

PLANNING, DESIGN & ACCESS STATEMENT

Magheralin Solar Farm

NI2702
February 2023

REPORT

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1 INTRODUCTION

This Planning Statement has been prepared by RPS on behalf RES (“the Applicant”) in support of an application for Full Planning Permission for the installation and operation of a solar farm with associated infrastructure (“the Proposed Development”) on four parcels of agricultural land located south of Magheralin and southeast of Dollingstown.

1.1 Proposed Development

The application seeks Full Planning Permission for the following:

“Installation and operation of a 29.9MW solar farm including photovoltaic panels, mounting frames, transformer / inverter units, and on-site substation with associated ancillary development including security fencing, pole mounted CCTV, associated landscaping, internal access tracks, new site access, internal cabling and associated site works.” (The Proposed Development)

1.1.1 Need for Development

Northern Ireland had previously set a target for 40% of electricity consumption from renewables generated energy by 2020. Figures from the Department for the Economy (DfE) and SONI confirm that this target has been achieved.

In December 2021 the Northern Ireland Executive published the Energy Strategy for Northern Ireland – ‘The Path to Net Zero’ - setting out a vision for net zero carbon energy which entails reducing emissions from the energy we use for transport, electricity generation, industry and the built environment. A stated target to, “Meet at least 70% of electricity consumption from a diverse mix of renewable sources by 2030” was included within this document as part of the drive towards a carbon neutral 2050 society.

This commitment is in keeping with the wider UK direction of travel which includes a legal obligation to reduce greenhouse gas emissions by at least 100% of 1990 levels (net zero) by 2050 with the introduction of the Climate Change Act 2008 (2050 Target Amendment) Order 2019, which came into force on 27th June 2019. This includes reducing emissions from the devolved administrations (Scotland, Wales and Northern Ireland), which currently account for about 20% of the UK’s emissions.

Section 4.2.4.1 contained within this Report reaffirms the commitment to replace fossil fuels with renewable energy.

The context is changing rapidly, and the inescapable conclusion is that more needs to be done by all of the UK regions to deliver on international obligations and national targets on climate change. The UK Climate Change Committee 2023 Progress Report to Parliament on 28th June 2023 is a statutory report that provides a comprehensive overview of the UK Government’s progress to date in reducing emissions. That report concludes that further urgent action is required to meet obligations and to effectively address the climate change issue.

The Proposed Development will make a significant contribution to renewable energy targets and the overall objectives in respect of Net Zero in accordance with the Energy Strategy for Northern Ireland and the Climate Change Act - seeking to meet at least 80% of electricity consumption from renewable sources by 2030 (Refer to Section 4.2.4 of this Report).

The latest Electricity Consumption and Renewable Generation in Northern Ireland report was published on the 7th December 2023¹ and confirms that:

- For the 12 months to September 2023, 47.4% of electricity consumption in Northern Ireland was generated from renewable sources – a decrease on the previous 12 months; and
- Of the renewable energy generated, 83.8% was generated from wind.

It is clear therefore, that the Region has some way to go to meet the environmental commitments set out to help address the Climate emergency. There is also an over-whelming dependency on wind energy, most of

¹ <https://datavis.nisra.gov.uk/Economy/electricity-consumption-and-renewable-generation-report.html>

which blows at night. The Proposed Development will generate enough energy to power 13,600 homes and also complements the existing renewable energy mix from a source complementary to wind generation.

1.1.2 Application Documents

This Planning, Design and Access Statement forms part of the planning application package which comprises the following documentation:

Title	Author
Planning Forms (P1)	RPS
Cover Letter	RPS
Suite of Accompanying Planning Drawings	RES
Environmental Impact Assessment Screening	RPS
Planning Support, Design and Access Statement	RPS
Pre-Application Community Consultation Report	RES
Ecological Impact Assessment and Shadow Habitats Regulations Assessment	RPS
Flood Risk Assessment	RPS
Glint & Glare Study	Pager Power
Cultural Heritage Statement	John Cronin & Associates
Landscape & Visual Impact Assessment	RPS
Noise Impact Assessment	RES
Transport Statement	RPS

Table 1.1 Application Documents

It is acknowledged that this is a Major Development as per the terms of The Planning (Development Management) Regulations (Northern Ireland) 2015 (DM Regulations) in that it relates to the construction of an electricity generating station where the capacity exceeds 5 megawatts. In that context the Applicant has undertaken Pre-Application Community Consultation (PACC) as required by Section 27 of the Planning Act. The report summarising the PACC process and outcomes is submitted in support of this planning application – as set out in Table 1.1 above.

Section 3 of this Statement sets out the planning context and confirms the RPS position that Environmental Impact Assessment (EIA) should not apply to this development. Rather RPS respectfully propose that the approach to supplement the application with the accompanying suite of tailored environmental reports is appropriate and in accordance with methods of best practice.

A standalone EIA Screening Report is included as part of the Planning Application pack. The Screening Report provides consideration of the proposed development against those relevant selection criteria contained within Schedule 3 of the Planning (EIA) Regulations (Northern Ireland) 2015 and testifies to the robustness of this approach.

1.1.3 The Applicant

RES is the world’s largest independent renewable energy company and is active in onshore and offshore wind, solar, energy storage, green hydrogen, transmission and distribution. As an industry innovator for over 40 years, RES has delivered more than 23GW of renewable energy projects across the globe and supports an operational asset portfolio exceeding 12GW worldwide for a large client base. Understanding the unique needs of corporate clients, RES has secured over 1.5GW of corporate power purchase agreements (PPAs) enabling access to energy at the lowest cost. RES employs over 2,500 passionate people and is active in 14 countries.

Founded in 1981 the company are committed to working towards a zero-carbon future. Their proposed investment at this site will make a The Company a significant contribution to renewable energy targets as well as to the reduction of carbon dioxide (CO2) emissions. The Proposed Development will play a vital role in a low carbon economy producing enough clean energy to power approximately 13,600 homes.

2 PROJECT DESCRIPTION

2.1 Site Location

The site measures c.64.4ha in area and is made up of four main parcels comprising several agricultural fields which will be connected by proposed underground cabling.

The landholding upon which the development is proposed measures c. 64.43 hectares / 159.23 acres.

For ease of reference and to facilitate review, the site is referred to within this Report as being made up of four land-parcels which are located south of Magheralin and southeast of Dollingstown. From north to south lands comprise:

- Parcel 1 – Lands accessing onto Springhill Road, immediately northwest of No.22 Springhill Road, Lurgan and immediately to the rear and northeast of 66, 68 and 70-90 Inn Road, Dollingstown (c. 9.3 ha);
- Parcel 2 – Lands c.300m southeast of 15 Springhill Road, Lurgan, c.240m northwest of 117 New Forge Road, Magheralin, Lurgan, and c.400m east of 64 Dromore Road, Lurgan (c.33.3ha);
- Parcel 3 – Lands c 80m northeast of 102 Dromore Road, Waringstown, and immediately adjacent to and west of 108 Dromore Road (c.9.4ha); and
- Parcel 4 – Lands c.660m southeast of 105 Dromore Road, Donaghcloney and extending south/southeast to c.80m north/northeast of 67 Drumlin Road, Craigavon and c.70m to the rear and southwest of 119 Dromore Road, Donaghcloney. (c. 11.5 ha).

Parcels 2 and 3 will be connected via underground cables which will pass through agricultural fields utilising existing agricultural lanes where available. The northernmost land-parcel (Parcel 1) will be connected via an interconnection cable across Springhill Road and intervening agricultural lands and the second interconnection route proceeds northwards from the southern-most land parcel (Parcel 4) across Drumlin Road and through intervening agricultural lands. It is proposed to traverse the River Lagan via horizontal directional drill before crossing Dromore Road to the north and entering Parcel 3 of the site. The purpose of the interconnecting cables is to transfer energy created from inverter stations to the on-site substation which is located in the centre of the site (Parcel 3). The interconnection cable areas comprise 0.93ha.



Figure 2.1: Site Context

The lands are all located outside any limit of development defined as Greenbelt within the Craigavon Area Plan 2010, although at their northernmost extents (Parcel 1) sit immediately adjacent to and southeast of the development limits of Dollingstown. Surrounding land-uses include residential, industrial, agricultural and recreational.

Notable development in the area includes:

- Huhtamaki Fibre Packaging Plant – c. immediately adjacent to Parcel 1;
- Dollingstown FC Facilities – immediately adjacent to the boundary of and southwest of Parcel 2; and
- Polypipe – adjacent and southeast of the Dromore Road and c. 100m northwest of Parcel 4.

In addition, there are a number of one-off residential properties, typically reflective of the settlement pattern throughout Northern Ireland, some of which have associated farm complexes and agricultural buildings. A linear development of one-off houses is situated near to and west of the Proposed Development along Inn Road which extends south from Dollingstown. These houses front Inn Road facing west and are separated and screened from the site by elongated rear gardens, intervening ancillary development including garages, and a mature band of vegetation.

Other commitments on the landscape include electricity infrastructure including roadside poles and pylons, which are visible along roadsides and as they traverse fields.

There is a strong transport network near the site and in the general locality. Three access points are included as part of the proposed development opening onto Springhill Road, Dromore Road and Drumlin Road all of which are situated adjacent to the site boundary. As its nearest, the M1 is less than 4.5km north of the site.



Figure 2:2: Application site boundary

2.2 Project Summary

As set out previously, the land-holding upon which the development is proposed measures c. 64.43 hectares / 159.23 acres.

Panels will not be placed on this entire area. The area of infrastructure has emerged through a process of detailed baseline environmental assessment, site visits, constraints mapping and as a result of feedback from stakeholders during the pre-consent processes including engagement with the Council, statutory authorities, and the public.

The application brought forward is for the construction and operation of a solar farm with a proposed capacity not exceeding 29.9MW.

Key project components are listed in the bullet points below and described in greater detail within subsequent text:

- Photovoltaic (PV) Solar Panels erected on steel/aluminium frames set out in south -facing arrays;
- 1 onsite Primary 33kV Sub-station typically measuring 10.34 x 5.7 m x 6.45m h and a solar control building 8.3m x 3.45 x 4m
- 9 No. Inverter Substations typically comprises of inverter measuring 5 x 3 x 2.5m and a transformer typically measuring 4x 3 x 2.5m to be located across the site;
- Perimeter post and wire security fencing (2.4m high);
- A number of strategically located CCTV security cameras (3.5m high);
- New or upgraded access points onto Dromore Road (Centre), Drumlin Road (South), and Springhill Road (North);
- Associated internal service tracks;
- Internal and interconnecting underground cabling; and
- Temporary construction compounds.

The proposal will have an operational lifespan of 40 years after which it will be fully decommissioned. Proposed planting which would be established within the landscape at that time will be left untouched.

When operational the site will support a dual renewable/farming use and the overwhelming land area will remain agricultural. Sheep grazing will take place across the entire area and will not be impeded by the proposed infrastructure.

2.2.1 Solar Panels

Solar panels will be composed of bifacial photovoltaic cells, opaque in design to maximise the absorbency of the sun's rays and to minimise the potential for reflection or glare. The solar panels will be arranged in south facing arrays, fixed within the site. There are no moving parts and they do not move to follow the sun.

The proposed panels will measure typically 2.5m by 1.1 m. These will be mounted in frame tables at an inclination of min 10 to a max 40 degrees depending upon localised topography. Each frame table will be supported on steel/aluminium posts/frames that will be pushed or screwed into the ground to depths of up to 2.4m. The front bottom edge of the panels will be typically 0.7m above existing ground level and within a range of 500mm to 1.2m, again depending on local topography.

Panels can be arranged in either portrait or landscape orientation. Regardless of their arrangement overall panel heights from ground level will not exceed 3.5m. There is a minimum spacing of 2m between the arrays.

Example arrangements are illustrated in Plates 1 and 2 of this Report.



Plate 1: Typical Solar Panel Arrangement – Landscape Formation



Plate 2: Typical Solar Panel Arrangement – Portrait Formation

2.2.2 Mounting System

Each frame table will be supported on aluminium and steel posts/frames. Where posts are pushed into the ground this is via typical agricultural methods routinely used to erect fence posts on farms and in the rural area. Depending on ground conditions frames will be fixed to the ground by either:

- Option 1 - Single post ground fixture, which as suggested will be a single aluminium/steel frame driven into the ground;

- Option 2 - Table post ground fixtures - where frames will be fixed on dual posts driven into the ground;
- Option 3 - In cases where it is required to safeguard potential archaeological assets frames can be mounted using a shallow concrete 'shoe'.

Option 3 is typically employed where constraints are identified by archaeologists during the post planning monitoring of construction activities as part of an archaeological programme of works proposed which are typically required through applied planning conditions. This solution can also be applied where rock is encountered across the site which may prohibit the erection of the mounting system via options 1 and 2 above.

2.2.3 Connecting Cables

Connecting cables run along the back of each panel to the end of every row where they connect to the main cables which in turn connect to inverter stations and primary on-site substation. Main cables will be undergrounded.

2.2.4 Interconnection

There are two interconnection routes the purpose of which is to transfer the energy created from the on-site inverter stations to the on-site substation which is proposed in the centre of the site – Parcel 3.

One interconnection route extends from the northernmost land-parcel (Parcel 1) across Springhill Road and intervening agricultural lands, then along internal tracks within the Proposed Development until it reaches the substation.

The second interconnection route proceeds northwards from the southern-most land parcel (Parcel 4) across Drumlin Road and through intervening agricultural lands. It is proposed to traverse the River Lagan via horizontal directional drill before crossing Dromore Road to the north, and entering Parcel 3 of the site.

2.2.5 Primary Substation

The substation and control building compound will accommodate all necessary equipment to enable the solar farm electrical system to be controlled, monitored, metered and connected to the network.

The control building will take the form of a multi-compartment prefabricated structure atop a concrete foundation. Equipment to be accommodated within the substation typically include metering equipment, switchgear, transformers, the central computer system and electrical control panels.

The substation building dimensions are 10.34 x 5.7m x 6.45m H. There is also a solar control building which will be 8.3m x 3.45m x 4m. It is located within a larger compound 34x 27m comprising a permeable hardstanding area.

2.2.6 Inverter Stations

Inverter Stations will be located throughout the development area. These are small cabin-like buildings constructed on a concrete base/plinth with footprint dimensions of 5 x 3m x 2.5m, rising to a height of 3m and a transformer typically 4m x 3 x 2.5m.

Figure 11 included as part of the planning application pack demonstrates two options for placing inverter stations on the site. Option 1 is for the inverter and transformer to be placed in the open air. Option 2 is for the inverter and transformer to be housed within an inverter container unit. Either option involves placing the inverter stations atop a permeable stone surface which measures 12m x 6m.

These stations are connected to the panels by cabling (refer 2.2.3) which has been buried underground. The inverter stations convert the Direct Current electricity generated by the solar panels into Alternating Current (AC) electricity before being fed into the primary substation and then onward to the local electricity grid network.

2.2.7 Grid Connection

The grid connection point for the proposed Magheralin solar farm is likely to be to 110kV/33kV Warringstown substation, which is located on the southern outskirts of Lurgan east of the A26 Banbridge Road – please refer

to Figure 2.3 below. Connection will likely be by underground cable laid in the local road network or potentially including some third-party lands.

This connection does not form part of the planning application and will be delivered via a separate consenting process. If undertaken by a statutory undertaker, the connection would normally benefit from permitted development rights under the terms of Class C of Part 14 of the Schedule to the Planning (General Permitted Development) Order (NI) 2015.



Figure 2:3: Potential Grid Connection Route (Source: Google Earth)

2.2.8 Perimeter Fencing

For security purposes the area of development will be enclosed by 2.4m high post and wire fencing.

The materials used are chosen to be in keeping with the landscape. The fence will have mammal gates to allow continued unrestricted access for small mammals across the site.

An image of typical fencing proposed at the site is included below in Plate 3.



Plate 3: Typical Post and Wire Security Fencing

2.2.9 CCTV Cameras

For security purposes there will be CCTV cameras placed strategically throughout the development site. These will be pole mounted to heights of 3.5m, be directed along fence-lines and utilise infra-red technology.

Cameras are designed to not move either intentionally or unintentionally due to adverse weather conditions or animal activity.

Plate 4 below includes an indicative example of a typical form of CCTV cameras associated with proposals such as this.



Plate 4: Typical CCTV Camera

2.2.10 Access & Traffic

Access to the site during both construction and operation will be via new road openings:

- Onto Springhill Road at the northern site extents (Parcel 1);
- Onto Dromore Road at the central site extents (Parcel 2 and 3); and
- Onto Drumlin Road at the southern site extents (Parcel 4).

There will be c.1250 deliveries to the site across the entirety of the c.40 week construction stage. Deliveries will be via standard HGV and there will be no oversized loads associated with the proposal.

Traffic generation at the site will peak at week 10 (stone delivery) and week 20 (PV panels) of the c.40 week programme (Construction peak and delivery peak) when there is anticipated to be c. 9 HGV deliveries per day to the site.

During operation traffic generation will be negligible at the site and limited to routine maintenance and cleaning – anticipated as no more than 1 visits per week by standard van or 4x4 vehicle.

It should be noted that general public access to the site will be prohibited at all times for security purposes and to prevent theft and vandalism. There is no public access provided proposed or provided for within the application, other than for those involved in site or ongoing farming activities.

2.2.11 Internal Service Tracks

The development is utilise existing agricultural lanes for servicing purposes in so far as is reasonably possible. Access will also be achievable during construction and operation via tractor or 4 x 4 vehicles around the periphery of existing fields where buffers to field boundaries are designed into development proposals. As such the extent of proposed new access tracks is minimised. Where new tracks are required these will be permeable and of stone construction.

2.2.12 Construction Period

The proposal will be constructed across a 40 week period (worst case) - not allowing for holiday periods.

Temporary storage compounds will facilitate the construction process. It is likely these will be located in 4 separate locations across the subject site, one to serve each of the land parcels described in Section 1 of this Screening Report. The locations of the proposed temporary compounds are illustrated in the Drawing Pack that forms part of the Planning Application Pack.

The compounds will be surrounded by a 3m high chain link fence to secure the contents and will enclose:

- a. A site office;
- b. Containers to facilitate storage of panels and tools;
- c. Areas of parking;
- d. Kitchen;
- e. Chemical toilets; and
- f. An area of storage for sand to facilitate cable laying.

Toilets will be self-contained. There will be no discharge to the ground or requirement for septic tank provision. Chemical toilets will be placed within a bunded area to protect against leakages. Toilets will be disposed of off-site, as required by appropriate contractors and to appropriate licenced facilities.

An onsite fuel storage container will be surrounded by a bund wall to protect against spillages and contamination. Ground level will be finished in a proposed 300mm Type 3 stone or equivalent. The compound area will measure approximately 50m x 60m maximum although those to serve land parcels 1 and 4 are likely to be much smaller. Upon completion of construction works compound areas will be reinstated and all hardcore will be removed off site and disposed of appropriately or utilised within the tracks.

2.2.13 Operational Period

It is anticipated that the proposal will have an operating life of 40 years after which all panels and associated infrastructure will be removed and the site reinstated in accordance with a scheme to be agreed in writing with the Planning Authority at that time. This requirement is likely to be attached as a condition of compliance to any notice of planning consent.

2.2.14 Waste

The proposal will not generate any waste. Toilet facilities on-site during construction will be self-contained to be appropriately disposed of off-site by qualified contractors. A toilet facility will be proposed within the substation compound, but again this will be self-contained and disposed of off-site by approved contractors.

2.2.15 Panel Cleaning/Maintenance

Professional contractors will undertake panel cleaning using de-ionised water. Cleaning will tend to take place during times of dry weather. As per the specified PV module manufacturer guidelines, no chemicals will be used in the cleaning of the modules ensuring there will be no contaminated run-off from panel washings on.

PV modules are classed as a 'Class 2' electrical component; this means that no touchable part of the panel is capable of causing electrocution, even in the event of internal short circuit.

2.2.16 Lighting

No permanent lighting is proposed. Manually operated lights may be attached to the substation and/or inverter cabinets in the event of an emergency maintenance visit being required in the hours of darkness.

2.2.17 Decommissioning

At the end of the project's operational life the solar farm will be fully decommissioned.

The operational lifespan of the project is 40 years and over this time any landscaping associated with proposals and over this period will establish and grow to form mature hedgerows and shrubbery. All landscaping will be retained in situ.

All project elements will be removed from site and where possible will be recycled. Any waste generated during the decommissioning process will be removed and transported by a certified and licensed contractor. The site will be restored leaving no permanent visible surface trace, other than tracks. The solar panels will be removed from the site in the same way they were transported to the site originally. The cables interconnecting the panels to the electricity grid system will be de-energised and removed from the site, with any cable marker signs removed.

A decommissioning programme will be agreed with the relevant authorities prior to commencement of the required works. An alternative option at the end of the solar farm operational life cycle may be the refurbishment or replacement of components. This action would be dependent upon many factors all of which would combine to inform viability at such future date.

Any such proposal would require a new development consent application.

2.3 Design Principles

A series of design principles have informed the evolution of the project layout including:

- Undertaking development proposals cognisant of onsite physical constraints to ensure features including landscaping is retained in-situ;
- Working with the existing site topography to avoid cut and fill or regarding of land;
- Where environmental constraints are identified, retaining these in-situ;
- Integration of a comprehensive package of landscape and ecological enhancement measures as an integral project component.

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Where there is potential for minor deviations in respect of project components, for example heights of panels off the ground, in all instances the maximum/most onerous design parameter has been applied to ensure a robust "worst case scenario" assessment.

3 PROCEDURAL CONSIDERATIONS

Under Section 25 of The Planning Act (Northern Ireland) 2011 ('the 2011 Act') there is a hierarchy of developments within Northern Ireland. Any proposal can belong to either the category of 'major developments' or 'local developments.'

The Planning (Development Management) Regulations (Northern Ireland) 2015 (DM Regulations) further defines development proposals as either "Major" or "Major prescribed for the purpose of Section 26 (1) of the Planning Act (Northern Ireland) 2011" – which refers to Developments of Regional Significance. These Regulations set thresholds beyond which proposals are determined to be either Major or Regionally Significant.

The classification of the application determines the process route to be followed to obtain planning permission as well as the nature of the reports and other supporting information required to accompany the application.

Major applications are usually assessed at local council level whilst Regionally Significant applications are assessed by the Department for Infrastructure (DfI).

Notably DfI do have a power of call in over any application.

3.1 Regionally Significant Development / Major Development

Regionally significant applications are considered:

- To be of significance to the whole or a substantial part of Northern Ireland or have significant effects outside Northern Ireland; or
- To involve a substantial departure from the local development plan for the area to which it relates

In terms of Energy Infrastructure Category 2 contained within the DM Regulations thresholds advises that any project considered to be a generating station with a capacity of 5MW or more, is deemed as 'major' development and is processed by a Local Council Authority. A proposed development with a generating capacity of 30MW or more, is deemed to be 'regionally significant' and is likely to be processed by DfI. The proposal brought.

The proposal brought forward therefore constitutes a Major – although not Regionally Significant – Development.

3.1.1 Pre-Application Community Consultation

Section 27 of the Planning Act (NI) 2011 requires anyone proposing to submit a planning application for a 'major' development to undertake Pre-Application Community Consultation (PACC) in advance of submitting any planning application.

A PACC Report has been submitted as part of this planning application. The Report illustrates how:

- The consultation process undertaken by the applicant in this instance fully complies with the statutory requirements of Section 27 of the Planning Act (NI) 2011
- The applicants devised a PACC strategy that was submitted with the PAN to the relevant planning authority who confirmed that the approach was satisfactory;
- The applicant has followed the strategy and ensured that the public event was accessible to all sections of the community;
- In addition to the statutory requirement to advertise the event, the applicant also undertook targeted mail drops to the local community to provide them with relevant information on the project, with contact details of the project team should they require any further information;
- The applicant also made themselves available for follow up engagement with local residents or interested parties;
- The level of response received was proportionate with the likely impact of the project on the local community;

- Any issues raised by the community have been dealt with directly either by modification of the project design or through clarification and/or assessment of potential impacts through direct consultation and/or the commissioning of environmental/technical reports to assess those matters raised.

The Section 28 PACC Report provides clear evidence on how an effective PACC process has been undertaken through meaningful engagement with the community.

3.1.2 Design and Access Requirements

Sections 40 (3) and 86 (2) of the Planning Act (Northern Ireland) 2011 require certain planning applications be accompanied by a Design and Access Statement (D&AS). The types of planning applications which are required to be accompanied by a D&AS, and the form and content of the same, are outlined within The Planning (General Development Procedure) Order (Northern Ireland) 2015.

The application is required to be accompanied by a D&AS on the basis that it is deemed a 'Major' application as defined by the Planning Act (Northern Ireland) 2011 and the Planning (Development Management) Regulations (Northern Ireland) 2015.

Development Management Practice Note 12 which outlines the key requirements of a D&AS setting out that it should explain inter-alia:

- The design principles and concepts applied to the development;
- How issues relating to access have been dealt with; and
- How the proposals consider environmental sustainability.

The level of information and detail in a D&AS should be proportionate to the scale, complexity and nature of the application.

This Planning, Design and Access Statement fully meets the requirements and recommendations in respect of same.

3.2 Environmental Impact Assessment

Environmental Impact Assessment (EIA) is the process of compiling, evaluating and presenting all the likely significant environmental effects of a proposed development. The need to undertake an assessment is governed by EC Directive 2011/92/EU as amended by Directive 2014/52/EU. These Directives have been implemented in Northern Ireland under the terms of The Planning (Environmental Impact Assessment) Regulations (Northern Ireland) 2017 hereafter referred to as the 'EIA Regulations'.

The EIA Regulations set out Schedule 1 and 2 developments and provide thresholds pertaining to each category of developments contained therein. Proposals which breach Schedule 1 thresholds are deemed to be mandatory EIA projects. Those which breach Schedule 2 thresholds require a determination to be made as to the application of EIA.

Schedule 1 of the EIA Regulations does not apply to the development proposal.

Category 3(a) contained within Schedule 2 under the category of Energy Industry, sets out that where an application is made for "Industrial installations for the production of electricity, steam and hot water" over 0.5 hectares in area, then a formal EIA determination will be required to be undertaken by the planning authority.

3.2.1 EIA Determination

No pre-application request for an EIA screening determination was made in respect of this application. As such it is accepted that an EIA Determination will be required to be undertaken by the Council planning authority upon receipt of this application.

A screening determination under Regulation 8 must take account of:

- Any information provided by the applicant;
- The results of any environmental assessments; and
- Those selection criteria as are relevant to the proposed development.

Selection criteria are set out within Schedule 3 of the EIA Regulations.

The Project team has undertaken a systematic assessment of the potential for likely significant environmental effects to arise as a result of the development. A summary of this consideration is provided within Section 4 of this Statement which also looks at the proposal in the context of prevailing planning policy and other material considerations.

Based on that assessment, on the characteristics of the site and nature of the proposed development, it is our considered view that this Schedule 2 development will not result in significant effects on the environment and does not need to be accompanied by an Environmental Impact Assessment Report (EIAR).

Rather it is proposed that the list of individual assessments set out in Section 1.1.2 of this Report which form part of the planning application pack, provide sufficient environmental information to allow a full and proper assessment of the environmental effects of the proposal without the need for an Environmental Impact Assessment.

4 DEVELOPMENT PLAN & OTHER MATERIAL CONSIDERATIONS

4.1 Planning Policy Context

In accordance with Section (6) 4 of the Planning Act (Northern Ireland) 2011, planning applications should be determined in accordance with the local development plan, unless material considerations indicate otherwise.

Further, Section 45 of the 2011 Act lays down a number of legislative requirements that must be complied with by the council or, as the case may be, the Department in relation to the determination of planning applications and they involve the following:

- The Local Development Plan; and
- Any other material consideration, including relevant planning policy, the planning history and existing site uses and features.

In this instance the Local Development Plan is the extant Craigavon Area Plan 2010 and the emerging Local Development Plan for Armagh, Banbridge and Craigavon District Council area. In addition, the following legislative requirements and policy documents are material to the assessment of this proposal:

- National & International Obligations
- Regional Development Strategy 2035
- Strategic Planning Policy Statement (SPPS)
- Planning Policy Statement 2 – Natural Heritage (PPS2)
- Planning Policy Statement 3 – Access Movement & Parking (PPS3)
- Planning Policy Statement 6 – Planning, Archaeology and the Built Heritage (PPS6)
- Planning Policy Statement 15 – Planning & Flood Risk (PPS15)
- Planning Policy Statement 18 - Renewable Energy (PPS18)

4.2 Principle of Development

The principle of the development at this location is established by the prevailing Development Plan and other material considerations that establish a need for increased renewable energy production in Northern Ireland.

4.2.1 Development Plan

In accordance with Section 6 (4) of the Planning Act (Northern Ireland) 2011, planning applications should be determined in accordance with the local development plan, unless material considerations indicate otherwise. The Craigavon Area Plan 2010 remains the extant plan for this area.

The application site is located within the Green Belt and outside any limit of development as identified within the Craigavon Area Plan 2010. The northernmost land parcel extents sit adjacent to the development limits of Dollingstown as illustrated by Figure 4.1 below.

Within the Craigavon Area Plan there is no specific reference to the development of renewable infrastructure.

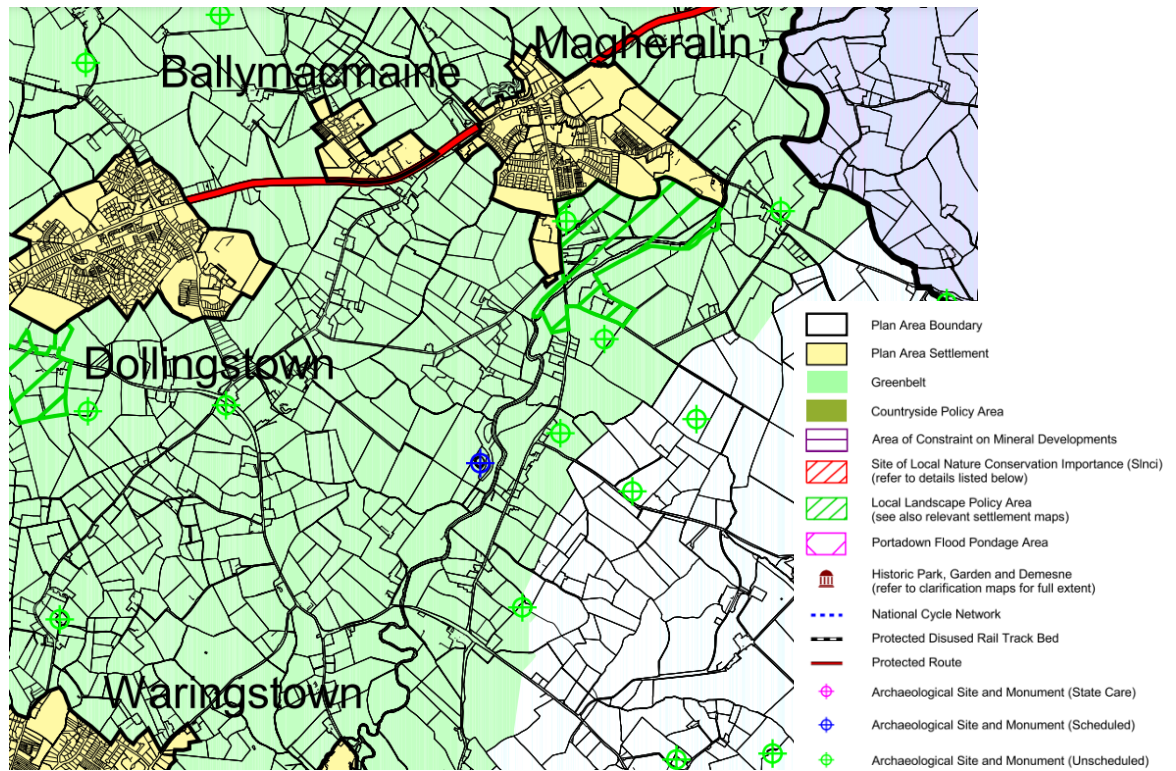


Figure 4.1: Extract from Craigavon Area Plan 2010

4.2.2 Emerging Development Plan

The Council are currently in the process of preparing a new Plan for the Borough, which will, when adopted, replace the existing Craigavon Area Plan 2010, and the existing suite of Regional Planning Policy Statements.

The Preferred Options Paper (POP) was published on the 28th March 2018 and is the first of three publication documents that the Council will issue during the LDP process.

In respect of renewable energy, Key Issue EVN 9 relates to facilitating appropriate renewable energy development. The POP acknowledges that pursuing renewable energy resources is an effective and efficient way in which we can balance the increasing demand for energy against the environmental challenge of climate change. The emerging plan supports the generation of energy from renewable sources in appropriate locations whilst affording protection to the environment including sensitive or vulnerable landscapes.

The Proposed Development is compatible in principle with the prevailing and emerging Development Plans.

4.2.3 National & International Obligations

The need for the Proposed Development is set within the context of legislation, policy and guidance and renewable energy targets set at international and national levels.

Renewable energy generation and storage is recognised as an established and important part of the solution for climate change and can help achieve the climate and energy targets set at international and national levels. The most relevant renewable energy and climate change legislation and obligations are summarised below.

4.2.3.1 Kyoto Protocol

The Kyoto Protocol brings the United Nations Framework Convention on Climate Change (UNFCCC) into consideration by committing industrialised countries and economies to limiting and reducing greenhouse gas emissions in accordance with agreed individual targets (UNFCCC, 1997). The Convention asks those countries to adopt policies and measures on mitigation and to report periodically.

4.2.3.2 The United Nations Adoption of the Paris Agreement COP21

Some 197 countries, including the UK, adopted the Paris Agreement at the 21st Conference of the Parties (COP21) in Paris in 2015 (UNFCCC, 2015). This is an agreement that seeks to reduce global greenhouse gas emissions and to limit the global temperature increase in this century to 2°C, while pursuing the means to limit this further to 1.5°C (UNFCCC, 2015). This was ratified by the UK Government in November 2016 and now forms part of UK Government Policy.

The UK's Nationally Determined Contribution (NDC) (HM Government, 2020a) under the Paris Agreement to the United Nations Framework Convention on Climate Change (UNFCCC), submitted in December 2020, commits the UK to reducing economy-wide GHG emissions by at least 68% by 2030, compared to 1990 levels.

4.2.3.3 Conference of Parties 26th Session (COP26)

At the COP26 summit in November 2021, parties voted to adopt the COP26 report, known as the Glasgow Climate Pact (UNFCCC, 2021). This included commitments to phase down the use of coal and supports a common timeframe and methodology for national commitments on emissions reductions. Countries were tasked to return in 2022 with more ambitious 2030 emissions reductions targets. COP26 revisited targets set during the Paris Agreement 2015, strengthening these limits and setting the new target to limit global warming to below 1.5°C.

4.2.3.4 The UK Climate Change Act 2008 (as amended)

In November 2008, the Climate Change Act became law requiring the UK to reduce carbon dioxide (CO₂) emissions, updated in 2019 to provide a legal basis for the target of securing a 100% reduction of greenhouse gas emissions to be achieved by 2050 (compared to 1990 levels).

The Climate Change Act commits the UK government by law to reducing greenhouse gas emissions by at least 100% of 1990 levels (net zero) by 2050. This includes reducing emissions from the devolved administrations (Scotland, Wales and Northern Ireland), which currently account for about 20% of the UK's emissions. The 100% target was based on advice from the CCC's 2019 report: 'Net Zero – The UK's contribution to stopping global warming'.

4.2.4 Regional Policy & Strategies

4.2.4.1 NI Energy Strategy

Section 1.1.1 of this document references the Energy Strategy for Northern Ireland – 'The Path to Net Zero' – confirming a target to "Meet at least 70% of electricity consumption from a diverse mix of renewable sources by 2030" was included within this document as part of the drive towards a carbon neutral 2050 society.

The Energy Strategy Action Plan, published in March 2023 reaffirms the commitment to replace fossil fuels with renewable energy.

Chapter 3 of the document, "Grow the Green Economy" sets out objectives:

- To double the size of our low carbon and renewable energy economy to more than £2bn turnover by 2030; and
- For Northern Ireland to become a leading energy decarbonisation innovation hub.

Chapter 5 "Replace Fossil Fuels with Renewable Energy" reaffirms the objectives to:

- Meet at least 80% of electricity consumption from a diverse mix of renewable sources (original 70% target superseded by the Climate Change Act);
- Replace high carbon heating sources with lower and zero carbon sources in households and businesses; and
- Support the transition to low and zero carbon fuels for vehicles

The Energy Strategy also sets objectives to create a flexible, resilient & integrated energy system:

- Develop an energy system that delivers energy decarbonisation in a secure and cost-effective way; and

- Support the development and delivery of solutions that enable people and communities to be active participants in the energy decarbonisation.

The UK Climate Change Committee 2023 Progress Report to Parliament on 28th June 2023 is a statutory report that provides a comprehensive overview of the UK Government's progress to date in reducing emissions. That report concludes that:

- Policy development continues to be too slow and the assessment of the Carbon Budget Delivery Plan (CBDP) has raised new concerns and Committee confidence in the UK meeting its medium-term targets has decreased in the past year.
- A lack of urgency. While the policy framework has continued to develop over the past year, this is not happening at the required pace for future targets.
- Immediate priority actions and policies. Action is needed in a range of areas to deliver on the Government's emissions pathway.
- Planning policy needs radical reform to support Net Zero. The planning system must have an overarching requirement that all planning decisions must be taken giving full regard to the imperative of Net Zero.

All evidence points to an urgent imperative to do more to address climate change. In that context the Proposed Development will make an important contribution to Northern Ireland's role in meeting national objectives, which are likely to see an upwards change in the region's renewable energy targets in the near future.

The proposed development therefore aligns with the latest policy and guidance noted above in helping Northern Ireland move towards a net zero economy.

4.2.4.2 Regional Development Strategy

The strategic planning policy framework in Northern Ireland (NI) is established within the Regional Development Strategy 2035 ('the RDS'), which seeks to inform and guide the distribution of development throughout NI. It takes account of key driving forces such as population growth, demographic change, transportation needs, economic changes, and climate change amongst other elements, and seeks to achieve sustainable development and social cohesion through addressing economic social and environmental issues.

The long-term vision of the RDS is as follows: 'An outward-looking, dynamic and liveable Region with a strong sense of its place in the wider world; a Region of opportunity where people enjoy living and working in a healthy environment which enhances the quality of their lives and where diversity is a source of strength rather than division.'

The Strategy also outlines Regional Guidance, which applies to all of Northern Ireland, presented under three sustainable development themes of Economy, Society and Environment. In terms of the Magheralin Solar Farm, the Strategy outlines applicable regional guidelines as follows:

- RG5: Deliver a Sustainable and Secure Energy Supply; and
- RG9: Reduce Our Carbon Footprint and Facilitate Mitigation and Adaptation to Climate Change Whilst Improving Air Quality
- RG5 acknowledges that Northern Ireland needs a robust and sustainable energy infrastructure and identifies a need to deliver a significant increase in all types of renewable electricity installations and renewable heat installations, including a wide range of renewable resources for electricity generation both onshore and offshore to meet the Region's needs.

The proposed development will increase the contribution that renewable energy can make to the overall energy mix within Northern Ireland. Furthermore, the development will reduce the regions carbon footprint and facilitate mitigation and adaption to climate change which is supported by RG9.

4.2.4.3 Strategic Planning Policy Statement (SPPS) for Northern Ireland Planning for Sustainable Development

The SPPS applies to the whole of Northern Ireland and must be considered in the preparation of Local Development Plans (LDP).

Sustainable development is stated as being at the heart of the SPPS. It recognises that, "*A central challenge in furthering sustainable development is mitigating and adapting to climate change whilst improving air quality.*"

This includes the need to reduce emissions of greenhouse gases...and to respond to the impacts brought about by climate change”.

The aim of the SPPS in respect of renewable energy is, “...to facilitate the siting of renewable energy generating facilities in appropriate locations within the built and natural environment to achieve Northern Ireland's renewable energy targets and to realise the benefits of renewable energy without compromising other environmental assets of acknowledges importance.”

Regional strategic objectives in respect of renewable energy are to:

- Ensure that the environmental, landscape, visual and amenity impacts associated with or arising from renewable energy development are adequately addressed;
- Ensure adequate protection of the region's built, natural, and cultural heritage features; and
- Facilitate the integration of renewable energy technology into the design, siting and layout of new development and promote greater application of the principles of Passive Solar Design.

4.3 Other Material Considerations

4.3.1 Planning Policy Statements

The existing suite of retained Planning Policy Statements (PPS) and the provisions contained therein will be cancelled when all Councils have adopted a new Plan Strategy for the whole of their council area. Until such times retained PPS documents remain relevant material considerations within the determination of planning applications.

Notably, any conflict between the SPPS and retained policy contained in the PPS documents must be resolved in favour of the SPPS. Where the SPPS is silent or less prescriptive on a planning policy matter that retained policies, this should not lessen the weight afforded to the retained policy.

PPS21 – Sustainable Development in the Countryside – Policy CTY1 confirms that planning permission will be granted for renewable energy projects in the countryside subject to complying with PPS18 – Renewable Energy.

In addition to PPS18, the following PPS documents are material in the determination of this application:

- Planning Policy Statement 2 – Natural Heritage (PPS2)
- Planning Policy Statement 3 – Access Movement & Parking (PPS3)
- Planning Policy Statement 6 – Planning, Archaeology and the Built Heritage (PPS6)
- Planning Policy Statement 15 – Planning & Flood Risk (PPS15)
- Planning Policy Statement 18 - Renewable Energy (PPS18)

4.3.1.1 PPS18 Renewable Energy

PPS 18 'Renewable Energy' sets out the Departments policy for development that generates energy from renewable resources (including solar generation). Within PPS18, the relevant policy consideration for the proposed development is Policy RE1 Renewable Energy Development. It notes that all development that generates energy from renewable resources will be permitted provided the proposal, and any associated buildings and infrastructure will not result in an unacceptable adverse impact on:

- a. public safety, human health or residential amenity
- b. visual amenity and landscape character;
- c. biodiversity, nature conservation or built heritage interests;
- d. local nature resources i.e. air quality or water quality;
- e. public access to the countryside.

Where any project is likely to result in unavoidable damage during its installation, operation or decommissioning, Policy RE1 requires that the application provides details of how this will be minimised and mitigated, including details of any proposed compensatory measures where required. Notably the wider

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environmental, economic and social benefits of renewable energy proposals are material considerations to be given significant weight in determining whether planning permission should be granted.

5 PLANNING ASSESSMENT

The suite of documents that accompany the planning application, as set out within Section 1.1.2 of this Statement, are prepared cognisant of the relevant operational planning policy that will apply to this application. This section of the Statement summarises the conclusions of the environmental assessments, as set out in the EIA Screening Report that forms part of the Planning Application Pack confirming there are no associated Significant Environmental Impacts associated with the proposal and that the proposed development is compliant with planning policy.

Design of the Proposed Development has evolved from the initial concept design, through the Pre-Application Community Consultation process, and in response to technical and environmental assessment.

During the community consultation process the applicant reached out to nearby residents to seek their views on the development. The applicant continued to employ a sensitive approach to layout development which including employing set-back and/or landscaping at locations across the development extents and excluding parcels from development.

This process of engagement and continuing environmental assessment, has resulted in the Proposed Development brought forward for Council consideration which has a reduced panel area, from that brought forward at PACC stage (c.40 acres less) along with a package of landscape enhancement.

5.1.1 Existing Land Use

This proposal is acceptable in land-use terms.

The development is located outside the development limit and therefore any land-use proposals are assessed against the contents of PPS21 – Sustainable Development in the Countryside. Section 3.5, PPS21 permits renewable energy developments in the rural area in accordance with the policy content of PPS18 – Renewable Energy.

PPS18 confirms renewable energy developments will be permitted providing that further to mitigation, the proposal will not result in unacceptable impacts on interests of acknowledged importance within the baseline environment. The conclusions contained within the suite of environmental reports accompanying the planning application confirm there are no unacceptable adverse environmental impacts in respect of inter-alia:

- Ecology and Ornithology;
- Archaeology and Cultural Heritage;
- Landscape and Visual Impact;
- Flood Risk and Drainage;
- Noise;
- Glint and Glare; and
- Traffic and Transport.

5.1.2 Ecology and Ornithology

The SPPS and PPS2 (Natural Heritage) both set policies to ensure the protection and conservation of a range of natural heritage interests, including: European & Ramsar designations; Protected Species; National sites of nature conservation importance; sites of local conservation importance; and Habitats, Species or Features of Natural Heritage Importance.

The site of the Proposed Development is not located within the boundary of any statutory or non-statutory designated sites of international, national or local nature conservation importance. The site however is hydrologically linked to Belfast Lough SPA, Belfast Lough Open Water SPA and Belfast Lough Ramsar site, which are designated sites of international importance and Belfast Lough Area of Special Scientific Interest, which is a designated site of national importance. These are substantial distances from the site (33km via a straight line or 45km along the route of the hydrological link).

The Application is supported by an Ecological Impact Assessment (EclA) which is informed by consultation, a desk-study and an Extended Phase 1 Habitat Survey assessing the potential impacts associated with the

Proposed Development. Appendix V and VI of the EclA comprise the findings of an Ecological Survey for Birds and a Shadow Habitats Regulations Assessment (sHRA) respectively. The sHRA examines whether the Proposed Development is likely to have a significant effect on any European site and to help inform the assessment of the Competent Authority in accordance with the requirements of The Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 (as amended), otherwise known as the “Habitats Regulations”. The EclA was further informed by an Ecological Survey for Badger which has been submitted as a confidential appendix to the EclA.

The assessment of impacts upon identified designations, habitats and species confirms that:

- Designated Sites – As per Section 4.2.1 there is a hydrological link to the designations present at Belfast Lough. The significant distance (45km hydrological path) coupled with the design characteristics of applied buffers to the Lagan, and the fact there is no discharge from the development to any watercourse, means there will be no significant effect on any designated sites;
- Habitats – The design approach to work within existing field boundaries retaining hedgerows and vegetation, the application of a 5m buffer between hedgerows and proposed infrastructure, and the applied 10m separation distance to the River Lagan means there is no significant effects on priority habitats. Construction will occur on grassland habitat which are widespread within Northern Ireland and of ecological value at a site level only. This will have no significant effect. Landscaping proposals which are an inherent part of the project will enhance ecological activity in the surrounding area;
- Bats –The design of the project has evolved to work within existing field boundaries thus avoiding direct habitat loss with the exception of hedge removal and trimming for sight-lines at access points. All trees categorised as having medium to low suitability to provide roosting habitat for bats are retained. There are set back distances of at least 10m of the River Lagan. Accordingly there is No Significant Effect on bat roosting, foraging or commuting habitat. The proposed landscape planting is likely to have a significant positive effect for bats at a site level;
- Otter – Given that the Lagan adjoins the site the Phase 1 Habitat survey was extended to examine the potential for otter. There was no evidence of otter recorded. The applied 10m buffer to the Lagan is a further safeguard and the proposal will result in no significant effects;
- Newt – A drainage channel within the site was considered in respect of its suitability to provide habitat for smooth newt, scoring below average. There were no other features within the site suitable to support newts and the species was excluded from further assessment;
- Badger - The proposed development has been designed to avoid damage and disturbance to badger setts. A 25m ecological exclusion zone will be maintained between all infrastructure and badger setts. EEZ will be maintained between all infrastructure and all badger setts located on the site;
- Birds – The application of a 5m buffer between hedgerows and proposed infrastructure, and the applied 10m separation distance to the River Lagan, together with retention of the grass sward beneath solar panels means there is no significant effects on birds. The landscaping proposals will provide additional foraging and roosting habitat for birds and have a significant positive effect for biodiversity at a site level.

5.1.3 Archaeology and Cultural Heritage

The SPPS and PPS6 (Planning, Archaeology and the Built Heritage) both set policies to ensure the protection and conservation of a range of archaeological and heritage interests both designated and non-designated. Impacts can manifest in terms of direct or indirect impacts, where proposals could have a detrimental impact to the setting of interests of acknowledged importance.

There are no recorded archaeological or cultural heritage sites overlapping the area of the Proposed Development. There are ten archaeological sites recorded on the Sites and Monuments Record (SMR) within the applied 1km study area, the nearest of which is a rath (DOW020:005), the scheduled area for which overlaps slightly with the solar farm site, although notably there is no development planned over or near to this overlap.

The Assessment that forms part of the planning application pack acknowledges that the site is set within a large and undeveloped parcel of agricultural land with the potential for previously unrecorded archaeological features and set within a wider landscape with other recorded sites and find spots. Accordingly the lands are considered to possess a moderate to high potential for unrecorded sub-surface archaeology. As such the study recommends a programme of geophysical survey followed by targeted testing post grant of any emerging

permission and prior to the commencement of works on site. This is a standard approach which is routinely applied by Planning Condition.

5.1.4 Landscape and Visual Impacts

A Landscape and Visual Impact Assessment (LVIA) has been undertaken by chartered landscape architects and is submitted in support of the proposed development. The purpose of this LVIA is to identify and determine the effects on landscape character, landscape features, visual receptors and visual amenity as a result of the works associated with the construction and operation of the Proposed Development.

As stated above in Section 4.4, there has been an iterative design approach employed to consider feedback from the PACC process as well as the result of technical and environmental assessments, resulting in the removal of c.40 acres of land proposed for development earlier in the process. Central to the consideration was the potential for landscape and visual impacts.

A Landscape & Visual Impact Assessment (LVIA) has been undertaken based on the relevant guidance described in the Guidelines for Landscape and Visual Impact Assessment, Third Edition (The Landscape Institute and Institute of Environmental Management & Assessment, 2013) (GLVIA3) and the Technical Guidance Note 06/19 Visual Representation of Development Proposals (The Landscape Institute, 2019).

The LVIA Report is submitted as supporting environmental information with the planning application.

The Proposed Development is located at the boundary of Lough Neagh Basin RLCA 14 and Down Drumlins and Holywood Hills RLCA 22. The predicted significance of landscape effect for RLCA 14 and 22 during the operational phase is Minor and not significant as predicted effects are limited in extent by the low-lying flat nature of the proposed site and surrounding topography, surrounding trees, built form in the surrounding landscape and will be barely perceptible in the wider landscape and will be locally perceived with existing large, shed type developments that are common across this RLCA locally. The Proposed Development is also not located in proximity to any of the sensitive key landscape features identified by NIEA within RLCA 14 and 22.

The Proposed Development is located within two landscape character areas identified as Donaghcloney Valley LCA 80 and Upper Ballinderry Plateau LCA 109 and immediately adjacent to Craigavon Plateau LCA (79). The predicted significance of landscape effect for LCA 79, 80 and 109 during the operational phase is Minor and not significant as predicted effects are limited in extent by the generally flat low-lying nature of the proposed site within an extensive landscape, the topographical changes across each of the LCAs, extensive screening vegetation in the wider landscape, built form to the west and north of the existing site and will not be perceptible in the wider landscape of the LCAs apart from in close proximity. The Proposed Development is also not located in proximity to any of the sensitive key landscape features identified by NIEA within LCA 79, 80 or 109.

The Proposed Development will not have any significant effect on any landscape designations including; AONB's; Historic Parks & Gardens; Ulster Way; or Way Marked Trails; due to distance from these features and/or intervening topography and vegetation.

A total of 11 viewpoints have been assessed, for both construction and operational phases of the Proposed Development and Photomontages are included as Appendix B of the LVIA. Three viewpoints that are in close proximity to the Proposed Development (VP1; VP3 and VP10) have been assessed as having significant effects during the operational phase before the proposed mitigation measures have been implemented. Once the mitigation measures have been implemented the predicted effects reduce to Moderate and no significant effects. A combination of distance of view and the screening effects of vegetation and topography reduce the significant effects for the majority of views.

Assessment of effects on residential properties has taken place for properties on Inn Road Dromore Road, New Forge Road and Drumlin Road at locations where properties may have potential filtered views in relatively close proximity. Where properties are in proximity to the Proposed Development landscape mitigation has been proposed to strengthen and reinforce existing hedgerows and trees and overall, no significant visual effects are predicted. At distances greater than 500m the Proposed Development is well screened in views and at such longer distances no significant effects are predicted for views from residential properties.

Overall, the surrounding landscape and its visual resources has the ability to accommodate the changes associated with this type of development.

5.1.5 Flood Risk and Drainage

A Flood Risk and Drainage Assessment has been undertaken and the detailed report is submitted as supporting environmental information with this planning application.

The assessment considered the four main sources of flood risk identified in Planning Policy Statement 15, namely: flooding from rivers; coastal flooding; surface water flooding; and potential flooding from impounded water bodies such as reservoirs and dams.

The assessment also took account of DfI Water & Drainage Policy Division published 'Technical Flood Risk Guidance in relation to Allowances for Climate Change in Northern Ireland' (February 2019) which sets out the DfI Rivers approach to climate change in flood risk management.

The flood map shows that small areas of the site are affected by the 1% AEP floodplain of the River Lagan. Some of the panels will be located within the identified floodplain. It is only proposed to construct the solar arrays in areas with flood depths less than 0.75m. To mitigate the flood risk, a minimum freeboard of 300mm will be applied between the solar panel and the 1% AEP flood level, ensuring a minimum panel height of 1.05m. This is illustrated on the project layout submitted as part of the planning application pack.

Where the panels are located within the river floodplain, the impact on flood risk elsewhere is considered negligible since the footprint of the stanchions on the ground is insignificant in relation to the floodplain area. The flood map does not show flooding for the other minor watercourses which flow through the site. A buffer of 5m has been used in the siting of the panels either side of any watercourse/ drain, and the panels will be above the ground by typically 700mm (within a range of 500mm to 1.2m). These measures will ensure that the risk of flooding to the panels is minimised. The substation and inverter stations must avoid flooding and are located on higher ground, outside of the floodplains. The proposed development will therefore not increase the risk of river flooding elsewhere and there is no impact on the floodplain.

The flood map shows some areas of potential surface water flooding within the site, mostly at depths of less than 0.3m although some exceeding this up to 1m. Where there are minor areas of overlap panels will be raised adequately above the surface water depths, as is common practice. The proposed development will therefore not be at risk of surface water flooding. Where the panels are located within the surface water area, again the impact on flood risk elsewhere is considered negligible since the footprint of the stanchions on the ground will be insignificant in relation to the area. The stanchions are small in cross-sectional area and spaced at a distance apart, with the actual area of pile stanchions making up less than 0.2% of the total site area. The proposed development will therefore not increase the risk of surface water flooding elsewhere.

The solar panels will not form large impermeable surfaces. The arrays are arranged in well-spaced rows with open avenues in between. In addition, there are spaces between each of the panels as they are affixed to the supporting structure, allowing rainwater to pass through the arrays and disperse evenly. These design features combine to ensure permeability within the solar panels. Rainfall will fall onto open ground as usual or run-off the panels through the gaps into the ground to be dispersed by the same routes that are currently in place. Owing to the retention of vegetation there will not be a measurably increased runoff as a result of installation of the panels. Any flows that do not infiltrate the ground will drain to the existing drainage ditches within the site. The overall drainage regime for the site will not therefore be significantly altered as a result of the proposed development. There will be no storm water drainage installed as part of the development, and no discharge consents are required.

Accordingly, the Proposed Development has a low risk of flooding and will not increase the risk of flooding elsewhere and is demonstrably in accordance with the requirements of Planning Policy Statement 15.

5.1.6 Noise

A Noise Impact Assessment (NIA) has been undertaken in respect of the proposed development and the detailed report is provided as environmental information in support of the planning application.

The noise assessment has considered the following relevant policy and guidance documents including:

- Noise Policy Statement for Northern Ireland (NI), Department of Environment (2014);
- World Health Organisation (WHO) – Guidelines for Community Noise (1999, 2009 and 2018);
- British Standard BS8233: 2014 Sound Insulation and Noise Reduction for Buildings – Code of Practice (BS, 2014); and

- British Standard BS4142:2014 Methods for Rating and Assessing Industrial and Commercial Sound (BS, 2014); and

Baseline sound levels were determined in an extended continuous survey undertaken at three locations chosen to be representative of noise-sensitive receptors (residential dwellings) in the vicinity of the site. Monitoring took place between 01st June 2023 and 07th June 2023. The assessment considered the potential for noise impacts during daytime and night-time hours, concluding that at all times there are no adverse impacts predicted.

5.1.7 Glint and Glare

A Glint & Glare Assessment was undertaken by Pager Power who are specialists in this field. The detailed report is provided as supporting environmental information with the application.

Pager Power has reviewed existing guidelines and the available studies in the process of defining its own glint and glare assessment guidance and methodology. This methodology defines the process for determining the impact on road safety, residential amenity and relevant aviation interests.

Pager Power's approach is to undertake geometric reflection calculations and, where a solar reflection is predicted, consider the screening (existing and/or proposed) between the receptor and the reflecting solar panels. The scenario in which a solar reflection can occur for all receptors is then identified and discussed, and a comparison is made against the available solar panel reflection studies to determine the overall impact.

The assessment concluded there are no significant effects on road safety or residential amenity. Where mitigation is recommended, this is provided within the landscape mitigation plan which forms part of the planning pack accompanying the application.

It is demonstrated within the assessment that:

- Roads – Solar reflections are geometrically possible towards a 2.1km section and 1.7km section of the B2 and a 2km section of the B9. No significant impacts are predicted on any of the modelled road sections;
- Dwellings – 247 dwelling locations were assessed. The modelling exercise revealed that of these 247 properties, solar reflections were geometrically possible towards 179 dwellings. They were not possible towards the remaining 68 properties;

Where solar reflections were possible the assessment did not predict any significant effects. Moderate effects were predicted at six properties. Mitigation measures in the form of landscaping - which is an inherent part of the scheme – negates these impacts. The mitigation measures recommended in the Glint and Glare report are provided within the landscape mitigation plan which forms part of the planning application pack; and

- Aviation Assessment – An assessment of Tandragee Airstrip and Tarsan Lane Microlights Airfield did not result in any predicted significant effects.

To reaffirm, the assessment concludes there are no significant glint and glare effects on road safety, residential amenity or relevant aviation interests.

5.1.8 Access, Traffic and Transport

The SPPS and PPS3 - 'Access, Movement and Parking' sets out the planning policy for vehicular and pedestrian access, transport assessment, the protection of transport routes and parking.

Relevant policies include:

- Policy AMP 1 – Creating an Accessible Environment and
- Policy AMP 2 – Access to Public Roads.

These outline the policy criteria for new access and intensification of the use of existing access onto a public road permitting those that do not adversely impact upon safety.

The development proposal has been subject to assessment as presented in the Transport Statement submitted in support of the planning application.

Three access points are proposed to serve the site during both construction and operation as follows:

- Proposed Access 1 – Springhill Road;
- Proposed Access 2 – B2 Dromore Road; and
- Proposed Access 2 – B9 Drumlin Road.

The purpose of the TS is to quantify the volumes of trips associated with the Proposed Development and establish how the local road network can accommodate this increased demand. Measures to minimise or mitigate the impact of these movements are outlined where required.

The TS was prepared in accordance with the Transport Assessment (TA) guidelines document (July 2006) published by the Department for Infrastructure (DfI).

The proposed development comprises of a construction and operational phase, with the most onerous phase for vehicular movements associated with the construction phase. During the operational phase the facility will be unmanned and vehicle movements will be associated with routine maintenance and inspection only, anticipated to comprise typically of one vehicle (Transit Van or similar) trip per week.

To determine the level of traffic on the surrounding road network in the vicinity of the site, Automatic Traffic Count (ATC) surveys were undertaken between Saturday 17th to Friday 23rd June 2023 inclusive. The ATC recorded 24hr classified traffic flows, including Heavy Good Vehicle (HGV) volumes, and speed profiles at three locations chosen to be representative of the proposed access locations.

It is anticipated that the construction phase will occur across a period of 40 weeks. Overall, the delivery of materials to site will generally be balanced uniformly across the project's construction period, however with a peak at week 10 (associated with stone delivery) and week 20 (delivery of the PV panels). During weeks 10 and 20 there is expected to be 9 daily HGV deliveries to the site. During the other weeks deliveries will balance at 6 per day. Deliveries are expected to occur regularly and will be scheduled to prevent conflict between vehicle arrivals and departures, including queueing and delays within the road network.

The proposed development requires a total of 25 construction staff across the three site portions of the scheme. Construction staff will typically arrive in teams of 4-5 persons in working vans, as per most construction sites. Allowing for 20 staff arriving in teams of 4 and 5 staff arriving in singular vehicles this equates to 10 staff vehicles arriving at the site.

The overall construction traffic (staff & HGV) equates to an increase of 2.7% on Springhill Road, and 0.8% on B2 Dromore Road and 1.6% on B9 Drumlin Road. The increase in flows is considered a negligible increase in trips and will not result in any increase in peak hour trips.

Construction increases are temporary in nature, the changes in traffic described are also entirely within the range of normal fluctuations in daily traffic that could be expected on the road network. Therefore, against the underlying capacity of these roads.

The operational phase is anticipated to have a very low traffic generation, equating to 1no. vehicle trip every week for maintenance purposes.

In addition, a CTMP will be a condition of any planning consent and would include measures to control the routing and timing of vehicles entering/egressing the Proposed Development site as to avoid adverse impacts on the local road network.

The conclusions drawn in the TS are that the impact of the traffic associated with the construction of the Proposed Development can be appropriately accommodated, with no significant adverse impact on road safety for the existing users of the surrounding road network.

5.1.9 Further Environmental Considerations

5.1.9.1 Human Health

The Proposed Development is benign in terms of risk to human health and risks are limited to those associated with traffic movements during construction or potential noise impact.

It is predicted that no significant effects will arise in respect of those traffic or noise considerations and in any event should any impacts exist, these are short term and temporary. Further consideration is provided in Section 4.4.8 (traffic) and Section 4.4.6 (noise).

5.1.9.2 Use of Natural Resources

It is proposed to place a renewable energy facility on a portion of existing agricultural land. The only water requirements will be facilitated by rainwater harvesting at the substation compound. It does not utilise fuel to operate. The facility harvests sunlight to create energy which is clean and renewable.

As per the project description set out in Section 2 of this Report, the design of the facility includes ingrained design principles including the retention of vegetation across the site, integration of separation distances to field boundaries (5m) and includes significant separation distances between panel arrays (at least 2m and often significantly more) meaning the overwhelming majority of the site will remain undisturbed. Furthermore, the Proposed Development includes embedded proposals for additional hedgerow planting as well as mitigation planting – comprising hedgerows and trees - that will enhance biodiversity and increase tree coverage in the locality.

The result of this approach is a dual use on site of renewable clean, green energy creation and retained agricultural use through sheep grazing during the entire operational period.

5.1.9.3 Production of Waste

There will be no waste generated by the operation of the Proposed Development. Toilets are self-contained.

Construction processes will require minor excavation works to facilitate cable laying and foundation preparation for the inverter stations, CCTV and substation. Excavated materials generated during cable trenching will be temporarily stored in accordance with best environmental practices and all trenches will be backfilled as work progresses across the site.

Excavated materials to facilitate foundations for inverter stations and substation buildings will be insignificant and will be reused across the site. In the unlikely event this cannot be facilitated, residual materials will be transported off-site to be disposed of by suitably accredited waste contractors.

Project components such as solar panels will be manufactured elsewhere and transported to site for installation only, meaning there is no waste generated.

At the end of its lifecycle all project components will be decommissioned in accordance with binding regulations at that time and recycled where possible.

5.1.9.4 Pollution and Nuisances

There are no negative air quality impacts associated with the proposal other than those associated with vehicle movements during construction. These will not be significant or lead to any damaging air quality effects within the area. The project has the capacity to create enough clean renewable electricity to power 13,600 homes, contributing to Net Zero targets and leading to an annual carbon abatement of c18,000 tonnes .

Solar farms are largely noise neutral developments. During operation there are no moving parts associated with the facility, whilst maintenance traffic is occasional. There is potential for noise emissions from inverter units during peak hours of sunshine however experience advises that these will be localised and not significant.

Panels utilised on site will be manufactured by a registered supplier and in accordance with applicable EU Directives regarding the Restriction on the Use of Certain Hazardous Substances in Electrical and Electronic Equipment meaning any potential risk of contamination from broken panels is negated.

5.1.9.5 Cumulative Impacts

A review of existing development around the site together with planning history in respect of developments approved and currently under consideration was undertaken to assess the potential cumulation of the impact with the impact of other existing and/or approved development. The planning history search was undertaken using the Planning Portal <https://planningregister.planningssystemni.gov.uk/simple-search> and evidenced in the planning applications and decisions listed in Table 4.1 below.

Reference number	Site address	Proposed development	Decision
LA08/2022/1248/O	Lands between 124 and 128 New Forge Road Magheralin BT67 0QW	Proposed site for a dwelling and associated site works.	Granted 2023
LA08/2023/1990/F	Lands approx 80m south-west of No.39 Inn Road, Dollingstown	Erection of 8no. dwellings and associated works	Granted 2023
LA08/2021/0312/F	Dollingstown Football Club Planters Park Dromore Road	Waringstown BT66 7QXErection of club house building and replacement changing rooms	Granted 2021
LA08/2020/1337/O	110m South of No. 47 Springhill Road Magheralin Craigavon	Proposed site for dwelling and garage on a farm	Granted 2021.
LA08/2020/0564/F	60m North of 108 Milltown Road Donacloney BT66 7NF	Proposed erection of dwelling and garage (change of house type)	Granted 2020
LA08/2019/1326/RM	Lands 150m south east of No. 98 Dromore Road Waringstown BT66 7QX	Proposed new dwelling and garage (amended plans)	Granted 2020
LA08/2019/1357/F	Lands between 117 Milltown Road and 105 Dromore Road	Site for infill dwelling. (Amended plans)	Granted 2020.
LA08/2019/1326/RM	Lands 150m south east of No. 98 Dromore Road Waringstown BT66 7QX	Proposed new dwelling and garage (amended plans)	Granted 2020
LA08/2018/0116/F	78 Inn Road Dollingstown BT66 7JW	Proposed ground floor sunroom and first floor extension to dwelling	Granted 2019.
LA08/2018/0457/F	80m SW of 17A Acres Road Magheralin	Proposed new farm dwelling with detached double garage	Granted 2018
LA08/2018/0335/F	Adjacent and north of 34 Springhill Road Magheralin BT66	Proposed erection of dwelling & garage	Granted 2018.

Reference number	Site address	Proposed development	Decision
	7JL	(change of house type, ref:N/2014/0553/RM)	
LA08/2015/0751/RM	Adjacent to and South East of 70 Springhill Road Maralin	Proposed new dwelling and detached garage	Granted 2015

Table 4.1 Planning History

The listed planning history is dominated by one-off housing which is viewed as standard for an area of this type.

The potential for cumulative impacts between the Proposed Development and other developments is possible mainly due to:

1. Impacts during construction in the event that the construction timelines overlap for the proposed development and one or more of the developments listed in Table 1, mainly in terms of traffic and transport or noise effects; and
2. Cumulative landscape and visual impacts on receptors of acknowledged importance.

It is proposed that due to the nature of the developments listed – mainly one-off housing – there is little to no potential for significant cumulative effects as a result of overlapping construction timelines with the Proposed Development.

The presence of an operational solar farm to the south of Donaghcloney (Planning Ref: LA08/2015/0381/F) is acknowledged. This solar farm is located circa. 3.9km south of Parcel 4. The significant separation distance to the site of the Proposed Development together with intervening landscape features mean there is no potential for cumulative landscape or visual impacts. This other development is operational and there is no potential for cumulative impacts during construction.

6 CONCLUSION

The preceding assessment of the Magheralin Solar Farm proposal supports the following conclusions:

- There is an over-riding acknowledgement of a climate emergency which is reflected in International and National legislation and policy including the UK commitment to reduce greenhouse gas emissions by at least 100% of 1990 levels (net zero) by 2050, reflected locally within the NI Energy Strategy;
- The proposed solar farm will create enough clean, renewable electricity to power c.13,600 homes;
- Relevant planning policies offer support to renewable energy proposals providing there are no significant impacts that cannot be appropriately mitigated. The suite of environmental reports that accompany the planning application demonstrate that there will be no significant impacts associated with the Proposed Development.
- It is accepted that the Council must undertake an EIA Screening Assessment upon receipt of this application. The Planning Application Pack contains an EIA Screening Submission prepared to assist the Council in making the determination.
- Based on the characteristics of the site as well as those of the development – together with significant project experience - RPS respectfully propose that the application does not need to be accompanied by an EIAR. Rather we contend that the applicant has undertaken an appropriate approach to supplement the application with a tailored suite of appropriate environmental reports.
- The proposal brought forward constitutes a Major – although not Regionally Significant – Development. Accordingly an appropriate Pre-Application Community Consultation exercise was undertaken in accordance with Section 27 of the Planning Act (Northern Ireland) 2011. The corresponding PACC Report forms part of the Planning Application Pack.
- This Planning, Design and Access Statement meets the requirements in respect of same, as defined by the Planning Act (Northern Ireland) 2011 and the Planning (Development Management) Regulations (Northern Ireland) 2015.

The SPPS states at paragraph 5.73 that:

“Planning authorities should be guided by the principle that sustainable development should be permitted, having regard to the local development plan and all other material considerations, unless the proposed development will cause demonstrable harm to interest of acknowledged importance”.

In that context we respectfully state that this Proposed Development will make an important contribution to in the national effort to tackle climate change and meet ever increasing targets for generation of electricity from renewable sources. In that context and given that there are no predicted unacceptable environmental impacts arising, there is no sustainable reason why planning permission should not be granted for this proposal and respectfully request that the council grant planning permission.