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MAES Y DROELL QUARRY EXTRACTION OF INDUSTRIAL SAND

Environmental Statement
Volume II

Chapter 09: Landscape and Visual

Silica Sand Mold Limited

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Chapter 09: Landscape and Visual

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9 LANDSCAPE & VISUAL EFFECTS

9.1 Introduction

- 9.1.1 This Chapter has been prepared in support of the planning proposal for the Proposed Development.
- 9.1.2 This Chapter reports the outcome of the assessment of potential impacts and likely significant effects arising from the Proposed Development upon landscape and visual resources within the Site and study areas.
- 9.1.3 This Chapter considers two distinct but closely related areas: landscape character and visual amenity.

Landscape

- 9.1.4 The landscape assessment considers the effects of change and development on landscape as a resource. The character of the landscape derives from a combination of physical factors, natural processes, and human intervention. Landscape effects are a combination of the physical changes to the landscape and how these will be perceived.
- 9.1.5 The landscape assessment considers the effects of the Proposed Development on the landscape as a whole, effects on significant individual elements of the landscape, and effects on characteristic combinations or patterns of elements and how these are seen to affect its character and quality.

Visual

- 9.1.6 The visual assessment is concerned with the views that are available to people who may be affected by the Proposed Development, and their perception of and responses to changes in these views, based on presumed levels of interest in and sensitivities to their visual environment.
- 9.1.7 Visual effects arise from changes in the composition and character of views available in the area affected. The assessment considers the likely change that would be experienced, including the effects both on specific views and on general visual amenity – the pleasantness of the view or outlook – that the people potentially affected enjoy.
- 9.1.8 For the purposes of assessment, whilst it is the people living, working, passing through or enjoying recreational activities in the area who actually see the views and derive the visual amenity, it is their general locations that are mapped and described as the visual receptors.
- 9.1.9 In some instances, it may be appropriate to consider private viewpoints, mainly from residential properties. As it is impractical to visit all properties that may be affected, professional judgement must be used so that an assessment can be made about the likely views based on the views from the nearest public vantage point, previous experience of undertaking similar assessments and available information from both desktop studies and Site information during the field assessment.

9.2 Assessment Methodology

- 9.2.1 This Chapter has been informed by the findings of the Landscape and Visual Impact Assessment at **ES Volume III, Appendix 9.1: Landscape and Visual Impact Assessment** which accompanies this planning application. This document was prepared in accordance with the Guidance for Landscape and Visual Impact Assessment 3 (Landscape Institute 2023). In accordance with GLVIA3, the significance of landscape and visual effects is determined by considering, in tandem, the sensitivity of landscape and visual receptors (landscape elements, landscape character areas, landscape designations and groups of people who may be affected by changes in visual amenity) and the magnitude of effect arising from the Proposed Development.
- 9.2.2 Sensitivity (described as High, Medium or Low) is judged by combining component judgements about the value and susceptibility of the receptor, as illustrated in **Table 9-1** and **Table 9-2**. It should be noted that intermediate assessments of value or susceptibility may be applied (e.g. High/Medium, Medium/Low or National/Regional, Regional/Community). Likewise, when combining susceptibility and value to determine sensitivity, an intermediate assessment is adopted where overall sensitivity is judged to lie between levels. In all instances, professional judgement is employed and the tables below should not be interpreted rigidly to give a specific answer. A slightly greater weight is given to susceptibility in judging the sensitivity of visual receptors.
- 9.2.3 A Zone of Theoretical Visibility (ZTV) study was generated based on the proposed design. The analysis was carried out using a topographic model and including buildings and trees (buildings modelled with an assumed height of 7.5 m and woodland with an assumed height of 15m) as visual barriers in order to provide a more realistic indication of potential visibility.
- 9.2.4 The ZTV study was used to aid the identification of those receptors that are likely to be most affected by the Proposed Development and those that do not require detailed consideration.
- 9.2.5 The ZTV for the Proposed Development demonstrates that the main area of visibility is mostly confined to the area immediately surrounding the Site and out to approximately 2 km east, west and south. There would be very limited visibility to the north within 2 km of the Site boundary.
- 9.2.6 Beyond 2 km, visibility would extend in a more fragmented pattern to higher ground in the west, south and east (approximately 4-5 km from the Site boundary), with very little visibility elsewhere.
- 9.2.7 Existing tree cover and built form in the study area has a notable effect on visibility, limiting views of the Site. In places, site visit work indicated that screening by smaller trees and hedgerows has not been fully reflected by the modelling and that visibility is likely to be slightly less than indicated by the ZTV study.
- 9.2.8 Effects on landscape or visual receptors outside the areas of visibility shown on the ZTV study would be Negligible and are not assessed in detail.

Table 9-1: Landscape Sensitivity

Landscape Receptors		Susceptibility		
		High	Medium	Low
Value	National	High	High / Medium	Medium
	Regional	High / Medium	Medium	Medium / Low
	Community	Medium	Medium / Low	Low

Table 9-2: Visual Sensitivity

VISUAL RECEPTORS		Susceptibility		
		High	Medium	Low
Value	National	High	High / Medium	Medium
	Regional	High / Medium	High / Medium	Medium / Low
	Community	High / Medium	Medium	Low

- 9.2.9 Landscape and Visual impacts are perceived by receptors as noted above. The magnitude of the potential change experienced by each receptor defines the potential impact.

Table 9-3: Criteria for Assessing the Significance of Effect

Sensitivity of Landscape/Visual Receptor					
	Very High	High	Moderate	Low	Very Low
Major Beneficial	Major Beneficial	Major-Moderate Beneficial	Moderate Beneficial	Moderate/Minor or Beneficial	Minor Beneficial
Moderate Beneficial	Major-Moderate Beneficial	Moderate Beneficial	Moderate / Minor Beneficial	Minor Beneficial	Minor / Negligible Beneficial
Minor Beneficial	Moderate Beneficial	Moderate / Minor Beneficial	Minor Beneficial	Minor / Negligible Beneficial	Negligible
Neutral	Negligible	Negligible	Negligible	Negligible	Negligible
Minor Adverse	Moderate Adverse	Moderate / Minor Adverse	Minor Adverse	Minor / Negligible Adverse	Negligible
Moderate Adverse	Major-Moderate Adverse	Moderate Adverse	Moderate/Minor or Adverse	Minor Adverse	Minor / Negligible Adverse
Major Adverse	Major Adverse	Major-Moderate Adverse	Moderate Adverse	Moderate / Minor Adverse	Minor Adverse

9.3 Baseline Conditions

Landscape

- 9.3.1 Within the Conwy and Denbighshire Landscape Sensitivity and Capacity Assessment For Wind Energy Development, (Conwy County Borough Council and Denbighshire County Council, 2014) the Site shares boundaries with two individual character areas. It is located within the B1: Gritstone Hills (Graianrhyd) landscape unit; with the western edge of the Site situated within the C2: Limestone Farmlands (Llandegla to Maeshafn) landscape unit. B1: Gritstone Hills (Graianrhyd) is described as a medium scale landscape comprising gently undulating landform; a mosaic of pastures and broadleaved woodland; and man-made influence including scattered settlement, pylons and quarrying activities. By contrast, C2: Limestone Farmlands (Llandegla to Maeshafn) is a medium to large scale strongly undulating upland limestone landscape comprising undulating farmland, wooded hillside and small dispersed settlements; the LCA contains two quarries with limited local influence.
- 9.3.2 The ZTV shows visibility of the Site within 5km from an additional four character areas in Denbighshire and nine LANDMAP Visual and Sensory aspect areas in Flintshire / Wrexham. These are:
- B4 Hill Slopes (Clwydian Range Hill Slopes);
 - D12 Moorland Plateau (Cym y Brain – Eglwyseg Mountains);

- D13 Moorland Ridge (Clwydian Ridgeline);
- D14 Moorland Ridge (Llantysilio Ridgeline);
- FLNTVS094 (Maesgwyn limestone plateau/hill fringes);
- FLNTVS067 (Nercwys limestone edge);
- FLNTVS071 (Treuddyn rolling farmland);
- FLNTVS006 (unnamed);
- FLNTVS091 (Mold southern fringe farmland);
- WRXHMVS011 (Minera Limestone Scarp);
- WRXHMVS012 (West of Bwlchgwyn);
- WRXHMVS077 (Heatherfield west of Bwlchgwyn); and
- WRXHMVS078 (Minera Limestone Quarry).

9.3.3 Effects on the following character areas are considered:

- B1: Gritstone Hills (Graianrhyd); and
- C2: Limestone Farmlands (Llandegla to Maeshafn).

9.3.4 Apart from these two character areas, the presence of intervening vegetation and limited visibility mean that indirect landscape effects will diminish with distance; therefore, more distant character areas and aspect areas are not considered further.

Visual Receptors

9.3.5 Visual receptors are *'the different groups of people who may experience views of the development'* (GLVIA, 3rd edition, para 6.3). In order to identify those groups who may be significantly affected the ZTV study, baseline desk study and site visits have been used.

9.3.6 The different types of groups assessed within this Chapter encompass local residents; people using key routes such as roads; cycle ways, people within accessible or recreational landscapes; people using Public Rights of Way (PRoW); or people visiting key viewpoints. In dealing with areas of settlement, PRoW and local roads, receptors are grouped into areas where effects might be expected to be broadly similar, or areas which share particular factors in common.

9.3.7 Representative viewpoints have been selected to aid the assessment of effects on visual receptors.

Baseline Visual Environment

- 9.3.8 The Site is located immediately north of the village of Graianrhyd; it occupies two parcels of land to the east of the road linking Graianrhyd and Eryrys. The area around the Site is characterised by undulating pastoral farmland divided by hedgerows, with isolated and clustered settlement throughout the landscape. The former quarry workings within the Site can be seen from locations to the south and west in particular, comprising partially regenerated woodland, exposed mineral faces and stockpiles. The study area includes multiple PRowWs, including the Offa's Dyke National Trail; as well as areas of open access land.

Visual Receptor Groups

- 9.3.9 The following visual receptor groups are located within the study area and are likely to have visibility of the Proposed Development, as shown on the ZTV study for the Phase 2 Extraction Area, **ES Volume IV, Figure 10: LVIA2 – Zone of Theoretical Visibility with Screening Effect of Woodland and Settlement – Phase 2 Extraction Area**; and are considered further in **section 6.5** of the assessment.

- Maes Y Droell and Mynydd Du (0-0.3 km, north of the Site);
- Pen-y-Foel (0-0.1 km, east of the Site);
- Graianrhyd (0-0.5 km, south of the Site);
- Rhydtalog (1-2 km, south-east of the Site);
- Llyn Cyfynwy and Moel Garegog open access land (1-3 km, south of the Site); and
- Clwydian Range (3-5 km, west of the Site).

- 9.3.10 There are also a number of receptor groups which are excluded from the detailed assessment, on the basis that visual effects are likely to be Negligible, for the reasons indicated below:

- Treuddyn and Pant-y-ffordd (2-4 km, north-east of the Site) – Trees and hedgerows (not included in the ZTV study) in the landscape, including along roadsides, limit views alongside terrain such that the proposals are unlikely to be seen except perhaps for glimpsed views from very limited locations.
- Four Crosses (4-5 km, south-east of the Site) – Visibility towards the Site would be largely prevented by a combination of trees and hedgerows (not included in the ZTV study) and terrain. In views where it could be seen, the Proposed Development would be a distant element filtered by intervening vegetation.

Recreational Routes

- 9.3.11 Offa's Dyke Path National Trail (3-5 km west of the Site) - This route runs along the Clwydian Range within the study area and forms part of a wider 285 km route linking the Severn estuary to Prestatyn. It has associations with King Offa and the dyke that he had

constructed in the 8th century. As shown by the ZTV study, there would be occasional sections of the route where visibility (within 5 km of the Site) is likely when the oblique and occasionally panoramic views from the path obtained on the hill slopes to the east of the Clwydian Range offer views of the Site. The extent of this receptor within the study area largely correlates with the Clwydian Range receptor group outlined above; thus these receptors will be assessed together.

9.4 Embedded Mitigation

- 9.4.1 The design approach has prioritised minimising the visibility of the Proposed Development, impacts upon landscape character and views from nearby residents, road users, PRoW, and recreational users.
- 9.4.2 Mitigation to be implemented at the outset and during the operations includes:
- 4 m high noise screening bunds along the eastern and north-western boundaries of the south site;
 - Permanent screening bund along the southern boundary of the north site adjacent to the cemetery to mitigate these close-range views (to be implemented during initial operations in the south site). The bund would be seeded and planted with advance tree and shrub planting and as vegetation establishes on the bund, its appearance would be softened;
 - Advance planting and gap planting of trees and shrubs along the northern, eastern and western boundaries of the south site to filter and screen views of the Site and Proposed Development from surrounding residents and PRoW;
 - Progressive restoration would be carried out throughout the proposed phased operations to minimise extent of operations within the landscape.

9.5 Viewpoint Analysis

- 9.5.1 Viewpoint analysis has been undertaken from a total of 11 viewpoints. The final list of viewpoints was prepared following consultation with the North Wales Minerals and Waste Planning Service (NWMWPS) and Natural Resources Wales (NRW). For details of the viewpoint locations suggested for inclusion by NWMWPS and NRW but excluded from our analysis, and the reasons why, please refer to **ES Volume III, Appendix 9.5: Viewpoints**.
- 9.5.2 The viewpoint locations are illustrated on **ES Volume IV, Figures 9 – 14**. The visualisations (comprising photographs of the existing view, wireframes and photomontages) are illustrated with reference to Viewpoints 1 to 11.
- 9.5.3 The full viewpoint analysis is contained within **ES Volume III, Appendix 9: Landscape and Visual Impact Assessment**, at section 6.3. The findings are summarised below in **Table 9-4**. In each case, distances are listed in relation to the nearest part of the Site boundary.
- 9.5.4 Please note that **ES Volume III, Appendix 9: Landscape and Visual Impact Assessment** considers the nature and the scale of changes to character and views at each viewpoint location only. The sensitivity of receptors and wider extent of the effect (beyond the individual viewpoint location) and its duration are considered in the main body of the assessment text below as part of the consideration of the magnitude and significance of effects.

Table 9-4: Viewpoint Analysis Summary

Viewpoint No.	Viewpoint (Landscape Character Area / Unit)	Distance / direction	Scale of Landscape Effect	Scale of Visual Effect
1	Denbighshire Footpath 515/18 (C2 Limestone Farmlands (Llandegla to Maeshafn))	0 m to the north of the Site	Phase 1: Negligible Phase 2: Negligible Phase 3: Negligible Phase 4: Large Restoration: Medium	Phase 1: Negligible Phase 2: Negligible Phase 3: Negligible Phase 4: Medium Restoration: Medium
2A	Denbighshire Bridleway 515/17 (looking north) (B1 Gritstone Hills (Graianrhyd))	0 m to the south of the Site	Phase 1: Negligible Phase 2: Negligible Phase 3: Negligible Phase 4: Large Restoration: Medium	Phase 1: Negligible Phase 2: Negligible Phase 3: Negligible Phase 4: Large Restoration: Medium
2B	Denbighshire Bridleway 515/17 (looking south) (B1 Gritstone Hills (Graianrhyd))	0 m to the north of the Site	Phase 1: Large Phase 2: Large Phase 3: Large Phase 4: Large Restoration: Medium	Phase 1: Large Phase 2: Large Phase 3: Large Phase 4: Large Restoration: Medium
3	Junction of Denbighshire Footpath 515/15 and Denbighshire Footpath 515/87 adjacent to eastern Site boundary (B1 Gritstone Hills (Graianrhyd))	25 m to the east of the Site	Phase 1: Medium Phase 2: Medium Phase 3: Medium Phase 4: Medium Restoration:	Phase 1: Medium Phase 2: Medium Phase 3: Medium Phase 4: Medium Restoration:

Viewpoint No.	Viewpoint (Landscape Character Area / Unit)	Distance / direction	Scale of Landscape Effect	Scale of Visual Effect
			Small/ Negligible	Small/ Negligible
4	Denbighshire Bridleway 515/20 (C2 Limestone Farmlands (Llandegla to Maeshafn))	200 m to the north-west of the Site	Phase 1: Small Phase 2: Small Phase 3: Small Phase 4: Small Restoration: Negligible	Phase 1: Small Phase 2: Small Phase 3: Small Phase 4: Small Restoration: Negligible
5	Denbighshire Footpath 515/10 (C2 Limestone Farmlands (Llandegla to Maeshafn))	425 m to the south-west of the Site	Phase 1: Medium Phase 2: Medium Phase 3: Medium Phase 4: Medium Restoration: Small	Phase 1: Medium Phase 2: Medium Phase 3: Medium Phase 4: Medium Restoration: Small
6	Denbighshire Footpath 517/28 (D12 Moorland Plateau (Cyrn y Brain – Eglwyseg Mountains))	1.3 km to the south of the Site	Phase 1: Small Phase 2: Small Phase 3: Small Phase 4: Medium Restoration: Small	Phase 1: Small Phase 2: Small Phase 3: Small Phase 4: Medium Restoration: Small
7	Llanfynydd Bridleway 42 (FLNTVS071)	2.6 km to the south-east of the Site	Phase 1: Negligible Phase 2: Negligible Phase 3: Negligible Phase 4: Negligible	Phase 1: Small Phase 2: Small Phase 3: Negligible Phase 4: Negligible

Viewpoint No.	Viewpoint (Landscape Character Area / Unit)	Distance / direction	Scale of Landscape Effect	Scale of Visual Effect
			Restoration: Negligible	Restoration: Negligible
8	Offa's Dyke Path (Denbighshire Footpath 521/73) (D13 Moorland Ridge (Clwydian Ridgeline))	4.8 km to the west of the Site	Phase 1: Small Phase 2: Small Phase 3: Small Phase 4: Small Restoration: Negligible	Phase 1: Small Phase 2: Small Phase 3: Small Phase 4: Small Restoration: Negligible
9	Treuddyn Footpath 10 (FLNTVS071)	2.7 km to the north-east of the Site	Phase 1: Negligible Phase 2: Negligible Phase 3: Negligible Phase 4: Negligible Restoration: Negligible	Phase 1: Negligible Phase 2: Negligible Phase 3: Negligible Phase 4: Negligible Restoration: Negligible
10	Denbighshire Footpath 515/88 on Moel Llanfair (D13 Moorland Ridge (Clwydian Ridgeline))	4.4 km to the west of the Site	Phase 1: Small Phase 2: Small Phase 3: Small Phase 4: Small Restoration: Negligible	Phase 1: Small Phase 2: Small Phase 3: Small Phase 4: Small Restoration: Negligible
11	Summit of Moel Gyw (D13 Moorland Ridge (Clwydian Ridgeline))	4.4 km to the north-west of the Site	Phase 1: Small Phase 2: Small Phase 3: Small Phase 4: Small	Phase 1: Small Phase 2: Small Phase 3: Small Phase 4: Small

Viewpoint No.	Viewpoint (Landscape Character Area / Unit)	Distance / direction	Scale of Landscape Effect	Scale of Visual Effect
			Restoration: Negligible	Restoration: Negligible

9.6 Assessment of Effects

9.6.1 Each of the viewpoints is a 'sample' of the potential effects, representing a wide range of receptors - including not only those actually at the viewpoint, but also those nearby, at a similar distance and/or direction. From these viewpoints it can be seen that the distribution of effects would be as follows:

9.6.2 Effects on character:

- Large scale effects from the addition of mineral extraction, as well as changes to landform and removal of regeneration vegetation would be limited to within the Site itself and within 100 m of the site boundary, where the Proposed Development would become a prominent feature of the landscape. How rapidly effects diminish beyond the Site depends on the scale of development, the context and visibility of the proposal.
- Effects would reduce to a maximum of medium scale within up to 1.5 km from the site boundary. In this area, the addition of mineral extraction (including associated movement and loss of tranquillity) would be notable at most.
- Effects on landscape character are judged to be either small or negligible beyond 1.5 km these areas there would be less intervisibility with the Site and the prominence of the Proposed Development within the wider landscape character would diminish with distance.
- Effects on character, outside of the Site itself, would generally be more pronounced at the beginning of each phase, becoming less so as the quarrying moves into the void. At restoration, proposed planting reflects the character of other vegetation in the existing landscape and integrates the Site into its surroundings. There would, however, be permanent effects on landform and some skylines.

9.6.3 Effects on views:

- The extent of large-scale visual effects, where the Proposed Development would form a major alteration to key elements, features, qualities and characteristics of the view such that the baseline will be fundamentally changed, would generally be limited to locations within or on roads and PRow immediately adjacent to the Site.
- Beyond this area, medium scale visual effects would arise within up to 1.5 km, decreasing to small scale beyond as the proposed quarry generally forms a smaller element of these views and is increasingly filtered and screened by intervening vegetation.
- Beyond approximately 1.5 km from the site boundary, the Proposed Development is increasingly only seen from higher ground such as the Clwydian Range and typically screened or filtered by a combination of landform and vegetation elsewhere. Visual effects reduce to between Small and Negligible in scale.

9.7 Effects on Landscape Character

9.7.1 Descriptions for each of the assessed character areas are briefly summarised below, along with further observations from site-based work.

9.7.2 Effects on the following character areas and LANDMAP Visual and Sensory Units are assessed to be not significant and are described where appropriate within **ES Volume III, Appendix 9: Landscape and Visual Impact Assessment**;

- **B4 Hill Slopes (Clwydian Range Hill Slopes)** (2.5 km+ west of the Site) – some limited intervisibility between the LCA and the Site, however distance of LCA from the Site means indirect effects are limited;
- **D12 Moorland Plateau (Cym y Brain – Eglwyseg Mountains)** (1 km+ south of the Site) – some limited intervisibility between the LCA and the Site, however presence of intervening landform and vegetation (and in places, distance from the Site) means indirect effects are limited;
- **D13 Moorland Ridge (Clwydian Ridgeline)** (3.5 km+ west of the Site) - some intervisibility between the LCA and the Site, however distance of LCA from the Site means indirect effects are limited;
- **D14 Moorland Ridge (Llantysilio Ridgeline)** (3 km+ south of the Site) – some limited intervisibility between the LCA and the Site, however distance of LCA from the Site means indirect effects are limited;
- **FLNTVS094 (Maesgwyn limestone plateau/hill fringes)** (0.5-1.5 km north-east of the Site) - some limited intervisibility between the LANDMAP Visual & Sensory Unit and the Site, however presence of intervening landform and vegetation means that indirect effects are limited;
- **FLNTVS067 (Nercwys limestone edge)** (1 km+ north-east of the Site) - some intervisibility between the LANDMAP Visual & Sensory Unit and the Site, however presence of intervening landform and vegetation (and in places, distance from the Site) means that indirect effects are limited;
- **FLNTVS071 (Treuddyn rolling farmland)** (1.5 km+ east of the Site) - some intervisibility between the LANDMAP Visual & Sensory Unit and the Site, however presence of intervening landform and vegetation (and in places, distance from the Site) means that indirect effects are limited;
- **FLNTVS006 (unnamed)** (1.5 km+ south-east of the Site) - some intervisibility between the LANDMAP Visual & Sensory Unit and the Site, however presence of intervening landform and vegetation (and in places, distance from the Site) means that indirect effects are limited;
- **FLNTVS091 (Mold southern fringe farmland)** (3 km+ north-east of the Site) - some intervisibility between the LANDMAP Visual & Sensory Unit and the Site, however distance of LANDMAP Visual & Sensory Unit from the Site means indirect effects are limited;

- **WRXHMVS011 (Minera Limestone Scarp)** (4.5 km+ south-east of the site Site - some limited intervisibility between the LANDMAP Visual & Sensory Unit and the Site, however distance of LANDMAP Visual & Sensory Unit from the Site means indirect effects are limited;
- **WRXHMVS012 (West of Bwlchgwyn)** (3.5-4.5 km south-east of the Site) - some intervisibility between the LANDMAP Visual & Sensory Unit and the Site, however distance of LANDMAP Visual & Sensory Unit from the Site means indirect effects are limited;
- **WRXHMVS077 (Heatherfield west of Bwlchgwyn)** (4.5 km+ south-east of the Site) - some intervisibility between the LANDMAP Visual & Sensory Unit and the Site, however distance of LANDMAP Visual & Sensory Unit from the Site means indirect effects are limited; and
- **WRXHMVS078 (Minera Limestone Quarry)** (4.5 km+ south-east of the Site) - some limited intervisibility between the LANDMAP Visual & Sensory Unit and the Site, however distance of LANDMAP Visual & Sensory Unit from the Site means indirect effects are limited.

B1: Gritstone Hills (Graianrhyd)

- 9.7.3 As shown on Figure LVIA5 (**ES Volume IV, Figure 13: LVIA5 Landscape Character**), this character area includes the eastern three-quarters of both the south site and the north site; it extends up to approximately 1 km to the south and east.
- 9.7.4 Key characteristics are identified within the Conwy and Denbighshire Landscape Sensitivity and Capacity Assessment for Wind Energy Development as:
- *'Medium scale landscape*
 - *Scattered settlement'*
- 9.7.5 The document then goes on to set out characteristics of the landscape unit; these comprise:
- *'Medium scale landscape*
 - *Gently undulating landform*
 - *Landcover comprises a mosaic of pastures and broadleaved woodland*
 - *Man-made influences include the local road network, scattered settlement pattern, pylon lines and quarrying activities*
 - *This landscape unit is not seen as a skyline feature. Pylon lines interrupt skylines in places*
 - *Infrequent road traffic and quarrying activities bring occasional movement to this relatively still landscape unit*
 - *Views are typically enclosed and filtered by landform and vegetation. There are some longer views to and from the Clwydian Range and Gritstone Hills*

- *Typical receptors ... include occupiers, users and visitors to the following:*
 - *Scattered properties*
 - *Open Access Areas in adjacent landscape units*
 - *Local attractions and public rights of way*
 - *The local road network*
- *There is a strong association between this landscape unit and the Clwydian Range and Gritstone Hills*
- *Views to and from important landscapes and cultural heritage features ... include:*
 - *The Clwydian Range and Dee Valley AONB [(National Landscape)]*
 - *Open Access Areas*
- *Scenic Quality and Character - Typical Moderate LANDMAP evaluation with some areas Outstanding.*
- *An attractive rural landscape unit with some modern development and human activity. The presence of a quarry lessens the sense of remoteness.'*

- 9.7.6 As identified within **ES Volume III, Appendix 9.4: Landscape Sensitivity Assessment**, the susceptibility of this character area is judged to be Medium/Low. The key considerations within the landscape which are more susceptible to the Proposed Development than others are the sense of openness/enclosure, the rural settlement pattern, and the intervisibility and long views between the LCA and the Clwydian Range. As described within **ES Volume III, Appendix 9.4: Landscape Sensitivity Assessment**, the value of the landscape within this character area/type is judged to be Regional/Community. Elements in the LCA of particular landscape value are the distinctive association with the Clwydian Range; moderate scenic quality; perceptions of wildness and tranquillity; and green infrastructure function. Considering susceptibility and value together the sensitivity is judged to be Medium/Low.
- 9.7.7 As described above and in detail within **ES Volume III, Appendix 9: Landscape and Visual Impact Assessment**, during extraction, Large scale effects would occur across the Site itself; with Medium scale effects taking place in close quarter (within 250 m of the site boundary). These effects would be as a result of the removal of characteristic broadleaved woodland and changes to the undulating landform within the Site, as well as an increase to the recorded infrequent quarrying activities in the landscape. The extraction effects would be apparent across a localised extent of the LCA and would be long term in duration. The magnitude of change would be Substantial/Moderate within the Site, reducing to Moderate within 250 m of the site boundary. Beyond 250 m from the site boundary, the magnitude of landscape effects would noticeably reduce.
- 9.7.8 Combining the Medium/Low landscape sensitivity and the Substantial/Moderate magnitude of change within the Site, the significance of effect during extraction would be Major/Moderate, significant and, on balance, Adverse. These would reduce to Moderate Adverse within 250 m of the site boundary, and not significant beyond this distance.

- 9.7.9 By restoration, the scale of effects within this LCA in the site boundary would reduce to Medium, with the scale of effects within 250 m of the site boundary reducing to Small/Negligible. In turn, (alongside the permanent nature of the restoration), this would reduce the magnitude of change to Moderate within the site boundary and Slight/Negligible up to 250 m from the site boundary. This would give a significance of effect of Moderate Beneficial within the Site and Minor Beneficial within 250 m of the site boundary – neither of these effects would be significant. The effects at restoration are beneficial as restoration would reinforce the characteristic broadleaved woodland and undulating landform, as well as reducing the effect of quarrying on perceived tranquillity.

C2: Limestone Farmlands (Llandegla to Maeshafn)

- 9.7.10 As shown on Figure LVIA5 (**ES Volume IV, Figure 13: LVIA5 Landscape Character**), this character area includes the western quarter of both the south site and the north site; it extends up to approximately 2.5 km to the west, as well as over 5km to the north-west and south-west.
- 9.7.11 Key characteristics are identified within the Conwy and Denbighshire Landscape Sensitivity and Capacity Assessment for Wind Energy Development (Conwy County Borough Council and Denbighshire County Council, 2014) as:
- *‘Medium to large scale*
 - *Upland limestone landscape*
 - *Undulating farmland’*
- 9.7.12 The document then goes on to set out characteristics of the landscape unit; these comprise:
- *‘Medium to large scale landscape*
 - *Landform is strongly undulating*
 - *Wooded hillside and complex mosaic of outcrops, woodland and fields. A golf course also covers a part of this landscape unit*
 - *A rural landscape with small dispersed settlements and individual farms and cottages linked by a network of minor lanes. Two quarries have limited local influence and one pylon line crosses the very south eastern extremity of the landscape unit*
 - *This landscape is rarely seen as a skyline feature due to the surrounding higher hills, the majority of which form distinctive skylines in the backdrop of views from this landscape unit*
 - *Local traffic introduces some infrequent movement into the landscape*
 - *Visibility is restricted in some places by landform and woodland; however, there are far ranging views from more open and elevated parts (such as Moel Findeg). Moel Famau Jubilee Tower forms a distant focal point along the Clwydian Ridge*
 - *These include occupiers, users and visitors to the following:*

- *Dispersed settlements*
- *Long distance routes including Offa's Dyke Path national trail, the Clwydian Way and Brenig Way*
- *Open Access Areas*
- *Loggerheads Country Park and other local attractions including Moel Famau Jubilee Tower*
- *Public rights of way*
- *The local road network*
- *Intervisibility between this landscape unit and the adjacent upland landscapes of the Clwydian Range, Llantysilio Mountain, Bryn Alyn and Moel Gareog is significant. These uplands form distinctive skylines and contain views from the unit; there are many opportunities for long distant views to and from these areas. Landform and woodland within the unit screen views in places*
- *Views to and from Important Landscapes and Cultural Heritage Features ... include:*
 - *The Clwydian Range and Dee Valley AONB*
 - *Offa's Dyke Path national trail.*
 - *Open Access Areas*
 - *Dyffryn Clwyd (The Vale of Clwyd) and Dyffryn Llangollen ac Eglwyseg (Vale of Llangollen and Eglwyseg) Registered Historic Landscapes*
 - *Hillforts*
- *Aesthetic, Perceptual and Experiential Scenic Quality and Character - Typical High-Outstanding LANDMAP evaluation*
- *The sense of remoteness and tranquillity varies across the area. There are some distinct pockets of remoteness and tranquillity, which in other places are reduced by the presence of settlement, the road network and quarrying'*

9.7.13 As identified within **ES Volume III, Appendix 9.4: Landscape Sensitivity Assessment**, the susceptibility of this character area is judged to be Medium/Low. The key considerations within the landscape which are more susceptible to the Proposed Development than others are the strongly undulating landform, the sense of openness/enclosure, the rural settlement pattern, and the intervisibility and long views between the LCA and the Clwydian Range. As described within **ES Volume III, Appendix 9.4: Landscape Sensitivity Assessment**, the value of the landscape within this character area/type is judged to be National. The LCA largely falls within the Clwydian Range and Dee Valley National Landscape. Elements in the LCA of particular landscape value are the National Landscape itself; intervisibility with adjacent upland areas; strong network of PRoW; High-Outstanding scenic quality; and green infrastructure function. Considering susceptibility and value together the sensitivity is judged to be Medium.

- 9.7.14 As described above and in detail within **ES Volume III, Appendix 9: Landscape and Visual Impact Assessment**, during extraction, Large scale effects would occur across the part of the LCA within Site itself; with Medium scale effects taking place in close quarter (within 500 m of the site boundary). These effects would be as a result of the change to the characteristic strongly undulating landform and mosaic woodland within the Site; within the wider landscape there would also be a perceived increase in quarrying activity and a reduction in perceived tranquillity in the landscape. The extraction effects would be apparent across a limited extent of the wider LCA and would be long term in duration. The magnitude of change would be Moderate within the Site, reducing to Moderate/Slight within 500 m of the site boundary. Beyond 500 m from the site boundary, the magnitude of landscape effects would noticeably reduce.
- 9.7.15 Combining the Medium landscape sensitivity and the Moderate magnitude of change within the Site, the significance of effect during extraction would be Moderate and, on balance, both significant and Adverse. These would reduce to Moderate/Minor Adverse (not significant) within 500 m of the site boundary, and further reduced and not significant beyond this distance.
- 9.7.16 By restoration, the scale of effects within this LCA in the site boundary would reduce to Medium, with the scale of effects within 500 m of the site boundary reducing to Small/Negligible. In turn, (alongside the permanent nature of the restoration), this would reduce the magnitude of change to Moderate/Slight within the site boundary and Slight/Negligible up to 500 m from the site boundary. This would give a significance of effect of Moderate/Minor Beneficial within the Site – a non-significant effect - and Minor Beneficial non-significant effect within 500 m of the site boundary. The effects at restoration are beneficial as restoration would reinforce the mosaic woodland and strongly undulating landform, as well as reducing the effect of quarrying on perceived tranquillity, beyond that within the baseline.

9.8 Visual Effects

- 9.8.1 Effects on the following visual receptors are assessed to be not significant and are described within **ES Volume IV, Figure 14: Annotated Photosheets**;
- **Treuddyn and Pant-y-ffordd** (2-4 km, north-east of the Site) – The presence of intervening landform and vegetation limits views of the Proposed Development from this receptor group; views would be glimpsed at most from very limited locations.
 - **Four Crosses** (4-5 km, south-east of the Site) – The Proposed Development would largely be screened by a combination of intervening vegetation and landform. Where views are possible, the Proposed Development would appear as a small and distant element which would be filtered by intervening vegetation.

Visual Receptor Groups

- 9.8.2 This assessment focuses on the effects on groups of visual receptors, incorporating effects on views from public spaces and streets within neighbourhoods. The assessment of effects focuses on the visual amenity of public spaces, though views from groups of dwellings will also be noted in the descriptions. Effects on private residential amenity are a separate matter and do not merit detailed assessment in respect of this development.

Maes Y Droell and Mynydd Du (0-0.3 km, north of the Site)

- 9.8.3 The receptor group comprises a mixture of residents and users of recreational routes within relatively close proximity to the north of the Site; it includes the farmhouse at Maes Y Droell Farm, the cemetery adjacent to the north site, and the PRoW in and around the north site / northern part of the south site. The receptor group is represented by viewpoints 1, 2, and 4. Whilst some of these receptors are located within the Clwydian Range and Dee Valley National Landscape, the views experienced by them are not promoted, nor are there facilities for enjoyment of the views and thus there is a Community value. These receptors are typically focussed on their environment and would be of High susceptibility to changes within these Community value views. They would be of High/Medium sensitivity overall.
- 9.8.4 The changes to the visual environment during extraction would be of Large scale close to the site boundaries (particularly during Phase 4), reducing to Small scale beyond 150 m from the site boundaries. The effects would be apparent across a Limited extent, and during extraction would be long term. The effects would be of Moderate magnitude within close proximity to the Site, reducing rapidly to Slight/Negligible beyond 150 m from the site boundaries. Taking into account the visual sensitivity and magnitude of change, the significance of the effect would be Major/Moderate Adverse and significant in the immediate proximity to the Site during extraction, reducing to Minor Adverse and not significant beyond 150 m from the site boundaries.
- 9.8.5 By restoration, the scale of effects would reduce to Medium in the immediate vicinity of the Site, and to Negligible beyond 150 m. In turn, in the immediate vicinity of the site boundary, this would reduce the magnitude of change to Moderate/Slight and the significance of effect to Moderate Neutral (not significant). Beyond 150 m from the site boundary, the effects would be of Negligible magnitude and Minor/Negligible Neutral significance (not significant). The effects in these instances would be neutral as the elements of the view at restoration such as quarry faces and associated planting would replicate existing elements within the baseline.

Pen-y-Foel (0-0.1 km, east of the Site)

- 9.8.6 This receptor group is located to the east of the Site, comprising a mixture of residents and users of recreational routes. It is represented by Viewpoint 3 (**ES Volume IV, Figure 14: Annotated Photosheets**). These views are of Community value, and the receptors would be of High susceptibility to changes within their visual environment. The value and susceptibility would be combined to give an overall High/Medium sensitivity.
- 9.8.7 During extraction, the changes within the receptor group would be of Medium scale, occurring in the long term across a limited area. The effects would primarily occur during Phase 1 and, to a lesser extent, Phase 3. The magnitude of change during extraction for this receptor group would therefore be Moderate/Slight. Combining the High/Medium sensitivity and the Moderate/Slight magnitude, the overall significance of effect would be Moderate Adverse and significant.
- 9.8.8 Following restoration, the wooded backdrop to the baseline view would be restored alongside retained noise bunding, resulting in a Small scale of effect for a limited extent on a permanent basis. The resulting magnitude of change would be Slight/Negligible; and the significance of effect would reduce to Minor Neutral. The effects at restoration would be neutral as the restored elements would replicate those within the existing view.

Graianrhyd (0-0.5 km, south of the Site)

- 9.8.9 This receptor group comprises residents and users of recreational footpaths in and around Graianrhyd, who experience views of Community value. The viewpoint illustrating these views is Viewpoint 5 (**ES Volume IV, Figure 14: Annotated Photosheets**). These receptors are of High susceptibility to changes within their visual environment due to their focus on their surroundings; the receptor group is of High/Medium sensitivity.
- 9.8.10 For much of the receptor group within 300 m of the site boundary, views of the Proposed Development would be obscured by a combination of vegetation and landform – these effects would be Negligible in magnitude and of Negligible significance at extraction and restoration.
- 9.8.11 Beyond 300 m from the site boundary, rising landform allows views from the receptors towards the Proposed Development, particularly the changes within Phases 1, 2 and 4. The scale of change in these views would be Medium at most. The changes would be apparent across a limited extent, as well as long-term. The magnitude of change at extraction would be Moderate/Slight. When combined with the High/Medium sensitivity, the overall significance of effect would be Moderate Adverse.
- 9.8.12 By restoration, the scale of change would reduce to Small, with the wooded landform of the Site again becoming apparent, but some differences in landform present compared to the baseline view. The permanent effects would remain limited in extent, with the magnitude of change reducing to Slight/Negligible. Combined with the sensitivity to change, the overall significance of effect would be Minor Neutral. The effect would be neutral rather than adverse as the elements of the baseline view would be replicated, albeit in a slightly different configuration.

Rhydtalog (1-2 km, south-east of the Site)

- 9.8.13 Receptors at Rhydtalog include residents and users of recreational routes; their view is illustrated by representative Viewpoint 7 (**ES Volume IV, Figure 14: Annotated Photosheets**). These receptors are of High susceptibility to changes within views of Community value. The value and susceptibility combine to give an overall High/Medium sensitivity.
- 9.8.14 During extraction, the effects of the Proposed Development upon this receptor group would be Small at most (during Phases 1 and 2 only); there is intervening vegetation and landform which locally reduces the scale of effect. The changes during extraction would be long-term, and a limited extent of the receptor group would be affected. The magnitude of change at this stage of development would be, at most, Slight/Negligible. The significance of effect would be Minor Adverse, which is not significant.
- 9.8.15 At restoration, the baseline elements of the views would be replicated by the restoration landform and planting, thus reducing the scale of change to Negligible. In turn, this permanent effect would be of Negligible magnitude and Minor/Negligible Neutral significance. The effect would be neutral rather than adverse given the replication of baseline elements in the view.

Llyn Cyfynwy and Moel Garegog open access land (1-3 km, south of the Site)

- 9.8.16 The receptors experiencing this view would primarily be recreational receptors, including those using public rights of way, open access land, and the fishing lakes at Llyn Cyfynwy –

as illustrated within Viewpoint 6 (**ES Volume IV, Figure 14: Annotated Photosheets**). The view is located within the Clwydian Range and Dee Valley National Landscape. These receptors are of High susceptibility to changes within their visual environment. Whilst not promoted for tourism or appearing in guidebooks, the views are valued by visitors, as apparent by the provision of facilities for their enjoyment such as the fishing lakes and associated amenities. The views are of Regional value. Overall, the sensitivity to change for these receptors is High/Medium.

- 9.8.17 The scale of change during extraction is Small at most for these receptors – the effects also diminish further with distance. The extent of change is localised due to the open moorland terrain and would occur over a long-term period. The magnitude of change is therefore Slight. Taking into account the Slight magnitude of change and the High/Medium sensitivity, the significance of effect for these receptors would be Moderate/Minor Adverse, which is not significant.
- 9.8.18 By restoration, much of the exposed quarry faces (which are the catalyst for the scale of change perceived in the views during extraction) would be softened in appearance by the restoration vegetation, reducing the perceived scale of change further to Negligible. This in turn would combine with the permanent duration and localised extent to give a Slight/Negligible magnitude of effect. The magnitude of effect and sensitivity would combine to give an overall Minor Neutral significance of effect (not significant) at restoration. As the restored view would replicate the elements of the baseline, the effect would be neutral rather than adverse.

Clwydian Range / Offa's Dyke Path National Trail (3-5 km, west of the Site)

- 9.8.19 The receptors within this receptor group are primarily users of the recreational routes and open access land along the Clwydian Range within the Clwydian Range and Dee Valley National Landscape. The views available for this receptor group are illustrated in Viewpoints 8, 10 and 11 (**ES Volume IV, Figure 14: Annotated Photosheets**). The value of the views from these receptors is National as the hilltops from which the views are experienced are a key part of the Clwydian Range and Dee Valley National Landscape and also are followed by the route of Offa's Dyke Path National Trail. The receptors would be of High susceptibility to changes within their visual environment. Combining the value and susceptibility, the overall sensitivity of these receptors is also High.
- 9.8.20 Changes within these views during extraction would occur in the distance and would be of Small scale, however it should be noted that the Proposed Development would also be seen in the context of the existing Graig Quarry. The effects would be long-term, occurring over a localised area. The magnitude of change would therefore be Moderate/Slight. Combining this with the High sensitivity, the overall effect would be of Major/Moderate significance.
- 9.8.21 Following restoration, the scale of change would reduce to Negligible, in turn reducing the magnitude of change for the permanent effects to Negligible. The significance of effects at restoration would overall be Minor Neutral – the restoration would replicate the baseline elements within the view, thus would be neutral rather than adverse.

9.9 Designated Areas

- 9.9.1 The effects on the proposed Glyndŵr National Park are considered to be the same as those upon the Clwydian Range and Dee Valley National Landscape. The special qualities of the National Landscape only are carried forward to assessment below.

9.9.2

Table 9-5 considers effects on each of the agreed Special Qualities of the National Landscape as set out within **section** Error! Reference source not found. of **ES Volume III, Appendix 9: Landscape and Visual Impact Assessment** and described in greater detail in **ES Volume IV, Figure 14: Annotated Photosheets**.

Table 9-5: Effects on National Landscape special qualities

Quality	Stage	Susceptibility	Nature of effect	Scale and extent of effect
Landscape Character and Quality				
Tranquillity	Extraction	High – high degrees of tranquillity are likely to be affected by noise and movement from extraction.	Movement and noise from extraction would locally reduce perceived tranquillity within the National Landscape, particularly during the works in Phase 4, which would directly affect it.	Large scale within the Site, reducing to Small within 1 km and negligible beyond.
	Restoration	Low – the restored Site is unlikely to affect this special quality.	The restored Site would retain the perceived tranquillity in the National Landscape.	Negligible.
Remoteness and Wildness, Space and Freedom	Extraction	Medium – movement and noise during extraction would be likely to affect the remoteness and wildness aspects of this special quality.	Movement and noise from extraction would locally reduce perceived remoteness and wildness within the National Landscape, particularly during the works in Phase 4, which would directly affect it.	Medium scale within the Site, reducing to Small within 1 km and negligible beyond.
	Restoration	Low – the restored Site is unlikely to affect this special quality.	The restored Site would retain the perceived remoteness and wildness in the National Landscape.	Negligible.
Habitats and Wildlife				
Heather Moorland and Rolling ridges	Extraction / Restoration	No change		
Broadleaved Woodlands and Veteran Trees	Extraction	High – removal of vegetation within the extraction period would mean that effects on this special quality are likely.	During extraction, areas of self-set woodland would be removed; no veteran trees are proposed for removal.	Large scale within the Site, negligible beyond.

Quality	Stage	Susceptibility	Nature of effect	Scale and extent of effect
	Restoration	Low – the restored Site is unlikely to affect this special quality.	The addition of broadleaved woodland to the restored Site would reinstate this special quality where it was lost.	Negligible.
River Valleys and the River Dee	Extraction / Restoration	No change		
Limestone Grasslands, Cliffs and Screes	Extraction / Restoration	No change		
Historic Environment				
Historic Settlement and Archaeology	Extraction / Restoration	No change		
Industrial Features and the World Heritage Site	Extraction / Restoration	No change		
Small historic features	Extraction / Restoration	No change		
Traditional boundaries	Extraction / Restoration	No change		
Access, Recreation and Tourism				
The Offa's Dyke National Trail and Promoted Routes	Extraction	High – views from the Offa's Dyke Path National Trail could be affected by the presence of extraction activity.	Extraction activity within the Site would be visible from sections of the Offa's Dyke Path National Trail.	Small scale from the Offa's Dyke Path National Trail, negligible elsewhere.
	Restoration	Low – the restored Site is unlikely to affect this special quality.	The restored Site would largely restore views from the Offa's Dyke Path National Trail to their baseline conditions.	Negligible.

Quality	Stage	Susceptibility	Nature of effect	Scale and extent of effect
Culture and People				
The Built Environment	Extraction	High – Extraction activity is likely to be visible to nearby residents.	There are select locations where extraction activity will be visible to nearby residents; however, the main settlements within the study area would not have intervisibility with the Site.	Large scale immediately adjacent to the Site, reducing to medium within 500 m and negligible beyond.
	Restoration	Low – the restored Site is unlikely to affect this special quality.	The restored Site would largely restore views from surrounding residents to their baseline conditions. Some differences in vegetation and landform would be apparent to residents in close proximity to the Site.	Medium scale immediately adjacent to the Site, reducing to small within 500 m and negligible beyond.

- 9.9.3 Based on the detailed considerations set out above, long-term effects during extraction upon the purposes of designation of the National Landscape would be large and medium scale in the Limited area of the Site and its immediate surroundings up to approximately 500 m. These effects would be of **Substantial/Moderate magnitude, Major (significant) and Adverse**.
- 9.9.4 At restoration, the permanent effects of the restored Site upon the purposes of designation would be medium scale for the built environment special quality. The permanent effect on this special quality would be **Moderate/Slight magnitude, Moderate (not significant) and Neutral**. The effect would be neutral as the baseline elements seen in views from the residents would be replicated. For all other special qualities, the permanent effect from the restored Site would be **Negligible**.
- 9.9.5 Small scale effects would arise along the Offa's Dyke Path National Trail. The effects during extraction would be long-term, affect a localised extent and would be of **Slight magnitude, Moderate (not significant) and Adverse**. At restoration, these effects would reduce to negligible.
- 9.9.6 Effects beyond these areas would be Negligible for both extraction and restoration stages. Distant views of the quarry may arise but will not affect the special qualities or purposes of designation.

9.10 Summary of Landscape and Visual Effects

- 9.10.1 Effects on the receptors assessed are summarised in the table overpage.
- 9.10.2 The Proposed Development is located on an existing silica sand quarry Site near Graianrhyd in Denbighshire. The Site comprises two parts, separated by a bridleway. The north Site lies

within the Clwydian Range and Dee Valley National Landscape, which is also part of the proposed Glyndŵr National Park. The proposed extraction would comprise four phases and culminate in restoration of the Site to a mixture of habitats including broadleaved woodland, rhos grassland, and wetland scrapes. Extraction would involve the reworking of existing stockpiles, including associated removal of regeneration vegetation, followed by continuing extraction of the remainder of the Site.

- 9.10.3 The Proposed Development would therefore result in notable landscape and visual change during the extraction phases within the Site and its immediate surroundings. The most pronounced effects would occur within the Site itself and in close proximity to the Site boundaries, where quarrying activity, changes to landform and the removal of existing vegetation would be most apparent. Beyond this limited area, the scale of effects would rapidly reduce as a result of distance, landform and the filtering influence of existing vegetation.
- 9.10.4 During extraction, adverse landscape and visual effects would largely be confined to nearby receptors, including public rights of way and isolated residents adjacent to the Site. Effects on wider landscape character and more distant visual receptors, including elevated viewpoints within the Clwydian Range and Dee Valley National Landscape, would generally be small in scale or less, reflecting the contained nature of visibility and the presence of existing quarrying influences within the landscape.
- 9.10.5 The Proposed Development would give rise to some localised significant adverse effects during extraction, particularly in relation to landscape character within the Site and its immediate setting, and views experienced by receptors in close proximity to the Site. However, these effects would not extend across the wider landscape and, aside from localised effects, would not overall undermine the integrity or special qualities of the Clwydian Range and Dee Valley National Landscape.
- 9.10.6 At restoration, the landscape and visual effects would substantially reduce. The proposed restoration strategy, including progressive backfilling, landform regrading and the establishment of new woodland, heath and grassland habitats, would integrate the Site back into the surrounding landscape. Post-restoration effects on landscape character and views would be neutral to beneficial, with the restored landscape reflecting and, in some respects, enhancing baseline characteristics.
- 9.10.7 Overall, the assessment concludes that while the Proposed Development would result in localised adverse effects during extraction, these would be limited in extent and duration. Following restoration, the landscape would have the capacity to accommodate the Proposed Development without giving rise to significant adverse long-term landscape or visual effects.

Table 9-6: Summary of Effects

Only effects of greater than Negligible magnitude and/or Negligible significance are included in the summary table, significant effects are underlined.

Receptor	Description	Sensitivity	Magnitude	Significance	Beneficial /Neutral /Adverse
Landscape Character					
B1: Gritstone Hills (Graianrhyd)	Effects on the Site during extraction	Medium/Low	Substantial/Moderate	<u>Major/Moderate</u>	Adverse
B1: Gritstone Hills (Graianrhyd)	Effects on the area within 250 m of the Site during extraction	Medium/Low	Moderate	Moderate	Adverse
B1: Gritstone Hills (Graianrhyd)	Effects on the Site during restoration	Medium/Low	Moderate	Moderate	Beneficial
B1: Gritstone Hills (Graianrhyd)	Effects on the area within 250 m of the Site during restoration	Medium/Low	Slight/Negligible	Minor	Beneficial
C2: Limestone Farmlands (Llandegla to Maeshafn)	Effects on the Site during extraction	Medium	Moderate	<u>Moderate</u>	Adverse
C2: Limestone Farmlands (Llandegla to Maeshafn)	Effects on the area within 500 m of the Site during extraction	Medium	Moderate / Slight	Moderate / Minor	Adverse
C2: Limestone Farmlands (Llandegla to Maeshafn)	Effects on the Site at restoration	Medium	Moderate / Slight	Moderate / Minor	Beneficial
C2: Limestone Farmlands (Llandegla to Maeshafn)	Effects on the area within 500 m of the Site at restoration	Medium	Slight / Negligible	Minor	Beneficial
Visual Receptor Groups					
Maes y Droell and Mynydd Du	Effects in the immediate vicinity of the Site during extraction	High / Medium	Moderate	<u>Major / Moderate</u>	Adverse
Maes y Droell and Mynydd Du	Effects beyond 150 m of the Site during extraction	High / Medium	Slight / Negligible	Minor	Adverse

Maes y Droell and Mynydd Du	Effects in the immediate vicinity of the Site at restoration	High / Medium	Moderate / Slight	Moderate	Neutral
Maes y Droell and Mynydd Du	Effects beyond 150 m of the Site at restoration	High / Medium	Negligible	Minor / Negligible	Neutral
Pen-y-Foel	Effects on the receptor group during extraction	High / Medium	Moderate / Slight	<u>Moderate</u>	Adverse
Pen-y-Foel	Effects on the receptor group at restoration	High / Medium	Slight / Negligible	Minor	Neutral
Graianrhyd	Effects beyond 300 m of the Site during extraction	High / Medium	Moderate / Slight	<u>Moderate</u>	Adverse
Graianrhyd	Effects beyond 300 m of the Site at restoration	High / Medium	Slight / Negligible	Minor	Neutral
Rhydtalog	Effects on the receptor group during extraction	High / Medium	Slight / Negligible	Minor	Adverse
Rhydtalog	Effects on the receptor group at restoration	High / Medium	Negligible	Minor / Negligible	Neutral
Llyn Cyfynwy and Moel Garegog open access land	Effects on the receptor group during extraction	High / Medium	Slight	Moderate / Minor	Adverse
Llyn Cyfynwy and Moel Garegog open access land	Effects on the receptor group at restoration	High / Medium	Slight / Negligible	Minor	Neutral
Clwydian Range / Offa's Dyke Path National Trail	Effects on the receptor group during extraction	High	Moderate / Slight	<u>Major / Moderate</u>	Adverse
Clwydian Range / Offa's Dyke Path National Trail	Effects on the receptor group at restoration	High	Negligible	Minor	Neutral

Key Routes

None affected					
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Specific Viewpoints

None affected					
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Landscape Designations

Clwydian Range and Dee Valley National Landscape	Effects on the National Landscape during extraction	High	Substantial / Moderate	<u>Major</u>	Adverse
Clwydian Range and Dee Valley National Landscape	Effects on the special quality of the built environment within the National Landscape at restoration	High	Moderate / Slight (reducing to Negligible for most special qualities)	Moderate	Neutral
Clwydian Range and Dee Valley National Landscape	Effects on all other special qualities within the National Landscape at restoration	High	Negligible	Negligible	N/A

9.11 Further Mitigation

- 9.11.1 A range of mitigation measures have been incorporated into the Proposed Development design and the operational strategy to minimise effects on landscape character and visual amenity.
- 9.11.2 These measures include the construction of screening and noise attenuation bunds, advance tree and shrub planting to strengthen boundary vegetation and filter views, careful control of site lighting to reduce light spill, and progressive restoration throughout the phased extraction programme to limit the extent of active operations at any one time.
- 9.11.3 In addition, a permanent landscaped bund adjacent to the cemetery will provide screening of close-range views, while improvements to Denbighshire Footpath 515/15 through selective scrub thinning will enhance accessibility and the recreational experience for users.

9.12 Residual Effects

- 9.12.1 The Proposed Development would result in localised effects on landscape character and visual amenity during the extraction phases, principally within the site and its immediate surroundings.
- 9.12.2 Following restoration, residual landscape and visual effects would reduce substantially and are predicted to be neutral to beneficial as the restored landform and habitats become established.

9.13 Summary and Conclusion

- 9.13.1 The Proposed Development would extend industrial sand extraction at Maes y Droell Quarry through four phases before restoring the site to broadleaved woodland, rhôs grassland and wetland habitats.
- 9.13.2 During extraction, noticeable landscape and visual changes would occur within the site and its immediate surroundings, particularly where excavation, landform changes and vegetation removal are visible. Adverse effects would be largely confined to nearby receptors, including adjacent public rights of way and nearby residents, with significant effects generally limited to the site and areas within approximately 250 m of its boundary.
- 9.13.3 Due to intervening landform, vegetation and the existing quarrying context, effects on the wider landscape, including the Clwydian Range and Dee Valley National Landscape, would not be significant.
- 9.13.4 Progressive restoration would substantially reduce effects over time, with backfilling, landform regrading and habitat creation integrating the site into the surrounding landscape. Following restoration, landscape and visual effects are predicted to be neutral to beneficial, with no significant long-term adverse effects remaining.