

Pengarnddu Service Reservoir

Landscape and Visual Impact Assessment

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1 Introduction

This report considers the landscape and visual implications of the proposed development. Landscape is defined in the European Landscape Convention as ‘...an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors’ (Council of Europe, 2000). Visual amenity considerations relate specifically to views afforded to people. These separate but related issues form the basis for landscape and visual impact assessment (LVIA).

The application site, hereafter referred to as ‘the site’, is situated at the existing covered Pengarnddu Service Reservoir, Pengarnddu Industrial Estate, Merthyr Tydfil, as shown on Figure 1, Appendix A. The development proposals for the site, hereafter referred to as the ‘proposed development’, comprise a new covered service reservoir and valve house with associated pumps, pipework (overflow and washout), mains water connections (inlet and outlet), kiosks for electrical equipment, sustainable drainage system, an internal access road, landscape proposals and a perimeter security fence.

The remainder of this report sets out the methodology used to undertake the assessment, the baseline conditions, design/mitigation measures, and an assessment of impacts which takes account of mitigation measures that are integral to the proposed development. A conclusions section completes the report.

2 Methodology

The assessment process has been carried out based on 'Guidelines for Landscape and Visual Impact Assessment: Third Edition' (Landscape Institute, LI, and Institute of Environmental Management and Assessment, IEMA, 2013).

The Study Area extends to a 2.5km radius from the site (refer to Figure 1, Appendix A). Beyond this distance the proposed development is not anticipated to be readily noticeable within the wider landscape.

To refine the assessment, a Zone of Theoretical Visibility (ZTV) has been generated within the Study Area, which represents the theoretical area from which any part of the proposed development may be seen (refer to Figure 1, Appendix A). The ZTV is based on bare ground data, with any ridgelines, plateaux and valleys reflected in the extent of predicted visibility. The ZTV does not take into account local conditions such as subtle variations in landform, built development or vegetation cover, which significantly reduce the extent of actual visibility.

The ZTV was modelled using a Digital Terrain Model (DTM), taking into account the curvature of the earth and assuming viewer height of approximately two metres above ground level. DTM data was derived from Ordnance Survey (OS) Terrain 50 data (elevation data on a 50m grid). ZTV output was overlaid on OS 1:25,000 mapping. The ZTV informs the identification of visual receptors, or those who would have a view of the Scheme, and corresponding viewpoints.

Table 1 presents details of the consultation undertaken during the preparation of this assessment.

Table 1 Summary of Consultation Responses

Consultee	Date of Consultation	Consultation Response	Project Response
Merthyr Tydfil County Borough Council (MTCBC)	March 2020	A proportionate landscape and visual impact assessment should be carried out for the proposed development and submitted with the planning application.	Assessment carried out accordingly.

2.1 Baseline Evaluation

Baseline conditions are defined by landscape character and respective sensitivity, together with visual amenity (as represented by views) and the sensitivity of visual receptors (or potential viewers), in accordance with the criteria set out below.

Table 2 Definitions of Sensitivity

Level of Sensitivity	Definition of Sensitivity <i>Sensitivity considers the value of receptors and their susceptibility to change</i>
High	Landscape Value: Typically of high importance and rarity, recognised at an international or national scale, with limited potential for substitution (e.g. National Parks or Areas of Outstanding Natural Beauty). LANDMAP: Outstanding or High overall evaluation.

	*Susceptibility to change: Landscape unlikely to accommodate the change proposed. Visual Amenity Value: Typically internationally or nationally recognised/important (e.g. within landscape/townscape area of recognised international or national importance). Susceptibility to change: Appreciation of affected views may be one of the main activities; receptors typically include residents and users of pedestrian/equestrian/cycle orientated routes (e.g. Public Rights of Way).
Medium	Landscape Value: Typically of moderate importance and rarity, recognised at a regional/local scale, with limited potential for substitution (e.g. areas of landscape/townscape value designated by local authorities). LANDMAP: Moderate overall evaluation *Susceptibility to change: Landscape has the potential to accommodate the change proposed. Visual Amenity Value: Typically regionally/locally recognised/important (e.g. within landscape/townscape area of recognised regional/local importance). Susceptibility to change: There may be appreciation of affected views; receptors typically include users of municipal facilities (e.g. schools) and those using recognised scenic roads, railways and waterways.
Low	Landscape Value: Typically of low importance and rarity, undesignated and may be degraded. LANDMAP: Low overall evaluation. *Susceptibility to change: Landscape likely to accommodate the change proposed. Visual Amenity Value: Typically views not recognised or of importance. Susceptibility to change: Attention is unlikely to be focussed on affected views; receptors typically include those at places of work and users of the utilitarian transport network.
<i>*The judgement concerning susceptibility to the type of change proposed is made by considering the nature/characteristics of the change and receiving landscape, following evaluation of receptor value and prior to the assessment of effects.</i>	

Relevant desk-based information was obtained from Natural Resources Wales (NRW), MTCBC and Ordnance Survey. Field survey work was undertaken during early April 2020. At this time of year, deciduous trees and shrubs are predominantly without leaves such that there is more visibility within the landscape than in summer months (when there is deciduous leaf cover). Viewpoints were selected to represent the range of visual receptors, that is those who would have a view of the proposed development, and views potentially affected, against which visual sensitivity was assessed. Viewpoint photographs were taken using a digital single lens reflex (DSLR) camera, with lens selected to provide the digital equivalent of 50 mm focal length for a 35 mm film format SLR camera. Photographs were then stitched together to generate a panorama spanning approximately ninety degrees in the direction of the proposed development (the extent of view that would be readily experienced by the viewer at the selected viewpoint, when facing in that direction).

2.2 Assessment

Table 3 Assigning Magnitude of Impact

Level of Magnitude	Definition of Magnitude <i>Impacts may be beneficial or adverse</i>
High	Landscape Major beneficial or adverse alteration to key landscape characteristics such that landscape character would be fundamentally changed.
	Visual Amenity Major beneficial or adverse change in existing view.
Medium	Landscape Beneficial or adverse alteration to key landscape characteristics such that landscape character would be noticeably changed.
	Visual Amenity Noticeable beneficial or adverse change in existing view.
Low	Landscape Minor beneficial or adverse alteration to key landscape characteristics such that landscape character would be similar to the baseline conditions.
	Visual Amenity Minor beneficial or adverse change in existing view such that view largely unchanged.
Negligible	Landscape Very minor beneficial or adverse alteration to key landscape characteristics such that change in landscape character would be barely distinguishable from the baseline conditions.
	Visual Amenity Barely noticeable beneficial or adverse change in existing view.

A combined assessment of sensitivity and magnitude is undertaken to determine how significant an effect is, as set out in Table 4, below.

Table 4 Significance Matrix

MAGNITUDE	High	Moderate	Moderate / Major	Major
	Medium	Minor / Moderate	Moderate	Moderate / Major
	Low	Minor	Minor / Moderate	Moderate
	Negligible	Negligible	Negligible	Negligible
		Low	Medium	High

	SENSITIVITY
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Significance is determined by applying professional judgement and is derived as a product of magnitude and sensitivity, as set out above. Where more than one significance outcome is possible for a given combination of magnitude and sensitivity level, professional judgement is applied to determine that which is most appropriate, on a case by case basis.

Effects may be beneficial or adverse. Only those effects that are shaded above are considered likely to be significant in respect of the decision-making process regarding development consent. Typical descriptors of each effect category are provided in Table 5.

Table 5 Levels of significance

Significance	Criteria
Major	Landscape Beneficial - Character and integrity of landscape greatly enhanced. Adverse - At complete variance with the character and integrity of the landscape.
	Visual Amenity Beneficial – Substantial enhancement of views, typically from highly sensitive receptors. Adverse - Substantial deterioration of views, typically from highly sensitive receptors.
Moderate	Landscape Beneficial – Character and integrity of landscape noticeably enhanced. Adverse – Noticeable variance with character and integrity of the landscape.
	Visual Amenity Beneficial – Obvious improvement of views from low to medium sensitivity receptors or perceptible improvement of views from more sensitive receptors. Adverse – Obvious deterioration of views from low to medium sensitivity receptors or perceptible deterioration of views from more sensitive receptors.
Minor	Landscape Beneficial – Complementary change or limited enhancement to character and integrity of landscape. Adverse – Limited variance with character and integrity of the landscape.
	Visual Amenity

	Beneficial – Limited enhancement of views from receptors, with greater enhancement of views from receptors of low sensitivity. Adverse – Limited deterioration of views from receptors, with greater deterioration of views from receptors of low sensitivity.
Negligible	Landscape Character and integrity of landscape maintained.
	Visual Amenity No readily perceptible deterioration or improvement in views from receptors.

3 Baseline

3.1 Legislation and Policy

This assessment has been undertaken in accordance with current legislation, and has had regard to national, regional and local plans and policies relating to landscape and visual amenity matters as they are affected by the proposed development. A summary of legislation and policies that are applicable to the proposed development and matters of landscape and visual amenity are provided in Table 6, below.

Table 6 Legislation and Policy

<i>Legislation/Policy</i>	<i>Summary of Requirements and Relevance</i>
National Parks and Access to the Countryside Act 1949	National Parks are designated under the provisions of the National Parks and Access to the Countryside Act (1949). Section 11A of the National Parks and Access to the Countryside Act (1949) provides that in exercising or performing any functions in relation to, or so as to affect, land in a National Park, any relevant authority shall have regard to the purposes of conserving and enhancing the natural beauty of these areas and promoting opportunities for the understanding and enjoyment of the special qualities of these areas by the public. The site falls within the setting of the Brecon Beacons National Park, which is duly considered within the visual assessment of this report.
Planning Policy Wales, 2018	Planning Policy Wales advises that all the landscapes of Wales are valued for their intrinsic contribution to a sense of place, and local authorities should protect and enhance their special characteristics, whilst paying due regard to the social, economic, environmental and cultural benefits they provide, and to their role in creating valued places. The statutory landscape designations that apply in Wales are National Parks, and Areas of Outstanding Natural Beauty (AONBs). Planning authorities have a statutory duty to have regard to National Parks and AONB purposes. This duty applies in relation to all activities affecting National Parks and AONBs, whether those activities lie within, or in the setting of, the designated areas. SLAs are non-statutory designations that define local areas of high landscape importance, which may be unique, exceptional or distinctive to the area. Planning authorities should apply these designations where there is good reason to believe that normal planning policies cannot provide the necessary protection. LANDMAP is an important information resource which can help inform planning for the sustainable management of natural resources in an area. LANDMAP describes and evaluates the physical, ecological, visual, cultural and historic aspects of the landscapes of Wales, and provides the basis of a consistent, quality assured national approach to landscape assessment. LANDMAP assessments can help to inform the designation of SLAs, planning policy and development management decisions. The Brecon Beacons National Park, which lies north of the site, Nant Morlais and Cwm Taf Fechan SLA, within which the site lies, and LANDMAP have been duly considered within this report.
Merthyr Tydfil County Borough Council Replacement Local Development Plan (2016 - 2031), 2020	Local Development Plan (LDP) Objective 11 (Countryside and Landscape) is to protect and enhance the character and appearance of the landscape and the countryside. LDP Policy EnW5 advises that development proposals will be permitted where it can be satisfactorily demonstrated that a) it would not cause unacceptable harm to the character and quality of the landscape setting of the County Borough; b) development within Special Landscape Areas are sensitive to their special characteristics; c) development respects the local distinctiveness and historic character of the landscape; d) development will safeguard local landscape character and landscape features, including views, which make a significant contribution to the character, history and setting of the locality; e) development secures the enhancement of the character, appearance and quality of the landscape, through restoration, management or enhancement where possible; f) there is no satisfactory alternative and the benefits associated with the development can be demonstrated to outweigh the harm; and g) where damage to local landscape character cannot be avoided appropriate mitigation has been secured. LDP

	Policy CW1 (The Historic Environment) advises that the integrity of our historic environment assets will be conserved and enhanced. Development affecting undesignated historic environment assets including Landscapes of Outstanding Historic Interest in Wales should have regard to their special character and archaeological importance. The proposed development is assessed in the context of local landscape character and visual amenity within this report, with due consideration for Nant Morlais and Cwm Taf Fechan Special Landscape Area (SLA) and Merthyr Tydfil Landscape of Outstanding Historic Interest, within which the site lies.
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3.2 Landscape

3.2.1 Landscape Character

LANDMAP (NRW, continuously updated – www.naturalresources.wales/guidance-and-advice/business-sectors/planning-and-development/evidence-to-inform-development-planning/landmap-the-welsh-landscape-baseline) is the national landscape information system in Wales which provides a layered approach to landscape appraisal, to aid decision-making. The characteristics, qualities and influences on the landscape have been mapped as a series of aspect layers, comprising Geological Landscape, Landscape Habitats, Visual and Sensory, the Historic Landscape and Cultural Landscape. The site falls within the following specific aspect areas: MRTHRGL008 Dowlais Top Geological Landscape, MRTHRLH007 Acid Grassland Landscape Habitats, MRTHRVS313 Merthyr North Flank Visual and Sensory, MRTHRHL009 Historic Landscape and MRTHRCL015 Merthyr Common Cultural Landscape. The Visual and Sensory layer, the mapping for which is shown on Figure 2, Appendix A, provides an indication of overall landscape qualities and a summary of the corresponding information for Merthyr North Flank aspect area, within which the site lies, is provided as follows:

‘The area is of exposed upland character with moorland rising to 530m. The visual and sensory character is generally bleak and open with long views. It is a complex area in which the variety of land uses over time have fragmented the appearance and changed the otherwise large-scale upland. The resulting mix is sometimes jarring but elsewhere the diversity adds interest. The unifying influence is the fact that these land uses have clearly altered the landscape. The north eastern corner of this area feels remote from development but much of the remaining area is clearly influenced by the proximity to the town. Settlement is present on the north side of the A465 and abuts the area - terraced housing, large scale industry and retail parks. The retail park in particular is very exposed and sits uncomfortably on the edge of the upland moorland. There are many signs of past and current extractive activity including the active Vaynor Quarry cutting northwards east of Cefn Cil-Sanws, and disused quarries at Morlais, Bryniau and at Twynau Gwynion. Other past industrial activity is indicated by Pitwellt Pond. Morlais Hill and Castle form an important landmark which can be seen from the south side of Merthyr. The adjacent golf course is not particularly visually distinct in long views. The range of active and no longer used industrial sites influence the character of the landscape and the adjacent residential and retail areas. The power lines are detractors in this landscape.

Overall Evaluation: Moderate

Justification of Overall Evaluation: The mosaic of post-industrial and prehistoric features combined with moorland create a landscape of distinctive character with dramatic characteristics in places.’

The landscape character of the site is typical of the aspect area described above, comprising the existing Pengarnddu covered reservoir and adjacent hillside grassland, with open moorland to the north, Pengarnddu Industrial Estate immediately to the east, and powerlines and

telecommunications masts immediately to the south and west - beyond which lie extensive housing estates at the northern edge of Merthyr Tydfil.

3.2.2 Landscape Sensitivity

The site lies within the locally designated Nant Morlais and Cwm Taf Fechan SLA and Merthyr Tydfil Landscape of Outstanding Historic Interest. The overall LANDMAP evaluation score for the Visual and Sensory aspect area within which the site lies is moderate. Taking these considerations into account, together with the fact that a development of the nature proposed can be integrated with the local landscape without resulting in significant disruption to local landscape character, the landscape is considered to be of **medium** sensitivity.

3.3 Visual Amenity

The ZTV relating to the proposed development, which does not take account of land cover, is illustrated on Figure 1, Appendix A. In broad terms, this extends northwards and eastwards across Merthyr Common, including land within Brecon Beacons National Park, and southwards and westwards to the urban areas of Merthyr Tydfil. Whilst the ZTV (based on bare ground information) extends east and south-east of the site, in reality buildings and infrastructure at Pengarnddu Industrial Estate will restrict views of the proposed development from these locations, such that they are not considered further. In addition, extensive built land cover within Merthyr Tydfil will largely prevent views from the urban area, however the limited available views are nonetheless represented by assessment viewpoints included in this assessment. Potential visual receptors include residential properties, Public Rights of Way (PRoW), Open Access Land and roads in the Study Area, as represented by Viewpoints 1 to 6, which form the basis for visual assessment below. Although the ZTV does not include Caeracca, as it is based on bare-ground information, a viewpoint (Viewpoint 3) has been included at the edge of this area of settlement nearest to the proposed development to represent potential views from the upper floor windows of residential properties. Viewpoint photographs are provided within Figures 3 to 5, Appendix A. The National Grid References for viewpoints are as follows: Viewpoint 1 - 307422, 209089; Viewpoint 2 - 307470, 208703; Viewpoint 3 - 306958, 209152; Viewpoint 4 - 305847, 208922; Viewpoint 5 - 305704, 208043; and Viewpoint 6 - 306893, 211003.

3.3.1 Viewpoint 1: Open Access Land, Merthyr Common, looking south east

This view represents users of Open Access Land within Nant Morlais and Cwm Taf Fechan SLA and Merthyr Tydfil Landscape of Outstanding Historic Interest. As a result, visual sensitivity is considered to be **high**. The foreground is formed by hillside grassland traversed by power lines, beyond which the site lies on an elevated skyline broken by wind turbines and the tops of fencing and vent stacks at Pengarnddu Industrial Estate.

3.3.2 Viewpoint 2: Route with Public Access, Pengarnddu, looking north

This view represents users of the Route with Public Access and adjacent residents of the travellers' camp, at Pengarnddu, within Nant Morlais and Cwm Taf Fechan SLA and Merthyr Tydfil Landscape of Outstanding Historic Interest. As a result, visual sensitivity is considered to be **high**. The foreground is formed by the travellers' camp and hillside grassland, with a grassed reservoir embankment, which obscures the site, and a wind turbine at Pengarnddu Industrial Estate, in the backdrop.

3.3.3 Viewpoint 3: Tai'r Twynau, Caeracca, Pant, looking east

This view represents residential properties together with users of Public Rights of Way, Cycle Route 46 and roads at Caeracca, Pant, which lie within/near Nant Morlais and Cwm Taf Fechan SLA and Merthyr Tydfil Landscape of Outstanding Historic Interest. As a result, visual sensitivity is considered to be **high**. The foreground is formed by the housing estate at Caeracca with the hillside on which the site lies, traversed by powerlines and telecommunications infrastructure, forming the backdrop.

3.3.4 Viewpoint 4: Bryniau Road, Pant, looking east

This view represents residential properties at Pant, together with users of the nearby recreational ground, cemetery, Open Access Land, Public Rights of Way and roads, which lie within/near Nant Morlais and Cwm Taf Fechan SLA and Merthyr Tydfil Landscape of Outstanding Historic Interest. As a result, visual sensitivity is considered to be **high**. The foreground is formed by housing estates at Pant with the moorland of Merthyr Common, traversed by powerlines, forming the backdrop. The site is located on a ridgeline near the southern edge of the moors, in the distance, where the skyline is broken by pylons, telecommunications infrastructure and wind turbines.

3.3.5 Viewpoint 5: Mitchell Crescent, Penybryn, looking north east

This view represents residential properties together with users of Public Rights of Way, public open space and roads within the north-eastern suburbs of Merthyr Tydfil and fall inside Merthyr Tydfil Landscape of Outstanding Historic Interest. As a result, visual sensitivity is considered to be **high**. The foreground and middle ground are formed by housing estates within the north-eastern suburbs of Merthyr Tydfil, with the moorland of Merthyr Common, traversed by powerlines, forming the backdrop. The site is located on a ridgeline near the southern edge of the moors, in the distance, where the skyline is broken by pylons and telecommunications infrastructure, together with wind turbines and buildings at Pengarnddu Industrial Estate.

3.3.6 Viewpoint 6: Open Access Land at Castell-y-nos, Brecon Beacons National Park, looking south east

This view represents users of Open Access Land within the Brecon Beacons National Park. As a result, visual sensitivity is considered to be **high**. The foreground is formed by limestone rock formations and wider moorland of Merthyr Common, beyond which the site is seen in the distance, in the immediate context of Pengarnddu Industrial Estate, and wind turbines therein, together with powerlines and telecommunications infrastructure. The southern reaches of Merthyr Common and The Valleys, beyond, form the wider backdrop.

4 Design / Mitigation Measures

4.1 Construction

Vegetation clearance would be limited and occur only where necessary; those landscape elements to be retained, such as trees and shrubs, would be protected during construction and areas of landscape that are temporarily disturbed during construction, including areas of grassland, would be restored on completion. Refer to Drawing Number B10237-123532-XX-XX-DR-LA-DI9003 (Landscaping and Planting General Arrangement Plan), submitted with the planning application.

4.2 Operation

During the siting and design process there has been due consideration for landscape and visual amenity. The proposed development would largely comprise covered infrastructure, with careful profiling and seeding of surrounding earthworks to integrate the proposals with the contextual open, moorland landscape. Refer to Drawing Number B10237-123532-XX-XX-DR-LA-DI9003 (Landscaping and Planting General Arrangement Plan), submitted with the planning application. Whilst the roof of the service reservoir would be covered with gravel this would form a recessive element and would not be readily noticeable where it occurs in distant views of the proposed development. Kiosks would be coloured green, in response to vegetation within the landscape. Industrial-looking metal palisade fencing at the site perimeter would be avoided, instead new fencing would comprise more visually permeable green wire mesh, to limit intrusion within the landscape and visual amenity. The mitigation described here is integral to the proposed development (embedded in the design).

5 Assessment of Impacts

5.1 Construction Phase Effects: Landscape and Visual Amenity

Vegetation clearance would be limited, resulting in minimal disruption to landscape and visual amenity. Construction activities associated with the proposed development, more generally, such as the movement of plant and vehicles, earthworks and the creation of material stockpiles, would introduce temporary elements within the landscape. These activities would generally be seen in the context of Pengarnddu Industrial Estate together with power and telecommunications infrastructure, such that landscape character and quality, and visual amenity, would not be notably altered. Overall, considering the nature of construction activities, particularly their very transient characteristics, the magnitude of landscape and visual impacts is considered to be **low adverse**, and, taking into account sensitivities described in Section 3, the overall significance of landscape and visual effects during construction is considered to be **moderate adverse**.

5.2 Operation Phase Effects: Landscape

The proposed development would largely comprise covered infrastructure, with limited above ground components including small kiosks and site perimeter fencing. Following construction, the careful profiling and acid grassland seeding of earthworks, and appropriate management thereafter (low frequency cutting), would integrate the proposals with the surrounding open moorland landscape. Kiosks would be coloured green, in response to vegetation within the landscape, and industrial-looking metal palisade fencing would be avoided - instead more visually permeable green wire mesh fencing would be used, to limit intrusion within the landscape. As a result, there would be only minor change to baseline landscape character. Overall, the magnitude of landscape impact is considered to be **low adverse**. Taking into account medium landscape sensitivity, the overall significance of landscape effect is considered to be **minor adverse**.

5.3 Operation Phase Effects: Visual Amenity

Viewpoint locations are shown on Figure 1, Appendix A, with photographs provided within Figures 3 to 5, Appendix A.

5.3.1 Viewpoint 1: Open Access Land, Merthyr Common, looking south east

The foreground would continue to be formed by hillside grassland traversed by power lines, beyond this the proposed development, namely the reprofiled ground around the reservoir (laid to grass) and perimeter fencing, would be visible on the hillside, with fencing and wind turbines at Pengarnddu Industrial Estate continuing to sit within the immediate backdrop. As a result, the magnitude of visual impact is considered to be **low adverse**. Taking into account high visual sensitivity, the overall significance of visual effect is considered to be **moderate adverse**.

5.3.2 Viewpoint 2: Route with Public Access, Pengarnddu, looking north

The foreground would continue to be formed by the travellers' camp and hillside grassland, with existing grassed reservoir embankment, to the south of the site, in the backdrop - such that only glimpses of the proposed development, principally the top of the valve house and adjacent grassed reservoir embankments, would be visible beyond. The wind turbine at Pengarnddu Industrial Estate would remain visible in the background. As a result, the magnitude of visual

impact is considered to be **low adverse**. Taking into account high visual sensitivity, the overall significance of visual effect is considered to be **moderate adverse**.

5.3.3 Viewpoint 3: Tai'r Twynau, Caeracca, Pant, looking east

From upper floor windows of residential properties, the proposed development, namely the reprofiled ground around the reservoir (laid to grass) and perimeter fencing, would be seen in the distance and set within the context of existing powerlines and telecommunications infrastructure, such that change in the view would be minimal. As a result, the magnitude of visual impact is considered to be **low adverse**. Taking into account high visual sensitivity, the overall significance of visual effect is considered to be **moderate adverse**.

5.3.4 Viewpoint 4: Bryniau Road, Pant, looking east

The proposed development, namely the reprofiled ground around the reservoir (laid to grass) and perimeter fencing, would form a minor element in the distance, set within the context of existing powerlines and telecommunications infrastructure, such that change in the view would be barely noticeable. As a result, the magnitude of visual impact is considered to be **negligible adverse**. Taking into account high visual sensitivity, the overall significance of visual effect is considered to be **negligible adverse**.

5.3.5 Viewpoint 5: Mitchell Crescent, Penybryn, looking north east

The proposed development would form a minor element in the distance, set within the context of existing powerlines and telecommunications infrastructure, such that change in the view would be barely noticeable. As a result, the magnitude of visual impact is considered to be **negligible adverse**. Taking into account high visual sensitivity, the overall significance of visual effect is considered to be **negligible adverse**.

5.3.6 Viewpoint 6: Open Access Land at Castell-y-nos, Brecon Beacons National Park, looking south east

The proposed development would form a very minor, distant element in a broad panorama, set within the immediate context of Pengarnddu Industrial Estate, and wind turbines therein, together with powerlines and telecommunications infrastructure. The change in view would be barely noticeable. As a result, the magnitude of visual impact is considered to be **negligible adverse**. Taking into account high visual sensitivity, the overall significance of visual effect is considered to be **negligible adverse**.

6 Conclusions

The landscape and visual implications of the proposed development have been considered through landscape and visual impact assessment, in accordance with good practice guidance. The site falls within the Nant Morlais and Cwm Taf Fechan SLA together with Merthyr Tydfil Landscape of Outstanding Historic Interest, and lies within the setting of the Brecon Beacons National Park. The proposed development responds to this context through careful siting and design, such that the proposals would be well integrated with the site locality and would result in minor alteration to local landscape character and views, overall.

7 References

British Government (1949) *National Parks and Access to the Countryside Act*

Council of Europe (2000) *European Landscape Convention*

Landscape Institute (2013) *Guidelines for Landscape and Visual Impact Assessment: Third Edition*

Merthyr Tydfil County Borough Council (2020) *Merthyr Tydfil County Borough Council Replacement Local Development Plan (2016 - 2031)*

Natural Resources Wales (continuously updated) *LANDMAP*:
<https://naturalresources.wales/guidance-and-advice/business-sectors/planning-and-development/evidence-to-inform-development-planning/landmap-the-welsh-landscape-baseline>

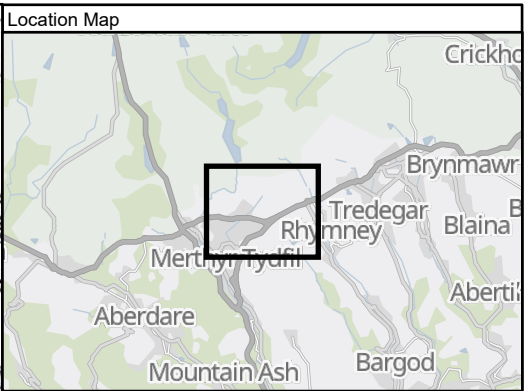
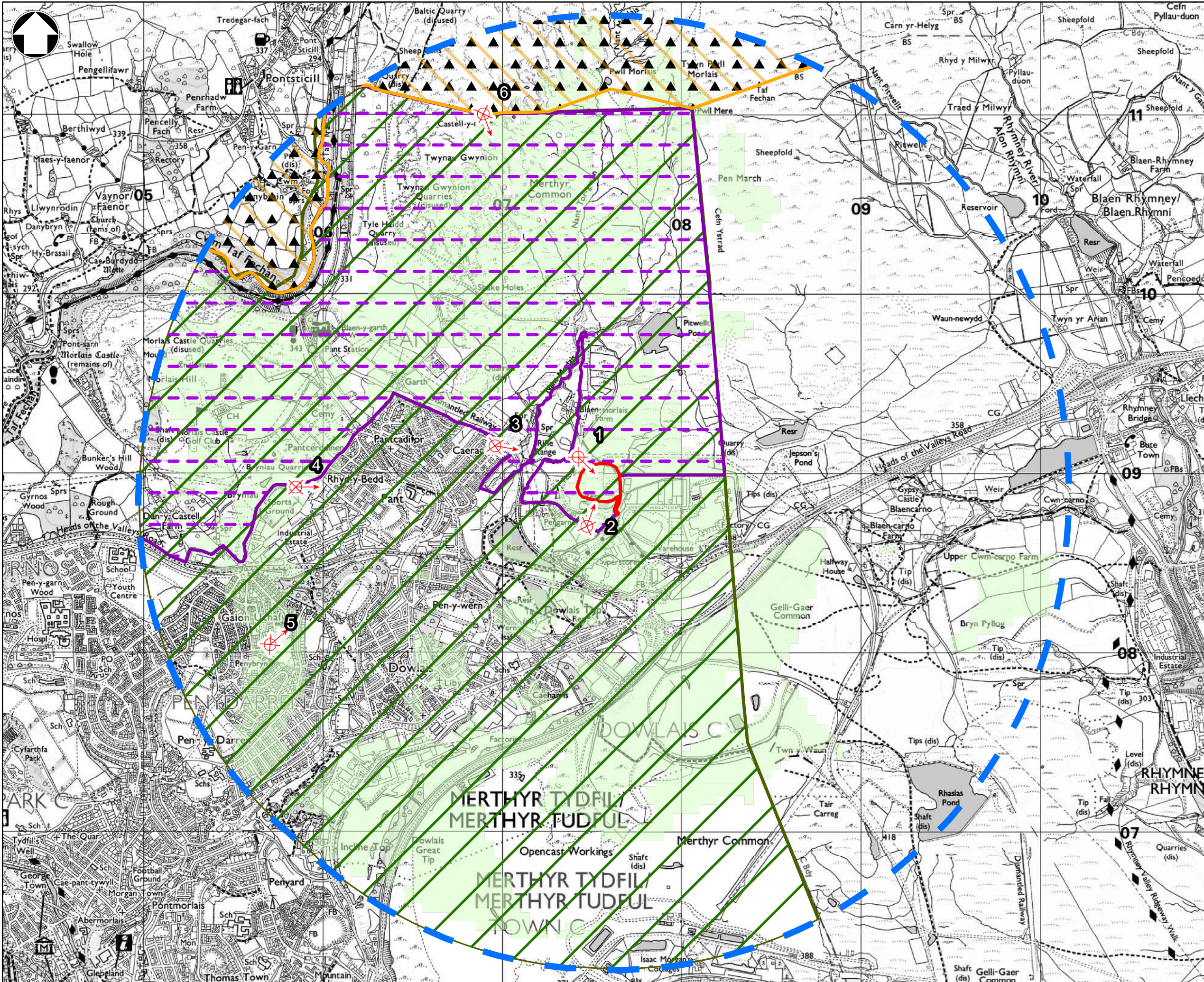
Welsh Government (2018), *Planning Policy Wales, Edition 10*

Appendices

A. Figures

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A. Figures



- Key to Symbols
- Site Boundary
 - Study Area
 - Zone of Theoretical Visibility (ZTV)
 - Viewpoints
 - Special Landscape Areas
 - Landscape of Outstanding Historic Interest
 - Brecon Beacons National Park

Notes

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P2	24/06/20	HW	For information	MC	MC
P1	07/04/20	SA	For information	HW	MC
Rev	Date	Drawn	Description	Ch'k'd	App'd



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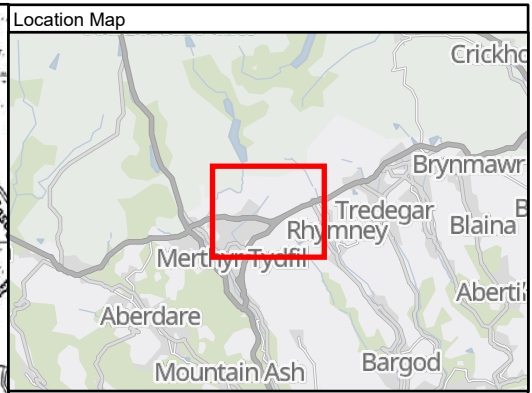
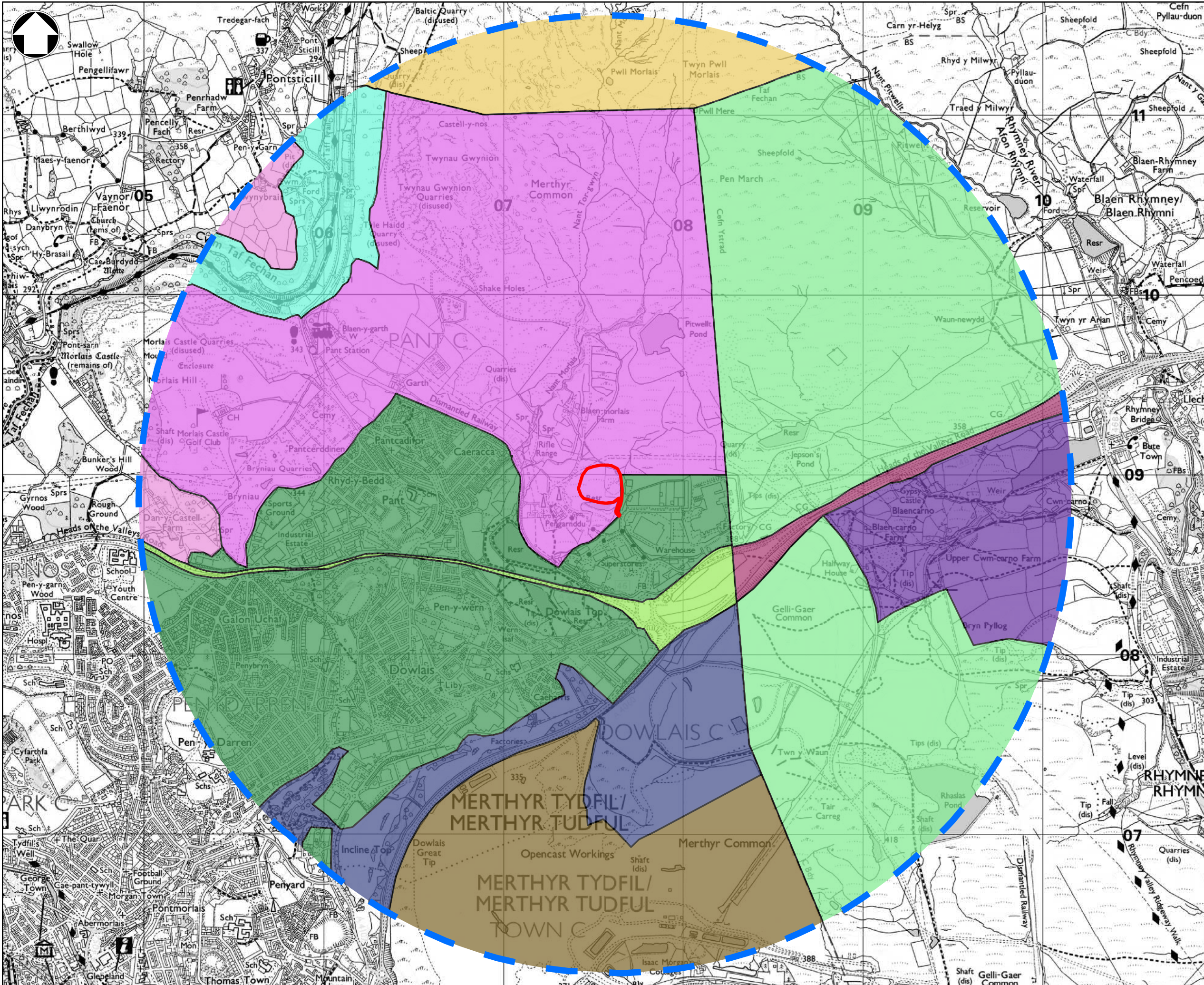
Title

Welsh Water Reservoir - Pengarnddu
Figure 1: Landscape and Visual Considerations

Designed	M Cartwright	MC	Eng. Check	M Cartwright	MC
Drawn	S Anstice	SA	Coordination	S Campbell	SC
GIS Check	H Wheldon	HW	Approved	M Cartwright	MC
Scale at A3	Status	Rev	Security		
1:20,000	PRE	P2	STD		

Drawing Number
B10237-123532-ZZ-XX-PL-ZA-DI0098





Key to Symbols	
	Site Boundary
	Study Area
LANDMAP Visual and Sensory Areas	
	A465,CYNONVS003
	A465 Corridor,MRTHRVS762
	Ffos-y-fran Merthyr Upper East Flank,MRTHRVS355
	Merthyr East Flank,MRTHRVS876
	Merthyr North Flank,MRTHRVS313
	Merthyr Tydfil,MRTHRVS122
	Mynydd Llangynidr and Mynydd Llangattock,BRCKNVS372
	Taff Fechan,MRTHRVS288
	Vaynor Farmlands,MRTHRVS198
	West of Rhymney,CYNONVS209
	Rhoslas,CYNONVS361

Notes	
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P2	24/06/20	HW	For information	HW	MC
P1	07/04/20	SA	For information	HW	MC
Rev	Date	Drawn	Description	Ch'k'd	App'd

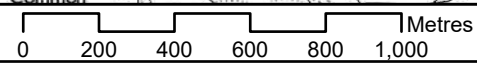
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Title
Welsh Water Reservoir - Pengarnddu
Figure 2: LANDMAP Visual and Sensory Aspect Areas

Designed	M Cartwright	MC	Eng. Check	M Cartwright	MC
Drawn	S Anstice	SA	Coordination	S Campbell	SC
GIS Check	H Wheldon	HW	Approved	M Cartwright	MC
Scale at A3	Status	Rev	Security		
1:20,000	PRE	P1	STD		

Drawing Number
B10237-123532-ZZ-XX-PL-ZA-DI0099





Viewpoint 1

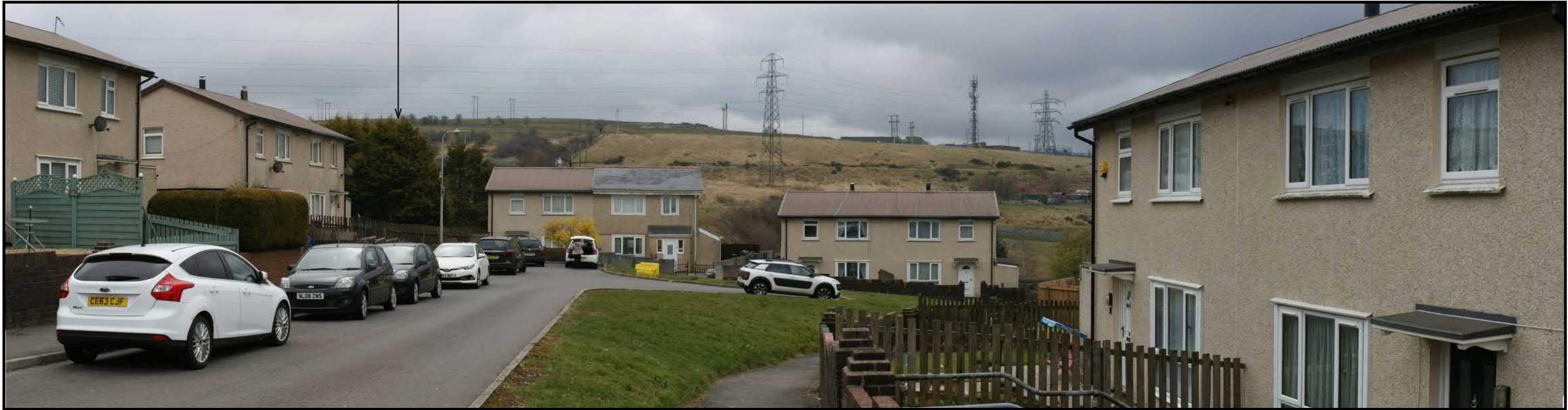


Viewpoint 2

Figure 3:
Viewpoints 1 and 2

Rev	Drafted Date	Drawn	Description	Checked	Approved
01	07/04/2020	MH	First Issue	MB	MC

Site Location



Viewpoint 3

Site Location



Viewpoint 4

Figure 4:
Viewpoints 3 and 4

Rev	Drafted Date	Drawn	Description	Checked	Approved
01	07/04/2020	MH	First Issue	MB	MC



Viewpoint 5



Viewpoint 6

Figure 5:
Viewpoints 5 and 6

Rev	Drafted Date	Drawn	Description	Checked	Approved
01	07/04/2020	MH	First Issue	MB	MC

