Wylfa Newydd Development Consent Order
Landscape and Habitat Management Strategy
Commentary on ecology and land management by National Trust

Summary

S1. The Landscape and Habitat Management Strategy (LHMS) raises a number of questions of fundamental principle and of detail, commitment and certainty. This arises because only section 4 (Landscape and habitat design principles) and section 7 (Implementation and long-term management) are secured by Schedule 3 of the Development Consent Order (DCO). The remaining parts of the document are indicative and illustrative only and this greatly weakens the document. Our concerns have been raised with HNP over three years of consultations and meetings and many issues remain unresolved.

S2. The LHMS is lacking in ambition given the scale of the terrestrial and marine footprint of the project, with insufficient mitigation being proposed, particularly in the marine environment where 31.1 ha of seabed and intertidal shoreline is being lost to the development. The opportunity to develop an integrated landscape and habitat management strategy for the WNDA and its adjoining land, coastline and offshore sea has been missed.

S3. Current Welsh and UK legislation and planning policies are clear that developments should result in no net-loss of biodiversity and seek to achieve biodiversity net-gain and ecosystem resilience. Given the information currently provided, and particularly the lack of substantive habitat creation proposals for the marine environment, we can have no confidence that the LHMS will provide a net overall biodiversity gain for the project.

S4. The LHMS is highly focussed on the WNDA site in isolation from where it sits in the wider environment. A fully integrated, landscape-scale approach, would be expected for a project with such a large development footprint and consequent impact on the local and regional environment.

S5. The proposals for terrestrial, wetland and freshwater habitat creation and restoration on the WNDA need to be reworked to provide the maximum possible outcomes for biodiversity. Good soil management is also vital to the success of the LHMS and must be given greater prominence in the LHMS.

S5. The LHMS gives insufficient emphasis to the protection of Cemlyn Bay SSSI/SAC (and Anglesey Terns SPA) with Mound E being only 110m away from the western boundary of the Cemlyn Lagoon. It is imperative that landforms, soils and stabilising vegetation are fixed as soon as possible, especially on the western side of mound E, and not altered at a later date.

S7. The LHMS says very little about monitoring and long-term management. It is vital that a fully-funded monitoring and surveillance programme is established at the outset as an integral part of the habitat creation and management schemes. HNP's financial, staffing and temporal commitments to long term management are not clear

in the document and would need to be secured and properly resourced via the TCPA (Section 106 Agreement), DCO applications or using other innovative models.

Evidence

1. This evidence relates to Document 8.16 (APP-424 & APP-425) Landscape and Habitat Management Strategy (Parts 1 and 2), contained within Volume 8: Other Documents (Part 9/19). The status of this document is set out in the Draft DCO Explanatory Memorandum, Document 3.3, (APP–031) page 63, paragraph 10.9.2 (e):

"Landscape and Habitat Management Strategy ("LHMS"): The LHMS sets out how key landscape elements and habitats within the Wylfa Newydd Development Area (and other select areas) will be created and managed in order to mitigate the adverse ecological effects identified in the Environmental Statement. This will be a certified document and will include the illustrative reference point drawings as an appendix. The LHMS is a standalone strategy; rather than forming part of one of the CoCPs".

However, only section 4 of the LHMS (Landscape and habitat design principles) and section 7 (Implementation and long-term management) are secured by Schedule 3 of the Development Consent Order (DCO). The remaining parts of the document are indicative and illustrative only and raise a number of concerns both of fundamental principle and of detail, commitment and certainty. Our concerns have been raised with HNP over three years of consultations and meetings and many issues remain unresolved.

2. In the Design Concept and Scheme Evolution section of the LHMS, specifically paragraph 3.2.14 on page 55, it states:

"Comments received from stakeholders and during the PAC process have been considered and incorporated into the development of design and management principles within the LHMS to the greatest extent possible. In particular, the need to maximise the conservation value of the site and deliver a net biodiversity gain has been central to the development of the principles. While the LHMS only sets out the principles for attaining these objectives, compliance with these principles are secured through the DCO Requirements."

This implies that all the ecological proposals in the LHMS should be examined against the principles of maximising the conservation value of the site and delivering a net biodiversity gain. <u>This evidence tests whether these principles have been delivered by posing a number of questions concerning the LHMS</u>.

Does the LHMS properly reflect the scale of the development?

3. No. The LHMS is lacking in ambition given the scale of the terrestrial and marine footprint of the project, with insufficient mitigation being proposed, particularly in the marine environment where 31.1 ha of seabed and intertidal shoreline is being lost to the development. The scale and long-term nature of the Wylfa Newydd development provided a considerable opportunity for the project to drive a major programme of habitat creation and management which would extend beyond the boundaries of the Wylfa Newydd Development Area (WNDA). The opportunity to develop an

integrated landscape and habitat management strategy for the WNDA and its adjoining land, coastline and offshore sea has been missed.

4. Current Welsh and UK legislation and planning policy is clear that developments should result in no net-loss of biodiversity and seek to achieve net-gain and ecosystem resilience. The recent tranche of Welsh policy including the Well Being & Future Generations Act (WB&FGA, 2015), the most recent edition of Planning Policy Wales (PPW 9th edition 2016) and the recently drafted Welsh National Marine Plan (2017) all enshrine the need to retain, conserve and enhance Wales' biodiverse natural environment with healthy functioning ecosystems in order to maintain the nation's resilience (goal 7 of WB&FGA). These policies contain a strong emphasis on the importance of the undeveloped Welsh coastline and its identified Heritage Coast (PPW 5.7.4), whilst TAN 5 (2009) clearly highlights the weight to be placed on undeveloped coast. The proposals set out in the LHMS are not adequate to comply with these requirements because they do not properly address the full scale of the development and its impact on biodiversity, landscape and wider natural resources.

Do the landscape and habitat proposals for the WNDA maximise the conservation value of the site and deliver a net biodiversity gain?

5. Partly. The LHMS sets out to maximise the conservation value of new terrestrial and freshwater habitats, but fails to do this for marine (littoral and benthic) habitats. The landscape and habitat design principles (LHMS, section 4, pages 60-62), contain a confusing mix of definite and conditional statements concerning landscape design, planting, habitats, ecological compensation sites, earthworks, public access, etc. This conditionality is another example of the indicative/illustrative element of the LHMS, with important detail being left post-DCO. However, the ambitious habitat creation proposals in section 6.5 (pages 106-107), are to be welcomed, aiming for particular National Vegetation Classification (NVC) types to be created. However, it will be challenging to create the soils, soil profiles and hydrological conditions that will be required for the delivery of each NVC type. In our judgement, given the expected on-site conditions, it is likely to prove difficult to create particular NVC types and much less specific vegetation types will result with a lower biodiversity value than implied in the LHMS.

6. We also question the indicative areas of different habitat types, which are:

Species-rich grassland – close sward	20ha
Species-rich grassland – coarse sward	100ha
Marshy/wet grassland and fen	10ha
Coastal heath/grassland mosaic	10ha
Sympathetically managed agricultural grasslands	40ha

Our major concern is the 100ha of "species-rich grassland – coarse sward", which is twice the area of other proposed grasslands and fen (not including the 40ha of "sympathetically managed agricultural grassland" discussed in the following paragraph). A coarse sward grassland normally develops when a species-rich grassland transitions to a poorer quality habitat, usually due to lack of appropriate management. The description in the LHMS, paragraph 6.5.8, suggests the habitat will comprise primarily species of MG5 grassland, but these species do not produce a

coarse sward habitat. We are concerned that attempting to create as much as 100ha of this habitat could lead to major problems and be a missed opportunity to create habitats of higher biodiversity value. Given these concerns and the greater biodiversity value of the other proposed habitats, it is recommended that their indicative areas are revised to greatly reduce the area of course sward grassland. This will allow additional areas of higher quality habitat to be created.

7. Given the overarching ecological aims of the terrestrial habitat creation and management proposals for the WNDA, nature conservation (within the overarching landscape design parameters) should be the primary objective for the whole site. It follows that the 40 ha of "sympathetically managed agricultural grassland" is not needed within the WNDA and more habitat can therefore be created. We now understand, from a recent meeting with Horizon Nuclear Power (HNP), that this proposal has been withdrawn and 40 ha of new additional habitats will be created instead. We welcome this change to the LHMS as long as additional high quality habitats are proposed. Whereas many habitats will require grazing management to maintain the correct ecological conditions for target species, agricultural objectives should be secondary to ecological ones in order to maximise biodiversity value.

8. Soil should be given greater prominence in the LHMS. The objectives set out for terrestrial habitats are all dependent on achieving suitable soils, soil profiles, physical/chemical conditions and hydrology for each habitat and NVC type. Good soil management is vital to the success of the LHMS as well as minimising the environmental impact of the site clearance and construction phases of the development on the site's watercourses and inshore waters.

9. It is unclear whether the creation of open-water wetlands on the WNDA, the "natural sediment ponds" (paragraph 6.2.4, page 87) and "permanently damp hollow and seasonal pools" (paragraph 6.3.29, page 99) will fully compensate for the loss of approximately 20 ponds currently on the site. We understand from recent post DCO submission documents from HNP that it is now proposed to create nine ponds. Again, this is another example lack of certainty when HNP are wishing to demonstrate biodiversity net gain. We await clarification from HNP concerning any updated documents and information as to how this change will be incorporated into the DCO submission.

10. There is little in the LHMS to show that new on-site habitats have been designed to link with existing habitat adjoining and close to the WNDA, including the Notable Wildlife Enhancement Site and reptile translocation site (Mynydd Ithel). This has missed an opportunity to maximise the conservation value of the new on-site habitats and maximise opportunities for effective recolonisation.

11. The LHMS fails to demonstrate biodiversity net gain for marine (littoral and benthic) habitats (biotopes) with a loss of 31.1ha of these biotopes. To mitigate this loss, it is proposed to seed permanent marine structures with natural rock on the harbour side of the southern element of the western breakwater to provide 0.3ha of new substrates (0.2ha intertidal, 0.1ha subtidal). This is only 5.1% of the total area of the breakwaters (5.89 ha). There are also proposals for "roughening" the 17ha of harbour floor and for restoring the biotopes lost beneath the temporary causeway. Together with breakwater proposals, the proposed mitigation is unlikely to provide

sufficient types and extent of marine biotopes to demonstrate biodiversity net gain in the marine environment. This is considered in more detail in paragraphs 24-29 of this evidence.

12. It is unclear how the LHMS will provide quantitative evidence that a net biodiversity gain will be achieved though its proposals. What is being put forward as habitat creation and management proposals has to be set against the loss of habitats resulting from the large development footprint on land and at sea, and the acknowledged damage to the Tre'r Gof SSSI. This will require a comprehensive monitoring/surveillance plan that is designed to provide this information. Given the information currently provided, and particularly the lack of substantive habitat creation proposals for the marine environment, we can have no confidence that the LHMS will provide a net overall biodiversity gain for the project.

Does the LHMS present proposals that connect adequately with the land, coast and sea adjoining the Wylfa Newydd Development Area?

13. No. In terms of ecology and ecological impact, the LHMS is highly focussed on the WNDA site in isolation from where it sits in the wider environment. It is better in its treatment of landscape and landscape impact (except seascape), but a fully integrated approach would be expected for a project which such large-scale development footprint and its consequent impact on the local and regional environment. It would be expected that HNP's proposals would accord with current good ecological practice, working at a landscape scale (Lawton, (2010), the Lawton principles": more, bigger, better and joined' [1]). The LHMS is clearly not formulated using these principles. A good example of this lack of thinking is the depiction of bat corridors during construction (Figure 5-7, page 75) and operation (Figure 6-21, page 111). These figures are meaningless without showing connections between the WNDA and adjoining land and the wider landscape.

14. Another example is the Notable Wildlife Enhancement Site which adjoins the National Trust's Trwyn Pencarreg Wildlife Site coastal heathland to the west, north and east[2]. Why wasn't this ecological linkage considered from the outset? It could have provided a much more valuable off-site habitat which would have joined with the WNDA to the south with adjoining land and habitats providing an integrated approach to land management. However, in spite of the lack of planning, Trwyn Pencarreg will still be crucial to the success of the Enhancement Site, though the National Trust is concerned about its ability to continue to provide the current high quality grazing management due to uncertainty about grazing tenancies brought about by the Wylfa development.

15. Real opportunities have been missed too with the LHMS not considering habitat connectivity between Cemlyn Lagoon and the WNDA. Cemlyn Lagoon

[1] Lawton, J. (2010). **Making Space for Nature: A review of England's Wildlife Sites and Ecological Network**
http://webarchive.nationalarchives.gov.uk/20130402170324/http:/archive.defra.gov.uk/environment/biodiversity/documents/201009space-for-nature.pdf

[2] The Trwyn Pencarreg Wildlife Site supports high quality coastal heathland, acid grassland and scrub maintained in favourable condition through the current grazing regime.

SAC/SPA/SSSI is only 110m from the western boundary of the WNDA but is not, for example, shown on Figure 2-18 (page 39) where only terrestrial and freshwater habitats are presented. This appears to be a consequence of the artificial separation of the marine environments from terrestrial and freshwater even though there are strong ecological linkages between them. This is a major flaw in the LHMS.

16. It is possible that HNP has responded to this criticism by supporting the principle of an off-site agri-environment scheme working with Menter Mon (set out in a HNP Briefing Note for Stakeholders: Offsite Ecological Enhancements, October 2018). This could help to deliver better ecological and landscape connectivity of the WNDA with its adjoining and wider landscape. However, the funding of this is dependent on £700k of currently unsecured external funding to match £300k of funding from HNP and thus cannot be relied upon to deliver the ecological and landscape connectivity which is necessary. It is suggested that other models are examined, such as the Hinkley Community Fund, which could provide the required funding.

Does the LHMS provide sufficient protection of the existing ecological assets of Cemlyn Lagoon and Cemlyn Bay?

17. No. The LHMS gives insufficient emphasis to the protection of Cemlyn Bay SSSI/SAC (and Anglesey Terns SPA) with Mound E being only 110m away from the western boundary of the Cemlyn Lagoon. This gap is defined as a "Buffer Zone" in the LHMS (Figure 3-4, paragraph 3.2.1 and Figure 6-5, page 89), but what this means in terms of proposals is not stated. Together with Tre'r Gof and Cae Gwyn SSSIs, the Cemlyn Lagoon is at risk from hydrological, water quality, silt and air pollution impacts. These risks are all intimately connected to the creation of landscape mounds, installed drainage, the handling of soils, and the process of habitat creation within the WNDA.

18. In order to manage hydrological and water quality risks, it is important that Mound E is created and vegetation established to stabilise its soils in as rapid a programme as possible. However, proposals set out in paragraph 5.4.6 of the LHMS indicate that Mound E will not be stabilised in this manner and will, at a later stage, be "…*reduced to its final contours*". It is imperative that landforms, soils and stabilising vegetation are fixed as soon as possible and not altered at a later date. The LHMS uses "indicative" and "illustrative" proposals and drawings: surely HNP must have sufficiently detailed information about fill and soil volumes to provide more certainty about the final design of the new landforms? There is also concern about the ease of vegetation establishment on steep slopes – will these only be created at times of the year when vegetation establishment <u>can</u> take place?

19. All through the construction period the drainage of Mound E is of particular concern. Although it is understood that drainage water from the western side of Mound E will be collected and pumped to the Afon Cafnan during construction (Main Power Station sub CoCP (APP-415), paragraph 10.2.10; and shadow HRA (APP-050) paragraph 7.4.2-8 and Figure 7-1), this is not secured through a Requirement in the DCO and is not shown on any of the construction drainage drawings (WNDA construction landform drainage design WN0902-HZDCO-LFM-DRG-00016 rev 1.0). There is also concern that the capacity of any pumping facility could be insufficient in a major heavy rainfall event. The attenuation planning is for 1 in 100 year storms

plus 20% but a 1 in 30 year event is stated in APP-415, paragraph 7.4.7. Is this sufficient given the recent and growing intensity of rainfall events? Is there sufficient capacity in the Afon Cafnan to take this water and what would be the impact of a silt-laden discharge into Porth-y-Pistyll? It is also unclear about how the drainage discharges from Mound E, from the sediment ponds towards the Cemlyn Lagoon, will work in the operational phase, once the diversion to the Afon Cafnan has ceased (LHMS, paragraphs 6.3.20-22, page 99).

Are the Notable Wildlife Enhancement Site and the Reptile Receptor Area fit for purpose?

20. Partly. Although these sites and their operation are set out in the LHMS, it has been necessary to refer to more detailed reports in order to answer this question[3,4]. These reports provide objectives and detailed plans for the creation, operation and monitoring of both sites in much more detail than the LHMS itself which is largely illustrative and indicative.

21. The objective for the Notable Wildlife Enhancement Site is to provide habitat for all notable species displaced by the clearance of the WNDA as set out in paragraph 1.2.1 of the plan. Given the wide range of species affected, all with different habitat requirements and life histories, this objective is unlikely to be achieved. However, the habitat creation and enhancement which is proposed for this area should deliver habitat improvements albeit that the work to do this only started in 2017 and the habitats will be required when site clearance starts in 2019. This gives little time for any habitat improvement which will be significant enough to receive displaced fauna and flora.

22. The objective for the Reptile Receptor Area is to provide habitat for adders and common lizards which will be trapped on the WNDA in advance of habitat removal. The proposals set out in the plan should provide suitable habitat, though it is of concern that the Reptile Receptor Area is surrounded by intensively managed farmland which is unsuitable for reptiles, making it an island environment.

23. The two sites are leased by HNP from local landowners and, at present, the conservation management is only guaranteed for 15 years when the leases run out. There is little consideration in the LHMS to the future of these areas and their connections with adjoining land and habitats to provide an integrated approach that would allow for effective recolonisation of the WNDA by these species once the LHMS habitats are established. This needs to planned carefully otherwise the investment of time and effort over 15 years could be wasted. The Notable Wildlife Enhancement Site should be brought under HNP ownership to ensure long-term control of the management of this area. There is also the ecological linkage with the Trwyn Pencarreg Wildlife Site to consider, discussed in paragraph 14 of this evidence.

[3] Management Plan for Notable Wildlife Enhancement Site (Kehoe Countryside Ltd, Feb. 2018)

[4] Management Plan for Reptile Receptor Area (Kehoe Countryside Ltd, Jan. 2018)

Does the LHMS contain sufficient habitat management proposals for the marine environment?

24. No. The marine sections of the LHMS are short and the mitigation proposals for the intertidal zone, with 7.6 ha being lost to the development, are unspecific in terms of their ecological objectives. There is also no reference to the sublittoral even though 23.5 ha of benthic biotopes will be lost to the construction of the breakwaters, MOLF facilities and dredging. Again, the LHMS is lacking in ambition here and, unlike the loss of terrestrial habitats, the loss of 31.1ha of marine habitats and their biodiversity is scarcely acknowledged. This is in spite of current Welsh and UK legislation and policy that new developments should result in no net-loss to the environment and seek to achieve biodiversity net-gain and ecosystem resilience.

25. However, marine habitat creation and management issues are addressed in two documents not specifically linked to the LHMS: Marine Ecological Enhancement Mitigation (report WN0902-JAC-PAC-TEC-00011), issued 3 September 2018, and in section 11.2.1 of the Marine Works sub-CoCP (APP-416). There are only limited habitat creation or management proposals for most of marine section of the WNDA. Eco-Xblocs, which could have provided useful marine habitats on the breakwaters, have been (for timing and engineering reasons) rejected for use by HNP with the only habitat creation being the seeding of breakwaters and adjacent areas with natural rock "*where practicable*". It is proposed that 0.3ha of seeding with natural rock is incorporated on the harbour side of the southern element of the western breakwater (0.2ha intertidal, 0.1ha subtidal), which is only 5.1% of the total area of the breakwaters. Information we have received from the Eco-Xbloc manufacturer, Delta Marine Consultants (Netherlands) indicates that the production lead time for Eco-Xblock-1 is no longer that for normal Xblocs and that any additional time required for Eco-Xbloc-11 (with embedded tiles) can be organised to fit in with the daily production sequence of the blocks. This implies that the timing objection by HNP is not sound. HNP's engineering objection remains perplexing given the examples in the Marine Ecological Enhancement Mitigation report (Table 2) where Eco-Xblocs and ecologically enhanced tiles have been installed on marine structures at Ijmiuden (Netherlands), Hartlepool (UK), Saltcoats (Scotland) and Seattle (USA) without compromising engineering functionality.

26. There is a proposal for up to 10 pre-cast vertical rock pools on the harbour (MOLF) Wall, but only if practical to include them during construction or operational phase. "*Up to 10*" could mean as few as one and it is uncertain that setting them at Mean High Water Springs will be at the best level. This habitat creation proposal is unlikely to provide sufficient new rock pool habitat for what will be lost to the MOLF development and thus does not comply with the "no net-loss of biodiversity" principle in Welsh legislation.

27. This is also the case with the proposal to actively maintain surface roughness of intertidal and subtidal areas in the harbour subject to dredging as part of the Main Works. The 17ha floor of the harbour would not be scraped smooth but left with relief of +/- 25 cm "*….to provide surface heterogeneity and to promote recolonisation of the area and the establishment of more complex habitats which would help reduce risk of INNS becoming established subtidally within the harbour*". The relief of +/- 25 cm seems very minor and it is not clear if all would be bare rock or if some sand and

gravel is to be left in place and/or brought in. More information is required on how this enhancement will be carried out and the physical nature of the seabed to be created, along with how it will be sustained during the maintenance dredging programs for the MOLF and the CWS intake.

28. It is also proposed to restore the intertidal and subtidal area beneath the footprint of the temporary causeway (4ha in total), including intertidal, rock-pool and sublittoral biotypes. This is surely an essential part of the LHMS and is currently missing. Given the restrictions on wave character and flow fields necessary for the CWS (Cooling Water System), it is not clear whether a feasibility exercise has been undertaken to determine whether these biotopes can actually be created in this location and what substrate may be available on which to create them in such close proximity to the dredged channel to the CWS intake. Whilst the document indicates that a Shoreline Protection and Restoration Method Statement will be produced, what is presented in the report does not provide confidence that this restoration is achievable.

29. The establishment of breakwaters, MOLF, new harbour seabed and restored causeway, all open up the opportunity of colonisation by Invasive Non-Native Species (INNS). Section 11.3 of the Marine Works sub-CoCP (APP-416) and the Biosecurity Risk Management Strategy covers this, but it is important that the design and monitoring of marine structures and ecological enhancements takes this risk seriously, especially given the current problems with INNS in Holyhead Harbour.

Does the LHMS show how the environmental impacts of construction tourists and off-duty construction workers will be managed?

30. No. There is no consideration in the LHMS concerning the management of tourists attracted to view the construction activity with respect to their potential impacts on footpaths (including the Wales Coastal Path on Trwyn Pencarreg) and semi-natural habitats. Aligned to this, there is inadequate consideration of the environmental impact of the construction workforce during its leisure time and how this will be managed (a briefing to workers is mentioned in the text, but this seems inadequate). The evidence of Mrs Teresa Hughes (North Wales Wildlife Trust) covers this in more detail: paragraphs 3.150 to 3.191 inclusive.

Does the LHMS contain a sufficient focus on environmental monitoring during both construction and operation?

31. No. The LHMS says very little about monitoring and long-term management (section 7 is short and contains management principles and no integrated monitoring proposals). It is vital that a fully-funded monitoring and surveillance programme is established at the outset as an integral part of the habitat creation and management schemes. This must operate during both construction and operation of the power station. The programme must monitor the composition of the habitats and the target species set out in the LHMS. In addition to providing useful information on site biodiversity, monitoring results will be essential to guide future management and to provide evidence to demonstrate whether biodiversity net-gain is being delivered by the project.

Does the LHMS give adequate long term commitment to environmental management?

32. No. A great deal of the responsibility for the successful outcome of the habitat creation and management proposals is being delegated by HNP to IACC, NRW and the NGOs, particularly the National Trust, NWWT and the RSPB. HNP's financial, staffing and temporal commitments to long term management are not clear in the document and would need to be secured and resourced via the TCPA (Section 106 Agreement) and/or DCO applications. The LHMS should provide more detailed information on the funding and operation of long-term management for the life of the project and its decommissioning period.

33. HNP's proposals for staffing the environmental management required in the construction and operational phases are provided in other documents and not in the LHMS where it should be brought together and set out clearly. The funding, staffing and expertise required to deliver the LHMS and manage it in the long term should not be underestimated. Apart from delivery models based solely on standard Section 106 Agreements, other models should be explored as these may achieve greater certainty about outcomes. One possible model is the Mersey Gateway Environmental Trust which has been operating for almost 10 years: the Trust has and continues to deliver the environmental monitoring and management work relating to the new Mersey Gateway road crossing.

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