Pre-Planning Statement

For Development at Drumroe East, Clashnagoneen and Adjacent Townlands, Cappoquinn, Co. Waterford

on behalf of Amarenco Solar Modelligo Ltd

December 2024

McCutcheon Halley

CHARTERED PLANNING CONSULTANTS

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1. Introduction

1.1 Overview

This pre-planning report has been prepared by McCutcheon Halley Planning Consultants on behalf of Amarenco Solar Modelligo Limited (Amarenco) to accompany a request for a S.182E pre-application consultation for the proposed development of a solar PV farm, 110kV on-site substation and associated 110kV grid connection route on lands at Drumroe East, Clashnagoneen and adjacent townlands, Co. Waterford (fig. 1). Amarenco aim to be in a position to submit a planning application for the proposed development by the end of quarter two of 2025.

Figure 1: *Approximate location of permitted solar farms in context of Waterford County*

The purpose of this report is to outline the details of the proposed development and relevant planning history, the need for the development, the planning policy context and the deliverables proposed to accompany the application. The report also seeks clarity on the appropriate consent route for the proposed development as a whole within the legislative context of the Planning and Development Act, 2000 (as amended) [PDA 2000] and the Planning and Development Act, 2024[PDA 2024] which has yet to be commenced.

1.2 Site History Context

Amarenco acquired the proposed development site from Highfield Solar Ltd. in the autumn of 2023. There are three extant planning permissions associated with the lands. The particulars and current status of these permissions are outlined below:

Planning Reference No. 16/126 (Waterford City & County Council) & PL93.246902 (An Bord Pleanála):

A 10-year planning permission was granted to Highfield Solar for the construction of a Solar PV Energy development within a total site area of approximately 28.8ha at Drumroe East on the 14th November 2016. The operational period for the proposed development is for 25-years from the date of commissioning.

No construction works have been carried out to date and these lands now form part of the proposed development site, subject of this pre-application consultation.

Planning Reference No. 17/564 (Waterford City & County Council) & ABP-300004-17 (An Bord Pleanála):

A 10-year planning permission was granted to Highfield Solar Ltd for the construction of a Solar PV Energy development within a total site area of approximately 62.8ha at Clashnagoneen on the 19th February 2019. The operational period for the proposed development will be for 25-years from the date of commissioning.

No construction works have been carried out to date and these lands now form part of the proposed development site, subject of this pre-application consultation

Planning Reference No. 21/735 (Waterford City & County Council) & PL93.311670 (An Bord Pleanála):

A 10-year planning permission was granted to Highfield Solar Ltd for approx. 10km of grid connection infrastructure on the public road (N72) to connect the approved Drumroe East Solar Farm, (Planning Ref. No. 16/126) to the Dungarvan 110kV ESB Substation.

No construction works have been carried out to date. These lands now form part of Option A for the grid route subject of this pre-application consultation.

Following acquisition of the sites, Amarenco have undertaken detailed assessments of the plans and particulars associated with the extant permissions. During this assessment period it became apparent that the permitted site layout plans and development details will need to be updated to reflect the advancements in solar technology and the current offering on the market. Furthermore, given the proximity of the two previously permitted solar PV farms to each other, Amarenco have applied for a grid connection offer based on the combined MW output of the two previous permissions for the Solar PV farm elements under the project name 'Modelligo'. A response on the grid connection offer is expected in early 2025.

To facilitate the combined MW output capacity, a 110kV on-site substation and associated 110kV grid connection is now required. The previously permitted development under ABP-PL93.311670 was for a 38kV underground grid connection to connect the permitted Drumroe Solar Farm (16/126) site to the Dungarvan 110kV ESB Substation. It is no longer intended

that this grid connection will be built out. Instead, the applicant seeks permission for an underground 110kV grid connection to connect both sites via an on-site 110kV substation.

Further details on the scope of the proposed development are set out under section 2.

2. Description of Proposed Development

The proposed development can be broken down into two main elements i.e. the Solar PV farm and the 110kV substation and associated grid connection (fig. 2).

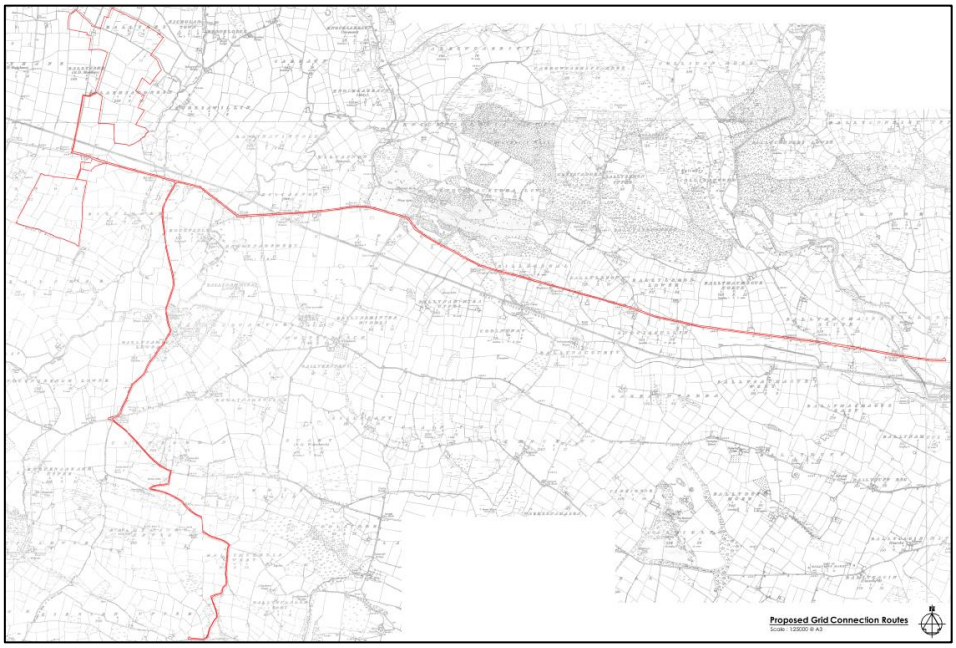

Figure 2: *Red line boundary of proposed development, including two grid route options.*

2.1 Solar PV Farm

It is currently anticipated that the proposed development will seek a 10-year permission for

- The construction of a Solar PV Farm consisting of solar photovoltaic panels on ground mounted frames
- *c.* 16 single storey transformer stations
- *c.* 16 Single storey spare parts storage containers
- Underground electrical ducting and cabling within the development site
- Internal access tracks
- Security Fencing
- CCTV
- Landscaping
- Associated development site works.
- Access comprising a new entrance to the southern site, including the substation, from the N27 and upgrades to the existing entrance to the northern parcel.

Final development details will be confirmed in advance of the planning application submission. The solar panels will be arranged within a site area covering approximately 39.3ha.

Site context

The site is located in an area which is typically rural in character with existing mature vegetation including mature trees and hedgerows. Overall, the landscape is flat but gently undulating and rural in character (fig. 3). The site is divided into two parcels, to the north and south of the N72 National Secondary Route and in close proximity to R671 Regional Road (fig. 4). The site is not within any designated landscape in relation to visual sensitivity or amenity designation and there are no scenic routes noted in the development plan in this area.

Figure 3: *View to southern parcel from entrance to northern parcel (indicative site boundary in red*

Access

The northern parcel benefits from an existing access via an unnamed road that serves approximately five residential dwellings as well as agricultural and light industrial sites. It is proposed that the existing entrance to the north of the unnamed road will be upgraded for the construction phase and will remain the operational access. A new entrance is proposed to the southern parcel for both the construction and operational phases of the development. This entrance will also provide construction and operational access to the substation.

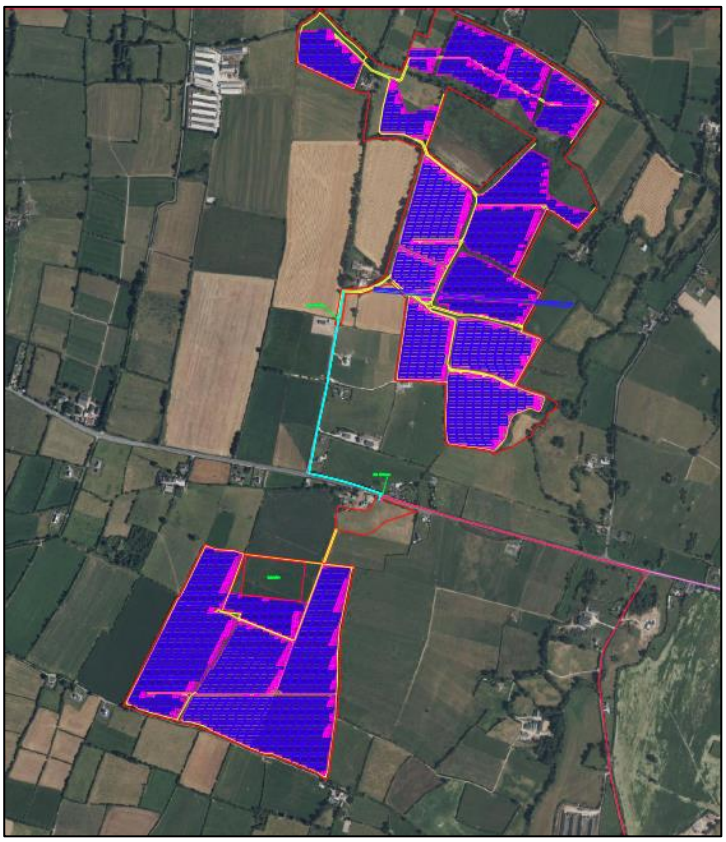

Figure 4: *PV farm layout, with substation to north of southern parcel*

2.2 110kV Substation & Grid Connection

The proposed development comprises of a 10-year permission for

- a 110kV on-site electricity substation, including 3 control building(s)
- a 110kV underground grid connection comprising of electrical ducting, cabling and joint bays within the public road.

A desktop review was carried out by Amarenco with regards to the location of the substation. The preferred location is to the north of the southern parcel of land, as indicated by a green rectangle in figure 4. This is considered favourable due to proximity to the permitted site of electrical generation which has less visual impact, set away from the N27 road and the nearby dwellings and which provided a shorter cable route when compared with other options within the vicinity of the solar farms.

The 110kV substation is based on ESBN specifications and comprises three buildings. An indicative drawing is included with this pre-planning pack:

i. The MV Switchgear Room is used to terminate connections into busbar and provides mechanical control of the connection and isolation features.
ii. The Trafo building raises the voltage from medium voltage (MV) on site to high voltage (HV) for transmission.

iii. The control building is Eirgrid's centre for control and includes welfare facilities. On completion of construction, the 110kV substation will be taken in charge by Eirgrid.

Additional considerations with regards to lighting, CCTV, lightning poles, fencing and surface water drainage will be provided by Eirgrid in advance of the planning application submission.

There are currently two potential grid connection route options being explored by Amarenco. Both options are outlined on the site location map (see fig. 2) and indicative site layout plans included with this pre-application consultation request. It is anticipated that a final route option will be determined in early 2025.

Amarenco intend to seek a grid connection through the public road, based on their experience in grid connection applications. Seeking multiple landowners along a route to connect to a substation has a low probability of success. Recent experience indicates 20-25% of landowners will not consider an overhead line crossing on their land. This would force multiple re-routes and significant effort in an instance when a preferred substation has not yet been identified.

Route Option A - An underground cable running east from the proposed 110kV substation at Drumroe East via the N72, National Secondary Route, for a distance of 11.75km passing through, or adjacent to, the townlands of Ballyhane, Clashnagoneen, Drumroe Kilcloher, Boherawillin, Bawnnavinnoge, Rockfield, Kilcannon (Hely), Ballynahemery, Kilcannon (Osbourne), Cappagh, Ballynamintra Upper, Coolnanav, Killeeshal, Ballylemon, Knockacullen, Ballylemon Lower, Ballymacmague North, Ballymacmague South to terminate at the existing 110kV Dungarvan Substation at Killadangan, Dungarvan, Co. Waterford.

Route Option B - An underground cable running east from the proposed 110kV substation at Drumroe East via the N72, National Secondary Route, for a distance of 0.8km passing through, or adjoining, the townlands of Ballyhane, Drumroe, Clashnagoneen and Kilcloher before turning south on the R671 for a distance of 2.8km passing through or adjoining the townlands of Rockfield, Bridgequarter, Ballygambon Lower, Clonkerdin, Knocknaskagh Lower and Knocknaskagh Upper and then east again via an unknown local road for a distance of 3.6km passing through or adjoining the townlands of Cool, Ballymulalla West, Knocknamona and Keereen Upper to terminate at the existing 110kV Woodhouse Substation at Glenbeg, Co. Waterford.

The cable route options are along the N27 National Secondary Route, the R671 Regional Road and an unnamed local road which are located within a continuation of the landscape that is rural in character, generally flat but gently undulating with existing mature vegetation including trees and hedgerows.

Option B includes a crossing of the R. Finisk at the Protected Structure of Whitechurch bridge (RPS no. WA750664) comprising a three-arch rubble limestone road bridge over the river from *c.*1830.

The legislative basis for seeking permission for the entirety of the proposed development under the PDA 2000 and the PDA 2024 is set out under Section 3.

3. Legislative Context

3.1 Planning & Development Act 2000 (as amended)

3.1.1 Legislative Provisions

S.182A of the PDA 2000 sets out that where a person intends to carry out development comprising of or for the purposes of electricity transmission, they shall prepare, or cause to be prepared, an application for approval of development under section 182B and shall apply to the Board for such approval accordingly. Subsection 9 states that:

> *"In this section 'transmission' in relation to electricity, shall be construed in accordance with section 2(1) of the Electricity Regulation Act 1999 but, for the purposes of this section, the foregoing expression, in relation to electricity, shall also be construed as meaning the transport of electricity by means of-*
>
> *(a) a high voltage line where the voltage would be 110 kilovolts or more, or*
>
> *(b) an interconnector, whether ownership of the interconnector will be vested in the undertaker or not."*

In section 2(1) of the Electricity Regulation Act, 1999, "transmission" is defined as:

> *The transport of electricity by means of a transmission system, that is to say a system which consists, wholly or mainly, of high voltage lines and electric plant and which is used for conveying electricity from a generating station to a substation, from one generating station to another, from one substation to another or to or from any interconnector or to final customers but shall not include any such lines which the Board may, from time to time, with the approval of the Commission, specify as being part of the distribution system but shall include any interconnector owned by the Board.*

"Distribution" is defined as:

> *The transport of electricity by means of a distribution system, that is to say, a system which consists of electric lines, electric plant, transformers and switch gear and which is used for conveying electricity to final customers.*

"Electric plant" is defined as:

> *any plant, apparatus or appliance used for, or for the purposes connected with, the generation, transmission, distribution or supply of electricity other than –*
>
> *(a) An electric line.*

3.1.2 Applicability to Proposed Development

As set out in Section 2 above, the proposed development subject of this pre-application consultation request can be broken down into two main elements and the applicability of the legislative provisions will be discussed under the relevant headings hereunder:

110kV Substation & 110kV Grid Connection

The proposed development consists of a 110kV on-site substation and an associated 110kV grid connection that will connect to the national grid via one of two possible route options as follows:

A. An underground cable running east from the proposed 110kV substation at Drumroe East via the N72, National Secondary Route, for a distance of 11.75km to the existing 110kV Dungarvan Substation at Killadangan, Dungarvan, Co. Waterford.
B. An underground cable running east from the proposed 110kV substation at Drumroe East via the N72, National Secondary Route, for a distance of 0.8km before turning south on the R671 for a distance of 2.8km and then east again via an unknown local road for a distance of 3.6km to the existing 110kV Woodhouse Substation at Glenbeg, Co. Waterford.

A "Reduced Criteria for Generation Facilities Connection Application Form to the Transmission System" was submitted to Eirgrid in 2023 which indicated a maximum export capacity required of 80 MW. This connection process is ongoing. A copy of the application form is included with this pre-planning application pack.

Section 182A(9) of the PDA 2000 sets a threshold of 110kV in order for a high voltage electricity transmission line to be considered strategic infrastructure. No threshold has been set out in respect of an associated substation. As such, it can be concluded that both grid route options currently under consideration and the associated proposed on-site substation all fall within the scope of Section 182A(9) and this element of the proposed development constitutes strategic infrastructure.

Solar PV Farm

At the time of preparing this pre-application consultation report, the legislative provisions set under S182A of the PDA 2000 are still in force.

Although the Solar PV farm, as a standalone development, does not fall within the scope of the definition for electricity transmission set out under S.182A(9) of the PDA 2000, it is noted that neither element of the project can function without the other. It is therefore considered that the PV farm,

substation and grid connection function as integrated and interdependent infrastructure.

The proposed development forms part of the electricity transmission network as it will transport electricity from the proposed on-site 110kV generation substation via the proposed 110kV transmission line to one of two potential substations, both under the ownership of ESB. In this instance, the solar PV farm is an integral component of the proposed development as it allows the on-site substation and grid connection to function as electricity transmission infrastructure within the definition set out in section 2(1) of the Electricity Regulation Act, 1999.

We consider it appropriate to submit a combined application for both elements of the proposed development given this interdependent relationship. Furthermore, the provisions set out under Section 82(1)(b) of the PDA 2024, as discussed in section 3.2.1., provides clarity that this is an appropriate approach

We welcome feedback from the Board on the appropriate consenting route(s) for the whole development in this regard.

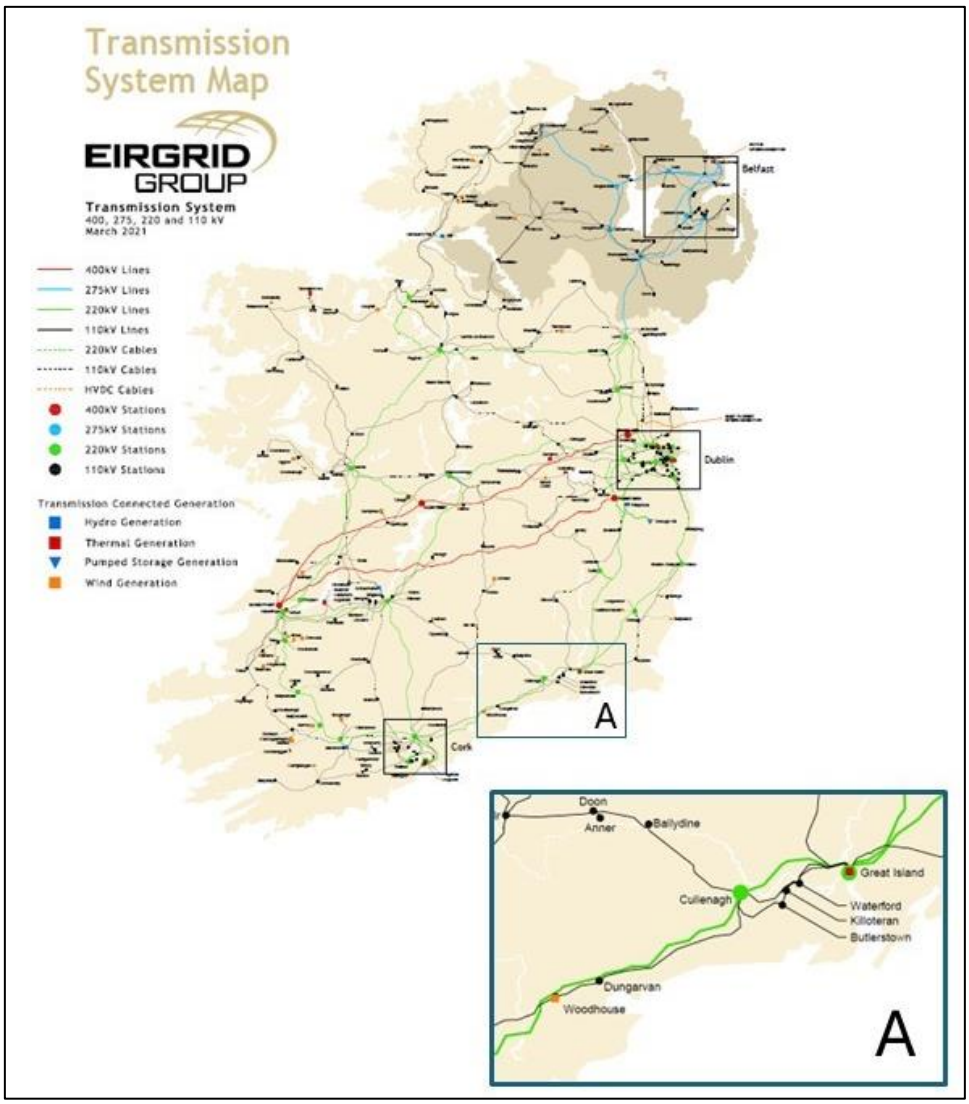

Figure 5: *Extract of Eirgrid Transmission System Map. Source: Eirgrid*

3.2 Planning & Development Act 2024

3.2.1 Legislative Provisions

Chapter 4 of Part 4 of the PDA 2024 sets out the legislative provisions for planning applications made directly to the Commission.

Section 82(1)(b) of the PDA 2024 defines "*Chapter 4 development*" to mean –

> *Subject to any regulations under section 116 in relation to any particular development or class of development that would, but for such regulations, fall within any of the following classes, development of any of the following classes if situated wholly outside an urban development zone:*
>
> *(i) Strategic infrastructure development*
>
> *(ii) Electricity transmission infrastructure development…*

Section 82(1) further defines "electricity transmission infrastructure development" to mean—

> *(a) development consisting of infrastructure for transmission within the meaning of Directive (EU) 2019/944/EC of the European Parliament and of the Council of 5 June 201910 on common rules for the internal market for electricity and amending Directive 2012/27/EU, or*
>
> *(b) development for the purposes of such transmission, and includes an interconnector within such meaning;*

Directive (EU) 2019/944/EC of the European Parliament and of the Council of 5 June 201910 on common rules for the internal market for electricity and amending Directive 2012/27/EU provides the following definitions:

"transmission" is defined as

> *the transport of electricity on the extra high-voltage and high-voltage interconnected system with a view to its delivery to final customers or to distributors, but does not include supply;*

"interconnector" is defined as

> *equipment used to link electricity systems;*

"interconnected system" is defined as

> *a number of transmission and distribution systems linked together by means of one or more interconnectors;*

In addition to the above definitions, Section 115(2) of the PDA 2024 sets out that where chapter 4 applies to part only of a development, an application for permission for the entire development shall be made to the Commission under this Chapter [4].

3.2.2 Applicability to Proposed Development

Given the legislative provisions set out under Section 115(2) of the PDA, it is our understanding that provided one part of a development comes within the scope of a Chapter 4 application then the entire development can be submitted as one application to the Commission under said provisions.

As set out above, the proposed development consists of two main elements i.e. the solar PV farm and the 110kV on-site substation and 110kV grid connection. The 110kV on-site substation and 110kV grid connection will facilitate the transport of electricity on the high-voltage interconnected system by connecting into the National Grid at either the 110Kv Dungarvan Substation or the 110kV Woodhouse Substation. A "Reduced Criteria for Generation Facilities Connection Application Form to the Transmission System" was submitted to Eirgrid in 2023 which indicated a maximum export capacity required of 80 MW. This connection process is ongoing. A copy of the application form is included with this pre-planning application pack.

Based on the above determination and the legislative provisions set out under S.115(2) of the PDA 2024, it is our understanding that an application for the entire proposed development can be submitted to the Commission for determination once this section of the PDA 2024 has commenced. We would welcome confirmation from the Board that this is the correct interpretation of the legislative provisions set out in the PDA 2024.

3.3 Transitional Arrangements

S.116(10) of the PDA 2024 sets out that

> *Where a person is served with a notice under paragraph (a) of subsection (4) of section 37B of the Act of 2000 but does not make an application under section 37E of that Act before the repeal of the said section 37E by section 6, the notice shall be deemed to be a Chapter 4 PAC notification.*

The above provisions provide clarity for applicants who have received an opinion from the Board under Section 37B(4) of the PDA 2000.

However, it is not clear from the PDA 2024 whether persons who have entered into pre-application consultation under S.182E of the PDA 2000, but who have not submitted a S.182B application for the proposed development before the repeal of said section, will be required to re-enter pre-application consultation under S.116 of the PDA 2024.

We would be grateful if the Board could provide clarity on this issue.

4. Need for the Project

4.1 National, Economic & Environmental Context

Both European and national legislative and regulatory policy outlines clear commitments and goals for a 55% reduction in carbon emissions by 2030 and climate neutrality by 2050. The roll out of a renewable energy infrastructure will play a key part in reaching these targets. The EU Solar Strategy identifies the importance of the solar sector and has outlined initiatives to accelerate the deployment of solar technologies to be adopted at national and regional levels by stream-lining the consenting process.

Amarenco Group Ltd are a result of a merger between the French-based Méthode Carré and the Irish-based Amarenco in 2018. Amarenco Group now deploys infrastructure globally that integrates photovoltaic energy generation that can be backed by storage, battery or green hydrogen research solutions. The energy solutions provide the opportunity to reduce carbon emissions and improve economic competitiveness for customers and partners. In order to maximise solar energy, Amarenco plans to grow its installed capacity to 5GW in 2025, 10GW in 2030 and 50GW in 2050, significantly contributing to the targets set out in EU and Irish legislation.

In addition to the deployment of photovoltaic installations, Amarenco recognise that as well as reducing carbon emissions, it can provide solutions for biodiversity loss, biogeophysical cycles of nitrogen and phosphorus and soil degradation within the solar parks. This is achieved through partnerships with biodiversity and ecology specialists and includes installations of micro-forests in addition to any visual mitigation and replacement of hedgerow loss.

Amarenco are committed to producing regenerative electricity in all countries where it has a presence. Regenerative electricity means electricity that is accompanied by the regeneration of local ecosystems. This addition is realised through Amarenco's ECHO programme and the support of local ecologists. The ECHO programme goes beyond regulatory requirements and is a voluntary commitment by Amarenco to restore ecosystems and improve their resilience. This approach includes site-specific actions aimed at improving soil health, carbon capture, water cycles, and biodiversity.

5. Planning Policy Context

The following sections provides an overview of the relevant EU, national, regional and local legislation and policy provisions that underpin renewable energy and associated strategic infrastructure development.

5.1 European Green Deal

5.1.1 European Green Deal & Fit for 55

The European Green Deal is underpinned by the European Climate Law, enacted in July 2019, which made binding the climate neutrality commitment. It sets a target to reduce net emissions by at least 55% by 2030 compared to 1990.

The 2019 European Green Deal sets out a low emissions growth strategy, aiming to ensure the EU achieves zero emissions by 2050. The Green Deal recognises that the transition to clean energies and technologies has become a critical incentive for economic growth and innovation and seeks to create an enabling environment. This is first and foremost about putting people at the core of the transition that is just and fair, supporting those who are more vulnerable in a clean transition and those most affected by the effects of climate change. Increasing the share of renewables in the electricity mix to replace a reliance on fossil fuels. Following Russia's invasion of Ukraine, the European Commission proposed to end the EU's reliance on imports of fossils fuels and boost its own energy autonomy, based on renewables, energy efficiency and other Green Deal policies.

The Fit for 55 initiative provides a package of legislation that brings all sectors of the EU's economy in line with the targets set out under the European Climate Law and Green Deal.

5.1.2 Renewable Energy Directive

The Renewable Energy Directive is the legal framework for the development of clean energy across all sectors of the EU economy, supporting cooperation between EU countries towards this goal.

The Renewable Energy Directive (2018/2001/EU) entered into force in December 2018 and established a binding renewable energy target for the EU of at least 32%, which was a continuation of the 20% for 2020.

Given the need to speed up the EU's clean energy transition, the Renewable Energy Directive was revised in 2023. The amending Directive EU/2023/2413 entered into force in November 2023 with an 18-month period to transpose most of the directive's provisions into national law, with a shorter deadline of July 2024 for some provisions related to permitting for renewables. The revised Renewable Energy Directive sets a renewable energy target of at least 42.5% binding at EU level by 2030 but aiming for 45%. The directive includes faster and simpler procedures for renewable energy products and their related infrastructure projects.

5.1.3 RePowerEU Plan

In response to geopolitical uncertainties and global energy market disruptions caused by Russia's invasion of Ukraine, the EC introduced the REPowerEU Plan in May 2022 to phase out dependency on Russian fossil fuel imports.

The REPowerEU Plan was published in May 2022 and builds on the implementation of the Fit for 55 proposals, which support the ambitious EU goal of achieving at least 55% less net greenhouse gas emissions by 2030 and climate neutrality by 2050 in line with the European Green Deal. The REPowerEU Plan is based on three key pillars: saving energy, producing clean energy and diversifying the EU's energy supplies with an ultimate goal of achieving 42.5% of the energy shared generated from renewables, with targets from solar to bring online at least 700 GW by 2030. The Plan includes help to enable the EU's manufacturing industry to scale-up its production of the net-zero technologies and accelerate the transition to clean energy.

5.1.4 EU Solar Strategy

As part of the REPowerEU Plan, the Commission adopted an EU Solar Energy Strategy. The Solar Strategy identifies the remaining barriers and challenges in the solar energy sector and outlines initiatives to overcome them and accelerate the deployment of solar technologies. Its states the EU solar energy has a significant potential to rapidly become a mainstream part of the power and heating systems in the EU and a main lever to achieve the European Green Deal objectives while phasing out dependence on Russian fossil fuels. Amid the energy crisis, the implementation of the Strategy and these key solar initiatives proposed for the EU and its Member States is noted to be of utmost importance.

Alongside the REPowerEU Plan, the Commission also presented a Recommendation on fast-tracking the permitting for renewable energy projects and a legislative proposal on permitting that will contribute to the further acceleration of solar energy deployment in the EU. It is acknowledged that slow and complex permitting processes are a key obstacle to unleashing the renewables revolution and for the competitiveness of the renewable energy industry.

5.1.5 IPCC Climate Change 2023

In March 2023, the UN's Intergovernmental Panel on Climate Change (IPCC) indicated in its 'Climate Change 2023 – Synthesis Report', that it is likely that global warming will exceed 1.5°C during the 21st century, thus making it a significant challenge to limit warming below 2°C. The IPCC state that the world is on a path to exceed the temperature limits of the Paris Agreement. Further, without urgent actions, the report states that climate change will increasingly threaten ecosystems, biodiversity and the livelihoods, health and well-being of current and future generations. In relation to energy systems, the report states that these actions include urgent decarbonisation through renewable energy development such as wind and solar.

5.2 National Context

5.2.1 Climate Action & Low Carbon Development (Amendment) Act 2021

Ireland's Climate Action and Low Carbon Development (Amendment) Act 2001 (the Climate Act), commenced on 7th September 2021. The Climate Act places on a statutory basis 'the National Climate Objective', that "*the State, so as to reduce the extent of further global warming, pursue and achieve, by no later than the end of year 2050, the transition to climate resilient, biodiversity rich, environmentally sustainable and climate neutral economy*". The Climate Act also provides for a 51% reduction in greenhouse gases by 2030 compared to 2018 levels, and puts in place a rigorous governance structure, including a system of carbon budgeting, sectorial emissions ceilings, a national adaptation framework, sectoral adaptation plans and annually updated Climate Action Plans, to ensure that Ireland achieves its national, EU and international climate commitments in the near- and long-term. In tandem with this, the Act also provides for an increase in the share of electricity generated from renewable sources to 80% over the decade (2021-2030).

Reaching climate neutrality will mean that Ireland will have no further negative impacts on the climate by mid-21st century. This represents an extremely ambitious target for Ireland to meet over the next three decades, but one which is in line with the scale and severity of climate breakdown facing the international community and which underscores Ireland's commitment to showing leadership on climate action.

5.2.2 Climate Action Plan 2024

Climate Action Plan 2024 (CAP) is the third annual update to Ireland's Climate Action Plan 2019 and the second to be prepared under the Climate Action and Low Carbon Development (Amendment) Act 2021. It builds on the introduction of carbon budgets and sectoral emissions ceilings in Climate Action Plan 2023 and sets a course for Ireland's targets to halve emissions by 2030 and reach net-zero no later than 2050. These national targets align with Ireland's obligations under EU and international treaties, most notably the Paris Agreement (2015) and the European Green Deal (2020).

The CAP states that transformational policies, measures and actions, and societal change are required to increase the deployment of renewable energy generation, strengthen the electricity grid, and meet the demand and flexibility needs required for the challenges of increasing renewable generation to supply 80% of demand by 2030 through the accelerated expansion of onshore wind and solar energy generation, developing offshore renewable generation, and delivering additional grid infrastructure.

In line with transposing the revised Renewable Energy Directive, which entered into force in November 2023, the CAP seeks to ensure that the permit-granting procedure, the planning, construction and operation of renewable energy plants, the connection of such plants to the grid, the related grid itself, and storage assets are presumed as being in the overriding

public interest in order to accelerate the deployment of renewable energy to replace fossil fuels and achieve further emissions reductions.

5.2.3 National Planning Framework – Project Ireland 2040

The Government published the National Planning Framework (NPF) in 2018. The NPF is the Government's high-level strategic plan for shaping the future growth and development Ireland until 2040. It identifies the transition to a low carbon and climate resilient society as one of the key pillars of the Plan. Section 3.4 of the NPF states that harnessing the potential of the region in renewable energy terms across the technological spectrum from wind and solar to biomass and wave energy is a key policy priority for the Southern Region.

National Policy Objective 23 provides to:

> *Facilitate the development of the rural economy through supporting a sustainable and economically efficient agricultural and food sector, together with forestry, fishing and aquaculture, energy and extractive industries, the bio-economy and diversification into alternative on-farm and off-farm activities, while at the same time noting the importance of maintaining and protecting the natural landscape and built heritage which are vital to rural tourism.*

National Policy Objective 55 seeks to:

Promote renewable energy use and generation at appropriate locations within the built and natural environment to meet national objectives towards achieving a low carbon economy by 2050.

5.2.4 Draft NPF Review 2024

The Draft NPF was published in July 2024 and focuses on the need to update the framework introduced in 2018 in order to appropriately reflect changes to Government policy that have taken place since its initial publication. These changes include policy changes relating to climate resilience via the Climate Action and Low Carbon Development (Amendment) Act 2021, which legally binds a commitment to reduce greenhouse gas emissions by 51% and increase the share of electricity generated from renewable sources tom80% over the decade (2021-2030) and to achieve net-zero emissions no later than 2050.

If the Draft NPF is adopted, the following policy objectives will have relevance:

National Policy Objective 31 provides to:

> *Facilitate the development of the rural economy, in a manner consistent with the national climate objective, through supporting a sustainable and economically efficient agricultural and food sector, together with forestry, fishing and aquaculture, energy and extractive industries, the bio-economy and diversification into alternative on-farm and off-farm activities, while at the same time noting the importance*

> *of maintaining and protecting biodiversity and the natural landscape and built heritage which are vital to rural tourism.*

National Policy Objective 71 seeks to:

> *Promote renewable energy use and generation at appropriate locations within the built and natural environment to meet national objectives towards achieving a zero-carbon economy by 2050.*

National Policy Objective 72 seeks to:

> *Support the development and upgrading of the national electricity grid infrastructure, including to support the delivery of renewable electricity generating development.*

National Policy Objective 73 seeks to:

Support an all-island approach to the delivery of renewable electricity through interconnection of the transmission grid.

5.2.5 Programme for Governance 2020 – Our Shared Future

The programme for government 2020 (PFG) outlines the strategic goals of the Irish government until 2025. The approach to a transition to a carbon neutral and climate resilience is underpinned by the European Green Deal.

The PFG sets out a commitment to an average of 7% per annum reduction in overall greenhouse gas emissions from 2021-2030, representing a 51% reduction over the decade, and to achieving net zero emissions by 2050. The implementation of the Climate Action Bill and the establishment of the Climate Action Council will ensure these targets are met. The delivery of a reliable supply of safe, secure and clean energy is an essential mechanism of the PFG that will phase out fossil fuels and play an important role in the creation of a strong and sustainable economy

5.2.6 Ireland's Transition to a Low Carbon Energy Future 2015-2030 – White Paper

The White Paper sets out the Government's plan to radical transformation Ireland's energy system to meet its climate policy objectives and to achieve a low carbon energy system by 2050. The commitments included targets to source 20% of its energy from renewables, including solar, by 2020, in line with the EU targets at the time.

The paper further sets out an objective to accelerate the development and diversification of renewable energy production and increase the country's output of electricity from renewable sources, and section 137 of the White Paper outlines the role of solar in achieving the targets:

> *Solar photovoltaic (PV) technology is rapidly becoming cost competitive for electricity generation, not only compared with other renewables but also compared with conventional forms of generation. The deployment of solar in Ireland has the potential to increase energy security, contribute to our*

renewable energy targets, and support economic growth and jobs. Solar also brings a number of benefits like relatively quick construction and a range of deployment options, including solar thermal for heat and solar PV for electricity.

5.2.7 Renewable Electricity Support Scheme (RESS)

The RESS provides subsidies to renewable electricity projects in Ireland. The RESS is a government initiative is operated as a series of competitive renewable energy auctions, delivered by the department of Environment, Climate and Communications (DECC), with support of Commission for Regulation of Utilities (CRU) and EirGrid, the transmission System Operator (TSO).

The RESS initiative seeks to deliver a broad range of policy objectives, including:

- Provide pathways and supports for communities to participate in renewable energy projects;
- Increase technology diversity by broadening the renewable electricity technology mix;
- Deliver an ambitious renewable electricity policy to 2030;
- Increase energy security, energy sustainability and ensure the cost effectiveness of energy policy.

An updated schedule of RESS auctions was published in March 2023 which outlines a plan for three further onshore RESS auctions to 2025 and are set out in fig. 6. The RESS 4 and 5 auctions are the largest onshore auctions to be held to date that is indicative of a large number of projects expected to progress through the RESS process to meet the 2030 targets

RESS Future Auction Schedule

Auction Type	Indicative Auction Volume (GWh)	Indicative Auction Dates	Indicative Auction Commercial Operation Dates
Offshore RESS 1	10,500 - 16,000	Q2 2023	2029
Onshore RESS 3	2,000 - 3,500	Q3 2023	2026
Offshore RESS 2.1	2,500 - 3,500	2024	2030
Onshore RESS 4	2,000 - 5,500	2024	2027
Offshore RESS 2.2	5,000 - 11,000	2025	2030
Onshore RESS 5	2,000 - 5,500	2025	2028

Figure 6: *Renewable Electricity Support Scheme (RESS) – Schedule of Future Auctions. Source: DoECC, 2023*

5.3 Regional Context

5.3.1 Southern Assembly: Regional Spatial & Economic Strategy 2020

The Regional Spatial and Economic Strategy 2020 (RSES) provides the framework through which the NPF's disruptive vision and the related Government policies and objectives will be delivered for the region. In line with international best practice, the RSES adopts a territorially differentiated and place-based approach to regional planning and economic development.

The RSES recognises the Southern Region as particularly rich in renewable energy resources and contains significant energy generation infrastructure of national and regional importance. In order to achieve national and EU targets, the RSES identifies the requirement for investment into measures to develop alternative renewable energies with greater interconnection to energy resources, increased capacity and reconfiguration of power generation facilities from fossil fuels to low carbon solutions. Further, the RSES supports a safe, secure and reliable system of transmission and distribution of electricity and seeks to promote change across business, public and residential development to achieve reduced GHG emissions.

5.4 Local Context

5.4.1 Waterford City & County Council Development Plan 2022-2028

The Waterford City and County Development Plan (CDP) is a statutory planning document, made in accordance with Section 9(1) of the Planning and Development Act 2000 (as amended) and outlines the strategic vision for the proposed planning and sustainable development of the amalgamated City and County administrative area.

Renewable Energy Policies

Chapter 6 of the CDP addresses Utilities Infrastructure, Energy and Communication which sets out a strategic objective to:

> *Promote and facilitate the provision of energy efficient, low carbon infrastructure and utilities and support infrastructure, whilst supporting industry to innovate, decarbonising the energy sector in order to contribute to a national target of zero net emissions of greenhouse gases in Ireland by 2050.*

Section 6.6 of the WDP recognises that there is significant potential to use renewable energy, including solar, to achieve climate change emission reduction targets. Table 6.2 of the WCCDP (fig. 7) identifies the Renewable Energy Generation Capacity in County Waterford as of October 2019.

Table 6. 2 Current Renewable Energy Generation Capacity, EirGrid Enduring Connection Policy 1 (ECP1) - Constraints Report for Area K Solar and Wind, Oct. 2019				
Node	Generator	Solar (MW)	Wind (MW)	Thermal (MW)
Butlerstown	Coolnagapogue Solar Farm (Ph. 1)	4		
	Beallough, Portlaw (1)		2	
	Ormond Organics Ormond Organics AD			2 1
Dungarvan	Ballycurreen (1)		5	
	Clashnagoneen Solar Farm	4		
	Drumroe East Solar Farm	15		
	Foxhall PV	4		
Rathnaskilloge	Rathnaskilloge Solar	95		
Woodhouse	Knocknamona Wind Farm		34	
	Woodhouse (1)		20	
Total[6]		122	90	3

Figure 7: *Table 6.2 of WCCDP*

Table 6.3 (fig. 8) notes that there is 220.7MW of permitted, undeveloped solar production, including the permitted development subject of this application.

Table 6.3 Renewable Energy Targets 2030					
Source	Operational (MW)	Permitted Undeveloped (MW)	Target 2030 (MW)	Shortfall (MW)	Note
On shore	62.87	34.85	211.20	113.48	Note 1
Solar	0.00	220.70	345.70	125.00	
Other, including auto production solar PV, CHP and hydro	4.68	0.00	76.40	71.72	
Total	67.55	255.55	633.30	310.20	Note 2

Figure 8: *Table 6.3 of WCCDP*

It is the policy of Waterford City and County Council to promote and facilitate a culture of adopting energy efficiency/ renewable energy technologies and energy conservation and seek to reduce dependency on fossil fuels thereby enhancing the environmental, social and economic benefits to Waterford City and County.

Policy Objective UTL 13 seeks to:

> *Promote and encourage the use of renewable energy, and low carbon resources, namely solar photovoltaic, geothermal, heat pumps, district heating, solar thermal, hydro, tidal power, offshore and onshore wind, biomass as well as micro-generation among business, agriculture, education, health, and other sectors.*
>
> *At initial design stage full consideration should be given to reasonable alternatives and existing infrastructural assets. In this regard environmental assessments should address reasonable alternatives for the location of new energy developments, and where existing infrastructural assets such as sub-stations, power lines and roads already exist within*

proposed development areas, then such assets should be considered for sustainable use by the proposed development where the assets have capacity to absorb the new development.

All planning applications for Renewable Energy Projects such as wind farms and solar farms shall be accompanied by a Decommissioning and Restoration Plan (DRP) consistent with the Wind Energy Guidelines 2006 or any update thereof. Issues to be addressed shall include details of proposed restorative measures, the removal of above ground structures and equipment, the restoration of habitats, landscaping and/or reseeding roads etc.

Promoting, encouraging, ensuring, and facilitating community engagement, participation and implementation of in renewable energy projects.

Volume 2 of the CDP relates to development management. Policy Objective DM 31 (fig. 9) has regard to the development management of solar farms, noting that at present, there are no national policy guidelines for solar farms. In the assessment of any applications for solar farms, the Council will consider such applications in accordance with the following criteria:

Policy Objective DM 31 Criteria:
○ The Waterford Landscape and Seascape Character Assessment.
○ Visual impact particularly on raised/elevated sites.
○ Archaeological Impact Assessment and Heritage Impact Assessment.
○ Zone of visual influence, and visual impact of the structures.
○ Glint and glare report and potential impact on adjoining road networks and dwellings.
○ Construction impacts, including road access and impact on road network serving the site during the construction phase (A pre and post construction impact report may be required).
○ Incorporation of security measures – use of CCTV/surveillance cameras and security fencing, fencing proposals should be appropriate for wildlife through-access.
○ The suitability/strength of the grid and accessibility to it.
○ The suitability of the site, having regard to other land use policies, including the need to protect areas of important built and natural heritage.
○ Impact on drainage patterns and water tables.
○ Incorporation of green infrastructure elements and opportunities provided to enhance/ improve biodiversity and biodiversity linkages,
○ Decommissioning of obsolete infrastructure and after-use.

Figure 9: *Development management of solar farms extracted from WCCDP*

Grid Connection & Electricity Cabling Policies

Where undergrounding of cables is being pursued, Policy Objective UTL 19 outlines that proposals should demonstrate that environmental impacts including the following are minimised:

> *Where undergrounding of cables is being pursued, proposals should demonstrate that environmental impacts including the following are minimised:*
> - *Habitat loss as a result of removal of field boundaries and hedgerows (right of way preparation) followed by topsoil stripping (to ensure machinery does not destroy soil structure and drainage properties).*
> - *Short to medium term impacts on the landscape where, for example, hedgerows are encountered;*
> - *Impacts on underground archaeology.*
> - *Impacts on soil structure and drainage; and*
> - *Impacts on surface waters as a result of sedimentation.*

With regards a connection to the grid, Policy Objective UTL 24 addresses the electricity infrastructure:

> *Subject to appropriate environmental assessment and compliance with the policy objectives and development management standards of the development plan, the Planning Authority support and facilitate the development of a safe, secure and reliable supply of electricity, associated electricity networks and transmission infrastructure to serve existing and future demand.*

Section 5.21 of Volume 2 of the development plan makes the following comment in relation to cable routes:

> *The Council will require that all cables in built up areas be placed underground. In rural areas, particularly in areas of high visual amenity, the Planning Authority may require that cables be placed underground for all or part of their length or be re-routed in order to avoid injury to amenity. The destruction of hedgerows and trees, which has become a feature of cable route maintenance, will be discouraged.*

In relation to development proposals within proximity to existing high voltage overhead electricity lines, developers/ applicants should contact the ESB in advance of completing or finalising designs etc. (i.e. prior to pre planning stage), so as to ensure that the relevant clearances are maintained from any High Voltage Overhead Electricity (HV OHL) Infrastructure.

Due regard will be made to the Spatial Planning and National Roads Guidelines for Planning Authorities 2012, relating to development affecting National Primary and Secondary roads, including motorways and associated junctions. The Guidelines set out requirements for Traffic and Transport

Assessments (TTA) and Road Safety Audits (RSA) to be used in preparing planning applications for major development affecting national roads.

Section 5.22. of Volume 2 sets out the policy context for utility facilities and infrastructure. The CDP states that the appropriate location and quality/ design of well finished buildings/ structures and high-quality landscaping schemes associated with utility infrastructure, such as electricity substations, especially those located to the front and side of buildings, is encouraged. It is recognised that utility facilities are necessary, especially for larger scale developments. However, they should be sensitively located, and aspects of green infrastructure and sustainable design shall also be incorporated, where feasible and dependent on the scale of the utility infrastructure development proposal.

Biodiversity Policies

Chapter 9 addresses Climate Action, Biodiversity and Environment, which sets out the following strategic objectives:

> *Integrate climate change and adaptation considerations into land-use policy objectives and decision-making processes to enhance our resilience to the effects of Climate Change and reducing our carbon footprint.*
>
> *We will protect, manage, and enhance the natural heritage, biodiversity, landscape and environment of Waterford City and County in recognition of its importance as a non-renewable resource, providing a unique identity and character for the City and County as a natural resource asset.*

It is a policy objective to contribute towards the protection and enhancement of biodiversity and ecological connectivity, including woodlands, trees, hedgerows, semi-natural grasslands, rivers, streams, natural springs, wetlands, the coastline, geological and geo-morphological systems, other landscape features, natural lighting conditions, and associated wildlife where these form part of the ecological network and/or may be considered as ecological corridors or stepping stones in the context of Article 10 of the Habitats Directive.

To this end, Policy Objective BD 02 provides to:

> *"Support the All-Ireland Pollinator Plan we will seek to maintain and enhance Waterford's biodiversity in favourable conservation condition so that environmental resilience and net gain in biodiversity enhancement and creation are achieved during implementation of this plan.*

Landscape Policies

Further, Policy Objective L 03 states that:

> *We will assess all proposals for development outside of our settlements in terms of the 2020 Landscape and Seascape Character Assessment (Appendix 8) and the associated*

sensitivity of the particular location. We will require a Landscape and Visual Impact Assessment (LVIA) for proposed developments with the potential to impact on significant landscape features within the City and County. Proposals for significant development (e.g. renewable energy projects, telecommunications and other infrastructure and the extractive industry) shall be accompanied by a LVIA which includes Zones of Theoretical Visibility (ZTV) which indicate the landscape impact zone within which the proposed development may be seen. There will be a presumption against developments which are located on elevated and exposed sites and where the landscape cannot accommodate such development with reasonable and appropriate mitigation.

Chapter 10 of the CDP addresses Landscape, coast/Marine and Blue Green Infrastructure, which sets out a general strategic objective to:

Protect our sensitive landscapes and seascapes which contribute to the distinctiveness of Waterford as a place.

Figure 10 sets out the units of character indicating sensitivity and the extent to which landscape will be vulnerable to change in its character.

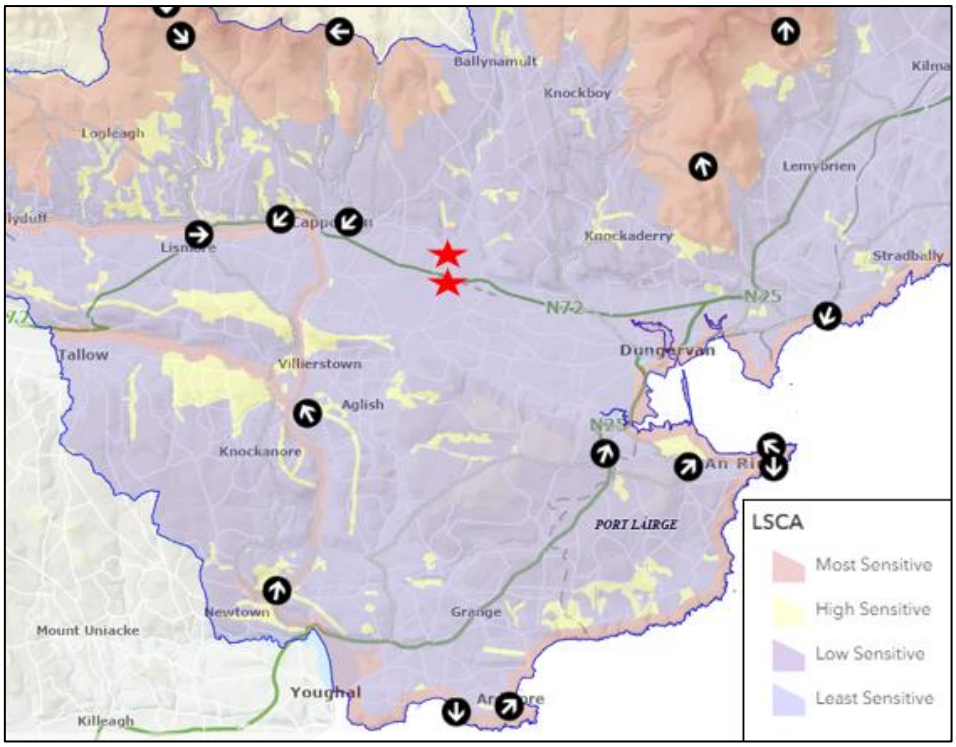

Figure 10: *Waterford Landscape and Seascape Character Assessment, extracted from WCCDP Maps, Approx. site locations in red.*

Policy Objective L 02 seeks to:

> *Protect the landscape and natural assets of the County by ensuring that proposed developments do not detrimentally impact on the character, integrity, distinctiveness or scenic value of their area and ensuring that such proposals are not unduly visually obtrusive in the landscape, in particular, in or adjacent to the uplands, along river corridors, coastal or other distinctive landscape character units.*

Further, Policy Objective L 03 states that:

> *We will assess all proposals for development outside of our settlements in terms of the 2020 Landscape and Seascape Character Assessment (Appendix 8) and the associated sensitivity of the particular location. We will require a Landscape and Visual Impact Assessment (LVIA) for proposed developments with the potential to impact on significant landscape features within the City and County. Proposals for significant development (e.g. renewable energy projects, telecommunications and other infrastructure and the extractive industry) shall be accompanied by a LVIA which includes Zones of Theoretical Visibility (ZTV) which indicate the landscape impact zone within which the proposed development may be seen. There will be a presumption against developments which are located on elevated and exposed sites and where the landscape cannot accommodate such development with reasonable and appropriate mitigation.*

In the past, surface water management has tended to focus on intervention with the use of methods such as piping, culverting and installation of underground attenuation tanks. The Council will require compliance with best practice guidance for the collection, reuse, treatment and disposal of surface waters for all future development proposals. The use of SuDs offers a solution to rain and surface water management and is applicable in both urban and rural situations and will be central to any infrastructure provision and Green Infrastructure Strategies of the Council.

For new developments, the Council will require that all developments incorporate 'Sustainable Urban Drainage Systems' (SuDS) as part of the development proposals. The systems should aim to mimic the natural drainage of a site to minimise the effect of a development on flooding and pollution of existing waterways.

Archaeological and Built Heritage Policies

It is a policy objective to ensure that development in the vicinity of a site of archaeological interest shall be designed and sited sympathetically and shall not be detrimental to the character of the archaeological site or its setting by reason of its location, scale, bulk or detailing.

It is the policy of the Council to protect, and enhance in an appropriate manner all elements of the archaeological heritage including:

- *Sites and monuments included in the Sites and Monuments Record as maintained by the Department with responsibility for the protection of Ireland's archaeological heritage.*
- *Archaeological features not as yet identified but which may be impacted on by development.*

To this end, Waterford City & County Council shall, in an appropriate manner, secure either by preservation in-situ or preservation-by-record, the archaeological heritage. In this regard priority shall be given to the preservation in-situ of any archaeological monument/site/place as the first option considered. If preservation in-situ cannot be achieved, or can only be achieved in-part, then preservation by-record of elements of the archaeological heritage will be required, this will require the full archaeological excavation and recording of the monument/site, according to best professional practice. Where excavation is required, this shall also include the preparation of appropriate reports, post-excavation analyses and publications. The costs of assessing and mitigating archaeological impacts shall form part of development costs as borne by the developer.

Roads Access Policy

Planning applications that include access on to National Roads should accord with National policy set out in the Spatial Planning and National Roads Guidelines for Planning Authorities (DoECLG, 2012) and local policy set out in the Transport and Mobility Chapter of this Development Plan.

Objective DM 45 sets out that:

> *It is therefore a policy of the Council to avoid the creation of any additional access point from new development or the generation of increased traffic from existing accesses to national roads to which speed limits greater than 60 kmh apply, in accordance with Government Policy as outlined within the Spatial Planning and National Roads Guidelines for Planning Authorities (2012) issued by the DoECLG. This provision applies to all categories of development including houses in rural areas, regardless of the housing circumstance of the applicant…*

A Road Safety Audit and Traffic Impact Assessment will be required to accompany the planning application in accordance with S 8.5 of the CDP.

Hedgerow Protection

The CDP sets out that the removal of roadside ditches and hedges should be avoided, and existing roadside hedgerows and trees should be retained as much as possible. Where satisfactory access can be achieved only by removing large stretches of roadside hedgerow/ditches/stone boundaries, the Council will require that the roadside boundary is replaced with a new hedgerow, formed from native and naturalised species.

5.4.2 Waterford City & County Renewable Energy Strategy 2016-2030

The Waterford County Development Plan incorporates the Waterford Renewable Energy Strategy 2016-2030. Section 5 addresses solar energy and notes that Waterford County is in the top 15% in terms of solar resource in Ireland and has good potential for solar energy. Section 5.3.2 notes that a 'solar farm' is a large-scale collection of grid connected solar panels used to generate electricity which is exported to the national gird via a substation.

It notes that the National Renewable Energy Statement provides a target of 600MW of solar energy for Ireland by 2020. This Renewable Energy Statement has included a projection of 84.1MW of solar energy for Waterford up to 2030 (Table 3.3 refers). It projects that this would require just over 168 hectares of land. The strategy although identifying potential and projected levels of energy does not provide any guidance on the best locations for projects. It notes the potential disadvantages in relation to solar farms including land take, impact on crop production, glint/glare issues and possible hydrological effects.

The figures outlined in the development plan should be considered as targets and not caps and, as such, are expected to be revised. Regard should be had for the draft and subsequent revised NDP that notes significant increases in renewable energy targets.

6. Planning Assessment

The key planning issues for the application are:

1. Land Use and development principles
2. Strategic locations and alternatives
3. Landscape and Visual Impact
4. Traffic Assessment
5. Archaeology and Heritage
6. Surface Water & Drainage
7. Ecology
8. Environmental Impact Assessment Screening
9. Noise
10. Security, Lighting & CCTV

Each of these will be addressed in detail in the forthcoming S.182B application. This section of the pre-planning report provides a high-level review of each of the key issues assessed under the two main components of the proposed development i.e. (i) the Solar PV Farm and (ii) the 110kV Substation & associated 110kV Grid Connection.

6.1 Land Use & Development Principles

Solar PV Farm

According to the Waterford City and County Development Plan Maps, the lands at Drumroe and Clashnagoneen are not under any specific zoning. The current land use is agricultural, with dispersed one-off residential dwellings located within the surrounding area of the proposed development site. The location of solar PV farms on large tracts of land in rural areas is supported in principle in national, regional and local planning policy.

Furthermore, the permitted solar developments at Drumroe East and Clashnagoneen demonstrate that there is an established principle for solar infrastructure at these lands.

A full review of the relevant policy context will be provided as part of any future application.

110kV Substation and 110kV Grid Connection

The 110kV on-site substation will be located adjacent to the solar PV site on the lands at Drumroe East. The development of electricity transmission infrastructure is supported in principle in local planning policy. There is an emphasis on appropriate siting and landscaping of large-scale utility infrastructure within the CDP. As such, a landscape and visual impact assessment will accompany any future planning application to the Board along with a landscape mitigation plan.

Both options under consideration for the 110kV Grid Connection are routed underground and through the public road which is supported in principle in local planning policy.

6.2 Strategic Locations & Alternatives

Solar PV Farm

The parent applications contain a summary of the site selection criteria. Under these applications, criterion was based on solar resource; residential properties & settlements; proximity to existing electricity grid infrastructure; landscape; ecological value, and archaeology. A high-level alternatives screening of the general area was also undertaken. The permitted sites were ultimately selected having regard to the listed criteria.

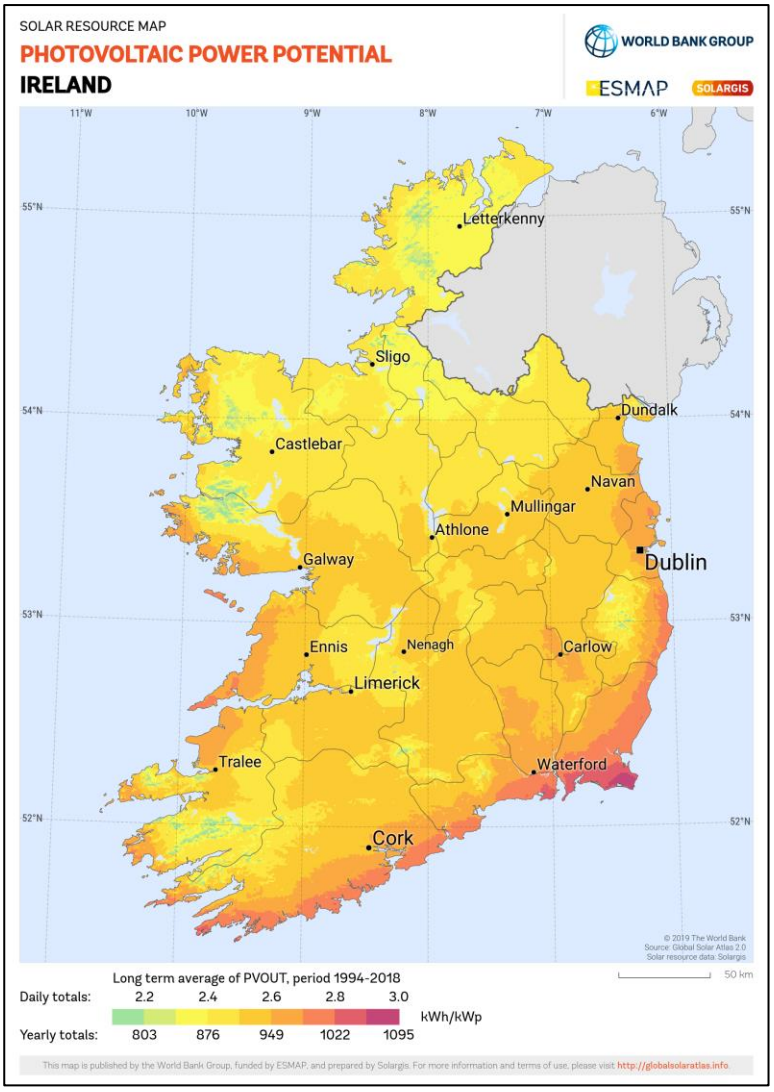

Figure 11: *Photovoltaic Power Potential for Ireland. Source: SolarGIS*

A site selection analysis carried out by Amarenco assessed the suitability of the site in terms of potential solar yield relative to the rest of the country. A solar resource assessment (fig.11) shows the suitability of the site based on the high photovoltaic potential and associated solar yield in the southeast of Ireland relative to the rest of the country. With regards to residential properties and settlements, the proposed sites are located at least 240m from any existing residences and 280m from the N72 national secondary

route. These set back distances are an increase on those already revised as part of the appeal response. Additionally, it is considered that the existing permissions for PV farms at Drumroe East and Clashnagoneen provide a precedent for solar development at these sites. The remaining criteria are addressed in greater detail in the following subsections.

110kV Substation and 110kV Grid Connection

The location of the 110kV substation on the lands at Drumroe East was considered the preferred option by the applicant following a desktop study. The study criterion was based on potential for visual impact, distance to residential receptors and distance from grid connection. Following the review, the site at Drumroe East was considered to have the least visual impact, sufficient separation distances to nearby dwellings and also provided a short cable route when compared with alternative lands available. The existing permission for the PV farm at Drumroe East provides precedent for the strategic location of renewable energy infrastructure, and this was also considered as part of the site selection process. The permission further provides for visual mitigation by way of existing and enhanced screening hedgerows.

There are currently two options under consideration for the grid connection route, as follows:

A. An underground cable running east from the proposed 110kV substation at Drumroe East via the N72, National Secondary Route, for a distance of 11.75km to the existing 110kV Dungarvan Substation at Killadangan, Dungarvan, Co. Waterford.
B. An underground cable running east from the proposed 110kV substation at Drumroe East via the N72, National Secondary Route, for a distance of 0.8km before turning south on the R671 for a distance of 2.8km and then east again via an unknown local road for a distance of 3.6km to the existing 110kV Woodhouse Substation at Glenbeg, Co. Waterford.

It is note that the Whitechurch Bridge on the proposed route option to the Woodhouse Substation is a protected structure (RPS no. WA750664). A strategy of laying the grid connection through the public road network has been adopted to avoid a protracted process of third-party consenting. As such, alternatives to a through-road grid connection have not been considered at this time.

6.3 Landscape & Visual Assessment

Solar PV Farm

The site is located in an area which is typically rural in character with existing mature vegetation including trees and hedgerows. Overall, the landscape is gently undulating and rural in character. The site is divided into two parcels, one on either side of, and in close proximity to, the N72 National Secondary Route, and R671 Regional Road. The site is not within any designated landscape in relation to visual sensitivity or amenity designation and there are no scenic routes noted in the development plan in this area.

Figure 12: *View from N7s looking towards northern section of proposed PV farm (Google)*

Further to a desk-based appraisal of the site in terms of landscape, the parent applications for Drumroe East and Clashnagoneen each included an LVIA which provides a more detailed assessment of the existing site context. The LVIA describes the Drumroe East site as generally flat but very gently undulating farmland. The LVIA further notes an existing network of hedgerows, including mature trees, that for the site boundary (fig. 12). The landscape character of the area around both PV parcels are within a low sensitivity character type and noted as having potential to absorb a wide range of new developments. There are small pockets of high sensitivity character areas located to the north of the PV sites and within a 5km radius of the sites. The CDP notes these areas as having some capacity to absorb a limited range of new developments

The landscape and visual impacts and glint and glare impacts were assessed in the parent applications for the PV farms at Drumroe and Clashnagoneen. The overall conclusion drawn in the parent applications and subsequent local authority/Board assessment in relation to the impacts was that the cumulative impacts are minimal and impacts on landscape character would be extremely limited and localised.

No significant changes have been made to the layout of the Solar PV farms proposed from those previously permitted. As can be seen from the enclosed draft layout drawing, there is a significant setback between the solar PV development and the N72. A glint and glare study will accompany any future application taking into account potential impacts on transport and residential receptors in the area. Additionally, appropriate mitigation measures will be proposed where required. Therefore, we consider that cumulative visual impacts will be minimal and impacts on landscape character would be extremely limited and localised.

In terms of visual impacts on residential amenity, any future application will take into consideration the need for supplementary planting and setbacks required. A full LVIA including a photomontage package and glint and glare study will be provided as part of any new application and will be accompanied by a corresponding landscape mitigation plan.

110kV Substation and 110kV Grid Connection

The proposed 110kV substation is set within the same landscape as the pv farms and is located to the north of the southern parcel and will be subject to the landscape mitigation planting and screening. Fig. 13 shows the existing hedgerow screening the view to the approximate location of the proposed substation from the N72.

Figure 13: *Showing existing view from N72 southwards towards proposed substation location (Google)*

As it is proposed to construct the 110kV Grid Connection completely underground, it is not anticipated at this stage that there would be any adverse landscape or visual impacts associated with the proposed development. There will be some adverse landscape and visual impacts associated with the construction stage of the proposed development; however, these are considered temporary / short-term and not significant within the overall context of the development.

The proposed 110kV substation and associated 110kV Grid Connection will not pose a glint and glare impact on any receptors.

A full LVIA and landscape mitigation plan will be undertaken as part of any future planning application submission to ensure any potential impact has been addressed and mitigated against, where required.

6.4 Traffic Assessments

Solar PV Farm

The site is well serviced by the national, regional and local road network. The estimated level of traffic generated during the construction phase is not considered to exceed local road network capacity or to give rise to local traffic obstruction either at the site entrance or on approach roads.

There are no changes to the site entrances and access to the two parcels remain as permitted under planning refs. 16/126 and ABP-300004-17. The northern parcel benefits from an existing access via an unnamed local road serving approximately five residential dwellings, agricultural and industrial sites. It is proposed that the entrance to the site from this access road will be upgraded as part of the development and will serve as access to the site for both the construction and operational stages. A new construction entrance to access the southern parcel was permitted under planning ref. 16/126 and will remain in place for the operational access.

The operational phase of the proposed development will generate minimal traffic movements. Operational traffic is anticipated to be less than one or two vehicles per month and will use the same existing access points to the site as the construction phase. Maintenance work on the solar array is anticipated to be required monthly from time to time but generally at quarterly intervals.

A site-specific traffic management plan would accompany any future application. Condition 8 of planning application 16/126 stipulates that construction associated traffic shall be limited to between 0800 hours and 1800 hours, Monday to Saturday. Further, the condition requires that a construction traffic route should be agreed in writing with the Planning Authority. Condition 10 of planning ref. ABP-300004-17 requires the submission and agreement of a Construction Management Plan (CMP) with the Planning Authority prior to commencement of development. It is expected that a coordinated CMP for the entire development will be submitted.

With regards to glint and glare, the Glint and Glare Report will give due consideration to roads as receptors. However, due to the setbacks and existing screening by way of existing hedgerows, glint and glare impacts on road users are not anticipated.

110kV Substation and 110kV Grid Connection

The substation is located to the north of the southern PV farm parcel and will benefit from the same entrance for both construction and operational stages. The substation is located within and forms an integral part of the transmission of the electricity generated onsite. As such, the construction and operational traffic associated with substation will be provided for within the above-mentioned CMP.

As far as possible, and subject to detailed design, the cable will be laid within the road verges to reduce disruption to traffic and road surfaces. A full Construction Traffic Management Plan, Traffic Impact Assessment and Road Safety Audit will be provided prior to construction to address traffic solutions arising from the laying of the grid connection cable along the N72, R671 and unnamed local road during the construction phase. Amarenco will seek a Roads Opening Licence in tandem once planning permission has been approved. All road surfaces, culverts, watercourses, verges and public lands will be protected during construction. In the case of any damage occurring resultant of construction shall be reinstated. A Road Condition Survey will also be carried out prior to and following the construction stage to provide a basis for reinstatement works.

6.5 Archaeology & Heritage

Solar PV Farm

Archaeological Assessments were included as part of the parent applications for the PV farms. There are no recorded archaeological monuments within the redline boundaries. The Archaeological Assessments concluded that following adherence to the proposed mitigation measures, there shall be no

residual effects on the cultural heritage resource following construction of the proposed development.

It is noted that the Sites and Monuments Records Zone (SMRZ) emanating from the Monument WA029-014 comprising an ancient road/trackway is located to the southern boundary of the southern parcel (fig. 14). It is therefore proposed that a geophysical survey and any required test trenching be carried out in the southern parcel in tandem with the application. All construction works will be supervised by a suitably qualified archaeologist.

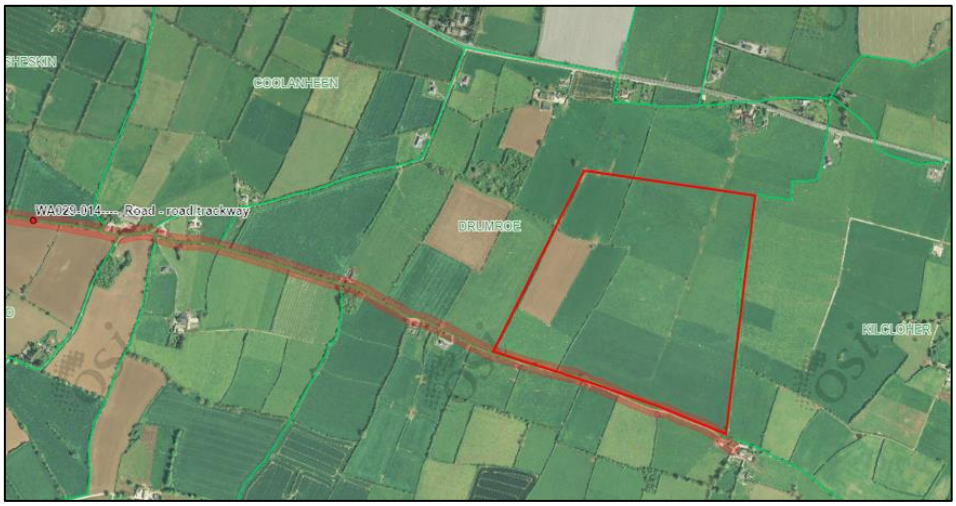

Figure 14: *SMRZ shown in relation to site, approximate boundary in red. Source: Historic Environment Viewer*

110kV Substation and 110kV Grid Connection

As the substation is located in the southern parcel it will be subject to the same geophysical survey and test trenching as the PV farm.

Option A for the grid connection route will be set within the verge of the N72 national route or under the road itself. As the grid connection is set within the road, it is not anticipated that there will be any unknown archaeological features encountered. Option B for the grid connection includes crossing the R. Finisk at Whitechurch Bridge, which is a protected structure. At this preliminary stage, it is unclear that in the event that Option B is chosen as the preferred route, whether the water course will be crossed via overhead cabling, culverts or through the road. Once the grid route is decided a full Archaeological Impact Assessment will be prepared and will include any mitigation measures deemed necessary.

6.6 Surface Water & Drainage

Solar PV Farm

With regards to drainage management, it is considered that solar farms and in particular solar racks are a water compatible development, with panels located a minimum of 700mm above ground level with no obstruction to existing surface water flows.

The original Local Authority refusal for the subsequently permitted development at Clashnagoneen was partly based on the fact that a portion of the site falling within flood zones A and B. In the appeal, the proposed development was revised to omit all inverters and tracks, except for the water course crossing, have been removed from the flood zone.

The R. Clashnagoneen runs east-west through the northern parcel. It would be proposed to construct a clear span bridge for vehicular movement throughout the northern parcel. The proposed bridge is likely to be a dry construction that will not require the need to cement or macadam other than concrete used for footings that will be located away from the riverbanks and will not impact the existing drainage regime. The construction of the clear span bridge will be carried out in accordance with Inland Fisheries Ireland guidelines and will be assessed as part of the AA screening.

A new drainage impact assessment and flood risk assessment will be prepared as a part of any further application.

110kV Substation and 110kV Grid Connection

The substation will be designed to be fully compliant with current Eirgrid specifications. The substation compound will be surfaced with 400mm free-draining crushed stone such that rainwater can percolate to ground.

The substation will include staff welfare facilities for operators. Discharges will be connected to a sealed holding tank to be emptied and disposed of off-site by a licenced contractor to an approved licenced facility. Water will be tankered onto site as required. Consequently, welfare facilities will not place additional burden on the ground drainage regime.

The grid connection route Option B crosses the R. Finisk. At this preliminary stage, it is unclear that in the event that Option B is chosen as the preferred route, whether the water course will be crossed via overhead cabling, culverts or through the road. Any crossing of a watercourse will be carried out in accordance with Inland Fisheries Ireland guidelines and will be assessed as part of the AA screening.

6.7 Ecology

Solar PV Farm

Ecological Impact Assessments (EcIA), Appropriate Assessment (AA) screenings were provided as part of the parent application. The EcIAs conclude that there will be no significant adverse impact on the ecology of the site. Further, the EcIA for Clashnagoneen assessed the potential for cumulative impacts in combination with the Drumroe development. The assessment concludes that there is no potential for cumulative or in-combination impacts when assessed in combination with the Drumroe development. The EcIAs also put forward a comprehensive range of mitigation measures that will be adhered to during the construction. It further presents opportunities to enhance the biodiversity value of the site including the reseeding of wild grasses and wildflowers upon completion.

The AA screenings conclude that there are not likely to be any significant effects on the Natura 2000 network of sites resulting from the proposed development.

A new AA screening and EcIA report will be provided as part of a new application. Amarenco have delivered strong biodiversity net gain outcomes in previous permitted and operational solar farms including bolstering hedgerows, wild grass and wildflower areas and micro forests. It is anticipated that a similar approach will be taken in any future application.

110kV Substation and 110kV Grid Connection

The 110kV substation will be subject to the same AA screening and EcIA as the PV farm parcels due to its location within the southern parcel.

The parent application for the proposed grid connection was accompanied by a Natura Impact Statement as it was concluded that a hydrological link existed between the grid route and two Natura Sites, namely the Blackwater River (Cork/Waterford) SAC and Dungarvan Harbour SPA. The NIS outlined standard best practice pollution measures for the construction stage including suitable protection for watercourses to be installed prior to commencement of construction works. It was subsequently determined that the proposed development would not have a significant effect on any qualifying features, and therefore the integrity, of any Natura 2000 site connected with the application site.

In the event that Option A is selected as the preferred route, a new NIS will be submitted as part of the application. In the event that Option B is selected as the preferred route, an AA screening will be carried out which will determine whether a stage 2 Appropriate Assessment will be required.

6.8 Environmental Impact Assessment Screening

Solar PV Development

The Planning and Development (Amendment) (No.2) Regulations 2023 (S.I. 383 of 2023) amended Part 2 of Schedule 5 of the Planning Regulations, by inserting 'Projects for the restructuring of rural landholdings' as follows:

> *"(a) Projects for the restructuring of rural land holdings, undertaken as part of a wider proposed development, and not as an agricultural activity that must comply with the European Communities (Environmental Impact Assessment)(Agriculture) Regulations 2011, where the length of field boundary to be removed is above 4 kilometres, or where recontouring is above 5 hectares, or where the area of lands to be restructured by removal of field boundaries is above 50 hectares."*

All Solar PV planning applications should now be screened against the scope of Class 1 (a) to determine whether they require an EIA or not. An EIA Screening Statement will accompany the future planning application.

Grid Connections

Class 20 of Part 1, Schedule 5 of the Planning Regulations includes:

> *"Construction of overhead electrical power lines with a voltage of 220 kilovolts or more and a length of more than 15 kilometres."*

And Class 3(b) of Part 2, Schedule 5 of the Planning Regulations includes:

> "Industrial installations for carrying gas, steam and hot water with a potential heat output of 300 megawatts or more, or transmission of electrical energy by overhead cables not included in Part 1 of this Schedule, where the voltage would be 200 kilovolts or more."

As classes of development that falls within the scope of EIA.

As the current design of the proposed development provides for a 110kV grid connection that is completely underground, it can be concluded that the grid connection elements of the proposed development would not require a mandatory or sub-threshold EIA Screening with regard to the provisions set out under Class 20 and Class 3(b) of Part 1 and Part 2 respectively in Schedule 5 of the Planning Regulations.

Notwithstanding the above, as the Solar PV farm is considered a type of development that could fall within Class 1(a) of Part 2, Schedule 5 of the Planning Regulations, both elements of the proposed development will be assessed in the EIA Screening accompanying a future planning application.

6.9 Noise Impact Assessment

Solar PV Farm

With regards to noise impacts, it is considered that this will largely be confined to the construction and decommissioning phases and short-term in nature. In the operational phase of the development, the solar panels will be completely silent. Transformers typically produce a decibel rating of approximately 50dB @ 1m without housing and under full load. This level would be significantly reduced by both housing of the transformers and distances to the nearest receptors. As noise generated correlates with solar load, there will be no noise produced at night.

110kV Substation and 110kV Grid Connection

With regards noise generated by the substation, it is considered that this will largely be confined to the construction and decommissioning phases and will be short-term in nature. During the operational phase, noise associated with the substation will be comparable to that emitted by the PV farm transformer stations. A Noise Impact Assessment can be provided as part of the application if deemed necessary.

The noise impacts for the grid connection will be entirely confined to the construction phase. Once operational, the undergrounded cable will not produce any noise.

6.10 Security, Lighting & CCTV

Solar PV Farm

A future application on behalf of Amarenco Solar Ltd would include a 2m high wire mesh, stock proof fence fixed to timber posts on 3.5m centres. Mammal access points of approximately 200mm wide x 250mm high will be placed approximately every 100m along the fence for the free access of badgers and small animals.

CCTV cameras will be installed at various locations positioned to face into the PV farm from the perimeter mounted on 4m poles.

No lighting infrastructure would be required in a future application.

110kV Substation and 110kV Grid Connection

On completion of construction, the substation will be taken in charge by Eirgrid. Additional considerations with regards to lighting, CCTV, lightning poles, fencing and surface water drainage will be provided by Eirgrid and are outside the scope of this planning application. It is unknown at this stage the extent of additional measures Eirgrid will include once they have taken charge of the substation.

No fencing, lighting or CCTV will be required for the operational stage of the grid connection.

7. Summary & Conclusion

This report, prepared by McCutcheon Halley Planning Consultants on behalf of Amarenco Solar Modelligo Ltd., outlines a request for a Section 182E pre-application consultation for a proposed solar photovoltaic (PV) farm, along with a 110kV on-site substation and associated grid connection, located in Drumroe East, Clashnagoneen, and surrounding townlands, Co. Waterford. Amarenco aims to submit a planning application by the end of Q2 2025.

The planning context to deliver enhanced renewable energy infrastructure has strengthened under evolving EU and Irish legislation, including the new Planning Act 2024. Both European and national legislative and regulatory policy outlines clear commitments and goals for a 55% reduction in carbon emissions by 2030 and climate neutrality by 2050. The roll out of a renewable energy infrastructure will play a key part in reaching these targets. The EU Solar Strategy identifies the importance of the solar sector and has outlined initiatives to accelerate the deployment of solar technologies to be adopted at national and regional levels by stream-lining the consenting process.

The permitted solar and associated grid connection development at Drumroe East and Clashnagoneen demonstrates that there is an established precedent for solar farm and utility infrastructure at these lands. We welcome the Board's feedback on the proposed development and in particular, our preferred approach to submit a combined application for both the 110kV elements and the solar farm development to An Bord Pleanála under S.182B (PDA 2000) or to An Coimisiún Pleanála as a Chapter 4 application (PDA 2024).