

Wylfa Newydd Project

6.9.4 ES Volume I - Cumulative effects I4 - Intra-project cumulative effects

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4 Intra-project cumulative effects

4.1 Introduction

- 4.1.1 This chapter lists the significant intra-project cumulative effects that are predicted to result from the Wylfa Newydd Project. These take into account all the embedded, good practice and additional mitigation identified in the topic chapters across all volumes of the Environmental Statement.
- 4.1.2 A full list of effects, which includes minor intra-project cumulative effects, is provided in appendix I4-1 (intra-project cumulative effects) (Application Reference Number: 6.9.9).
- 4.1.3 Where additional mitigation is described in this chapter, it relates to further additional mitigation introduced as a result of the assessment of cumulative effects. It does not duplicate the additional mitigation measures for individual effects identified in the topic chapters in volumes C to H (Application Reference Number: 6.3 to 6.8). Where it is stated that no mitigation is required to address a particular cumulative effect, that is because the cumulative effect is not assessed to be significant or would be beneficial. Where it is stated that no mitigation has been identified, that is in cases where the cumulative effects would be significant but all feasible mitigation measures have already been committed to in the individual topic assessments earlier in this Environmental Statement.

4.2 Assessment findings

Socio-economics

Description of intra-project cumulative effects

- 4.2.1 The level of investment to be made by the Wylfa Newydd Project represents a substantial sum which would benefit the economies of both Anglesey and north Wales; this investment filters through the economy via payment to employees, contracts with local businesses and investment in infrastructure. The smaller, individual developments cumulatively lead to significant effects at a different geographic scale, as workers would spend their income at local businesses, with benefits for local economies. In addition, it should be noted that for effects such as 'employment' the contribution of the individual developments is already captured within the project-wide effects as the labour profile for the whole Wylfa Newydd Project is considered.

Mitigation of intra-project cumulative effects

- 4.2.2 No mitigation is required, but enhancement actions already outlined as part of the topic assessment in volumes C to H (Application Reference Number: 6.3 to 6.8) seek to maximise the level of local economy benefit from investment and spending. For example, the Supply Chain Charter and Action Plan would encourage involvement with local businesses, whilst the Jobs and Skills Strategy (Application Reference Number: 8.3) seeks to improve access to employment opportunities for local people.

Significance of residual intra-project cumulative effects

4.2.3 The residual effects on the economies of Anglesey and north Wales have been assessed as moderate beneficial, as set out in table I4-1.

Traffic and transport

Description of intra-project cumulative effects

4.2.4 The strategic traffic model has modelled all vehicle trips generated by, and associated with, each development within the Wylfa Newydd Project. The outputs from the strategic traffic model informed the assessments in chapter C2 (traffic and transport) (Application Reference Number: 6.3.2). Therefore, the effects in chapter C2 (Application Reference Number: 6.3.2) are the intra-project cumulative effects; hence, there are no further intra-project cumulative effects to report for this topic.

Public access and recreation

Description of intra-project cumulative effects

4.2.5 Walkers and cyclists using Parc Cybi spine road would experience a short-term or medium-term reduction in recreational amenity during construction of the Logistics Centre. The duration of this reduction in recreational amenity would extend into the long term as a result of the increased traffic flows along the highway network whilst construction works at the Wylfa Newydd Development Area were underway.

4.2.6 Similarly, there would be a reduction in recreational amenity for users of the Wales Coast Path (WCP) as a result of the noise, dust, visual impact and temporary diversions required during construction of the A5025 Off-line Highway Improvements, and also subsequently during the construction of the WNDA Development.

Mitigation of intra-project cumulative effects

4.2.7 Embedded, good practice and additional mitigation has been identified in the topic chapters across all volumes of the Environmental Statement. The requirements, standards and measures outlined within the Wylfa Newydd Code of Construction Practice (CoCP) (Application Reference Number: 8.6) would further reduce effects. No further additional mitigation has been identified for cumulative effects.

Significance of residual intra-project cumulative effects

4.2.8 One moderate adverse and one major adverse cumulative effects have been identified, as set out in table I4-1.

Air quality

Description of intra-project cumulative effects

Dust

4.2.9 As shown in the matrix in appendix I2-1 (matrix of receptors affected by Wylfa Newydd Project and which short-listed projects could affect them) (Application Reference Number: 6.9.6), the only developments identified as having common receptors (with the potential for intra-project cumulative dust effects at human receptors) are the Off-Site Power Station Facilities (Alternative Emergency Control Centre (AECC), Environmental Survey Laboratory (ESL) and Mobile Emergency Equipment Garage (MEEG)) and Section 5 (Llanfaethlu) of the A5025 Off-line Highway Improvements. The good practice mitigation measures set out in the Wylfa Newydd CoCP (Application Reference Number: 8.6) would reduce the individual effects from each of these developments to not significant.

Emissions to air

4.2.10 The assessment of potential intra-project cumulative effects due to emissions of pollutants to air from sources within the Wylfa Newydd Development Area and project-wide road traffic emissions on the A5025 is set out in appendix I4-2 (project-wide and WNDA Development intra-project air quality assessment) (Application Reference Number: 6.9.10). The assessment considered those human receptors which would experience the largest increases in pollutant concentrations from these sources during the construction and operation of the Power Station. Combining the pollutant contributions from these sources at key human receptors did not materially alter the changes in pollutant concentrations and the effect descriptors set out in the individual assessments in chapters C4 (air quality effects of traffic) (Application Reference Number: 6.3.4) and D5 (air quality) (Application Reference Number: 6.4.5). The assessment did not identify any overall changes to the determination of significant effects during construction and operation of the Power Station at those receptors within 2km of the Wylfa Newydd Development Area. The intra-project cumulative effect is concluded to be not significant.

Mitigation of intra-project cumulative effects

Dust

4.2.11 The approach set out in the Wylfa Newydd CoCP (Application Reference Number: 8.6) would also reduce any potential cumulative effects to not significant, and no additional mitigation measures are required.

Emissions to air

4.2.12 No further additional mitigation is required for cumulative effects.

Significance of residual intra-project cumulative effects

4.2.13 There would be no significant intra-project cumulative effects.

Noise and vibration

Description of intra-project cumulative effects

4.2.14 The assessment of intra-project cumulative noise effects involved the calculation of cumulative noise levels at the various receptors. Differences in noise levels within a significance category are considered small enough not to be identified as cumulative effects. Details of the findings are provided in appendix I4-3 (intra-project cumulative noise effects) (Application Reference Number: 6.9.11). The findings are summarised in table I4-1.

Mitigation of intra-project cumulative effects

4.2.15 Mitigation measures for noise and vibration have been identified for each of the developments individually. No further mitigation has been proposed as a result of this assessment of intra-project cumulative effects. Further details of the reasons for this are set out in appendix I4-3 (Application Reference Number: 6.9.11).

Significance of intra-project cumulative effects

4.2.16 The following cumulative effects have been identified due to interactions between the project-wide effects and the effects from the construction of the Power Station within the Wylfa Newydd Development Area:

- major adverse at two residential properties in Cefn Coch;
- moderate adverse at two residential properties south of Cefn Coch;
- major adverse at five and moderate adverse at four residential properties north of Cefn Coch;
- major adverse and one moderate adverse at seven residential properties north of the A5025 between Tregele and Cemaes;
- major adverse at four and moderate adverse at two residential properties south of the A5025 between Tregele and Cemaes; and
- major adverse at 39 and moderate adverse at 19 residential properties in Tregele.

4.2.17 The following cumulative effects have been identified due to interactions between the project-wide effects and the effects from the operation of the Power Station within the Wylfa Newydd Development Area:

- major adverse at three residential properties and a moderate adverse at one other residential property in Tregele.

4.2.18 Major adverse cumulative effects have been identified due to interactions between the project-wide effects, the effects from the construction of the WNDA Development and the A5025 Off-line Highway Improvements at:

- six residential properties at Cefn Coch;
- four residential properties north of Cefn Coch; and
- two residential properties in Tregele.

4.2.19 The following cumulative effects have been identified due to interactions between the project-wide effects and the effects from the construction of the Off-Site Power Station Facilities:

- major adverse at seven and moderate adverse at seven residential properties in Llanfaethlu;
- a major adverse and a moderate adverse at one residential property off the A5025, north of Llanfaethlu; and
- a major adverse effect at a residential property off the A5025 near the road fork with Chapel Street.

4.2.20 Major adverse effects have been identified at five residential properties in Llanfaethlu and at three residential properties off the A5025, north of Llanfaethlu due to interactions between the project-wide effects, the effects from the Off-Site Power Station Facilities and the A5025 Off-line Highway Improvements.

4.2.21 Due to the interaction between the project-wide effects and the construction of the Park and Ride facility, major adverse effects have been identified at two residential properties in Dol Eithin and at nine residential properties and one hotel outlying the village of Llanfihangel-yn-Nhywyn. Moderate adverse cumulative effects have been identified at eight residential properties outlying the village of Llanfihangel-yn-Nhywyn arising from project-wide traffic and the construction of the Park and Ride.

4.2.22 The following cumulative effects have been identified due to interactions between the project-wide effects and the A5025 Off-line Highway Improvements:

- major adverse effects at 13 residential properties in Llanfaethlu;
- a major adverse effect at a residential property southeast of Llanfaethlu;
- major adverse effects at two residential receptors off the A5025, north of Llanfaethlu;
- a major adverse effect at an outlying residential property north of Llanfaethlu;
- major adverse effect at four residential properties at Llangynghenedl, off the A5025 near to its junction with the B5109;
- major adverse effect at three outlying residential receptors on the unnamed road east of the A5025 north of Llanfachraeth;
- moderate adverse effect on two outlying residential properties south of Valley;
- major adverse effect on 78 and moderate adverse effect on 247 residential receptors in Valley;
- major adverse at 35 residential properties in Llanfachraeth.

4.2.23 The only major cumulative effect due to interaction between project-wide effects and the Logistics Centre would be at a residential property in Kingsland. There would be moderate adverse cumulative effects arising from

the interaction of project-wide effects and the Logistics Centre on seven residential receptors north of Trearddur Bay.

Conventional waste and materials management

4.2.24 All effects have been reported at a project-wide level in volume C (Application Reference Number: 6.3); hence, there are no further intra-project cumulative effects to report for this topic.

Soils and geology

Description of intra-project cumulative effects

4.2.25 A moderate adverse cumulative effect has been identified for construction workers, who may be exposed to unexpected contamination at multiple sites. The WNDA Development would contribute the most to this cumulative effect based on the contamination identified to date at the site and the nature of the works, although there remains the potential for unexpected contamination at other sites.

Mitigation of intra-project cumulative effects

4.2.26 Measures have been identified for each of the developments individually to reduce effects. In addition, the Wylfa Newydd CoCP (Application Reference Number: 8.6) outlines requirements, measures and standards to mitigate potential effects. No further measures have been identified to reduce this potential cumulative effect.

Significance of residual intra-project cumulative effects

4.2.27 There is the potential for a moderate adverse cumulative effect on construction workers who work on a number of different development sites, although the likelihood of occurrence is very low.

Surface water and groundwater

Description of intra-project cumulative effects

4.2.28 Intra-project cumulative effects on the Afon Cafnan are set out in appendix I4-1 (Application Reference Number: 6.9.9). As these effects would not be significant, they are not discussed here.

Mitigation of intra-project cumulative effects

4.2.29 No further mitigation is required for intra-project cumulative effects.

Significance of residual intra-project cumulative effects

4.2.30 There would be no significant intra-project cumulative effects.

Terrestrial and freshwater ecology

4.2.31 The only Wylfa Newydd Project development location from which significant effects were identified was the Wylfa Newydd Development Area. None of the

predicted effects were considered likely to combine with effects from other Wylfa Newydd Project developments, and their respective locations, due to an absence of spatial connectivity and/or because the effects of other individual developments are predicted to be negligible.

Landscape and visual

Description of intra-project cumulative effects

- 4.2.32 The only significant landscape cumulative effects would be on local landscape character, where construction effects of the Power Station and Off-Site Power Station Facilities would be perceived in conjunction with the construction of adjacent or nearby sections of the A5025 Off-line Highway Improvements. During operation, the only significant cumulative effect could result from the interaction between the Power Station and A5025 Off-line Highway Improvements.
- 4.2.33 The potential for cumulative visual effects on receptors in different geographical locations occurs where a receptor (viewer) is mobile. The most significant cumulative visual effects would occur for users of the WCP, local Public Rights of Way (PRoWs) and open access land, the A5025, local road network users and the community of Tregele, principally during construction but also during operation.
- 4.2.34 Other cumulative visual effects would affect the community of Llanfaethlu and users of the National Cycle Network Route 8 and A5 Holyhead Road but only during construction.
- 4.2.35 By some margin, the most significant contributions to the cumulative effects described above would result from the effects reported in chapter D10 (landscape and visual) (Application Reference Number: 6.4.10) for construction and operation of the Power Station. These effects would arise with or without the other intra-project developments which were identified above, and would result in a relatively minor additional level of effect on some receptors over and above the effects of the Power Station, particularly during construction.

Mitigation of intra-project cumulative effects

- 4.2.36 Because the main cumulative effects would result from construction and operation of the Power Station, for which extensive specific mitigation measures are proposed and because specific mitigation is also proposed for the other intra-project developments, no further mitigation measures have been identified.

Significance of residual intra-project cumulative effects

- 4.2.37 Effects would range from minor to major adverse, as set out in table I4-1.

Cultural heritage

- 4.2.38 No significant intra-project cumulative effects have been identified for cultural heritage. Intra-project cumulative effects on four cultural heritage receptors

(Groes Fechan and three buildings at Cefn Coch) have been assessed to be minor adverse and are not considered significant. These effects are not discussed here but are presented in appendix I4-1 (Application Reference Number: 6.9.9).

Mitigation of intra-project cumulative effects

4.2.39 No further mitigation is required, because the cumulative effects would not be significant.

Significance of residual intra-project cumulative effects

4.2.40 As shown in table I4-1, there would be no significant residual effects.

Coastal processes and coastal geomorphology

Description of intra-project cumulative effects

4.2.41 The only effects relating to this topic are reported in chapter D12 (coastal processes and coastal geomorphology) (Application Reference Number: 6.4.12). Therefore, there is no potential for intra-project cumulative effects.

Marine environment

4.2.42 The only effects have been reported in chapter D13 (the marine environment) (Application Reference Number: 6.4.13); hence, there are no intra-project cumulative effects to report for this topic.

Radiological effects

4.2.43 The only effects have been reported in chapter D14 (radiological effects) (Application Reference Number: 6.4.14); hence, there are no intra-project cumulative effects to report for this topic.

Shipping and navigation

4.2.44 The only effects have been reported in chapter D15 (shipping and navigation) (Application Reference Number: 6.4.15); hence, there are no intra-project cumulative effects to report for this topic.

Table I4-1 Significant intra-project cumulative effects

Receptor	Effects of individual developments (brief description and significance)						Intra-project cumulative effect			
	Project-wide effect	WNDA Development	Off-Site Power Station Facilities: AECC, ESL and MEEG	Park and Ride	A5025 Off-line Highway Improvements	Logistics Centre	Description of cumulative effect	Additional mitigation	Significance of residual cumulative effect	
Socio-economics										
Local economy in north Wales	Investment made within the local economy (north Wales). It is estimated that up to 4% of the total £10 billion construction value of the Wylfa Newydd Project could be spent within north Wales (moderate beneficial).	It is likely that there would be increased spending by workers in local businesses. The potential effect is assessed as minor beneficial, and therefore significant.	It is likely that there would be increased spending by workers in local businesses. The potential effect is assessed as minor beneficial, and therefore not significant.	It is likely that there would be increased spending by workers in local businesses. The potential effect is assessed as minor beneficial, and therefore not significant.	It is likely that there would be increased spending by workers in local businesses. The potential effect is assessed as minor beneficial, and therefore not significant.	Not applicable	It is likely that there would be increased spending by workers in local businesses. The potential effect is assessed as minor beneficial, and therefore not significant.	There would be substantial investment within the local economy (north Wales) as a result of the Wylfa Newydd Project. There would be increased spending by construction and operational workers within the north Wales area.	None identified	Moderate beneficial
Local economy in Anglesey	Annual average direct, indirect and induced increase in income of around £20 million on Anglesey from staff costs at the Wylfa Newydd Power Station, equivalent to an increase of 2.1% over baseline levels (moderate beneficial).	It is likely that there would be increased spending by workers in local businesses. The potential effect is assessed as minor beneficial, and therefore not significant.	It is likely that there would be increased spending by workers in local businesses. The potential effect is assessed as minor beneficial, and therefore not significant.	It is likely that there would be increased spending by workers in local businesses. The potential effect is assessed as minor beneficial, and therefore not significant.	Not applicable	It is likely that there would be increased spending by workers in local businesses. The potential effect is assessed as minor beneficial, and therefore not significant.	It is likely that there would be increased spending by workers in local businesses. The potential effect is assessed as minor beneficial, and therefore not significant.	There would be an annual average direct, indirect and induced increase in income of around £20 million on Anglesey.	None identified	Moderate beneficial
Traffic and transport – all effects have been reported at a project-wide level in volume C; hence, there are no intra-project cumulative effects to report for this topic.										
Public access and recreation										
Users of WCP between Cemlyn Bay and Cemaes	Not applicable	A major adverse effect would result from the reduction in recreational amenity as a result in the increase in length of the WCP between Cemlyn	Not applicable	Not applicable	Construction of Power Station access road junction across the WCP is assessed as minor adverse.	Not applicable	The cumulative effect associated with this receptor is the elongation of the period of time over which it would occur.	None identified. Embedded and additional mitigation to minimise the effects of the construction works on the	Major adverse	

Receptor	Effects of individual developments (brief description and significance)						Intra-project cumulative effect		
	Project-wide effect	WNDA Development	Off-Site Power Station Facilities: AECC, ESL and MEEG	Park and Ride	A5025 Off-line Highway Improvements	Logistics Centre	Description of cumulative effect	Additional mitigation	Significance of residual cumulative effect
		Bay and Cemaes during construction. A major adverse effect would result from the reduction in recreational amenity as a result of noise, dust and visual intrusion during construction of the Power Station. A major adverse effect would result from the reduction in recreational amenity of the WCP as a result of the increase in length of the route between Cemlyn Bay and Cemaes during operation.						recreational amenity of the WCP as far as practicable are described in chapters D4 and G4 (public access and recreation) (Application Reference Numbers: 6.4.4 and 6.7.4).	
Recreational and active travel users of the Lôn Trefignath	A moderate adverse effect would result from the movement of heavy goods vehicles in and out of the Logistics Centre crossing the Lôn Trefignath during the opening year of the A5025. A moderate adverse effect would result from the movement of heavy good vehicles in and out of the Logistics Centre crossing the Lôn	Not applicable	Not applicable	Not applicable	Not applicable	The reduction in recreational amenity of the Lôn Trefignath during construction of the site entrance to the Logistics Centre is assessed as minor adverse. The reduction in recreational amenity of the Lôn Trefignath during construction of the main	The cumulative effect associated with this receptor is the elongation of time over which these recreational and active travel users would experience a reduction in the amenity of the route.	None identified. Embedded and additional mitigation to minimise the effects of the construction works on the recreational amenity of the Lôn Trefignath as far as practicable are described in chapters D4 and G4 (Application Reference	Moderate adverse

Receptor	Effects of individual developments (brief description and significance)						Intra-project cumulative effect		
	Project-wide effect	WNDA Development	Off-Site Power Station Facilities: AECC, ESL and MEEG	Park and Ride	A5025 Off-line Highway Improvements	Logistics Centre	Description of cumulative effect	Additional mitigation	Significance of residual cumulative effect
	Trefignath during peak construction.					compound of the Logistics Centre is assessed as minor adverse		Numbers: 6.4.4 and 6.7.4).	
Air quality – no significant intra-project cumulative effects									
Noise and vibration									
Receptors at Cefn Coch									
Two residential receptors within 25m of the A5025 in Cefn Coch	Moderate adverse effect at two properties due to increased noise levels from the effects of traffic on the A5025.	Moderate adverse effect at two properties due to elevated noise and vibration levels during construction.	Not applicable	Not applicable	Moderate adverse effect at two properties due to elevated noise and vibration levels during construction.	Not applicable	The effects identified within this receptor group are due to the following interaction identified to occur for a period of six quarters commencing in year one: <ul style="list-style-type: none"> project-wide traffic, A5025 Off-line Highway Improvements and the construction of the WNDA Development. 	None identified	Major adverse effect at two properties
One outlying residential receptor 400m west of the A5025	Minor adverse effect at one property due to increased noise levels from the effects of traffic on the A5025.	Moderate adverse effect at one property due to elevated noise and vibration levels during construction.	Not applicable	Not applicable	Minor adverse effect at one property due to elevated noise and vibration levels during construction.	Not applicable	The effects identified within this receptor group are due to the following interaction identified to occur for a period of six quarters commencing in year one: <ul style="list-style-type: none"> project-wide traffic, A5025 Off-line Highway Improvements and the construction of the WNDA Development. 	None identified	Major adverse effect at one property

Receptor	Effects of individual developments (brief description and significance)						Intra-project cumulative effect		
	Project-wide effect	WNDA Development	Off-Site Power Station Facilities: AECC, ESL and MEEG	Park and Ride	A5025 Off-line Highway Improvements	Logistics Centre	Description of cumulative effect	Additional mitigation	Significance of residual cumulative effect
Two outlying residential receptors 400m west of the A5025	Minor adverse effect at two properties due to increased noise levels from the effects of traffic on the A5025.	Moderate adverse effect at two properties due to elevated noise and vibration levels during construction.	Not applicable	Not applicable	Minor adverse effect at two properties due to elevated noise and vibration levels during construction.	Not applicable	The cumulative effects identified within this receptor group are due to the following interaction identified to occur for a period of 6 quarters commencing in Year one: <ul style="list-style-type: none"> project wide traffic, A5025 off-line highway improvements and the construction of the WNDA Development. 	None Identified	Major adverse effect at two properties
Two residential receptors within 80m of the A5025 in Cefn Coch	Moderate adverse effect at two properties due to increased noise levels from the effects of traffic on the A5025.	Moderate adverse effect at two properties due to elevated noise and vibration levels during construction.	Not applicable	Not applicable	Not applicable	Not applicable	The cumulative effects identified within this receptor group are due to the following interaction identified to occur for a period of 26 quarters commencing in year three: <ul style="list-style-type: none"> project-wide traffic and the construction of the WNDA Development. 	None identified	Major adverse effect at two properties
Three residential receptors off the road between Llanfairynghornwy and Llanfechell, south of Cefn Coch	Minor adverse at three receptors due to increased noise levels from the effects of traffic on the A5025.	Minor adverse effect at three properties due to elevated noise and vibration levels during construction.	Not applicable	Not applicable	Not applicable	Not applicable	The cumulative effects identified within this receptor group are due to the following interaction identified to occur for a period of 26 quarters commencing in year three: <ul style="list-style-type: none"> project-wide traffic and the construction of the 	None identified	Moderate adverse effect at two properties

Receptor	Effects of individual developments (brief description and significance)						Intra-project cumulative effect		
	Project-wide effect	WNDA Development	Off-Site Power Station Facilities: AECC, ESL and MEEG	Park and Ride	A5025 Off-line Highway Improvements	Logistics Centre	Description of cumulative effect	Additional mitigation	Significance of residual cumulative effect
							WNDA Development.		
One residential receptor on the A5025 in Cefn Coch	Moderate adverse effect at one property due to increased noise levels from the effects of traffic on the A5025.	Minor adverse effect at one property due to elevated noise and vibration levels during construction.	Not applicable	Not applicable	Moderate adverse effect at one property due to elevated noise and vibration levels during construction.	Not applicable	The cumulative effects identified within this receptor group are due to the following interactions identified to occur for a period of 26 quarters commencing in year one and 26 quarters commencing in year three, respectively: <ul style="list-style-type: none"> project-wide traffic, A5025 Off-line Highway Improvements and the construction of the WNDA Development; and project-wide traffic and the construction of the WNDA Development. 	None identified	Major adverse effect at one property
Receptors at Kingsland									
One residential receptor off Kingsland Road and south of the A5153	Moderate adverse effect at one property due to increased noise levels from the effects of traffic on the A5025.	Not applicable	Not applicable	Not applicable	Not applicable	Moderate adverse effect at one property due to elevated noise and vibration levels during construction. Moderate adverse effect at one property due to operation.	The cumulative effects identified within this receptor group are due to the following interactions identified to occur for a period of five quarters commencing in year one and two quarters commencing in year three, respectively: <ul style="list-style-type: none"> project-wide traffic and construction of 	None identified	Major adverse effect at one property

Receptor	Effects of individual developments (brief description and significance)						Intra-project cumulative effect		
	Project-wide effect	WNDA Development	Off-Site Power Station Facilities: AECC, ESL and MEEG	Park and Ride	A5025 Off-line Highway Improvements	Logistics Centre	Description of cumulative effect	Additional mitigation	Significance of residual cumulative effect
							Parc Cybi Logistics Centre; and • project-wide traffic and the operation of Parc Cybi Logistics Centre.		
Receptors at Llanfaethlu									
Residential receptors in Llanfaethlu Village (a)	Moderate at five receptors, minor adverse at eight due to increased noise levels from the effects of traffic on the A5025.	Not applicable	Not applicable	Not applicable	Minor adverse effect at 13 properties due to elevated noise and vibration levels during construction.	Not applicable	The cumulative effects identified within this receptor group are due to the following interaction identified to occur for a period of six quarters commencing in year one: • project-wide traffic and A5025 Off-line Highway Improvements.	None identified	Major adverse effect at 13 properties
Outlying residential receptor southeast of Llanfaethlu Village	Moderate adverse effect at one property due to increased noise levels from the effects of traffic on the A5025.	Not applicable	Not applicable	Not applicable	Moderate adverse effect at one property due to elevated noise and vibration levels during construction.	Not applicable	The cumulative effects identified within this receptor group are due to the following interaction identified to occur for a period of six quarters commencing in year one: • project-wide traffic and A5025 Off-line Highway Improvements.	None identified	Major adverse effect at one property
Residential receptors off the A5025, north of Llanfaethlu Village (a)	Moderate adverse effect at two properties due to increased noise levels from the effects of traffic on the A5025.	Not applicable	Not applicable	Not applicable	Minor adverse effect at two properties due to elevated noise and vibration levels	Not applicable	The cumulative effects identified within this receptor group are due to the following interaction identified to occur for a period of six	None identified	Major adverse effect at two properties

Receptor	Effects of individual developments (brief description and significance)						Intra-project cumulative effect		
	Project-wide effect	WNDA Development	Off-Site Power Station Facilities: AECC, ESL and MEEG	Park and Ride	A5025 Off-line Highway Improvements	Logistics Centre	Description of cumulative effect	Additional mitigation	Significance of residual cumulative effect
					during construction.		quarters commencing in year one: • project-wide traffic and A5025 Off-line Highway Improvements.		
Outlying residential receptor north of Llanfaethlu Village	Minor adverse effect at one property due to increased noise levels from the effects of traffic on the A5025.	Not applicable	Not applicable	Not applicable	Minor adverse effect at one property due to elevated noise and vibration levels during construction.	Not applicable	The cumulative effects identified within this receptor group are due to the following interaction identified to occur for a period of six quarters commencing in year one: • project-wide traffic and A5025 Off-line Highway Improvements.	None identified	Major adverse effect at one property
Residential receptors in Llanfaethlu Village (b)	Moderate adverse effect at two receptors, minor adverse at 12 due to increased noise levels from the effects of traffic on the A5025.	Not applicable	Minor adverse effect at 14 properties due to elevated noise and vibration levels during construction.	Not applicable	Not applicable	Not applicable	The cumulative effects identified within this receptor group are due to the following interaction identified to occur for a period of 10 quarters commencing in year three: • project-wide traffic and the construction of Off-Site Power Station Facilities.	None identified	Major adverse effect at seven properties, moderate at seven.
Residential receptors off the A5025, north of Llanfaethlu Village (b)	Moderate adverse effect at one receptor, minor adverse at one due to increased noise levels from the effects of traffic on the A5025.	Not applicable	Minor adverse effect at two properties due to elevated noise and vibration levels during construction.	Not applicable	Not applicable	Not applicable	The cumulative effects identified within this receptor group are due to the following interaction identified to occur for a period of 10	None identified	Major adverse effect at one property, moderate at one.

Receptor	Effects of individual developments (brief description and significance)						Intra-project cumulative effect		
	Project-wide effect	WNDA Development	Off-Site Power Station Facilities: AECC, ESL and MEEG	Park and Ride	A5025 Off-line Highway Improvements	Logistics Centre	Description of cumulative effect	Additional mitigation	Significance of residual cumulative effect
							quarters commencing in year three: • project-wide traffic and the construction of Off-Site Power Station Facilities.		
Residential receptors in Llanfaethlu Village (c)	Moderate adverse effect at two receptors, minor adverse at three due to increased noise levels from the effects of traffic on the A5025.	Not applicable	Minor adverse effect at five properties due to elevated noise and vibration levels during construction.	Not applicable	Minor adverse effect at five properties due to elevated noise and vibration levels during construction.	Not applicable	The cumulative effects identified within this receptor group are due to the following interactions identified to occur for a period of six quarters commencing in year one and 10 quarters commencing in year three, respectively: • project-wide traffic and A5025 Off-line Highway Improvements; and • project-wide traffic and the construction of Off-Site Power Station Facilities.	None identified	Major adverse effect at five properties
Residential receptors off the A5025, north of Llanfaethlu Village (c)	Moderate adverse effect at three receptors due to increased noise levels from the effects of traffic on the A5025.	Not applicable	Minor adverse effect at three properties due to elevated noise and vibration levels during construction.	Not applicable	Minor adverse effect at three properties due to elevated noise and vibration levels during construction.	Not applicable	The cumulative effects identified within this receptor group are due to the following interactions identified to occur for a period of six quarters commencing in year one and 10 quarters commencing in year three, respectively:	None identified	Major adverse effect at three properties

Receptor	Effects of individual developments (brief description and significance)						Intra-project cumulative effect		
	Project-wide effect	WNDA Development	Off-Site Power Station Facilities: AECC, ESL and MEEG	Park and Ride	A5025 Off-line Highway Improvements	Logistics Centre	Description of cumulative effect	Additional mitigation	Significance of residual cumulative effect
							<ul style="list-style-type: none"> project-wide traffic and A5025 Off-line Highway Improvements; and project-wide traffic and the construction of Off-Site Power Station Facilities. 		
Receptors at Llanfihangel-yn-Nhywyn									
Two residential receptors in Dol Eithin	Minor adverse effect at two receptors due to increased noise levels from the effects of traffic on the A5025.	Not applicable	Not applicable	Minor adverse effect at two properties due to elevated noise and vibration levels during construction.	Not applicable	Not applicable	The cumulative effects identified within this receptor group are due to the following interactions identified to occur for a period of six quarters commencing in year one: <ul style="list-style-type: none"> project-wide traffic and the construction of the Park and Ride facility. 	None identified	Major adverse effect at two properties
Receptors at Llangynghenedl									
Four residential receptors off the A5025 near to its junction with B5109	Moderate adverse effect at four receptors due to increased noise levels from the effects of traffic on the A5025.	Not applicable	Not applicable	Not applicable	Minor adverse effect at four properties due to elevated noise and vibration levels during construction.	Not applicable	The cumulative effects identified within this receptor group are due to the following interactions identified to occur for a period of 6 quarters commencing in Year 1: <ul style="list-style-type: none"> project wide traffic and A5025 off-line highway improvements. 	None Identified	Major adverse effect at four properties
Receptors north of Trearddur Bay									

Receptor	Effects of individual developments (brief description and significance)						Intra-project cumulative effect		
	Project-wide effect	WNDA Development	Off-Site Power Station Facilities: AECC, ESL and MEEG	Park and Ride	A5025 Off-line Highway Improvements	Logistics Centre	Description of cumulative effect	Additional mitigation	Significance of residual cumulative effect
Seven residential receptors in Penrhyn Geiriol	Minor adverse effect at seven receptors due to increased noise levels from the effects of traffic on the A5025.	Not applicable	Not applicable	Not applicable	Not applicable	Minor adverse effect at seven receptors due to increased noise levels from the operation of Parc Cybi Logistics Centre	The cumulative effects identified within this receptor group are due to the following interaction identified to occur for a period of 26 months commencing in year three: <ul style="list-style-type: none"> project-wide traffic and the operation of Parc Cybi Logistics Centre. 	None identified	Moderate adverse effect at seven properties
Outlying receptors at Llanfihangel-yn-Nhywyn									
One residential receptor near Go Karting	Minor adverse effect at one property due to increased noise levels from the effects of traffic on the A5025.	Not applicable	Not applicable	Minor adverse effect at one property due to elevated noise and vibration levels during construction.	Not applicable	Not applicable	The cumulative effects identified within this receptor group are due to the following interaction identified to occur for a period of six quarters commencing in year one: <ul style="list-style-type: none"> project-wide traffic and the construction of the Park and Ride facility. 	None identified	Major adverse effect at one property
Five residential receptors off Altwen Goch	Minor adverse effect at five receptors due to increased noise levels from the effects of traffic on the A5025.	Not applicable	Not applicable	Minor adverse effect at five properties due to elevated noise and vibration levels during construction.	Not applicable	Not applicable	The cumulative effects identified within this receptor group are due to the following interaction identified to occur for a period of six quarters commencing in year one:	None identified	Major adverse effect at four properties, moderate at one

Receptor	Effects of individual developments (brief description and significance)						Intra-project cumulative effect		
	Project-wide effect	WNDA Development	Off-Site Power Station Facilities: AECC, ESL and MEEG	Park and Ride	A5025 Off-line Highway Improvements	Logistics Centre	Description of cumulative effect	Additional mitigation	Significance of residual cumulative effect
							• project-wide traffic and the construction of the Park and Ride facility.		
Eight residential receptors off Holyhead Road	Minor adverse effect at seven receptors due to increased noise levels from the effects of traffic on the A5025.	Not applicable	Not applicable	Minor adverse effect at seven properties due to elevated noise and vibration levels during construction.	Not applicable	Not applicable	The cumulative effects identified within this receptor group are due to the following interaction identified to occur for a period of six quarters commencing in year one: • project-wide traffic and the construction of the Park and Ride facility.	None identified	Major adverse effect at four properties, moderate at three
One residential receptor off Road to Bodedern	Minor adverse effect at one property due to increased noise levels from the effects of traffic on the A5025.	Not applicable	Not applicable	Minor adverse effect at one property due to elevated noise and vibration levels during construction.	Not applicable	Not applicable	The cumulative effects identified within this receptor group are due to the following interaction identified to occur for a period of six quarters commencing in year one: • project-wide traffic and the construction of the Park and Ride facility.	None identified	Moderate adverse effect at one property
One Hotel (residential for purposes of assessment)	Minor adverse effect at one property due to increased noise levels from the effects of traffic on the A5025.	Not applicable	Not applicable	Minor adverse effect at one property due to elevated noise and vibration levels during construction.	Not applicable	Not applicable	The cumulative effects identified within this receptor group are due to the following interaction identified to occur for a period of six	None identified	Moderate adverse effect at one property

Receptor	Effects of individual developments (brief description and significance)						Intra-project cumulative effect		
	Project-wide effect	WNDA Development	Off-Site Power Station Facilities: AECC, ESL and MEEG	Park and Ride	A5025 Off-line Highway Improvements	Logistics Centre	Description of cumulative effect	Additional mitigation	Significance of residual cumulative effect
							quarters commencing in year one: • project-wide traffic and the construction of the Park and Ride facility.		
Two residential receptors off Altwen Goch near junction with Minffordd Road	Minor adverse effect at two properties due to increased noise levels from the effects of traffic on the A5025.	Not applicable	Not applicable	Minor adverse effect at two properties due to elevated noise and vibration levels during construction.	Not applicable	Not applicable	The cumulative effects identified within this receptor group are due to the following interaction identified to occur for a period of 26 quarters commencing in year three: • project-wide traffic and the operation of the Park and Ride facility.	None identified	Moderate adverse effect at two properties
Outlying receptors north of Cefn Coch									
Nine residential receptors north of Cefn Coch	Moderate adverse effect at five receptors, minor adverse at four due to increased noise levels from the effects of traffic on the A5025.	Moderate adverse effect at two properties, minor at seven due to elevated noise and vibration levels during construction.	Not applicable	Not applicable	Not applicable	Not applicable	The cumulative effects identified within this receptor group are due to the following interaction identified to occur for a period of 26 quarters commencing in year three: • project-wide traffic and the construction of the WNDA Development.	None identified	Major adverse effect at five properties, moderate at four
Four residential receptors north of Cefn Coch	Moderate adverse effect at four receptors due to increased noise levels from the	Moderate adverse effect at four properties due to elevated noise and vibration levels	Not applicable	Not applicable	Moderate adverse effect at two properties, minor at two	Not applicable	The cumulative effects identified within this receptor group are due to the following interactions	None identified	Major adverse effect at four properties

Receptor	Effects of individual developments (brief description and significance)						Intra-project cumulative effect		
	Project-wide effect	WNDA Development	Off-Site Power Station Facilities: AECC, ESL and MEEG	Park and Ride	A5025 Off-line Highway Improvements	Logistics Centre	Description of cumulative effect	Additional mitigation	Significance of residual cumulative effect
	effects of traffic on the A5025.	during construction.			due to elevated noise and vibration levels during construction.		identified to occur for a period of six quarters commencing in year one and 26 quarters commencing in year three, respectively:		
Outlying receptors north of Llanfaethlu									
One residential receptors off A5025 near road fork with Chapel Street	Moderate adverse effect at one property due to increased noise levels from the effects of traffic on the A5025.	Not applicable	Minor adverse effect at one property due to elevated noise and vibration levels during construction.	Not applicable	Not applicable	Not applicable	The cumulative effects identified within this receptor group are due to the following interaction identified to occur for a period of 10 months commencing in year three:	None identified	Major adverse effect at one property
Outlying receptors north of Llanfachraeth									
Three residential receptors on unnamed road east of A5025	Moderate adverse effect at three receptors due to increased noise	Not applicable	Not applicable	Not applicable	Minor adverse effect at three properties due to elevated	Not applicable	The cumulative effects identified within this receptor group are due to the	None identified	Major adverse effect at three properties

Receptor	Effects of individual developments (brief description and significance)						Intra-project cumulative effect		
	Project-wide effect	WNDA Development	Off-Site Power Station Facilities: AECC, ESL and MEEG	Park and Ride	A5025 Off-line Highway Improvements	Logistics Centre	Description of cumulative effect	Additional mitigation	Significance of residual cumulative effect
	levels from the effects of traffic on the A5025.				noise and vibration levels during construction.		following interactions identified to occur for a period of six quarters commencing in year one: <ul style="list-style-type: none"> project-wide traffic and A5025 Off-line Highway Improvements. 		
Receptors on the A5025 between Cemaes and Tregele									
Eight residential receptors north of A5025 (between Tregele & Cemaes)	Minor adverse effect at eight receptors due to increased noise levels from the effects of traffic on the A5025.	Moderate adverse effect at seven properties and minor adverse effect at one property due to elevated noise and vibration levels during construction.	Not applicable	Not applicable	Not applicable	Not applicable	The cumulative effects identified within this receptor group are due to the following interaction identified to occur for a period of 32 quarters commencing in year one: <ul style="list-style-type: none"> project-wide traffic and the construction of the WNDA Development. 	None identified	Major adverse effect at one property and moderate adverse effect at seven properties
Six residential receptors south of A5025 (between Tregele & Cemaes)	Minor adverse effect at six properties due to increased noise levels from the effects of traffic on the A5025.	Moderate adverse effect at five properties, minor at one due to elevated noise and vibration levels during construction.	Not applicable	Not applicable	Not applicable	Not applicable	The cumulative effects identified within this receptor group are due to the following interaction identified to occur for a period of 32 quarters commencing in year one: <ul style="list-style-type: none"> project-wide traffic and the construction of the WNDA Development. 	None identified	Major adverse effect at four properties, moderate at two

Receptor	Effects of individual developments (brief description and significance)						Intra-project cumulative effect		
	Project-wide effect	WNDA Development	Off-Site Power Station Facilities: AECC, ESL and MEEG	Park and Ride	A5025 Off-line Highway Improvements	Logistics Centre	Description of cumulative effect	Additional mitigation	Significance of residual cumulative effect
One residential receptor south of the A5025 (between Tregele & Cemaes)	Minor adverse effect due to increased noise levels from the effects of traffic on the A5025.	Moderate adverse effect due to elevated noise and vibration levels during construction.	Not applicable	Not applicable	Not applicable	Not applicable	The cumulative effects identified within this receptor group are due to the following interaction identified to occur for a period of 32 quarters commencing in year one: project-wide traffic and the construction of the WNDA Development. A second interaction is due to the project-wide traffic and the operation of the Power Station.	None identified	Major adverse effect during construction of the WDNA Development.
Outlying receptors south of Valley									
Two residential receptor within 200m of the A55	Minor adverse effect at two receptors due to increased noise levels from the effects of traffic on the A5025.	Not applicable	Not applicable	Not applicable	Minor adverse effect at two properties due to elevated noise and vibration levels during construction.	Not applicable	The cumulative effects identified within this receptor group are due to the following interaction identified to occur for a period of six quarters commencing in year one: • project-wide traffic and A5025 Off-line Highway Improvements.	None identified	Moderate adverse effect at two properties
Receptors at Tregele									
Two residential receptors off A5025 near Tregele Petrol Station.	Minor adverse effect at two receptors due to increased noise levels from the effects of traffic on the A5025.	Minor adverse effect at two properties due to elevated noise and vibration levels during construction.	Not applicable	Not applicable	Minor adverse effect at two properties due to elevated noise and vibration levels	Not applicable	The cumulative effects identified within this receptor group are due to the following interaction identified to occur for a period of six	None identified	Major adverse effect at two properties

Receptor	Effects of individual developments (brief description and significance)						Intra-project cumulative effect		
	Project-wide effect	WNDA Development	Off-Site Power Station Facilities: AECC, ESL and MEEG	Park and Ride	A5025 Off-line Highway Improvements	Logistics Centre	Description of cumulative effect	Additional mitigation	Significance of residual cumulative effect
					during construction.		quarters commencing in year one: • project-wide traffic, A5025 Off-line Highway Improvements and the construction of the WNDA Development.		
53 residential properties in Tregele	Minor adverse effect at 53 receptors due to increased noise levels from the effects of traffic on the A5025.	Moderate adverse effect at six properties, minor at 47 due to elevated noise and vibration levels during construction.	Not applicable	Not applicable	Not applicable	Not applicable	The cumulative effects identified within this receptor group are due to the following interaction identified to occur for a period of 26 quarters commencing in year three: • project-wide traffic and the construction of the WNDA Development.	None identified	Major adverse effect at 35 properties, moderate at 18
Five residential properties in Tregele	Minor adverse effect at five receptors due to increased noise levels from the effects of traffic on the A5025.	Moderate adverse effect at four properties, minor at one due to elevated noise and vibration levels during construction.	Not applicable	Not applicable	Not applicable	Not applicable	The cumulative effects identified within this receptor group are due to the following interactions identified to occur for a period of 32 quarters commencing in year one and 100 quarters commencing in year 11, respectively: • project-wide traffic and the construction of the WNDA Development; and	None identified	Major adverse effect at four properties, moderate at one

Receptor	Effects of individual developments (brief description and significance)						Intra-project cumulative effect		
	Project-wide effect	WNDA Development	Off-Site Power Station Facilities: AECC, ESL and MEEG	Park and Ride	A5025 Off-line Highway Improvements	Logistics Centre	Description of cumulative effect	Additional mitigation	Significance of residual cumulative effect
							• project-wide traffic and the operation of the WNDA Development.		
Receptors in Valley									
117 residential properties north of the A5	Minor adverse effect at 117 receptors due to increased noise levels from the effects of traffic on the A5025.	Not applicable	Not applicable	Not applicable	Minor adverse effect at 117 properties due to elevated noise and vibration levels during construction.	Not applicable	The cumulative effects identified within this receptor group are due to the following interaction identified to occur for a period of six quarters commencing in year one: • project-wide traffic and A5025 Off-line Highway Improvements.	None identified	Major adverse effect at 69 properties, moderate at 48
87 residential receptors south of A5 and north of North Wales Coast Railway Line	Minor adverse effect at 87 receptors due to increased noise levels from the effects of traffic on the A5025.	Not applicable	Not applicable	Not applicable	Minor adverse effect at 87 properties due to elevated noise and vibration levels during construction.	Not applicable	The cumulative effects identified within this receptor group are due to the following interaction identified to occur for a period of six quarters commencing in year one: • project-wide traffic and A5025 Off-line Highway Improvements.	None identified	Major adverse effect at nine properties, moderate at 78
121 residential receptors south of the North Wales Coast Railway Line	Minor adverse effect at 121 receptors due to increased noise levels from the effects of traffic on the A5025.	Not applicable	Not applicable	Not applicable	Minor adverse effect at 121 properties due to elevated noise and vibration levels	Not applicable	The cumulative effects identified within this receptor group are due to the following interaction identified to occur for a period of six	None identified	Moderate adverse effect at 121 properties

Receptor	Effects of individual developments (brief description and significance)						Intra-project cumulative effect		
	Project-wide effect	WNDA Development	Off-Site Power Station Facilities: AECC, ESL and MEEG	Park and Ride	A5025 Off-line Highway Improvements	Logistics Centre	Description of cumulative effect	Additional mitigation	Significance of residual cumulative effect
					during construction.		quarters commencing in year one: • project-wide traffic and A5025 Off-line Highway Improvements.		
Receptors at West Llanfachraeth									
Two residential receptors off A5025 and north of Ysgol Llanfachraeth	Moderate adverse effect at two receptors due to increased noise levels from the effects of traffic on the A5025.	Not applicable	Not applicable	Not applicable	Minor adverse effect at two properties due to elevated noise and vibration levels during construction.	Not applicable	The cumulative effects identified within this receptor group are due to the following interaction identified to occur for a period of six quarters commencing in year one: • project-wide traffic and A5025 Off-line Highway Improvements.	None identified	Major adverse effect at two properties
24 residential receptors off A5025 and south of Stad Roebuck	Moderate adverse effect at 23 receptors, minor at one due to increased noise levels from the effects of traffic on the A5025.	Not applicable	Not applicable	Not applicable	Minor adverse effect at 24 properties due to elevated noise and vibration levels during construction.	Not applicable	The cumulative effects identified within this receptor group are due to the following interaction identified to occur for a period of six quarters commencing in year one: • project-wide traffic and A5025 Off-line Highway Improvements.	None identified	Major adverse effect at 24 properties
Nine residential receptor off north of Stad Roebuck and south of Ysgol Llanfachraeth	Moderate adverse effect at seven receptors, minor at two due to increased noise levels from the effects of traffic on the A5025.	Not applicable	Not applicable	Not applicable	Minor adverse effect at nine properties due to elevated noise and vibration levels	Not applicable	The cumulative effects identified within this receptor group are due to the following interaction identified to occur for a period of six quarters commencing in year one: • project-wide traffic and A5025 Off-line Highway Improvements.	None identified	Major adverse effect at nine properties

Receptor	Effects of individual developments (brief description and significance)						Intra-project cumulative effect		
	Project-wide effect	WNDA Development	Off-Site Power Station Facilities: AECC, ESL and MEEG	Park and Ride	A5025 Off-line Highway Improvements	Logistics Centre	Description of cumulative effect	Additional mitigation	Significance of residual cumulative effect
					during construction.		quarters commencing in year one: • project-wide traffic and A5025 Off-line Highway Improvements.		
Conventional waste and materials management – all effects have been reported at a project-wide level in volume C; hence, there are no intra-project cumulative effects to report for this topic.									
Soils and geology									
Construction workers (working on the Wylfa Newydd Project)	Not applicable	Moderate adverse effect due to potential exposure to unexpected contamination. Minor adverse effect due to pollution incidents.	Minor adverse effect due to potential exposure to unexpected contamination.	Minor adverse effect due to potential exposure to unexpected contamination.	Minor adverse effect due to potential exposure to unexpected contamination.	Minor adverse effect due to potential exposure to unexpected contamination.	Construction workers could be mobile between sites comprising the Wylfa Newydd Project and therefore could potentially be exposed to unexpected contamination at multiple sites. If a moderate adverse effect occurred on construction workers at the Wylfa Newydd Development Area, and they were then exposed to unexpected contamination at another site, the cumulative effect could be greater than the effect identified for the Wylfa Newydd Development Area in isolation, although the likelihood of this occurring is very low.	None identified	Moderate adverse
Surface water and groundwater – no significant intra-project cumulative effects									
Terrestrial and freshwater ecology – the only significant effects on terrestrial and freshwater receptors were reported in volume D (chapter D9, terrestrial and freshwater ecology, Application Reference Number: 6.4.9). None of these effects are considered likely to combine with effects arising from other Wylfa Newydd Project developments to become more significant. No minor adverse effects from any Wylfa Newydd Project									

Receptor	Effects of individual developments (brief description and significance)						Intra-project cumulative effect		
	Project-wide effect	WNDA Development	Off-Site Power Station Facilities: AECC, ESL and MEEG	Park and Ride	A5025 Off-line Highway Improvements	Logistics Centre	Description of cumulative effect	Additional mitigation	Significance of residual cumulative effect
development are considered likely to combine to form a significant effect, due to an absence of spatial overlaps. There are therefore no intra-project cumulative effects to report for this topic and no additional mitigation is proposed.									
Landscape and visual									
Landscape receptors									
Local Landscape Character Area (LLCA)	Not applicable	Short to medium-term effects (localised) ranging from moderate to major adverse during the construction phase resulting from changes to landform and land cover. Indirect effects would also occur resulting from visibility of the construction works and associated construction apparatus (including tower cranes) from surrounding LLCAs. During operation the effects on LLCAs would reduce in the long-term to moderate adverse or less following establishment of the mitigation planting which would help to integrate the Power Station into the surrounding landscape.	Short-term minor adverse effect (localised) resulting from the direct loss of landscape features during the construction phase. Long-term minor beneficial effect during operation resulting from the establishment of planting along the northern, eastern and southern boundaries to the Off-Site Power Station Facilities.	Short-term moderate adverse effect (localised) resulting from the loss of sections of pasture and changes to the field pattern/land cover during the construction phase. Indirect effects would also occur, resulting from visibility of the construction works and increased perception of movement. Moderate adverse visual effect during operation reducing permanently to neutral following decommissioning and restoration of the car park to pasture.	Short-term moderate adverse effect (localised) resulting from the loss of sections of pasture and changes to the field pattern/land cover during the construction phase. Indirect effects would also occur, resulting from visibility of the construction works and increased perception of movement. During operation, the effect reduces permanently to slight adverse (localised) following establishment of the mitigation planting.	Short-term moderate adverse effect (localised) during the construction phase as a direct result of loss of land cover and vegetation associated with the construction works. Indirect effects associated with visibility of the construction of the Logistics Centre. Medium-term moderate adverse effect (localised) during operation as a result of the presence of the Logistics Centre within a rural situation. Indirect effects associated with the visibility of the Logistics Centre within a rural situation. At decommissioning the effect would reduce to minor adverse (localised) as a	Construction of the Power Station would overlap with the construction and operational phases of the Off-Site Power Station Facilities, the Park and Ride (including its decommissioning), the A5025 Off-line Highway Improvements and the Logistics Centre (in addition to its decommissioning). The concurrent construction and operation of these developments (and decommissioning where relevant) would result in direct and indirect localised changes to the features which define LLCAs within the study area. Generally, these effects would be localised and occur in the vicinity of each development only. In this regard, the sum total of these changes is unlikely to significantly	There would be only a limited perception of simultaneous cumulative effects on local landscape character and given the specific mitigation already proposed for each development, no further mitigation has been identified.	Minor to major adverse locally.

Receptor	Effects of individual developments (brief description and significance)						Intra-project cumulative effect		
	Project-wide effect	WNDA Development	Off-Site Power Station Facilities: AECC, ESL and MEEG	Park and Ride	A5025 Off-line Highway Improvements	Logistics Centre	Description of cumulative effect	Additional mitigation	Significance of residual cumulative effect
							result of removal of the welfare/security building, inspection bay covering, security scanner and security kiosks. At all stages the overall effect on the local landscape character would be negligible adverse.	undermine and redefine the LLCAs cumulatively, the effects generally occurring in geographically distinct areas. Where effects do arise, for instance in the vicinity of the A5025 Off-line Highway Improvements where it passes the Off-Site Power Station Facilities, the effects on landscape character would be reduced as the mitigation planting associated with each development becomes established and helps to integrate the developments into the landscape (in addition to the restoration of the Park and Ride site to pasture).	
Visual receptors									
WCP walkers	Not applicable	Medium-term visual effects ranging from major to moderate adverse resulting from views of the construction works including tower cranes. During operation, visual effects would be major	Not applicable	Not applicable	Short-term slight adverse visual effect during the construction phase resulting from direct views of the construction works.	Not applicable	WCP walkers would potentially experience cumulative visual effects resulting from the construction of the Power Station and the A5025 Off-line Highway Improvements. Furthermore, WCP walkers would also experience visual	There would be very limited potential for simultaneous views of the two developments and given the specific mitigation already proposed for each	Major adverse

Receptor	Effects of individual developments (brief description and significance)						Intra-project cumulative effect		
	Project-wide effect	WNDA Development	Off-Site Power Station Facilities: AECC, ESL and MEEG	Park and Ride	A5025 Off-line Highway Improvements	Logistics Centre	Description of cumulative effect	Additional mitigation	Significance of residual cumulative effect
		adverse or less in the long-term. Where effects are reduced this would be attributable to the establishment of the mitigation planting which would help to integrate the Power Station into the surrounding landscape.			During operation, visual effects would generally reduce permanently to neutral but would be permanently Slight adverse at west Llanfachraeth.		effects during the operational phases of these developments. Cumulative effects would be sequential in nature (i.e. views of each development occurring separately, the developments not being visible at the same time) where the WCP is walked the entire distance between West Llanfachraeth and the Power Station, a distance of approximately 20km. There would be no (or very limited for) simultaneous views of the two developments.	development, no further mitigation has been identified.	
Users of local PRoWs and open access land	Not applicable	Medium-term visual effects ranging from major to moderate adverse, resulting from views of the construction works including tower cranes from PRoWs and open access land within approximately 6km of the Power Station. During operation, visual effects would range from major to minor adverse	Short-term adverse effects ranging from minor to moderate resulting from views of the construction works from PRoWs and open access land within approximately 2km of the Off-Site Power Station Facilities. During operation,	Not applicable	Short-term adverse effects ranging from slight to moderate resulting from views of the construction works from PRoWs and open access land within approximately 2km of the A5025 Off-line Highway Improvements. During operation,	Short-term adverse effects ranging from minor to moderate resulting from views of the construction works from PRoWs and open access land within approximately 2km of the Logistics Centre. During operation	Users of local PRoWs and open access land would potentially experience cumulative effects resulting from the construction and operation of the Power Station, Off-Site Power Station Facilities and A5025 Off-line Highway Improvements in combination. These effects are most likely to arise for users of PRoWs and open access land within 2km of the Off-Site	Only effects of the A5025 Off-line Highway Improvements would be perceived simultaneously with the effects of some other developments and given the specific mitigation already proposed for each development, no further	Major adverse in the locations noted in the 'description of cumulative effect' column

Receptor	Effects of individual developments (brief description and significance)						Intra-project cumulative effect		
	Project-wide effect	WNDA Development	Off-Site Power Station Facilities: AECC, ESL and MEEG	Park and Ride	A5025 Off-line Highway Improvements	Logistics Centre	Description of cumulative effect	Additional mitigation	Significance of residual cumulative effect
		permanently. Where effects are reduced, the reduction would be attributable to establishment of the mitigation planting which would help to integrate the Power Station into the surrounding landscape.	visual effects would reduce permanently to minor or less as a result of the establishment of planting along the northern, eastern and southern boundaries to the Off-Site Power Station Facilities which would screen views and soften the appearance of the buildings.		visual effects would reduce to moderate or less permanently following establishment of the mitigation planting, which would help to integrate the A5025 Off-line Highway Improvements into the landscape.	longer distance views, following the establishment of planting to the site boundary. Effects would reduce to negligible following decommissioning.	Power Station Facilities and the A5025 Off-line Highway Improvements who would experience simultaneous or sequential views of the developments. While the changes in views would be most apparent during the construction phases of the three developments, the establishment of mitigation planting would reduce effects during the operational phases. Due to the distance separating PRoWs and open access land in the vicinity of the Logistics Centre to those in the vicinity of the Power Station, Off-Site Power Station Facilities and the A5025 Off-line Highway Improvements and with consideration of the intervening landform and vegetation it is unlikely that cumulative visual effects associated with in-combination visibility of these	mitigation has been identified.	

Receptor	Effects of individual developments (brief description and significance)						Intra-project cumulative effect		
	Project-wide effect	WNDA Development	Off-Site Power Station Facilities: AECC, ESL and MEEG	Park and Ride	A5025 Off-line Highway Improvements	Logistics Centre	Description of cumulative effect	Additional mitigation	Significance of residual cumulative effect
							developments would arise.		
A5025 users	Not applicable	Medium-term visual effects ranging from major to moderate adverse, resulting from views of the construction works including tower cranes. During operation, visual effects would reduce to moderate adverse or less for the long-term following establishment of the mitigation planting which would help to integrate the Power Station into the surrounding landscape.	Short-term minor adverse effect resulting from intermittent views of the construction works. During operation the effects would reduce to neutral.	Not applicable	Short-term effects ranging from slight adverse to large adverse resulting from views of the construction works. During operation, visual effects would reduce to slight or less permanently following establishment of the mitigation planting which would help to integrate the A5025 Off-line Highway Improvements into the landscape.	Not applicable	Users of the A5025 would have the potential to experience cumulative visual effects during the construction and operational phase of the A5025 Off-line Highway Improvements with the construction of both the Off-Site Power Station Facilities and the Power Station as a result of the changes to the existing views. These effects would be both sequential in nature and simultaneous (i.e. within the same field of view at the same time). While the change in views would be greatest during the construction of both the Off-Site Power Station Facilities and construction of the Power Station, the establishment of mitigation planting would reduce effects during the operation of all three developments.	Only effects of the A5025 Off-line Highway Improvements would be perceived simultaneously with the effects of some other developments and given the specific mitigation already proposed for each development, no further mitigation has been identified.	Moderate adverse

Receptor	Effects of individual developments (brief description and significance)						Intra-project cumulative effect		
	Project-wide effect	WNDA Development	Off-Site Power Station Facilities: AECC, ESL and MEEG	Park and Ride	A5025 Off-line Highway Improvements	Logistics Centre	Description of cumulative effect	Additional mitigation	Significance of residual cumulative effect
Local road network users	Not applicable	Medium-term visual effects ranging from major to moderate adverse resulting from views of the construction works including tower cranes. During operation, visual effects would reduce to moderate adverse or less for the long-term following establishment of the mitigation planting which would help to integrate the Power Station into the surrounding landscape.	Short-term effects ranging from minor adverse to neutral resulting from direct views of the construction works. During operation, the effects would reduce to negligible as a result of the establishment of planting along the northern, eastern and southern boundaries to the Off-Site Power Station Facilities.	Not applicable	Short-term effects ranging from slight adverse to large adverse resulting from views of the construction works. During operation, visual effects would reduce to moderate or less permanently following establishment of the mitigation planting which would help to integrate the A5025 Off-line Highway Improvements into the landscape.	Not applicable	Users of the local road networks identified within the study area of each development would potentially experience cumulative visual effects during the construction and operational phases of the Power Station and Off-Site Power Station Facilities and the operation of the A5025 Off-line Highway Improvements. These effects would have the potential to be both sequential in nature and simultaneous. While the change in views would be greatest during the construction of both the Off-Site Power Station Facilities and construction of the Power Station, the establishment of mitigation planting would reduce effects during the operation of all three developments.	Only effects of the A5025 Off-line Highway Improvements would be perceived simultaneously with the effects of some other developments and given the specific mitigation already proposed for each development, no further mitigation has been identified.	Moderate adverse in the locations noted in the 'description of cumulative effect' column.
Community of Tregele	Not applicable	Medium-term major adverse visual effect during the construction phase resulting from partial views	Not applicable	Not applicable	Short-term moderate adverse visual effect during the construction	Not applicable	The community of Tregele would potentially experience cumulative visual effects resulting from the construction and	The only cumulative effects would result from the effects of the A5025 Off-line	Major adverse during construction

Receptor	Effects of individual developments (brief description and significance)						Intra-project cumulative effect		
	Project-wide effect	WNDA Development	Off-Site Power Station Facilities: AECC, ESL and MEEG	Park and Ride	A5025 Off-line Highway Improvements	Logistics Centre	Description of cumulative effect	Additional mitigation	Significance of residual cumulative effect
		of the construction works and cranes. During operation the visual effect would reduce to moderate adverse for the long-term, the maturation of woodland planting helping to soften and integrate the landscape mounds into the surrounding landscape.			phase resulting from direct views of the construction works. During operation, the effect would reduce permanently to Slight adverse following establishment of the mitigation planting which would help to integrate the A5025 Off-line Highway Improvements into the landscape.		operation of both the A5025 Off-line Highway Improvements and the Power Station. Views of the developments would generally be consecutive in nature (i.e. not within the same field of view at the same time). While the change in views would be greatest during the construction of both the Off-Site Power Station Facilities and the Power Station, the establishment of mitigation planting would reduce effects during the operation of both developments.	Highway Improvements, in conjunction with the effects of the Power Station, and given the specific mitigation already proposed for both developments, no further mitigation has been identified.	
A5 Holyhead Road	Not applicable	Not applicable	Not applicable	Short-term minor adverse visual effects during the construction phase resulting from extensive views of the construction works. Minor adverse visual effect during operation reducing permanently to neutral after decommissioning following	Short-term moderate adverse visual effect during the construction phase resulting from direct views of the construction works. During operation, visual effects reduce permanently to	Not applicable	Users of the A5 would potentially experience cumulative visual effects during the construction and operational phases of the A5025 Off-line Highway Improvements and the Park and Ride. These effects would be sequential in nature where the A5 is travelled between Valley and Llanfihangel.	The only cumulative effects would result from the effects of the A5025 Off-line Highway Improvements, in conjunction with the effects of the Park and Ride and given the specific mitigation already proposed for both	Moderate adverse during construction

Receptor	Effects of individual developments (brief description and significance)						Intra-project cumulative effect		
	Project-wide effect	WNDA Development	Off-Site Power Station Facilities: AECC, ESL and MEEG	Park and Ride	A5025 Off-line Highway Improvements	Logistics Centre	Description of cumulative effect	Additional mitigation	Significance of residual cumulative effect
				restoration of the car park to pasture.	slight adverse following establishment of the mitigation planting which would help to integrate the A5025 Off-line Highway Improvements into the landscape.		The establishment of mitigation planting would reduce effects on visual amenity during the operational phases of both developments.	developments, no further mitigation has been identified.	
Cultural heritage – No significant intra-project cumulative effects									
Coastal processes and coastal geomorphology – the only effects have been reported in volume D; hence, there are no intra-project cumulative effects to report for this topic.									
Marine environment – the only effects have been reported in volume D; hence, there are no intra-project cumulative effects to report for this topic.									
Radiological effects – the only effects have been reported in volume D; hence, there are no intra-project cumulative effects to report for this topic.									
Shipping and navigation – the only effects have been reported in volume D; hence, there are no intra-project cumulative effects to report for this topic.									

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