



An
Bord
Pleanála

Inspector's Report ABP-309401-21

Development	Planning permission for a period of 10 years to construct and complete a solar PV development.
Location	Graigs & Rathcoon, Co. Meath.
Planning Authority	Meath County Council
Planning Authority Reg. Ref.	KA200934
Applicant(s)	Gorman Solar Farm Ltd
Type of Application	Permission
Planning Authority Decision	Grant Permission
Type of Appeal	Third Party
Appellants	Eco Advocacy CLG
Date of Site Inspection	29 th March 2021
Inspector	Dolores McCague

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1.0 Site Location and Description

- 1.1.1. The site, as described in the notices, is located in the townlands of Graigs & Rathcoon, Co. Meath. The site is c 2.5km northeast of Navan and c 165m northwest of the Gorman 220kv ESB substation.
- 1.1.2. Land in the area is undulating, and within the site, the elevation is stated to vary within the range of 62mAOD to 85m AOD.
- 1.1.3. The site is divided into three parcels, referred to in the documentation as the northern, central and southern sections, which will be connected via underground cables. The central section is bounded along its northern boundary by an unnamed river, a tributary of the River Boyne. The southern section is bounded along its southern boundary by a river known as Graigs river which flows towards the unnamed river and is a tributary of the River Boyne. The River Boyne is approx. 1.4km to the south.
- 1.1.4. Graigs lane runs along the eastern boundary of the central and southern sections and along the western boundary of the northern section.
- 1.1.5. Land in the area is in agricultural use, a mixture of arable farming and pasture, predominantly pasture. A large portion of the central section is currently used for arable farming. There are dwellings, in the vicinity of the site, along the road frontage of Graigs lane and to the west, on Antylstown lane and Proudstown Road. An airstrip, known as Navan airfield, runs in an east west orientation, along the southern boundary of the central section.
- 1.1.6. Graigs lane extends from the N51 (800m to the south) to the R163 (1.7km to the north east).
- 1.1.7. The site, given as 49.5ha, is in two separate ownerships and consents from the owners have been supplied.
- 1.1.8. As stated in the further information response, advertised as significant further information, the development includes an indicative connection route of c4.7km which will follow the local road network, for connecting to the national grid. The route direction is indicated in the response. The relevant townlands have not been named in the development description or public notices.

2.0 Proposed Development

- 2.1.1. Planning permission is sought for a period of 10 years to construct and complete a solar PV development with a total site area of circa 49.5 hectares to include a single storey electrical substation, electrical inverter transformer stations, new internal access tracks, underground cabling, perimeter fencing with CCTV cameras and access gates, site control room, spare parts containers, temporary construction compounds and all ancillary grid infrastructure and associated works. The solar farm would be operational for 35 years. Significant further information/revised plans were submitted on this application.
- 2.1.2. The electricity output from the facility was not stated in the original application. It was stated that the technology is continually being improved, resulting in improved output. In response to a further information request the applicant has stated that based on the current situation the anticipated maximum output capacity is 46MW.
- 2.1.3. There are three proposed access points from Graigs lane to each of the three sections. A trackway and cable connection between the central and southern sections runs along the western boundary of the several intervening fields. A cable along the public road joins the central and northern sections. The northern section, the smallest of the three land parcels, is close to the Gorman 220kv ESB substation. The proposal is to connect to the transmission network, close to Navan, via cables to be provided within or along the public road.
- 2.1.4. The Outline Construction Environmental Management Plan states that:
- 2.1.5. Solar panels will be mounted on metal mounting frames which will be supported by posts piled into the ground at a depth of approximately 1.5m. There is a total of c 110,000 modules proposed with a maximum number of c120,000 pile drive poles, each having an area of disturbance of 0.008m² cumulative ground disturbance c980,19m². Piling is to be undertaken using c2.95 tonne pile drivers with rubber tracks of relatively low weight compared to standard agriculture vehicles.
- 2.1.6. The application is accompanied by 3 volumes of documents:
- Volume 1 - planning report with appendices:
- Appendix BB1 - Justification for 35 year operational life
- Appendix BB2 – EIA screening report from Council

Appendix BB3 Gorman Community letter.

AA screening

Volume 2 - drawings

Volume 3a - Appendices 1-6

Appendix 1 - Landscape and visual impact appraisal

Appendix 2 Ecological Impact Assessment

Appendix 3 Archaeological and Architectural Impact Assessment

Appendix 4 Flood Risk and Drainage Impact Assessment

Appendix 5 Construction Traffic Management Plan

Appendix 6 Noise Impact Assessment

Volume 3b - Appendices 7-8

Appendix 7 Glint and Glare Assessment

Appendix 7 Outline Construction Environmental Management Plan

3.0 Planning Authority Decision

3.1. Decision

- 3.1.1. The planning authority decided to grant planning permission subject to 25 conditions, including:

Condition 2 - a 10 year duration for implementation.

Condition 4 - prior to commencement provision of sightlines at proposed access points.

Condition 5 - prior to commencement submission of a construction stage traffic management plan.

Condition 6 - pre and post construction surveys of local road L-74163 from its junction of the R163 to the N51 and the lodgement of a bond of €35,000 or other security as agreed to secure the satisfactory completion of any identified repairs to the public road.

Condition 7 - implementation of mitigation measures identified in Section 5.411 of the construction traffic management plan.

Condition 8 - implementation of mitigation measures in the Glint and Glare assessment (section 7.106 & 7.107) to reduce the risk of exposure to 'none'; submission of post construction Glint and Glare inspection and survey from local receptors; submission of a report to the planning authority, following year 1 and agree any remedial works any subsequent year when Glint and Glare issues arise, during the life of the project.

Condition 9 - prior to commencement agreement for passing bays along the L-74163.

Condition 10 - re flood risk: 10m set back from drains and rivers for which the OPW has responsibility; access tracks in flood zones A and B shall not be raised above local ground level but shall be marked with a marker pole; gates at watercourse crossings shall not impact the flow of 1:100 year or 1:1,000 year flood event, details for prior agreement; any fencing in flood zones A and B shall be limited to deer fencing and any fencing crossing the watercourse shall not extend into the watercourse, details for prior agreement; any alteration to a culvert of crossing to require Section 50 consent from OPW.

Condition 11 - (CEMP) Construction Environmental Management Plan, to be submitted prior to commencement, to be treated as a live document; Waste Management Plan (WMP) to be submitted prior to commencement, to be treated as a live document; dust emissions limit; refuelling in a designated refuelling area at least 30m from watercourses; bunding of tanks for storage of hydrocarbons, chemicals and oil; oil spill kits; noise limits for construction and operation; glint and glare mitigation to be carried out; vibration from construction limits; complaints register during construction; any importation of soil to have a waste facility permit.

Condition 12 - prior to commencement agreement, for proposals for the proposed filter drains.

Condition 13 - all work shall comply with the Greater Dublin Strategic Drainage Study (GDSDS) Regional Drainage Policies, Volume 2, for New Developments.

Condition 14 - All ecological avoidance measures shall be implemented in full and carried out in accordance with best ecological practice in consultation with statutory agencies (if necessary). A report on the implementation of these measures shall be submitted to the planning authority upon first operation of the development.

Condition 15 - the exact detail of the transformers / inverters and other ancillary units and structures shall be submitted to the planning authority prior to commencement.

Condition 16 - removal of structures not later than 35 years from the date of commencement of the development and reinstatement of the site unless their retention for a further period has been permitted. A detailed restoration plan, providing for the removal of foundations / anchors and access roads to a specific timescale to be submitted prior to commencement. On full or partial decommissioning of the solar farm, or if the solar farm ceases operation for a period of more than one year, the solar arrays, including foundations, shall be dismantled and removed from the site. The site shall be restored in accordance with the said programme (including all access roads) and all decommissioned structures shall be removed within three months of decommissioning.

Condition 17 - this permission shall not be construed as any form of consent or agreement to a connection to the national grid or to the routing or nature of any such connection.

Condition 18 - details of CCTV for prior to commencement agreement.

Condition 19 - any service building to be integrated into the landscape per MCC Rural Design Guide.

Condition 20 - any inverter/transformer stations, battery storage units, storage container and gates shall be painted matt green.

Condition 21 - all glint and glare mitigations and recommendations arising from Navan Airfield glint and glare assessment shall be implemented to the satisfaction of the planning authority.

Condition 22 - archaeological survey of the central and southern sections.

Condition 23 - re IW – protection of services on Graigs Lane etc.

Condition 24 – bond.

Condition 25 – S48 contribution of €460,000.

3.2. Planning Authority Reports

3.2.1. Planning Reports

There are two planning reports on the file, the first recommending a further information request, which issued, includes:

- The majority of the site is located in an area of moderate landscape sensitivity and moderate landscape character value, North Navan Lowlands. A small portion of the northernmost site is located in an area of high landscape sensitivity and very high landscape character value, Rathkenny Hills. Protected view 32 is 4km east and protected view 33 is 1.4km south-west.
- Noting submissions and reports.
- It is considered that the potential Archaeological and Architectural Heritage Impacts have been suitably appraised and addressed;
- Further information is required:
 - in relation to glint and glare and impact on roads;
 - in relation to visual impact;
 - in relation to flood risk;
 - an Ecological Impact Assessment is required;
 - the appropriate assessment screening report relates solely to the proposed solar farm, the associated grid connection (38kV connection route to Navan substation) a distance of c4.7km is not considered and should be addressed;
- The further information required is set out under 9 points.
 - 1) Maximum output capacity
 - 2) Proximity to the national grid – the subject site at the nearest point is estimated to be within a minimum of 4.7km from the proposed grid connection location. The development is not subject to a current grid connection offer. Based on the stated combined site area of 49.5 ha (122.312 acres) and as per recommendation provided in the Guidelines on Solar Installations issued by the Irish Solar Energy Association in 2017, it is estimated that the subject site, if permitted, will have an export capacity of c24MW (i.e. 5MW per 25 acres). It is noted that this is below the 40MW threshold for a grid connection application directly to Eirgrid and that this would appear to be the reason that

the applicant is proposing to connect to the ESB network at Navan substation. Having regard to the proximity of the subject lands to the Gorman 220kV substation, stated to be within 165m, the applicant is invited to:

Indicate long term plans re. any future additional solar farm development at this location,

Provide clear justification for the choice of site 4.7km from the nearest available connection and the viability/deliverability of the proposal.

Comment on potential future requirement to apply to An Bord Pleanála for strategic development (SID) at this general location.

Provide details of anticipated format of proposed grid connection at Navan substation.

- 3) Re. construction site compound – address concerns at potential to give rise to disturbance at surrounding residential properties and consider alternative location.
- 4) Re. visual impacts – viewpoint 1 is identified as a high sensitivity receptor – address by additional mitigation; and consider alternative substation location. Address impact from upper floor. Appraise from protected view no 32.
- 5) Transportation department concerns – item 5 i) to iv).
- 6) Include the 4.7km grid connection route in the AA screening.
- 7) Re. – Flood risk assessment – liaise with Environment Department to obtain their specific comments/ recommendations prior to submitting a response.
- 8) Submit an Ecological Impact Assessment.
- 9) Respond to third party submissions.

3.2.2. Other Technical Reports

Architectural Conservation Officer – recorded and registered monument ME018-209 field system – conditions: desk top study, pre-site testing, on site monitoring. Any service building to accord with Meath Rural Design Guide.

Water Services – conditions - agree the location and extent of the proposed filter drains; all work to comply with the GDSDS.

3.3. Prescribed Bodies

3.3.1. DAU – archaeology:

The department notes the presence of a field system of archaeological interest, recorded monument ME018-029—which is subject to statutory protection in the Record of Monuments and Places, established under section 12 of the National Monuments (Amendment) Act 1994. This field system is located between the Central and Southern areas of the solar farm. The connecting corridor between the Central and Southern Sections traverses the field close to the field's boundaries.

Furthermore, the department notes the proximity of the southern section of the solar farm to a complex of enclosures and ring-ditches of archaeological interest, (SMR Nos ME025-072001 to ME025-073---) located in Antylstown townland which is contiguous with the southern section.

Prior to commencement conditions, in the event that permission is being granted:

The applicant is required to engage the services of a suitably qualified archaeologist to carry out an archaeological assessment of the Central and Southern Sections of the development site. The assessment will include the results of an archaeological geophysical survey. No sub-surface work should be undertaken in advance of the archaeologist without his/her express consent.

The archaeologist should carry out any relevant documentary research and inspect the site. Test trenches will be excavated at locations chosen by the archaeologist (licensed under the National Monuments Acts 1930-2004), having consulted the site drawings.

Having completed the work, the archaeologist should submit a written report to the planning authority and to the Department of Culture, Heritage and the Gaeltacht in advance of the commencement of any construction works. Where archaeological material/features are shown to be present, preservation in situ, preservation by record (excavation), or monitoring may be required.

If significant archaeological remains are found further archaeological excavation or monitoring may be required.

Construction should not commence until the planning authority and the department have had the opportunity to evaluate the Archaeological Impact Assessment.

3.3.2. IAA – Irish Aviation Authority:

If permitted, condition – engage with the IAA, Safety Regulation Division to ensure that all recommendations arising from the Navan Airfield Glint and Glare Assessment are implemented.

3.3.3. IW:

Submit for approval a detailed plan demonstrating how existing water services on Graigs Lane will be protected during construction works.

Any proposals to build over or divert existing water or wastewater services shall be submitted to IW for written approval.

Separation distances between existing IW assets and propose structures, other services, trees etc have to be in accordance with IW codes of practice and standard details.

3.4. Further Information

3.4.1. The Further Information request (9 points as set out in the planner's report) issued 8th September 2020.

3.4.2. A response to the further information request was received 20th November 2020, including:

Landscape designation with zone of theoretical visibility; photomontages of viewpoint 1;

Revised landscape and ecology management plan, landscape and visual FI response.

Revised layout, with new location of compound.

Revised AA screening report.

Ecological Impact Assessment

Flood Modelling Assessment, and

A letter, detailing responses to each of the 9 items in the request.

- 3.4.3. There is potential for connection for up to 47MW capacity at the 38kV side of the Navan 38/110kV substation; whereas the connection at Gorman substation would be 110kV as 38kV assets are not available at this substation.

Connection at Navan is 10% less costly. ESBN & Eirgrid have an obligation to provide the lowest connection cost.

Max. output is up to 46MW.

- 3.4.4. Allocation of grid capacity is organized through the Enduring Connection Policy (ECP) and can only be applied for following a positive planning decision. Solar module efficiency, mean that guidelines from the Irish Solar Energy Association in 2017 are outdated.

All cables will be buried underground, preferably in the verge or if unavoidable in the road, in accordance with ESBN specifications.

- 3.4.5. An alternative location for the construction site compound is proposed.

- 3.4.6. Viewpoint 1 – VP1 3 viewpoints were missed in scanning to the planning website, and are supplied again. Impact not significant and will reduce to minor adverse as planting becomes established.

- 3.4.7. Meath Co Councils Transportation Engineer was consulted and confirmed that item 5 can be addressed by condition.

- 3.4.8. Revised AA screening is provided, a NIS is not required.

- 3.4.9. A Detailed hydrological and hydraulic modelling assessment has been undertaken which indicates that the application site is not at risk of flooding up to the 1;1000 year events. The proposed development will be contained within flood zone C. A 6m buffer has been left free of development from all ADS's (Arterial Drains) onsite. This buffer had been agreed with OPW on other sites.

There is a low risk of surface water and groundwater flooding.

The proposed development will not increase the risk of flooding within and away from the site.

- 3.4.10. An Ecological Impact Assessment was submitted but appears not to have been scanned to the planning portal and is supplied again. No residual effects are identified and the Biodiversity Management Plan will result in net gain.

3.4.11. Responding to submissions:

Landscape and visual – the development has been designed so that its structures are offset from existing field boundaries to minimise disturbance to the existing landscape elements. A comprehensive Landscape and Ecology Management Plan has been submitted which provides high levels of additional planting along site boundaries to further screen the development.

Traffic/roads – the Construction Traffic Management Plan addressed issues relating to traffic and transportation. There will be minimal traffic at operations stage. The construction period is quite short – c 6 months.

Property devaluation – there is no evidence to indicate that solar farms have a negative impact on the property market.

Noise – Technical Appendix 6, the Noise Impact addressed this issue. There will be no significant impact.

3.5. Further Reports

3.5.1. Planning Reports:

The second planning report recommending permission, includes:

Expressing satisfaction with responses.

The planning authority concludes that the proposed development, entire project, by itself or in combination with other plans and developments in the vicinity, would not be likely to have a significant effect on European sites and stage 2 AA (NIS) is not required.

Development charge based on MEC of 45.5 MW, €1,000 per 0.1MW, €460,000 is applicable.

A special development contribution of €35,000 is applicable per Transportation report.

3.5.2. Environment Department - the applicant has relocated all essential infrastructure (solar panels and inverter/transformer stations) out of Flood Zones A and B. Some small portions of access tracks and fencing remain in flood zones A and B and the applicant has noted this. No objection subject to conditions. 10m set back from

drains and rivers for which the OPW has responsibility; access tracks in flood zones A and B shall not be raised above local ground level but shall be marked with a marker pole which shows the depth of floodwaters, details to be submitted for written agreement prior to commencement; any gates at watercourse crossings shall not impact the flow of 1:100 year or 1:1,000 year flood event, details for prior agreement; any fencing in flood zones A and B shall be limited to deer fencing and any fencing crossing the watercourse shall not extend into the watercourse, details for prior agreement; any alteration to a culvert or crossing to require Section 50 consent from OPW.

3.5.3. Transportation Department – conditions:

Prior to commencement provision of sightlines at proposed access points.

Condition 5 - prior to commencement submission of a construction stage traffic management plan.

Applicant to complete pre and post construction surveys of local road L-74163 from its junction of the R163 to the N51 and the lodgement of a bond of €35,000 or other security as agreed to secure the satisfactory completion of any repairs to the public road identified.

Implementation of mitigation measures identified in Section 5.411 of the construction traffic management plan.

Implementation of mitigation measures in the Glint and Glare assessment (section 7.106 & 7.107) to reduce the risk of exposure to none; submission of post construction Glint and Glare inspection and survey from local receptors to ensure that there is no risk to motorists on the public road; submission of a report to the planning authority, following year 1 and agree any remedial works any subsequent year when Glint and Glare issues arise, during the life of the project.

Prior to commencement agreement, for passing bays along the L-74163.

3.5.4. Architectural Conservation Officer – conditions as earlier report.

3.6. Prescribed Bodies

3.6.1. IAA – Irish Aviation Authority:

Irish Aviation Authority Aerodromes Department – In the event of planning consent being granted, condition – to ensure that all recommendations arising from the Navan Airfield Glint and Glare Assessment are implemented.

3.7. **Third Party Observations**

3.7.1. Third party observations on the file have been read and noted, including:

Traffic safety, nice road for walking;

Accidents, including fatalities on the N51 near junction, also serious accident including fatalities on R162 near junction. This road is used for diversion for blockages on Slane Road N51;

House not shown on maps; storey and a half, glint and glare is mostly based on bungalows; no public consultation letter received;

Will CCTV be rotating?

Inadequate details re security fencing;

Construction noise may be unacceptable;

The noise assessment should have included wind direction;

Observer had to satisfy local need;

The solar farm has no place in a rural setting;

Impact on landscape, view and property value;

Glint and glare requires annual review;

Requesting mature trees be planted around perimeter.

Traffic management plan, with laybys; speed restrictions; road surface;

Establish a point of contact with developer for residents;

Construction to be carried out during business hours;

The €80k pa during the lifetime of the solar farm – the terms and conditions should be clearly laid out in the planning condition – how it will be managed, what type or activity may benefit, and what oversight residents will have of operation of fund;

Impact on biodiversity;

Historical place of interest nearby;

Health implications;

No guidelines;

Proximity of observer to the yard, turning area etc.

4.0 Planning History

SA120024 Eirgrid extension of duration of planning permission SA50483 – 110 kV single circuit overhead line linking Gorman 220kV substation at Causetown, Co Meath with the Meath Hill 110kV substation at Meath Hill, permission granted.

17.218893 PA Reg Ref SA120024, permission granted for 110 kV single circuit overhead line linking Gorman 220kV substation at Causetown, Co Meath with the Meath Hill 110kV substation at Meath Hill.

NA800193 – new private airplane hanger beside existing, refused permission.

NA 60186 – retention for shed slatted tanks etc, retention granted.

NA60170 – permission to increase the number of lift-offs and landings on private airstrip, permission granted.

NA40117 – permission to amend condition 2(c) of NA30414 limiting the number of lift-offs and landings.

NA30414 – permission for erection of private airplane hanger and retention of single private grass airstrip, permission granted.

5.0 Policy Context

5.1. National Planning Framework

5.1.1. National Strategic Outcome 8 – Recognises the need to harness both on-shore and off-shore potential from energy sources including solar. The following points are noted:

5.1.2. Green Energy

- 5.1.3. 'Deliver 40% of our electricity needs from renewable sources by 2020 with a strategic aim to increase renewable deployment in line with EU targets and national policy objectives out to 2030 and beyond. It is expected that this increase in renewable deployment will lead to a greater diversity of renewable technologies in the mix'.
- 5.1.4. National Policy Objective 55 – '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. **Strategy for Renewable Energy 2012-2020**

- 5.2.1. Includes the objective that as a minimum we achieve out legally binding 2020 target. Strategic goals 1-5 refer.

5.3. **Regional Spatial Economic Strategy, 2019-2031**

- 5.3.1. The regional strategy (RSES) of the Eastern Midlands Regional Authority supports harnessing on-shore and off-shore potential from wind, wave and solar and connecting the richest sources of that energy to major demand centres.

5.4. **Climate Action and Low Carbon Development (Amendment) Bill 2021**

- 5.4.1. The Climate Action and Low Carbon Development (Amendment) Bill 2021 will support Ireland's transition to Net Zero and achieve a climate neutral economy by no later than 2050. It will establish a legally binding framework with clear targets and commitments set in law, and ensure the necessary structures and processes are embedded on a statutory basis to ensure we achieve our national, EU and international climate goals and obligations in the near and long term.
- 5.4.2. It embeds the process of carbon budgeting into law, Government are required to adopt a series of economy-wide five-year carbon budgets, including sectoral targets for each relevant sector, on a rolling 15-year basis, starting in 2021, and includes:
- Actions for each sector will be detailed in the Climate Action Plan, updated annually.
 - A National Long Term Climate Action Strategy will be prepared every five years.

- Government Ministers will be responsible for achieving the legally-binding targets for their own sectoral area with each Minister accounting for their performance towards sectoral targets and actions before an Oireachtas Committee each year.
- Strengthens the role of the Climate Change Advisory Council, tasking it with proposing carbon budgets to the Minister
- Provides that the first two five-year carbon budgets proposed by the Climate Change Advisory Council should equate to a total reduction of 51% emissions over the period to 2030, in line with the Programme for Government commitment.
- Expands the Climate Change Advisory Council from eleven to fourteen members, and provides that future appointments to the Council provide for a greater range of relevant expertise and gender balanced.
- Introduces a requirement for each local authority to prepare a Climate Action Plan, which will include both mitigation and adaptation measures and be updated every five years. Local authority Development Plans will also align with their Climate Action Plan.

5.4.3. Public Bodies will be obliged to perform their functions in a manner consistent with national climate plans and strategies, and furthering the achievement of the national climate objective.

5.5. Development Plan

5.5.1. The Meath County Development Plan 2013-2019, extended, is the operative plan. (The review process currently underway is nearing completion and the 2021 to 2027 is projected to come into force on the 29th October 2021).

5.5.2. Relevant provisions include:

EC POL 1 To facilitate energy infrastructure provision, including the development of renewable energy sources at suitable locations, so as to provide for the further physical and economic development of Meath.

EC POL 2 To support international, national and county initiatives for limiting emissions of greenhouse gases through energy efficiency and the development of renewable energy sources which makes use of the natural resources of the county

in an environmentally acceptable manner, where it is consistent with proper planning and sustainable development of the area.

EC POL 3 To encourage the production of energy from renewable sources, such as from biomass, waste material, solar, wave, hydro, geothermal and wind energy, subject to normal proper planning considerations, including in particular, the potential impact on areas of environmental or landscape sensitivity and Natura 2000 sites.

EC POL 4 To support the National Climate Change Strategy and, in general, to facilitate measures which seek to reduce emissions of greenhouse gases.

EC POL 12 To co-operate and liaise with statutory and other energy providers in relation to power generation in order to ensure adequate power capacity for the existing and future needs of the County.

EC POL 13 To ensure that energy transmission infrastructure follows best practice with regard to siting and design particularly to ensure the protection of all important recognised landscapes.

EC OBJ 1 To ensure that all plans and projects associated with the generation or supply of energy or telecommunication networks will be subject to an Appropriate Assessment Screening and those plans or projects which could, either individually or in-combination with other plans and projects, have a significant effect on a Natura 2000 site (or sites) undergo a full Appropriate Assessment.

EC OBJ 3 To investigate the preparation of a renewable energy strategy promoting technologies which are most viable in County Meath.

EC OBJ 4 To seek the delivery of the necessary integration of transmission network requirements to facilitate linkages of renewable energy proposals to the electricity transmission grid in a sustainable and timely manner.

LC SP 1 To protect the landscape character, quality, and local distinctiveness of County Meath in accordance with relevant government policy and guidelines and the recommendations included in Meath Landscape Character Assessment (2007) in Appendix 7. *191

LC POL 2 To require that any necessary assessments, including landscape and visual impact assessments, are provided when undertaking, authorising, or approving development.

LC OBJ 2 To assess development proposals having regard to the recommendations contained in the Meath Landscape Character Assessment 2007.

LC OBJ 5 To preserve the views and prospects and the amenity of places and features of natural beauty or interest listed in Appendix 12 and shown on Map 9.5.1 from development that would interfere with the character and visual amenity of the landscape.

- 5.5.3. The landscape character assessment, attached as appendix 7 to the Plan identifies 4 landscape character types, and 20 landscape character areas. Of the landscape character areas the subject site is located in area 3 North Navan Lowlands and on the margins of area 4 Rathkenny Hills.

Area 3 has medium potential capacity to accommodate large farm buildings, high to medium potential capacity to accommodate overhead cables, masts and substations around urban fringe where built development is more common; low potential capacity in rural areas and around smaller settlements, where landscape character is of higher value; and medium potential capacity to accommodate the development of wind farms and individual turbines because there are few long range views except to the adjacent LCA. Area 4 has low potential capacity to accommodate new overhead cables, masts or substations because a major existing pylon line runs from east to west through the centre of this LCA; and medium capacity for large agricultural buildings.

- 5.5.4. The list of views and prospects to be protected and their significance, is attached as appendix 12, and depicted in Map 9.5.1 'Views & Prospects' and includes:

View 31 at cross off county road to north of N51, looking East, South and West. and View 32, at Proudstown Cross Roads on R162 looking east. Both are of local significance, neither are impacted by the proposed development.

5.6. Guidelines

- 5.6.1. No national guidelines have been issued to date. I have noted the following as of relevance to this development:

- 5.6.2. Planning and Development Guidance Recommendations for Utility Scale Solar Photovoltaic Schemes in Ireland (October 2016 report prepared by Future Analytics for the Sustainable Energy Authority Ireland/ SEAI).
- 5.6.3. Planning guidance for the development of large-scale ground-mounted solar PV systems (British Research Establishment/ BRE – 2016).

5.7. Natural Heritage Designations

- 5.7.1. The nearest Natura sites are: River Boyne and River Blackwater SAC 002299 1.31km to the south and River Boyne and River Blackwater SPA 004232, located c 1.39km to the south; and at a further downstream distance.

5.8. EIA Screening

- 5.8.1. The proposed development is not of any type included in Schedule 5 of the Planning and Development Regulations 2001 (as amended), i.e. development for which mandatory EIA is required, nor is it integral to any project that is of a type included in Schedule 5. Having regard to the nature and scale of the development, there is no real likelihood of significant effects on the environment arising from the development. The need for environmental impact assessment can, therefore, be excluded at preliminary examination and a screening determination is not required.

6.0 The Appeal

6.1. Grounds of Appeal

Eco Advocacy CLG, have submitted an appeal against the decision to grant permission. The issues raised include:

- Community negatives outweigh benefits.
- The RESS scheme is wrong.
- Deep Bore Geothermal is preferable.
- The use of finite resources, including land, for solar is objectionable.

- Destruction of agricultural land is contrary to the European Landscape Convention.
- They are dissatisfied with NIS.
- It should not be called a farm.
- It should not be located on land. It should be located on roof surfaces, other hard surfaces or brownfield sites. Many examples are given.
- What's inside a PV? Citing an article regarding PV content:
 - Beyond the inefficient use of these resources to begin with, in the process of making crystalline silicon from silicon, as much as 80% of the raw silicon is lost, there are numerous human health concerns directly related to the manufacture and disposal of solar panels. Toxic chemicals in solar panels include cadmium telluride, copper indium selenide, cadmium gallium (di)selenide, copper indium gallium (di)selenide, hexafluoroethane, lead, and polyvinyl fluoride. Silicon tetrachloride, a by-product of producing crystalline silicon is also highly toxic. If exposed to water it can release hydrochloric acid which is corrosive, and bad for human and environmental health.
 - Based on installed capacity and power-related weight, the estimate is that by 2016 photovoltaics had spread about 11,000 tons of lead and about 800 tons of cadmium; also referring to effects from long-term exposure to cadmium.
- The trouble with solar waste. Citing an article regarding waste related to solar panels:
 - Amount, composition, challenges to re-cycling, global inequality (dumping in poor nations), etc.
- Questioning certain narratives regarding the eco-friendliness of those energy supplies, classified as renewables, but which do not live up to an environmental standard that reasonable people could support, is essential to both innovation and environmental protection. Sustainable energy must be

examined more fully by taking account of all aspects such as production, installation, life-span and environmental impact after their service life ends.

- They ask the Board to satisfy itself that the EIA Directive and ECJ case law has been complied with; and including the SEA Directive.
- The project is unsustainable without grants.
- Visual impact concerns and inadequate assessment of this issue; including Meath the heritage county.
- Impact on east coast air traffic.
- Fire.
- Electrical issues – shocks from short circuits, arc faults, arc flash.
- Solar panels fry birds and pose a particular hazard for migratory birds. Website details are listed.
- EU sites – it is essential that all scientific evidence is properly examined to ensure that there is no danger of significant direct, indirect or secondary effects.
- Runoff – including chemicals.
- Employment in construction – arguments are erroneous. More labour-intensive industry such as intensive horticulture would sustain more jobs.
- Sustainability – developer led not plan led; manufacture of support structures must be considered; only five/six months per year producing electricity in Ireland; carbon footprint – cement, rare earth metals and other finite resources; the amounts of concrete, aggregate and steel are not given in the application.
- They provide a list of materials and related concerns:
 - Human rights.
 - Fuel
 - Aggregate sources – there is significant unauthorised extractive industry especially in Meath.

- Chasing grant sources makes very poor planning law.
- Alternative energy sources are outlined: biomass, biofuels, hydrogen, tidal, wave, hydroelectric, geothermal, deep-bore geothermal; the latter being the most promising and is set out in more detail in the submission.
- Re. dispatchability – sources of electricity that can be used on demand and dispatched at the request of power grid operators according to market needs. Dispatchable generators can be turned on or off or can adjust their power output according to an order. Neither solar or wind are dispatchable and have to be backed up by forms that are mainly fossil fuel plants. Deep-bore geothermal does not have this issue.
- Enforcement is poor. Conditions will not be enforced. Self-policing is problematic.

6.2. Applicant Response

6.2.1. Neo Environmental have responded on behalf of the applicant, to the grounds of appeal, which response includes:

6.2.2. Re. Community Benefit, the proposed development would provide numerous benefits to the community:

- Economic – a source of income which allows continued agricultural use, for sheep grazing. The construction, operation and de-commissioning would provide jobs.
- The land would be taken from intensive agricultural use; use of pesticides and fertilisers would be reduced. Long term benefits of hedgerow enhancement; improved biodiversity, through the adopted Biodiversity Management Plan and Landscape and Ecology Management Plan. Following de-commissioning it can return to other agricultural uses.
- It will help with the reduction of CO₂ and other harmful gases from fossil fuel energy plants. It will contribute to meeting Ireland's challenging target of producing 70% of electricity from renewables by 2030.
- A community benefit fund will be available to the local area.

- The €460,000 development contribution will benefit the local community and across the county.

6.2.3. Re the RESS scheme:

- This is a key support and ensures that only projects with the lowest cost of energy are successful. The NFP sets out National Policy Objectives that aim to reduce Ireland's carbon footprint by integrating climate action into the planning system in support of national targets for climate policy mitigation and adaptation objectives. Solar farms are essential to meet these objectives.

6.2.4. Re deep bore thermal:

- A mix of renewable energy sources is positive, and key to Ireland meeting its 2030 targets and beyond. Geothermal is relatively untested to date. Solar is a proven technology and can be deployed quickly.

6.2.5. Re. Oppose use of agricultural land:

- Solar farms support agricultural diversification by combining traditional production with additional revenue from rent.
- It will result in ground disturbance of 2.77%. It will result in a net gain in ecological enhancement. Upon decommissioning land will revert to no change or minor beneficial.

6.2.6. Re. European Landscape Convention

- Site selection was carried out and Technical Appendix 1 – LVIA is referred to. The planning authority deemed the information acceptable.

6.2.7. Re. dissatisfied with AA screening:

- Stage 1 AA was carried out. A further AA screening was carried out including the associated grid connection. The report met the quality and standards requested by the Local Authority and was undertaken in accordance with the EU Habitats Directive.

6.2.8. Re. use of the term solar farm:

- This term has been used for large scale solar developments across the UK and Northern Ireland for the past 10 years and the Republic of Ireland for the past 5 years. Agricultural activities will continue.

6.2.9. Re. Inappropriate land use:

- When de-commissioned panels, frames and associated equipment will be removed and recycled. Topsoil removal for the electrical infrastructure and access tracks amounts to c2.77% of the site.

6.2.10. Re. Better in other locations:

- Gorman Solar Farm Ltd supports the development of solar and other forms of renewable energy development at appropriate locations as all these elements will be required to help Ireland tackle the climate emergency and meet its 2030 targets. Large roof surfaces/hard surfaces and brown field sites are appropriate for smaller scale developments but in the vast majority of cases cannot achieve the scale of development required for powering the energy network. The focus of projects of that scale is on providing a clean renewable energy source for a particular business. It is clear that without the development of large-scale utility type solar farms, which is one of the dominant renewable energy technologies showing the largest growth projections over the next decade, Ireland will not meet its renewable energy targets: 70% electricity from renewable sources by 2030.

6.2.11. Re. examples given:

- Each is referred to. The utility scale project is aimed at decarbonizing the energy network and providing electricity to the national grid.

6.2.12. Re. What's inside a PV?

- The solar panels proposed are single crystal silicon which originates from sand (silicon dioxide) one of the most plentiful sources on earth.
- These panels do not include cadmium telluride, copper indium selenide, cadmium gallium (di)selenide, copper indium gallium (di)selenide or hexafluoroethane.

6.2.13. Re. The trouble with solar waste.

- Current waste legislation was taken into account during the production of the OCEMP and this report covered waste management.

- Solar modules are governed by the Waste Electrical and Electronic Equipment (WEEE) Directive brought into Irish Law in 2005, which requires manufacturers to fund the subsequent collection and responsible disposal of end-of-life materials.

6.2.14. Re. that cadmium can be washed out of a PV:

- The panels for this project do not include cadmium telluride, copper indium selenide, cadmium gallium (di)selenide, copper indium gallium (di)selenide and hexafluoroethane.
- Cadmium is not used so leaching is a non-issue.

6.2.15. Re. misuse if waste dumping in poor nations etc:

- This could be said of many recyclable materials.
- Solar modules are governed by the Waste Electrical and Electronic Equipment (WEEE) Directive brought into Irish Law in 2005, which requires manufacturers to fund the subsequent collection and responsible disposal of end-of-life materials.
- Solar modules have a long life and guarantee c35 years; at the end of this period the solar module is still capable of producing more than 80% of its original power.

6.2.16. Re. other references to waste:

- Current waste legislation was taken into account during the production of the OCEMP and this report covered waste management.

6.2.17. Re. Questioning certain narratives:

- Renewables are cleaner, as outlined in the response.
- The sun is a huge source of energy which has only recently been tapped into etc.
- Panels have become more productive, more resilient, and far more cost effective. One of the key benefits of solar farms is the biodiversity net gain that they can deliver, which have been achieved on existing projects in the UK, many of which are included in the Solar Trade Association document 'The Natural Capital Value of Solar'. Greater than 95% of a field is still accessible for plant growth and potentially for wildlife enhancements and complementary agricultural activities such as conservation grazing. The proposal will result in an increase in biodiversity.

6.2.18. Re. Sustainable energy must be examined more fully by taking account of all aspects such as production, installation, life-span and environmental impact after their service life ends:

- The solar farm has been considered in totality and at every stage of the development.
- Comprehensive and detailed assessments have been produced including an OCEMP, Construction Traffic Management Plan, Biodiversity Management Plan and Landscape and Ecology Management Plan.

6.2.19. Re. compliance with the EIA Directive, SEA Directive and ECJ case law:

- There is no requirement to submit an EIAR.
- An EIA screening report was prepared on behalf of Meath Co Co.
- An AA screening report was submitted.
- Re. SEA the NPF, Regional Strategy and CDP are stepping stones and have been subject to SEA.
- The applicant has applied for a local project which cannot be subject to EIA or SEA.

6.2.20. Re. Grants:

- The cost reductions that have been delivered in recent years have demonstrated that photovoltaics has become one of the most cost-effective energy generators available. According to 'our World in data', the price of electricity from solar farms has decreased by 89% in the ten years, between 2009 and 2019, outlining how innovation has helped drive this renewable energy technology.

6.2.21. Re. visual impact:

- A Landscape and Visual Impact Appraisal was submitted. This was supported by a Landscape and Ecology Management Plan. An Architectural & Archaeological Impact Assessment was also produced. Visual effects upon archaeological and heritage assets within the surrounding area have been assessed. By calculating the zone of theoretical visibility for the proposed construction elements, it was determined that while most heritage assets in the surrounding area will not be visible, three heritage assets may have the potential for views and intervisibility. Due

to the relatively low-lying nature of the proposal, such views would be largely screened by intervening vegetation, field boundaries and treelines; such that any visual effects on heritage assets would not be sufficient to cause harm to any of their settings.

6.2.22. Re. air traffic:

- An assessment of Navan airfield was submitted. The IAA was consulted.

6.2.23. Fire services:

- In the event of a fire all personnel must evacuate. The site manager is responsible for calling the fire brigade. The installation of the solar farm is compliant with ESB and electrical standards. All components are fenced off to protect the site.
- Subsequent to being connected to the electricity grid, the solar farm will operate autonomously.

6.2.24. Re. electrical safety:

- The solar farm will operate autonomously. There will be scheduled visits and regular reporting.
- Access will be controlled. It has been designed in accordance with ESB standards.
- Fire risks are not any greater than those associated with other electrical equipment.
- All live electrical equipment maintenance must be carried out by trained personnel using appropriate tools and PPE. A detailed health and safety plan will be in place and all maintenance operatives will be trained and qualified to perform maintenance.

6.2.25. Re. birds:

- There is no evidence to suggest solar farms fry birds in Ireland. The RSPB have actually been involved in solar farm projects. Articles cited by appellant are referred to and rebutted in relation to the subject development.

6.2.26. Re. EU sites:

- An AA screening report was submitted.

- Measures are included in the report to prevent pollution entering the aquatic environment:
 - Plant and equipment will be stored on dedicated hardstandings within the construction compound. This will minimise the risk of pollution caused by leakage out of hours. Drip trays will be used where appropriate.
 - Plant and equipment will be regularly checked to ensure their correct operation and verify no leakages.
 - All plant and equipment will utilise biodegradable hydraulic oil.
 - Spill kits will be readily available to all personnel. Spill kits will be of an appropriate size and type for the materials held on site.
 - Diesel fuel will be stored in a bunded diesel bowser which will be located within a fenced off area in the construction compound.
 - Refuelling and maintenance of vehicles and plant will take place in designated areas of hardstanding.
 - All other chemicals will be stored in a secure area with an accompanying COSHH datasheet.
 - Wastewater from the temporary staff toilets and washing facilities will be discharged to sealed containment systems and disposed via licensed contractors.
 - Runoff from the site has been fully considered with relevant design measures integrated to resolve any potential effects. The design measures have been considered through the co-ordination of hydrologists, ecologists and landscape architects.

6.2.27. Re. Employment:

- An estimated 100 people at any one time during construction. Services in the local economy. Business rates and contributions. Community benefit in the region of €80,000 per annum.
- It will provide some long term roles for security, maintenance and operational requirements.

6.2.28. Re. Sustainability:

- It accords with NFP etc.
- Solar panels are single crystal silicon (sand). Solar panels generate energy that produce no greenhouse gas emissions. Study in Nature Energy by Dr Gunnar Luderer: 'building solar creates an insignificant carbon footprint compared with savings from avoiding fossil fuels'. Footprint of solar 6gCO₂e/kWh (CO₂e - carbon dioxide equivalent), coal CCS (CCS - for Carbon Capture and Storage) (109g), gas CCS (78g), hydro (97g) and bioenergy (98g). Compared to a global average target for a 2C (2 degrees centigrade temperature increase) world of 15gCO₂e/kWh in 2050.

6.2.29. Re. adequate light:

- Short daylight hours in winter are compensated by long daylight hours in summer.

6.2.30. Re. carbon footprint:

- The development will use very little concrete, which is only required for the CCTV bases, the substation and power conversion stations (inverters).
- The footprint is outlined in the planning statement CTMP (Construction Traffic Management Plan), OCEMP (Outline Construction Environmental Management Plan) and other documents.

6.2.31. Re. component parts and rare earth metals:

- Panels are made from silicon (which originates from sand). No cadmium telluride, copper indium selenide, cadmium gallium (di)selenide, copper indium gallium (di)selenide and hexafluoroethane.
- Re. use of steel - Study in Nature Energy by Dr Gunnar Luderer is referred to.
- Re. use of concrete – as previous.
- Re aggregates – very little footprint.
- Re. fuel - as previous.

6.2.32. Re. Human rights:

- Statkraft (the applicant) are a global company with stringent corporate social responsibility procedures.

6.2.33. Re. aggregate:

- The access tracks will not be surfaced and will consist of compacted stone only. The amount of crushed stone is relatively low.
- Mounting structures will be piled into the soil.
- Where the aggregate comes from will be decided closer to construction. It will be from an authorised facility.

6.2.34. Re. grants subsidies:

- RESS provides an important support to assist the development.

6.2.35. Re. alternative renewable energy sources:

- Gorman Solar Farm Ltd see the development of a mix of renewable energy sources as positive. The conversion of Moneypoint to biomass has been considered a number of times over the years but the technical and economic challenges are great. One challenge being that if concerted it would consume an unsustainable amount of biomass resource, requiring over 300,000 hectares of land (equivalent to a covering of willow of counties Wexford and Carlow), or the import of very large amounts. Biomass is best used to generate heat, because it is possible to get twice the energy from the same amount of biomass, rather than turning it into electricity. Ireland has a target for renewable heat as well as renewable electricity.
- Re. biofuels: the appellant has outlined the challenges – to be a sustainable alternative, biofuels should avoid negatively affecting land use, food security, water resource, biodiversity etc.
- Re. hydrogen: the appellant has outlined the challenges – the big challenge is to source hydrogen from renewable sources.
- Re. tidal - tidal is not at a viable commercial standard.
- Re. hydroelectric – this type of generation requires very specific locations and site conditions. It is unlikely that there are any remaining opportunities of scale that can be developed. Particularly with the associated environmental challenges.

- Re. geothermal and deep bore geothermal – to date it is relatively untested in Ireland and would require significant research and identification of suitable sites.

6.2.36. Re. dispatchability:

- Wind and solar are not dispatchable.
- Getting an increased mix and scale of renewables onto the grid is key to maximising the availability of clean renewable energy. Solar and wind complement each other by providing clean energy in many cases at different times of the day and year. They are controllable and can be turned on and off. There has been very strong growth in new carbon neutral technologies connected to the grid such as large-scale batteries that offer high quality grid services that complement renewable generation and help balance the grid in the event of sudden increase in demand or reduction in generation on the grid. Batteries can respond much faster (fraction of a second to full output) when compared to gas generators (10-30 minutes). This area will continue to grow.

6.2.37. Re. enforcement / conditions / self-policing:

- The development is compliant with policies. All conditions will be complied with.

6.2.38. Attached to the response is a copy of the EIA screening report prepared for Meath Co. Co.

6.3. **Planning Authority Response**

- 6.3.1. The planning authority have responded to the grounds of appeal stating that all matters outlined in the appeal were considered during the course of the application as detailed in planning officer reports.

7.0 **Assessment**

- 7.1.1. The issues which arise in relation to this appeal are: the principle of the development, appropriate assessment, glint and glare, landscape and visual impact, archaeology, and other issues and the following assessment is dealt with under these headings.

7.2. The Principle of the Development

- 7.2.1. The proposal consists of a solar photovoltaic (PV) development with associated infrastructure, landscaping and cable route to enable the export of renewable energy to the National Grid. Renewable energy development is supported in principle at national, regional and local policy levels, with collective support across government sectors for a move to a low carbon future and an acknowledgement of the need to encourage the use of renewable resources to reduce greenhouse gas emissions and to meet renewable energy targets set at a European Level. It is also an action of the NPF under National Policy Objective no. 55 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'.
- 7.2.2. Meath County Development Plan 2013-2019 supports renewable energy.
- 7.2.3. The site is located on agricultural lands that are outside any designated settlement. There is no national guidance in relation to the location of solar energy facilities. Although national policy seeks to increase agricultural productivity, the scale of the proposed facility is such that it would not be likely to compromise this strategic objective and less intensive agricultural use would take place alongside the solar farm use.
- 7.2.4. There is policy support for this type of development at national, regional and local policy levels and I am satisfied that the proposed development is suitably located and is acceptable in principle.

7.3. Appropriate Assessment

- 7.3.1. In accordance with obligations under the Habitats Directives and implementing legislation, to take into consideration the possible effects a project may have, either on its own or in combination with other plans and projects, on a Natura 2000 site, there is a requirement on the Board, as the competent authority in this case, to consider the possible nature conservation implications of the proposed development on the Natura 2000 network, before making a decision, by carrying out appropriate assessment.

AA Screening Report

- 7.3.2. To facilitate the Board in carrying out this function the applicant has submitted an AA Screening Report, Technical Appendix 2: Ecological Impact Assessment, (which refers to impacts in the absence of mitigation), and Technical Appendix 8: Outline Construction Environmental Management Plan, provide supporting information. The screening report was amended very slightly, in response of the further information request, to include the 4.7km indicative 38kV grid connection route in the development description.
- 7.3.3. The screening report lists standard best practice pollution prevention measures which will reduce the impact on ecology during construction, but which are not required to reduce/avoid impacts on the qualifying interests of nearby designated sites.
- 7.3.4. Pollution prevention measures are listed:
- Drainage mitigation is outlined, including clean water diversion and sediment control measures, such as silt traps, gravel, sand bags, anchored straw bales or silt fencing might be required at the discharge point to prevent erosion at the outlet and aid dispersion or infiltration, in accordance with SuDS techniques.
 - Silt control is detailed:
 - Silt-laden runoff should be expected from any areas of recently exposed soil or rock. There is also potential for pollution to occur from machinery used in the solar farm construction.
 - Any introduced or artificial materials (e.g. silt fencing, straw bales, sand bags etc) that might need to be deployed onsite, will be removed on completion of the works. Discharge from the silt control measures will be discharged into an area of vegetation for dispersion or infiltration, in accordance with SuDS techniques or discharged into the existing drainage network within the application site.
- 7.3.5. The response to the grounds of appeal again lists measures to prevent pollution entering the aquatic environment:
- Plant and equipment will be stored on dedicated hardstandings within the construction compound. This will minimise the risk of pollution caused by leakage out of hours. Drip trays will be used where appropriate.

- Plant and equipment will be regularly checked to ensure their correct operation and verify no leakages.
- All plant and equipment will utilise biodegradable hydraulic oil.
- Spill kits will be readily available to all personnel. Spill kits will be of an appropriate size and type for the materials held on site.
- Diesel fuel will be stored in a bunded diesel bowser which will be located within a fenced off area in the construction compound.
- Refuelling and maintenance of vehicles and plant will take place in designated areas of hardstanding.
- All other chemicals will be stored in a secure area with an accompanying COSHH datasheet.
- Wastewater from the temporary staff toilets and washing facilities will be discharged to sealed containment systems and disposed via licensed contractors.
- Runoff from the site has been fully considered with relevant design measures integrated to resolve any potential effects. The design measures have been considered through the co-ordination of hydrologists, ecologists and landscape architects.

7.3.6. In response to the further information request the amended AA screening includes, at point 2.4, reference to the indicative 38kV grid connection route estimated to be 4.7km and will run in a westerly direction from the solar farm to the Navan substation. All cables will be buried underground preferably in the verge or, if unavoidable, in the road in accordance with ESNB specifications. There is otherwise no amendment to the report.

7.3.7. The sites with potential for impact and the qualifying interest/special conservation interest species (QI/SCI) for these sites are:

European Site	Site Code	Relevant QI & SCI	Distance
River Boyne and River Blackwater SAC	002299	Alkaline fens Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus</i>	c 1.4km south and an unspecified further

		excelsior (Alno-Padion, Alnion incanae, Salicion albae) * River Lamprey Salmon Otter	distance downstream.
River Boyne and River Blackwater SPA	004232	Kingfisher	c 1.4km south and an unspecified further distance downstream.

*denotes a priority habitat.

The Standard Data Form states that the main channel of the Boyne contains a good example of alluvial woodland of the Salicetum albo-fragilis type which has developed on three alluvium islands. Alkaline fen vegetation is well represented at Lough Shesk, where there is a very fine example of habitat succession from open water to raised bog.

Appropriate Assessment - Screening

- 7.3.15. The project is not directly connected with or necessary to the management of a European Site and therefore it needs to be determined if the development is likely to have significant effects on European sites.
- 7.3.16. The screening report prepared by the applicant places reliance on measures intended to avoid or reduce impacts on European Sites downstream of the watercourse in the form of best practice measures expressly designed for watercourses protection: the use of silt fences, silt traps and check dams; with emphasis placed on prevention of hydrocarbon releases to local watercourses.
- 7.3.17. Screening the development for Appropriate Assessment cannot take any such measures into consideration in the identification of potential significant effects on any European Sites.

This has been made clear in a number of legal judgements including:

- Heather Hill Management Company clg v. An Bord Pleanála [2019] IEHC 450. One of the successful grounds for challenge in that case was that the screening determination relied upon ‘best practice measures’ in reaching the conclusion that the proposed housing development would not be likely to have a significant effect on the European site.
- Sweetman v. An Bord Pleanála (IGP Solar) [2020] IEHC 39. One of the two successful grounds for challenge was reliance on mitigation measures during stage one screening.

7.3.18. The intention of the measures referred to by the applicant in the screening report can be interpreted as being expressly for the prevention of discharge of silt and hydrocarbons into the local watercourse which is hydrologically connected to the River Boyne.

7.3.19. There is potential for contaminants, mainly suspended solids, to enter the local watercourses and ultimately the River Boyne. The entry of contaminants could potentially affect the qualifying interests of the SAC and SPA.

Screening Determination

7.3.20. Having regard to the inclusion of mitigation measures, as part of the proposed development, to avoid the potential for contaminants to enter the local watercourse and ultimately the River Boyne, where the qualifying interests of the SAC and SPA include water dependent species and habitats could potentially be affected, this AA screening concludes that appropriate assessment, (stage 2), is required.

7.3.21. The preparation of a NIS, by the applicant, is required, to allow the Board to consider measures capable of avoiding or reducing any significant effects on the protected sites through the process of appropriate assessment when a comprehensive analysis of those measures can be carried out and a determination reached as to whether they will or will not be effective (Sweetman v. An Bord Pleanála (IGP Solar) [2020] IEHC 39).

7.4. Glint and Glare

- 7.4.1. A Glint and Glare Assessment is attached as Appendix 7 to the application. Results for panel angles of 15 and 30 degrees are considered. Appendix 7H refers to a Glint and Glare Assessment for Navan Airfield,
- 7.4.2. Of the initial 35 residential receptors, (2 having showed no possible glare); which were considered to be potentially impacted using a bald earth scenario, high impact was anticipated at 25 receptors, medium at 6 and low at 4; reducing to medium at 4 low at 2 and none for the remainder, when the actual visibility was assessed. When the proposed mitigation is taken into account the impacts reduce to low at 6 and none for the remainder.
- 7.4.3. Of the 14 initial road receptors considered to be potentially impacted using a bald earth scenario, high impact was anticipated at all 14 receptors. When the actual visibility was assessed, impact was reduced to high at 4 and none for the remainder. With the proposed mitigation the impacts reduce to none.
- 7.4.4. For Navan Airfield, the report states that effects would be possible for aircraft approaching from the east from February to October between the hours of 17.00 and 19.00 (GMT) and from the west from February to October between the hours of 5.30 and 7.30 (GMT). An operation assessment concluded:
- Pilots often land when flying towards the sun at sunset. They mitigate the sun's impact using a number of effective methods, including wearing sunglasses, overflying the airfield to inspect it and landing in the opposite direction if wind conditions allow. The effects of glare from the solar panels for pilots will be less than those of direct sunlight and can be mitigated using the same methods. Residual effects are considered to be of low to no significance.
- 7.4.5. Mitigation measures proposed: tree and hedge planting schemes, allowing existing hedgerow to grow and infilling any gaps. Impacts on local dwellings are expected to be for a limited time and are low and of no significant effect.
- 7.4.6. The IAA – Irish Aviation Authority's Irish Aviation Authority Aerodromes Department requested that in the event of planning consent being granted, a condition be attached to ensure that all recommendations arising from the Navan Airfield Glint and Glare Assessment are implemented.

- 7.4.7. Condition 8 of the planning authority's decision required implementation of mitigation measures in the Glint and Glare assessment (section 7.106 & 7.107) to reduce the risk of exposure to none; submission of post construction Glint and Glare inspection and survey from local receptors; submission of a report to the planning authority, following year 1 and agree any remedial works any subsequent year when Glint and Glare issues arise, during the life of the project.
- 7.4.8. I am satisfied, taking account of the measures proposed and the use of appropriate conditions, that the issue of glint and glare can be adequately addressed.

7.5. Traffic

- 7.5.1. Issues in relation to traffic impact were addressed in the Transportation Department report and as item 10 of the further information request, including: sightlines at the proposed entrances, pre and post construction surveys of the local road, implementation of the mitigation in the glint and glare study and construction phase mitigations, and the provision of passing bays along the local road. Rather than addressing these issues in the further information response, it was agreed that they could be carried forward as conditions of the permission; conditions 4-9 of the of the planning authority's decision refer.
- 7.5.2. There is significant space between the boundary fences along sections of the local road, such that the provision of passing bays and other necessary measures could be facilitated.
- 7.5.3. I am satisfied, taking account of the measures proposed and the use of appropriate conditions, that the issue of traffic can be adequately addressed.

7.6. Visual and Landscape Impact

- 7.6.1. The application is accompanied by a Landscape and Visual Impact Appraisal.
- 7.6.2. The surrounding topography consists of gently undulating terrain ranging from approx. 65m to 159m AOD. The lowest lands are found in the valley of the River Boyne, with the highest lands being found in the Mullagaha Hills at the northern end of the study zone. Fields are typically small to medium in scale and well enclosed by hedgerows.

- 7.6.3. Receptors within 5km of the site were assessed.
- 7.6.4. Scenic views and scenic routes in the general area were assessed and three were found to be within the zone of theoretical visibility – V33 eastwards from Proudstown Cross Roads on the R167, of local significance; V35 northwest from local road between Beupark and Painstown, of regional importance; and V38 southwest to very distant horizon at Carn Hill on county road north of Casey’s Cross Roads on the R153, of local significance.
- 7.6.5. 10 viewpoints were selected for analysis including V33 and V35. Each view is assessed for construction phase impact, and impact after 5 years.
- 7.6.6. It is stated that there will be no visibility from protected views V33 and V35 or from other protected views within the study zone, including V28, V32 and V38 due to it being fully screened or not falling within the same extent and direction of the protected view.
- 7.6.7. Very localised moderate adverse effects, which reduce to minor adverse effects, were noted for some residential receptors and road locations. Maintenance and growth of existing hedgerows and planting of additional hedges and trees will result in a minor to moderate adverse effect on the characteristics of the site during operation. The potential visibility is limited to those receptors in the immediate area due to the relatively low heights of the elements, relatively low-lying lands of the site, and containment by variations in the local topography and the screening provided by hedgerows, trees and buildings.
- 7.6.8. Mitigation will reduce views from dwellings, but views will still be available from dwellings on elevated sites and from upper floors.
- 7.6.9. Two energy storage facilities, permitted but not constructed have been considered in relation to cumulative effects, with resulting minor adverse visual effects.
- 7.6.10. In my opinion the issue of landscape and visual impact should not be a reason to refuse or modify the proposed development.

7.7. Archaeology,

- 7.7.1. The trackway and cable connection between the central and southern sections runs along the western boundary of the several intervening fields within which there is

potential for archaeological material to exist. This has been addressed in the report of the Architectural Conservation Officer of Meath County Council and in the submission of the DAU – archaeology, as being amenable to condition. This adequately addresses the issue.

7.8. Other Issues

7.9. Sustainability of Solar Panel Technology

7.9.1. The grounds of appeal is largely centred around the use of solar voltaic panels for renewable energy production versus other technologies, and the negative impacts of use of solar panels.

7.9.2. Arguments are made in the grounds of appeal that solar panels contain rare earth metals and other finite resources and are liable to leach chemicals into the ground; that they involve disposal of waste with implications for poorer countries; have negative impact on birds; involve risk of fires and electrical short circuits; and that the solar farm will reduce the amount of valuable land available for agricultural use. All are all rebutted in the responses to the grounds.

7.9.3. It is not necessary for the Board to adjudicate on the relative benefits of the various technologies. Solar energy is supported in relevant plans and government policies. No particular negative impacts are apparent. Decommissioning and the disposal of the panels is currently regulated under waste regulations and will be similarly regulated at the end of the projected 35 year life.

7.9.4. In my opinion these matters have been adequately addressed and should not be a reason to refuse or modify the proposed development.

7.10. SEA / EIA

7.10.1. The need for SEA and EIA have been raised in the grounds of appeal. The response refers to the cascade of plans within which the proposal lies which have been subject to strategic environmental assessment (SEA) and that it has been determined previously that EIA is not required.

7.10.2. SEA is a process to which plans are subjected, such as the current Meath County Development Plan, which, as previously referred to, generally supports solar power generation.

7.10.3. As regards environmental impact assessment (EIA), this was dealt with under an earlier heading in this report, where it was concluded that the need for environmental impact assessment can be excluded at preliminary examination and a screening determination is not required.

7.11. Summary of Application Deficiencies

- 7.11.1. The application as presented does not provide sufficient detail of the proposed connection to the national grid over a route of 4.7km; does not include the necessary mapping details at sufficient scale to enable identification of siting; fails to include drawings and other details of this part of the proposed development, to enable meaningful assessment; and the development description, as stated in public notices, fails to identify the locations through which the route will pass, to facilitate public engagement.
- 7.11.2. The AA screening report, includes mitigation which is required to avoid impacts on protected sites, such that the preparation of a NIS, within which mitigation can be considered, is required. Any NIS arising would be required to include all aspects of the proposed development, including the grid connection cable route.
- 7.11.3. In the absence of such information the Board is precluded from granting permission.

8.0 Recommendation

- 8.1.1. In accordance with the foregoing it is recommended that planning permission be refused for the following reasons and considerations.

9.0 Reasons and Considerations

1 On the basis of the information provided with the application and appeal and in the absence of a Natura Impact Statement the Board cannot be satisfied that the proposed development individually, or in combination with other plans or projects would not result in adverse effects on the integrity of European site Nos. 002299 or 004232, in view of the sites' Conservation Objectives, as a result of surface water contamination arising from runoff from the construction works. In such circumstances the Board is precluded from granting permission.

2 The proposed grid connection is a fundamental and essential part of the proposed development which is inadequately described and documented in the information before the Board, such as to enable the Board or any interested party to evaluate this aspect of the development proposal.

Planning Inspector

4th May 2021

Appendices

- 1 Photographs
- 2 Meath County Development Plan 2013-2019, extracts