

Appendix 7.1a

Meeting Summary: Llanbrynmair and Carnedd Wen Wind Farms Ecology and Ornithology

Location: Microsoft Teams

Date: 20/01/2022. **Duration:** 10:00 – 12:22

Present: Patrick Lindley (Senior Ornithologist), Matthew Ellis (Senior Species Advisory Officer), Geraint Blayney (Adviser, Development Planning) [all Natural Resources Wales]; Chris Jackson (Senior Development Project Manager), Elliot Smith (Development Project Manager) [both RES]; Jennifer Pearson (Development Project Manager) RWE Renewables; Owain Gabb (Director), Rachel Taylor (Principal Ecologist), Joanne Conway (Consultant Ecologist) [all BSG Ecology].

Apologies for Absence: N/A.

ITEM	ITEM	ACTION
1	Introductions	
2	<p>Purpose of meeting</p> <p>OG set out the purpose of the meeting as being to discuss the scope, and ideally get some consensus on the ornithological and ecological work needed to inform planning applications for the respective Llanbrynmair and Carnedd Wen wind farm sites.</p> <p>BSG Ecology has been instructed to collect baseline data with regard to both sites.</p> <p>There are various benefits to this:</p> <ul style="list-style-type: none"> - survey work can be co-ordinated centrally and planned out so that e.g. there is no potential for surveyors for one site to be in the viewsheds of the other - survey to establish whether known sites for Schedule 1 birds and other potentially disturbance-sensitive species are occupied can be rationalised - emerging results of both survey and consultation can be used to inform changes to approaches for both sites - data will be held in the same format (on a GIS database), which will be useful for cumulative Collision Risk Analysis and EclA - it makes early consultation more streamlined <p>OG noted that the two schemes are distinct entities, however, and will be assessed separately.</p>	
3	<p>Proposed Development</p> <p><i>Carnedd Wen</i></p> <p>JP introduced the scheme:</p> <ul style="list-style-type: none"> • The scheme was withdrawn from consideration by DBEIS in 2020 as technologies had changed and the layout would need to be adjusted. The original planning submission was in 2008. 	

	<ul style="list-style-type: none"> • The new scheme is likely to have the same red line boundary as the previous application. The current layout is similar overall – a northern cluster with a ‘tail’ to the south. • RWE are currently looking at 30 turbines (but are early on in scheme design so this may be adjusted) with a tip height between 180-220 m. Height has therefore increased but there has been a reduction in the overall number of turbines (the previous application was for 50 turbines). There is potential for different tip heights across the site. • The overall capacity is likely to be the same as the previous application if not higher. • Access will continue to be from the north. • Peat and other considerations will inform layout. <p>Llanbrynmair</p> <p>CJ provided an overview:</p> <ul style="list-style-type: none"> • Planning consent was achieved for a wind farm of 30 turbines (up to tip height of 126.5 m) on 17 December 2021. • As per RWE’s comments, RES are now looking to submit a new application for larger but fewer turbines due to changes in technology since submission (in 2008). • The preliminary layout is 21 turbines with a maximum tip height of 230 m. • The locations of the turbines are similar to those of the consented scheme. 	
4	<p>Scope of work: Ornithology</p> <p>A report covering ornithology work undertaken on the sites in 2016 and 2017 (BSG Ecology, 2018) had been provided in advance of the meeting.</p> <p>OG noted he would not differentiate between the two sites as he discussed the scope of ornithological (or wider ecological) work unless there was particular reason to do so (i.e. an element of the work related far more to one site than the other or there were differences in timing or approach to work).</p> <p><u>Desk Study</u></p> <ul style="list-style-type: none"> • OG stated that the most useful desk study data is likely to be that summarised into the 2018 report (mainly consultancy surveys and RSPB Cymru data on black grouse). There has been considerable work completed over a sustained period at both sites, and this has demonstrated gradual change in the populations of some species. • For Carnedd Wen, ornithological surveys were completed between 2005 and 2012 (2005-08, 2012) in connection with the wind farm, and a full baseline update was completed in 2016/17. 	

	<ul style="list-style-type: none"> • For Llanbrynmair surveys were completed in 2005-06 and 2011-13, and fully updated in 2016/17. • Useful complementary work was completed by RSPB Cymru on black grouse that overlapped and preceded the work at the sites; results are summarised in BSG’s 2018 report. • OG stated that BSG are currently updating elements of the desk study. These are: <ul style="list-style-type: none"> - Data request to BIS - Data request to RSPB Cymru re: black grouse - BSG are also talking to Mick Green with regard to contextual information on curlew (he was collecting data on them at the county level in 2021 and is planning to continue this year). It is anticipated that Mick will be completing the wader survey planned for 2022; this will represent an extension to the west of work he was planning to do in the vicinity of Nant yr Eira (a stream between 800m – 1 km east of the site around which curlew historically bred in good numbers). • OG asked if PL was aware of other people or sources of information we should be looking to? PL indicated that it would be worthwhile contacting Keith Offord for records of locally-breeding raptors, particularly those within nearby areas of the Berwyn Special Protection Area (SPA). This would help to understand the degree of functional linkage between the SPA and the development sites through allowing interpretation of flight activity in the context of known / recently occupied nest locations / territories. One of the key ecological issues is to rule out the possibility of functional linkage between features of the Berwyn SPA and the development site. The proposed survey design needs to be robust enough to address the question of functional linkage <p><u>Vantage Point (VP) survey</u></p> <ul style="list-style-type: none"> • OG indicated that following changes to the design of the wind farms, 14 VP locations are now sufficient to cover them and an appropriate perimeter area. A figure was shown indicating VP locations and indicative viewsheds in relation to turbine co-ordinates for the respective schemes. • PL asked whether BSG could make a shapefile of the external boundary of all VP viewsheds which would illustrate more clearly the area subject to survey. OG agreed that this could be done. • OG noted that the area, particularly Carnedd Wen, is constrained by available viewpoints due to plantation growth, but that recent felling has opened up some options for VPs that were not available in 2016. • BSG are planning the (standard) 36 hours per VP in both the breeding season and winter periods. These periods would be defined as October to March inclusive (winter) and April to July / early August respectively, meaning there would be a gap in 	<p>OG / JC</p> <p>JC</p>
--	--	--------------------------

	<p>late August and September. OG asked if this would cause PL concern?</p> <ul style="list-style-type: none"> • PL answered that BSG are right to be cautious as hen harrier can still maintain a presence in breeding territories in autumn and sometimes into early winter so it would make sense to continue VP surveys in September . PL noted that we would need almost year-round coverage to determine whether there is functional linkage between the SPA and the site during the breeding season. This approach would account for gaps in dispersal. • OG stated that VP survey started in late September 2021, and that during winter to date they have recorded what they would expect to based on previous data and the (broadly) consistent baseline conditions: one whooper swan flight (6 birds), red kite, kestrel, goshawk, hen harrier, one flight for each of peregrine and merlin and a little bit of golden plover activity, with the kestrel, red kite and golden plover being more associated with open ground and the goshawk with plantation areas. • OG noted that in combination with this work regular counts of waterfowl using Llyn Gwyddior and Llyn Coch Hwyad are being completed, and will continue these until the end of March 2022. To date there have been few waterfowl present – 2 adult whooper swan on one occasion (Llyn Gwyddior), tufted duck, little grebe, mallard, lesser black-backed gull and great black-backed gull. • PL noted that these are species that would be expected on upland waterbodies in winter. <p><u>Raptor Survey</u></p> <ul style="list-style-type: none"> • OG stated that BSG are planning to complete breeding raptor surveys as follows: <ul style="list-style-type: none"> - 8 additional days of goshawk work commencing February week 2/3. - 14 days of additional breeding raptor survey in April to July inclusive. • Previous work has detected (most recently) 3 goshawk territories within the plantation habitats. Considerable larch (a species favoured by goshawk for nesting) has been recently removed, and the baseline may therefore have changed. BSG have recently received felling plans for the area, and will be refining their approach based on these and the observations of the surveyors with regard to retained suitable habitat over winter. • PL commented that goshawks are exceptionally noisy in early April, so effort at that time might help pin down territories. OG agreed and noted that the work would be spread between mid-February and early April, and that VP work will also be ongoing across the period. 	OG / JC
--	---	---------

	<ul style="list-style-type: none"> • There are four peregrine eyries in the area which will be checked for occupancy in 2022 (a figure was shown indicating the locations of these). Two were occupied in 2016. One was known to be productive in 2017. The eyrie [REDACTED] [REDACTED] [REDACTED] • A range of other species have bred historically (pre-canopy closure), including hen harrier and merlin, but there has been no evidence of this in recent years. • PL commented that the peregrine nest to the north of the boundary is within the Berwyn SPA, for which peregrine is a feature. The assessment needs to address the possibility of functional linkage between the development sites and the SPA. • PL highlighted need for agreed suitable buffer for raptor survey to include part of the SPA. • OG asked if SPA peregrines get annual survey coverage. PL answered no but recommended approaching Ian Williams in NRW's Species Permitting Team for information on additional territories from Schedule 1 licence return forms. <p><u>Wader Survey</u></p> <ul style="list-style-type: none"> • OG stated that wader survey of all suitable habitat within 800 m of proposed turbines will be completed using an adapted (4 visit) Brown & Shepherd (1993) survey protocol. In places (such as in areas of tall Molinia or if we have curlew activity suggesting a territory), the approach may be varied to include local VPs (as in 2016). These are useful in collecting behavioural information that can be used to help interpret sightings. • The most recent survey in 2016 recorded curlew around Nant yr Eira, to the east south-east of the site, albeit there was no clear evidence of breeding, with foraging pairs noted, and all records being from the 'spring'. OG noted that Nant yr Eira is an area Mick Green is interested in as part of his wider work on curlew in the area. It is slightly peripheral to our survey area (with the nearer areas principally used in the past generally falling being between 1-1.2 km distant) from the current array, but it is understood he is likely to cover it as part of his wider contextual work. PL indicated he was happy that Mick Green will be involved in the survey work, as he is an excellent field ornithologist. • OG indicated that over time the survey work to inform the Llanbrynmair application has tracked the population in this area from 10-11 pairs in 2005/06, down to 2 pairs in 2012, 1 pair in 2013, and no clear evidence of breeding in 2016. PL commented Curlew numbers are now close to regional 	<p>OG / PL</p> <p>OG / JC</p>
--	--	-------------------------------

	<p><u>Barn owl</u></p> <ul style="list-style-type: none"> • PL asked if there were any plans to survey for barn owl. OG answered that surveys for barn owl were not currently proposed on the basis that there is not much potential for them to nest within the site (no buildings or suitable trees), there is very little data to suggest collision is an issue, and potential for disturbance of nesting birds is therefore the main consideration. • PL suggested the need to rule out construction phase disturbance to barn owl (given its Schedule 1 status) and advised that it is considered going forward. • OG commented that RES / RWE and BSG need to review where the access routes are likely to be and whether there are any buildings / derelict structures within close enough proximity to these to be of concern. OG and PL discussed what an appropriate distance might be, eventually agreeing that in all likelihood they needed to simply agree something that appeared proportionate. <p>JP confirmed that the current plan for the access track is from the north through Carnedd Wen, using existing tracks where possible. CJ noted that a spur from this access would be needed for Llanbrynmair.</p> <p>CJ commented that there would also (potentially) be four construction access routes approaching the Llanbrynmair site from the south-east. OG asked CJ to send him a figure identifying the access options.</p> <p><u>Ornithological Questions</u></p> <ul style="list-style-type: none"> • OG asked if there was anything omitted from the scope of works that PL would see as being essential? PL replied that he suspects honey buzzard activity would be picked up by VP surveys although they are quite elusive at times. PL queried whether survey work would be sufficient to record hobby (which can breed in upland plantations and are highly elusive when breeding). PL commented that bespoke survey techniques may be required. OG will look to adapt surveys if a territory is identified. • OG replied that hobby had been recorded infrequently (once in September 2016 during the most recent surveys) at the site in the past but is certainly a species we are aware of as potentially increasing in number locally. Increases in general flight activity have been noted at sites in west and south Wales in recent years. Nests are challenging to find, but for the purposes of ornithological impact assessment (OIA) we would need (as a minimum) to infer a territory location. 	<p>JP / CJ / OG / JC</p> <p>CJ</p>
--	--	------------------------------------

	<ul style="list-style-type: none"> • OG asked whether, given the amount we know about the sites and how bird communities have changed, and the limited likelihood of unpredictable changes in the baseline, whether 1 year of baseline survey ahead of an OIA would be acceptable? • PL suggested adopting the principle of 2 years of data collection due to the proximity of the sites to the SPA. PL acknowledged the amount of historic data and noted there needed to be a focus on considering the potential of the developments to affect the adjacent SPA. Any future HRA would be required to rule out the possibility of functional linkage between the development site and the Berwyn SPA. Red kite is still a feature of the SPA and PL noted there was a lot of flight activity across the site at collision risk height. • OG asked if during the current year we found limited use of the sites by SPA species such as hen harrier, merlin and peregrine this could be revisited? • PL agreed in principle that this could be done, but that the data set would have to be robust and the conclusions clear. It will be important to combine historic and contemporary survey data in the right way. <p>ME commented that the survey and assessment needed to ensure consideration of all Bird Directive Annex 1 species and cross reference to the last sentence of Article 4 (4) of the Birds Directive.</p>	
5.	<p>Habitats and species</p> <p>A report (BSG Ecology 2018a) covering protected species work undertaken on the sites between 2016 and 2017 had been provided in advance of the meeting for consideration by ME.</p> <p>ME set out the content of and agreed to share an NRW document summarising the main considerations for EIA from a protected species and habitats perspective. GB offered to send this document to all concerned.</p> <p><u>Habitats</u></p> <ul style="list-style-type: none"> • OG stated that no updated habitat survey had been completed to inform the determination of either site by DBEIS. • Habitat data is therefore relatively historical for both sites. • OG further noted that the intention is for an experienced botanical surveyor to go to site and map all habitats to Phase 1 level in the field. More detailed habitat data (including species lists) will be collected than is necessarily typical during a Phase 1, and all habitats will be assigned to an NVC category in the field based on the experience of the surveyor. 	GB

- OG asked whether ME has any thoughts on UK Hab as a technique for mapping vegetation in Wales as opposed to Phase 1.
- ME would be happy for either technique to be used providing that the habitat descriptions are clear and can be translated to NVC and Annex 1 and Section 7 habitat types.
- OG confirmed that in addition to habitat mapping, figures showing priority habitats would be provided.

Protected Species: Bats

- OG summarised bat data collected in 2016 and 2017. Bats occurred at greater frequency in proximity to waterbodies and woodland edge in comparison to open moorland. Summer encounter rates were considerably higher than spring or autumn in terms of overall bat activity. Conversely, noctule activity was higher in spring than summer, with lower activity in autumn. However, total bat activity levels were not particularly notable in any season, and noctule activity was low (in comparison to various other Welsh wind farms). The timing of some of the noctule encounters in relation to dawn suggested there could have been opportunistic roosting in the plantation at Carnedd Wen in spring; something we have noted at other afforested sites. There was no evidence to suggest on site / very local roosting of other species (based on encounter times in relation to known emergence times in the species); historical work to inform the initial (2008) Carnedd Wen application recorded evidence of roosting pipistrelles in various buildings within 2 km of the site boundary at that time, a result that is not unexpected in an area with a low density of buildings.
- OG stated the intention to deploy 15 static detectors at Llanbrynmair and a further 17 at Carnedd Wen on a seasonal basis for 10 nights (spring, summer, autumn). This will result in up to 960 nights of data collection (although some level of failure is inevitable). SM4 detectors will be used. Weather stations will be deployed if it is not possible to get site-specific weather data. Data will be analysed using Kaleidoscope Pro, then manually checked.
- OG also commented on the intention to incorporate some survey of trees as part of the Phase 1. However, he noted that in dense (largely un-thinned) conifer plantation where roosting potential is likely to be generally very limited, this is extremely challenging in practice.
- ME indicated he was happy with the approach to bat survey work as long as this was based on NatureScot (SNH *et al.*)

guidance (which takes account of work completed by Exeter University).

- OG asked if ME would favour trying to sample as close as possible to turbine locations or sampling a cross section of representative habitats at Carnedd Wen.
- ME advised that detector locations should be as close as reasonably practical to turbine locations. If this is not possible, justification should be given and a representative sample should be surveyed.
- Reports to consider the differentiation of current conservation status (CCS) and favourable conservation status (FCS) . ME also made reference to updated [EC guidance on Article 12 -16](#). References to sections 3.2.3 and 3.3.2 are advocated

Protected Species: great crested newt

- OG summarised GCN data collected in 2016: In 2016 BSG looked at 12 ponds within the survey area, ten of which were in the Carnedd Wen site. These were shown on a figure. Most were borrow pits within the plantation. A number of the ponds (including two at Llanbrynmair) were in more open areas. In 2016 the results of eDNA were negative for 10 of the ponds; Pond 10 was positive and Pond 12 couldn't be tested, as it had low water levels. Both Ponds 10 and 12 are outside the plantation on farmland / moorland edge. Conventional presence / absence survey (4 visits) of 13 ponds at Carnedd Wen was also completed in 2006. This returned entirely negative results.
- OG commented on the need to update the desk study with regard to newts.
- OG stated the intention to complete eDNA survey of the ponds within the plantation, and a conventional 4-6 visit survey (6 if GCN are detected) of Ponds 10 and 12 (assuming the latter is not too shallow to eDNA).
- ME stated that NRW are becoming concerned by over-reliance in eDNA to demonstrate presence / absence and issues with false negatives. ME suggested that in addition to eDNA, at least one conventional method (torching, bottle trapping, egg searching) and an HSI should be completed at each of the ponds closest to P10 (P6, P7, P11 and P12). If this is undertaken early in the season, a meeting can be arranged to discuss the way forward, once eDNA results have been returned. ME commented that given the background of the sites and previous eDNA results, confidence in negative eDNA results may be achieved without completing 4 conventional survey

	<p>visits. Reports to appropriately consider CCS and FCS as informed by survey results and scheme design).</p> <ul style="list-style-type: none"> OG commented that practically speaking this would increase costs, but this matter will be taken away and discussed with RES / RWE. OG will follow up and agree an approach with ME. <p><u>Other Protected Species</u></p> <p>Dormouse:</p> <ul style="list-style-type: none"> Not previously surveyed. There is some connectivity of Carnedd Wen to the west via the hedgerow network, but the site is poorly linked in other directions due to presence of open farmland and / or moorland. ME showed data search records of dormouse to the north and south of the Site. This indicated a recent record to the north west of Carnedd Wen in linked woodland habitat (Ref. 9/9/2020, Braich Llwd). OG asked whether dormouse use of plantation habitat at Clocaenog wind farm has shown animals using coniferous woodland? ME stated that it had, and indicated that dormouse survey would be needed, going on to say that he would prefer boxes (as opposed to tubes) were deployed. These needed to be erected in representative habitats and might not get good results in their first year of deployment (i.e. needed a bedding in period). He also noted that he would like to see some boxes placed close to turbine locations and others in areas of the best habitat for dormice on site, and habitat descriptions for all deployment locations. OG indicated that a proposed scope of dormouse work would be suggested following further meetings with RES and RWE. <p>Water vole / otter:</p> <ul style="list-style-type: none"> OG stated that there were no previous records of either species on site, but that otter are likely to use the waterbodies and more substantial streams in the area, and may periodically visit ponds if there are breeding frogs / toads. Surveys were last completed of both sites in 2006. OG stated that the intention is to complete otter / water vole surveys ahead of submission at both sites (subject to design freezes). ME agreed that this was appropriate. <p>Badger and reptiles:</p> <ul style="list-style-type: none"> BSG will update through Phase 1. One badger sett to east of site detected in 2013. Common lizard known to be present. OG stated that a method statement approach to reptiles has been accepted previously. 	<p>OG / JC / CJ / JP</p> <p>OG</p>
--	---	------------------------------------

	<ul style="list-style-type: none"> • ME stated that under the 7th Quinquennial Review adder has been proposed as requiring regrading of scheduled part protection to full protection. Therefore, it may be sensible to consider adder specifically so that enough information is available if the level of protection for adder has been increased at the point of formal submission. • OG will consider the implications and the level of survey that may be appropriate. <p>OG asked if ME was happy with the overall scope of protected species work.</p> <p>ME advised he was happy but to reference pine marten in the ES as it may pass through the area, but that survey was not necessary. OG asked if released pine marten are still being radio-tracked. ME suggested checking with Vincent Wildlife Trust.</p>	<p>OG</p> <p>OG / JC</p>
6.	<p>Other Matters</p> <p>JP asked ME / GB about NRW resources in South Wales region, as colleagues had been unsuccessful in securing DAS meetings. JP also asked how communication with NRW for the Carnedd Wen and Llanbrynmair projects would proceed going forward.</p> <p>GB stated that he will take the South Wales resourcing issue back and ask NRW managers for clarity. With regard to the two sites, GB is the first point of contact (or the NRW mid-Wales planning email) and can be emailed to arrange further meetings. A quote will be provided along with standard paperwork.</p> <p>OG stated that it would be useful to have a meeting in autumn 2022 to discuss progress, results and scope going forward.</p>	<p>GB</p>

Meeting Ends: 12:22