



Proposed Solar Farm Dragon LNG Meadow Design And Access Statement

Prepared on Behalf of Dragon LNG Limited

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CONTENTS

Page

1.0 Introduction	1
2.0 Site Context	2
3.0 Planning Policy Context	4
4.0 Involvement	9
5.0 Design Process	10
6.0 Character and Design Solutions	12
7.0 Conclusions	16

1.0 INTRODUCTION

Background

- 1.1 This Design and Access Statement (DAS) has been prepared on behalf of Dragon LNG Limited (hereafter referred to as 'the Applicant'), who are working in partnership with Anesco Ltd, to accompany a full planning application which seeks consent for the installation of a solar PV farm (hereafter referred to as the 'proposed development') at Dragon LNG Meadow, which is located between the settlements of Milford Haven and Neyland (hereafter referred to as 'the site').
- 1.2 This DAS has been prepared to be compliant with the amended General Development Procedure Order (GDPO) and the guidance given by Welsh Government in Technical Advice Note 12 (TAN12) and Design Commission for Wales. Consideration has been given to the importance of demonstrating the mechanisms for delivery of design quality within the built environment.

Scope & Content of the Planning, Design & Access Statement

- 1.3 To ensure the proposals achieve physical integration, the area surrounding the site has been assessed. The assessment analysis has focused on the following components:
 - Appraising Context – an assessment and evaluation of the site, surrounding land uses, access and transport links to inform the planning process and guide design principles.
 - The Evaluation section includes an assessment of the existing site with the identification of development constraints and opportunities. This section also details the design process of the application proposals setting out a summary of the site assessment and evaluation.
 - The Design section describes the character of the application proposals and the design solutions that will achieve this and environmental sustainability.

2.0 APPRAISING CONTEXT

Introduction

- 2.1 Understanding the site and its immediate and wider context is the basis for a meaningful and sustainable design response and therefore the successful integration of the solar farm with its surrounding context is a key design objective. It is crucial to develop a thorough understanding of the context within which the new development will sit and then of the nature of the site itself and its immediate surroundings.

Location

- 2.2 The Site is located between the settlements of Milford Haven (approximately 1.2km west) and Neyland (approximately 2.9km east) within the administrative area of Pembrokeshire County Council.
- 2.3 In broad terms, the site is located in a strongly industrialised rural coastal landscape. The surrounding area is strongly influenced by industrial built development, with the extensive industrial complexes of the Dragon Liquified Natural Gas Terminal (Dragon LNG) and Pembroke Refinery located immediately north-east of the Site. The Site sits on the northern bank of the Milford Haven Waterway (MHW). The Site is not located within a Conservation Area and there are no listed buildings or scheduled ancient monuments within the site.
- 2.4 Figure 2.1 below highlights the exact location of the site and its relationship with Milford Haven and Neyland.

Figure 2.1: Site Location Plan



Site Description

- 2.5 The site measures approximately 15.8 hectares (ha) and comprises two pastoral fields between the Dragon LNG Terminal to the north and the coastline of the MHW to the south.
- 2.6 The site is well screened along all boundaries by existing hedgerows and due to a combination of intervening landform, industrial built form and vegetation, there are no views of the Site from the wider landscape to the north-west, north or north-east. There are a number of public right of ways present within the wider area, including the Pembrokeshire Coast Path National Trail which extends along approximately 300km of the Pembrokeshire coastline.
- 2.7 The site is located within Flood Zone 1 of the Natural Resources Wales Flood Map for Planning and is therefore not constrained by flood risk in planning policy terms

Access and Transport Links

Site Access

- 2.8 The existing site access will be maintained which is via the Western Perimeter Road which is off the B432.
- 2.9 The existing access from the north will also be used for the construction phase as the road has previously accommodated HGV movements for constructions works and as such is suitable. Minor improvements will be made, such as the provision of an area of hardstanding within the application site for vehicles to manoeuvre in and over which they would drive prior to accessing the public highway to reduce the risk of mud being trafficked onto the public highway. Once construction is completed, the level of traffic generated during the operational phase of the development will be minimal, with operational traffic comprising of one van accessing the application site twice per month, i.e. two two-way vehicle movements per month.

3.0 PLANNING POLICY CONTEXT

Introduction

3.1 Welsh Government Guidance on “Design and Access Statements in Wales”, dated 2017 states that this report should demonstrate that proposals meet Local Authority and Welsh Government design quality objectives and planning policy. Therefore, this section outlines the relevant planning policy context for the proposed development considering national and local policy

National Planning Policy

Future Wales: The National Plan 2040

3.2 Future Wales is Wales’ national development framework (hereafter referred to as ‘Future Wales’), setting the direction for development in Wales to 2040. It is a development plan with a strategy for addressing key national priorities through the planning system, including sustaining and developing a vibrant economy, and achieving decarbonisation and climate resilience.

3.3 Future Wales recognises the challenges climate change poses and recognises the significant impacts on the wellbeing of both current and future generations. Future Wales sets out that increasing temperatures and extreme weather events caused by climate change are putting pressure on infrastructure and the built environment, which all contribute to social and economic resilience. Future Wales:

- Supports a low carbon economy and the decarbonisation of industry, and the growth of sustainable and renewable energy; and
- Supports infrastructure development, including transport, energy and digital communications.

3.4 Future Wales recognises that Wales can become a world leader in renewable energy technologies. The Welsh Government recognises our potential for solar generation and supports both large and community scaled projects and commits to ensuring the planning system in Wales provides a strong lead for renewable energy development.

3.5 Policy 17 of Future Wales refers to ‘renewable and low carbon energy and associated infrastructure’. Policy 17 sets out that the Welsh Government strongly supports the principle of developing renewable and low carbon energy from all technologies and at all scales to meet our future energy needs and that in determining planning applications for renewable and low carbon energy development, decision-makers must give significant weight to the

need to meet Wales' international commitments and target to generate 70% of consumed electricity by renewable means in 2030 in order to combat the climate emergency.

Planning Policy Wales (PPW) (Edition 11) (February 2021)

- 3.6 Edition 11 of PPW was published on the same day as Future Wales, 24th of February 2021. PPW sets out the land use planning policies of the Welsh Government. The primary objective of PPW is to ensure that the planning system contributes towards the delivery of sustainable development and improves the social, economic, environmental and cultural well – being of Wales, as required by the Planning (Wales) Act 2015, the Well – being of Future Generations (Wales) Act 2015 and other key legislation.
- 3.7 Paragraph 3.30 (Climate Change, Decarbonisation and the Sustainable Management of Natural Resources) of PPW sets out that the Welsh Government declared a climate emergency in 2019, in order to co-ordinate action nationally and locally to help combat the threats of climate change. It further sets out that the planning system plays a key role in tackling the climate emergency through the decarbonisation of the energy system and the sustainable management of natural resources.
- 3.8 Paragraph 5.7.1 of PPW sets out that low carbon electricity must become the main source of energy in Wales. Renewable electricity will be used to provide both heating and transport in addition to power. This paragraph further emphasises that the future energy supply mix will depend on a range of established and emerging low carbon technologies.
- 3.9 Paragraph 5.7.6 sets out that the planning system should secure an appropriate mix of energy provision, which maximises benefits to our economy and communities whilst minimising potential environmental and social impacts. Paragraph 5.7.7 presents that the benefits of renewable and low carbon energy, as part of the overall commitment to tackle the climate emergency and increase energy security, is of paramount importance. The continued extraction of fossil fuels will hinder progress towards achieving overall commitments to tackling climate change. The planning system should:
- Integrate development with the provision of additional electricity grid network infrastructure.
 - Optimise energy storage.
 - Facilitate the integration of sustainable building design principles in new development;
 - Optimise the location of new developments to allow for efficient use of resources.

- Maximise renewable and low carbon energy generation.
- Maximise the use of local energy sources, such as heat networks.
- Minimise the carbon impact of other energy generation.
- Move away from the extraction of energy minerals, the burning of which is carbon intensive.

Local Planning Policy

Pembrokeshire County Council Local Development Plan (2013)

3.10 The current Local Development Plan (LDP) for Pembrokeshire County Council was adopted on 28th February 2013. The LDP establishes a vision-based development strategy and policies to guide the development and use of land in Pembrokeshire (excluding the Pembrokeshire Coast National Park) from adoption to 2021. It provides the policy context for directing development to appropriate locations, conserving the natural, built and historic environment and providing a basis for rational and consistent decision-making on planning applications. The LDP will remain an extent development plan until it is superseded by the Pembrokeshire County Council Local Development Plan Review (LDP2) currently being prepared, expected to be adopted in 2022. A summary of the relevant policies within the development plan and other material considerations relevant to establishing the principle of development is provided within the table below.

Policy	Summary
SP1	All development proposals must demonstrate how positive economic, social and environmental impacts will be achieved and adverse impacts minimised.
SP2	Development at the Ports of Milford Haven and Fishguard will be permitted for port related facilities and infrastructure, including energy related development.
SP16	The essential requirements of people who live and work in the countryside will be met whilst protecting the landscape and natural and built environment of Pembrokeshire and adjoining areas. Development which minimises visual impact on the landscape and relates to one of the following will be promoted: 1. Enterprises for which a countryside location is essential; 2. Opportunities for rural enterprise workers to be housed in suitable accommodation that supports their employment; and 3. The re-use of appropriate existing buildings.
GN1	Development will be permitted where the following criteria are met: 1. The nature, location, siting and scale of the proposed development is compatible with the capacity and character of the site and the area within which it is located; 2. It would not result in a significant detrimental impact on local amenity in terms of visual impact, loss of light or privacy, odours, smoke, fumes, dust, air quality or an increase in noise or vibration levels; 3. It would not adversely affect landscape character, quality or diversity, including the special qualities of the Pembrokeshire Coast National Park and neighbouring authorities; 4. It respects and protects the natural environment including protected habitats and species; 5. It would take place in an accessible location, would incorporate sustainable transport and accessibility principles and would not result in a detrimental impact on highway safety or in traffic exceeding the capacity of the highway network; 6. Necessary and appropriate

	service infrastructure ⁶⁴ , access and parking can be provided; 7. It would not cause or result in unacceptable harm to health and safety; 8. It would not have a significant adverse impact on water quality; and 9. It would neither contribute to the coalescence of distinct settlements nor create or consolidate ribbon development.
GN2	Development will be permitted where relevant criteria are met: 1. It is of a good design which pays due regard to local distinctiveness and contributes positively to the local context; 2. It is appropriate to the local character and landscape/townscape context in terms of layout, scale, form, siting, massing, height, density, mix, detailing, use of materials, landscaping and access arrangements / layout; 3. It incorporates a resource efficient and climate responsive design through location, orientation, density, layout, land use, materials, water conservation and the use of sustainable drainage systems and waste management solutions; 4. It achieves a flexible and adaptable design; 5. It creates an inclusive and accessible environment for users that addresses community safety; 6. It provides a good quality, vibrant public realm that integrates well with adjoining streets and spaces and 7. It contributes to delivering well designed outdoor space with good linkages to adjoining streets, spaces and other green infrastructure.
GN3	<p>Where development generates a directly related need for new or improved infrastructure, services or community facilities and this is not already programmed by a service or infrastructure company, then this must be funded by the development, and: 1. Related in scale and kind to the development; and 2. Provided on site wherever appropriate. In exceptional circumstances contributions may be made to the provision of facilities elsewhere, provided their location can adequately service the development. The timely provision of directly related infrastructure, services and community facilities shall be secured by planning condition(s), the seeking of planning obligation(s) by negotiation, and/or by any other agreement or undertaking. The viability of a development will be a key consideration when securing planning obligations and dispensation may be allowed where these requirements cannot be supported by land values.</p> <p>Measures necessary to physically deliver a development and ensure that it is acceptable in planning terms will be required in the first instance. Where appropriate contributions may be sought for a range of purposes, including: 1) Affordable housing 2) Recreational and Amenity Open Space 3) Sustainable Transport Facilities 4) Education 5) Community Facilities, including libraries, 6) Regeneration 7) Waste 8) Renewable and low carbon energy 9) Biodiversity In the event that viability considerations indicate that not all the identified contributions can reasonably be required, priority contributions will be determined on the basis of the individual circumstances of each case. In the case of housing developments, priority will be given to affordable housing unless there is an overwhelming need for the available contribution, in whole or in part, to be allocated for some other appropriate purpose/s.</p>
GN4	Development proposals should seek to minimise resource demand, improve resource efficiency and seek power generated from renewable resources, where appropriate. They will be expected to be well designed in terms of energy use. Developments which enable the supply of renewable energy through environmentally acceptable solutions will be supported.
GN22	Where new development is permitted in an area of mineral resource, prior extraction of any economic reserves of the mineral must be achieved, wherever appropriate in terms of economic feasibility and environmental and other planning considerations, prior to the commencement of the development.
GN37	All development should demonstrate a positive approach to maintaining and, wherever possible, enhancing biodiversity. Development that would disturb or otherwise harm protected species or their habitats, or the integrity of other habitats, sites or features of importance to wildlife and individual species, will only be permitted in exceptional circumstances where the effects are minimised or mitigated through careful design, work scheduling or other appropriate measures.

GN38	Development that affects sites and landscapes of architectural and/or historical merit or archaeological importance, or their setting, will only be permitted where it can be demonstrated that it would protect or enhance their character and integrity.
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4.0 INVOLVEMENT

Pre-Application Advice

- 4.1 PPW highlights that early consultation should take place with planning authorities so that all options for supply can be considered without causing delay to the construction project.
- 4.2 The pre-application advice from the Council (PR/0272/21) dated 21/10/2021 highlights that the principle of renewable energy production is supported by national and local planning policy and states that the proposal is resource efficient and climate responsive. It is also noted that the proposed development is flexible and adaptable in terms particularly of the relatively ease of returning the site to its former condition and use on the expiration of the development's life.

Screening Opinion

- 4.3 As highlighted in the Planning Statement a Request for a Screening Opinion under Regulation 5 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 was submitted to Pembrokeshire County Council (hereafter referred to as 'the Council').
- 4.4 A formal screening opinion was subsequently issued by the Council dated 29 September 2021. The Screening Opinions concluded that the development is unlikely to have significant effects on the environment and the Council have confirmed that the proposal is not EIA development.

Public Consultation

- 4.5 On 16 March 2016, key elements of the Planning (Wales) Act 2015 (the Act) were implemented. This included a need for developers to carry out statutory pre-application consultation on planning applications for major developments in Wales.
- 4.6 In addition to this, the Applicant has also sought to engage with the local community prior to the submission of the application in order to make them aware of the proposals and provide the opportunity for representatives of the community to raise any comments in relation to the proposed development.
- 4.7 A leaflet drop to local residents within the area was undertaken which provides the opportunity for them to gain an understanding of the proposal and ask questions if required.

5.0 DESIGN PROCESS

Introduction

- 5.1 PPW states that to create sustainable development, design must go beyond aesthetics and include the social, environmental and economic aspects of the development, including its construction, operation and management, and its relationship to its surroundings
- 5.2 All tiers of planning policy stress the importance of achieving high quality design in new development and the contribution that this can make to the promotion of sustainable development.
- 5.3 Through the design process, the Applicant has considered the constraints and opportunities of the site, in turn carried out an assessment of the site and subsequently produced an evaluation of the site to aid the design process. This following section therefore sets out the existing constraints and opportunities present on site, an assessment into the potential impacts and a rationale behind the final concept of the proposal.

Constraints and Opportunities

- 5.4 As part of a comprehensive review of the site, the existing constraints and opportunities have been identified. These constraints and opportunities have been reviewed in the context of the emerging development proposals and the findings of this assessment are set out below:

Constraints

- Public Rights of Way adjacent to the site; and
- Hedgerows are located along site boundaries which add to the landscape character and which may provide an important habitat to ecology.

Opportunities

- The site receives sufficient daylight;
- The site benefits from being located to existing infrastructure which can be utilised to export the electricity produced by the proposed development.
- The existing access point into the site which can be utilised to facilitate the construction of the solar farm and for ongoing routine maintenance;
- The site is free from any landscape designations;
- Existing landscaping along the boundaries to the site can be maintained and, if required/ enhanced; and
- There is the potential to deliver biodiversity enhancements as a result of the development.

Appraising Context

5.5 The site context, site analysis and a review of the planning policies identified a number of key issues. These are set out below:

- Careful consideration will need to be given to the proposed access arrangements to ensure they are of sufficient standard to facilitate the construction and maintenance of the proposed development;
- Full consideration will need to be given to the potential visual impact from the PROW that are present within the wider area, specifically those which are incorporated within the Pembrokeshire Coast Path National Trail;
- The retention and possible enhancement of the existing hedgerows along the site boundaries should be considered throughout the design process.

Concept

5.6 Following this assessment the following concept was adopted:

- Utilise the existing vehicular access point and associated track for construction/routine maintenance traffic;
- Retain and supplement vegetation and landscaping;
- Embrace opportunities to enhance bio-diversity where possible; and
- Promote sustainability.

Evaluation

5.7 In response to the assessment and overall concept the following specific criteria were established to guide the detailed design of the development of the site.

- Ensure the proposed design is sensitive to its location within the open countryside and also from potential viewpoints into the site – from the PROW running through the site; and
- Ensure any identified ecological habitats are retained and where possible incorporate additional opportunities for new habitats to be created.

6.0 CHARACTER AND DESIGN SOLUTIONS

Introduction

- 6.1 The site is located in a strongly industrialised rural coastal landscape. This section will set out and explain how the use, amount, layout of development, scale, landscape design, appearance, access and sustainability credentials have been considered and are in compliance with both local and national planning policies.

Use

- 6.2 The proposed development is for a solar photovoltaic (PV) farm on a circa 15.8 hectare site. Once installed and fully operational, the development will have the potential to generate 9.99 MW of electricity.
- 6.3 Electricity produced by the proposed development will be exported directly into the Dragon LNG facility and this will be an 11kV connection into an existing arrangement within site.

Amount

- 6.4 The size of the proposed development has been designed at a scale which works with the full extents of the site and also reflects the identified constraints.
- 6.5 A full layout showing the proposed development is enclosed with the application but in summary it will include 18,495 x 540W solar panels, a total of 4 low voltage (LV cabins) each with an open-air transformer would be installed within the arrays as well as high voltage (HV) switchgear, approximately 43 inverters mounted onto the back of the arrays, 2.4m high deer fence, CCTV system and an education building set into the slope of the site comprising a mono pitch design with a green roof to minimise its impact upon the surrounding area. It measures 20m x 12m x 4.7 m in height (at the highest point) and is positioned to the north of the proposed solar farm. Internally the building accommodates a field classroom with associated storage and toilets. The building elevations would be finished in larch cladding with UPVC windows and doors. Vehicular access is provided via the existing lane to the west with lay-by parking provision for circa 7 vehicles. The green roof would also accommodate solar panels.
- 6.6 Careful consideration has been given to the design of the solar farm to ensure it responds to the existing site context and has been engineered to provide a balance of functional capacity and the preservation of the environment and local amenity. At the scale proposed, the solar farm will sit comfortably within the extents of the site but at the same time retaining all of the existing landscaping. The LVTN concludes that there will be no impact on the wider landscape.

6.7 Overall the amount of development proposed is considered to be appropriate and acceptable on this site.

Layout of Development

6.8 The proposed layout is shown on the enclosed Site Layout Plan referenced C0002459_01 Site Layout Meadow_RevD.

6.9 The layout has been prepared having regard to the topography of the site and the existing features. The Proposed Development itself, being typical a typical solar scheme, has a limited height and unsubstantial massing, a visually permeable appearance and is static.

Scale

6.10 The scale and massing of the proposed development responds to the following factors:

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- The scale is required in order to make the scheme viable; and
- The scale of the equipment is dictated by the standard technology dimensions chosen in order to make the proposal work on the site.

6.11 A full set of drawings are enclosed within the application submission.

6.12 Overall it is considered that the proposed development is of an appropriate scale and will therefore be compatible with the surrounding area.

Landscape Design

6.13 A Landscape and Visual Technical Note (LVTN) of the site has been undertaken in order to determine the site's suitability for the proposed development and advise on a suitable landscape strategy in order to successfully absorb development into the surrounding landscape.

6.14 A comprehensive series of mitigation measures has been developed to avoid or reduce adverse landscape and visual effects arising from the Proposed Development, which include the following:

- Retaining as far as possible the existing structure of vegetation on the Site and managing vegetation and grassland to encourage improved biodiversity;
- Offsetting proposed panels a minimum of 15m from the Pembrokeshire Coast Path to limit the potential for close range views and reduce the impact on longer distance views;
- Provision of a new native species hedgerow along the southern edge of the eastern field of the Site. The hedgerow will be set back from the Pembrokeshire Coast Path

(and up against the proposed fence) to maximise the retention of an open buffer around the PRow and screening of the Proposed Development;

- Planting of a block of native scrub with limited tree planting within the eastern extent of the Site to reduce the impact of the Proposed Development on views from the Pembrokeshire Coast Path and longer distance views from the east;
- Refurbish/replace the existing interpretation boards in the south-east of the Site, and provide an area of new native species rich grassland to improve the experience for users of the route; and
- Remove existing scrub and dilapidated fencing on the western Site boundary and replace with native species hedgerow to improve the appearance of the boundary and screen views of the Site from the Pembrokeshire Coast Path.

6.15 The establishment of areas of scrub vegetation, and both the provision of new hedgerows as well as the improvement of existing hedgerows, and other characteristic landscape enhancements will provide positive biodiversity enhancements, as well as reinforcing existing landscaping within the site through positive management. The location and type of new landscaping has been considering in the context of the findings of the LVIA which forms part of the application submission.

Appearance

6.16 The overall appearance of the proposed development will be functional, sympathetic and in keeping with the surrounding context. The panels will be of a high standard and will be covered with non-reflective material to allow as much light as possible through to the PV cells and minimise glare. A glint and glare study undertaken by Pager Power found that there are no significant impacts upon surrounding dwellings and therefore mitigation is not required.

6.17 Full details of the proposed development including the boundary fencing are enclosed with the application documents.

Access and Movement

6.18 The existing site access will be maintained which is via the Western Perimeter Road which is off the B432.

6.19 A full assessment of the existing access and likely traffic movements that will enter and egress the site is contained within the Transport Statement (TS) that accompanies the application submission. The TS demonstrates that the existing access achieves the required visibility onto the highway to ensure that HGVs and other vehicles associated with the

development can safely enter and exit the site. Minor improvements will be made to the access, such as the provision of an area of hardstanding within the application site for vehicles to manoeuvre in and over which they would drive prior to accessing the public highway to reduce the risk of mud being trafficked onto the public highway.

- 6.20 The TS also makes clear that during the 24 week construction phase of the development, there would be a temporary increase in traffic but is only five two way traffic movements per day. Once constructed and the proposed development becomes fully operational, there would be a minimal increase in traffic volumes with operational traffic expected to access the site on two occasions per month at the most.
- 6.21 The overall conclusions of the TS make it clear that the site can be safely accessed by construction and operational vehicles and at which the temporary traffic impacts during construction would be de minimal.
- 6.22 It is clear that there are no highways or transportation reasons why the proposed development should be prevented or refused.

Sustainable Design

- 6.23 The proposed development is in itself inherently sustainable as it has been designed to serve its purpose, which is to provide a significant amount of renewable electricity over the next 40 years in a very sustainable manner.

7.0 CONCLUSIONS

7.1 This Design and Access Statement describes how a scheme has been developed which meets all the technical requirements for a solar farm whilst also addressing the specific issues arising from the site and its context.

7.2 Key design and access benefits of the proposed development include the following:

- Once installed, and fully operational, the proposed development has the potential to generate circa 9.99MW of renewable energy;
- An appropriate use for the site given its low impact;
- The site benefits from existing landscaping which will be maintained and enhanced;
- One of the main reasons that this site has been chosen is its proximity to an existing grid connection point;
- An existing access point is already in place which can be utilised to facilitate the development;
- The proposed development is temporary and can easily revert back to its current state;
- The site and surrounding area will be made safer through the construction of a 2.4m high deer fence to restrict unauthorised access; and
- Significant ecology improvements are proposed throughout the scheme to encourage wildlife back onto the site.

7.3 The proposed development can be sensitively accommodated in this location whilst ensuring the preservation of local amenity, ecology and the character of the wider landscape and represents a responsive design in terms of landscape features within and surrounding the site. The introduction of landscape enhancements, particularly the provision of a new native species hedgerow.

7.4 As a result of the above considerations, it is concluded that the proposed development accords to all relevant planning policies at a national and local level.