneficial	✓
	M6 <i>Carex echinata</i> - <i>Sphagnum recurva/auriculatum</i> mire	Minor adverse	✗
	Acid grassland	Minor adverse	✗
	Species-poor soft rush	Negligible adverse	✗
	Waterbodies and watercourses	Minor adverse	✗
	Bats (foraging and commuting)	Negligible adverse	✗
	Badger	Negligible to minor adverse	✗
	Water vole	Negligible to minor adverse	✗
	Otter	Negligible to minor adverse	✗
	Reptiles and amphibians	Negligible to minor adverse	✗
Chapter 10: Ornithology			
	Displacement due to loss and degradation of habitats, and disturbance	Negligible adverse, Minor adverse	✗

ⁱ No construction stage effects were 'scoped in' for the Shadow Flicker assessment.

Technical topic / likely significant effect	Residual effects	Significance
Population decline of breeding upland birds within the West Pennine Moors SSSI	Negligible adverse	✘
Chapter 11: Landscape and Visual		
Changes in landscape character and features	Moderate / Minor adverse, Moderate adverse	✘ / ✔
Changes in views / visual amenity	Moderate / Minor adverse, Moderate adverse, Major Adverse	✘ / ✔
Chapter 12: Built Heritage		
Harm to the heritage significance (character and appearance) of Conservation Areas as a result of change within their setting	Moderate adverse	✘
Harm to the heritage significance (special architectural and historic interest) of listed buildings as a result of change within their setting	Negligible adverse, Minor adverse, Moderate adverse	✘
Harm to the heritage significance (special historic interest) of RP&G as a result of change within their setting	Moderate adverse	✘
Harm to the heritage significance of non-designated heritage assets as a result of change within their setting	Minor adverse	✘
Chapter 13: Archaeology		
Loss / disturbance to known archaeological assets	Negligible adverse, Minor adverse	✘
Loss / disturbance to potential / unknown buried archaeological remains	Negligible to Minor adverse, Negligible to Major adverse	✘ / ✔
Loss / reduction in deposits preserving palaeoenvironmental remains as a result of dewatering activities	Minor adverse	✘
Chapter 14: Hydrology, Hydrogeology and Peat		
Surface water features	Minor adverse	✘
Public water supplies	Minor adverse	✘
Private water supplies	Minor adverse	✘

Technical topic / likely significant effect	Residual effects	Significance
Ground Water Dependent Terrestrial Ecosystems (GWDTEs)	Minor adverse	✗
Peat resource	Minor adverse	✗
Chapter 15: Climate Changeⁱⁱ		
Greenhouse Gas (GHG) emissions	Moderate Adverse	✓

Table 17.2: Summary of residual effects during operation

Technical topic / likely significant effect	Residual effect	Significance
Chapter 6: Transport and Access – Not applicableⁱⁱⁱ		
Chapter 7: Noise and Vibration		
Disturbance associated with operational noise	Not Significant	✗
Chapter 8: Shadow Flicker		
Shadow flicker	Negligible adverse	✗
Chapter 9: Ecology		
Bats (foraging and commuting)	Minor adverse	✗
Other fauna (badgers, otter, water vole and herpetofauna)	Negligible adverse	✗
Chapter 10: Ornithology		
Increased mortality due to collision	Negligible adverse, Minor adverse	✗
Displacement due to loss and degradation of habitats, and disturbance	Negligible adverse	✗
Population decline of breeding upland birds within the West Pennine Moors SSSI	Negligible adverse	✗
Chapter 11: Landscape and Visual^{iv}		

ⁱⁱ It is noted that the net effect of the construction and operational stages is reported within **Chapter 15: Climate Change** and this is concluded to be Beneficial (Significant).

ⁱⁱⁱ No operational stage effects were 'scoped in' for the Transport and Access assessment.

^{iv} Where relevant, the conclusions presented account for both scenarios assessed (i.e. Existing Baseline Scenario and Restored Baseline Scenario). See **Chapter 11: Landscape and Visual**.

Technical topic / likely significant effect	Residual effect	Significance
Changes in landscape character and features	Minor adverse, Moderate / Minor adverse, Moderate adverse, Major / Moderate adverse	✘ / ✓
Changes in views / visual amenity	Negligible adverse, Minor / Negligible adverse, Minor adverse, Moderate / Minor adverse, Moderate adverse, Major / Moderate adverse, Major adverse	✘ / ✓
Effects on special qualities of designated landscapes	Minor adverse, Moderate / Minor adverse	✘
Night-time landscape and visual effects	Moderate / Minor adverse, Moderate adverse, Major / Moderate adverse	✘ / ✓
Chapter 12: Built Heritage^v		
Harm to the heritage significance (character and appearance) of Conservation areas as a result of change within their setting	Moderate adverse	✘
Harm to the heritage significance (special architectural and historic interest) of listed buildings as a result of change within their setting	Negligible adverse, Minor adverse, Moderate adverse	✘
Harm to the heritage significance (special historic interest) of RP&G as a result of change within their setting	Moderate adverse	✘
Harm to the heritage significance of non-designated heritage assets as a result of change within their setting	Minor adverse	✘
Chapter 13: Archaeology		
Loss / reduction in deposits preserving palaeoenvironmental remains as a result of dewatering activities	Minor adverse	✘
Chapter 14: Hydrology, Hydrogeology and Peat		
Surface water features	Minor adverse	✘
Public water supplies	Minor adverse	✘

^v Where relevant, the conclusions presented account for both scenarios assessed (i.e. Existing Baseline Scenario and Restored Baseline Scenario). See **Chapter 12: Built Heritage**.

Technical topic / likely significant effect	Residual effect	Significance
Private water supplies	Minor adverse	✗
GWDTEs	Minor adverse	✗
Peat resource	Minor beneficial	✗
Chapter 15: Climate Change^{vi}		
GHG savings (annual)	Moderate beneficial	✓
Net GHG effect – construction, operation & decommissioning	Major beneficial	✓

Decommissioning

17.6 The residual effects relevant to decommissioning are summarised as follows:

- **Chapter 7: Noise and Vibration:** Residual effects likely to be the same as identified in **Table 17.1** (Not Significant);
- **Chapter 9: Ecology:** Residual effects largely likely to be the same as reported in **Table 17.1** (Negligible adverse to Minor adverse and Not Significant)^{vii};
- **Chapter 10: Ornithology:** Residual effects likely to be the same as that reported in **Table 17.1** (Negligible adverse – Minor adverse and Not Significant);
- **Chapter 11: Landscape and Visual:** Residual effects likely to be the same as that reported in **Table 17.1** (Moderate / Minor adverse – Major adverse and a mix of Not Significant / Significant);
- **Chapter 12: Built Heritage:** Residual effects likely to be the same as that reported in **Table 17.1** (Negligible adverse – Moderate adverse and Not Significant);
- **Chapter 13: Archaeology:** Residual effects likely to be no greater than that reported in **Table 17.1** (Negligible adverse – Major adverse and a mix of Not Significant / Significant);
- **Chapter 14: Hydrology, Hydrogeology and Peat:** Residual effects likely to be no greater than that reported in **Table 17.1** (Minor adverse and Not Significant); and
- **Chapter 15: Climate Change:** Residual effects are as reported in **Table 17.1** (Moderate adverse and Significant).

^{vi} It is noted that the net effect of the construction, operation and decommissioning stages is reported within **Chapter 15: Climate Change** and this is concluded to be Major beneficial (Significant).

^{vii} The beneficial effects associated with moorland restoration are not specifically attributable to the decommissioning stage.

Summary of Chapter 16: Assessment of Cumulative Effects

- 17.7 An assessment of cumulative effects has been completed within **Chapter 16: Assessment of Cumulative Effects**. The assessment considered two types of cumulative effects:
- Effect interactions (where more than one effect is experienced by a single receptor); and
 - In-combination cumulative effects (where effects on a receptor may combine with those of other projects in the locale).
- 17.8 A summary of the outputs of the assessment for each type of cumulative effect is set out below.
- 17.9 In addition, the works required to connect the Project for Assessment to the grid / network at the Rawtenstall Bulk Supply Point (BSP), which will be undertaken by the District Network Operator (DNO), have been considered to ensure that the combinations / interactions of such effects are reported.

Effect Interactions

- 17.10 The assessment of effect interactions considers multiple effects generated by the Project for Assessment impacting upon the same receptor.
- 17.11 The qualitative appraisal identified the following for the construction stage:
- **Population and human health** – effect interactions likely to be greater than the effects individually and perceived as **Significant**;
 - **Biodiversity** - there are no effect interactions;
 - **Cultural heritage** – there are no effect interactions; and
 - **Water** – there are no effect interactions
- 17.12 The qualitative appraisal identified the following for the operational stage:
- **Population and human health** – effect interactions likely to be greater than the effects individually and perceived as **Significant**;
 - **Biodiversity** – effect interactions are likely to be no greater than the effects individually and would be **Not Significant**;
 - **Landscape** – effect interactions likely to be no greater than the effects individually but would be **Significant**;
 - **Cultural heritage** – there are no effect interactions; and
 - **Water** – there are no effect interactions.

- 17.13 The qualitative appraisal determined that the effect interactions during the decommissioning stage would be no greater than that determined for the construction stage.

Assessment of In-combination Effects

- 17.14 The assessment of in-combination effects considers effects generated by the Project for Assessment and other existing wind farm schemes and Cumulative Project(s) impacting upon the same receptor. The assessment considered 23 existing wind farm schemes and 20 Cumulative Projects.
- 17.15 As set out in **Chapter 16: Assessment of Cumulative Effects**, climate change has not been specifically considered within the assessment of in-combination effects, but it is noted that the overall effect was determined to be **Major Beneficial** and **Significant** as stated within **Chapter 15: Climate Change**.
- 17.16 A summary of the evaluation of in-combination effects with the Cumulative Projects is provided in **Table 17.3**.

Table 17.3: Summary of in-combination assessment

Technical topic	Summary of appraisal
Transport and access	In-combination effects were not identified with a number of Cumulative Projects. Where in-combination adverse effects are likely to occur, these are the same as that identified for the Project for Assessment in isolation and would be Not Significant .
Noise and vibration	In-combination effects were not identified with a number of Cumulative Projects. Where there are potential interactions with other existing wind farm schemes, these have inherently been considered as part of the assessment presented in Chapter 7: Noise and Vibration . Therefore, the effects would be Not Significant .
Shadow flicker	There are no in-combination shadow flicker effects.
Ecology	In-combination ecological effects are largely either the same or no greater than that identified for the Project for Assessment in isolation and would be Not Significant . For some receptors there are no in-combination effects.
Ornithology	In-combination ornithological effects are largely the same or no greater than that identified for the Project for Assessment in isolation, with some that would be greater. However, all in-combination effects would be Not Significant .
Landscape and visual	The assessment found that the additional change from Calderdale Wind Farm would lead to levels of effect no greater than was assessed in the main assessment (for the Project for Assessment in isolation).Where there are

Technical topic	Summary of appraisal
	potential interactions with other existing wind farm schemes, these have inherently been considered as part of the assessment presented in Chapter 11: Landscape and Visual (where the effects are a mixture of Significant / Not Significant).
Built heritage	Where there are potential interactions with other existing wind farm schemes, these have inherently been considered as part of the assessment presented in Chapter 12: Built Heritage. The in-combination effects with other Cumulative Projects are likely to be the same as that identified for the Project for Assessment in isolation and would be Not Significant.
Archaeology	In-combination archaeological effects are the same as that for the Project for Assessment in isolation and would be Not Significant / Significant .
Hydrology, hydrogeology and peat	There is a mixture of no in-combination effects or where these are anticipated, the in-combination hydrology, hydrogeology and peat effects are no greater than that for Project for Assessment in isolation and would be Not Significant .

Works at Rawtenstall BSP

- 17.17 There are unlikely to be significant effects from the works at the Rawtenstall BSP or in-combination effects with the Project for Assessment.