

# Design Review Report

Mona Offshore Wind Project, Denbighshire

**DCFW Ref: 302**

Meeting of 21<sup>st</sup> November 2024



**Review Status**

Meeting date  
Issue date  
Scheme description  
Scheme location  
Scheme reference number  
Planning status

**PUBLIC**

21<sup>st</sup> November 2024  
2<sup>nd</sup> December 2024  
Renewable Energy Infrastructure  
Denbighshire  
N302  
Submitted for IPC Development  
Consent Order

## Key Points

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- The process that has been undertaken to date and the current stage achieved were presented clearly. We understand the application represents the maximum development to be permitted.
- The size and scale of the substation, and its location mean greater commitment to good design is needed – above and beyond mitigation measures.
- Whilst some elements of the landscape design philosophy and treatments are clearer, illustrations and a narrative are still needed that reflect and commit to qualitative client ambition and commitment, beyond the technical requirements, and beyond mitigation to enhancement.
- The existing Design Principles, even if translated into a 'Design Guide', are not sufficiently robust to provide clear stewardship of the delivery requirements, post-consent. A stronger, well-communicated design strategy would be more useful to the local authority in the discharge of conditions and to the applicant and delivery team in their tender process and detailed design.
- Greater expectation and control over the design is available to the development team throughout design development including the tender processes, and the Design Principles do not yet work in this regard. The consideration and coordination of elements of the substation equipment layout is important given its size and the scale of structures proposed within it.
- The nature and intent of the agreed requirements reflected in the Development Consent Order, should it be granted, are vital to ensuring genuine design quality commitment at every stage of delivery. The developer, Examining Authority and the local authority all have a role in this securing of a good design process and outcome, post-consent.
- There remains an issue of cumulative impact of various interventions related to the National Grid connection point at Bodelwyddan which needs to be considered and that would benefit from strategic coordination. Given the context for renewable energy in Wales, the local authority working with neighbouring authorities, Welsh Government, National Grid and other stakeholders should take steps to develop a

comprehensive strategic masterplan that addresses this particular location and its landscape capacity as renewable energy development proposals increase in number and at pace. This would aid all parties and contribute to risk management and consenting regimes. This is broader strategic issue across Wales that would benefit from Welsh Government attention.

## Consultations to Date

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This is the second Design Review with the Design Commission for Wales. The first review meeting took place in August 2023 and this report should be read in conjunction with our earlier report. The Design Commission previously responded to questions arising from the examination process. That correspondence is appended to this report.

## The Proposal

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The Mona Offshore Wind Project is a wind energy generating installation and, for consenting purposes, is categorised as a Nationally Significant Infrastructure Project (NSIP) requiring a Development Consent Order (DCO) via the Infrastructure Planning Inspectorate. The proposals encompass offshore wind farm development, associated offshore and onshore infrastructure as required to connect turbine generators and to facilitate connections to the national grid. The Mona Array Area (i.e. the area within which up to 107 offshore wind turbines will be located), is 449.97km<sup>2</sup> in area and is located 28.2km (15.2nm) from the Ynys Môn (Anglesey) coastline. The key components of the Mona Offshore Wind Project include:

- Offshore wind turbines
- Foundations (for wind turbines and Offshore Substation Platforms (OSPs))
- Scour protection
- Inter-array cables linking the individual wind turbines to the OSPs
- Connection works to the existing Bodelwyddan National Grid substation
- Temporary construction compounds, including storage areas
- Permanent and temporary access roads
- High Voltage Alternating Current (HVAC) transmission system including: – OSPs, Offshore interconnector cable(s), Offshore export cable(s), Mona 400kV Grid Connection Cable, Onshore export cable(s), Onshore Substation



*Proposed illustrative summer Year 15*

At the time of this second design review meeting in November 2024, the proposals are at examination stage with determination expected mid-2025, following submission and Acceptance of Application for a Development Consent Order (DCO) in March 2024. Examinations began in July 2024 and due to end in January 2025. The remaining programme is: Deadline 5: 3<sup>rd</sup> December; Issue Specific Hearings: 10<sup>th</sup> – 11<sup>th</sup> December; Deadline 6: 20<sup>th</sup> December; Deadline 7 14<sup>th</sup> January 2025; Close 16<sup>th</sup> January 2025, followed by a 6 month decision period. Consent, if granted, would be expected in July 2025 with the project generating power by 2030.

## Context

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The onshore cables and onshore substation will be located within the Mona Proposed Onshore Development Area, which overlaps Conwy and Denbighshire, in north Wales. Connection will be made with the Bodelwyddan National Grid Substation to the west of St Asaph. The proposed location of the substation was selected prior to the August 2023 review meeting and is located to the south of the National Grid Substation, south of St Asaph Business Park. Several other substations are located or proposed in this area relating to other offshore wind farms that also plan to connect to the grid at this point.

## Main Points

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### **Design Principles**

At this Design Review meeting the Design Commission returned to key aspects of the design approach to the substation, given its size, scale and location in a landscape setting.

The design process presented at this stage, as at the previous stages remains largely constraints-driven. In our previous report we noted that the review discussion revealed a potentially more ambitious approach that sought to better understand and then respond to the landscape. This opportunity remains undocumented and is not presented or communicated as part of a narrative for the scheme or, crucially, embedded into firm commitments for the project. The Commission advocated a more qualitative analysis of the existing landscape context in order to inform a clearly presented vision. This analysis would include consideration of the history of the area, landscape character and functions, natural vs manmade interventions, noise, views etc. This approach is not evidenced in the materials and the approach remains one of constraints and mitigation.

In our previous report we advised that *'Further work is needed to inform the proposals and present a coherent approach to design which is clearly discernible amongst the myriad of other material that accompanies a consent application of this scale. This work should include definition of high-level design principles that are guiding work across the whole project, that can then lead to sub-sets of more detailed principles or design commitments specific to individual elements of the work or individual sites, enabling appropriate responses to local context.'* Other than a 'philosophy of enclosure' this work is still not evident, in either the approach to integrating the substation into the landscape or in the layout of the components with the substation itself. We therefore refer the team to our earlier report for subsequent detailed comment on design development and the application of design principles in practice, which remain relevant.

We would expect to see a clear, well-illustrated design statement (to explain what the application design proposal is and how it has been established) for development at any scale. This vital explanatory document should address and resolve the design issues raised in this report but, as far as we are able to ascertain at the time of review, appears to be missing from the DCO application material that we have seen.

The Design Principles and/or Design Guide work (to define what post-DCO design remains, how it will proceed and be controlled, and defining the client's commitments) should reflect a strength of commitment from the development team to a range of issues relating to landscape quality as well as capacity, drawing from an in depth understanding of the landscape, and used to develop a more considered approach with benefits beyond mitigation measures. The substation, along with others in proximity, represents a development on an urban/townscape scale and requires more than 'enclosure'. Written and drawn materials conveying a design vision and principles which underpin it are still needed.

There should also be a clear programme chart showing the key decisions to be made, their sequence and which consultees or authorities will be involved in each one.

The Design Guide, if better defined, could be valuable as part of a design development and control process extending through detailed design, into tender and the delivery processes. It can be used to document the process of design iteration and control and set out key design principles that must be adhered to as the design progresses onto site. It should form part of the contractual processes for the detailed design/contractor teams and form part of the requirements linked to the DCO Order so it has material weight. It should anticipate the need for design and construction flexibility, i.e. not be too prescriptive, but should very clearly articulate and evidence how the principles established as part of the

EIA and design development to date can be upheld through to delivery, operation and maintenance.

This will be particularly important where truncated timescales post consent could lead to tension between expedience and optimal decisions. For example, clarity of approach and well-choreographed and coordinated elements can make a considerable positive difference beyond the technical, in terms of layout, materials colour and lighting, and more thought should be given securing this in the tender process.

In addition, the design guide should set out a design strategy for how the 'maximum development' would be changed if it proves that something less than the maximum space taken can be achieved as choices of systems and equipment are made.

### **Strategic Coordination**

There remains a need for strategic planning to consider how all the significant infrastructure interventions within proximity of these proposals will work together. As previously noted and as discussed, large scale energy infrastructure is developing in a piecemeal and uncoordinated way. A creative interpretation of what this means for the area and how this may influence the landscape and west St Asaph as a place would help to inform the design of each of the substations and other energy related development. We again urge the key stakeholders to engage in a landscape-led 'masterplanning' approach to the area.

As previously noted in our earlier report, *'A piece of more strategic work could also help to inform some general design principles and design guidance for the area, potentially in the form of an SPG document or similar. It is recognised that with increasing demand for electrical energy, substantial new and expanded National Grid infrastructure and supplier substations are inevitable across Wales, therefore similar strategic work is needed at a national level'*. This is a national issue that would benefit from Welsh Government attention.

## **Concluding Remarks and Next Steps**

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A rigorous process has been undertaken in the land assessment and we previously encouraged a similarly rigorous approach to design that reflects the stated ambitions of the project. Some of that work has been undertaken but much not. The extent of work to date and submitted in the DCO is insufficient to establish any commitments beyond basic mitigation. Whilst it is asserted that there will be no lasting damage, after repair and

mitigation, we urge enhancement and a considered design approach to what is in reality an intervention at an urban scale, in a landscape setting. This approach can and should be used to set expectations and specifications throughout procurement and into delivery.

As previously noted, the Design Commission would expect to see the design matters (those already resolved and those subject to future decision) to be refined and clearly communicated with visual as well as written materials, alongside a demonstration of how they will inform and influence the design and layout of the substation as well as any incorporated mitigation, on and off site, and how design principles will continue to be applied through into delivery.

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***A Welsh language copy of this report is available upon request.***



## Attendees

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Client:	Paul Carter – Consent lead, BP Philip Rew-Williamson, Onshore Consents & Environment, BP
Design Team:	Dirk Dollmann, EnBW, Engineering Manager/Design Champion Johannes Krause, EnBW, Onshore Substation Package Manager Corinna Demmar, RPS, SLVIA Lead Jess Furlong, Onshore Consents & Environment
Stakeholder Engagement:	Not present at this meeting
Local Authority:	Apologies received from Paul Mead, Denbighshire County Council

### **DCFW Design Review Panel**

Chair:	Ewan Jones
Panel:	Andrew Linfoot Simon Power Simon Richards Carole-Anne Davies, Chief Executive, DCFW Max Hampton, Design Advisor, DCFW
Observing:	Erin Philips, DCFW

## Declarations of Interest

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Panel members, observers and other relevant parties are required to declare ***in advance*** any interests they may have in relation to the Design Review and meeting Agenda items. Any such declarations are recorded here and in DCFW's central records.

There were no declarations of interest.