

Appendix 4-2 – Viewpoint Analysis

Table 1: Viewpoint Locations

Vp no	Location	Easting	Northing	Elevation (approx.)	Distance to solar arrays	Bearing to site (approx.)	Planning Authority	Landscape Character Unit	Landscape Designations	Recreational and Transport Routes	Visual receptors
1	Track by Pen y Waun	272670	210110	262m AOD	0.3km	N	Neath Port Talbot	LCA 28 – Slopes of Cefn Gwrhyd & Cwm Egel	SLA	Representative of nearby footpath	A few residents, Walkers
2	Mynydd Uchaf	272165	210400	321m AOD	0.5km	E	Neath Port Talbot	LCA 29 – Mynydd Uchaf, Mynydd Garth & Cefn Gwrhyd	SLA	Common Land	Walkers
3	Footpath SW of Fforch Egel Farm	272720	209320	206m AOD	1.1km	N	Neath Port Talbot	LCA 28 – Slopes of Cefn Gwrhyd & Cwm Egel	SLA	Footpath	Walkers
4	Footpath across Cefn Gwrhyd	273100	209215	236m AOD	1.3km	N	Neath Port Talbot	LCA 29 – Mynydd Uchaf, Mynydd Garth & Cefn Gwrhyd	SLA	Footpath	Walkers
5	Local road on Cefn Gwrhyd	273030	208775	294m AOD	1.7km	N	Neath Port Talbot	LCA 29 – Mynydd Uchaf, Mynydd Garth & Cefn Gwrhyd	SLA	Local road	Motorists

Prediction Methodology

1. The following viewpoint analysis has identified the visual receptor sensitivity and landscape sensitivity at each viewpoint location and combined these with the predicted magnitude of change in the view in order to determine the overall impact and whether or not this would be a significant change in the view for each visual receptor type and landscape character unit at each location.
2. The term 'significant' has been used within this assessment and in this context refers to effects which are material to the determination of the application. However, it must be reiterated that this is a sub EIA application.
3. All visual receptors are people and are assumed to be equally sensitive to change. However, the location and activities of visual receptors influence the way in which they currently experience the landscape and views, the extent to which views of the surrounding landscape may contribute to their existing visual amenity, the value they place on these views and their susceptibility to changes in these views. Accordingly, at any one location there may be different levels of sensitivity for the different receptor groups, the sensitivity may vary depending on the direction of the view, and any one receptor group may be accorded different levels of sensitivity at different locations.
4. Receptor susceptibility levels of susceptible, moderate susceptibility and slight susceptibility are used taking into account the following factors:
 - Receptor location, occupation or activity,
 - Movement of receptor and duration and frequency of view experienced,
 - Focus of attention and interest.
5. The judgement of value is based on a five point scale – National value, County/Borough/District value, Community value, private value, unvalued. The value attached to a location or to a particular view at a location can influence the purpose and expectation of receptors at the location and the judgement of value takes into account:
 - Recognised value – for example by the presence of planning designations or designated heritage assets,
 - Indicators of value – to individuals, communities and society generally, such as the popularity of a location.
6. Visual receptor sensitivity is determined in terms of the sensitivity of each location for each receptor type (rather than the sensitivity of the receptors *per se*), using a five point relative scale – high, high/medium, medium, medium/low or low.
7. The assessment of landscape sensitivity for each landscape unit is judged through a five point scale –high, high/medium, medium, medium/low or low sensitivity.
8. The magnitude of the change in the views from the five viewpoints has been assessed using a five point scale – very substantial, substantial, moderate, slight and negligible. This magnitude of change scale is a relative scale and is not an absolute scale. It is based on the assessor's interpretation of largely quantifiable parameters, including:
 - Distance and direction of the viewpoint from the development.
 - Extent of the development visible from the viewpoint.
 - Field of view occupied by the development (horizontal and vertical angles of view) and proportion of view (as a percentage of the panorama).
 - Context of the view and degree of contrast with the existing landscape and built elements (background, form, composition, pattern, scale and mass, line, movement, colour, texture, etc).

- Scale of change with respect to the loss or addition of features in the view. For the addition of built form, this includes the relative scale of the development and whether the development would be overwhelming, overbearing, dominant, prominent, visible, noticeable, discernible or barely discernible.
 - Duration and nature of the effect, e.g. direct/ indirect, secondary, cumulative, temporary/ permanent, short term/ long term, intermittent/ continuous, reversible/ irreversible, etc (as related to the nature of the development).
9. The sensitivity and magnitude of change have then been combined as per the matrix in **Table 2** below. Overall effects of major/moderate and above are considered significant and are shaded grey in **Table 2** below. Overall effects of moderate+ or lower changes are unlikely to result in significant changes to views or landscape character.

Table 2 – Assessment of Overall Impact and Significance

LOCATION SENSITIVITY	Very Substantial	Substantial	Moderate	Slight	Negligible
High	Major	Major/moderate+	Maj/ mod	Moderate+	Moderate
High/medium	Major/moderate+	Major/moderate	Moderate+	Moderate	Moderate/ minor+
Medium	Major/moderate	Moderate+	Moderate	Moderate/ minor+	Moderate/ minor
Medium/low	Moderate+	Moderate	Moderate/ minor+	Moderate/ minor	Minor+
Low	Moderate	Moderate/ minor+	Moderate/ minor	Minor+	Minor

Viewpoint Analysis

10. The findings of the viewpoint analysis are provided in **Table 3** below. The findings take into account the screening effects of intervening topography, existing vegetation and built form and assume excellent visibility conditions. The assessment measures the change that would be brought about to the baseline environment from the introduction of the proposed development and separates the magnitude of change and resulting effects into effects at the end of the construction period and then effects five years post construction - taking into account the additional screening effects of the planting proposed as part of the application. This assessment is based on a timeframe approximately five years post construction in order to assume the growth of the proposed planting to a height of approximately up to 2.5-3m.
11. This analysis was undertaken in the field in August 2018. It is illustrated by the images in **Viewpoints 1 to 5** in the A3 Photomontage Booklet which show the existing and predicted views (post construction) in the direction of the proposed development from each of these locations.
12. These viewpoint illustrations are printed at A3 and guidance is contained on each sheet as to the appropriate viewing distances in order for the scale of the elements in the images to match those in the field when viewed from these viewpoint locations. The details of the camera type and the camera lens are also included within the photomontage booklet.
13. In addition, **Figures 4.5 – 4.7** illustrate the panoramic views from each of the five viewpoints at A3 size. These views are provided for illustrative purposes and are not produced at a set viewing distance. However, they provide information on the context for each view and are labelled with further pertinent information.

Table 3: Viewpoint Analysis

Vp 1: Track by Pen y Waun					
Distance from proposed development	NGR	Elevation (mAOD)	Landscape designation	Recreational area or route	Existing View
0.3km	272670 210110	262mAOD	SLA	Footpath	Post and wire fencing bounds the track, with deciduous woodland visible to the east. The footpath runs just east of the viewpoint but has no visible markings on the ground. The residential property at Pen y Waun can be seen in the far right of the view. Forestry in the left of the view has been felled. The landform rises to the north where the substation and one of the two wind turbines of Mynydd y Gwrhyd Wind Farm are clearly visible on the skyline.
Assessment of Effects on Landscape Character					
LCA	Sensitivity	Magnitude	Predicted effects	Assessment	
LCA 28 – Slopes of Cefn Gwrhyd & Cwm Egel	High/ medium	End of construction:		A locally designated landscape identified to have a high/medium sensitivity to change. At the end of the construction period, the solar panels and associated elements would be partially visible above existing vegetation (intervening trees) and would be seen in association with existing built development. This would result in a slight adverse magnitude of change and a moderate adverse effect on landscape character at this location. This indicates no significant effect on landscape character at this viewpoint.	
		Slight adverse	Moderate adverse		
		5 years post construction:		Five years post construction, once the proposed planting has grown to up to 2.5-3m in height, the solar panels and associated elements would be only partially discernible from this location, largely screened from view. This would result in a negligible adverse magnitude of change and a moderate/minor+ adverse effect on landscape character at this location. This indicates no significant effect on landscape character at this viewpoint.	
		Negligible adverse	Moderate/minor+ adverse		

Assessment of Effects on Views				
Receptor	Sensitivity	Magnitude	Predicted effects	Assessment
A few residents	High	End of construction:		A private residential view which a few residential receptors may gain from various parts of their property, including garden areas (once property is fully constructed). Views in other directions would also be available, particularly to west and south, where landform slopes away. Views to north are partially contained by nearby woodland and currently look onto Mynydd y Gwrhyd Wind Farm. High sensitivity to changes in the view. From ground floor level, at the end of the construction period, the solar panels and associated elements would be partially visible above existing vegetation (intervening trees) and would be seen in association with existing built development as illustrated by the photomontage view. The solar farm would occupy a small proportion of overall views. This would result in a slight magnitude of change and a moderate+ effect on the visual amenity of residents. This indicates no significant effect on the visual amenity of receptors at this viewpoint.
		Slight	Moderate+	
		5 years post construction:		Five years post construction, once the proposed planting has grown to up to 2.5-3m in height, the solar panels and associated elements would be only partially discernible from this location, almost entirely screened from view. From ground floor level, at the end of the construction period, the solar panels and associated elements would barely visible above intervening vegetation and would occupy a small proportion of overall views. This would result in a negligible magnitude of change and a moderate effect on the visual amenity of residents. This indicates no significant effect on the visual amenity of receptors at this viewpoint.
		Negligible	Moderate	
Walkers	High/ medium	End of construction:		A local footpath along which receptors would be moving slowly, with views towards the north limited by rising land, but open views available to the south and west, with a high/medium sensitivity to changes in the view. At the end of the construction period, the solar panels and associated elements would be partially visible above existing vegetation (intervening trees) and would be seen in association with existing built development as illustrated by the photomontage view. The solar farm would occupy a small proportion of overall views. This would result in a slight magnitude of change and a moderate effect on the visual amenity of walkers. This indicates no significant effect on the visual amenity of receptors at this viewpoint.
		Slight	Moderate	

		5 years post construction:		Five years post construction, the proposed planting has grown to up to 2.5-3m in height, the solar panels and associated elements would be only partially discernible from this location, almost entirely screened from view. This would result in a negligible magnitude of change and a moderate/minor+ effect on the visual amenity of walkers at this location. This indicates no significant effect on the visual amenity of receptors at this viewpoint.
		Negligible	Moderate/minor+	

Vp 2: Mynydd Uchaf					
Distance from proposed development	NGR	Elevation (mAOD)	Landscape designation	Recreational area or route	Existing View
0.5km	272165 210400	321mAOD	SLA	Common Land and Access Land	An elevated viewpoint with open, panoramic and long distance views to the east and south. Views consist mainly of interlocking high land, smooth skylines with coniferous forestry and a number of wind farms in the near, middle and far distance. This viewpoint is representative of views for users of the common land and access land across Mynydd Uchaf.
Assessment of Effects on Landscape Character					
LCA	Sensitivity		Magnitude	Predicted effects	Assessment
LCA 29 – Mynydd Uchaf, Mynydd Garth & Cefn Gwrhyd	High/medium		End of construction:		A locally designated landscape identified to have a high/medium sensitivity to change. At the end of the construction period, a small proportion of the solar panels and associated elements would be partially discernible in the context of existing built form as illustrated by the photomontage view. The majority of the solar farm would be screened by intervening topography. This would result in a negligible adverse magnitude of change and a moderate/minor+ adverse effect on landscape character at this location. This indicates no significant effect on landscape character at this viewpoint.
			Negligible adverse	Moderate/minor+ adverse	
			5 years post construction:		The proposed planting would be located on the lower slopes, south of the proposal and

		Negligible adverse	Moderate/minor+ adverse	so would be entirely screened from this location. Therefore, any impacts on landscape character would remain the same as set out above.
Assessment of Effects on Views				
Receptor	Sensitivity	Magnitude	Predicted effects	Assessment
Walkers	High/medium	End of construction:		A local common land area across which walkers would be moving slowly, could use the route frequently, with views generally open to the east and south, with a high/medium sensitivity to changes in the view.
		Negligible	Moderate/minor+	At the end of the construction period, a small proportion of the solar panels and associated elements would be partially discernible in the context of existing built form and as part of panoramic views. The majority of the solar farm would be screened by intervening topography. The solar farm would occupy an extremely limited proportion of views to the east. This would result in a negligible magnitude of change and a moderate/minor+ effect on the visual amenity of receptors on this common land. This indicates no significant effect on the visual amenity of receptors at this viewpoint.
		5 years post construction:		The proposed planting would be located on the lower slopes, south of the proposal and so would be entirely screened from this location. Therefore, any impacts on visual amenity would remain the same as set out above.
		Negligible	Moderate/minor+	

Vp 3: Footpath southwest of Fforch Egel Farm					
Distance from proposed development	NGR	Elevation (mAOD)	Landscape designation	Recreational area or route	Existing View
1.1km	272720 209320	206mAOD	SLA	Local footpath	Located within a pasture field, looking north across the surrounding landscape. Views from the footpath are generally quite contained due to the high levels of mature vegetation within the valley landscape.
Assessment of Effects on Landscape Character					
LCA		Sensitivity	Magnitude	Predicted effects	Assessment
LCA 28 – Slopes of Cefn Gwrhyd & Cwm Egel		High/ medium	End of construction:		A locally designated landscape identified to have a high/medium sensitivity to change. At the end of the construction period, the solar panels and associated elements would be entirely screened behind existing vegetation as illustrated by the photomontage view. This would result in no adverse magnitude of change and no adverse effect on landscape character at this location.
			None	None	
			5 years post construction:		A locally designated landscape identified to have a high/medium sensitivity to change. Five years post construction, the solar panels and associated elements would be entirely screened behind existing vegetation as illustrated by the photomontage view. This would result in no adverse magnitude of change and no adverse effect on landscape character at this location.
			None	None	
Assessment of Effects on Views					
Receptor		Sensitivity	Magnitude	Predicted effects	Assessment
Walkers		High/ medium	End of construction:		A local footpath along which walkers would be moving slowly, could use the route frequently, with views generally limited by surrounding mature vegetation, with a

		None	None	high/medium sensitivity to changes in the view. At the end of the construction period, the solar panels and associated elements would be entirely screened behind existing vegetation as illustrated by the photomontage view. This would result in no magnitude of change and no effect on the visual amenity of receptors on this footpath. This indicates no significant effect on the visual amenity of receptors at this viewpoint.
		5 years post construction:		A local footpath along which walkers would be moving slowly, could use the route frequently, with views generally limited by surrounding mature vegetation, with a high/medium sensitivity to changes in the view.
		None	None	Five years post construction, the solar panels and associated elements would be entirely screened behind existing vegetation as illustrated by the photomontage view. This would result in no magnitude of change and no effect on the visual amenity of receptors on this footpath. This indicates no significant effect on the visual amenity of receptors at this viewpoint.

Vp 4: Footpath across Cefn Gwrhyd					
Distance from proposed development	NGR	Elevation (mAOD)	Landscape designation	Recreational area or route	Existing View
1.3km	273100 209215	236mAOD	SLA	Local footpath	Located on a local footpath with open views across the valley. Existing wind farm, other single turbines and disused pit are all visible as part of the varied valley landscape.
Assessment of Effects on Landscape Character					
LCA	Sensitivity	Magnitude	Predicted effects	Assessment	
LCA 29 – Mynydd Uchaf, Mynydd	High/	End of construction:		A locally designated landscape identified as having a high/ medium sensitivity to change.	

Garth & Cefn Gwrhyd	medium	Negligible adverse	Moderate/ minor+ adverse	At the end of the construction period, the solar panels and associated elements would be discernible in the context of the existing wind farm, substation and disused pit as a low level development of limited extent, partially screened by existing vegetation. This would result in a <i>negligible adverse magnitude of change</i> and a <i>moderate/ minor+ adverse effect</i> on landscape character at this location. This indicates <i>no significant effect</i> on landscape character at this viewpoint.
		5 years post construction:		A locally designated landscape identified as having a <i>high/medium sensitivity</i> to change. Five years post construction, once proposed planting south of the solar farm has grown to up to 2.5-3m in height, given the slope of the landform of the site, the solar panels and associated elements would be discernible from this location, seen in the context of the existing wind farm, substation and disused pit as a low level development of limited extent, partially screened by existing vegetation. This would result in a <i>negligible adverse magnitude of change</i> and a <i>moderate/ minor+ adverse effect</i> on landscape character at this location. This indicates <i>no significant effect</i> on landscape character at this viewpoint.
		Negligible adverse	Moderate/ minor+ adverse	
Assessment of Effects on Views				
Receptor	Sensitivity	Magnitude	Predicted effects	Assessment
Walkers	High/ medium	End of construction:		A local footpath along which walkers would be moving slowly, could use the route frequently, with views generally limited by surrounding mature vegetation, with a <i>high/medium sensitivity</i> to changes in the view. At the end of the construction period, the solar panels and associated elements would be visible in the distance as part of wide views, seen in the context of the existing wind farm, substation and disused pit as a low level development of limited extent, partially screened by existing vegetation. The solar farm would occupy a very limited proportion of views to the north. This would result in a <i>negligible magnitude of change</i> and a <i>moderate/minor+ effect</i> on the visual amenity of walkers. This indicates <i>no significant effect</i> on the visual amenity of receptors at this viewpoint.
		Negligible	Moderate/ minor +	
		5 years post construction:		A local footpath along which walkers would be moving slowly, could use the route frequently, with views generally limited by surrounding mature vegetation, with a

		Negligible	Moderate/ minor +	high/medium sensitivity to changes in the view. Five years post construction, proposed planting south of the solar farm has grown to up to 2.5-3m in height, given the slope of the landform of the site, the solar panels and associated elements would be discernible from this location, seen in the context of the existing wind farm, substation and disused pit as a low level development of limited extent, partially screened by existing vegetation. This would result in a negligible magnitude of change and a moderate/minor+ effect on the visual amenity of walkers at this location. This indicates no significant effect on the visual amenity of receptors at this viewpoint.
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Vp 5: Local road on Cefn Gwrhyd					
Distance from proposed development	NGR	Elevation (mAOD)	Landscape designation	Recreational area or route	Existing View
1.7km	273030 208775	294mAOD	SLA	Local road.	View from the most elevated part of the local road, looking north over the valley landscape. This is an open view across the valley where Mynydd y Gwrhyd Wind Farm, Mynydd y Betws Wind Farm, a few single turbines, pylons and the disused pit are all clearly visible man made features in this landscape.
Assessment of Effects on Landscape Character					
LCA		Sensitivity	Magnitude	Predicted effects	Assessment
LCA 29 – Mynydd Uchaf, Mynydd Garth & Cefn Gwrhyd		High/ medium	End of construction:		A locally designated landscape identified to have a high/medium sensitivity to change. At the end of the construction period, the solar panels and associated elements would be visible on the valley slope, seen in the context of existing built form. This would result in a slight adverse magnitude of change and a moderate adverse effect on landscape character at this location. This indicates no significant effect on landscape character at this viewpoint.
			Slight adverse	Moderate adverse	
			5 years post construction:		A locally designated landscape identified to have a high/medium sensitivity to change. Five years post construction, once proposed planting south of the solar farm has grown to up to 2.5-3m in height, visibility of the solar panels and associated elements would be slightly softened on the southern boundary, but would remain visible. This would result in a slight adverse magnitude of change and a moderate adverse effect on landscape character at this location. This indicates no significant effect on landscape character at this viewpoint.
			Slight adverse	Moderate adverse	
Assessment of Effects on Views					
Receptor		Sensitivity	Magnitude	Predicted effects	Assessment
Motorists		Medium	End of construction:		A local road along which receptors would be moving slowly to steadily, could use the route frequently, with views generally open across the valley, where their focus would

		Slight	Moderate/ minor+	be on the road as well as on views, with a medium sensitivity to changes in the view. At the end of the construction period, the solar panels and associated elements would be visible as part of wide views and seen in the context of existing built form. This would result in a slight magnitude of change and a moderate/minor+ effect on the visual amenity of motorists and their passengers where views are available. This indicates no significant effect on the visual amenity of receptors at this viewpoint.
		5 years post construction:		A local road along which receptors would be moving slowly to steadily, could use the route frequently, with views generally open across the valley, where their focus would be on the road as well as on views, with a medium sensitivity to changes in the view.
		Slight	Moderate/ minor+	Five years post construction, once proposed planting south of the solar farm has grown to up to 2.5-3m in height, visibility of the solar panels and associated elements would be slightly softened on the southern boundary, but would remain visible. This would result in a slight magnitude of change and a moderate/minor+ effect on the visual amenity of motorists and their passengers where views are available. This indicates no significant effect on the visual amenity of receptors at this viewpoint.