

# Contents

---

<b>17.</b>	<b>Inter-related cumulative effects</b>	<b>17-1</b>
17.1	Introduction	17-1
	Limitations and assumptions	17-1
17.2	Relevant Legislation, planning policy and technical guidance	17-1
	Legislation	17-1
	Planning policy	17-1
	Technical Guidance	17-2
17.3	Consultation and engagement	17-3
	Overview	17-3
	Scoping Direction	17-3
17.4	Data gathering methodology	17-3
17.5	Overall baseline	17-3
17.6	Embedded measures	17-3
17.7	Scope of the assessment	17-4
	Spatial scope	17-4
	Temporal scope	17-4
	Potential receptors	17-4
	Likely significant effects	17-14
17.8	Assessment methodology	17-14
17.9	Assessment of inter-related effects	17-16
	Overview	17-16
	Preliminary assessment	17-24
17.10	Preliminary significance Conclusion	17-24

---

Table 17.1	Planning policy relevant to the inter-related cumulative effects assessment	17-2
Table 17.2	Common receptors between ES Chapters	17-6
Table 17.3	Common receptors and significance of identified effects	17-17

---

Graphic 17.1	Illustrative example of the spatial scope and study area for an example receptor	17-4
Graphic 17.2	Illustrative example of the spatial scope and study area for an example receptor	17-15

# 17. Inter-related cumulative effects

---

## 17.1 Introduction

- 17.1.1 This chapter presents the assessment of the likely significant effects of the Proposed Development with respect to inter-related (intra-project) cumulative effects. It should be read in conjunction with the description provided in **Chapter 4: Description of the Proposed Development**.
- 17.1.2 Potential inter-project cumulative effects arising from the combination of effects from the Proposed Development with similar topic-related effects generated by other developments are discussed in **Chapter 2: Approach to Environmental Impact Assessment** and assessed in **Chapters 6-16**.

## Limitations and assumptions

- 17.1.3 There are no limitations that affect the robustness of the assessment of the likely significant inter-related cumulative effects of the Proposed Development

## 17.2 Relevant Legislation, planning policy and technical guidance

- 17.2.1 This section identifies the legislation, planning policy and technical guidance that has informed the assessment of effects with respect to inter-related cumulative effects. Further information on policies relevant to the Proposed Development is provided in **Chapter 5: Legislation and policy overview**.

## Legislation

- 17.2.2 This assessment takes into account Paragraph 5 of Schedule 4 of the Town & Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017<sup>1</sup> which states that the “*The description of the likely significant effects on the factors specified in regulation 4(2) should cover the direct effects and any indirect, secondary, **cumulative**<sup>2</sup>, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the development.*”

## Planning policy

- 17.2.3 A summary of the relevant national and local planning policy is given in **Table 17.1**.

---

<sup>1</sup> UK Government (2017). The Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017. (Online) Available at: <https://www.legislation.gov.uk/wsi/2017/567/contents> (Accessed August 2024).

<sup>2</sup> Boldened for emphasis

**Table 17.1 Planning policy relevant to the inter-related cumulative effects assessment**

Policy	Policy Context
<b>National Planning Policy</b>	
<b>Future Wales: The National Development Plan 2040<sup>3</sup></b>	<p>Policy 18: Renewable and Low Carbon Energy Developments of National Significance outlines that proposals should consider the cumulative impacts of existing and consented renewable energy schemes.</p> <p>The Plan further states that “<i>Both within and outside Pre-Assessed Areas, communities should be protected from significant cumulative impacts to avoid unacceptable situations whereby, for example, smaller settlements could be potentially surrounded by large wind schemes</i>”.</p>
<b>Planning Policy Wales, Edition 12, Welsh Government (2024)<sup>4</sup></b>	<p>Chapter 5: Productive and Enterprising Places covers the economic components of placemaking. The chapter outlines that local planning authorities should, when formulating their renewable energy targets, “<i>take into account the cumulative impact of renewable and low carbon energy development and their associated infrastructure, for example grid connections</i>”.</p>

## Technical Guidance

17.2.4 A summary of other relevant information and guidance relevant to the assessment undertaken for inter-related cumulative effects is provided here:

- *Environmental Impact Assessment of Projects: Guidance on the preparation of the Environmental Impact Assessment Report* (Directive 2011/92/EU as amended by 2014/52/EU)<sup>5</sup> aims to help developers and consultants produce good quality EIA reports. Section 1.4.3 highlights the need to consider interactions between the different environmental aspects in a single project. It recommends using interactive matrices that consider the interactions of impacts assessed individually; and
- *Guideline for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions*<sup>6</sup> sets out various tools that can be used for inter-related effects, guidance on the approach and assessment. Section 3 of the guidance outlines the tools that can be used for inter-related effects, which are: expert opinion, matrices, consultation and questionnaires, network and systems analysis and spatial analysis. These tools can be used in different combinations at different stages of the project. Section 7.7 of the guidance states the inter-related effects assessment can be within the individual aspect chapters or as its own standalone chapter (as in this ES). Section 7.3.1 of the guidance states where the assessment cannot be qualitative, a qualitative assessment can be carried out.

<sup>3</sup> Welsh Government (2021). Future Wales: The National Plan 2040. (Online) Available at: <https://gov.wales/sites/default/files/publications/2021-02/future-wales-the-national-plan-2040.pdf> (Accessed August 2024).

<sup>4</sup> Welsh Government (2024) Planning Policy Wales, Edition 12, February 2024. (Online). Available at: [Planning Policy Wales - Edition 12 \(gov.wales\)](https://gov.wales/sites/default/files/publications/2024-02/planning-policy-wales-edition-12-february-2024.pdf). (Accessed August 2024).

<sup>5</sup> European Commission (2017). Environmental Impact Assessment of Projects: Guidance on the preparation of the Environmental Impact Assessment Report (Directive 2011/92/EU as amended by 2014/52/EU). (Online) Available at: [https://ec.europa.eu/environment/eia/pdf/EIA\\_guidance\\_EIA\\_report\\_final.pdf](https://ec.europa.eu/environment/eia/pdf/EIA_guidance_EIA_report_final.pdf) (Accessed August 2024).

<sup>6</sup> European Commission (1999). Guideline for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions. (Online) Available at: <https://ec.europa.eu/environment/archives/eia/eia-studies-and-reports/pdf/guidel.pdf> (Accessed August 2024).

## 17.3 Consultation and engagement

### Overview

- 17.3.1 The assessment has been informed by consultation responses and ongoing stakeholder engagement which was undertaken as part of the now withdrawn Mynydd Llanhilleth Wind Farm Application (DNS/3273368). This application constitutes a resubmission of the withdrawn application following the removal of Turbine 5 from the Proposed Development and minor amendment of the grid connection location. Therefore, consultation responses received as part of the withdrawn applications were retained where relevant. An overview of the approach to consultation is provided in **Section 2.4 of Chapter 2: Approach to Environmental Impact Assessment**.

### Scoping Direction

- 17.3.2 A Scoping Direction was issued by Planning and Environmental Decisions Wales (PEDW; formerly Planning Inspectorate Wales), on behalf of the Welsh Ministers, on 06 August 2021. No comments on inter-related cumulative effects were raised in the Scoping Direction.

### Statutory Consultation

- 17.3.3 The Draft ES was submitted in November 2022 to PEDW, and consultation events were undertaken in December 2022. Further information on the consultation events is provided in **Section 2.4 of Chapter 2: Approach to Environmental Impact Assessment**. No comments on inter-related cumulative effects were raised by any of the consultees or members of the public.
- 17.3.4 This Draft ES will undergo the equivalent consultation process as set out above and in Chapter 2.

### Final ES Submission

- 17.3.5 No comments on inter-related cumulative effects were raised by any of the consultees or members of the public as part of the final submission process for the now withdrawn application.

## 17.4 Data gathering methodology

- 17.4.1 The study area and data gathering exercises for the inter-related effects assessment are informed by those from each of the environment topic chapters (**Chapter 6 to Chapter 16**).

## 17.5 Overall baseline

- 17.5.1 The baseline for the assessment is as discussed within the individual topic chapters (**Chapters 6-16**).

## 17.6 Embedded measures

- 17.6.1 A range of environmental measures have been embedded into the development proposals as outlined in **Section 4.8 and Chapters 6-16** of this ES.

## 17.7 Scope of the assessment

### Spatial scope

- 17.7.1 The spatial study area is dependent on each receptor. To have a potential inter-related effect a receptor or receptor group must be within the study area of more than one environmental topic. An illustrative example of this is described in **Graphic 17.1**; only the green receptors have the potential to experience inter-related effects as they are in the study area for environmental topic (aspect) 1 and environmental topic (aspect) 2.

**Graphic 177.1 Illustrative example of the spatial scope and study area for an example receptor**



- 17.7.2 The study area for each of the individual environmental topics (**Chapter 6 to Chapter 16**) relevant to this chapter have been informed through desk study and engagement with stakeholders.

### Temporal scope

- 17.7.3 The temporal scope of the assessment of inter-related effects is the entire lifetime of the Proposed Development which therefore covers the construction, operation and maintenance and decommissioning periods.

### Potential receptors

- 17.7.4 The most likely types of receptors where topic effects are likely to combine are those pertaining to the amenity of the human population. For example, the occupants of a residential property in close proximity to the Proposed Development might be subject to adverse effects in terms of noise or shadow flicker, as well as with regard to visual amenity, or any combination thereof, each of which, when assessed individually, may not be significant in EIA terms, but when assessed in combination the combined effects may be judged to be significant.
- 17.7.5 Consideration has also been given to the potential for inter-related cumulative effects on other environmental receptors. A review of the respective ES chapters has been

undertaken to identify where one non-human receptor may be affected by more than one environmental effect.

#### *Landscape/Visual and Environment Receptors*

17.7.6 Twenty four receptor locations have been considered in two or more of the following receptors:

- **Chapter 6: Landscape and Visual Impact Assessment (LVIA);**
- **Chapter 7: Historic Environment;**
- **Chapter 10: Water Environment;**
- **Chapter 11: Ground Conditions;**
- **Chapter 12: Traffic and Transport; and**
- **Chapter 16 Socio-economics.**

#### *Human/Residential Receptors*

17.7.7 Twenty four receptor locations have been considered in two or more of the following chapters:

- **Chapter 6: Landscape and Visual Impact Assessment (LVIA);**
- **Chapter 10: Water Environment;**
- **Chapter 13: Noise;**
- **Chapter 15: Shadow Flicker; and**
- **Chapter 16: Socio-economics.**

#### *Ecological Receptors*

17.7.8 Sixteen receptor locations have been considered in two or more of the following chapters:

- **Chapter 8: Biodiversity;**
- **Chapter 9: Ornithology; and**
- **Chapter 10: Water Environment**

17.7.9 All receptors considered in two or more ES chapters are summarised in **Table 17.2**.

**Table 17.2 Common receptors between ES Chapters**

Receptor	Ch 6: Landscape & Visual	Ch 7: Historic Env	Ch 8: Biodiversity	Ch 9: Ornithology	Ch 10: Water Env	Ch11: Ground Conditions	Ch 12: Traffic & Transport	Ch 13: Noise	Ch 15 : Shadow Flicker	Ch 16: Socio economics
Landscape/Visual and Environmental Receptors										
<b>Blaenavon Industrial Landscape World Heritage Site</b>	✓	✓	X	X	X	X	X	X	X	X
<b>Mynydd Llanhilleth Common</b>	✓	X	X	X	X	X	X	X	X	✓
<b>Mineral Safeguarding Area</b>	X	X	X	X	X	✓	X	X	X	✓
<b>Bridleway 337/118/1</b>	✓	X	X	X	X	X	X	X	X	✓
<b>Bridleway 331/20</b>	✓	X	X	X	X	X	X	X	X	✓
<b>Public Rights of Way (PRoW) on Site</b>	✓	X	X	X	X	X	X	X	X	✓
<b>PRoW and Open Access Land within 5km</b>	✓	X	X	X	X	X	X	X	X	✓
<b>PRoW and Open Access Land within 5km-10km</b>	✓	X	X	X	X	X	X	X	X	✓
<b>PRoW and Open Access Land within 10km-15km</b>	✓	X	X	X	X	X	X	X	X	✓

Receptor	Ch 6: Landscape & Visual	Ch 7: Historic Env	Ch 8: Biodiversity	Ch 9: Ornithology	Ch 10: Water Env	Ch11: Ground Conditions	Ch 12: Traffic & Transport	Ch 13: Noise	Ch 15 : Shadow Flicker	Ch 16: Socio economics
Pontypool Park	✓	✓	X	X	X	X	X	X	X	X
Torfaen Trail	✓	X	X	X	X	X	X	X	X	✓
Cistercian Way	✓	X	X	X	X	X	X	X	X	✓
Tirpentwys Trail	✓	X	X	X	X	X	X	X	X	✓
Rhymney Valley Ridge Walk	✓	X	X	X	X	X	X	X	X	✓
M4	✓	X	X	X	X	X	✓	X	X	X
A4042 (Turnpike Road)	✓	X	X	X	X	X	✓	X	X	X
A472 (Griffithstown)	✓	X	X	X	X	X	✓	X	X	X
A467	✓	X	X	X	X	X	✓	X	X	X
A4043 (Abersychan)	✓	X	X	X	X	X	✓	X	X	X
B4246 (Talywain)	✓	X	X	X	X	X	✓	X	X	X
Farm Road	✓	X	X	X	X	X	✓	X	X	X
Blaen-y-Cwm Road	✓	X	X	X	X	X	✓	X	X	X
Groundwater – Secondary A aquifer	X	X	X	X	✓	✓	X	X	X	X
Surface Water: Nant Ddu, Nan-y-cnyw,	X	X	X	X	✓	✓	X	X	X	X



Receptor	Ch 6: Landscape & Visual	Ch 7: Historic Env	Ch 8: Biodiversity	Ch 9: Ornithology	Ch 10: Water Env	Ch11: Ground Conditions	Ch 12: Traffic & Transport	Ch 13: Noise	Ch 15 : Shadow Flicker	Ch 16: Socio economics
<b>Nant-y-Gaws and Nant Cyffin</b>										
Human Receptors										
<b>Woodview Cottages</b>	X	X	X	X	X	X	X	✓	✓	X
<b>Gilfach Wen Farm</b>	✓	X	X	X	X	X	X	✓	✓	X
<b>Ty-Dafydd Farm</b>	✓	X	X	X	X	X	X	✓	✓	X
<b>Blaencuffin Barn Farm</b>	✓	X	X	X	X	X	X	✓	✓	X
<b>Maescynew Farm</b>	X	X	X	X	X	X	X	✓	✓	X
<b>5 Incline Cottages</b>	X	X	X	X	X	X	X	✓	✓	X
<b>Tir-Ysbsubor-Ddu</b>	✓	X	X	X	X	X	X	✓	✓	X
<b>2 Ty Gwyn Cottages</b>	✓	X	X	X	X	X	X	✓	✓	X
<b>Ty Mari Hari Farm</b>	✓	X	X	X	X	X	X	✓	✓	X
<b>Cefn-y-Crib Farm</b>	✓	X	X	X	X	X	X	✓	✓	X
<b>The Old School House</b>	X	X	X	X	X	X	X	✓	✓	X
<b>2-9 Bush Terrace</b>	X	X	X	X	X	X	X	✓	✓	X
<b>Mountain View House</b>	X	X	X	X	X	X	X	✓	✓	X

Receptor	Ch 6: Landscape & Visual	Ch 7: Historic Env	Ch 8: Biodiversity	Ch 9: Ornithology	Ch 10: Water Env	Ch11: Ground Conditions	Ch 12: Traffic & Transport	Ch 13: Noise	Ch 15 : Shadow Flicker	Ch 16: Socio economics
1-6 Ty-Bwpyn Road	X	X	X	X	X	X	X	✓	✓	X
Blaenant-y-Caws	✓	X	X	X	X	X	X	✓	✓	X
Cwmffrwdoyer Farm	X	X	X	X	X	X	X	✓	✓	X
Yew Tree Cottage	X	X	X	X	X	X	X	✓	✓	X
Tal-ochor Farm	✓	X	X	X	✓	X	X	✓	✓	X
Pistyll Gwyn	✓	X	X	X	✓	X	X	✓	✓	X
British Road	X	X	X	X	X	X	X	✓	✓	X
Cwm Ffrwd-oer, Pontnewynydd	✓	X	X	X	✓	X	X	X	X	X
Six Bells, Abertillery	✓	X	X	X	✓	X	X	X	X	✓
Blaen-Cyffin Road, Llanhilleth	✓	X	X	X	✓	X	X	X	X	✓
Regent Street, Llanhilleth	✓	X	X	X	✓	X	X	X	X	✓
Ecological Receptors										
Severn Estuary SPA/ SAC/ Ramsar	X	X	✓	✓	X	X	X	X	X	X
Bloreng SSSI	X	X	✓	✓	X	X	X	X	X	X
Llandegfedd Reservoir SSSI	X	X	✓	✓	X	X	X	X	X	X

Receptor	Ch 6: Landscape & Visual	Ch 7: Historic Env	Ch 8: Biodiversity	Ch 9: Ornithology	Ch 10: Water Env	Ch11: Ground Conditions	Ch 12: Traffic & Transport	Ch 13: Noise	Ch 15 : Shadow Flicker	Ch 16: Socio economics
River Usk (Lower Usk) SSSI	X	X	✓	✓	X	X	X	X	X	X
Nelson Bog SSSI	X	X	✓	✓	X	X	X	X	X	X
River Usk (Upper Usk) SSSI	X	X	✓	✓	X	X	X	X	X	X
River Usk (Tributaries) SSSI	X	X	✓	✓	X	X	X	X	X	X
Tirpentwys Cut SINC	X	X	✓	✓	✓	X	X	X	X	X
Blaen-y-cwm Upland Pasture SINC (T6)	X	X	✓	✓	X	X	X	X	X	X
Cwm Ddu Woods, Blaenserchan SINC (T27)	X	X	✓	✓	X	X	X	X	X	X
Mynydd Llanhilleth Common SINC (T55)	X	X	✓	✓	X	X	X	X	X	X
Mulfran, Mynydd Coity, Mynydd James & Gwastad SINC	X	X	✓	✓	X	X	X	X	X	X
Afon Ebwy Fach SINC	X	X	✓	✓	✓	X	X	X	X	X
Afon Ebwy SINC	X	X	✓	✓	X	X	X	X	X	X

Receptor	Ch 6: Landscape & Visual	Ch 7: Historic Env	Ch 8: Biodiversity	Ch 9: Ornithology	Ch 10: Water Env	Ch11: Ground Conditions	Ch 12: Traffic & Transport	Ch 13: Noise	Ch 15 : Shadow Flicker	Ch 16: Socio economics
<b>Ebbw River South Tip Section SINC</b>	X	X	✓	✓	X	X	X	X	X	X
<b>Blaenserchan SINC</b>	X	X	✓	✓	X	X	X	X	X	X

17.7.10 The receptors considered in this assessment are therefore:

*Landscape/Visual and Environment Receptors:*

- Blaenavon Industrial Landscape World Heritage Site (LVIA and Historic Environment);
- Mynydd Llanhilleth Common (LVIA and Traffic and Transport);
- Mineral Safeguarding Area (Ground Conditions and Socio-economics);
- Bridleway 337/118/1 (LVIA and Socio-economics);
- Bridleway 331/20 (LVIA and Socio-economics);
- Public Rights of Way (PRoW) on Site(LVIA and Socio-economics);
- PRoW and Open Access Land within 5km(LVIA and Socio-economics);
- PRoW and Open Access Land within 5km-10km(LVIA and Socio-economics);
- PRoW and Open Access Land within 10km-15km(LVIA and Socio-economics);
- Pontypool Park (LVIA and Historic Environment);
- Torfaen Trail (LVIA and Historic Environment);
- Cistercian Way (LVIA and Historic Environment);
- Tirpentwys Trail (LVIA and Historic Environment);
- Rhymney Valley Ridge Walk (LVIA and Historic Environment);
- M4 (LVIA and Traffic and Transport);
- A4042 (Turnpike Road) (LVIA and Traffic and Transport);
- A472 (Griffithstown) (LVIA and Traffic and Transport);
- A467 (LVIA and Traffic and Transport);
- A4043 (Abersychan) (LVIA and Traffic and Transport);
- B4246 (Talywain) (LVIA and Traffic and Transport);
- Farm Road(LVIA and Traffic and Transport);
- Blaen-y-cwm (LVIA and Traffic and Transport);
- Ground Water – Secondary A Aquifer (Ground Conditions and Water Environment);  
and
- Surface Water: Nant Ddu, Nan-y-cnyw, Nant-y-Gaws and Nant Cyffin (Ground  
Conditions and Water Environment)

*Human/Residential Receptors*

- Woodview Cottages (LVIA, Noise and Shadow Flicker);
- Gilfach Wen Farm (LVIA, Noise and Shadow Flicker);
- Ty-Dafydd Farm (LVIA, Noise and Shadow Flicker);
- Blaencuffin Barn Farm (LVIA, Noise and Shadow Flicker);
- Maescynew Farm (LVIA, Noise and Shadow Flicker);

- 5 Incline Cottages (Noise and Shadow Flicker);
- Tir-Ysborbor-Ddu (LVIA, Noise and Shadow Flicker);
- 2 Ty Gwyn Cottages (LVIA, Noise and Shadow Flicker);
- Ty Mari Hari Farm (LVIA, Noise and Shadow Flicker);
- Cefn-y-Crib Farm (LVIA, Noise and Shadow Flicker);
- The Old School House (Noise and Shadow Flicker);
- 2-9 Bush Terrace (Noise and Shadow Flicker);
- Mountain View House (Noise and Shadow Flicker);
- 1-6 Ty-Bwpyn Road (Noise and Shadow Flicker);
- Blaenant-y-Caws (LVIA, Noise and Shadow Flicker);
- Cwmffrwdroer Farm (Noise and Shadow Flicker);
- Ywe Tree Cottage (Noise and Shadow Flicker);
- Tal-ochor Farm (LVIA, Water Environment, Noise and Shadow Flicker);
- Pistyll Gwyn (LVIA, Water Environment, Noise and Shadow Flicker);
- British Road (Noise and Shadow Flicker);
- Cwm Ffrwd-oer, Pontnewynydd (Water Environment, Noise and Shadow Flicker);
- Six Bells, Abertillery (LVIA, Water Environment, Noise and Shadow Flicker);
- Blaen-Cyffin Road, Llanhilleth (LVIA, Water Environment, Noise and Shadow Flicker);
- Regent Street, Llanhilleth (LVIA, Water Environment, Noise and Shadow Flicker);

### *Ecological Receptors*

- Severn Estuary SPA/ SAC/ Ramsar (Biodiversity and Ornithology);
- Blorenge SSSI (Biodiversity and Ornithology);
- Llandegfedd Reservoir SSSI (Biodiversity and Ornithology);
- River Usk (Lower Usk) SSSI (Biodiversity and Ornithology);
- Nelson Bog SSSI (Biodiversity and Ornithology);
- River Usk (Upper Usk) SSSI (Biodiversity and Ornithology);
- River Usk (Tributaries) SSSI (Biodiversity and Ornithology);
- Blaen-y-cwm Upland Pasture SINC (T6) (Biodiversity and Ornithology);
- Cwm Ddu Woods, Blaenserchan SINC (T27) (Biodiversity and Ornithology);
- Mynydd Llanhilleth Common SINC (T55) (Biodiversity and Ornithology);
- Tirpentwys Cut SINC (B39/T92) (Biodiversity, Ornithology and Water Environment);
- Mulfran, Mynydd Coity, Mynydd James & Gwastad SINC (Biodiversity and Ornithology);
- Afon Ebwy Fach SINC (Biodiversity, Ornithology and Water Environment);

- Afon Ebwy SINC (Biodiversity and Ornithology);
- Ebbw River Sout Tip Section SINC (Biodiversity and Ornithology); and
- Blaenserchan SINC (Biodiversity and Ornithology).

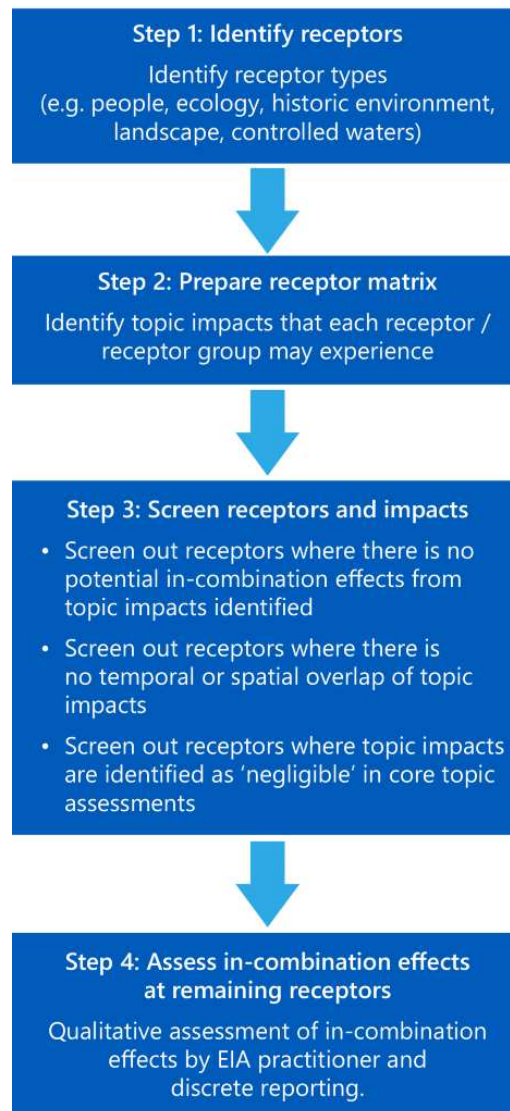
## Likely significant effects

- 17.7.11 The purpose of EIA is to identify and assess any likely significant effects that are material to the decision-making process. In order to maintain proportionality, and in accordance with the EIA Regulations 2017, this assessment therefore concentrates on where significant inter-related cumulative effects are likely to arise between topics considered in this ES.

## 17.8 Assessment methodology

- 17.8.1 National policy guidance requires that all relevant effects should be considered objectively. However, existing policy guidance presently fails to provide advice on how such an objective assessment should be carried out.
- 17.8.2 There is no established, robust methodology for quantitatively assessing complex cross-topic inter-related effects and assigning a level of significance to them, as methodologies and criteria vary across environmental aspects. Therefore, the assessment of inter-related effects between topics is qualitative, relying on professional judgement as to how individual effects would interact.
- 17.8.3 The methodology adopted for this assessment is summarised in **Graphic 17.2** and is outlined in detail in the remainder of this section.

## Graphic 17.2 Illustrative example of the spatial scope and study area for an example receptor



17.8.4 Common receptors for environmental topics have been identified and consideration given to whether the aspect effects on any common receptors are likely to combine. This has identified:

- The common receptor(s) from the individual topic assessments;
- The impact source pathways that can affect the common receptor(s);
- The potential effects on the identified common receptor(s); and
- The inter-related effects across the construction, operation and maintenance and decommissioning phases where appropriate.

17.8.5 It should be noted that some elements of the assessment inherently consider inter-related effects. For example, biodiversity assessment of effects takes into account the potential for multiple impacts affecting particular features such as disturbance effects on faunal receptors resulting from noise and vibration, visual disturbance and lighting. Where this is the case, this is described within the individual environmental topic chapter.



## 17.9 Assessment of inter-related effects

### Overview

- 17.9.1 The assessment of inter-related cumulative effects has focused on those receptors where potential significant effects have been predicted in respect of at least two or more topics and/or where the technical assessments have shown that potential individual effects are nearing the thresholds of established national criteria.
- 17.9.2 **Table 17.3** sets out where significant effects, or effects close to the threshold of significance, have been identified for each common receptor identified in **Table 17.2**.

**Table 17.3 Common receptors and significance of identified effects**

Receptor	Ch 6: Landscape & Visual	Ch 7: Historic Env	Ch 8: Biodiversity	Ch 9 : Ornithology	Ch 10: Water Env	Ch11: Ground Conditions	Ch 12: Traffic & Transport	Ch 13: Noise	Ch 15 : Shadow Flicker	Ch 16: Socio economics
Landscape/Visual and Environmental Receptors										
BILWHS			X	X	X	X	X	X	X	X
Mynydd Llanhilleth Common	◆◆	X	X	X	X	X	X	X	X	
Mineral Safeguarding Area	X	X	X	X	X		X	X	X	
Bridleway 337/118/1	◆◆	X	X	X	X	X	X	X	X	
Bridleway 331/20	◆◆	X	X	X	X	X	X	X	X	
Public Rights of Way (PRoW) on Site	◆◆	X	X	X	X	X	X	X	X	
PRoW and Open Access Land within 5km	◆◆	X	X	X	X	X	X	X	X	
PRoW and Open Access	◆◆	X	X	X	X	X	X	X	X	

Receptor	Ch 6: Landscape & Visual	Ch 7: Historic Env	Ch 8: Biodiversity	Ch 9 : Ornithology	Ch 10: Water Env	Ch11: Ground Conditions	Ch 12: Traffic & Transport	Ch 13: Noise	Ch 15 : Shadow Flicker	Ch 16: Socio economics	
Land within 5km-10km	◆◆										
PRoW and Open Access Land within 10km-15km		X	X	X	X	X	X	X	X		
Pontypool Park				X	X	X	X	X	X	X	
Torfaen Trail			X	X	X	X	X	X	X		
Cistercian Way			X	X	X	X	X	X	X		
Tirpentwys Trail			X	X	X	X	X	X	X		
Rhymeny Valley Ridge Walk			X	X	X	X	X	X	X		
M4			X	X	X	X	X		X	X	X
A4042 (Turnpike Road)			X	X	X	X	X		X	X	X
A472 (Griffithstown)			X	X	X	X	X		X	X	X
A467		X	X	X	X	X		X	X	X	

Receptor	Ch 6: Landscape & Visual	Ch 7: Historic Env	Ch 8: Biodiversity	Ch 9 : Ornithology	Ch 10: Water Env	Ch11: Ground Conditions	Ch 12: Traffic & Transport	Ch 13: Noise	Ch 15 : Shadow Flicker	Ch 16: Socio economics
A4043 (Abersychan)		X	X	X	X	X		X	X	X
B4246 (Talywain)	◆◆	X	X	X	X	X		X	X	X
Farm Road	◆◆	X	X	X	X	X		X	X	X
Blaen-y-Cwm Road		X	X	X	X	X		X	X	X
Human Receptors										
Woodview Cottages	X	X	X	X	X	X	X			X
Gilfach Wen Farm		X	X	X	X	X	X			X
Ty-Dafydd Farm		X	X	X	X	X	X			X
Blaencuffin Barn Farm		X	X	X	X	X	X			X
Maescynew Farm	X	X	X	X	X	X	X			X
5 Incline Cottages	X	X	X	X	X	X	X			X
Tir-Ysbubor- Ddu		X	X	X	X	X	X			X

Receptor	Ch 6: Landscape & Visual	Ch 7: Historic Env	Ch 8: Biodiversity	Ch 9 : Ornithology	Ch 10: Water Env	Ch11: Ground Conditions	Ch 12: Traffic & Transport	Ch 13: Noise	Ch 15 : Shadow Flicker	Ch 16: Socio economics
2 Ty Gwyn Cottages		X	X	X	X	X	X			X
Ty Mari Hari Farm		X	X	X	X	X	X			X
Cefn-y-Crib Farm		X	X	X	X	X	X			X
The Old School House	X	X	X	X	X	X	X			X
2-9 Bush Terrace	X	X	X	X	X	X	X			X
Mountain View House	X	X	X	X	X	X	X			X
1-6 Ty-Bw,pyn Road	X	X	X	X	X	X	X			X
Blaenant-y-Caws		X	X	X	X	X	X			X
Cwmffrwoer Farm		X	X	X	X	X	X			X
Ywe Tree Cottage	X	X	X	X	X	X	X			X
Tal-ochor Farm		X	X	X		X	X			X
Pistyll Gwyn		X	X	X		X	X			X

Receptor	Ch 6: Landscape & Visual	Ch 7: Historic Env	Ch 8: Biodiversity	Ch 9 : Ornithology	Ch 10: Water Env	Ch11: Ground Conditions	Ch 12: Traffic & Transport	Ch 13: Noise	Ch 15 : Shadow Flicker	Ch 16: Socio economics
British Road	X	X	X	X	X	X	X			X
Six Bells, Abertillery		X	X	X		X	X	X	X	
Blaen-Cyffin Road, Llanhilleth		X	X	X		X	X	X	X	
Regent Street, Llanhilleth		X	X	X		X	X	X	X	
Hollybush Cottage		X	X	X		X	X	X	X	X
Ecological Receptors										
Severn Estuary SPA/ SAC/ Ramsar	X	X			X	X	X	X	X	X
Blorenge SSSI	X	X			X	X	X	X	X	X
Llandegfedd Reservoir SSSI	X	X			X	X	X	X	X	X
River Usk (Lower Usk) SSSI	X	X			X	X	X	X	X	X
Nelson Bog SSSI	X	X			X	X	X	X	X	X

Receptor	Ch 6: Landscape & Visual	Ch 7: Historic Env	Ch 8: Biodiversity	Ch 9 : Ornithology	Ch 10: Water Env	Ch11: Ground Conditions	Ch 12: Traffic & Transport	Ch 13: Noise	Ch 15 : Shadow Flicker	Ch 16: Socio economics
River Usk (Upper Usk) SSSI	X	X			X	X	X	X	X	X
River Usk (Tributaries) SSSI	X	X			X	X	X	X	X	X
Blaen-y-cwm Upland Pasture SINC (T6)	X	X			X	X	X	X	X	X
Cwm Ddu Woods, Blaenserchan SINC (T27)	X	X			X	X	X	X	X	X
Mynydd Llanhilleth Common SINC (T55)	X	X			X	X	X	X	X	X
Tirpentwys Cut SINC (B39/T92)	X	X				X	X	X	X	X
Mulfran, Mynydd Coity, Mynydd James & Gwastad SINC	X	X			X	X	X	X	X	X

Receptor	Ch 6: Landscape & Visual	Ch 7: Historic Env	Ch 8: Biodiversity	Ch 9 : Ornithology	Ch 10: Water Env	Ch11: Ground Conditions	Ch 12: Traffic & Transport	Ch 13: Noise	Ch 15 : Shadow Flicker	Ch 16: Socio economics
Afon Ebwy Fach SINC	X	X			X	X	X	X	X	X
Afon Ebwy SINC	X	X				X	X	X	X	X
Ebbw River South Tip Section SINC	X	X			X	X	X	X	X	X
Blaen-y-Cwm Upland Pasture SINC	X	X			X	X	X	X	X	X
Cwm Ddu Woods	X	X			X	X	X	X	X	X

Key: Common receptors

◆: Effects close to significance threshold

◆◆: Significant effects



## Preliminary assessment

- 17.9.3 The technical assessments (**Chapters 6-16**) in the ES have identified potential effects on common receptors as a result of the Proposed Development, as summarised in **Table 17.3**. The table shows that 0 common receptors are anticipated to experience more than one significant effect or effect close to the threshold of significance.

### 17.10 Preliminary significance Conclusion

- 17.10.1 The preliminary assessment of inter-related cumulative effects has considered whether any of the individual environmental topic effects resulting from the Proposed Development could combine to create effects that are significant, on common receptors between technical topics. The preliminary assessment focused on those receptors where significant effects have been predicted in respect of at least two or more topics and/or where the technical assessments have shown that potential individual effects are nearing the thresholds of established national criteria.
- 17.10.2 It has been concluded that there would be no inter-related cumulative effects.