Design and Access Statement.

Proposed 5MW Solar Farm & Associated Infrastructure

On behalf of Fuse Energy UK.

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1. Introduction

1.1. This Design and Access Statement (DAS) has been prepared by Pegasus Group on behalf of Fuse Renewables UK Ltd ("the Applicant") to support a full planning application for a ground-mounted solar photovoltaic (PV) development and associated infrastructure on land at Talwrn Bach, Llanfyllin, Powys.

1.2. The he application seeks full planning permission for the installation of a solar farm with the following description of development: **"Installation of a 5MW ground-mounted solar photovoltaic (PV) farm and associated infrastructure."**

1.3. The Proposed Development will generate up to 5MW of renewable electricity, contributing directly to local and national decarbonisation objectives. The scheme comprises the construction, operation, management, and decommissioning of a grid-connected solar farm, including solar arrays, inverter stations, a substation, security fencing, and internal access tracks. Planning permission is sought for a temporary period of 40 years, after which all infrastructure will be removed and the land restored to its current agricultural use.

1.4. This Statement sets out how the Applicant has considered all relevant design and access matters during the evolution of the scheme. It addresses the following key elements:

- Use
- Amount
- Layout
- Scale
- Landscape
- Appearance
- Access

1.5. The Statement explains the design process and demonstrates how the proposal achieves a sustainable, environmentally responsible development that aligns with national and local objectives relating to climate change mitigation, renewable energy generation, biodiversity enhancement, and rural economic resilience.

1.6. Although this DAS is intended to be read as a standalone document, it should be considered alongside the full suite of planning application documents, which provide comprehensive detail on the proposal, its environmental effects, and its planning merits. The accompanying Planning Statement sets out the planning policy context relevant to the design and access considerations of the scheme.

1.7. The purpose of the Proposed Development is to support national and local commitments to renewable energy generation and carbon reduction. *Future Wales – The National Plan 2040*, *Planning Policy Wales (Edition 12)*, and the Powys Local Development Plan collectively emphasise strong support for renewable and low-carbon energy development where environmental and landscape impacts can be appropriately mitigated.

1.8. Planning Policy Wales highlights the need to transition to a low-carbon future and confirms that local planning authorities should support renewable energy proposals where effects are acceptable or can be made acceptable through mitigation. Further detail on policy compliance is provided within the accompanying Planning Statement.

2. Application Site and Context

2.1. The application site comprises land at Talwrn Bach, located to the east of the B4393 and approximately 1km east of Llanfyllin, Powys. The site consists of three agricultural fields bounded by established hedgerows and scattered mature trees (see Figures 1 & 2 – Site Location & Layout Plans).

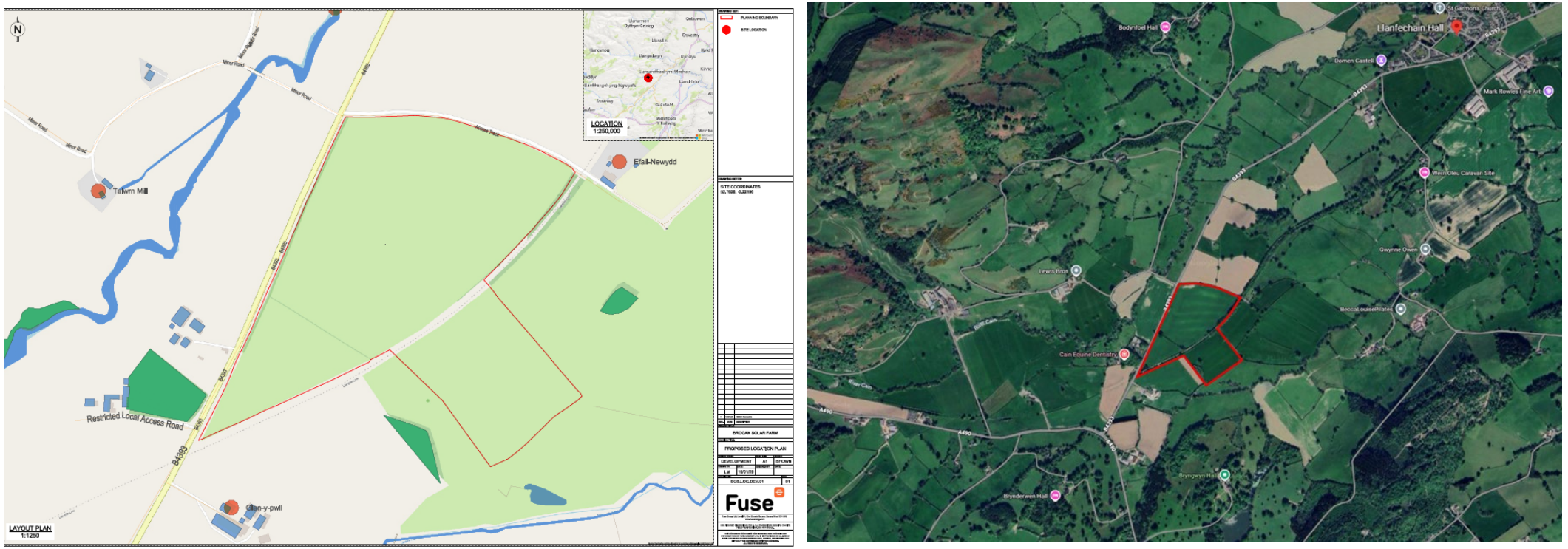

Figure 1 – Site Location Plan

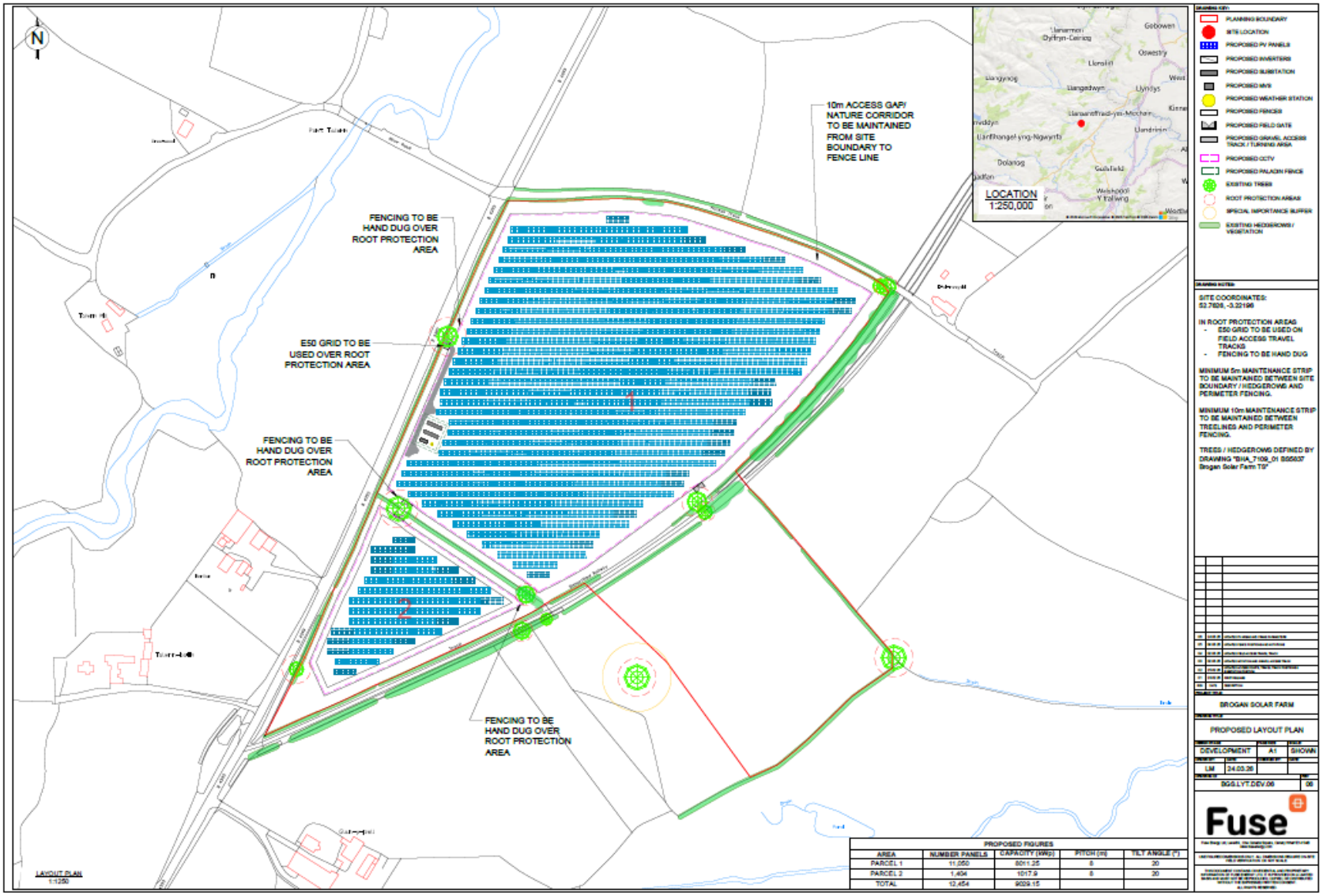

Figure 2-Proposed Site Layout Plan

2.2. The surrounding area is rural in character, with dispersed farmsteads and pastoral fields. The closest residential property is Talwrn Bach, situated to the southwest of the site on the opposite side of the B4393.

2.3. The site has been assessed as suitable for solar development, benefitting from proximity to existing electricity infrastructure which enables an efficient grid connection. The layout has been informed by detailed analysis of environmental, operational, landscape, heritage, and grid-related constraints.

2.4. The site is not located within any statutory landscape or ecological designations. It is not allocated for development within the Powys Local Development Plan.

2.5. The nearest nationally designated ecological feature is the Bryngwyn Hall Site of Special Scientific Interest (SSSI), located approximately 500m to the south of the site. No part of the proposed development lies within or directly adjacent to this designation.

2.6. Natural Resources Wales flood mapping confirms that the vast majority of the site is located within Flood Zone 1, representing very low risk of fluvial flooding. A small portion of land in the northern field intersects areas of surface water and fluvial exceedance flow paths; however, these areas have been accounted for in the layout, and the development avoids placing sensitive infrastructure within higher-risk zones.

2.7. Agricultural Land Classification (ALC) mapping indicates the site comprises predominantly Grade 3b agricultural land, which is not considered "Best and Most Versatile." A detailed site-specific ALC survey confirms this assessment and identifies that the proposed development will not result in permanent loss of agricultural capability. Sheep grazing will continue beneath and between the arrays.

2.8. There are no designated heritage assets within the site boundary. Several heritage assets lie within the surrounding area, the closest being Talwrn Bach (Grade II), located southwest of the site. Further designated assets include Bryngwyn Hall Registered Park and Garden approximately 500m to the south. A detailed Heritage Impact Assessment demonstrates that, following recent amendments to the original scheme, the development will not result in unacceptable impacts on the significance or setting of these assets.

2.9. Further information regarding the application site, including policy context and the findings of supporting technical assessments, is provided in the accompanying Planning Statement.

3. Design

3.1. A considerable number of factors have contributed towards the design and layout of the Solar Farm that is proposed in this application.

Layout

Scheme Evolution

3.2. A thorough constraints analysis was undertaken to inform the final scheme.

3.3. In developing the layout, careful attention was given to maintaining existing field boundaries, retaining all hedgerows wildlife corridors and mature trees, and positioning infrastructure to minimise visual heritage prominence within the rural landscape. The following constraints and design responses have informed the development:

Constraint		Consideration as Part of Design
1	Site Access	Access to the site is provided via a temporary construction access from the B4393, avoiding the need to route construction traffic through Llanfyllin or nearby rural settlements. The proposed temporary construction access has been designed to safely accommodate HGVs delivering construction materials, with swept path analysis confirming suitability. During operation, the site will be unmanned, resulting in only occasional maintenance visits via existing field openings, and negligible traffic generation. Further details are set out in the submitted Construction Traffic Management Plan (CTMP).
2	Trees and Hedgerows	A detailed Arboricultural Assessment has been completed, confirming that all trees and hedgerows will be retained. Appropriate Root Protection Areas (RPAs) have been respected within the layout. Hedgerows will be strengthened through additional planting, enhancing visual screening and biodiversity value.
3	Public Rights of Way (PRoW)	No Public Rights of Way cross the site. Existing nearby routes benefit from natural screening provided by boundary hedgerows, which will be retained and enhanced. Additional planting

		will further reinforce visual containment of the development for recreational users of the wider landscape.
4	Sensitive infrastructure	All sensitive electrical infrastructure—including the substation, inverter stations, and MVS housing—has been positioned in the least visually sensitive part of the site, screened by existing vegetation and located away from nearby residential receptors such as Talwrn Bach and the Bryngwyn Hall Registered Park and Garden.
5	Noise	The scheme will operate quietly, and all inverter and electrical equipment is positioned at sufficient distance from residential properties. Technical assessment confirms that no noise mitigation is required due to low operational sound levels and the rural context.
6	Flood risk	Most of the site lies within Flood Zone 1, with a small pocket of land in the northern field experiencing occasional surface water or fluvial exceedance flows. No sensitive equipment is located within these higher-risk areas. All solar panels are mounted at least 600mm above ground level to ensure operational resilience. The scheme maintains natural flow paths and does not increase off-site flood risk.
7	Biodiversity Net Gain	The llandscaping and ecological strategy follows national and local biodiversity guidance. Measures include species-rich grassland, hedgerow management and diversification, wildlife corridors, bat and bird boxes, and log piles. The development delivers a measurable biodiversity net gain, supported by the Ecological Impact Assessment and Biodiversity Net Benefit calculations.
8	Heritage	The design has considered nearby heritage assets, including Talwrn Bach (Grade II) and Bryngwyn Hall Registered Park and Garden. The original scheme has been amended to ensure that panels have not been placed in the southern parcel nearest to the Registered Park and Garden to protect its wider setting. Existing vegetation and additional planting provide appropriate screening to minimise potential intervisibility.

Final Scheme

3.4. The final scheme s illustrated on the submitted Layout Plan (ref: BGS.LYT.DEV.06). This plan identifies the arrangement of all infrastructure within the site, including the positions of the PV arrays, inverters, substation, MVS building, access tracks, CCTV, and

fencing. Dimensions and technical specifications are set out on the accompanying drawings provided as part of the planning application.

3.5. A network of internal access tracks will be installed to facilitate the movement of construction and maintenance vehicles to key infrastructure such as the inverters and substation. Tracks will be kept to the minimum necessary to maintain operational efficiency and will use a permeable gravel construction. These tracks will be formed using MOT Type 3 aggregate over a geotextile membrane, providing a stable permeable surface while minimising ground disturbance. Their alignment and extent are informed directly by the layout plan and environmental constraints within the site.

3.6. The positioning of electrical equipment has been carefully considered to minimise visual and environmental impact. All infrastructure has been set back from field boundaries and separated from existing vegetation and sensitive ecological features, including Root Protection Areas (RPAs) for existing trees. Vegetation retention and proposed planting will reinforce visual screening and ensure that the infrastructure integrates sensitively into the rural landscape. The substation and MVS building have been sited in the least visually prominent part of the site, as identified through landscape and heritage assessment findings.

Scale

3.7. The scale of the proposed development is dictated by the equipment required to generate 5MW of renewable energy. The majority of structures will be low-profile, with all PV panel arrays remaining below approximately 3m in height. This limited vertical scale ensures the development sits unobtrusively within the surrounding landscape.

3.8. Each row of PV panels will be mounted on a simple metal framework, with modules elevated above ground level to ensure operational resilience and facilitate sheep grazing beneath. The support structures are engineered to withstand local wind and snow loads and require minimal ground penetration.

3.9. Ancillary equipment including inverter cabinets, the substation, and the MVS building—has been designed to remain compact and functional. These will be comparable in scale to small agricultural structures and will not appear visually dominant within their rural context.

Biodiversity

3.10. The landscaping and biodiversity enhancement strategy includes a range of measures throughout the site to support ecological uplift and habitat creation. Enhancements include:

- Species-rich grassland beneath and between the solar arrays.
- Strengthening of existing hedgerows through gap planting and species diversification.

- Dedicated wildlife corridors, including a 10m nature corridor along the northern boundary.
- Installation of bird boxes, bat boxes, and habitat piles.
- Retention of all trees and hedgerows, with RPAs strictly observed

3.11. The Ecological Impact Assessment confirms that the development can deliver measurable biodiversity benefits through habitat creation and long-term ecological management. Detailed prescriptions for habitat establishment and ongoing enhancement are set out in the submitted Landscape Masterplan.

3.12. All offsets from sensitive ecological features have been incorporated into the design. A Construction Environmental Management Plan (CEMP) can be secured via condition to ensure best practice during the construction phase.

Landscape

3.13. The landscape design has been informed by the findings of the Landscape and Visual Impact Assessment (LVIA), which considers local topography, views from nearby receptors, and the rural character of the area. While the solar farm will introduce new built form into the landscape, the layout has been designed to minimise effects wherever feasible.

3.14. Landscape mitigation includes:

- Strengthening existing hedgerows and planting new native hedgerows where needed.
- Maintaining a generous set-back from boundaries to preserve characteristic field patterns.
- Using species-rich grassland to soften the visual profile of infrastructure.
- Enhancing screening from Talwrn Bach and views associated with Bryngwyn Hall Registered Park and Garden.
- Additional planting has been designed sensitively to respect the wider setting of local heritage assets, ensuring that screening does not inadvertently alter their landscape character or sense of openness.
- Further details on landscape effects and visual amenity considerations are provided in the LVIA submitted with the planning application.

Use

3.15. The proposed use of the site is for the construction, operation, maintenance, and decommissioning of a 5MW ground-mounted solar farm and associated infrastructure.

3.16. The PV modules convert sunlight into electricity through photovoltaic cells set within a glass and aluminium frame. Electricity generated is transferred through inverters and onward to the local distribution network.

3.17. The development allows for continued agricultural use, with sheep grazing taking place beneath and between the panels throughout the operational lifetime of the scheme. This dual-use approach maintains agricultural productivity while delivering renewable energy generation.

3.18. The development is temporary and fully reversible. After the 40-year operational period, all infrastructure will be removed, and the land will be returned to full agricultural use.

3.19. The characteristics of solar development—including minimal ground disturbance and raised panels—mean that soil structure is preserved and long-term agricultural value is protected.

3.20. The site's location outside urban areas reflects typical locational requirements for solar development, including land availability, topography, and proximity to grid infrastructure.

3.21. This DAS, alongside the accompanying technical documents, demonstrates why the site is appropriate and suitable for the proposed use.

Amount and Fabrication

3.22. The final extent of the development has been defined through iterative constraints analysis, including flood risk, heritage settings, biodiversity, and arboricultural considerations. The layout includes new planting, strengthened hedgerows, species-rich grassland, and ecological enhancement features.

3.23. The principal built elements are:

- Metal mounting frames supporting PV modules.
- Inverters, substation, and MVS building.

- 2m deer fencing with access gates.
- CCTV security cameras.
- Gravel access tracks and turning areas.

3.24. All infrastructure has been sited to avoid RPAs, using hand-dug or low-impact construction techniques where required.

Appearance

3.25. 3.26. The LVIA assesses the likely visual effects of the proposal. Mitigation planting and the retention of existing vegetation will ensure that views of the solar farm are limited and softened from nearby roads, dwellings, and public viewpoints.

3.26. 3.27. The solar panels are dark in colour with anti-glare coatings. The supporting galvanised steel or aluminium framework is non-reflective, ensuring a subdued appearance within the landscape.

3.27. 3.28. Ancillary buildings will be finished in muted tones to reduce visibility and integrate with surrounding vegetation.

3.28. 3.29. The overall appearance of the development is functional and consistent with typical rural solar farm schemes, with no external lighting proposed except for low-glare CCTV equipment for security purposes.

4. Access

4.1. Construction access to the site will be taken from a new, purpose-designed temporary access point on the B4393, as illustrated on the submitted Layout Plan (ref: BGS.LYT.DEV.06). This access arrangement enables construction vehicles to enter and exit the site safely without routing through Llanfyllin or nearby rural settlements, thereby minimising disruption to the local highway network.

4.2. Construction materials, including solar panels, mounting frames and electrical equipment, will be delivered by Heavy Goods Vehicles (HGVs). The Transport Statement and CTMP confirm that construction traffic will be generated over a temporary six-month build period, with an anticipated total of approximately 386 deliveries (772 two-way HGV movements). The surrounding highway network is suitable for accommodating these movements.

4.3. A temporary construction compound will be established within the site boundary, providing parking, turning, and welfare facilities. All construction-related parking will be contained on site, ensuring no reliance on the public highway.

4.4. Operational access will continue to be taken from the existing field access from the B4393. Once operational, the solar farm will be unmanned and will require only infrequent maintenance visits.

4.5. Post-commissioning, only light vehicles (LGVs) such as small vans or 4x4s will be required to access the site, typically amounting to 1–2 visits per month. Internal access tracks shown on the layout plan provide sufficient space for vehicles to turn within the site, removing the need for any reversing manoeuvres onto the public highway.

4.6. A detailed Construction Traffic Management Plan (CTMP) accompanies the application and outlines the measures that will be implemented to manage construction traffic safely and efficiently. These include delivery scheduling, wheel-washing, temporary signage, banksmen support, and routing agreements.

5. Summary and Conclusions

5.1. The Design and access arrangements for the proposed 5MW solar farm have been carefully considered to ensure the development integrates sensitively within its rural surroundings. The combination of low-profile infrastructure, retained hedgerows, new planting, and ecological enhancements ensures that the proposal will not result in unacceptable impacts on the visual amenity or character of the wider landscape.

5.2. The site has been selected following a thorough appraisal of environmental, technical and planning constraints. Existing vegetation provides meaningful natural screening, and additional planting will reinforce the containment of views. Landscape matters are addressed comprehensively within the submitted Landscape and Visual Impact Assessment.

5.3. The proposed equipment and layout have been chosen to ensure efficient renewable energy generation while minimising visual and environmental effects. Infrastructure has been positioned to avoid sensitive receptors, heritage assets, ecological features, and areas at higher flood risk.

5.4. Safe and suitable access to the site can be achieved from the B4393 via the proposed new temporary access. All construction traffic will be managed in accordance with the submitted CTMP, and operational traffic will be minimal. Temporary construction access features will be removed following completion of the build phase.

5.5. Overall, the design and access proposals represent a well-considered response to the site's constraints and opportunities. The development will make a meaningful contribution to Wales' renewable energy and decarbonisation objectives, while maintaining agricultural use and delivering biodiversity enhancement. The proposal is therefore considered appropriate and suitable for the granting of planning permission.

Town & Country Planning Act 1990 (as amended)
Planning and Compulsory Purchase Act 2004

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