

Contents

17.	Inter-related cumulative effects	17-1
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	17-3
	Spatial scope	17-3
	Temporal scope	17-4
	Potential receptors	17-4
	Likely significant effects	17-13
17.8	Assessment methodology	17-13
17.9	Assessment of inter-related effects	17-15
	Overview	17-15
	Preliminary assessment	17-22
17.10	Preliminary significance Conclusion	17-22

Table 17.1	Planning policy relevant to the inter-related cumulative effects assessment	17-2
Table 17.2	Common receptors between Draft ES Chapters	17-6
Table 17.3	Common receptors and significance of identified effects	17-16

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	17-14

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 The Draft Environmental Statement (ES) has been produced to fulfil the Applicant's consultation duties and enable consultees to develop an informed view of the likely significant effects of the Proposed Development.
- 17.1.4 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 2017¹ 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**², 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**.

¹ 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 April 2022).

² Boldened for emphasis

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

Policy	Policy Context
National Planning Policy	
Future Wales: The National Development Plan 2040³	<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>
Planning Policy Wales, Edition 11, Welsh Government (2021)⁴	<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)⁵ 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*⁶ 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 Draft ES). Section 7.3.1 of

³ 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 October 2023).

⁴ Welsh Government (2021) Planning Policy Wales, Edition 11, February 2021. (Online). Available at: https://gov.wales/sites/default/files/publications/2021-02/planning-policy-wales-edition-11_0.pdf. (Accessed October 2023).

⁵ 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 (Accessed October 2023).

⁶ 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 October 2023).

the guidance states where the assessment cannot be qualitative, a qualitative assessment can be carried out.

17.3 Consultation and engagement

Overview

- 17.3.1 The assessment has been informed by consultation responses and ongoing stakeholder engagement. 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 02 December 2022. No comments on inter-related cumulative effects were raised in the Scoping Direction.

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 Draft 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 Draft 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 five 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 12: Traffic and Transport; and**
 - **Chapter 16 Socio-economics.**

Human/Residential Receptors

- 17.7.7 Fourteen 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 Fifteen 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 Draft ES chapters are summarised in **Table 17.2**.

Table 17.2 Common receptors between Draft ES Chapters

Receptor	Ch 6: Landscape & Visual	Ch 7: Historic Env	Ch 8: Biodiversity	Ch 9: Ornithology	Ch 10: Water Env	Ch 12: Traffic & Transport	Ch 13: Noise	Ch 15 : Shadow Flicker	Ch 16: Socio economics
Landscape/Visual and Environmental Receptors									
Taith Torfaen Anything Challenge;	✓	X	X	X	X	X	X	X	✓
Ebbw Valley Walk;	✓	X	X	X	X	X	X	X	✓
Cambrian Way;	✓	X	X	X	X	X	X	X	✓
Cistercian Way;	✓	X	X	X	X	X	X	X	✓
Torfaen Trail;	✓	X	X	X	X	X	X	X	✓
Raven Walk;	✓	X	X	X	X	X	X	X	✓
Celtic Way;	✓	X	X	X	X	X	X	X	✓
Sirhowy Valley Ridgeway Walk;	✓	X	X	X	X	X	X	X	✓
Monmouthshire Way; and	✓	X	X	X	X	X	X	X	✓
Rhymney Valley Ridgeway Walk.	✓	X	X	X	X	X	X	X	✓
A4046	✓	X	X	X	X	✓	X	X	X
A467	✓	X	X	X	X	✓	X	X	X
RBW171	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	Ch 12: Traffic & Transport	Ch 13: Noise	Ch 15 : Shadow Flicker	Ch 16: Socio economics
RBW172	X	X	X	X	X	✓	X	X	✓
RBW366	X	X	X	X	X	✓	X	X	✓
RBW160	X	X	X	X	X	✓	X	X	✓
RBW158	X	X	X	X	X	✓	X	X	✓
FP149	X	X	X	X	X	✓	X	X	✓
FP157	X	X	X	X	X	✓	X	X	✓
FP162	X	X	X	X	X	✓	X	X	✓
FP388	X	X	X	X	X	✓	X	X	✓
FP181	X	X	X	X	X	✓	X	X	✓
FP334	X	X	X	X	X	✓	X	X	✓
BRW179	X	X	X	X	X	✓	X	X	✓
Open Access land and PRoW within 5km of proposed turbines	✓	X	X	X	X	X	X	X	✓
Open Access land between 5km-10km of the proposed turbines.	✓	X	X	X	X	X	X	X	✓
Residential Receptors									

Receptor	Ch 6: Landscape & Visual	Ch 7: Historic Env	Ch 8: Biodiversity	Ch 9: Ornithology	Ch 10: Water Env	Ch 12: Traffic & Transport	Ch 13: Noise	Ch 15 : Shadow Flicker	Ch 16: Socio economics
Abercarn (Llanfach, Persondy, Celynen, High Meadow);	✓	X	X	X	✓	X	X	X	X
Swffryd/ Hafodyrynys;	✓	X	X	X	✓	X	X	X	X
Ty Oakley Farm	X	X	X	X	✓	X	✓	✓	X
Pen y Caeau Farm	X	X	X	X	✓	X	✓	✓	X
Cefn-rhos-y-bed-uchaf	X	X	X	X	✓	X	✓	✓	X
Glan Shon Farm	X	X	X	X	✓	X	✓	✓	X
Roxburgh bungalow	X	X	X	X	✓	X	✓	✓	X
Rhyswg-ganol	X	X	X	X	X	X	✓	✓	X
Bwthyn Mamgu	X	X	X	X	X	X	✓	✓	X
Graigwen Bungalow, Gwyddon Rd	X	X	X	X	X	X	✓	✓	X
Blaendwrney Farm Dwelling	X	X	X	X	X	X	✓	✓	X
Old Pant Road, Newbridge	X	X	X	X	X	X	✓	✓	X
Ty-hir, Cefn-Crib Rd	X	X	X	X	X	X	✓	✓	X
Tir Shon Shenkin	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	Ch 12: Traffic & Transport	Ch 13: Noise	Ch 15 : Shadow Flicker	Ch 16: Socio economics
Bwthyn Yr Ysgol, Blaen-y-cwm Rd	X	X	X	X	X	X	✓	✓	X
Cefn-y-Crib Farm, Blaen-y-Cwm Rd	X	X	X	X	X	X	✓	✓	X
Ecological Receptors									
Pwllgwinau, East of Newbridge SINC	X	X	✓	X	✓	X	X	X	X
Mynydd Maen, East of Newbridge SINC	X	X	✓	✓	✓	X	X	X	X
Coed Cil-Lonydd, East of Newbridge SINC	X	X	✓	✓	✓	X	X	X	X
Gwydon Valley Woodlands, Abercarn SINC	X	X	✓	✓	✓	X	X	X	X
Cwm Hafod-Fach Woodlands, North of Abercarn SINC	X	X	✓	✓	X	X	X	X	X
Craig Gwent Wood Ancient Woodland SINC	X	X	✓	X	✓	X	X	X	X
River Ebbw SINC	X	X	✓	X	✓	X	X	X	X
Llandegfedd Reservoir SSSI	X	X	✓	✓	X	X	X	X	X
Bloreng SSSI	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	Ch 12: Traffic & Transport	Ch 13: Noise	Ch 15 : Shadow Flicker	Ch 16: Socio economics
Nelson Bog SSSI	X	X	✓	✓	X	X	X	X	X
River Usk (Lower Usk) SSSI	X	X	✓	✓	X	X	X	X	X
River Usk (Upper Usk) SSSI	X	X	✓	✓	X	X	X	X	X
River Usk (Tributaries) SSSI	X	X	✓	✓	X	X	X	X	X
Severn Estuary SPA/Ramsar	X	X	✓	✓	X	X	X	X	X
Lisvane Reservoir SSSI	X	X	✓	✓	X	X	X	X	X

17.7.10 The receptors considered in this assessment are therefore:

Landscape/Visual and Environment Receptors:

- Taith Torfaen Anything Challenge (LVIA and Socio-economics);
- Ebbw Valley Walk (LVIA and Socio-economics);
- Cambrian Way (LVIA and Socio-economics);
- Cistercian Way (LVIA and Socio-economics);
- Torfaen Trail (LVIA and Socio-economics);
- Raven Walk (LVIA and Socio-economics);
- Celtic Way (LVIA and Socio-economics);
- Sirhowy Valley Ridgeway Walk (LVIA and Socio-economics);
- Monmouthshire Way(LVIA and Socio-economics);
- Rhymney Valley Ridgeway Walk (LVIA and Socio-economics);
- A4046 (LVIA and Traffic and Transport);
- A467 (LVIA and Traffic and Transport);
- RBW171 (Traffic and Transport and Socio-economics);
- RBW172(Traffic and Transport and Socio-economics);
- RBW366 (Traffic and Transport and Socio-economics);
- RBW160 (Traffic and Transport and Socio-economics);
- RBW158 (Traffic and Transport and Socio-economics);
- FP149 (Traffic and Transport and Socio-economics);
- FP157 (Traffic and Transport and Socio-economics);
- FP162 (Traffic and Transport and Socio-economics);
- FP388 (Traffic and Transport and Socio-economics);
- FP181 (Traffic and Transport and Socio-economics);
- FP334 (Traffic and Transport and Socio-economics);
- BRW179 (Traffic and Transport and Socio-economics);
- Open Access land and PRow within 5km of proposed turbines (LVIA and Socio-economics); and
- Open Access land between 5km-10km of the proposed turbines (LVIA and Socio-economics);

Human/Residential Receptors

- Abercarn (Llanfach, Persondy, Celynyn, High Meadow) (LVIA and Water Environment);
- Swffryd/ Hafodyrynys (LVIA and Water Environment);

- Ty Oakley Farm (Water Environment, Noise and Shadow Flicker);
- Pen y Caeau Farm (Water Environment, Noise and Shadow Flicker);
- Cefn-rhos-y-bed-uchaf (Water Environment, Noise and Shadow Flicker);
- Glan Shon Farm (Water Environment, Noise and Shadow Flicker);
- Roxburgh bungalow (Water Environment, Noise and Shadow Flicker);
- Rhyswg-ganol (Noise and Shadow Flicker);
- Bwthyn Mamgu (Noise and Shadow Flicker);
- Graigwen Bungalow, Gwyddon Rd (Noise and Shadow Flicker);
- Blaendwrney Farm Dwelling (Noise and Shadow Flicker);
- Old Pant Road, Newbridge (Noise and Shadow Flicker);
- Ty-hir, Cefn-Crib Rd (Noise and Shadow Flicker);
- Tir Shon Shenkin (Noise and Shadow Flicker);
- Bwthyn Yr Ysgol, Blaen-y-cwm Rd (Noise and Shadow Flicker); and
- Cefn-y-Crib Farm, Blaen-y-Cwm Rd (Noise and Shadow Flicker);

Ecological Receptors

- Pwllgwinau, East of Newbridge SINC (Biodiversity and Water Environment);
- Mynydd Maen, East of Newbridge SINC (Biodiversity, Ornithology and Water Environment);
- Coed Cil-Lonydd, East of Newbridge SINC (Biodiversity, Ornithology and Water Environment);
- Gwydon Valley Woodlands, Abercarn SINC (Biodiversity, Ornithology and Water Environment);
- Cwm Hafod-Fach Woodlands, North of Abercarn SINC (Biodiversity and Ornithology);
- Craig Gwent Wood Ancient Woodland SINC (Biodiversity and Water Environment);
- River Ebbw SINC (Biodiversity and Water Environment);
- Llandegfedd Reservoir SSSI (Biodiversity and Ornithology);
- Blorenge SSSI (Biodiversity and Ornithology);
- Nelson Bog SSSI (Biodiversity and Ornithology);
- River Usk (Lower Usk) SSSI (Biodiversity and Ornithology);
- River Usk (Upper Usk) SSSI (Biodiversity and Ornithology);
- River Usk (Tributaries) SSSI (Biodiversity and Ornithology);
- Severn Estuary SPA/Ramsar (Biodiversity and Ornithology); and
- Lisvane Reservoir SSSI (Biodiversity and Ornithology);

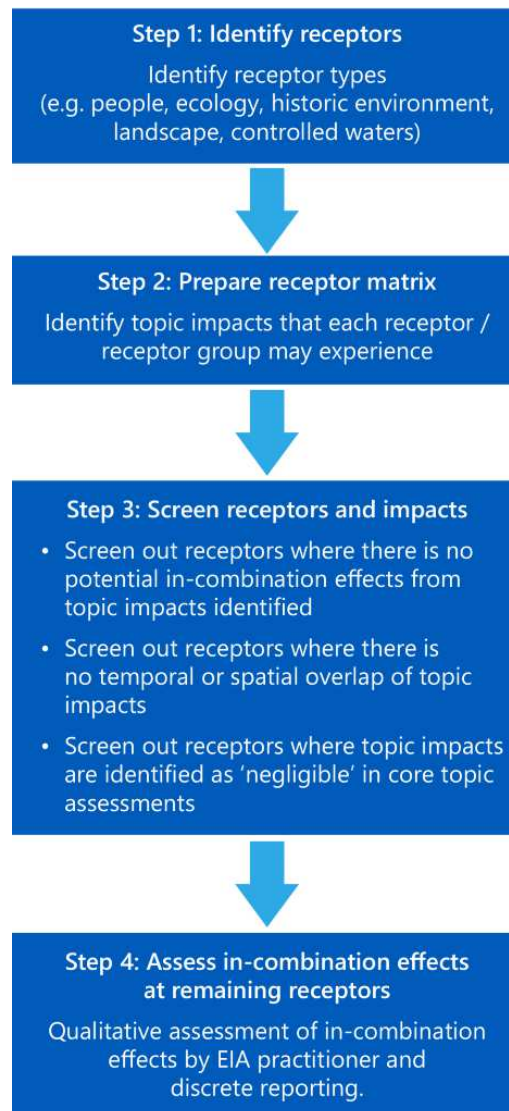
Likely significant effects

- 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 Draft 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	Ch 12: Traffic & Transport	Ch 13: Noise	Ch 15 : Shadow Flicker	Ch 16: Socio economics
Landscape/Visual and Environmental Receptors									
Taith Torfaen Anything Challenge;	◆◆	X	X	X	X	X	X	X	
Ebbw Valley Walk;	◆◆	X	X	X	X	X	X	X	
Cambrian Way;	◆◆	X	X	X	X	X	X	X	
Cistercian Way;	◆◆	X	X	X	X	X	X	X	
Torfaen Trail;	◆◆	X	X	X	X	X	X	X	
Raven Walk;	◆◆	X	X	X	X	X	X	X	
Celtic Way;	◆◆	X	X	X	X	X	X	X	
Sirhowy Valley Ridgeway Walk;	◆◆	X	X	X	X	X	X	X	
Monmouthshire Way; and	◆◆	X	X	X	X	X	X	X	
Rhymney Valley Ridgeway Walk.	◆◆	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	Ch 12: Traffic & Transport	Ch 13: Noise	Ch 15 : Shadow Flicker	Ch 16: Socio economics
A4046		X	X	X	X		X	X	X
A467		X	X	X	X		X	X	X
RBW171	X	X	X	X	X		X	X	
RBW172	X	X	X	X	X		X	X	
RBW366	X	X	X	X	X		X	X	
RBW160	X	X	X	X	X		X	X	
RBW158	X	X	X	X	X		X	X	
FP149	X	X	X	X	X		X	X	
FP157	X	X	X	X	X		X	X	
FP162	X	X	X	X	X		X	X	
FP388	X	X	X	X	X		X	X	
FP181	X	X	X	X	X		X	X	
FP334	X	X	X	X	X		X	X	
BRW179	X	X	X	X	X		X	X	
Open Access land and PRoW within 5km	◆◆	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	Ch 12: Traffic & Transport	Ch 13: Noise	Ch 15 : Shadow Flicker	Ch 16: Socio economics
Open Access land and PRoW within 5km-10km	◆◆	X	X	X	X	X	X	X	
Human Receptors									
Abercarn (Llanfach, Persondy, Celynen, High Meadow);	◆◆	X	X	X		X	X	X	X
Swffryd/ Hafodyrynys;	◆◆	X	X	X		X	X	X	X
Ty Oakley Farm	X	X	X	X		X			X
Pen y Caeau Farm	X	X	X	X		X			X
Cefn-rhos-y- bed-uchaf	X	X	X	X		X			X
Glan Shon Farm	X	X	X	X		X			X
Roxburgh bungalow	X	X	X	X		X			X
Rhyswg-ganol	X	X	X	X	X	X			X
Bwthyn Mamgu	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	Ch 12: Traffic & Transport	Ch 13: Noise	Ch 15 : Shadow Flicker	Ch 16: Socio economics
Graigwen Bungalow, Gwyddon Rd	X	X	X	X	X	X			X
Blaendwrney Farm Dwelling	X	X	X	X	X	X			X
Old Pant Road, Newbridge	X	X	X	X	X	X			X
Ty-hir, Cefn- Crib Rd	X	X	X	X	X	X			X
Tir Shon Shenkin	X	X	X	X	X	X			X
Bwthyn Yr Ysgol, Blaen-y- cwm Rd	X	X	X	X	X	X			X
Cefn-y-Crib Farm, Blaen-y- Cwm Rd	X	X	X	X	X	X			X
Ecological Receptors									
Pwllgwinau, East of Newbridge SINC	X	X		X		X	X	X	X
Mynydd Maen, East of Newbridge SINC	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	Ch 12: Traffic & Transport	Ch 13: Noise	Ch 15 : Shadow Flicker	Ch 16: Socio economics
Coed Cil-Lonydd, East of Newbridge SINC	X	X				X	X	X	X
Gwydon Valley Woodlands, Abercarn SINC	X	X				X	X	X	X
Cwm Hafod-Fach Woodlands, North of Abercarn SINC	X	X			X	X	X	X	X
Craig Gwent Wood Ancient Woodland SINC	X	X		X		X	X	X	X
River Ebbw SINC	X	X		X		X	X	X	X
Llandegfedd Reservoir SSSI	X	X			X	X	X	X	X
Bloreng SSSI	X	X			X	X	X	X	X
Nelson Bog SSSI	X	X			X	X	X	X	X
River Usk (Lower Usk) SSSI	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	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
River Usk (Tributaries) SSSI	X	X			X	X	X	X	X
Severn Estuary SPA/Ramsar	X	X			X	X	X	X	X
Lisvane Reservoir SSSI	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 Draft 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.