APP/KH/4

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Peel Environmental Management (UK) Ltd. / Bilsthorpe Waste Ltd.

Public Inquiry into the proposed development of Bilsthorpe Energy Centre

Rebuttal Evidence on matters relating to ecology and nature conservation

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1 Introduction

1.1 This evidence has been prepared in rebuttal to the submission by Ms. Janice Bradley of Nottinghamshire Wildlife Trust (NWT) dated 6th October 2015 in response to the Third Regulation 22 Submission.

1.2 In her submission on behalf of NWT, Ms. Bradley has confirmed that NWT agree that the proposed BEC would not have an impact on bats or great crested newts. It is therefore a matter of common ground that there would be no impacts on European protected species.

1.3 Ms. Bradley maintains her objection on behalf of NWT to the proposed BEC on the following grounds:

- Impacts of the BEC on waders, including noise effects;
- Cumulative impacts of the BEC on waders, including the effectiveness of the mitigation area;
- Impacts on woodlark;
- Impacts on nightjar;
- Impacts on dingy skipper;
- Impacts on reptiles; and
- Impacts on habitats.

1.4 Ms. Bradley's '*Supplementary Information from Nottinghamshire Wildlife Trust*' document has also been re-submitted, which I have addressed in my main Proof of Evidence. This version correctly reproduces 'Figure 2', showing the GPS tracking of a male nightjar, as opposed to the blank version submitted in February 2015. This is helpful in giving further clarification in my response to her postulated effects on nightjar.

1.5 Before addressing each of the above points of objection in turn, I believe it is important by way of context to compare the responses from Ms. Bradley on behalf of NWT in relation to the BEC to some of the other NWT responses to planning applications affecting Bilsthorpe Colliery Local Wildlife Site.

2 NWT stance on other developments at Bilsthorpe Colliery

Solar Farm proposal

Original proposal 12/01594/FULM

2.1 NWT issued a holding objection to the initial Bilsthorpe Colliery Solar Farm application (ref. 12/01594/FULM; see Appendix APP/NR/2-A for location of this and other applications), covering an area of 20.7ha. Their holding objection was contained in a letter from Ben Driver of NWT on 16th January 2013. This was made on the basis of inadequate supporting ecological information. The relevant report by AESL Ltd. (APP/KH/2-C) did not include a bird survey, any search of biological records, or details of ecological mitigation and enhancements.

2.2 NWT did comment on the value of Bilsthorpe Colliery for breeding waders, and noted the need to take a risk-based approach to the assessment of effects on the ppSPA. With respect to nightjar and woodlark, they stated that: "*We are also aware that two churring male nightjar have been recorded in Eaking Brail Wood in the past and therefore consider some of the habitats on site could offer* ***nightjar and woodlark opportunities for foraging on passage***" (my emphasis). They did not refer to the potential suitability of the site for breeding woodlark.

2.3 Following submission of supplementary ecological information from SLR Consulting in June 2013 (APP/KH/2-D), NWT wrote to Newark and Sherwood District Council to withdraw their holding objection (APP/KH/5-A).

2.4 It should be noted that the SLR bird survey was undertaken in the same season as the Argus Ecology survey for the BEC and like the Argus Ecology survey included the whole of the Bilsthorpe Colliery LWS and former tip. Their results were broadly comparable, which is unsurprising. Up to six pairs of lapwings were recorded breeding in the vicinity of the Solar Farm, with four chicks recorded; a young oystercatcher was recorded in the shallow pond within the Solar Farm, where little ringed plover were also recorded. The only usage of the Solar Farm site by waders which Argus Ecology recorded, which was not picked up in the slightly earlier SLR survey dates, was the presence of small numbers of migrating green sandpiper and dunlin.

2.5 NWT appear to have accepted the comment in the SLR report that: "*The proposals will not have an impact upon woodlark or nightjar, neither of which were recorded on site during fieldwork, nor are there any site records of either species in the desk study*

data". There is no further consideration of potential effects of the Solar Farm on the ppSPA, or any application of the 'risk-based approach'; indeed, the SLR report makes no mention anywhere of the ppSPA.

2.6 With respect to waders, SLR state in section 5.2.2 of their report (APP/KH/2-D) that: "*There is an anticipated reduction in the numbers of nesting* (skylark and) *lapwing within the boundary of the solar park, but this will not be significant in a regional context*." NWT appear to have regarded an impact of this magnitude as acceptable. The mitigation measures SLR proposed for birds included provision of nest boxes and avoidance of construction work during the bird breeding season. No measures targeted at waders were proposed.

Revised proposal 14/01283/FULM

2.7 NWT raised no objections to the revised Solar Farm planning application (APP/KH/5-B). This was submitted to Newark and Sherwood District Council's Planning Committee on 7th October 2014. In terms of chronology this was:

- after NWT had considered the cumulative impact assessment contained in the BEC Environmental Statement;
- after they had considered the 2013 Argus Ecology bird survey contained within the ES which recorded use of the Solar Farm site by green sandpiper and dunlin; and
- after they expressed concerns that woodlark could utilise Bilsthorpe Colliery site for breeding.

Coal recovery proposals

Removal of Colliery Spoil 14/00976/FULM

2.8 This currently permitted project is located within Bilsthorpe Colliery LWS, and consists of removal of colliery spoil over an area of land just to the east of the BEC site. It was considered by Nottinghamshire County Council's Planning Committee on 28th April 2015. The Committee Report included a summary of NWT's position.

2.9 NWT expressed concern that a bird survey had not been undertaken to inform the proposed development, and stated that lost habitats should be replicated as far as possible in the restoration scheme. The Committee report stated that: "*NWT considers that the proposed development would not result in 'pollution or deterioration of habitat' used by nightjar or woodlark*". This is a surprising assertion

in the context of their currently expressed position (i.e. maintaining the adjacent BEC site is suitable for breeding woodlark), especially given a broad similarity of habitats between the BEC site and the planned coal recovery area.

2.10 With respect to dingy skipper, they stated that: "*Dingy skipper butterfly has been known to be historically present on the site and its food plant is still present. The habitat protection area would conserve some of this food plant but provision should be made to ensure that it persists through the restoration scheme*." In contrast to the BEC site, dingy skipper surveys were not undertaken to inform the coal recovery operations. Accordingly, unlike the BEC site, where survey works have confirmed dingy skipper were not present in 2015, it is not possible to say whether coal recovery operations will have a direct effect on dingy skipper or not. Despite this, NWT did not consider impacts on dingy skipper to be sufficient to maintain an objection.

2.11 With respect to reptiles, they stated that: "*A reptile survey has not been undertaken and there are habitats present that might host reptiles, particularly common lizard. In order to ensure reptiles are not affected by the scheme, a reptile protection plan should be submitted prior to works on site, including details of how harm to reptiles would be avoided (through manual searching etc) and what mitigation would be provided if they were to be found, including the provision of receptor habitat in a protected area*." This clearly indicates that NWT considered that a planning condition requiring a pre-commencement search and clearance, commensurate with the partial protection status of commoner reptiles, is acceptable to ensure no reptiles are harmed by the development. I consider this approach to be reasonable, particularly given the longer period of establishment of habitats on parts of the proposed coal recovery site. However, it contrasts markedly with NWT's response to the Third Regulation 22 submission for the BEC development where they continue to demand a reptile survey.

Findings

2.12 Based on the foregoing, I consider the extent of Ms. Bradley's continuing objection to the BEC proposal to be disproportionate and not consistent with NWT's stance on other developments. In my opinion this can only be explained by an objection to the nature of the proposed development, rather than any objective evaluation of its likely ecological effects.

3 Impacts of the BEC on waders

Lapwing

3.1 Ms. Bradley states that she predicted displacement of lapwing by the Solar Farm, stating "*I note that the updated ecological surveys have identified changes in both the habitats and the species assemblages on the proposed development site. In particular, lapwing have not bred in the vicinity of the proposed development this year and appear to have been lost from the solar farm site, as predicted by both myself and Mr Crouch of NCC.*" She does not state that it was not considered of sufficient magnitude to maintain an objection to the Solar Farm proposal.

3.2 Ms. Bradley goes on to suggest that lapwing may have been displaced from the Solar Farm site by construction works while the species was prospecting prior to breeding, and may return in subsequent years, stating: "*It is possible that they may return and try to breed elsewhere within the LWS (outside the solar farm boundary) in subsequent years, as depending on the timing of the solar farm construction, they may have been disturbed when prospecting for breeding sites*.". In my opinion this seems unlikely, as areas to the north of the Solar Farm are lacking in suitable shallow water habitats, and are closer to the wind turbines.

Little ringed plover and oystercatcher

3.3 With respect to our observation of 'possible' breeding in 2015, NWT state that: "*There remain, however, suitable areas of sparse vegetation, bare areas and ephemeral pools and muddy margins on the site, so it is probable that other factors (such as disturbance by people or other construction and extraction operations in the vicinity of the site) prevented breeding in 2015, rather than habitat change*." In fact in 2015 the observed level of disturbance on site was much less than in 2013, a time when the red shale mounds were being formed on the northern part of the site, and the wind farm was being constructed, with a haul road which passed the northern edge of the site. I agree that suitable habitat still remains, but it is significantly less suitable than it was in 2013, and this is the most likely explanation for the lower level of recorded activity by this species.

3.4 NWTuse the fact we noted that little ringed plover mitigation will create suitable habitat for oystercatcher to assert the reverse i.e. that the presence of oystercatcher means conditions will continue to be suitable for little ringed plover, stating: "*Oystercatcher have continued to breed on the site, or its immediate vicinity, and they often use similar habitat to LRP (as stated in the Argus Ecology Report), so it is quite*

possible that LRP might breed there again" This does not automatically follow; oystercatcher can nest in a much wider range of habitats than little ringed plover, ranging from comparable bare ground and river shingle habitats through to grazed pasture.

3.5 NWT also state: "*LRP breed in a range of habitats considered to be "sub-optimal" in Nottinghamshire and lack of evidence of breeding in one season cannot be assumed to mean that they would not breed again at this site if it were left undeveloped*." If it is true that in Nottinghamshire little ringed plovers are known to nest in sub-optimal habitats, then this should also be taken account of in assessing the likely success of the wader mitigation plan. In fact, the presence of birds nesting in habitats previously considered 'sub-optimal' is frequently a consequence of an expanding local or national population. In the case of little ringed plover, although they remain a relatively rare species and are protected through listing under Schedule 1 of the Wildlife and Countryside Act 1981, they have expanded their range significantly in recent decades, resulting in their Birds of Conservation Concern 'green list' status. This does not alter the fact that the trajectory of vegetation change within the BEC is unfavourable for little ringed plover.

Disturbance of mitigation area through noise impacts

3.6 NWTcontend that the success of the mitigation area would be compromised by noise impacts during construction. This is essentially the same point raised in response to the First Regulation 22 submission in a letter of 16th August 2014, and indeed appears to repeat word for word the response to the Second Regulation 22 submission in her letter of 23rd September 2014.

3.7 The second revision of the Wader Mitigation Plan (submitted as part of the second Regulation 22 submission) addressed the points raised in NWT's 16th August letter, providing a more explicit assessment of any possible constraints imposed by the BEC and other potential developments, and concluding that it will not have any effect. This was supported by assessments of noise and lighting, including those within the ES, which include consideration of construction noise and potential effects on birds, and which were submitted as part of the first Regulation 22 submission. The boundary of the mitigation area is 100m from the BEC site boundary, well outside the 55dBLAeq noise contour, as illustrated by Appendix 2-5 of the first Regulation 22 submission.

3.8 Ms. Bradley states in her recent submission that: "*The applicant has use 55dBa as the level at which disturbance to bird behaviour is acknowledged, but indeed for some waders impacts have been assessed at 45dBA*." In fact evidence suggests that the 55dB(A) threshold is precautionary with respect to waders. For example, the *Waterbird Disturbance Mitigation Toolkit* produced by University of Hull Institute of Estuarine and Coastal Studies defines 55dB(A) as a: '*low level disturbance unlikely to affect sensitive species*' (APP/KH/5-C).

3.9 In my experience little ringed plover are unlikely to be considered as a particularly sensitive species, given their well-known propensity to nest in working quarries in the presence of plant and machinery. It should be further noted that little ringed plover bred on site in 2013 during a high level of noise-generating activity while the red shale storage mounds were formed, and they remained tolerant of vehicle movements associated with the adjacent Council Depot site. Based on their responses to the planning application in respect of the coal recovery operations, the Wildlife Trust seem not to be concerned that movement of plant and machinery would displace little ringed plover from the adjacent BEC site.

Conclusions

3.10 The proposed mitigation for the BEC provides an opportunity to maintain breeding waders at Bilsthorpe Colliery, which would otherwise be lost as a consequence of recent developments and future successional change.

3.11 NWT has not put forward any evidence to support their assertion that the BEC would itself affect the success of the mitigation area.

4 Cumulative impacts on waders

4.1 In the section of their submission on cumulative impacts, Ms. Bradley appears to accept that the Solar Farm has displaced lapwing from the site, stating: "*The solar array development site contained breeding lapwing in 2013, as recorded by SLR and, as was noted by Mr Crouch in his comments on that solar development, the loss of the open grassland and the existing waterbodies to the development would result in a permanent loss of lapwing habitat, likely to lead to displacement of those birds. The development also involves the planting of a hedge around the entire periphery of the array, which would be detrimental to the success of breeding waders through predation of chicks by corvids. Indeed, the consultants previously agreed with Mr Crouch's and my view that the lapwing currently using the solar array site would be*

displaced by that (solar) development (previously Revised WMP, p9), which has proved to be the case."

4.2 NWT are correct to state that we are in agreement that there have already been a number of cumulative impacts on waders within the former Bilsthorpe Colliery site. I agree that it is regrettable that these have not been effectively mitigated, and find it regrettable that she does not acknowledge that the Wader Mitigation Plan provides a serious attempt to mitigate not just for the effects of the BEC site, but for some of the cumulative impacts of previous developments. As a principle of ecological mitigation, I do not think it is necessary for the BEC site to demonstrate it can mitigate for impacts it has not caused. This is particularly important given the fact that lapwing have now been displaced from the whole Colliery site, and may not necessarily return, irrespective of the quality of the mitigation which is implemented. Notwithstanding this fact, the Wader Mitigation Plan offers the potential to mitigate some of the cumulative impacts of other developments at Bilsthorpe Colliery.

4.3 NWT comments regarding the effectiveness of the Wader Mitigation Plan reiterate some of those made in the letter of 23rd September 2014, and do not acknowledge the changes made in the Third Regulation 22 submission. Some of these repeat misinterpretations of the earlier iterations of the Plan; it was never intended to graze sheep on the mitigation area. I fully intended that points of detail regarding grazing management can be addressed through the proposed monitoring provisions in the Wader Mitigation Plan. For example, it may well be that exclusion of grazing during the breeding season will be desirable, or it may be that the shingle and scrape area in the south of the site may need to be cordoned off with temporary electric fencing.

4.4 With respect to the creation of further scrapes, NWT expresses doubt about size and their ability to hold water, and suggests locations are indicative. The locations I indicated on the Wader Mitigation Plan are accurate; they were measured with a sub-metre accuracy GPS, and reflect the extent of existing hollows and areas which are likely to retain water through the breeding season if appropriate measures to create a compacted impermeable clay layer are implemented. While more scrapes would be beneficial, I acknowledge they need to be located where they are likely to actually hold water. In any event wader chicks are mobile and can move to suitable areas, as evidenced by the use of the shallow water body in the Solar Farm by oystercatcher and little ringed plover breeding in the vicinity of the BEC site in 2013.

4.5 NWT suggest that the size of scrapes is inadequate, stating: "*The proposed scrape area appears to be 0.1ha, which is very small (equating to 10x10m albeit in a rectilinear shape) in a 8.35ha site, particularly to accommodate both feeding and breeding LRP and at least 2 pairs of lapwing*." In terms of the areas of open water scrapes to be provided, I would point out that there are 10,000m^2 in a hectare, consequently an area of 0.1ha is 1,000m^2, not 10x10m (i.e. 100m^2) as stated by NWT.

Conclusions – cumulative wader impacts

4.6 NWT have re-iterated points regarding cumulative impacts which are matters of common ground, but fail to accept that the Wader Mitigation Plan is the first serious attempt to provide deliverable mitigation, with provisions to monitor results and adapt detailed management accordingly. Their tenfold underestimation of the extent of wetland habitat creation illustrates their unwillingness to see any benefit in what is a significant mitigation commitment.

5 Potential impacts on woodlark

5.1 NWTcontinue to assert that the site may be suitable for woodlark, despite there being no records from four bird surveys on site, one of which (in 2014) was carried out by a woodlark expert in full compliance with recommended methodology.

5.2 With regard to the detectability of woodlark in the 2015 survey, it is worthwhile comparing NWT's comments about timing to the authoritative *Bird Monitoring Methods* (APP/KH/5-D). This recommends three survey visits, one from 15th February – 21st March; one from 22nd March – 25th April; and one from 26th April – 1st June. Two of the breeding bird survey visits were undertaken during the 'third' survey season for woodlark. Given the expert opinion of David Pearce in the Woodlark survey reported in the first Regulation 22 submission regarding habitat quality on site and negative result reported by his survey, I do not consider it was necessary to repeat this survey methodology.

5.3 There is no evidence that woodlark, had they been present in 2015, would not have been detected in the June survey. A paper describing the national woodlark survey (Conway *et al*., 2009; APP/KH/5-E) states that: "*The recording period for the survey was restricted to 15 February–31 May, even though the breeding period typically finishes in late July. This minimized the chances of double recording of pairs that may have changed breeding locations between early and late broods, or after early failure due to habitat loss*." Thus, it is clear that the national woodlark survey window was

restricted due to the need to avoid 'double-counting' in a wider scale survey, rather than there being a problem with detectability later in the season.

5.4 NWT do not specify what 'similar sites' woodlark have been recorded on, or their distance from the Indicative Core Area and Important Bird Area defined by Natural England and RSPB respectively. The preliminary ecological appraisal carried out by the Wildlife Trust's consultants, EMEC Ecology, on behalf of RAGE provides further elucidation. This notes the presence of the nearest woodlark record 2.1km from the BEC site. Section 4.1.4 (b) notes that this territory is in Clipstone Forest, and was last recorded in use in 2011; the nearest 2015 record is also within Clipstone Forest, 2.6km from the BEC site. Both of these locations are within the Sherwood Indicative Core Area and Important Bird Area (IBA). Further information is given in the Birklands Ringing Group data appended to the EMEC report. This states that the nearest 2011 site is a restocked plantation, and the 2015 site is on lowland heathland.

5.5 The Birklands Ringing Group data also provides an opinion on the likely population trajectory in Clipstone Forest in coming years, stating: "*The total number of pairs present is likely to rise due to the large areas of additional clearfell created by the Forestry Commission on this site over the past two winters*." Such measures on suitable habitat within the Indicative Core Area are much more likely to impact on the conservation status of woodlark than habitat changes on Bilsthorpe Colliery, a site where woodlark have never been recorded.

Conclusion – woodlark

5.6 A risk-based approach to woodlark has been followed, in accordance with Natural England's recommendations for the ppSPA. All evidence points to a conclusion that the BEC development will be neutral with respect to woodlark.

6 Potential impacts on nightjar

6.1 NWT refer to the content of Ms. Bradley's February 2015 submission on nightjar, which I have addressed in detail in my main Proof of Evidence (paragraphs 7.4-7.13). It is necessary to respond to further points made in this latest submission, particularly where they re-iterate a very partial version of the facts.

6.2 What was clear from the February 2015 submission was that Ms. Bradley combined four disparate observations regarding Nottinghamshire nightjars, and used these to construct evidence that the BEC site would have a likely significant effect on nightjar populations in Sherwood. These are:

(1) nightjars have been recorded in Cutt's Wood;

(2) a GPS-tagged, radio-tracked female nightjar moved up to 8.3km from its roost on one occasion;

(3) a tagged and tracked male nightjar was recorded near a brightly-lit farmyard; and

(4) a Nottinghamshire-ringed nightjar was found dead in a partially-built power station in France.

Nightjar in Cutt's Wood

6.3 Firstly, Ms. Bradley states that '*nightjar are using Cutt's Wood for foraging and breeding*'. She submitted a plan showing nightjar activity in and around Cutt's Wood to Nottinghamshire County Council in March 2014. I was aware of this plan, and responded to it in Appendix 2-4 of the First Regulation 22 response. This included a nightjar survey carried out in optimum conditions in 2014, an assessment of habitat quality in the part of the wood where a pair were shown to have been recorded, and an assessment of the possible effects of nitrogen deposition, lighting, noise and traffic on nightjar in Cutt's Wood as a consequence of the BEC proposal.

6.4 The plan she submitted in March 2014 did not state that nightjar were breeding in Cutt's Wood, and I remain unconvinced that the area of the woodland where she indicates that Birkland's Ringing Group informed her was occupied by a pair of nightjars is suitable breeding habitat. The area supports dense woodland, which David Pearce who carried out the 2014 survey and myself considered to be unsuitable for breeding nightjar when we separately visited the wood. As I noted in the First Regulation 22 submission (Appendix 2-4), it was not clear if the map was as supplied from the Ringing Group, or was NWTs interpretation of a separate verbal or written report. Irrespective of whether nightjar were or were not present in the location indicated, I assessed potential impacts as if the whole of the wood was suitable.

Evidence for wide-scale foraging by nightjar

6.5 Secondly, Ms. Bradley states that: "*one tagged birds was found to fly to Cutts Wood from a south westerly direction and may have crossed Bilsthorpe Tip*". As I noted in paragraph 7.4 of my main Proof of Evidence, this did not 'fly to Cutt's Wood', but had an inferred direction of flight which may have taken it close to or through Cutt's Wood; a direct trajectory between two logged points would have taken it along the western boundary of Cutt's Wood. What is more relevant is the fact that this was regarded by EMEC ecology who carried out the study as an exceptional observation

(APP/KH/2-E), compared to all other logged movements which stayed much closer to home territories.

Attraction of nightjars to light

6.6 The version of the February 2015 submission included in the October submission helpfully includes a map of the tracked male nightjar which had been noted foraging around a farmyard lit by security lights; this had not printed properly in the previous pdf version. The correctly printed 'Figure 2' confirms my understanding that this was close to its core territory, showing a movement of no more than 1km.

6.7 Having seen this figure, what I am now less clear about is how the tracking evidence shows that nightjars were attracted to forage around a brightly lit farmyard. Figure 2 seems to show both 'fixes' to the north-west of the nearest buildings. Although there are no locations marked on the map, the disposition of roads and woodland shows this to be to the north-west of Gorse Bank Farm, around grid reference 459450, 365610. The immediate area of the closest fix to the farmyard includes a belt of dense woodland alongside a minor unlit road, as shown in the appended Google Earth Pro images (see photograph and aerial image in APP/KH/5-F).

Mortality risk posed by partially-built power stations

6.8 Ms. Bradley repeats the report originally made in her February 2015 submission that a ringed nightjar from Nottinghamshire was killed by entering a partially-built power station in France. She does not give any further details of the location of the recovery.

6.9 I have explained in my main evidence that birds can be at greater risk during migration, when they can be distracted by bright lighting and become disorientated, particularly during foggy conditions. Structures on the coast such as lighthouses, or offshore such as gas platforms can be particularly hazardous. Over land, birds are able to interrupt their migration during unfavourable weather conditions.

6.10 I have investigated ringing recoveries for nightjar in Nottinghamshire listed on the British Trust for Ornithology (BTO) website, and believe the recovery Ms. Bradley refers to is of a bird found dead in Flamanville Power Station, Manche, France on 16th October 2014 (APP/KH/5-G). This is a nuclear power station located on the coast of Normandy, close to Cherbourg, and likely to be an important 'landfall' site for migratory birds crossing the Channel. The size and setting of the plant can be determined by the front cover of operator EDF Energy's annual report (APP/KH/5-H).

I do not consider that this is comparable in terms of scale, location or potential risk to migratory birds to the BEC.

Conclusions

6.11 I consider that a risk-based approach to nightjar has been followed in consideration of the potential impacts of the BEC. This includes both the scenario originally proposed by NWT, that nightjar were very sensitive to impacts such as habitat change, lighting and noise, and the modified scenario of a wide-ranging species likely to be attracted to the BEC site, become trapped and die. Accordingly I reject Ms. Bradley's assertion that Natural England's requirements have not been followed.

7 Potential impacts on dingy skipper

7.1 With respect to dingy skipper, NWT note the conclusions of the habitat and dingy skipper surveys, which recognised that habitat quality on site has increased in terms of an increased population of its food-plant, bird's-foot trefoil.

7.2 NWT note that dingy skipper was not found in the 2015 survey, but go on to state it: "*has been recorded on the site previously*", . I am not aware of any past records specifically relating to the BEC site, which was certainly totally unsuitable in 2013, so NWT are presumably referring to the wider Bilsthorpe Colliery site. Based on this inferred but unverified presence, Ms. Bradley goes on to state: "*I would therefore expect specific provision to be made for it in the mitigation area.*"

7.3 Whether dingy skipper has been recorded on the BEC site or not in the past, specific provision has been made for this species in the Wader Mitigation Plan, and provision will be made to maintain suitable habitat within the BEC site landscape. This does not satisfy NWT, who criticises the Wader Mitigation Plan's provision for dingy skipper, stating that: "*It is proposed in the WMP that birds foot trefoil be sown on the southern facing slope, which could be beneficial for this species, however the rest of the paragraph states that this area would be sown with red clover cultivars and other potentially commercial species to "improve its resilience for grazing stock" (WMP page 17).*"

7.4 On reading page 17 of the Wader Mitigation Plan, I can find no reference to 'red clover cultivars' and 'other potentially commercial species'. In fact I wrote on page 17 that: "*sloping grassland to the north of the scrape which currently supports poorly-established grassland will be improved to increase its resilience for grazing stock and*

value for wildlife by appropriate amendments and sowing a grass / legume mix, incorporating ***native cultivars*** *of red clover (Trifolium pratense) and bird's-foot trefoil (Lotus corniculatus). This faces south, and will provide a suitably sheltered habitat for foraging butterflies and other invertebrates*" (my emphasis).

7.5 I am aware that there is an important balance to reach between the establishment of a resilient sward and the maintenance of grassland biodiversity. I have previously managed restored colliery tip sites for grazing, and have experience of the need to avoid the sward breaking up and regressing, as it has currently on parts of this slope. The Wader Management Plan provides for careful monitoring and adjustment as necessary, but with grassland biodiversity and the provision of suitable habitat for dingy skipper and breeding waders the principle aim.

7.6 The NWT submission goes on to state: "*The development and grazing management of such a sward would be unsuitable for maintaining habitat for dingy skipper.* ***So I do not consider this important species to be adequately provided for in the mitigation proposals***" (her emphasis). By way of further clarification, I submit some advice from Butterfly Conservation regarding habitat management for dingy skipper (APP/KH/5-J). This states that: "*The most suitable grazing regimes are those that produce a range of sward heights including breeding patches of less than 5cm. Cattle grazing is superior to sheep grazing as it results in a less uniform sward. Late spring or early summer grazing should be avoided, as egg-laying female Dingy Skippers generally avoid damaged foodplants*." This regime is entirely compatible with the prescriptions of the Wader Mitigation Plan. The same advice recommends the maintenance of areas of bare ground, which will of course be fulfilled by the bare shingle area at the foot of the slope, as well as the likelihood of smaller-scale bare patches being produced by winter grazing.

Conclusion – dingy skipper

7.7 Rather than failing to adequately provide suitable habitat for dingy skipper, mitigation measures will increase the area available relative to the current baseline. NWT have misrepresented the type of habitat creation proposed, which has nature conservation rather than agriculture as its primary focus.

8 Need for reptile surveys

8.1 Ms. Bradley states that reptile surveys should be undertaken. I do not think this is necessary in order to comply with the degree of protection afforded to reptiles. However, should the Secretary of State have any residual concern in respect of

reptiles, a Reptile Mitigation Plan can be provided in the Construction Environmental Management Plan (as proposed under the present draft planning conditions). This would be consistent with measures proposed for the adjacent coal recovery site, although it should be noted that there is a materially higher risk of reptiles occurring on the better established coal recovery site.

9 Impacts on habitats

9.1 NWTnote that species-rich grassland is not the same as Open Mosaic Habitat. I concur with this, but would add that the speed of natural succession suggests that open mosaic habitat would not persist long on the BEC site in the absence of further disturbance. In contrast, the Wader Mitigation Plan provides for long-term management of grassland habitats for wildlife, as well as areas of bare shingle which will retain many of the characteristics of open mosaic habitat.

9.2 In this context, there is no evidence for her assertion that: "*In reality, the majority of the mitigation area would be managed to create a better grazing sward for cattle, of relatively low species diversity and high homogeneity*". A key change in the revised Wader Mitigation Plan has been to shift the emphasis towards creating and maintaining grassland diversity, although it misrepresents the original plan to suggest it would be managed simply to provide a better grazing sward for cattle.

9.3 I do not consider over 8ha of mitigation area to compensate for the loss of 4ha of recently disturbed habitat to be an 'inadequate' response to habitat loss. The re-calculation of the Biodiversity Offsetting Metric presented in the Third Regulation 22 submission provides objective support for this view.

Effects of air quality on habitats

9.4 With respect to air quality, Ms. Bradley returns to a comment made in response to the Second Regulation 22 submission, stating: "*In my previous response I noted that the inclusion of the 1% contour map for the NOx critical level is helpful and I am now satisfied that the majority of LWS in the area would not fall above the 1% contour. But I note that higher levels than 1% are predicted for the northern corner of Eakring Brail Wood LWS and the Bilsthorpe Colliery LWS. The Applicant states that this would not be significant, even though approximately 10% of the Bilsthorpe LWS could be affected by this change in emissions, which is a significant area*." NWT are referring here to Figure 1 of Appendix 2-2 of the Second Regulation 22 submission.

9.5 The explanation why the change in emissions was not considered significant could be found in section 4.2 of Appendix 2-2 (page 13), where I state: "*The 1% annual mean NOx critical level contour includes the eastern margins of Bilsthorpe Colliery LWS, the western part of Mill Lane, Eakring LWS, and the southern part of Eakring North Meadow LWS. In each case, application of EA guidance to these potentially significant results shows the PEC is <70% of the relevant environmental assessment level (critical level of 30µg/m3 annual mean, background level of 16.78µg/m3 annual mean), and they can be screened out from further consideration*."

9.6 Leaving aside the fact that this actually applies more precautionary limits to the avoidance of 'significant pollution' of locally designated sites than current EA guidance (APP/KH/2-G), in simple terms a process contribution in excess of 1% of Critical Level (i.e. over 0.03µg/m^3) would result in a predicted environmental concentration which is still less than 70% of that Critical Level. This would have no possible effects on vegetation or associated fauna.

9.7 The NWT submission goes on to state: "*The consultants previously stated that they believed that the foodplant of dingy skipper were not present, but the surveys from this year have shown this plant to be quite widespread within the proposed BEC footprint, and it may be on the wider LWS*."

9.8 I do not see how the presence of bird's-foot trefoil on the BEC site infers that land on the eastern margin of the LWS must now support both bird's-foot trefoil and dingy skipper. Whether it does or not is in any event irrelevant, as the predicted environmental NOx concentration is well below the Critical Level.

Conclusions – habitats

9.9 The Third Regulation 22 submission provides evidence that there will be a net increase in both the quality and quantity of habitats present. NWT's submission ignores the result of the Biodiversity Offsetting Metric, makes unsupported assumptions about the primary aims of the Wader Mitigation Plan, and repeats a misinterpretation of the Second Regulation 22 submission which addressed air quality impacts on vegetation.

10 Conclusions

10.1 NWT have confirmed that they agree with the evidence from recent surveys provided in the Third Regulation 22 submission that the proposed BEC development will not have an impact on European Protected Species.

10.2 In other respects, NWT's submission repeats many of their comments made previously on earlier Regulation 22 submissions, or already submitted to the Inquiry in the form of Ms. Bradley's *Supplementary Information* document.

10.3 I have addressed their comments on wader, cumulative impacts, woodlark, nightjar, dingy skipper, reptiles and habitats, and do not believe there are any substantive points requiring further response from the Applicant in terms of modification of mitigation or further assessment.

10.4 I do not believe their approach to the BEC development is consistent with that adopted towards other consented and constructed developments on the former Bilsthorpe Colliery site.