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MONA OFFSHORE WIND PROJECT

Response to Griff Parry on behalf of Harriet Mary Parry, Robert Wynne Parry, Griffith Wynne Parry and Elizabeth Wynne Wade D2 Submission

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Image of an offshore wind farm

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Prepared for:

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Glossary

Term	Meaning
Applicant	Mona Offshore Wind Limited.
Appropriate Assessment	A step-wise procedure undertaken in accordance with Article 6(3) of the Habitats Directive, to determine the implications of a plan or project on a European site in view of the site's conservation objectives, where the plan or project is not directly connected with or necessary to the management of a European site but likely to have a significant effect thereon, either individually or in-combination with other plans or projects.
Bodelwyddan National Grid Substation	This is the Point of Interconnection (POI) selected by the National Grid for the Mona Offshore Wind Project.
Competent Authority	Regulation 6(1) defines competent authorities as "any Minister, government department, public or statutory undertaker, public body of any description or person holding a public office".
Development Consent Order (DCO)	An order made under the Planning Act 2008 granting development consent for one or more Nationally Significant Infrastructure Project (NSIP).
Environmental Statement	The document presenting the results of the Environmental Impact Assessment (EIA) process for the Mona Offshore Wind Project.
Evidence Plan Process	The Evidence Plan process is a mechanism to agree upfront what information the Applicant needs to supply to the Planning Inspectorate as part of the Development Consent Order (DCO) applications for the Mona Offshore Wind Project.
Expert Working Group (EWG)	Expert working groups set up with relevant stakeholders as part of the Evidence Plan process.
Inter-array cables	Cables which connect the wind turbines to each other and to the offshore substation platforms. Inter-array cables will carry the electrical current produced by the wind turbines to the offshore substation platforms.
Interconnector cables	Cables that may be required to interconnect the Offshore Substation Platforms in order to provide redundancy in the case of cable failure elsewhere.
Intertidal access areas	The area from Mean High Water Springs (MHWS) to Mean Low Water Springs (MLWS) which will be used for access to the beach and construction related activities.
Intertidal area	The area between MHWS and MLWS.
Landfall	The area in which the offshore export cables make contact with land and the transitional area where the offshore cabling connects to the onshore cabling.
Local Authority	A body empowered by law to exercise various statutory functions for a particular area of the United Kingdom. This includes County Councils, District Councils and County Borough Councils.
Local Highway Authority	A body responsible for the public highways in a particular area of England and Wales, as defined in the Highways Act 1980.
Marine licence	The Marine and Coastal Access Act 2009 requires a marine licence to be obtained for licensable marine activities. Section 149A of the Planning Act 2008 allows an applicant for a DCO to apply for a 'deemed' marine licence as part of the DCO process. In addition,

Term	Meaning
	licensable activities within 12nm of the Welsh coast require a separate marine licence from Natural Resource Wales (NRW).
Maximum Design Scenario (MDS)	The scenario within the design envelope with the potential to result in the greatest impact on a particular topic receptor, and therefore the one that should be assessed for that topic receptor.
Mona 400kV Grid Connection Cable Corridor	The corridor from the Mona onshore substation to the National Grid substation at Bodelwyddan.
Mona Array Area	The area within which the wind turbines, foundations, inter-array cables, interconnector cables, offshore export cables and offshore substation platforms (OSPs) forming part of the Mona Offshore Wind Project will be located.
Mona Array Scoping Boundary	The Preferred Bidding Area that the Applicant was awarded by The Crown Estate as part of Offshore Wind Leasing Round 4.
Mona Offshore Cable Corridor	The corridor located between the Mona Array Area and the landfall up to MHWS, in which the offshore export cables will be located.
Mona Offshore Cable Corridor and Access Areas	The corridor located between the Mona Array Area and the landfall up to MHWS, in which the offshore export cables will be located and in which the intertidal access areas are located.
Mona Offshore Transmission Infrastructure Scoping Search Area	The area that was presented in the Mona Scoping Report as the area encompassing and located between the Mona Potential Array Area and the landfall up to MHWS, in which the offshore export cables will be located.
Mona Offshore Wind Project	The Mona Offshore Wind Project is comprised of both the generation assets, offshore and onshore transmission assets, and associated activities.
Mona Offshore Wind Project Boundary	The area containing all aspects of the Mona Offshore Wind Project, both offshore and onshore.
Mona Offshore Wind Project PEIR	The Mona Offshore Wind Project Preliminary Environmental Information Report (PEIR) that was submitted to The Planning Inspectorate (on behalf of the Secretary of State) and NRW for the Mona Offshore Wind Project.
Mona Offshore Wind Project Scoping Report	The Mona Scoping Report that was submitted to The Planning Inspectorate (on behalf of the Secretary of State) and NRW for the Mona Offshore Wind Project.
Mona Onshore Cable Corridor	The corridor between MHWS at the landfall and the Mona onshore substation, in which the onshore export cables will be located.
Mona Onshore Development Area	The area in which the landfall, onshore cable corridor, onshore substation, mitigation areas, temporary construction facilities (such as access roads and construction compounds), and the connection to National Grid substation will be located
Mona Onshore Transmission Infrastructure Scoping Search Area	The area that was presented in the Mona Scoping Report as the area located between MHWS at the landfall and the onshore National Grid substation, in which the onshore export cables, onshore substation and other associated onshore transmission infrastructure will be located.
Mona PEIR Offshore Cable Corridor	The corridor presented at PEIR that was consulted on during statutory consultation and has subsequently been refined for the application for Development Consent. It is located between the Mona Array Area and the landfall up to MHWS, in which the offshore export cables and the offshore booster substation will be located.

Term	Meaning
Mona PEIR Offshore Wind Project Boundary	The area presented at PEIR containing all aspects of the Mona Offshore Wind Project, both offshore and onshore. This area was the boundary consulted on during statutory consultation and subsequently refined for the application for Development Consent.
Mona Potential Array Area	The area that was presented in the Mona Scoping Report and in the PEIR as the area within which the wind turbines, foundations, meteorological mast, inter-array cables, interconnector cables, offshore export cables and OSPs forming part of the Mona Offshore Wind Project were likely to be located. This area was the boundary consulted on during statutory consultation and subsequently refined for the application for Development Consent.
Mona Proposed Onshore Development Area	The area presented at PEIR in which the landfall, onshore cable corridor, onshore substation, mitigation areas, temporary construction facilities (such as access roads and construction compounds), and the connection to National Grid infrastructure will be located. This area was the boundary consulted on during statutory consultation and subsequently refined for the application for Development Consent.
Mona Scoping Report	The Mona Scoping Report that was submitted to The Planning Inspectorate (on behalf of the Secretary of State) and NRW for the Mona Offshore Wind Project.
National Policy Statement (NPS)	The current national policy statements published by the Department for Energy Security & Net Zero in 2024.
Non-statutory consultee	Organisations that an applicant may choose to consult in relation to a project who are not designated in law but are likely to have an interest in the project.
Offshore Substation Platform (OSP)	The offshore substation platforms located within the Mona Array Area will transform the electricity generated by the wind turbines to a higher voltage allowing the power to be efficiently transmitted to shore.
Offshore Wind Leasing Round 4	The Crown Estate auction process which allocated developers preferred bidder status on areas of the seabed within Welsh and English waters and ends when the Agreements for Lease (AfLs) are signed.
Pre-construction site investigation surveys	Pre-construction geophysical and/or geotechnical surveys undertaken offshore and, or onshore to inform, amongst other things, the final design of the Mona Offshore Wind Project.
Point of Interconnection	The point of connection at which a project is connected to the grid. For the Mona Offshore Wind Project, this is the Bodelwyddan National Grid Substation.
Relevant Local Planning Authority	The Relevant Local Planning Authority is the Local Authority in respect of an area within which a project is situated, as set out in Section 173 of the Planning Act 2008. Relevant Local Planning Authorities may have responsibility for discharging requirements and some functions pursuant to the DCO, once made.
the Secretary of State for Business, Energy and Industrial Strategy	The decision maker with regards to the application for development consent for the Mona Offshore Wind Project.
Statutory consultee	Organisations that are required to be consulted by an applicant pursuant to the Planning Act 2008 in relation to an application for development consent. Not all consultees will be statutory consultees (see non-statutory consultee definition).

Term	Meaning
Wind turbines	The wind turbine generators, including the tower, nacelle and rotor.
The Planning Inspectorate	The agency responsible for operating the planning process for NSIPs.

Acronyms

Acronym	Description
AfL	Agreement for Lease
BEIS	Department for Business, Energy and Industrial Strategy
BNG	Biodiversity net gain
DCO	Development Consent Order
EIA	Environmental Impact Assessment
EnBW	Energie Baden-Württemberg AG
EWG	Expert Working Group
HVAC	High Voltage Alternating Current
IEF	Important Ecological Feature
IEMA	Institute for Environmental Management and Assessment
ISAA	Information to support the Appropriate Assessment
MDS	Maximum Design Scenario
MHWS	Mean High Water Springs
MLWS	Mean Low Water Springs
NBB	Net Benefits for Biodiversity
NRW	Natural Resources Wales
NSIP	Nationally Significant Infrastructure Project
NTS	Non-Technical Summary
OSP	Offshore Substation Platform
PDE	Project Design Envelope
PEI	Preliminary Environmental Information
PEIR	Preliminary Environmental Information Report
POI	Point of Interconnection
SAC	Special Area of Conservation
SoCC	Statement of Community Consultation
SPA	Special Protection Area
TCE	The Crown Estate
WTW	Wildlife Trust Wales
TWT	The Wildlife Trusts

Units

Unit	Description
GW	Gigawatt
km	Kilometres
km^2	Kilometres squared
kV	Kilovolt
MW	Megawatt
nm	Nautical miles

1 Response to Griff Parry on behalf of Harriet Mary Parry, Robert Wynne Parry, Griffith Wynne Parry and Elizabeth Wynne Wade D2 Submission

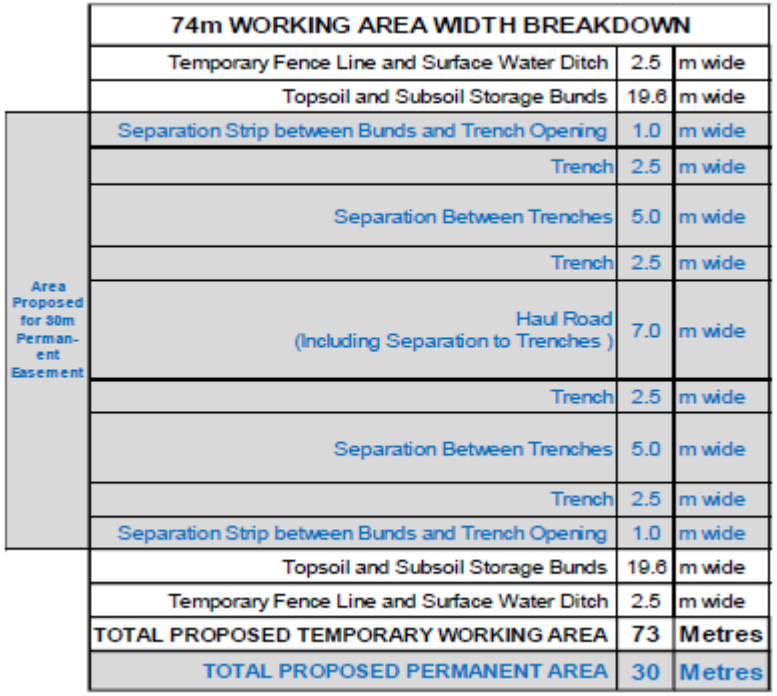
1.1 Introduction

1.1.1.1 The Applicant has responded to Griff Parry on behalf of Harriet Mary Parry, Robert Wynne Parry, Griffith Wynne Parry and Elizabeth Wynne Wade's D2 Submission below.

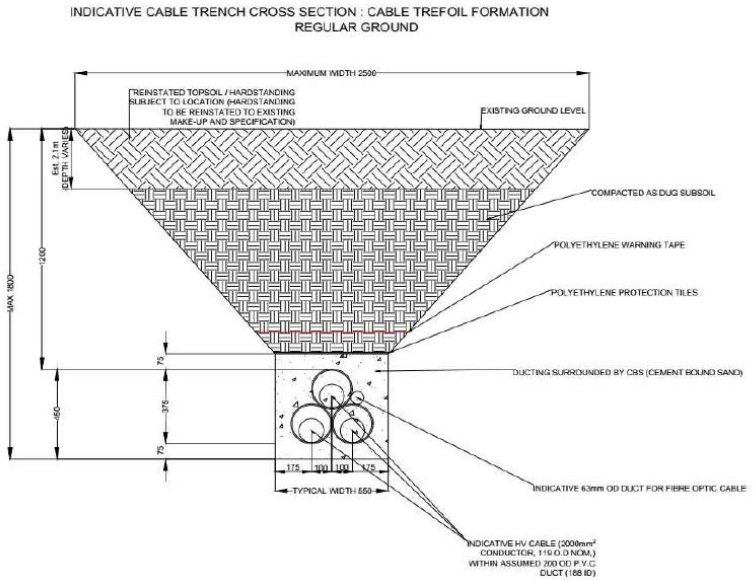
2 Response to Griff Parry on behalf of Harriet Mary Parry, Robert Wynne Parry, Griffith Wynne Parry and Elizabeth Wynne Wade

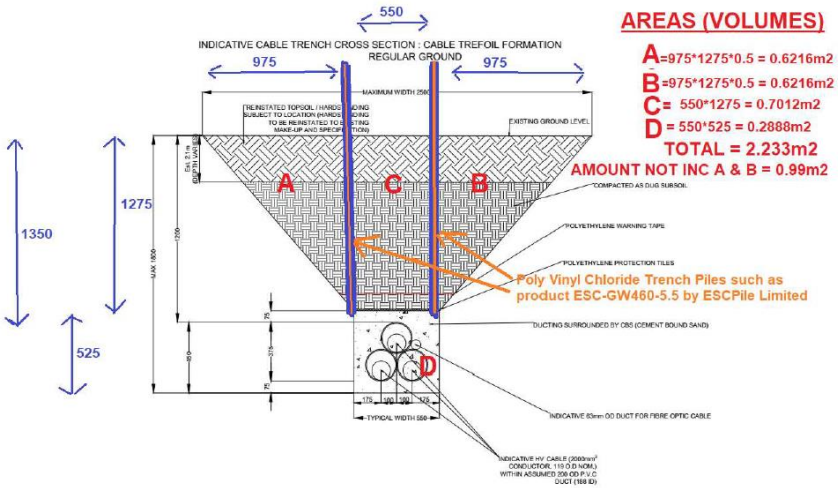
Table 2.1: REP2-102 - Griff Parry on behalf of Harriet Mary Parry, Robert Wynne Parry, Griffith Wynne Parry and Elizabeth Wynne Wade

Reference	Written Submission Comment	Applicant's response
REP2-102.1	2.0 **Introduction** 2.1 These written submissions are provided without prejudice to the Objector's contention that the Order should not be granted at all.	As the Mona Offshore Wind Project is still within the development process, with the detailed design stage still be to be completed, post-consent, the Project Design Envelope approach (also known as the Rochdale Envelope approach) has been adopted, in accordance with industry good practice and in line with Planning Inspectorate's Advice Note Nine: Rochdale Envelope. The maximum design scenario for the Onshore Cable Corridor (excluding trenchless crossing locations where the cable corridor may be wider to allow for difficult ground conditions or features) is 74 m as stated in the Project Description (APP-050). For the avoidance of doubt, where there are trenchless technique crossings the maximum width of the Onshore Cable Corridor is 100 m, with the exception of where the route crosses Gwrych Wood. The indicative cross-section issued at Deadline 1 (REP1-018) displays a typical open trench layout including fencing, surface water drainage, soil storage, trenching and the haul road. In addition to the open trench activity shown on the indicative cross-section, the Onshore Cable Corridor will also need to accommodate joint bays, the storage of subsoil associated with the joint bay excavations, the attenuation of surface / ground water, welfare facilities and provide adequate space for cable pulling/jointing activities. The exact positioning
REP2-102.2	2.2 The Promoter has submitted the Hearing Action Point Submission including cross sectional drawings presumably to explain and attempt to justify the excessive amount of land included in the Order and for the equally excessive permanently sterilised easement corridor area thereafter.	
REP2-102.3	2.3 Contrary to the Promoter's presumed intention however, it instead clearly demonstrates beyond doubt the wasteful and inefficient working methods that they intend to deploy with ill-considered knock on impacts on land take and consequent detriment to landowners.	
REP2-102.4	2.4 The Promoter's document contains cross section drawing number ED13798-GE1015 Rev F ("Drawing") which is of particular interest to the Objectors and shows a temporary working area of 74m now which has reduced from the 100m temporary working corridor area that the Promoter has insisted on to date.	
REP2-102.5	2.5 The proposed use of the working area shown in the cross section drawing is at odds with my previous understanding of the layout arrangements as described in section 12 and especially section 12.2.5 of the August 7th Submissions but is now accounted for as follows:	

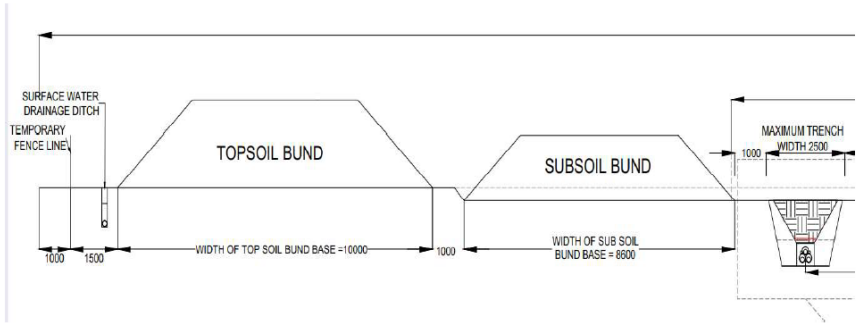
Reference	Written Submission Comment	Applicant's response
		of the individual elements of the onshore cable construction will be determined during detailed design. The Applicant would like to confirm that the key parameters with regard to the construction and maintenance of the onshore cable corridor can be found in section 3.7.2 of the Project Description (APP-050). The parameters quoted in this written representation have been extracted from the indicative cross-sections provided at Deadline 1 (REP1-018) and have only been provided for illustrative purposes and state that they should not be used for scaling.
REP2-102.6	2.6 This supplementary written submission seeks to review the Promoter's now proposed working area shown in the cross section on the Drawing, firstly from a temporary construction point of view and secondly from the impacts that these methods have on the permanent sterilising land rights.	
REP2-102.7	2.7 It should be read in conjunction with section 12 of the August 7th Submissions which it expands from a more practical / hands on approach.	
REP2-102.8	2.8 It considers each constituent part of the cross section, soil storage bunds, trench widths, separation strip widths, haul road widths from thermal, electromagnetic, construction and maintenance / repair perspectives.	
REP2-102.9	3.0 **Construction and Maintenance Methodology**. 3.1 With the exception of watercourses and hedges, the Promoter proposes open trench excavation over the Plots. They propose laying 4 no. trenches over the approximately 345 linear meters of the Plots.	

Reference	Written Submission Comment	Applicant's response
REP2-102.10	3.2 The Promoter intends an excavation down to approximately 1.8m with the cables being laid on top of circa 75mm trench bedding (i.e. the bottom of the cable duct will sit at 1.725m depth). Minimum depth of cover over the upper cable is intended to be 1.2m.	
REP2-102.11	**Trench Width, Support and Safety issues** 3.3 "Prescriptive" Health and Safety Executive ("HSE") regulations dating from 1966 used to adhere to a presumptive rule that if a trench excavation was under 1.2m in depth then it did not need trench support. Later it was realised that, despite earlier guidance, there were actually considerable Health and Safety issues with trench excavations up to 1.2M and so the position was not endorsed in subsequent HSE advice.	As stated with the Project Description (APP-050) and shown on the indicative cross-section issued at Deadline 1 (REP1-018), the maximum trench width at surface is 2.5 m and the maximum trench width at base is 1.5 m. This allows for either a flat or trefoil cable formation of ducts within the trench excavation. The industry standard for excavation of trenches and installation of a ducted system, for cross-country cable routes, is to adopt a battered excavation with the angle of repose dictated by the ground conditions encountered, as this is the safest and most efficient method. All excavations will be governed by temporary works designs and trench support will only be adopted if the temporary works designs prescribes that the default battered excavation approach is unsuitable. The temporary works designs will be finalised during detailed design and will be based on the results of ground investigations. All temporary works designs will adhere to the overarching HSE regulations and guidelines.
REP2-102.12	3.4 Later HSE guidance on excavation can be found in HSE-CIS8 Construction Information Sheet No 8(1) which assumes trench support to be an essential safety component for working in any trenches.	
REP2-102.13	3.5 The more recent document CIS64 which is an advisory good practice leaflet also produced by the HSE and entitled "Excavation: What you need to know as a **busy builder"(2)**. Shows that unsupported trench excavations may be acceptable for shallower trenches provided the sides are battered or angulated less steeply than the land's natural angle of repose. The HSE stresses the adverse impacts and consequences of failing to follow good health and safety guidance clearly with a view to encouraging trench support such as trench or sheet piles or trench boxes to be used.	
REP2-102.14	3.6 Despite the health and safety risks, the Promoter does not propose trench support and instead seems to be seeking to use an excessively wide 2.5M wide trench to accommodate angled slopes to be excavated to the depth of 1.8m in	

Reference	Written Submission Comment	Applicant's response
	readiness to receive trench support material. See diagram extract from the Drawing in the Promoter's Hearing Action Point Submission:  	
REP2-102.15	3.7 The drawing is clearly marked "not to scale" and so the Promoters proposed angulation for the excavation cannot be reliably measured. There also seem to be some discrepancies with the Promoter's vertical measurements on the diagram which make calculating the angle a little more difficult. Nevertheless, with some margin for error, the angle has been estimated to be approximately 52.5 degrees from the horizontal.	
REP2-102.16	3.8 The actual angle ultimately excavated will obviously vary from location to location based on the soil-type and ground conditions i.e. moisture and plasticity at that time.	
REP2-102.17	3.9 Nevertheless, based on the standard arrangement described in the Hearing Action Point Submission, it can be seen that after the first 1.275m of the trench walls will be battered at an angle of approximately 52.5 degrees. This causes the open trench	

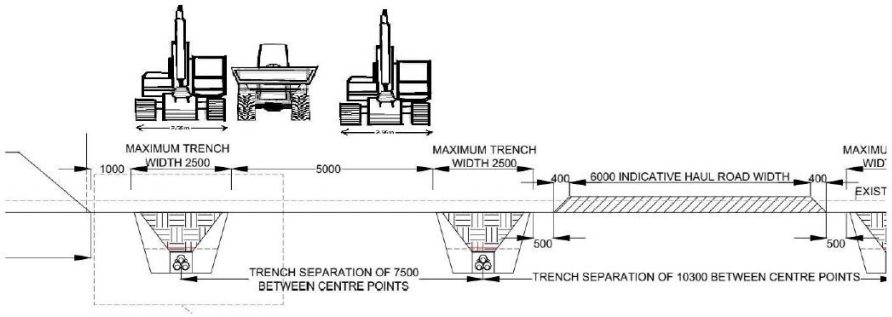
Reference	Written Submission Comment	Applicant's response
	area to extend to a width equating to an additional 1.95m over what is strictly necessary to accommodate the cables which is namely the 0.55m at the very bottom of the trench with the angulation entirely unnecessary.	
REP2-102.18	3.10 Notwithstanding the health and safety risks, this gives rise to a great deal of additional excavation and material arisings than would otherwise be required and this is calculated in the markup below: 	
REP2-102.19	3.11 Areas A,B,C and D amount to approximately 2.233m2. For each linear metre of the cables the volume of spoil being removed would therefore be 2.233m3.	
REP2-102.20	3.12 If however, trench sheets were used allowing straight vertical walls to the trench then a more proportionate rectangular trench of only 0.99m2 would be affected or a volume of 0.99m3 for each linear meter of the trench.	
REP2-102.21	3.13 In addition to the saving of substantial volume excavated then this would also mean that 2 metres per trench could be saved off the temporary working area. This would be 8m over the 4 trenches.	
REP2-102.22	**Volume of Soil to be Excavated and its Storage**	The Applicant would emphasise that the cross sections provided at Deadline 1 (REP1-018) are indicative and state that they should not be

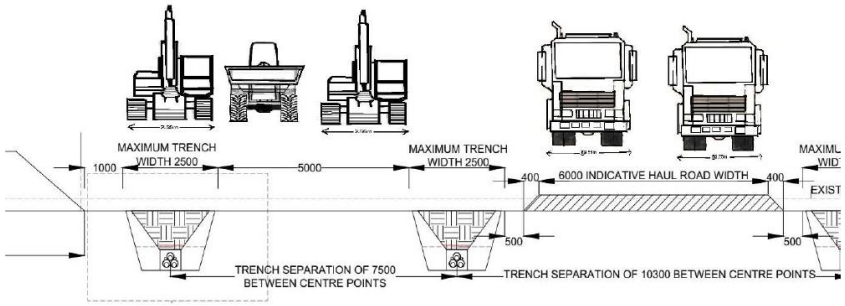
Reference	Written Submission Comment	Applicant's response
	3.14 For the following purposes we ignore any separation between topsoil and subsoil (which varies in depth from site to site in any event) and just deal with overall volumes.	used for scaling. They have been provided to give an example of how the proposed trenches would be accommodated within the Onshore Cable Corridor. The proposed installation technique depicted on the cross sections provided is the industry standard for excavation of trenches and installation of a ducted system, for cross-country cable routes. The volume of soil to be excavated and stored at any specific location will depend on a number of factors including ground conditions and final location of joint bays and link boxes, all of which will be determined during detailed design. In addition, the calculations provided in the Representation do not fully assess all options presented within the Project Description (APP-050), for example, a flat formation will be up to three times the width at the base of the trench compared to the trefoil formation used in the calculations and will therefore require additional soil to be excavated.
REP2-102.23	3.15 The total excavation area of the cross sectional area is therefore 2.233m2. For a 1m linear length of trench this would be a volume of 2.233m3. Depending on material type and moisture, or water content, at the time, it would be expected that this would weigh in the region of 3.5 tonnes.	
REP2-102.24	3.16 For instance, for every individual linear metre of trench excavated in line with the current proposals then some 3.5 tonnes of material would be excavated by the Promoter or 14 tonnes overall for all 4 proposed trenches.	
REP2-102.25	3.17 Obviously this is for the settled (compacted) soil in situ in the ground. When excavated the weight would obviously stay the same but, due to the disturbance, the volume would increase and this can mean an increased volume by up to 40% in exceptional circumstances. The increased volume per linear metre of trench would therefore be 3.13m3 (being 2.233m3 *140%) or 12.5m3 (being 2.233m3 *4) over all 4 proposed trenches.	
REP2-102.26	3.18 Areas A and B are obviously right angled triangles and their combined volume has been calculated to each be 1.2432m3 (being, 0.6216m3*2) per linear meter of each individual trench or 1.7405m3 (being, 1.2432m3*140%) once disturbed. Over the 4 trenches this would be 6.962m3 (being, 1.7405m3*4) per linear meter.	
REP2-102.27	3.19 The Promoter's cross section Drawing in the Hearing Action Point Submission shows a 10 metre topsoil bund together with an 8.6 metre subsoil bund at both sides of the proposed trench excavations. No measurements are given for the bund heights and they cannot be scaled as the drawing clearly states that it is "not to scale"	

Reference	Written Submission Comment	Applicant's response
		
REP2-102.28	3.20 However in order to work out what height a volume of 12.5m3 stored as a triangular prism along the working area/ alignment without flattened top bunding would require the calculation would be as follows: (Base * Height * Length[or Depth]) /2 = Volume where the volume is obviously known to be 12.5m3 and base(s) and known to be 10m+8.6m_8.6m+10m = 37.2m and the length (or depth) is known to be 1m The calculation is therefore : (37.2m * Height m*1m)/2 = 12.5m3 37.2 * Height = 25 **Height = 25/37.2 = 0.672m**	
REP2-102.29	3.21 The area that the Promoter has shown as soil bunding could therefore accommodate all the site excavation arisings within a bund of only 0.672M (just over 2 foot) in height . This would be a very irregular and unusually low height to which similar bunds would ordinarily be stacked from my experience of trench excavations. For one thing this would give rise to an extraordinary large surface area to which the Promoter would need to administer weed control and so on unnecessarily increasing project costs. Ponding, leaching and erosion would also be a problem.	
REP2-102.30	3.22 A far more common bunding height would be 1.5m although in constrained sites 2m or more would be used. If a bunding height of 1.5m was used for the Scheme then the base need only be	

Reference	Written Submission Comment	Applicant's response
	(Base * Height * Length[or Depth]) /2 = Volume where the volume is obviously known to be 12.5m3 and height is taken to be = 1.5m and the length (or depth) is known to be 1m The calculation is therefore : (Base * 1.5m 1m)/2 = 12.5m3 Base * 1.5 = 25 Base = 25/1.5 **Base = 25/1.5 = 16.67m**	
REP2-102.31	3.23 In the event of a 2m tall bund then the base width of the bund could be further reduced to 12.5m	
REP2-102.32	3.24 A bund height of 1.5m would mean a reduction in the cross sectional width of the bund from 37.2m to 16.7m i.e. 8.35m either side of the trenches, enabling the working area to be reduced by a width of 20.5m.	
REP2-102.33	3.25 A bund height of 2.0m would mean a reduction in the cross sectional width of the bund from 37.2m to 12.5m i.e. 6.25m either side of the trenches, enabling the working area to be reduced by 24.7m.	
REP2-102.34	3.26 If trench piles ([3]) were to be used then the excavation of areas A and B would be unnecessary and a considerable saving of excavation arisings would be made. This would mean that a volume of only (12.5m3 less 6.962m3) i.e. 5.56m3 per linear metre would need to be displaced and stored. [3] If trench piles were to be used then a poly vinyl chloride product such as ESC-GW460-5.5 by ESCPILE Limited would be recommended if to be left in situ permanently – this would be for obvious conductivity reasons.	
REP2-102.35	3.27 If this reduced volume of arisings was stored in bunds at 1.5m height then the cross sectional bund width need only be 7.41m or 3.71m either side of the trenches. This could mean a reduction in temporary working area by a width of 29.8m.	
REP2-102.36	3.28 If this reduced volume of arisings was stored in bunds at 2.0m height then the cross sectional bund width need only be 5.56m or 2.78m either side of the trenches. This could mean a reduction in temporary working are by an astonishing width of 31.64m.	

Reference	Written Submission Comment	Applicant's response
REP2-102.37	3.29 Using trench piles together with more pragmatic stacking of the soil arisings could therefore alone, potentially reduce the temporary working corridor from the now proposed 74m down to as little as 42.4m in line, or in fact a little less than some of the National Grid undergrounding schemes referred to in section 12.2.1 of my August 7th Submission.	
REP2-102.38	3.30 The Promoter however, thinking only of its own convenience, has given no consideration whatsoever to mitigating the impact its scheme is likely to have on the landowners and occupiers.	
REP2-102.39	**5 metres separation area between trenches (7.5m between cable centres)** 3.31 The Promoter's agents email of 11 August 2023 (4) stated that: "The (trench) separation distance (hence the width of the corridor) is required for several reasons these being ease of construction, electrical separation (i.e. safety), thermal independence and ease of maintenance" (4). (emphasis added).	The dictating factor for trench separation is not the width of the open-cut trench, but rather the distance (centre-to-centre) between cable circuits. This separation is necessary due to the heat dissipation requirements of the export cable at depth. The 2.5m maximum trench width at surface and 7.5m separation between cable centres are indicative and the final dimensions are subject to existing ground conditions and will be developed during the detailed design stage. If the ground conditions are suitable, the overall trench width and separation may be reduced, this is in line with the Applicant's ongoing obligations (as set out in Article 20 of the draft DCO (REP2-004) to only compulsorily acquire land or rights in land that are required for the development of the Mona Offshore Wind Project.
REP2-102.40	3.32 This was dealt with in Section 12 of the August 7th August Submission.	
REP2-102.41	3.33 The Promoter has not submitted any evidence justifying, i.e. by way of calculations that the width requested is necessary for thermal independence or for electrical and or magnetic separation. These were demonstrated not to be an issue in sections 12.2.3 and 12.2.4 of my August 7th Submission and I have it on very good authority from a very respected professional working at senior level in high voltage power transmittal that: "at that distance and underground, there is unlikely to be any thermal derating. EMF doesn't combine exponentially. I have never heard of EMF shielding being installed in a trench, but the principles of shielding are well established."	
REP2-102.42	3.34 We must therefore again conclude that there are no thermal or EMF reasons for the 5M width between trenches and we must therefore again assume that it is instead for "**ease of**" construction or "**ease of**" maintenance reasons.	
REP2-102.43	3.35 In terms of construction a standard 12 tonne tracked excavator has a width of approximately 2.55m wide. This itself is slightly more than the trench width that the Promoter intends to utilise.	The Outline Highways Access Management Plan (APP-228) presents the access strategy for the Project. In order to minimise impacts of Heavy Goods Vehicle (HGV) traffic upon concentrations of sensitive receptors, the temporary construction haul road will be used where possible to avoid routeing traffic along the public highway network. Therefore, the
REP2-102.44	3.36 Two excavators have therefore been shown overlaid on the Drawing below:	

Reference	Written Submission Comment	Applicant's response
		haul road is required to provide 2-way access predominantly for standard HGV movements along the entirety of the Onshore Cable Corridor. The haul road has been indicatively shown centrally within the Onshore Cable Corridor, as shown on the indicative cross-section issued at Deadline 1 (REP1-018), as this approach minimises the amount of construction traffic movements on the subsoils and is typically used on other cross-country cable route projects. The haul road width and location within the cable corridor will be confirmed during the detailed design stage and will be influenced by topography and existing ground conditions.
REP2-102.45	3.37 A tracked trenching excavator would ordinarily operate by locating itself on the line of the as yet unopened trench so that the jib was behind it and in line with the centre of the newly excavated trench to the rear of its direction of travel. The diagram shows that not only is there sufficient room for an excavator over the trench but that a further two excavators or more likely, 5 to 7 tonne dumpers (also of width circa 2.5m) or similar pieces of large excavation / muck removal equipment could be accommodated in the 5m spacing which as well is excessive and unnecessary for cable laying and accomplishment of the Scheme. This would be even more the case in the event that the narrower trenches were employed due to using more efficient and safer trench piles.	
REP2-102.46	3.38 Once the cables are laid, backfilling the trenches would be a similar process although in reverse i.e. with the trench being filled in front of the direction of travel of the machine with the excavator travelling safely and efficiently over the already newly filled in trench.	
REP2-102.47	3.39 Construction reasons therefore do not justify a 5m space between trenches.	
REP2-102.48	3.40 In terms of whether the 5m strip is required for "maintenance" or repair of the cable in the future then it needs to be borne in mind that modern GPS equipment such as the Trimble R 780 (5) can pinpoint as built assets to within 10mm of accuracy and that together with modern "cat and genny" technology (Cable Avoidance Tool (CAT) and Signal Generator (Genny)) such as the C.A.T.4 and Genny4(6) which can track existing underground cables also with extraordinary accuracy that, with good record keeping and proper pre dig research and preparation, there will be little, or indeed no, ambiguity whatsoever regarding the precise location and depth of these cables in the event that they needed to be	

Reference	Written Submission Comment	Applicant's response
	excavated in the future, for instance, for repair or adjustment. A wide 5 metre spacing for trial holes and exploratory digs to try and locate the precise cable location would be entirely unnecessary.	
REP2-102.49	3.41 It is therefore also difficult to identify any maintenance or repair reasons for a 5 metre spacing between the trenches (being a 7.5m distance between cable centres).	
REP2-102.50	**6 metres haul road down the centre of the permanent easement area** 3.42 A standard 4 axle rigid 32 tonne tipper also has a width of approximately 2.55m wide. This again itself is slightly more than the trench width that the Promoter intends to utilise.	
REP2-102.51	3.43 Two such tipper wagons have therefore been shown overlaid to on an extract from Drawing below which shows that the road can conveniently accommodate two way Heavy Goods Vehicle traffic:  	
REP2-102.52	3.44 This convenience explains why the Promoter desires such a wide haul road the entire length of the onshore scheme even though the haul road would be extremely unlikely to be used again during the entire life of the cables once the scheme was implemented. Regardless of the fact that there would be no cables beneath the road, the Promoter still intends to sterilise this land as well.	
REP2-102.53	3.45 This further demonstrates the Promoter's cavalier and inconsiderate approach and low regard towards landowners who it seems to view as insignificant and irrelevant parties but it will be landowners who have to suffer the detrimental impacts of this for the foreseeable future.	

Reference	Written Submission Comment	Applicant's response
REP2-102.54	3.46 The Promoter could consider a 3m haul road with passing places but has chosen not to do so.	
REP2-102.55	3.47 Better still, the Promoter could install a 3m haul road with passing places directly adjacent to the first trench in which all works would be completed and backfilled in full before the haul road is moved away from the completed trench and the second trench commenced which would be located in the original footprint of where the haul road was previously located for the first trench. Repeating this for trenches 3 and 4 would mean a much more efficient use of the land and the at the end of construction the final location of the haul road footprint could accommodate the final post construction drainage.	
REP2-102.56	3.48 Given the evidence above, a far more proportionate use of the land than is currently proposed would be as follows:	The Applicant would dispute this proposal as it has been based on calculations extracted from drawings which explicitly state "do not scale". The Applicant maintains the position that a 74 m wide Onshore Cable Corridor is required to accommodate all elements of the onshore cable construction (excluding trenchless technique crossings). The permanent cable easement will be defined based on the final location of the cables within the onshore cable corridor, it is anticipated this will be 30m but this will be determined following detailed design which will be influenced by local ground conditions, final orientation and trenchless techniques used.
REP2-102.57	3.49 Applying much more proportionate spacings and efficient working practices above then it can be seen that the temporary working area could be reduced to circa 30m width whilst the permanent cable easement could be reduced to circa 12 metres which is far less detrimental to the land although it remains the Objectors strong preference that their land is not affected at all.	
REP2-102.58	**4.0 Conclusion**	The Applicant has responded to the detailed points above.

	74m WORKING AREA WIDTH BREAKDOWN			COMMENTARY	REVISED WIDTH "REQUIRED"
	Temporary Fence Line and Surface Water Ditch	2.5	m wide		Say 2.5m (if required at all)
	Topsoil and Subsoil Storage Bunds	19.6	m wide	A 2.0M tall bund here could replace with a 6.25m bund width	Say 6.25m
Area Proposed for 30m Perman-ent Easement	Separation Strip between Bunds and Trench Opening	1.0	m wide	unchanged	Say 1m
	Trench	2.5	m wide	using Trench piles could mean a trench of only 0.55m width	Say 0.55m
	Separation Between Trenches	5.0	m wide	there is no construction or maintenance of EMF or thermal justification for the width and a more proportionate spacing with be say 2m	Say 2.5m
	Trench	2.5	m wide	using Trench piles could mean a trench of only 0.55m width	Say 0.55m
	Haul Road (Including Separation to Trenches)	7.0	m wide	vehicle movements can be accommodated with passing places and the haul road could be moved along with the excavation as trenches are completed in any event at the end of construction the road footprint could house the post construction drainage	Say 2.5m
	Trench	2.5	m wide	using Trench piles could mean a trench of only 0.55m width	Say 0.55m
	Separation Between Trenches	5.0	m wide	there is no construction or maintenance of EMF or thermal justification for the width and a more proportionate spacing with be say 2m	Say 2.5m
	Trench	2.5	m wide	using Trench piles could mean a trench of only 0.55m width	Say 0.55m
	Separation Strip between Bunds and Trench Opening	1.0	m wide		Say 1m
	Topsoil and Subsoil Storage Bunds	19.6	m wide	A 2.0M tall bund here could replace with a 6.25m bund	Say 6.25m
	Temporary Fence Line and Surface Water Ditch	2.5	m wide		Say 2.5m (if required at all)
	TOTAL PROPOSED TEMPORARY WORKING AREA	73	Metres	ESTIMATED PROPORTIONATE WORKING AREA	29.2 Metres
	TOTAL PROPOSED PERMANENT AREA	30	Metres	ESTIMAED PROPORTIONATE PERMANENT AREA	11.7 Metres

Reference	Written Submission Comment	Applicant's response
	4.1 As shown in section 12 of my August 7th Submissions, no thermal or electromagnetic reasons justifying the excessive trench spacings proposed by the Promoter have been identified.	The Applicant would like to reiterate that the Onshore Cable Corridor width is presented as a maximum design scenario in line with the Project Design Envelope approach. The Applicant maintains that a 74 m cable corridor is required to accommodate all elements of the onshore cable construction (excluding trenchless technique crossings). However, during detailed design, if conditions allow, this will be reduced where possible in line with the Applicant's ongoing obligations (as set out in Article 20 of the draft DCO (REP2-004) to only compulsorily acquire land or rights in land that are required for the development of the Mona Offshore Wind Project.
REP2-102.59	4.2 Other than the claim in the email of 11th August (4) then the Promoter has made no other reference to them being required for these reasons either. Neither has the Promoter sought to provide calculations or other evidence that thermal or electromagnetic reasons might be a reason behind such excessively wide trench spacings.	
REP2-102.60	4.3 As also suggested in section 12 of my August 7th Submissions, the use of trench sheets can greatly reduce excavation widths and further, polyvinyl chloride trench sheets could be left in situ around the cables at a level above the highest cables to protect and give warning in the very unlikely event of a random accidental dig down.	
REP2-102.61	4.4 The Promoter could achieve a much narrower temporary working are by using trench piles to narrow the dig area and substantially reduce the excavated material arisings needing to be stored during the scheme.	
REP2-102.62	4.5 Raising the height of the soil storage bunds above the extraordinarily low heights currently proposed will also greatly narrow the temporary working area necessary.	
REP2-102.63	4.6 In addition to there being no EMF or thermal reasons to justify the 5m space (7.5m between cable centres) neither are there any construction or maintenance reasons and this land has only been included in the Order because the Promoter desires it for its own convenience.	
REP2-102.64	4.7 The central haul road is also misconceived and wasteful of land. The amenity of a haul road can be accommodated on 50% of the land with passing places. Further. the haul road can be moved along as the trenches are laid and completed so that the haul road is ultimately located to the outside of the cable trenches and easement and need not be included in the sterilised area rather than in the centre where it causes maximum disruption, inconvenience and impairment to landowners and occupiers.	
REP2-102.65	4.8 There are therefore no thermal derating, electrical, magnetic, other physical, construction (including health and safety), maintenance (including repair or renewal) or other practical or theoretical reasons that "require" this excessive amount of land for the implementation and delivery of the Scheme that justify its	

Reference	Written Submission Comment	Applicant's response
	inclusion in the Order or for the excess land to be recommended for confirmation. The excess land is not "necessary for the accomplishment of the Scheme". The excessive amount of land that the Promoter intends to impact upon has only been included in the Order as the Promoter desires it solely for its own convenience and amenity in furtherance of the Promoter's own venal commercial interests.	
REP2-102.66	4.9 In fact, the additional detriment that landowners will suffer due to the extent of this excessive and unnecessary landtake, if confirmed, further balances the decision "scales" against confirmation, when considering whether the application complies with section 122(3) of the Act and the associated sections 13 and 14 of the Guidance to the Act which requires that there be: *"a compelling case in the public interest for compulsorily acquiring the land and that the public benefit must outweigh the private loss that would be suffered by those whose land is to be acquired".* (emphasis added)	
REP2-102.67	4.10 The Court of Appeal decision in the Sharkey case([7]) confirmed the position that this excess and unnecessary land cannot be confirmed in this Order and modification to the Order will be required to exclude it before confirmation.	
REP2-102.68	4.11 Notwithstanding the above it remains the Objectors' strong preference that the Plots are excluded altogether from this Order prior to its confirmation.	