Environmental Impact Assessment Report

NISA

North Irish Sea Array

Volume 8: Appendices (Introductory)

Appendix 2.3
Information provided under S287 pre-application

Statkraft

CIP
Copenhagen Infrastructure Partners

GoBe
APEMGroup

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1. Prospective Applicant/General Project Details

North Irish Sea Array Windfarm Ltd. ("NISA") a Joint Venture between Statkraft Ireland Ltd and Copenhagen Infrastructure Partners P/S (hereafter referred to as the Developer) proposes to make an application for permission to carry out the development of the North Irish Sea Array Offshore Wind Farm (hereafter referred to as the proposed development) under Section 291 of the Planning and Development Act 2000, as amended (the "Planning Acts").

On 5th January 2023, the Developer submitted a request to An Bord Pleanála (the "Board") to enter pre-application consultation under Section 287(1) of the Planning Acts for the proposed development. The Board allocated Case number ABP-315801-23 to that request.

Subsequently, on March 10th 2023, Arup on behalf of the Developer prepared a report in response to a request from the Board (Case number ABP-315801-23) dated 20th February 2023 for the information described in its letter to be submitted to the Board in accordance with Section 288(1)(a) of the Planning Acts.

In that report, Arup confirmed on behalf of the Developer that the Developer would be requesting an opinion on flexibility under Section 287A of the Planning Acts. The Board allocated Case number ABP-316332-23 to that request.

On 31st May 2023, the Developer undertook a pre-application consultation ("PAC") meeting with the Board under Section 287(1) of the Planning Acts for the proposed development (Case number ABP-315801-23).

The Board invited the Developer to a follow up PAC meeting on 21st September 2023. Following this meeting, the Board invited the Developer to submit an '*application for opinion under section 287B*' of the Planning Acts.

For the purposes of seeking an opinion on design flexibility, the information required under Section 287A(2) of the Planning Acts is provided below. **Table 1** describes where the information required under Section 287A(2)(a)-(h) of the Planning Acts is addressed within this application.

Following submission of this application, a meeting with the Board under Section 287A of the Planning Acts will take place on 2nd November 2023.

Table 1 Signpost for provision of information as required under S287A(2) (a)-(h)

Section 287A (2)	Location in this report
(a) the name and address of the prospective applicant	Section 1.2
(b) a site location map sufficient to identify the maritime area in which the proposed development would be situated	Section 2
(c) a brief description of the nature and purpose of the proposed development and of its possible effects on the environment	Section 3
(d) a draft layout plan of the proposed development	Section 2
(e) a description of— (i) the details, or groups of details, of the proposed development that, owing to the circumstances set out in subparagraph (ii), are unlikely to be confirmed at the time of the proposed application, and	Section 4.4
(e) (ii) the circumstances relating to the proposed development, including such circumstances as the Minister may prescribe in relation to any class or description of development for the purposes of this subparagraph, that indicate that it is appropriate that the proposed application be made and decided before the prospective applicant has confirmed the details referred to in subparagraph (i) in particular, whether the prospective applicant may be able to avail of technology available after making the proposed application that is more effective or more efficient than that available at the time of the application,	Section 4.3

Section 287A (2)	Location in this report
(f) an undertaking to provide with the proposed application either— (i) two or more options in respect of each detail or group of details referred to in paragraph (e)(i), containing information on the basis of which the proposed application may be made and decided, (ii) parameters within which each detail referred to in paragraph (e)(i) will fall and on the basis of which the proposed application may be made or decided, or (iii) a combination of subparagraphs (i) and (ii),	Section 4.4
(g) such other information, drawings or representations as the prospective applicant may wish to provide or make available, and	Not providing.
(h) such other information as may be prescribed.	Not providing.

1.1 Application Fee

The Developer would be grateful if the Board could confirm the fee required as soon as possible. An electronic fund transfer can be then arranged.

1.2 Details of the Prospective Applicant

Applicant/Developer Name: North Irish Sea Array Windfarm Ltd.

Applicant Address: Building 3400, Cork Airport Business Park, Cork, T12 D23C

Contact Person: Tina Raleigh

Telephone Number: 086 0401188

Email Address: tina.raleigh@statkraft.com

2. Site location map(s)

The proposed development will be located within the proposed development boundary which is depicted as a "red line boundary" on the accompanying drawings in Appendix A which include the following:

- GEN-ZZ-0001: Site Location Map
- OFS-ZZ-1001: Offshore Layout Plan

The site location map shows the location of the proposed development including the maritime area in which the proposed development will be situated in addition to the location of the landfall, the onshore cable corridor and the grid connection at Belcamp. The draft offshore layout plan shows the indicative location of the offshore wind farm array and export cable corridor within the proposed development boundary. It is noted that the offshore layout plan as presented on OFS-ZZ-001 is at draft stage and does not reflect the two fixed layouts that will be provided in the planning application documentation.

3. Brief description of the nature and purpose of the proposed development and of its possible effects on the environment

3.1 Nature and Purpose of the Proposed Development

The proposed development is an offshore wind farm located off the coast of counties Dublin, Meath and Louth, bringing with it an opportunity to significantly contribute to the development of a clean, renewable energy future for the region.

Once operational the offshore wind farm will have the capacity to provide renewable energy for 500,000-700,000 homes and will transmit approximately 700 MW of generated electricity from the offshore wind farm to the national transmission grid. The proposed development will further the Irish Government's objectives with regard to increasing the generation and supply of renewable electricity and reducing the emissions of greenhouse gases, leading to an enhancement of Ireland's energy security, addressing a European wide target driven by REPowerEU. This will be an important contribution to reducing the effects of climate change on the environment, facilitating economic development and providing renewable power for a growing population. The Government published its Climate Action Plan (CAP) (to tackle Climate Breakdown) in 2019 to comply with the requirements of the Climate Action and Low Carbon Development Act 2015 and EU Regulation 2018/1999. The latest CAP (2023) includes a target of at least 5 GW of offshore wind by 2030 (and an additional 2 GW offshore wind for green hydrogen production).

As previously mentioned, the proposed development comprises of a combination of offshore infrastructure and onshore infrastructure ancillary works and activities. A brief description of the offshore and onshore elements is provided below.

3.2 Offshore Infrastructure

The key offshore elements of the proposed development will comprise the following:

- Between 35 and 49 offshore wind turbine generators (WTGs) (within array area)
- One offshore substation platform (OSP) (within array area)
- Substructures and associated seabed foundations (for WTGs and OSP) (within array area)
- Subsea inter-array cables (within array area)
- Offshore export cables (within an offshore export cable corridor)
- Scour protection around substructures and cable protection (as required); and
- Landfall site (interface between offshore and onshore infrastructure)

3.3 Onshore Infrastructure

The key onshore elements of the proposed development will comprise the following:

- Landfall site (interface between offshore and onshore infrastructure)
- Two 220kV offshore export cables (within an offshore export cable corridor)
- Two Transition Joint Bay(s) (within an onshore cable corridor)
- Two 220 kV HVAC underground export cable circuits between landfall site and onshore grid facility (within an onshore cable corridor)
- Onshore grid facility (comprising two distinct substations: the compensation substation and Bremore substation)

- Approximately 33-35km of a 220kV HVAC underground cable
- Connection to the existing EirGrid / ESBN substation at Belcamp; and
- Supporting infrastructure and ancillary works

3.4 Potential Environmental Effects

The preparation for an Environmental Impact Assessment Report ("EIAR") and Natura Impact Statement ("NIS") are ongoing, but not yet complete. The following brief description of potential environmental effects is made for the purposes of section 287A(2)(c).

Given the nature and location of the proposed development, the potential environmental effects arising during the construction, operation and decommissioning phase of the proposed development differ between the offshore and onshore infrastructure. A brief summary of the potential environmental effects, before any mitigation is applied, are provided below.

Mitigation measures will be considered throughout the design process of the proposed development. The requirement and feasibility of any mitigation measures will be dependent on the significance of the effects and will be consulted upon with a range of stakeholders throughout the Environmental Impact Assessment ("EIA") process.

The proposed development will be subject to all relevant environmental assessments, including an EIA and screening for an Appropriate Assessment ("AA") and AA, as necessary.

3.4.1 Offshore

Offshore construction activities such as drilling and piling, which may be required for the installation of the turbine foundations, have the potential to cause physical injury/ mortality and behavioural effects on marine mammals, benthic species, and fish through the introduction of additional underwater noise and vibration levels. Other construction works such as the preparation of the seabed for foundations could also lead to an increase in suspended sediment and turbidity which could result in a deterioration in water quality, reduction in prey availability and distribution and impact on benthic habitats. This in turn may result in potential impacts on commercial fisheries. An increase in vessel activity and installation works may also result in direct disturbance or displacement of birds from important offshore habitats, feeding and roosting areas.

The installation of the foundations for the wind turbines, potential scour protection and cables have the potential to cause direct disturbance and damage to known and undiscovered artefacts of marine archaeological significance. Similar impacts may occur as a result of anchoring and jack-up activities.

During the operational phase, there is a risk of birds in flight colliding with rotating turbine blades, however this depends upon physiological and behavioural characteristics of the species, in addition to the final layout and design specifications for the wind turbines. Potential visual impacts and potential impacts on shipping, navigation, aviation, commercial fisheries may arise due to the physical presence of the offshore wind turbines.

3.4.2 Onshore

Potential environmental effects arising from the construction activities associated with the installation of the onshore infrastructure predominately relates to loss of habitat and disturbance to nesting passerines, wintering birds, bats, mammals etc. Potential effects on watercourses are dependent on the crossing methodologies to be employed and the good work practices to implemented.

Potential effects on human health and wellbeing during the construction phase include noise, vibration, air quality, traffic and visual impacts.

The majority of the onshore infrastructure will be underground, however, during operation, potential landscape visual impacts may arise due to the physical presence of the onshore substation at Bremore.

Potential effects on the environment during the decommissioning phase of the proposed development will be similar to those expected during the construction phase, however given all below ground infrastructure will remain in-situ the potential effects are anticipated to be of a smaller scale and temporary in nature. The mitigation measures, described for the construction phase, will be implemented for the decommissioning phase, however these will be updated to reflect best practice at the time.

4. Design flexibility

4.1 Overview

As required under Section 287A(2)(e)(i) and (ii) of the Planning Acts, in seeking an opinion on design flexibility, the Developer has provided a description of:

i. the details of the proposed development that are unlikely to be confirmed at the time of the proposed application, and

ii. the circumstances relating to the proposed development that indicate that it is appropriate that the proposed application be made and decided before the final details are confirmed.

A description of the details of the proposed development that will not be confirmed at the time of the proposed application are provided in **Section 4.4** and the circumstances relating to the proposed development that indicate it is appropriate the proposed application be made and decided before the final details are confirmed are provided in **Section 4.3**.

4.2 Design Flexibility Guidance

4.2.1 Circular letter MPP 01/2023

A circular letter (MPP 01/2023) was issued by Department of Housing, Local Government and Heritage to the Board on 17th July 2023 titled 'An Opinion on Design Flexibility for Maritime Development'. The circular is intended to assist the Board in the application of the provisions of design flexibility for maritime development, under Section 287A of the of the Planning Acts.

The circular acknowledges that:

'Owing to the complex nature of offshore wind development, certain details of a proposed scheme may be unknown to the applicant at the time of submitting an application to the Board, including, but not limited to, foundation type, exact turbine tip height and turbine blade size. It is accepted that wind energy developers are unlikely to know precisely which turbines will be procured for the site until sometime after any consent has been granted. Accordingly, a degree of flexibility at planning application stage is desirable.'

The Circular also states that:

'*When requesting a meeting under section 287A, the applicant is required to provide an undertaking to include the following information as part of the application on the basis of which the proposed application may be assessed and decided:*

- *two or more options in respect of each detail or group of details referred to in paragraph 287A (2)(e)(i), containing information on the basis of which the proposed application may be made and decided;*
- *parameters within which each detail referred to in paragraph 287A (2)(e)(i) will fall and on the basis of which the proposed application may be made and decided, or;*
- *A combination of both options and parameters in respect of these details to be confirmed.'*

4.2.2 The Board correspondence 31st July 2023 (ABP-315801-23)

The Board issued a letter to the Applicant on 31st July 2023 in relation to Section 287A of the Planning Acts. Within the letter the Board advises that:

'*Options referred to under section 287A(2)(f) should refer to material differences only, and should follow the guidance set out below:*

(i) No more than two options, in respect of the details / technology to be deployed, such as turbine model, height, rotor diameter should be included in the application.

(ii) Parameters within which details referred to in item (i) above will fall such as the location, layout, foundation type and number of structures or other components of the development.

(iii) Combination of both options.

Where further options under item (i) are deemed necessary, regard should be had to the requirements in respect of the Environmental Impact Assessment and Appropriate Assessment processes.'

The letter also states that '*[t]here should not be an excessive number of options or range of parameters.*'

The areas of flexibility sought by the proposed development outlined in **Section 4.4** have regard for both the letter issued by the Board and the Circular from the Department of Housing Local Government and Heritage. The flexibility sought falls under the category of either options, parameters or both. There are not an excessive number of options or ranges of parameters. Justification for the flexibility required has been provided, including in instances where more than two options was required, described in **Section 4.3**.

4.3 Justification for flexibility

As required by Section 287A(2)(e)(ii) the circumstances relating to the proposed development that indicate it is appropriate that the proposed application be made are provided in this section.

4.3.1 WTG model

The WTG model that will be available to the proposed development at the time of construction will be unknown prior to the proposed application being submitted. The basis for the maximum export capacity (MEC) will be dictated by the transmission system operator (TSO), Eirgrid. The MEC dictates the total number of WTGs required for the project, and the WTG capacity/dimensions. Ultimately, this means that the dimensions of the WTG cannot be confirmed prior to application. Therefore, flexibility is required in relation to the WTG model the proposed development is applying for.

Flexibility in WTG model within planning applications for offshore wind farms is a standard approach taken in a number of jurisdictions with well-established consenting regimes for offshore wind farm development.

WTG availability

There will be significant advancements in WTG technology between the submission of the proposed planning application and the construction of the proposed development. With WTG technological advancements the WTG models become larger, with greater output per WTG resulting in a reduction to the levelised cost of energy. Production of the smaller, lower output WTG models ceases once larger models become available, due to being rendered less economically efficient. Therefore, WTG models that are currently available on the market will no longer be available when the proposed development is in a position to procure WTGs for construction.

For projects to maintain their commercial viability, projects must be able to benefit from advances in technological design and installation / construction techniques developed concurrently with the consenting process but not considered possible to confirm at the time of application.

It is currently unknown the rate of technological advancement that will occur between the planning stage and the construction stage of the proposed development. WTG manufacturers do not make formal announcements about the termination of production of specific models, so this information is not publicly available.

Therefore, it is unknown which WTG models will be available, what the dimensions of those WTGs will be and what the MW capacity will be once the proposed development reaches construction stage and is procuring WTGs.

There are also benefits to the consumer with regard to ensuring projects are able to procure the latest, most efficient WTGs on the market. Such WTGs have lower maintenance costs which subsequently reduces project development costs and can lead to reduction in the levelised cost of energy for consumers.

The offshore wind industry is experiencing significant supply chain constraints, with WTG suppliers potentially struggling to meet demand. This has potential to impact the availability of WTGs and will impact the procurement of generator assets. This uncertainty in the supply chain availability applies globally but has realistic potential to directly impact Irish projects. Confirmation on the WTG model will not be possible prior to submission of the proposed application.

Environmental Benefits

The proposed development aims to reduce potential environmental impacts where possible through the project design. Flexibility in the WTG models consented enables the proposed development to construct and install the most efficient WTG models that are available at the time of construction. Using the most efficient WTG models available on the market to procure means the overall number of turbines required to achieve target export capacity is reduced. A reduction in the number of WTG's is anticipated to reduce environmental impacts in a number of key ways including, but not limited to:

- reduced bird collisions
- reduced interaction with shipping and navigation
- reduced impacts to benthic ecology due to fewer foundations; and
- reduction in underwater noise impacts to marine mammals and fish and shellfish due to fewer foundation installations.

4.3.2 WTG foundations

The foundation type required for the proposed development will depend on the WTG model selected. The size and weight of the WTG influences the size and type of foundation that is most suitable. Therefore, the foundation size cannot be determined until the WTG model is determined. Therefore, flexibility is required in relation to the foundation type. Flexibility in turbine design also allows for advances in turbine design and installation techniques which could reduce interactions with the environment.

Further details regarding the site investigation work required in advance of confirming foundations is provided in **Section 4.3.4** below.

4.3.3 OSP

Flexibility is required in relation to the design of the OSP, both the topside which will contain the electrical componentry, and the foundation structure which will support the topside. The foundation structure cannot be confirmed prior to application, due to the exact location of the OSP being unknown (**Section 4.3.4**). The OSP will be sited in the most efficient location to reduce array and export cable lengths to the extent possible. However, the location cannot be confirmed until the detailed site investigation surveys have been undertaken to inform on the ground conditions. The final location of the OSP will influence the design of the foundation, including its size and weight. The design of foundation support structures is also influenced by the oceanographic conditions, of which, the detailed characterisation will be complete post application submission. Additionally, and similar to the WTG, technological advancement of electrical infrastructure is possible; design refinement of cable and major electrical components (e.g., transformers) is possible and will vary between different high voltage equipment suppliers. Given the lack of certainty on the final design of the electrical componentry necessitates flexibility in relation to the design of the OSP.

4.3.4 Siting of infrastructure

Programme of development works

A Maritime Area Consent (MAC) was awarded to the proposed development in December 2022 which included an 18-month deadline for the planning application submission. As such, the planning application needs to be submitted by June 2024. The proposed development was also awarded an Offshore Renewable Energy Support Scheme (ORESS) contract in June 2023 which requires the proposed development be fully operational by December 2031. Additionally, in order to contribute to the national target of 5GW offshore wind by 2030 the proposed development needs to be operational by 2030.

In order to meet these timelines, there is a requirement for project workstreams to occur concurrently with the planning application process, including detailed foundation design and site investigation surveys. Both of these workstreams are interdependent and require a lengthy lead in time. Designing offshore foundations involve the data collection aspect of the site investigations (along with significant post processing and interpretative work), followed by an iterative and complex structural design process.

The Foreshore Licence for site investigations in the array was awarded to the proposed development in December 2021, with the first site investigation survey commencing when the weather permitted in May 2022. Following this, survey data analysis took several months as a result of the detailed data obtained. Following the data analysis, complex design studies were undertaken which also took several months. The results of the initial site investigation survey works have facilitated the reduction in the footprint of the proposed development.

However, given the time constraints on the proposed development, there is insufficient time to conduct the detailed site investigation surveys and characterize the oceanographic conditions, have this data analysed and processed such that it can inform detailed design work. The layout of offshore infrastructure is influenced by the ground conditions, and as discussed in **Section 4.3.1**, is also dependant on the WTG model. Therefore, flexibility is required regarding the siting of the offshore infrastructure.

Two fixed layouts for the WTG will be provided in the consent application, one for each discrete Project Option the proposed development is including in the proposed application. The flexibility required in the siting of infrastructure relates to limits of deviations from those fixed locations. A limit of deviation for micro-siting will be provided in the consent application and each WTG can move no further than the limit of deviation in any direction and all offshore infrastructure will be sited within the offshore development boundary. It is noted that the offshore layout plan as presented on OFS-ZZ-001 is at draft stage and does not reflect the two fixed layouts that will be provided in the planning application documentation.

Flexibility in the siting of offshore infrastructure within planning applications for offshore wind farms is a standard approach taken in a number of jurisdictions with well-established consenting regimes for offshore wind farm development. It should also be acknowledged it is standard practice in other jurisdictions for detailed site investigation surveys to occur post consent award due to prohibitively high costs preventing developers from securing the required funds without the certainty of having the project consent. However, due to the timelines from the proposed development's MAC and ORESS conditions, and national renewable energy targets the proposed development will be undertaking the detailed site investigation survey as soon as possible on receipt of a licence from Maritime Area Regulatory Authority (MARA), which is anticipated to occur during the determination period.

Requirement for detailed site investigation surveys

The underlying geology across the proposed development array is variable; the sediment type and thickness of subsoil strata varies, along with the depth to bedrock within the extent of the site. If the geological profile was consistent and more homogeneous, and in particular, the depth and type of bedrock was consistent, then it may have been possible to provide more firm locations within the planning application. The results of the first round of site investigation survey data have allowed reliable conceptual designs. However, due to the variability in the seabed, and the inherent large spatial extent of offshore wind farms, detailed site investigation surveys are required prior to confirming the precise locations of infrastructure, and the associated foundation designs.

Additionally, due to the varied seabed, the WTG model that will be used is required to be known prior to the detailed site investigation survey being undertaken. The WTG model will determine the number of WTG, and the type and size of foundations required. Confirmation on these aspects of the project design will determine the number and survey area that will be targeted during the detailed site investigation surveys.

The proposed development has reduced the request for flexibility significantly by reducing the development boundary where the WTG will be sited to just 36% of the entire MAC boundary. A fixed layout for each discrete Project Option the proposed developing is including in the proposed application will be provided, however, a limit of deviation from that layout will be required. The precise location of WTG within the limited array area will not be confirmed until detailed site investigation surveys are undertaken. This will be executed in parallel with the consenting process in order to adhere to the time constraints the proposed development is working to.

Incorporation of mitigation measures

Flexibility is also required in the siting of offshore infrastructure in order to allow for the application of mitigation measures that may be required based on any potential discoveries made during the detailed site investigation surveys. For example, if any protected habitats, unexploded ordinance (UXO) or designated archaeology are identified during the detailed site investigation surveys, then these areas would be avoided when siting the offshore infrastructure. Mitigation measures to reflect this will be proposed in the EIAR. Therefore, flexibility in the siting of offshore infrastructure allows for the adjustment of locations and the implementation of mitigation measures.

4.4 Flexibility of the proposed development

As required by Section 287A(2)(e)(i) the details of the proposed development that, owing to the circumstances set out in **Section 4.3,** are unlikely to be confirmed at the time of the proposed application are provided in **Table 2** below.

The consent application for the proposed development will align with the details provided in **Table 2**. This undertaking is provided in respect of Section 287A(2)(f)(i)-(ii) of the Planning Acts.

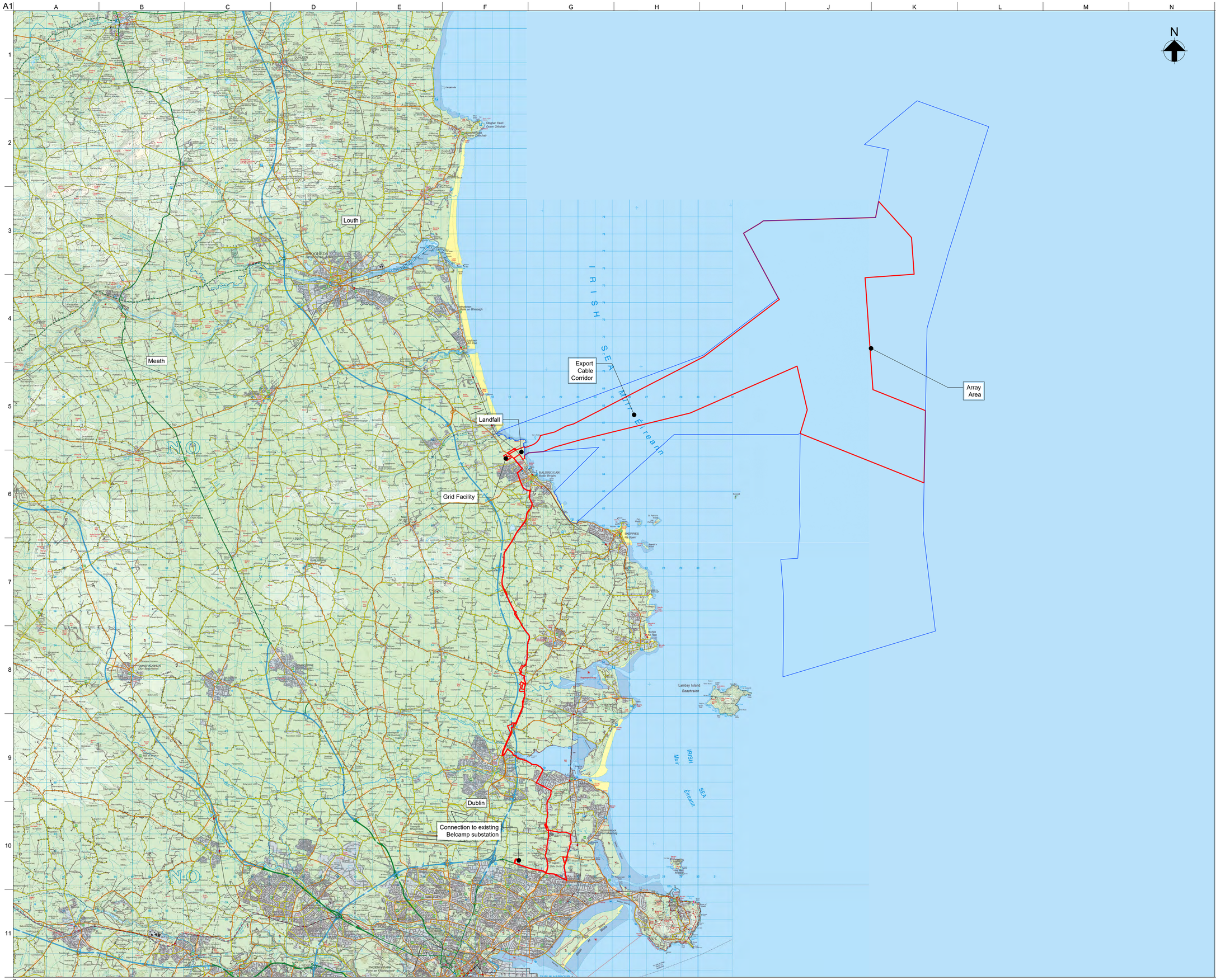
Table 2 Details of the proposed development not confirmed at the time of the proposed application submission

Aspects of Design	Options or Parameters or both	Flexibility to be sought		Will future technology be more effective or more efficient
		Parameter or option description	Extent / range / value	
(e) a description of – ***(i) the details, or groups of details, of the proposed development that, owing to the circumstances set out in subparagraph (ii), are unlikely to be confirmed at the time of the proposed application***	*(f) an undertaking to provide with the proposed application, either—* *(i) two or more options, in respect of each detail or group of details referred to in paragraph (e)(i), containing information on the basis of which the proposed application may be made and decided,* *(ii) parameters within which each detail referred to in paragraph (e)(i) will fall and on the basis of which the proposed application may be made and decided, or* *(iii) a combination of subparagraphs (i) and (ii),*			*(e)(ii) including, in particular, whether the prospective applicant may be able to avail of technology available after making the proposed application that is more effective or more efficient than that available at the time of the application*
Siting of Infrastructure				
WTG	Parameters	WTG locations	Fixed location with limit of deviation.	Yes
Foundations	Parameters	Foundation locations	Fixed location with limit of deviation.	Yes
Export cable alignment	Parameters	Export cable alignment	Fixed location with limit of deviation.	Yes
OSP Location	Parameters	OSP siting	Fixed location with limit of deviation.	Yes
WTG				
WTG number	Options	WTGs	Two options for WTG number. One for each discrete Project Option.	Yes
WTG dimensions	Options	Tip Height of turbines Rotor diameter Rotor swept area Nacelle and hub height	Two options for each WTG dimension. One for each discrete Project Option.	Yes
WTG Foundations and substructures				
Foundation type	Options	Foundation type options	Two options.	Yes
Foundation dimensions	Both	Diameter of pile structure	Maximum and minimum for each foundation option.	Yes
Offshore Cabling				
Subsea cable size	Parameter	Subsea cable size	Minimum and maximum subsea cable size.	Yes

Aspects of Design	Options or Parameters or both	Flexibility to be sought		Will future technology be more effective or more efficient
		Parameter or option description	Extent / range / value	
Subsea cable length	Parameter	Length of offshore cables	Minimum and maximum length of array and export cables.	No
Cable protection	Parameter	Dimensions of cable protection	Minimum and maximum height, width and depth of cable protection	No
OSP				
OSP foundation type	Options	Foundations	Three options.	Yes
OSP dimensions	Parameter	OSP dimensions	Minimum and maximum dimensions for OSPs topside: height above sea level, length and width. Minimum and maximum dimensions for OSP foundations.	Yes

Appendix A

Drawings



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Rev	Date	By	Chkd	Appd
P03	12.09.23	KON	ND	MD

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Client
North Irish Sea Array Windfarm Ltd.

Project Title
North Irish Sea Array
Offshore Windfarm

Drawing Title
Site Location Map

Scale at A1 1:100,000 @ A1, 1:200,000 @ A3

Role Civil

Suitability Planning

Arup Job No	Rev
281240-00	P03

Name
GEN-ZZ-0001

Do not scale

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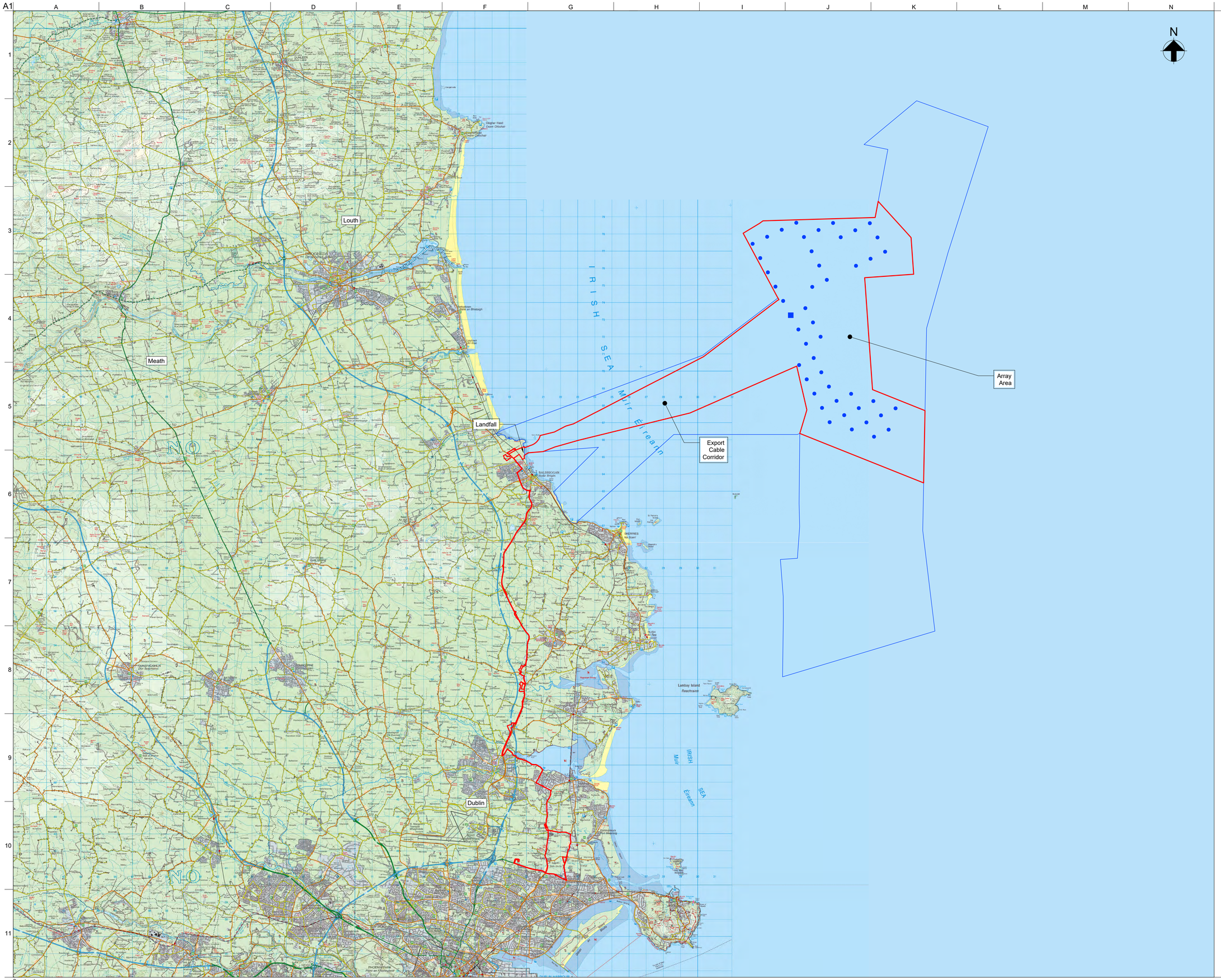
A1



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Project Title
North Irish Sea Array
Offshore Windfarm

Drawing Title
Offshore Layout Plan

Scale at A1 1:100,000 @ A1, 1:200,000 @ A3

Role Civil

Suitability S2: Suitable for Information

Arup Job No	Rev
281240-00	P03

Name
OFS-ZZ-1001

Do not scale

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