

Adran yr Economi a'r Seilwaith  
Department for Economy and Infrastructure



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Llywodraeth Cymru  
Welsh Government

**Objection Ref OBJ0030**

**File Ref WG/REB/OBJ0030 - RSPB**

**Response to Objector's Evidence: The Royal Society for the Protection  
of Birds**

## **1. GROUNDS FOR OBJECTION**

### **1.1. Details**

1.1.1. The Royal Society for the Protection of Birds has submitted a Statement of Evidence dated 7 February 2017 in relation to the draft statutory Orders associated with the Welsh Government's proposals for the M4 Corridor around Newport, which has been received via the Programme Officer.

1.1.2. The Welsh Government understands the evidence submitted within RSPB's Statement to be based on the following:

1. States that NRW 'has yet to provide a formal condition assessment for the Gwent Levels SSSI' and suggests that the SSSIs are not in favourable condition and so the M4CaN must deliver 'compensation' of SSSI impacts from a starting point of them being in favourable conservation status, given achievement of Favourable Conservation Status (FCS) is a duty of the Welsh Government (WG).
2. Suggests response is needed as to how legal duties and policies of the WG are taken into account in relation to biodiversity and sustainable development.

In relation to legislation and policy, RSPB refers to:

- The Wildlife and Countryside Act 1981 (as amended)
- The Conservation of Habitats and Species Regulations 2010 (as amended)
- The Well-being of Future Generations (Wales) Act 2016, (for example, Objectives 6, 7 and 12)
- The M4CaN Sustainable Development Report
- The Environment (Wales) Act 2016 Part 1 and 2
- The Nature Recovery Plan for Wales
- The UNEP Convention on Biological Diversity
- The Aichi Biodiversity Targets
- The Paris Agreement

3. States that the Conservation of Habitats and Species Regulations 2010 (as amended) (“the Habitats Regulations”) set out key duties in relation to the protection of bird species. Regulation 9(3) requires a competent authority to “have regard to the requirements of the Directives so far as they may be affected by the exercise” of their functions. Birds listed in Annex I of the Birds Directive (2009/147/EC) are to “be the subject of special conservation measures concerning their habitat in order to ensure their survival and reproduction in their area of distribution.” Outside of designated protection areas “Member States shall also strive to avoid pollution or deterioration of habitats.” Common crane is an Annex I species which bred on the Gwent Levels in 2016, and whose habitat would be destroyed by the proposed route.
4. Considers that the scale of the M4CaN proposal and its significant impacts on the environment, including biodiversity, clearly signal that it is not compatible with the purpose and spirit of the Well-being of Future Generations Act 2015.
5. Considers that the Sustainable Development Report is not based on the most up to date version of the principles as articulated in the Well-being of Future Generations Act 2015 and therefore the conclusion that the scheme represents sustainable development is not totally founded or based on up to date legislation.
6. Considers that the scheme is counter to recommendations set out in a State of Natural Resources Report (SoNaRR) to be published by Natural Resources Wales (NRW).
7. Considers that public authorities, which includes Welsh Ministers, are required to have regard to the list of priority species and habitats (which Welsh Ministers must publish under section 7 of the (Environment (Wales) Act), the SoNaRR, and any relevant area statement. The current section 7 list features a number of species which would be impacted by the Scheme, including lapwing.
8. Argues that should the M4CaN proposal go ahead, WG should commit to investing resources linked to the overall financing of the Scheme in projects to support recovery of biodiversity and build the resilience of ecosystems, beyond the direct compensation requirements arising.

9. Considers that the construction of the scheme is counter to meeting the greenhouse gas emissions target set out in the 'Paris Agreement'.
10. Asserts that the scheme is counter to other transport priorities of Wales (metro) and is not in response to future trends.
11. Considers that it is devastating that this proposal would destroy the habitat used by the common crane, an Annex I species, which bred on the Levels in 2016 – the first time the species has bred successfully in Wales for 400 years. The proposed route would bisect the cranes' nesting and feeding areas, making it impossible for the birds to return to breed at the same site. States that the Regulations require Annex I species to “be the subject of special conservation measures concerning their habitat in order to ensure their survival and reproduction in their area of distribution.” - Article 4(1) of the Birds Directive.
12. Considers that the M4CaN proposal would also destroy critical habitats for a number of priority species, including lapwing and four carder bee species (moss carder, red-shanked carder, brown-banded carder and shrill carder), as well as destroying a significant area of the priority habitat “coastal and floodplain grazing marsh”. These priority species and habitats are listed under section 7 of the Environment (Wales) Act, which it is the Government’s responsibility to publish; it is also their duty to take all reasonable steps to maintain and enhance the listed species and habitats, having regard to the principles of SMNR – these include taking account of the benefits and intrinsic value of natural resources (including biodiversity) and ecosystems, taking action to prevent significant damage to ecosystems, and taking account of the resilience of ecosystems.
13. Considers that the development of the M4CaN proposal is a commitment to road travel, and will do nothing to address the key priority of demand management. It is absolutely incompatible with the Welsh Government’s commitment to tackling climate change under the Paris Agreement.
14. The scheme does not align with the duties placed upon Welsh Government in the Environment (Wales) Act, to secure resilient ecosystems.
15. Agrees with the high value for redshank, gadwall and pintail assigned by the survey. However, considers that the values for mallard (which

equates to more than 2% of the SPA) and shoveler (which exceed more than 1% of the SPA population) should be increased to medium to match teal.

16. Considers that all breeding bird surveys focussed on identifying representative bird communities of the survey areas chosen, rather than properly assessing the bird populations affected along the M4CaN route. The RSPB understands that this approach has been taken following advice from NRW, but the RSPB respectfully disagrees with the advice NRW has given. States that there are large unsurveyed areas between the transects which have been undertaken. Considers that it is not possible to reach sound conclusions about the likely ornithological impacts of the route or to devise an appropriate mitigation and compensation package in the event that the scheme is approved.
17. Considers that bird surveys were not carried out using a robust methodology and the subsequent body of evidence is not sound.
18. States that no information has been provided on the hydrology of the crane breeding site, or the potential impacts of a new road on freshwater flow into the lagoon and adjacent habitats. It is therefore impossible to assess the indirect hydrological impacts of the proposed motorway extension on the nesting lagoon, adjacent foraging area, the hay meadows, or the SINC corridor between them. It is critical that the hydrology of the breeding pool and the key foraging habitats are maintained in order to secure the nesting site and retain the foraging areas in suitable condition for feeding chicks.
19. Considers that, given the apparent site constraints at Tatton Farm, it is extremely unlikely that this site would be suitable for breeding cranes.
20. Considers that, given the apparent site constraints at Maerdy Farm, it is very unlikely that this site would be suitable for breeding cranes.
21. States that Caldicot Moor covers c. 55 ha, with c. 40% lying within 200 m of the existing M4 and Severn Bridge toll, and c. 99% within 500 m. Lagoons and pools are identified in the western part of the site, all situated within 200-350 m of the existing motorway.
22. States that Fig. 2c shows lagoon and ponds in the western side of the site. Considers that they do not have enough information about site

- hydrology to comment on whether the site has the capacity to support a viable breeding pool for cranes, although they assume this is the wettest area currently, and therefore the most obvious location for a breeding pool. Aerial photographs of the site suggest the fields are intensively managed and very dry, and they would have concerns about the feasibility of creating and maintaining permanently wet areas.
23. Notes from fig. 2c the intention to enhance existing grassland across c. 80% of the site and to revert existing arable cover on the remaining c. 25%. Considers that it is likely to take several years before these fields would provide suitable foraging habitat for breeding cranes, and enhancement and reversion would therefore need to be carried out several years before the breeding pair at the steelworks is disturbed.
  24. Considers that, given the apparent site constraints at Caldicot Moor, it is unlikely that this site would be suitable for breeding cranes without significant reduction in the potential levels of human disturbance and a review of the other potential constraints. Specifically, given that the proposed lagoons and much of the foraging area would lie within 10-50m of the Celtic Trail, it is very unlikely that the site would be used by cranes. Assumes, in the absence of further information, that levels of human disturbance are likely to be too high.
  25. Recommends that a more systematic review of alternative sites across the Gwent Levels and adjacent areas is carried out. This should be achieved with input from the Living Levels Partnership and through access to existing habitat databases, focusing on areas of existing and former wetland habitats, and in particular unimproved areas of coastal and floodplain grazing marsh away from major roads, built development and pylons.
  26. States that it has carried out a brief assessment of Goldcliff Lagoons and Newport Wetlands and considers neither site is likely to be suitable due to a combination of factors, including current levels of human disturbance. In addition, there may be significant constraints at Newport Wetlands, a site which was created to provide compensatory habitat for the Cardiff Bay Barrage, with specific objectives for non-breeding shoveler and widgeon.

27. Considers that the scheme will have an impact on common cranes which is considered objectionable on the basis of their Annex I status under EU Directive (2009/147/EC).
28. Have significant concerns about the approach used to estimate the Cetti's warbler population set out in the 2016 Breeding Season Ornithological Surveys.
29. Concerned that barn owl mitigation is not appropriate and that nest boxes should be repositioned.
30. States that between 2014 and 2016 there has been a 75% decline in the number of birds reported in the surveys. Unfortunately no explanation has been advanced to accompany this information – for instance whether the differences relate to different survey areas, time of survey or whether this represents a rapid and substantial decline in the survey area.
31. Concerned that, due to the survey method used, it is very difficult if not impossible to be certain about the status of Willow Tit in this area but at face value the population of willow tit in Area 2 is one of the largest in Wales and is of national significance. Given the perilous situation of these species the failure to have a clearer idea of the population and its distribution is a source of concern.
32. Considers that the ES had highlighted one Section 7 species - Brown banded carder bee (*Bombus humilis*) but had failed to address impacts on two other Section 7 species, Red shanked carder bee (*Bombus ruderarius*) and Moss carder bee (*Bombus muscorum*), both of which are known to occur in the area from CCW and NRW reports.
33. Considers that the Shrill Carder Bee is the rarest species both nationwide and within Wales, as well as the bumblebee species most at risk from this planning proposal.
34. Considers that the landscape-wide metapopulation nature of bumblebees' population structure means that preservation of any one of the SSSIs would not be enough to secure the conservation of the Shrill Carder. The SSSIs, while playing a central role, are only part of the story in the wider context of the Shrill Carder's Gwent range, and areas outside the SSSI boundaries must be considered as functionally linked to the SSSI populations. Loss or severance of any part of this existing range is

- likely to negatively impact the survival of the population, and thus the survival of the species in the UK. The positioning of the M4 Black Route is such that it is likely to divide the existing large population into three smaller, less viable populations: west of the River Usk (37% of the current population by number of sightings); East of the Usk and south of the new M4 (53%); and east of the Usk and north of the new M4 (10%).
35. States that plant species which are particularly important to bumblebees include red bartsia *Odontites vernus*, red clover *Trifolium pratense*, creeping thistle *Cirsium arvense*, common bird's-foot trefoil *Lotus corniculatus*, common knapweed *Centaurea nigra* and viper's bugloss *Echium vulgare*. On the Gwent Levels, CCW/NRW surveys have recorded Shrill Carders collecting pollen and/or nectar from 26 plant species, especially narrow-leaved everlasting-pea *Lathyrus sylvestris*, common knapweed *Centaurea nigra*, tufted vetch *Vicia cracca*, red clover *Trifolium pratense*, common bird's-foot-trefoil *Lotus corniculatus* and sunflower *Helianthus annuus*. None of these plants are particularly difficult to grow, but several are not common components of meadow seed mixes and would need to be added specifically. Others do better with particular planting regimes, such as scarification or co-seeding with yellow rattle (*Rhinanthus minor*), which parasitizes grasses and reduces their vigour, allowing wild flowers to flourish.
36. Considers connectivity can be enhanced by favourable management of reens, ditches, road verges, and field margins, creating a flower-rich network linking larger habitat patches together. Favourable management in this sense is that which ensures an abundance of flowers which the bees are known to use.
37. Considers that the timing and methodology of the environmental survey work commissioned to date leaves much to be desired. In particular, the survey was not done over a long enough period, and there was no repeat surveying of areas. Invertebrate survey guidance states that several visits should be undertaken between March and October in order to capture the full diversity of such areas. In this case, surveys were only carried out between July and September, completely neglecting the invertebrates of spring, autumn, and early summer.

38. Considers that both the environmental survey and the scoping report (desk study) appear to be unaware of the Shrill Carder surveys of the area commissioned by CCW in 2009, 2010 and 2012. Although a CCW summary of the Gwent Levels status of the species is included as Appendix 10.3, this dates from 2010 and only includes the 2009 survey (Magor & Undy and Whitson SSSIs). Possibly related to this, the M4CaN paperwork completely misses the presence of a Section 7 bumblebee with very few recent Welsh records (*B. ruderarius*) on both the Whitson and Redwick & Landevenny SSSIs.
39. Considers that the combination of limited surveying and missing of existing survey reports means that it is impossible to have confidence in the conclusions reached. Considers that the potential for harming the Gwent Levels Shrill Carder population – a nationally-important area for a nationally rare species - has been considerably underestimated.
40. States that the SSSI sites are primarily designated for the Shrill Carder and the ree and ditch habitat which supports the bee and many other rare invertebrate species. The M4CaN plan proposes essentially 1:1 like-for-like replacement by length for the 2755 metres of ree and 9373m of ditch destroyed by construction of the road (2657m and 9771m respectively), but this will not solve the loss of connectivity across the route of the road: Even where the reens and ditches remain connected beneath the road, they will not be on the surface and so the vegetation, which is the value of the network for Shrill Carder, will be permanently lost.
41. Considers that loss of habitat at Newport Docks will also make it more likely that the Shrill Carder population epicentres east and west of the River Usk would be severed from each other, a risk exacerbated by both the new road and the new access road to Docks Way. While the river poses a barrier at the moment comparable in width to the proposed new road, the effect is minimal in comparison because of a lack of barriers along the edges (eg motorway escarpments), and the lack of the air turbulence and roadkill risk posed by several thousand vehicles per day passing at high speed.

42. Considers that, while it is claimed that the construction sites at Great Pencarn, Newport Docks and Tata Steel would be restored post-construction, this would still result in a four- or five-year period when the areas were unsuitable for the bumblebee, reducing the available foraging area before the compensation areas are created. As bumblebees have an annual lifecycle, this means that populations would be unable to use the area for 4-5 generations, causing the population to shrink just at the time it is most vital that populations are expanded to minimise the harm done by dividing them with the new road.
43. Considers that the new motorway (and other large roads built as part of the development) are likely to represent significant barriers to the Shril Carder and other bumblebee species. Bumblebees are known to treat transport links such as roads and railways as barriers in the landscape, and rarely cross them. Tall hedges and lines of trees are also known to be significant barriers to flying insects although they can also provide foraging and nesting resources. This, combined with the removal (or forcing underground) of ditches and reens across the new route of the motorway and the addition of screening banks and trees on either side of the road footprint, make it highly likely that the development will present a near-impenetrable barrier to bumblebee. This is contrary to the overly-optimistic judgement of the M4CaN Statement of Case Part 2 & 3 that the road “would not be likely to prevent exchange of individuals between sites”.
44. Considers that the populations south of the road which make up 37% (west of the Usk) and 53% (east of the Usk) of the post-2000 population are more viable, though their prospects would be greatly enhanced if they were to remain connected (encompassing 90% of the current population). However, any proposal to wilfully reduce the size of one of just five remaining British populations of our most endangered bumblebee is taking an unnecessary and unjustified risk with the future of the species in our country.
45. Considers that one of the main reasons that bumblebees such as the Shril Carder are thought to have become rare is that they exhibit preferences for flowers such as those of family Fabaceae, many of which are predominantly found in comparatively low-nutrient-input areas such

as hay meadows. A diffuse impact of the relocation of the motorway will be the greatly increased emission of nitrogenous exhaust fumes through the Gwent Levels. Nutrient fertilisation from road traffic emissions on even small roads is known to change the species composition of vegetation assemblages up to hundreds of metres from the road footprint itself. The change is towards more-nitrogen-tolerant species such as coarse grasses and away from less-nitrogen-tolerant species such as the preferred forage plants of the Shril Carder and other rare species. This will produce a zone of degraded habitat of little to no use for bumblebees on either side of the new road, as well as widening the effective barrier width of the new motorway and increasing the severance effect of the project.

46. Notes that the construction sites at Great Pencarn, Newport Docks and Tata Steel will be restored “as far as practicable” to mosaic habitat including “areas with food plant species of value to shrill carder bee” and considers that this restoration is to be welcomed, as brownfield mosaic habitats are a major habitat for Shril Carder, but does not address the loss of habitat during the construction phase. There must also be clarity on which particular ‘food plant species of value to the Shril Carder’ will be used. This must be added to the mitigation strategy.
47. States that reens and ditches would be restored at an approximately 1:1 ratio with those destroyed (2568 metres of reen lost, 2657m recreated and 9136m of ditch lost, 9771m recreated<sup>67</sup>). Considers that it is not clear whether reens and ditches converted to culverts would be regarded as lost in this scenario. Considers that, although the waterbody remains in place and connected, the littoral vegetation which provides value for the Shril Carder and other bumblebee species would be lost and thus these culverted sections should be regarded as lost as far as bumblebees are concerned. Considers that the littoral vegetation of reconstructed reens and ditches should consist of a varied structure of open flower-rich areas interspersed with shelter belts of scrub and trees.
48. Considers that the 1:1 habitat replacement ratio is too low for a site of this quality. Habitat compensation for this project should attempt not just to replace the habitat destroyed by the project, but also repair the damage inflicted by the severance effect of the road, fragmenting a large healthy

population into two smaller, less-viable populations. Therefore compensation for bumblebees should take place on both sides of the proposed route, not just in the south with the largest remaining population. On both sides of the new road, enough suitable habitat should be provided that each population is able to remain stable at the very least. This will require much more than the approximately 1:1 reed & ditch replacement ratio, and the approximately 1:3 recreated:destroyed ratio for grassland. In particular this is because suitable compensation must be provided on both sides of the new road, where the nationally-important bumblebee populations will be divided at least into two.

49. Considers that the three “mitigation” areas are of reasonable size (Tatton Farm 17ha, Maerdy Farm 24ha, Caldicot Moor 113 ha) but it is unclear how much of each would be used in compensation in general, let alone to provide Shril Carder habitat (“the actual extent of land within these areas which would be required to provide compensation is to be agreed with NRW.”). This will clearly have a major impact on the overall suitability (or not) of the compensation scheme, although the placement of the compensation areas means that the population remnant north of the proposed road and east of the Usk will not be helped however much of the three sites is used for compensation. All three new sites are south of the proposed M4 route: although this population will be reduced in size and will require support, the 10% of the population north of the proposed route is by far the most likely to be forced to extinction. The existing “mitigation” proposals do not even attempt to address this, and support for this northern population beyond reversion of the Tata Steel construction site to mosaic habitat is imperative to include within the compensation scheme. A starting point might be the temporary compensation of the ‘temporary’ construction land take at the time when the land is unavailable for bumblebees, rather than afterwards once the road is finished and the construction sites are reverted to open mosaic habitats.
50. States that a specimen of the Shril Carder was seen at Caldicot Moor during CCW surveys in 2009, so the species clearly uses the area although breeding at the site is not proven. Focused planting and management work has the potential to significantly increase the size of

the Shrill Carder population on the eastern end of the Gwent Levels, and increase connectivity with the small population around Portskewett. The species currently appears to have a smaller population at the eastern end than it does in the west, so this work would stand a reasonable chance of undoing some of the damage these works would do to one of the best populations of Britain's most threatened bumblebee species.

51. Considers that, when the compensation proposals are produced in detail, it is essential that flower-rich areas of compensation should be connected to existing Shrill Carder populations as far as is possible. The landscape must be made permeable to bumblebees by the provision of flower-rich corridors along reens, ditches, field edges and transport pathways such as road verges. This will ensure the population remains as unfragmented as possible on each side of the new road.
52. Considers that the suggested seed mix for the Mitigation Strategy's conversion of land to species-rich grassland for the Shrill Carder looks to be a broadly appropriate starting point, but should also include yellow rattle and red bartsia. Both these plant species are hemi-parasitic on grasses, reducing their vigour and allowing flower species to establish. This will be particularly important on the agriculturally-improved farmland of the proposed compensation areas, as they will help reduce the competitive advantage enjoyed by grasses in enriched soils. Both species are also good forage plants for bumblebees, particularly red bartsia which is a favourite of the Shrill Carder. Overall, it is important that the compensation seed mix includes a range of flower species which provide a succession of forage resources to bumblebees between at least May and September, the main flight period of the Shrill Carder, in South Wales.
53. Considers that it is unclear how the grassland compensation areas are to be managed, particularly in the long term, but best results are likely to come from the sympathetic management of flower-rich swards within pasture land. This lack of clarity makes it impossible to have confidence in even the best-case scenario which could be construed from these vague compensation proposals. Even in a best-case scenario (which would be all three proposed "mitigation" areas devoted to bumblebees in their entirety, reens and ditches restored), the site management (mowing

regime, seeding mixture, timing & ground treatment, etc) is essential to make the areas actually suitable for bumblebees. The Shrill Carder is a particularly late-flying bumblebee species and the mowing/grazing regime must reflect this, with flowers remaining available until queen bumblebees have begun hibernation in late September. At a minimum, NRW and the Bumblebee Conservation Trust should be consulted over the establishment and management strategies and the compensation land locked into long-term management goals.

54. Considers that for the compensation strategy to effectively compensate for the loss and fragmentation of habitat and Shrill Carder populations, it is important that the fine-scale microhabitat of the lost habitat is replicated in the replacement areas. For bumblebees, this is particularly important with nesting habitat as there is little data on the nesting preferences of rare bumblebee species such as the Shrill Carder.
55. States that the RSPB has highlighted that the bird assessment work has not focussed on the overall route of the M4CaN, but rather key survey areas. Considers that this means that the total bird population required to be covered by the compensation package has not been identified, and that therefore it is likely that the measures proposed do not provide adequate compensation for the species affected. The RSPB has highlighted the species for which this is the case.
56. This response also refers to two **letters to the Cabinet Secretary for Economy and Infrastructure**. The first of these, **dated 26 May 2017**, is from the RSPB and the Gwent Wildlife Trust (the RSPB/GWT letter) and raises concerns regarding the interpretation of the Welsh Government's duties under the Wildlife and Countryside Act 1981, the Well-being of Future Generations Act (Wales) Act 2015 and the Environment (Wales) Act 2016. (Inquiry Doc ID088)
57. The second letter, **dated 31 August 2017** (the RSPB letter), raises concerns regarding the suitability of the proposed alternative habitats for the common crane; refers to the implications of the Welsh Government's new Natural Resources Policy (Doc ID115); and argues that the proposed compensation measures would not ameliorate the impact of the Scheme and that bigger and bolder actions will be required to deliver on

the Welsh Government's duties to sustainable development and biodiversity. (Inquiry Doc ID111)

**2. REBUTTAL****2.1. Points Raised**

2.1.1. Some of the above points have already been addressed in proofs of evidence. Others are dealt with by topic by the relevant witness in the following sections, in addition to their general proofs of evidence, to which readers should also make reference in their entirety for a full understanding of the Welsh Government's case. For ease of reference the places where the above points are addressed in this Rebuttal are listed in the table below:

Objector's point reference	Rebuttal paragraph reference	Objector's point reference	Rebuttal paragraph reference
1	2.2.1	29	2.4.13
2	2.2.1 & 2.3.1	30	2.4.14
3	2.4.1	31	2.4.15
4	2.1.2 & 2.3.1	32	2.2.2
5	2.1.2 & 2.3.1	33	2.2.3
6	2.5.1	34	2.2.4
7	2.4.2	35	2.2.5
8	2.2.1	36	2.2.6
9	2.1.2	37	2.2.7
10	2.1.2	38	2.2.8
11	2.4.3	39	2.2.9
12	2.4.4	40	2.2.10
13	2.1.2	41	2.2.11
14	2.3.1	42	2.2.12
15	2.4.5	43	2.2.13
16	2.4.6	44	2.2.14
17	2.4.7	45	2.2.15
18	2.4.8	46	2.2.16
19	2.4.9	47	2.2.17
20	2.4.9	48	2.2.18
21	2.4.9	49	2.2.19
22	2.4.9	50	2.2.20
23	2.4.9	51	2.2.21
24	2.4.9	52	2.2.22
25	2.4.10	53	2.2.23
26	2.4.10	54	2.2.24
27	2.4.11	55	2.4.16
28	2.4.12	56	2.3.1

2.1.2. The points that have already been covered in proofs of evidence are as follows:

1. **Points 4 and 5** (*Considers that the scale of the M4CaN proposal and its significant impacts on the environment, including biodiversity, clearly signal that it is not compatible with the purpose and spirit of the Well-being of Future Generations Act 2015.*) (*Considers that the Sustainable Development Report is not based on the most up to date version of the principles as articulated in the Well-being of Future Generations Act 2015 and therefore the conclusion that the scheme represents sustainable development is not totally founded or based on up to date legislation.*) / John Davies considers the 5 ways of working and well-being goals set out in the relevant guidance in his evidence (WG1.23.1), concluding that the Scheme should proceed. John Davies (WG1.23.1) deals with the environmental impacts at paragraphs 56-204, the sustainable development principle and sustainability objectives in PPW at paragraphs 198-216, and the sustainable development principle set out in the Well-being of Future Generations Act 2015 at paragraphs 26-44. John Davies (WG1.23.1) and Matthew Jones (WG1.1.1) consider the balance between environmental, social and economic impacts and conclude the Scheme should proceed. A separate response to the evidence of the Future Generations Commissioner addresses how the Scheme is considered to be compatible with the purpose and spirit of the Well-being of Future Generations Act 2015.
2. These points are discussed further in the John Davies section 2.3.

3. **Points 9 and 13** (*Considers that the construction of the scheme is counter to meeting the greenhouse gas emissions target set out in the 'Paris Agreement'.*) (*Considers that the development of the M4CaN proposal is a commitment to road travel, and will do nothing to address the key priority of demand management. It is absolutely incompatible with the Welsh Government's commitment to tackling climate change under the Paris Agreement.*) / The Proof of Evidence of Matthew Jones (WG1.1.1) deals with the scheme in relation to greenhouse gas emissions targets and the Paris Agreement at section 15.
4. **Point 10** (*Asserts that the scheme is counter to other transport priorities of Wales (metro) and is not in response to future trends.*) / The Proof of Evidence of Matthew Jones (WG1.1.1) deals with the scheme in relation to other transport priorities and future trends at sections 3 and 9. The evidence of Bryan Whittaker (WG1.2.1) explains how public transport has been taken into account as part of the Scheme assessment. Further detail is provided in ID/PIQ073 which explains that for this project, the Welsh Government has fully taken account of the planned mainline rail electrification and the committed elements of Cardiff Metro in our core scenario, and has carried out a sensitivity test on a higher level of Metro investment and Newport Bus Rapid Transit. The results show that the combined effect of these public transport schemes is to reduce M4 traffic by a maximum of 6% and therefore that they do not resolve the problems on the M4. This does not mean to say that development of an efficient public transport system is not valid. Public transport should be seen as complementary to the M4 proposal and not in competition with it, as is explained further in how public transport has been taken into account by the Welsh Government in the evidence of Matthew Jones in section 9 of WG1.1.1.

## 2.2. Jon Davies (Ecology)

2.2.1. Response to **Points 1, 2 and 8** (States that NRW 'has yet to provide a formal condition assessment for the Gwent Levels SSSI' and suggests that the SSSIs are not in favourable condition and so the M4CaN must deliver 'compensation' of SSSI impacts from a starting point of them being in favourable conservation status, given achievement of Favourable Conservation Status (FCS) is a duty of the Welsh Government (WG)) and (Suggests response is needed as to how legal duties and policies of the WG are taken into account in relation to biodiversity and sustainable development) and (Argues that should the M4CaN proposal go ahead, WG should commit to investing resources linked to the overall financing of the Scheme in projects to support recovery of biodiversity and build the resilience of ecosystems, beyond the direct compensation requirements arising):

1. As explained at paragraph 4.6.8 of the September 2016 ESS, NRW had, at the stage of preparation of the Environmental Statement (published March 2016), advised that the Gwent Levels SSSIs Condition Assessments were still being finalised on the basis of their own survey information collected over the last few years. However, they subsequently advised that preliminary draft analysis indicates that most features are likely to be classified as 'unfavourable'. The main causes of unfavourable condition are the combination of a lack of in-channel submerged vegetation, an over-dominance of terrestrial vegetation and the lack of bare ground/poaching across the SSSIs. Extensive ecological surveys have been carried out for the Scheme over the period since 2014 and some are continuing. These have established the baseline conditions for the scheme regardless of any condition assessment of the wider SSSIs.
2. Regardless of the current condition and responsibilities, a number of the measures which are proposed within the SSSIs as part of the Scheme, in particular arable reversion at Maerdy Farm, recutting of former ditches at Maerdy Farm, and improvements to the diversity of grasslands at Tatton Farm would be unlikely to take place in the absence of the Scheme. Maerdy Farm is an arable farm in private ownership and any such radical change in farming practice is unlikely. Tatton Farm is owned by Welsh Government. In accordance with the Welsh Government's duties under

section 28G of the Wildlife and Countryside Act, there is an intention to carry out works to improve the field ditches within the farm as these support the aquatic vegetation and invertebrate communities which are the main features of the SSSI. The grasslands at Tatton Farm are not untypical of the Gwent Levels SSSIs and it is unlikely that the proposed changes in grassland management could be justified in the absence of the Scheme.

3. As explained at paragraph 8.1.23 of Keith Jones' proof of evidence (WG 1.18.1) Welsh Government has a statutory duty to maintain and enhance biodiversity, particularly in the context of loss and severance of the Gwent Levels SSSIs and impacts on protected species. The statutory duty under the Environment (Wales) Act 2016 Section 6(1) (Doc 31.7) is to the effect that :

*“A public authority must seek to maintain and enhance biodiversity in the exercise of functions in relation to Wales, and in so doing promote the resilience of ecosystems, so far as consistent with the proper exercise of those functions.”*

4. In relation to this duty, and to the duties under Section 28G of the Wildlife and Countryside Act 1981 (relating to furthering the conservation and enhancement of the features of SSSIs) and conserving biodiversity under Section 40(1) of the Natural Environment and Rural Communities Act 2006 (Doc 3.1.13), John Davies explains in his proof of evidence (WG 1.23.1) that in testing options using WelTAG (Doc 6.1.4), selecting a route and making highway design choices that would minimise the effect on the SSSIs, and developing a comprehensive SSSI mitigation strategy, the Welsh Government has indeed sought to maintain and enhance biodiversity insofar as that is consistent with the proper exercise of its functions regarding the motorway network.
5. Welsh Government has undertaken an Assessment of Implications (of highways and/or roads projects) on European Sites (AIES) in accordance with DMRB Volume 11, Section 4, Part 1 (HD44/09) (Highways Agency, 2009) and this was reported in the Statement to Inform an Appropriate Assessment (SIAA) (Doc 2.3.4) which has been agreed with NRW.

6. To the extent that the Scheme would require derogations from the Habitat Regulations with respect to effects on European Protected Species, these would be obtained through grant of licences by NRW.

7. **Point 2** is also discussed by John Davies in section 2.3.

2.2.2. Response to **Point 32** (Considers that the ES had highlighted one Section 7 species - Brown banded carder bee (*Bombus humilis*) - but had failed to address impacts on two other Section 7 species, Red shanked carder bee (*Bombus ruderarius*) and Moss carder bee (*Bombus muscorum*), both of which are known to occur in the area from CCW and NRW reports.

1. As explained at paragraph 10.3.113 of the March 2016 ES, a bumblebee survey (in particular, but not exclusively, for shrill carder bee *Bombus sylvarum* and brown-banded carder bee *B. humilis*) was carried out for the M4CaN project in 2015. This followed discussion with NRW at a meeting on 30<sup>th</sup> January 2015 .

2. This survey is reported in Appendix 10.31 of the March 2016 ES. Paragraph 10.4.491 of the March 2016 ES explains that the survey recorded 56 shrill carder bees from 16 fields/compartments and 67 brown-banded carder bees from 18 fields/compartments. This confirms the continuing importance of the Gwent Levels for these two UK BAP bumblebees. An additional 10 species of bumblebee were recorded (but red shanked carder bee and moss carder bee were not). The additional species recorded were:

- *Bombus terrestris*;
- *Bombus lucorum*;
- *Bombus pratorum*;
- *Bombus pascuorum*;
- *Bombus lapidaries*;
- *Bombus hortorum*;
- *Bombus hypnorum*;
- *Bombus vestalis*;
- *Bombus campestris*; and
- *Bombus jonellus*.

3. RSPB have submitted to the Public Inquiry reports of three Shrill carder bee surveys carried out for CCW as follows:
  - 31 Smith, M.N. (2010). The status and distribution of the Shrill Carder bee *Bombus sylvarum* on Magor & Undy SSSI and Whitson SSSI on the Gwent Levels and on Newport Wetlands National Nature Reserve in 2009. CCW Contract Science Report No. 919. Countryside Council for Wales, Bangor.
  - 32 Smith, M.N. 2011. The status and distribution of the shrill carder bee *Bombus sylvarum* on the eastern Gwent Levels and within the Caerwent and Caldicot areas of Gwent in 2010. CCW Contract Science Report No. 972. Countryside Council for Wales, Bangor.
  - 33 Smith, M.N. 2013. The status and distribution of the shrill carder bee *Bombus sylvarum* on Gwent Levels – Rumney and Peterstone SSSI and Gwent Levels – Nash and Goldcliff SSSI in 2012. CCW Contract Science Report No. 1030. Countryside Council for Wales, Bangor.
4. Twelve species were recorded in each of the 2009 and 2010 surveys. Eleven species were recorded in the 2012 survey. The red-shanked carder bee (*Bombus ruderarius*) was only recorded during the 2009 survey.
5. The RSPB written statement reports at paragraph 4.17 that the moss carder bee has been recorded only once within five km of the proposed route, although a population is known just outside the western edge of this affected area. The species was not recorded in any of the CCW surveys. It is thus not surprising that the species was not recorded in the survey carried out on behalf of Welsh Government.
6. The RSPB written statement reports at paragraph 4.19 that there are just seven Welsh records of red-shanked carder bee for the period 2000-2015, although it should be noted that the species is difficult to distinguish from the commoner Red-tailed bumblebee *B. lapidarius* and is thus likely to be considerably under-recorded. The Written Statement reports that two of these Red-shanked Carder records were from the vicinity of the proposed route during CCW surveying during 2010. However, the Results section of the survey report (page 9) states:

*“Neither the moss carder bee *B.muscorum* nor the red-shanked carder bee *B.ruderarius* was recorded.”*

7. The species was recorded during the 2009 survey. The plan at Figure 5 of the RSPB Written Statement indicates that the records of red-shanked carder bee are on the boundary of the Gwent Levels Whitson SSSI and Redwick and Llandeenny SSSI, some 500m south of the line of the proposed new section of motorway.
8. Given the limited occurrence of red-shanked carder bee, and particularly moss carder bee, in the vicinity of the M4CaN, no specific attention was given to these species in the ES. However, to the extent that they may be present, then they would benefit from the mitigation which would be delivered within the SSSI mitigation areas, and also the provision of extensive areas of species-rich grassland.

2.2.3. Response to **Point 33** (Considers that the Shrill Carder Bee is the rarest species both nationwide and within Wales, as well as the bumblebee species most at risk from this planning proposal.)

1. We agree that the Shrill carder bee is the most important bee species in the context of the proposed new section of motorway, not least because it is a feature of the Gwent Levels SSSIs. The March 2016 ES thus considers this species in its own right. The other species are considered as part of the overall assemblage of terrestrial invertebrates.

2.2.4. Response to **Point 34** (Considers that the landscape-wide metapopulation nature of bumblebees' population structure means that preservation of any one of the SSSIs would not be enough to secure the conservation of the Shrill Carder. The SSSIs, while playing a central role, are only part of the story in the wider context of the Shrill Carder's Gwent range, and areas outside the SSSI boundaries must be considered as functionally linked to the SSSI populations. Loss or severance of any part of this existing range is likely to negatively impact the survival of the population, and thus the survival of the species in the UK. The positioning of the M4 Black Route is such that it is likely to divide the existing large population into three smaller, less-viable populations: west of the River Usk (37% of the current population by number of sightings); East of the Usk and south of the new M4 (53%); and east of the Usk and north of the new M4 (10%).)

1. The March 2016 ES concludes (Paragraph 10.12.602) that the magnitude of the impacts of land take on shrill carder bee, taking into account the mitigation comprising the habitat creation included in the Environmental Masterplans (Figure 2.6), the improvements included in the SSSI Mitigation Strategy (Appendix 10.35) and the sympathetic restoration of the construction sites at Great Pencarn, Newport Docks and Tata Steel, would be Moderate Adverse and the significance Moderate or Large in the medium term. In the long term, as the new and replacement habitats develop, the magnitude of impacts would be Minor Adverse and the significance of effects Slight or Moderate. In EIA terms, taking a precautionary approach, the effects would be significant in the medium and long term.
  2. The March 2016 ES also concludes (paragraph 10.12.63) that for shrill carder bee, the magnitude of impacts of the construction works resulting in additional habitat loss, taking into account the sympathetic restoration of the construction areas in Newport Docks and Tata Steel on completion of the works, is assessed as Moderate Adverse and the significance of effects Moderate or Large in the medium term and the magnitude of impacts Minor Adverse and the significance of effects Slight or Moderate in the long term. Taking a precautionary approach these effects are significant in EIA terms.
  3. The RSPB conclude that some 10% of the shrill carder bee population at the eastern end of the scheme should be seen in the context that much of this population is already to the north of the A4810. The remaining population is at Tatton Farm. This will form one of the SSSI Mitigation areas.
  4. However, it is acknowledged that there would be loss of habitat through severance of the Levels from former industrial land used by the bees, and hence the conclusion of significant adverse effects.
- 2.2.5. Response to **Point 35** (States that plant species which are particularly important to bumblebees include red bartsia *Odontites vernus*, red clover *Trifolium pratense*, creeping thistle *Cirsium arvense*, common bird's-foot trefoil *Lotus corniculatus*, common knapweed *Centaurea nigra* and viper's bugloss *Echium vulgare*. On the Gwent Levels, CCW/NRW surveys have

recorded Shril Carders collecting pollen and/or nectar from 26 plant species, especially narrow-leaved everlasting-pea *Lathyrus sylvestris*, common knapweed *Centaurea nigra*, tufted vetch *Vicia cracca*, red clover *Trifolium pratense*, common bird's-foot-trefoil *Lotus corniculatus* and sunflower *Helianthus annuus*. None of these plants are particularly difficult to grow, but several are not common components of meadow seed mixes and would need to be added specifically. Others do better with particular planting regimes, such as scarification or co-seeding with yellow rattle (*Rhinanthus minor*), which parasitizes grasses and reduces their vigour, allowing wild flowers to flourish.

1. In developing the detailed specification of the seed mixtures to be used, advice would be sought from Bumblebee Conservation Trust.

2.2.6. Response to **Point 36** (Considers connectivity can be enhanced by favourable management of reens, ditches, road verges, and field margins, creating a flower-rich network linking larger habitat patches together. Favourable management in this sense is that which ensures an abundance of flowers which the bees are known to use.)

1. The M4CaN team recognises the importance of habitat connectivity. The species-rich grassland which would be provided along the south-facing banks of the new section of motorway would provide a valuable corridor for bees through the Gwent Levels, as would the new reens and ditches with their associated banks, which would be provided along the north and south of the new road.

2.2.7. Response to **Point 37** (Considers that the timing and methodology of the environmental survey work commissioned to date leaves much to be desired. In particular, the survey was not done over a long enough period, and there was no repeat surveying of areas. Invertebrate survey guidance states that several visits should be undertaken between March and October in order to capture the full diversity of such areas. In this case, surveys were only carried out between July and September, completely neglecting the invertebrates of spring, autumn, and early summer.)

1. The limitations of the 2015 terrestrial invertebrate surveys are recognised at paragraph 10.3.184 of the March 2016 ES. This states that the late start (July) of the surveys of land within Newport Docks and Tata Steel

due to delays in obtaining access meant that potentially important invertebrates with flight periods between April and June will have been missed. Weather conditions were unreliable, and somewhat variable, and to some degree affected these surveys and the bee survey of the Gwent Levels. Notwithstanding these limitations, I consider that the combination of desk study, general terrestrial invertebrate surveys across the Levels and elsewhere, and specific bumblebee surveys on the Levels, all of which were scoped with NRW, is certainly sufficient to establish the value of the sites surveyed for invertebrates for the purposes of the EIA. Furthermore, the mitigation proposals (which we hope will be finalised in conjunction with NRW, GWT, RSPB and the Bumblebee Conservation Trust) have been developed with a wide variety of invertebrates in mind, specifically to benefit biodiversity more broadly and not just bumblebees.

2.2.8. Response to **Point 38** (Considers that both the environmental survey and the scoping report (desk study) appear to be unaware of the Shrill Carder surveys of the area commissioned by CCW in 2009, 2010 and 2012. Although a CCW summary of the Gwent Levels status of the species is included as Appendix 10.3, this dates from 2010 and only includes the 2009 survey (Magor & Undy and Whitson SSSIs). Possibly related to this, the M4CaN paperwork completely misses the presence of a Section 7 bumblebee with very few recent Welsh records (*B. ruderarius*) on both the Whitson and Redwick & Llandevenny SSSIs.)

1. Paragraph 4.6.10 of the September 2016 ES Supplement explains that NRW provided the following reports of surveys of the Gwent Levels for Shrill carder bee.
  - The Status of the Shrill Carder Bee *Bombus sylvarum* on the Gwent Levels. CCW Contract Science Report No. 623 (Pavett, P. M., 2004).
  - The Status and Distribution of the Shrill Carder Bee *Bombus sylvarum* on the Eastern Gwent Levels and within the Caerwent and Caldicot areas of Gwent in 2010. CCW Contract Science No 972 (Smith, M. N., 2011).
  - The distribution of the shrill carder bee *Bombus sylvarum* on the Gwent Levels, 1998 to 2010 (Howe, M., 2012).

2. The assessment has therefore been based upon not only extensive invertebrate and specific bumblebee survey work but also a significant amount of background information. Whilst the RSPB have helpfully provided the further reports by Smith (2010 and 2013) (see Point 32 above), these provide useful additional context (though the information is older than the survey work carried out for the Scheme) but do not make a significant difference regarding the assessment nor the mitigation proposals.

2.2.9. Response to **Point 39** (Considers that the combination of limited surveying and missing of existing survey reports means that it is impossible to have confidence in the conclusions reached. Considers that the potential for harming the Gwent Levels Shrill Carder population – a nationally-important area for a nationally rare species - has been considerably underestimated.)

1. The presence of shrill carder bee has been fully recognised though the ES process. The population has been assessed as being of National importance and the effects of the Scheme on this population as being significant (see Point 34 above.). As discussed above (see Points 37 and 38), I consider that the combination of desk study, terrestrial invertebrate surveys, targeted bee surveys and previous CCW reports is indeed sufficient to make this assessment. Notwithstanding this, a precautionary approach to the assessment has been made.

2.2.10. Response to **Point 40** (States that the SSSI sites are primarily designated for the Shrill Carder and the ree and ditch habitat which supports the bee and many other rare invertebrate species. The M4CaN plan proposes essentially 1:1 like-for-like replacement by length for the 2755 metres of ree and 9373m of ditch destroyed by construction of the road (2657m and 9771m respectively), but this will not solve the loss of connectivity across the route of the road. Even where the reens and ditches remain connected beneath the road, they will not be on the surface and so the vegetation, which is the value of the network for Shrill Carder, will be permanently lost.)

1. The assessment in the ES recognises that there will be loss of habitat for shrill carder bee due to the presence of the new section of motorway and hence the assessment of significant long-term effects, in spite of the extensive provision of species-rich grassland and improved habitat in the

SSSI mitigation areas. This takes into account the adverse effects on connectivity, as it is accepted that the lack of vegetation within culverts will make it less likely that shrill carder bees will cross the motorway. However, this does not mean that bees will not be able to cross the road at all, and I do not accept that the populations north and south of the road will be completely isolated from one another. The recreation of ditch-side habitat along new reens, the sowing of wildflower mixes on the south-facing verges, the creation of species-rich grasslands within the SSSI Mitigation Areas and the ability of bees to cross the road (albeit less frequently and less safely) and thus maintain genetic interchange will very significantly offset the adverse effects of the road and ensure that this SSSI feature is maintained.

2.2.11. Response to **Point 41** (Considers that loss of habitat at Newport Docks will also make it more likely that the Shrill Carder population epicentres east and west of the River Usk would be severed from each other, a risk exacerbated by both the new road and the new access road to Docks Way. While the river poses a barrier at the moment comparable in width to the proposed new road, the effect is minimal in comparison because of a lack of barriers along the edges (eg motorway escarpments), and the lack of the air turbulence and roadkill risk posed by several thousand vehicles per day passing at high speed.)

1. We do not agree that the presence of the elevated section of motorway and new bridge across Newport docks and the River Usk will result in any significant increase in any barrier effect of the River Usk corridor to movement of Shrill Carder bee. Bees will be able to fly beneath the road and the approach viaducts and areas of open ground will remain within the docks.

2.2.12. Response to **Point 42** (Considers that, while it is claimed that the construction sites at Great Pencarn, Newport Docks and Tata Steel would be restored post-construction, this would still result in a four- or five-year period when the areas were unsuitable for the bumblebee, reducing the available foraging area before the compensation areas are created. As bumblebees have an annual lifecycle, this means that populations would be unable to use the area for 4-5 generations, causing the population to shrink just at the time it is most

vital that populations are expanded to minimise the harm done by dividing them with the new road.)

1. The ES acknowledges that the additional land take during the construction period would have significant adverse effects on Shrilc carder bee. Nevertheless, sufficiently large areas of suitable habitat at Great Pencarn, Newport Docks and Tata Steel will be retained during construction and post-construction to maintain bee populations.

2.2.13. Response to **Point 43** (Considers that the new motorway (and other large roads built as part of the development) are likely to represent significant barriers to the Shrilc Carder and other bumblebee species. Bumblebees are known to treat transport links such as roads and railways as barriers in the landscape, and rarely cross them. Tall hedges and lines of trees are also known to be significant barriers to flying insects although they can also provide foraging and nesting resources. This, combined with the removal (or forcing underground) of ditches and reens across the new route of the motorway and the addition of screening banks and trees on either side of the road footprint, make it highly likely that the development will present a near-impenetrable barrier to bumblebee. This is contrary to the overly-optimistic judgement of the M4CaN Statement of Case Part 2 & 3 that the road “would not be likely to prevent exchange of individuals between sites”.)

1. We agree that the new section of motorway would represent a barrier to the movement of bumblebees and would reduce the extent to which bumblebees move across the line of the road. However, we consider that there would still be occasional movements across the road and thus the exchange of individuals.

2.2.14. Response to **Point 44** (Considers that the populations south of the road which make up 37% (west of the Usk) and 53% (east of the Usk) of the post-2000 population are more viable, though their prospects would be greatly enhanced if they were to remain connected (encompassing 90% of the current population). However, any proposal to wilfully reduce the size of one of just five remaining British populations of our most endangered bumblebee is taking an unnecessary and unjustified risk with the future of the species in our country.)

1. It is not the case that the Welsh Government is setting out to “wilfully reduce” the size of the Shril Carder bee population. The species-rich grassland along the south facing verges and embankments of the new road has been specified primarily for reasons of invertebrate conservation. Similarly, the SSSI mitigation areas, with the increase in the area of grassland, and the ecological enhancement of existing grassland, would also benefit bumblebees.
2. To the extent that there would be adverse effects on this species, this is regrettable but the Welsh Government has sought to maintain and enhance biodiversity insofar as that is consistent with the proper exercise of its functions regarding the motorway network.

2.2.15. Response to **Point 45** (Considers that one of the main reasons that bumblebees such as the Shril Carder are thought to have become rare is that they exhibit preferences for flowers such as those of family Fabaceae, many of which are predominantly found in comparatively low-nutrient-input areas such as hay meadows. A diffuse impact of the relocation of the motorway will be the greatly increased emission of nitrogenous exhaust fumes through the Gwent Levels. Nutrient fertilisation from road traffic emissions on even small roads is known to change the species composition of vegetation assemblages up to hundreds of metres from the road footprint itself. The change is towards more-nitrogen-tolerant species such as coarse grasses and away from less-nitrogen-tolerant species such as the preferred forage plants of the Shril Carder and other rare species. This will produce a zone of degraded habitat of little to no use for bumblebees on either side of the new road, as well as widening the effective barrier width of the new motorway and increasing the severance effect of the project.)

1. The effects of the new section of motorway on habitats in the vicinity of the new section of motorway are assessed in section 10.6 of Chapter 10 of the March 2016 ES. This concludes, based on the air quality monitoring carried out for the Scheme, that with respect to nitrogen deposition, the critical loads of none of the habitats present along the corridor of the new section of motorway would be exceeded and there would be no significant effects. Whilst it is possible that some changes in nutrient status could occur near to the road, potentially reducing the flower resource available to the bumblebees, this will be offset by the

very extensive creation of additional flower-rich habitat, as discussed above (see Point 40).

2.2.16. Response to **Point 46** (Notes that the construction sites at Great Pencarn, Newport Docks and Tata Steel will be restored “as far as practicable” to mosaic habitat including “areas with food plant species of value to shrill carder bee”. Considers that this restoration is to be welcomed, as brownfield mosaic habitats are a major habitat for Shrill Carder, but does not address the loss of habitat during the construction phase. There must also be clarity on which particular ‘food plant species of value to the Shrill Carder’ will be used. This must be added to the mitigation strategy.)

1. We are pleased that the restoration of the construction sites is welcomed and accept that there will be loss of habitat during the construction period.
2. Advice will be sought from Bumblebee Conservation Trust regarding seed mixes to be used in restoration.

2.2.17. Response to **Point 47** (States that reens and ditches would be restored at an approximately 1:1 ratio with those destroyed (2568 metres of reen lost, 2657m recreated and 9136m of ditch lost, 9771m recreated<sup>67</sup>). Considers that it is not clear whether reens and ditches converted to culverts would be regarded as lost in this scenario. Considers that, although the waterbody remains in place and connected, the littoral vegetation which provides value for the Shrill carder and other bumblebee species would be lost and thus these culverted sections should be regarded as lost as far as bumblebees are concerned. Considers that the littoral vegetation of reconstructed reens and ditches should consist of a varied structure of open flower-rich areas interspersed with shelter belts of scrub and trees.)

1. We confirm that reens and ditches which would be culverted are included in the measurement of loss.
2. The banks of the reens and ditches would be managed as part of the Gwent Levels SSSIs.

2.2.18. Response to **Point 48** (Considers that the 1:1 habitat replacement ratio is too low for a site of this quality. Habitat compensation for this project should attempt not just to replace the habitat destroyed by the project, but also repair the damage inflicted by the severance effect of the road, fragmenting a large

healthy population into two smaller, less-viable populations. Therefore compensation for bumblebees should take place on both sides of the proposed route, not just in the south with the largest remaining population. On both sides of the new road, enough suitable habitat should be provided that each population is able to remain stable at the very least. This will require much more than the approximately 1:1 reed & ditch replacement ratio, and the approximately 1:3 recreated:destroyed ratio for grassland. In particular this is because suitable compensation must be provided on both sides of the new road, where the nationally-important bumblebee populations will be divided at least into two):

1. As explained at paragraph 7.3.63 of Keith Jones' Proof of Evidence (WG 1.18.1), the reason that the ratio of new to existing is not greater is because NRW were concerned that the original proposals could have had adverse effects on the hydrology of the levels. With regard to the SSSI Mitigation Areas, the ratios for arable reversion and grassland enhancement were both agreed with NRW, and will see a very significant increase in the amount of flower-rich habitat for bumblebees.
2. The proposed Tatton Farm SSSI Mitigation Area is to the north of the line of the proposed new section of motorway, and will therefore serve to mitigate for any impacts to the bee populations north of the proposed motorway (and thus offset some of the severance issues).

2.2.19. Response to **Point 49** (Considers that the three "mitigation" areas are of reasonable size (Tatton Farm 17ha, Maerdy Farm 24ha, Caldicot Moor 113ha) but it is unclear how much of each would be used in compensation in general, let alone to provide Shril Carder habitat ("the actual extent of land within these areas which would be required to provide compensation is to be agreed with NRW."). This will clearly have a major impact on the overall suitability (or not) of the compensation scheme, although the placement of the compensation areas means that the population remnant north of the proposed road and east of the Usk will not be helped however much of the three sites is used for compensation. All three new sites are south of the proposed M4 route: although this population will be reduced in size and will require support, the 10% of the population north of the proposed route is by far the most likely to be forced to extinction. The existing "mitigation" proposals do not even attempt to address this, and support for this northern population beyond

reversion of the Tata Steel construction site to mosaic habitat is imperative to include within the compensation scheme. A starting point might be the temporary compensation of the 'temporary' construction land take at the time when the land is unavailable for bumblebees, rather than afterwards once the road is finished and the construction sites are reverted to open mosaic habitats.)

1. The proposed extent of the land which would be used was set out in the SSSI Mitigation Strategy at Appendix SR10.35 of the December 2016 ESS, up-dated by the SSSI Mitigation Strategy submitted on 10<sup>th</sup> May 2017 to the Inquiry, as PID-049.
2. As discussed under point 48, the Tatton Farm SSSI Mitigation Area is north of the proposed new section of motorway and will therefore provide significant benefit to the population north of the motorway. As discussed above, the intention is that the detail of the mitigation proposals will be finalised in conjunction with NRW, GWT, RSPB and the Bumblebee Conservation Trust).

2.2.20. Response to **Point 50** (States that a specimen of the Shrill Carder was seen at Caldicot Moor during CCW surveys in 2009, so the species clearly uses the area although breeding at the site is not proven. Focused planting and management work has the potential to significantly increase the size of the Shrill Carder population on the eastern end of the Gwent Levels, and increase connectivity with the small population around Portskewett. The species currently appears to have a smaller population at the eastern end than it does in the west, so this work would stand a reasonable chance of undoing some of the damage these works would do to one of the best populations of Britain's most threatened bumblebee species.)

1. The acknowledgement of the potential value of the Caldicot Moor SSSI mitigation area is welcomed. We anticipate that the arable reversion and grassland enhancement at this site, as well as the creation of reens with species-rich bankside habitat, will significantly increase the value of the eastern end of the Scheme for Shrill Carder bee.

2.2.21. Response to **Point 51** (Considers that, when the compensation proposals are produced in detail, it is essential that flower-rich areas of compensation should be connected to existing Shrill Carder populations as far as is

possible. The landscape must be made permeable to bumblebees by the provision of flower-rich corridors along reens, ditches, field edges and transport pathways such as road verges. This will ensure the population remains as unfragmented as possible on each side of the new road.)

1. The M4CaN Scheme can only directly control management of habitats associated with the new section of motorway and the SSSI mitigation areas. This will include the creation and long-term management of flower-rich grassland habitat on the south-facing verge of the M4CaN, the SSSI Mitigation Areas, the bankside habitat of the new reens and ditches and the reinstated temporary construction areas (e.g. at Great Pencarn, Tata Steel and Newport Docks). It is also likely to be the case that the woodland edge habitat alongside the new proposed woodland planting areas across the scheme, and its interface with the neighbouring land use, will provide foraging opportunities to bumblebees. The permeability of the wider landscape to bumblebees will presumably be one of the aims of the Living Levels Project in which Bumblebee Conservation is a participant. Some of the proposed 'opening up' of scrubby woodland areas (at either end of the Scheme and on land at Tata) to enhance this habitat for dormice is also likely to have some beneficial effect for bumblebees, as the aim is to increase the provision of flowers (and ultimately fruit).

2.2.22. Response to **Point 52** (Considers that the suggested seed mix for the Mitigation Strategy's conversion of land to species-rich grassland for the Shrill carder looks to be a broadly appropriate starting point, but should also include yellow rattle and red bartsia. Both these plant species are hemi-parasitic on grasses, reducing their vigour and allowing flower species to establish. This will be particularly important on the agriculturally-improved farmland of the proposed compensation areas, as they will help reduce the competitive advantage enjoyed by grasses in enriched soils. Both species are also good forage plants for bumblebees, particularly red bartsia which is a favourite of the Shrill carder. Overall, it is important that the compensation seed mix includes a range of flower species which provide a succession of forage resources to bumblebees between at least May and September, the main flight period of the Shrill carder, in South Wales.)

1. As discussed above, advice from Bumblebee Conservation Trust would be sought regarding the specification of these seed mixes. This would certainly include this advice regarding yellow rattle and red bartsia, but would also be likely to comprise more detailed site- and habitat-specific advice.

2.2.23. Response to **Point 53** (Considers that it is unclear how the grassland compensation areas are to be managed, particularly in the long term, but best results are likely to come from the sympathetic management of flower-rich swards within pasture land. This lack of clarity makes it impossible to have confidence in even the best-case scenario which could be construed from these vague compensation proposals. Even in a best-case scenario (which would be all three proposed “mitigation” areas devoted to bumblebees in their entirety, reens and ditches restored), the site management (mowing regime, seeding mixture, timing & ground treatment, etc) is essential to make the areas actually suitable for bumblebees. The Shrill carder is a particularly late-flying bumblebee species and the mowing/grazing regime must reflect this, with flowers remaining available until queen bumblebees have begun hibernation in late September. At a minimum, NRW and the Bumblebee Conservation Trust should be consulted over the establishment and management strategies and the compensation land locked into long-term management goals.)

1. As explained at paragraph 5.5.2 WG 1.18.1, the Contractor would be responsible for implementing the Environmental, Landscape and Ecology Aftercare Plan (see March 2016 ES (Doc 2.3.2) Section 18.8) and this would include monitoring the performance of the completed Environmental Design for the duration of the Aftercare Period (5 years from completion of construction). The environmental performance of the project would be monitored against the commitments, objectives and targets identified in the Environmental Management System and more specifically, the Register of Environmental Commitments (updated in Appendix SR18.1 of the December 2016 ES Supplement (Doc 2.4.14)), which would include the mitigation requirements as set out in the AIES, ES, licences/consents and other documentation. These requirements include the various bumblebee-related mitigation measures discussed above.

2. Following the 5-year aftercare period, responsibility for the management and maintenance of the Scheme's soft estate, including all elements of the environmental design and mitigation, would revert to Welsh Government. In common with other strategic highways that are the responsibility of the Welsh Government, a specification for that ongoing management and maintenance would be produced at that time. It would incorporate measures to address ongoing commitments made previously with respect to the Scheme.
3. The requirements for Shrill carder bee, as a feature of the Gwent Levels SSSI, will be considered in the detailed management specifications, and this would include the incorporation of late-flowering species into the mix. NRW, GWT, RSPB and the Bumblebee Conservation Trust would be consulted on the details, as discussed above.

2.2.24. Response to **Point 54** (Considers that for the compensation strategy to effectively compensate for the loss and fragmentation of habitat and Shrill carder populations, it is important that the fine-scale microhabitat of the lost habitat is replicated in the replacement areas. For bumblebees, this is particularly important with nesting habitat as there is little data on the nesting preferences of rare bumblebee species such as the Shrill Carder.)

1. It will not be possible to exactly replicate the fine-scale micro-habitats of the areas which would be lost. However, it will be possible to create a very similar mix of micro-habitats (on the basis of a detailed bumblebee habitat assessment) and further advice would be sought specifically from the Bumblebee Conservation Trust on the provision of nesting sites for bumblebees.

2.2.25. I confirm that the statement of truth and professional obligations to the inquiry from my main proof still applies.

### **2.3. John Davies (Sustainable Development)**

2.3.1. Response to **Points 2, 4, 5, 14 and 56 (Letter of 26 May 2017)** (The legal duties of the WG in relation to biodiversity and sustainable development), (the scale of the M4CaN proposal and its significant impacts on the environment, including biodiversity, clearly signal that it is not compatible with the purpose and spirit of the Well-being of Future Generations Act 2015), (the Sustainable Development Report is not based on the most up to date version of the

principles as articulated in the Well-being of Future Generations Act 2015 and therefore the conclusion that the scheme represents sustainable development is not totally founded or based on up to date legislation), (The scheme does not align with the duties placed upon Welsh Government in the Environment (Wales) Act 2016, to secure resilient ecosystems), (The letter to the Cabinet Secretary for Economy and Infrastructure dated 26 May 2017 from the RSPB and the Gwent Wildlife Trust (the RSPB/GWT letter), which also raises concerns regarding the interpretation of the Welsh Government's duties under the Wildlife and Countryside Act 1981, the Well-being of Future Generations Act (Wales) Act 2015 and the Environment (Wales) Act 2016):

1. The duties of the Welsh Government in relation to biodiversity and sustainable development are contained in the Wildlife and Countryside Act 1981, Section 28G (the WCA); the Well-being of Future Generations (Wales) Act 2015, Section 3(1) (the WFGA); and Part 1 of the Environment (Wales) Act 2016.
2. Beginning with the WCA, section 28G(2) states as follows:  
  
*The duty is to take reasonable steps, consistent with the proper exercise of the authority's functions, to further the conservation and enhancement of the flora, fauna or geological or physiographical features by reason of which the site is of special scientific interest.*
3. The RSPB argues that because the published Scheme would cause loss of land and severance of the SSSIs "*this would be directly contrary to fulfilling the duty to conserve and enhance these sites*". This illustrates the error in the RSPB's argument, since the duty is not simply to 'conserve and enhance' but to "*take reasonable steps, consistent with the proper exercise of the authority's functions*" to further conservation and enhancement. By selectively quoting Section 28G of the WCA the RSPB first, misinterprets and second, misapplies the duty since loss of land or other impact on the SSSIs does not simply equate to a breach of the legislative requirements.
4. There is nothing new in this interpretation, which was confirmed in the judicial review *R (Friends of the Earth England, Wales and Northern*

*Ireland Limited) v Welsh Ministers [CO/4433/2014]*<sup>1</sup>. The Claimant submitted that the Welsh Government

*“failed properly to understand the nature of its duty under s.28G, which gave the protection and preservation of SSSIs enhanced weight in the decision-making process, such that there is a presumption against any plan that would lead to harm to such sites”.*

5. The Judge rejected this contention as unarguable, stating that Section 28G

*“does not impose a general duty on the decision-maker to have some particular regard to the desirability of protecting and preserving SSSIs; it imposes an entirely different type of obligation, namely a duty to ‘take reasonable steps ... to further the conservation and enhancement of the flora, fauna or geological or physiological features by reason of which the site is of special scientific interest’”.*

6. The Judge accepted that the process leading to the Welsh Government’s decision to adopt the Plan was focussed on the potential harm to the Gwent Levels SSSIs and the mitigation of that harm. The route had been chosen to minimise impact on the SSSIs and a comprehensive mitigation strategy was being developed. The design of both the Scheme and the accompanying mitigation strategy has continued to evolve, in consultation with NRW, culminating in a wide measure of agreement on the substantive issues. The Welsh Government has hence taken the ‘reasonable steps’ to further the conservation and enhancement of the features of the SSSIs throughout the process, as required by its duties under the WCA.

7. Turning next to the EWA, section 6 states:

*(1) A public authority must seek to maintain and enhance biodiversity in the exercise of functions in relation to Wales, and in so doing promote the resilience of ecosystems, so far as consistent with the proper exercise of those functions.*

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<sup>1</sup> Doc 4.5.45

*(2) In complying with subsection (1), a public authority must take account of the resilience of ecosystems, in particular the following aspects—*

- (a) diversity between and within ecosystems;*
- (b) the connections between and within ecosystems;*
- (c) the scale of ecosystems;*
- (d) the condition of ecosystems (including their structure and functioning);*
- (e) the adaptability of ecosystems.*

8. EWA Section 6(1) does not create an absolute duty. It requires the authority to 'seek' to maintain and enhance biodiversity in the exercise of its functions and promote the resilience of ecosystems "so far as consistent with the proper exercise of those functions". In this instance, the Welsh Government has to have regard to the duty under EWA Section 6(1) so far as that is consistent with its functions and responsibilities for the safe and efficient operation of the motorway network and for the Welsh economy. Section 6(2) requires certain matters to be taken into account and has to be interpreted in the light of Section 6(1), but makes no reference to absence of harm or enhancement.
9. EWA Section 1 defines the purpose of Part 1 of the Act as "to promote sustainable management of natural resources" and by virtue of Section 2 these include "animals, plants and other organisms; air, water and soil, minerals; geological features and processes; physiographical features; and climatic features and processes". The sustainable management of natural resources is linked by Section 3(2) to the objective of maintaining and enhancing the resilience of ecosystems so as to achieve sustainable development and contribute to the well-being goals of the WFGA, which is dealt with later.
10. With regard to "natural resources" as defined in the EWA, air quality overall would be improved. Water quality and quantity in the SSSIs would be maintained and quality improved because currently unmanaged ditches would be brought under management. The drainage system for

the new section of motorway would improve existing highway drainage within the Gwent Levels by providing attenuation lagoons on side roads that would cross the new section of motorway. The SSSI mitigation areas would enable new reens and ditches to be created, with managed grazing marsh and species-rich grassland. The mitigation areas have the potential to enhance biodiversity as they replace areas within the SSSI that are in poor condition. In addition, areas of land contamination would be remediated, with soil treated and utilised where possible in road construction, thus removing contamination and minimising the need for new construction material. Finally, landscape planting across the scheme will significantly increase the amount of woodland habitat in the area in the longer term.

11. The mitigation measures prepared by the Welsh Government in consultation with and agreed by NRW are therefore in line with the principles of sustainable management of natural resources. They have been designed to maintain and enhance biodiversity and to promote the resilience of ecosystems as far as possible and to the extent that this is consistent with the Welsh Government's functions in respect of the motorway network and the Welsh economy, as required by its duties under the EWA.
12. Turning then to the WFGA, section 2 defines sustainable development as *“the process of improving the economic, social, environmental and cultural well-being of Wales by taking action, in accordance with the sustainable development principle (see section 5), aimed at achieving the well-being goals (see section 4)”*.
13. Section 3 sets out the well-being duty, which requires each public body to carry out sustainable development and must include setting and publishing objectives. By virtue of Section 6, ‘public body’ includes Welsh Ministers. The Welsh Government published its well-being objectives on 4 November 2016, alongside its 5-year programme for Government, *Taking Wales Forward 2016-2021*. Included in the ‘United and Connected’ strategy of the programme for government is the delivery of an M4 relief road.

14. The 7 well-being goals are defined in Section 4 of the WFGA. Section 5 defines the sustainable development principle, stating

*“any reference to a public body doing something “in accordance with the sustainable development principle” means that the body must act in a manner which seeks to ensure that the needs of the present are met without compromising the ability of future generations to meet their own needs.”*
15. The Act hence recognises that development must take place in the present day to satisfy the needs of today’s society, but that the form of that development should not preclude choices for future generations. The RSPB/GWT letter maintains that the only notion of balancing in the WFGA relates to short and long-term needs. This is again an over simplification. It is clear from the Act’s definition of *“sustainable development”* that the required actions involve weighing and balancing different considerations. Whilst Section 2 of the WFGA refers to the economic, social, environmental and cultural well-being of Wales, whether actions taken accord with the definition of sustainable development and achieve the 7 well-being goals in Section 4 will involve judgements, since all actions cannot reasonably be expected to contribute equally to all 4 elements of well-being or all 7 well-being goals. Informed, balanced judgments will be needed to decide on preferred actions taking account of the sustainable development principle and the well-being goals, some of which are, potentially, in tension.
16. A decision regarding a major item of infrastructure such as the Scheme will require the consideration and balancing of a wide range of effects across the economic, social, environmental and cultural spheres. Whilst the WFGA requires new processes and gives statutory expression to the concept of *“sustainable development”*, it does not prescribe answers or outcomes. It does not say that the environment must always outweigh economic, social or cultural considerations but requires a balance to be struck across all elements of well-being and all considerations. The Welsh Government’s evidence demonstrates that the balance of advantage lies with the Scheme. The objectors may disagree with that judgement but the Act does not prevent the Minister from reaching such a conclusion.

17. The RSPB/GWT letter states that the sustainable development principle requires the integration of social, environmental and economic factors but the WFGA must not be applied selectively. Section 5 of the Act lists other matters in addition to integration that must be taken into account, although even this list cannot be exhaustive. In my view, it is implicit in the description of the matters to be taken into account in Sections 5(2)(a)-(e) that judgement will be required in their application.
18. The RSPB/GWT letter of 26 May outlines concern that the notion of balancing considerations may be used as a reason why the Welsh Ministers may opt to do less for biodiversity under the WCA Section 28G duty. However, as explained above, the Section 28G duty and the duty under Section 6(1) of the EWA require the Welsh Ministers to balance the conservation and enhancement of biodiversity with the requirements of their other functions and responsibilities. I have also explained how that balance has been struck in choosing the route, designing the Scheme, seeking to maintain and enhance the resilience of ecosystems wherever possible, and preparing comprehensive mitigation measures accordingly in conjunction and in agreement with NRW.
19. The RSPB evidence and the joint letter with the GWT refer to the Welsh Government's planning policies set out in Planning Policy Wales (PPW) and in Technical Advice Note 5 (TAN5). The first point is that PPW has been updated specifically to reflect the requirements of the WFGA. However, there is no suggestion that, in applying the sustainable development policies in the updated PPW, the long-accepted approach, set out in the Planning Acts and in case law, of weighing all considerations to make a balanced judgement, has been altered by the new Act or any of its duties. I acknowledge where there is conflict with national planning policies in my proof of evidence, and balance that conflict with all other considerations to reach the conclusion that the benefits the Scheme would bring provide a compelling case in its favour that outweighs the cumulative policy conflicts. Nothing in the WFGA or the other Acts referred to by the RSPB and GWT changes the correct approach to planning policy, which I have followed.
20. The RSPB/GWT letter suggests that the Scheme is contrary to the sustainable development principle, since it addresses congestion, which

they see as a short-term need, and in so doing puts the health of ecosystems at risk over the long term. This is incorrect, and the Welsh Government's evidence demonstrates conclusively that the congestion associated with the M4 around Newport, which the Scheme addresses, is a longstanding problem that is projected to get worse if not tackled. The Scheme will hence provide a long-term solution to long-term needs, and is the only satisfactory solution to have emerged from years of careful analysis.

21. The RSPB in its evidence criticises the Sustainable Development Report published as an Appendix to the March 2016 Environmental Statement. However, I have reviewed the development of the Plan for the M4 Corridor around Newport and the Scheme for its delivery, and found it to be entirely in line with the principles of sustainable development as now set out in the WFGA. The RSPB/GWT letter refers to the "spirit" of the WFGA, but legislation must be interpreted as it is written. The WFGA contains new provisions that require a particular approach to decision-making, but the wording of the Act is not ambiguous and does not require any other source to aid interpretation.
22. The RSPB/GWT letter expresses the view that NRW has properly discharged its functions as the Welsh Government's statutory adviser on nature conservation, but that their views are being undermined by being treated as not fully evidenced. The Welsh Government has given the views of NRW the fullest consideration and has worked closely with them to overcome their concerns. This is demonstrated by the proportion of the Register of Commitments that specifically addresses the concerns raised by NRW, and the number and wide-ranging extent of the Statements of Common Ground agreed by NRW and the Welsh Government. Agreement has been reached on the great majority of issues raised initially by NRW so that they are left with only a few outstanding concerns. However, it is necessary when considering the question of long term detriment to make an accurate assessment based on evidence. The Welsh Government has employed expert witnesses to deal with these concerns and to demonstrate that they would be addressed and resolved by the mitigation measures proposed and covered by the commitments given. The WFGA requires this kind of

exercise so that informed judgments can be made, but they must be based on evidence and experienced professional judgement, rather than assertion.

23. The RSPB/GWT letter accepts that the new legal duties arising from the Welsh legislation do not act as an “*absolute prohibition on harm*” but appears to later take the opposite view by suggesting that the Welsh Government’s position as proponent of the Scheme is “*untenable*” because of the framework for sustainable development and biodiversity in Wales’ new legislation and policy. By accepting that the duties on the Welsh Government do not prohibit harm, the RSPB/GWT, by implication, accepts that a balanced judgement has to be made weighing-up sometimes competing considerations. There should therefore be no dispute that ecological and environmental interests do not necessarily outweigh all other considerations. Many objectors disagree with the way in which the Welsh Government has balanced these considerations, but that does not imply it has misapplied or incorrectly interpreted the law, or that its judgement is wrong or irrational. Following receipt of the Inspectors’ report, it will be for the Welsh Ministers to weigh the competing considerations in the light of all the material, including evidence of the extensive steps which the Welsh Government proposes to take to maintain and enhance biodiversity in general and SSSIs and protected species in particular.
24. The RSPB/GWT letter refers to my agreement at the inquiry that the Welsh Government ought to be an exemplar in the way it delivers against the new legal and policy framework. I went on to say that in my opinion that is precisely the way that the Welsh Government has acted. I consider that the detailed work of the ecological, water quality, contamination and engineering/construction teams, in consultation with NRW, to develop “reasonable steps” for the protection of the Gwent Levels SSSI features (as well as other natural resources, biodiversity and ecosystems) has been exemplary.
25. **Point 2** is also discussed by Jon Davies in section 2.2.

2.3.2. Response to **Point 57 (letter from RSPB dated 31 August 2017 – the implications of the Welsh Government’s new Natural Resources Policy published in August 2017).**

1. Section 9 of the Environment (Wales) Act 2016 imposes a duty on the Welsh Ministers to prepare, publish and implement a national natural resources policy. The first Natural Resources Policy (NRP) was published in August 2017. The new NRP sets out three key challenges and three national priorities and explains how these will be delivered in key policy areas; one of these is transport. The NRP states that through the Wales National Transport Strategy and Finance Plan the Welsh Government is promoting a more sustainable road transport network and a modal shift away from roads for people and freight. The RSPB letter questions how the Scheme fits into this modal shift away from roads and argues that in view of Wales’ new legislative requirements, which are reiterated in the NRP, the proposals for the new section of motorway should be withdrawn and the problem of congestion around Newport reconsidered to find truly sustainable solutions.
2. Dealing first with the argument that the published Scheme should be withdrawn, this is unrealistic and unjustified. It would achieve nothing other than to postpone action to solve the current problems on the M4 motorway around Newport, in direct contravention of the sustainable development principle, which requires action to be taken to prevent problems occurring or getting worse. The congestion problems on the motorway exist and will get worse unless action is taken urgently.
3. It is incorrect to suggest that either the Well-being of Future Generations (Wales) Act 2015 or the Environment (Wales) Act 2016 requires or implies that the published Scheme should be withdrawn. I have analysed the requirements and duties in these two Acts in section 2.3.1 above; neither Act requires the withdrawal nor reconsideration of existing projects commenced prior to these Acts coming into force.
4. Withdrawing the published Scheme in order to reconsider solutions to the congestion problems would be of no benefit since the various options were comprehensively assessed as part of the M4 Corridor Enhancement Measures Programme described in the evidence of Mr Matthew Jones

(WG 1.1.1). Over 100 possible measures were considered as part of this exercise including network improvements, travel planning, demand management and alternative modes of transport. As part of the evidence submitted to the inquiry further extensive analysis has been carried out of the impact of other measures, in particular the South Wales Metro. This evidence has demonstrated conclusively that the new section of motorway is the only option capable of addressing the motorway congestion around Newport in a satisfactory manner. Other measures, including the South Wales Metro, would reduce the pressure on the motorway network but would not resolve the existing congestion issues and can only be regarded as complementary to the published Scheme.

5. Turning to the Welsh Government's policy to secure a modal shift away from roads for people and freight, the National Transport Finance Plan 2015 (Doc 5.1.7) sets out the schemes the Welsh Government will deliver, across all the different areas of transport for which it is responsible, in order to meet its policy objectives set out in the National Transport Strategy *One Wales: Connecting the Nation* (Doc 6.1.3). Whilst these objectives include a modal shift, as explained in the NRP, this does not preclude new road schemes. Annex A of the Finance Plan 2015 sets out a schedule of schemes in two categories: those estimated to be delivered in the period up to March 2020 and those to be completed after April 2020. These schemes include new roads and road improvements; schemes to address freight movement; schemes involving ports; rail infrastructure schemes, including new lines and stations; the South Wales Metro; improved bus services and other public transport improvements. The need for a specific scheme to address the problems on the M4 motorway around Newport is recognised in the Finance Plan by scheme R8, described as "*Improvements to the M4 Corridor around Newport – a new section of motorway south of Newport and complementary measures including reclassification of the existing M4 between Magor and Castleton, an M48-B4245 link and cycling and walking friendly infrastructure*".
6. The Finance Plan 2015 therefore confirms that Welsh Government policy to move to a more sustainable road network and a modal shift away from roads for people and freight does not imply an embargo on the construction of new road infrastructure. Such a policy objective will not

be achieved in the short term and requires action across all areas of transport, as demonstrated by the Finance Plan 2015. In particular, where road congestion issues need to be addressed to ensure they do not get any worse, the sustainable development principle requires the Welsh Government to take action and it is for this reason that it is promoting the published Scheme. This is in accordance with scheme R8 of the Finance Plan and the Welsh Government's programme for government 2016-21, which states a commitment to deliver an M4 relief road. Whilst this does not imply that the published Scheme is the only one that could deliver the objectives of the programme for government, it does mean that it is Welsh Government policy to address the congestion problems around Newport by means of new highway infrastructure. Whilst the RSPB may therefore legitimately question the published Scheme in terms of its design and impact, it is wrong for them to argue that it is contrary to the Welsh Government's legislative duties since these have been taken into account in preparing its programme for government.

7. The RSPB letter refers to the Welsh Government's biodiversity duty under Section 6 of the Environment (Wales) Act 2016 but incorrectly paraphrases this duty. The NRP correctly explains that Section 6 of the Act requires public authorities to '**seek**' to maintain and enhance biodiversity and promote the resilience of ecosystems, as part of their business planning and day-to-day activities. The word I have emphasised, '**seek**', is omitted from the RSPB letter; this is important for the reasons I have explained in paragraphs 2.3.1(7-8) above. In addition, the relevance of the final phrase of Section 6(1), "*so far as consistent with the proper exercise of those functions*", also needs to be recognised. This requires the Welsh Ministers to balance their obligations in respect of biodiversity under Section 6(1) against their other responsibilities, specifically in this case for the safe and efficient operation of the motorway network and the Welsh economy. I have explained in paragraph 2.3.1(23) above how the duties on Welsh Ministers require them to make balanced judgements weighing-up sometimes competing considerations.
8. The RSPB letter also refers to the Welsh Government's commitment in the NRP to take action to, amongst other things, enhance the resilience of

our ecosystems and reverse the decline of biodiversity, and integrate nature based solutions into the planning and development of new transport related infrastructure. However, the RSPB fail to give any recognition to the efforts made by the Welsh Government to have regard to biodiversity in the design and development of the published Scheme.

9. In section 2.3.1 above and in my proof of evidence (WG 1.23.1) I summarise how the impact on the Gwent Levels and the avoidance and mitigation of that impact was central to the initial design of the Scheme and has been a major influence on its subsequent evolution. The highway drainage has been explicitly designed to protect the water environment on the Levels and would improve the existing highway drainage, as explained in section 2.3.1 above. The three areas created at Tatton Farm, Maerdy Farm and Caldicot Moor as part of the SSSI mitigation strategy have the potential to enhance biodiversity and include 5.9km of extra ditch habitat (see section 2.5 below – response of Dr Peter Ireland). New landscape planting would significantly increase the area of woodland habitat. The mitigation strategy, developed in close collaboration with NRW, is designed to maintain and enhance biodiversity and to promote the resilience of ecosystems to the maximum extent consistent with the Welsh Government’s other functions and responsibilities, in this case for the motorway network and the Welsh economy. Extensive evidence in this regard is given in the evidence of the Welsh Government’s expert witnesses and specifically in this response. On the basis of this evidence I am entirely satisfied that the Welsh Government has acted in accordance with its duties under the EWA 2016 and its Natural Resources Policy published under Section 9 of that Act.

- 2.3.3. I confirm that the statement of truth and professional obligations to the inquiry from my main proof still applies.

## **2.4. Simon Zisman (Ornithology)**

- 2.4.1. Response to **Point 3** (States that the Conservation of Habitats and Species Regulations 2010 (as amended) (“the Habitats Regulations”) set out key duties in relation to the protection of bird species. Regulation 9(3) requires a competent authority to “have regard to the requirements of the Directives so far as they may be affected by the exercise” of their functions. Birds listed in

Annex I of the Birds Directive (2009/147/EC) are to “be the subject of special conservation measures concerning their habitat in order to ensure their survival and reproduction in their area of distribution.” Outside of designated protection areas “Member States shall also strive to avoid pollution or deterioration of habitats.”. Common crane is an Annex I species which bred on the Gwent Levels in 2016, and whose habitat would be destroyed by the proposed route.)

1. Detailed consideration has been given to the requirements of the Habitats Directive and Regulations. In relation to the areas classified under Article 4(1) of the Directive, the implications for the proposed M4CaN on SPAs have been comprehensively assessed in the SIAA (Document 2.3.4). This concluded that the proposed development would have no adverse impact on the integrity of the Severn Estuary Special Protection Area (SPA) or Ramsar Site, either alone or in combination with other plans or projects. The conclusion of the SIAA in relation to the SPA has been fully accepted by NRW. It should be noted that the crane nesting site does not lie within the SPA or Ramsar Site, nor have those areas been designated for cranes.
2. In relation to the general duties concerning habitat conservation of Annex 1 species in Articles 4(1) and Article 4(4), the Welsh Government has striven to avoid pollution and deterioration of habitats by means of a robust range of pollution prevention and water treatment measures, which have been designed to ensure there is no deterioration of water quality as a result of either construction or operation of the M4CaN. These measures have been explained in the evidence of Mr. Barry Woodman (WG1.6.1) and Mr. Ben Sibert (WG 1.5.1), and also referred to in paragraphs 5.3.9, 5.4.2 and 5.4.3 of my proof of evidence (WG 1.21.1). Providing the measures proposed to prevent runoff and pollution are implemented and maintained, watercourses would be protected. The water quality, vegetation, fish, amphibians and other food sources on which various bird species (including the crane) depend would therefore be maintained. These measures will ensure the requirements of Article 4(4) are met, by striving to avoid deterioration of habitats on which Annex 1 species depend.

3. Specifically in relation to cranes and the requirement to avoid deterioration of their habitats, detailed consideration has been given to the birds' nesting and habitat requirements, given their Annex 1 status. This resulted from the birds' first breeding attempt in the area in 2016, and also the species' return in 2017 to the same nesting location. The impact of land take and operation on the crane nesting area is considered in the December 2016 ES Supplement (Doc. 2.4.14), at paragraphs 4.4.12 to 4.4.18, with the residual impact of land take assessed as Moderate or Large adverse, and therefore significant in EIA terms. The creation of alternative nesting and foraging habitat has therefore been considered in the Draft SSSI Mitigation Strategy (Appendix SR10.35 of the December 2016 ES Supplement (Document 2.4.14)). Specifically, the creation of an alternative nesting pool and associated habitat is proposed at Caldicot Moor.
  4. Following subsequent consideration of RSPB's Written Response of 7 February 2017, investigations and liaison (with RSPB) are continuing in order to refine the habitat creation proposals for cranes. The purpose of this is to continue to explore further mitigation options and the ways in which the likelihood of colonisation can be maximised.
  5. Additional information from Welsh Government on RSPB's points 11 and 18 to 27 in relation to cranes are provided in sections 2.4.3 and 2.4.8 to 2.4.11 of this response respectively.
- 2.4.2. Response to **Point 7** (Considers that public authorities, which includes Welsh Ministers, are required to have regard to the list of priority species and habitats (which Welsh Ministers must publish under section 7 of the (Environment (Wales) Act), the SoNaRR, and any relevant area statement. The current Section 7 list features a number of species which would be impacted by the Scheme, including lapwing.)
1. Regard has been given by the Welsh Government to assessing, and where appropriate, mitigating the Scheme's predicted impacts on species listed under Section 7 of the (Environment (Wales) Act). Specifically in relation to lapwing, breeding wader surveys were carried out in 2016 and reported in the September 2016 ES Supplement. This concluded that the Scheme had no significant impact on lapwing, a conclusion that has been

accepted by NRW. Nonetheless, at a scale that is compatible with SSSI mitigation requirements, habitat management to encourage breeding lapwing will be carried out for Maerdy Farm and Tatton Farm, with consideration of such management also being given at Caldicot Moor.

2. With regard to non-avian Section 7 species (in particular mammals such as brown hare, harvest mouse and polecat, as well as invertebrate species such as cinnabar, blood-vein and shaded broad-bar moths), please see Section 2.2 of the rebuttal to the Written Statements of Mr James Byrne, GWT. This rebuttal explains how surveys for Section 7 species were scoped with NRW, how desk study information and more generic species surveys (e.g. terrestrial and aquatic invertebrate surveys) were used to inform the assessment of these species presented in the ES, and how consideration was given to these species in development of the mitigation measures.

2.4.3. Response to **Point 11** (Considers that it is devastating that this proposal would destroy the habitat used by the common crane, an Annex I species, which bred on the Levels in 2016 – the first time the species has bred successfully in Wales for 400 years. The proposed route would bisect the cranes' nesting and feeding areas, making it impossible for the birds to return to breed at the same site. States that the Regulations require Annex I species to "be the subject of special conservation measures concerning their habitat in order to ensure their survival and reproduction in their area of distribution." (Article 4(1) of the Birds Directive).

1. The impact of land take, construction and subsequent operation of the Scheme on the common crane nesting area is acknowledged in the December 2016 Environmental Statement (ES) Supplement (Doc. 2.4.14), at paragraphs 4.4.12 to 4.4.18, with the residual impact of land take assessed as Moderate or Large adverse, and therefore significant in EIA terms. In light of the cranes' return to the same nesting location in 2017, and in further discussions with RSPB, the mitigation proposals that aim to provide potential alternative habitat are being considered further, including in relation to areas within the Tata Llanwern Steelworks site.
2. RSPB's reference to Article 4(1) might apparently imply that the crane nesting location would be considered for designation as an SPA for this

species. A single nest location, albeit the first in over 400 years, would not meet the criteria for SPA designation, and neither the Welsh Government nor NRW is aware of any such designation proposals. The Welsh Government's proposed mitigation measures to address the requirements of Article 4(4) are, however, covered in 2.4.1 above.

2.4.4. Response to **Point 12** (Considers that the M4CaN proposal would also destroy critical habitats for a number of priority species, including lapwing and four carder bee species (moss carder, red-shanked carder, brown-banded carder and shrill carder), as well as destroying a significant area of the priority habitat "coastal and floodplain grazing marsh". These priority species and habitats are listed under section 7 of the Environment (Wales) Act, which it is the Government's responsibility to publish; it is also their duty to take all reasonable steps to maintain and enhance the listed species and habitats, having regard to the principles of SMNR – these include taking account of the benefits and intrinsic value of natural resources (including biodiversity) and ecosystems, taking action to prevent significant damage to ecosystems, and taking account of the resilience of ecosystems.)

1. As noted in my response to Point 7, in 2.4.1 above, and at a scale that is compatible with the SSSI Mitigation Strategy, habitat management at Maerdy Farm and Tatton Farm will provide beneficial management for breeding lapwing. My response to Point 7 also addresses how other Section 7 habitats and species have been dealt with in the assessment and mitigation proposals.
2. With regard to the Welsh Government's sustainability and SMR duties under the Environment (Wales) Act, please refer to the responses of Mr John Davies, in Section 2.3 above.

2.4.5. Response to **Point 15** (Agrees with the high value for redshank, gadwall and pintail assigned by the survey. However, considers that the values for mallard (which equates to more than 2% of the SPA) and shoveler (which exceed more than 1% of the SPA population) should be increased to medium to match teal.)

1. We note and welcome RSPB's agreement with the high value assigned to the redshank, gadwall and pintail populations recorded by the 2014/15 and 2015/16 surveys. However, given the ubiquitous distribution of

mallard across the survey area, and the distance from the Scheme from the SPA, the proportion of the recorded population that are SPA-associated birds is likely to be relatively low, and significantly less than the 'more than 2% of the SPA' figure referred to by RSPB (Written Statement paragraph 3.8). In addition, because of this species' adaptability, rate of colonisation of new wetlands, and tolerance of human activity, it can be predicted with a high degree of confidence that habitat creation measures will mitigate impacts on this species.

2. With respect to shoveler, given the distance from the SPA, the number of SPA-associated birds recorded is also likely to be lower than 1%. Given the small numbers concerned (6 recorded 2014/15, 7 recorded 2015/16) it can also be predicted that the SSSI Mitigation Strategy will deliver sufficient benefits to mitigate any impacts on this species (providing water quality protection measures are effective).

2.4.6. Response to **Point 16** (Considers that all breeding bird surveys focussed on identifying representative bird communities of the survey areas chosen, rather than properly assessing the bird populations affected along the M4CaN route. The RSPB understands that this approach has been taken following advice from NRW, but the RSPB respectfully disagrees with the advice NRW has given. States that there are large unsurveyed areas between the transects which have been undertaken. Consider that it is not possible to reach sound conclusions about the likely ornithological impacts of the route or to devise an appropriate mitigation and compensation package in the event that the scheme is approved.)

1. The nature of breeding bird survey coverage has been described in my written and oral evidence. Specifically, as acknowledged by the RSPB, breeding bird survey methods were agreed with NRW, the WG's statutory consultee on natural heritage. Furthermore, the survey work for the M4CaN is comparable to numerous other major road schemes, in that access restriction and route length require a targeted approach to survey coverage. This is what has been done for the Scheme, enabling the compilation of a robust dataset on the breeding birds present, their distribution, their habitats, and therefore the characteristic bird assemblages encountered along the proposed route. As I have highlighted, birds are a well-studied species group, where there is

extensive pre-existing accumulated distribution data. The repeated baseline desk studies, data searches, and field surveys therefore resulted in a robust baseline from which to assess the Scheme's impacts on breeding birds, predict significant effects and design appropriate mitigation.

2. As part of preparations if the Scheme be approved, additional surveys are being carried out during the 2017 breeding season. The resulting breeding bird data would be used in conjunction with the ES baseline information to assist the Ecological Clerk of Works and construction teams identify and minimise any impacts on breeding birds during the construction process. All breeding bird data will be collated and included in the finalised version of the Bird Protection and Mitigation Plan that is being drafted. The requirement to finalise this Plan prior to construction will be included on the Commitments Register.
3. As RSPB notes in its written submission (paragraph 3.11), the approach to surveying breeding birds was following NRW advice. NRW has accepted that the data provided form a suitable basis from which to make a robust assessment of the proposed M4CaN on breeding (and wintering) birds.

2.4.7. Response to **Point 17** (Considers that bird surveys were not carried out using a robust methodology and the subsequent body of evidence is not sound.)

1. As RSPB notes in its written submission in relation to breeding birds (paragraphs 3.11 to 3.16), the approach taken to surveying breeding birds was following NRW advice. The assessment of the effects of the Scheme with respect to breeding birds as presented in Chapter 10 of the March 2016 Environmental Statement and the December 2016 ES (paras 4.2.12 to 4.2.18) is appropriate for EIA purposes. NRW has accepted that the data provided form a suitable basis from which to make a robust assessment of the proposed M4CaN on breeding birds. I provided further background in support of this position in my written and oral evidence, noting that the approach to breeding bird surveys for the M4CaN is comparable to the survey approaches for a number of other major road schemes.

2. It may also be of assistance to RSPB to know that targeted breeding bird surveys of Cetti's warbler, barn owl, common crane and lapwing are being carried out this season (2017) to up-date data on the status of these species in the area. General breeding bird surveys will also be carried out in the Cetti's warbler survey areas for the same purpose. Informed by the baseline and 2017 data, a Bird Mitigation and Protection Plan will be agreed prior to commencement of the construction. A commitment to this will be added to the Commitments Register, as noted in 2.4.6 above.
3. Furthermore, RSPB may also find it helpful that the Welsh Government, through RPS' ornithologists, will collate and provide the accumulated bird data from the sequence of surveys completed for the M4CaN and previous associated schemes. This will be made available to RSPB through submission to the South East Wales Biodiversity Records Centre. This collation will again add weight to the conclusion that the ES and NRW have agreed on, namely that the baseline data are sufficiently robust to inform the impact assessment and mitigation design for the M4CaN.

2.4.8. Response to **Point 18** (States that no information has been provided on the hydrology of the crane breeding site, or the potential impacts of a new road on freshwater flow into the lagoon and adjacent habitats. It is therefore impossible to assess the indirect hydrological impacts of the proposed motorway extension on the nesting lagoon, adjacent foraging area, the hay meadows, or the SINC corridor between them. It is critical that the hydrology of the breeding pool and the key foraging habitats are maintained in order to secure the nesting site and retain the foraging areas in suitable condition for feeding chicks.)

1. As elaborated further below, the impact of land take and operation on the 2016 common crane nesting area is given in the December 2016 Environmental Statement (ES) Supplement (Doc. 2.4.14), at paragraphs 4.4.12 to 4.4.18. It concludes the Scheme would, regrettably, result in the abandonment of the current nesting lagoon, which is in agreement with RSPB. In paragraph 3.45 of its Written Evidence, however, RSPB state that the 'hydrology of the breeding pool must be protected'. The pool is part of the Tata Llanwern Steelworks' operational water treatment

process, and is subject to operational change in any case, regardless of the Scheme. However, as just noted, the pool would be altered as a result of the proposed motorway.

2. RSPB continue in paragraph 3.45 to suggest that there is no information on the impact of the Scheme on the hydrology of the adjacent foraging area, the hay meadow or the intervening SINC. RSPB also intimate that hydrological modifications might result to these areas. A substantial body of information has been provided by the Welsh Government team on the hydrological baseline and predicted impacts on adjacent land, however. Extensive consideration has been given to maintaining hydrological flows in the March 2016 ES (Doc. 2.3.2) (including the Reen Mitigation Strategy) and in the evidence of Ben Sibert (WG 1.5.1), Peter Ireland (WG 1.7.1), Richard Graham (1.15.1) and Keith Jones (WG 1.18.1). In light of this information, and the substantial measures that have been put in place to avoid adjacent hydrological and habitat impacts, it is unfounded to suggest there will be any significant changes to the hydrology of the current crane foraging areas.

- 2.4.9. Response to **Points 19 to 24** (Considers that, given the apparent site constraints at Tatton Farm, it is extremely unlikely that this site would be suitable for breeding cranes.), (Considers that, given the apparent site constraints at Maerdy Farm, it is very unlikely that this site would be suitable for breeding cranes.), (States that Caldicot Moor covers c. 55 ha, with c. 40% lying within 200 m of the existing M4 and Severn Bridge toll, and c. 99% within 500 m. Lagoons and pools are identified in the western part of the site, all situated within 200-350 m of the existing motorway.), (States that Fig. 2c shows lagoon and ponds in the western side of the site. Considers that they do not have enough information about site hydrology to comment on whether the site has the capacity to support a viable breeding pool for cranes, although they assume this is the wettest area currently, and therefore the most obvious location for a breeding pool. Aerial photographs of the site suggest the fields are intensively managed and very dry, and they would have concerns about the feasibility of creating and maintaining permanently wet areas.), (Note from Fig. 2c the intention to enhance existing grassland across c. 80% of the site and to revert existing arable cover on the remaining c. 25%. Considers that it is likely to take several years before these fields would

provide suitable foraging habitat for breeding cranes, and enhancement and reversion would therefore need to be carried out several years before the breeding pair at the steelworks is disturbed.), and (Considers that, given the apparent site constraints at Caldicot Moor, it is unlikely that this site would be suitable for breeding cranes without significant reduction in the potential levels of human disturbance and a review of the other potential constraints.

Specifically, given that the proposed lagoons and much of the foraging area would lie within 10-50m of the Celtic Trail, it is very unlikely that the site would be used by cranes. Assumes that, in the absence of further information, that levels of human disturbance are likely to be too high):

1. Since its February 2017 Written Submissions, at RSPB's request, a joint site visit has taken place on 25th May to the three mitigation areas (attached to this rebuttal as Appendix 1). It is therefore possible to provide an up-date on a number of points that RSPB originally raised in its Written Submissions in relation to cranes.
2. In response to RSPB Written Submission paragraphs (3.50 to 3.61) it can be confirmed that there was no intention for Tatton Farm or Maerdy Farm to host habitat creation for common cranes. This remains the situation.
3. With regard to RSPB's concerns about the hydrological suitability of Caldicot Moor (RSPB Written Submission paragraph 3.63), discussions and exchange of information is continuing on the design of pools, associated water control mechanisms and wetland habitat creation for cranes at Caldicot Moor. Through suitable engineering measures, the Welsh Government team does consider that a pool system suitable for crane nesting can be created, whilst acknowledging that remodelling of land levels will be necessary.
4. It is accepted, and acknowledged in the December 2016 ES Supplement (Document 2.4.14), that the development of adjacent foraging habitats will take a number of years to become established (as noted in RSPB's Written Submission paragraph 3.64).
5. RSPB has continued to raise concerns over disturbance risk to cranes at Caldicot Moor, which it considers would potentially arise from the proximity of footpaths, the Celtic Trail Cycle route and the existing M4 (RSPB's Written Submission paragraph 3.65 and 3.66). It is important to

note that the birds already nest in an operational waste water treatment area, which has maintenance tracks and vehicles passing immediately next to the nesting pond, within 10 metres of the nesting island. This has not prevented the birds nesting and breeding successfully. The RSPB itself, in fact, notes that 'the proximity of the A4810 c. 120m to the north of the (2016 and 2017) nesting lagoon clearly did not deter the cranes from nesting'. Observations in eastern Germany suggest that cranes may nest close to existing busy roads and railway lines if human disturbance is minimised and other critical habitat elements are available, such as undisturbed foraging habitat (Nowald 2003) (RSPB's Written Submission paragraph 3.27). Whilst there are farm tracks, footpaths and the cycle way in proximity to Caldicot Moor therefore, there are roads, cyclists, kennels, industrial, maintenance and agricultural activities all taking place within immediate proximity to the current nesting and foraging sites, Some of these activities at the current nest site are screened by hedgerows or other vegetation, so screening would similarly be accomplished at Caldicot Moor by creation of earth bunds. These would be of similar size to those that have very effectively been put in place at the Goldcliff Pools (within the Newport Wetlands SSSI), and would be in place as soon as the pool system was excavated.

2.4.10. Response to **Points 25 and 26** (Strongly recommends that a more systematic review of alternative sites across the Gwent Levels and adjacent areas is carried out. This should be achieved with input from the Living Levels Partnership and through access to existing habitat databases, focusing on areas of existing and former wetland habitats, and in particular unimproved areas of coastal and floodplain grazing marsh away from major roads, built development and pylons.) and (Have carried out a brief assessment of Goldcliff Lagoons and Newport Wetlands. Consider neither site is likely to be suitable due to a combination of factors, including current levels of human disturbance. In addition, there may be significant constraints at Newport Wetlands, a site which was created to provide compensatory habitat for the Cardiff Bay Barrage, with specific objectives for non-breeding shoveler and wigeon.)

1. The RSPB strongly recommends that a more systematic review of alternative site options to provide nesting and foraging ground for cranes

is carried out. It also notes that this should include input from the Living Levels Partnership.

2. The conclusion of the Welsh Government's team from its investigations to date of the Caldicot Moor proposed crane mitigation area is that hydrological conditions can be engineered to provide a suitable alternative nesting lagoon for the displaced birds. It is also considered that in the medium term, suitable foraging habitat can develop to support breeding cranes, as can the level of screening from earth bunds and hedgerows that will benefit the cranes.
3. In the same way that it would have been difficult to predict that the cranes would have nested in an active waste water treatment lagoon 120m from a trunk road, and in an operational industrial manufacturing site, it is difficult to predict with any degree of certainty whether or not the cranes would re-locate to the new habitat at Caldicot Moor. The December 2016 ES Supplement (Document 2.4.14) therefore takes account of this uncertainty in its assessment of significance. It also takes into account that habitat and full screening from vegetation would take a number of years to develop.
4. If the Living Levels Partnership can, however, put forward an alternative location for crane mitigation, then the Welsh Government team would be pleased to examine any such option. Requests to meet with the Partnership or its representatives to date have not been accepted, but the willingness to engage still remains on the part of the Welsh Government team. In light of the repeat nesting in 2017, additional mitigation options are also being investigated by the Welsh Government, including areas within the Tata Llanwern Steelworks site.

2.4.11. Response to **Point 27** (Considers that the scheme will have an impact on common cranes which is considered objectionable on the basis of their Annex I status under EU Directive (2009/147/EC).)

1. The impact from the proposed M4CaN motorway on common cranes has already been covered in 2.4.1 above. It is accepted, as presented in the December 2016 ES, that the cranes are likely to no longer use the 2016/2017 nesting location, and that there is no certainty that the proposed alternative habitat at Caldicot Moor will be adopted by them.

2. Following meetings with RSPB, further investigations are being undertaken in order to further consider habitat creation for cranes, as noted in 2.4.10 above. We appreciate the on-going liaison with RSPB in considering these refinements and will continue exploring ways in which the likelihood of colonisation by cranes can be maximised.

2.4.12. Response to **Point 28** (Have significant concerns about the approach used to estimate the Cetti's warbler population set out in the 2016 Breeding Season Ornithological Surveys.)

1. The points made in relation to estimation of Cetti's warbler numbers are noted. It is agreed that the number of singing males is an appropriate basis on which to establish Cetti's warbler numbers, and this is the approach taken in 4.2 of Appendix S10.5 to the September 2016 ES. It is also the case that there is a range of published population estimates for Cetti's warbler in the UK, attributable in large part to its substantial range expansion in the UK (by 6,783%, between 1970 and 2009, as noted in 4.2.3 of Appendix S10.5), and to population fluctuations in response to severe winter weather. RSPB's preferred figures of 2.73% of the 2014 figure, or 3.0% of the 2009 to 2014 5-year mean do not materially alter the findings of the assessment.
2. The value assigned in Chapter 10 of the March 2016 ES (para. 10.7.248) for the population of Cetti's warbler along the proposed route is National (High), reflecting the fact that it may represent in the region of 22% of the Welsh population. The importance of the area for this species has therefore been taken into account in the assessment.

2.4.13. Response to **Point 29** (Concerned that barn owl mitigation is not appropriate and that nest boxes should be repositioned.)

1. I have provided an up-date in relation to RSPB's concerns on the proposed barn owl mitigation to be undertaken for the M4CaN project. Specifically, having taken into account the points raised by RSPB, the barn owl boxes included as part of the mitigation for this species will only be provided if suitable receptor locations can be identified that are in excess of 3km from the proposed M4CaN. This is to minimise the risk of collisions of nesting and fledged barn owls with motorway traffic. The reference to barn owl nest box provision has also been removed from the

SSSI Mitigation Strategy, and will be included instead in the Bird Mitigation and Protection Plan that will be agreed with NRW prior to commencement of construction.

2.4.14. Response to **Point 30** (States that between 2014 and 2016 there has been a 75% decline in the number of birds reported in the surveys. Unfortunately, no explanation has been advanced to accompany this information – for instance whether the differences relate to different survey areas, time of survey or whether this represents a rapid and substantial decline in the survey area.)

1. In response to the RSPB's point on variance in song thrush numbers, this is due to the different extent of survey coverage over these years. The survey area covered for the 2015 and 2016 breeding bird surveys were comparable, and resulted in similar numbers of song thrush. The 2014 survey extent covered a different extent. We trust that this helps explain the difference in numbers recorded.

2.4.15. Response to **Point 31** (Concerned that, due to the survey method used, it is very difficult if not impossible to be certain about the status of willow tit in this area but at face value the population of willow tit in Area 2 is one of the largest in Wales and is of national significance. Given the perilous situation of these species the failure to have a clearer idea of the population and its distribution is a source of concern.)

1. Further bird surveys of the Tata Llanwern Steelworks during the 2017 breeding season (carried out as part of potential pre-commencement surveys) did not record willow tit. This prompted re-examination of 2016 data, including liaison with the field workers who had carried out the 2016 surveys. As a result of this process, the WG team has concluded the 2016 willow tit records (and those for marsh tit) were mis-coded by field workers. The actual species recorded were whitethroat and mistle thrush. The incorrect species codes were not identified at the time of writing of Appendix S10.5 of the September 2016 ESS as they did not appear anomalous, given there were previous records of both willow tit and marsh tit in the Tata area and its immediate surroundings (from M4-related surveys in 2007 and 2015 respectively).
2. The result of this correction in coding is that, given the absence of willow tit in 2016 and 2017, it can be concluded the Tata site is currently of

limited value for this species, so the proposed M4CaN will have no significant impact on this bird.

2.4.16. Response to **Point 55** (States that the RSPB has highlighted that the bird assessment work has not focussed on the overall route of the M4CaN, but rather key survey areas. Considers that this means that the total bird population required to be covered by the compensation package has not been identified, and that therefore it is likely that the measures proposed do not provide adequate compensation for the species affected. The RSPB has highlighted the species for which this is the case.)

1. As covered above in 2.4.6 and 2.4.7, a robust data set on breeding and wintering birds along the overall route has been assembled, using a combination of desk studies and field work.
2. The range of mitigation measures has therefore been designed, and has continually evolved, in response to the baseline data accumulated over the development of the Scheme, to the March 2016 ES, its Supplements and to on-going consultation with stakeholders. Specifically in relation to birds, this has led to revised proposals for the Caldicot Moor crane mitigation pools and associated screening.
3. Mitigation proposed for Caldicot Moor is also compatible for Cetti's warbler (as noted, for example, in RSPB Written Response paragraph 5.14). Careful consideration will also be given during the implementation of the SSSI and Reen Mitigation Strategies so that any hedge removal (to reduce shading of reens) is carried out on a rotational basis, to ensure Cetti's warbler habitat extent is not severely compromised.
4. In relation to lapwing, breeding season surveys being carried out in 2017 (at NRW's request) are adding to the data that will be used to finalise management of Tatton Farm, Maerdy Farm and Caldicot Moor. Where management to encourage breeding lapwing can be accommodated in tandem with the SSSI Mitigation Strategy, this will be incorporated into the mitigation work at these sites. In this regard, in response to the RSPB's clarification request regarding provision of scrapes (RSPB Written Response paragraph 5.17), this measure was removed at the request of NRW because it was not considered compatible with SSSI management. Nonetheless, where scrapes can be accommodated at these sites (and at

Caldicot Moor as part of wetland habitat creation), scrapes will be implemented. The potential location of these will be set out in the Bird Protection and Mitigation Plan.

2.4.17. Response to Point 57 (letter from RSPB dated 31 August 2017 – mitigation in relation to common cranes).

1. As covered above in 2.4.10 and 2.4.11, further consideration is being given to mitigation for common cranes, notably within areas on the Tata Llanwern Steelworks site.

2.4.18. I confirm that the statement of truth and professional obligations to the inquiry from my main proof still applies.

## **2.5. Peter Ireland (Environment - General)**

2.5.1. Response to **Point 6** (Considers that the scheme is counter to recommendations set out in a State of Natural Resources Report (SoNaRR) to be published by NRW.)

1. As referenced at paragraph 2.43 2<sup>nd</sup> bullet of the RSPB proof of evidence, I assume that Point 6 refers to the first State of Natural Resources Report (SoNaRR) that was published by NRW in accordance with section 8 of the Environment (Wales) Act 2016 in September 2016.
2. The first SoNaRR provides an assessment of the state of the natural resources within Wales, and shows that biodiversity is declining and that none of Wales' ecosystems is currently sufficiently resilient. I do not disagree with that statement.
3. It is also not clear which specific recommendations are being referred to, or whether what is meant is that M4CaN should, if it proceeds, not be adding to the general decline and loss of resilience, but be providing positive steps to maintain and enhance resilience.
4. The RSPB evidence concludes (at paragraph 6.15) that floodplains, in particular, are failing in relation to all aspects of resilience – diversity, extent, condition, connectivity, adaptability – and *“therefore Welsh Government should not limit its approach to compensating for direct losses, should the scheme go ahead; it should look to undertake wetland*

*restoration and creation on a large scale with a view to building ecological, economic and social resilience”.*

5. In reality, the proposed scheme will create significantly more species-rich wetland, woodland and grassland habitat than is being lost, which in turn will benefit many habitats and species listed under section 7 of the 2016 Act. It will ensure that the drainage and biodiversity functions of the Levels are maintained, and by maintaining the connectivity across the Scheme, resilience of species populations will also be maintained. For some species, for example dormice, the resilience of the local population may even be enhanced in the medium to long-term (i.e. by boosting the local population and providing crossings under the motorway at the Castleton junction where they do not currently exist).
6. The SSSI Mitigation Strategy agreed with NRW will create three areas that will better exhibit the valuable ecosystem the Levels comprised prior to eutrophication (the real threat to resilience across the Levels) as well as providing community and amenity opportunities for those living and working across the Levels and further afield. At Maerdy Farm, some 35ha of arable land will be restored to grazing marsh; this is approximately the same size as the original Magor Marsh Nature Reserve. At Caldicot Moor, a further 55ha of wetland habitats will be created or restored. Overall the three mitigation areas will provide an additional 5.9km of new ditch habitat over and above that provided by the 1:1 replacement ratio agreed with NRW. These are but a few examples within M4CaN of Welsh Government looking “to undertake wetland restoration and creation on a large scale, with a view to building ecological, social and economic resilience” as urged by RSPB above.

2.5.2. I confirm that the statement of truth and professional obligations to the inquiry from my main proof still applies.

**APPENDIX 1** - email from RSPB of 12<sup>th</sup> June 2017, following the site visit to mitigation areas

**From:** Dawkins, James  
**Sent:** 12 June 2017 14:23  
**To:** Simon Zisman  
**Cc:** Archer, Richard, Hugheston-Roberts,  
**Subject:** [EXT] M4 mitigation site visit ornithological feed back  
**Importance:** High

Dear Simon,

Thank you for your time, and transportation, showing us around the mitigation sites and part of last year's crane breeding ground on 25<sup>th</sup> May. This and the opportunity to discuss the bird-related aspects of the proposals in detail whilst out on site with you have been very much appreciated. I would also like to extend our thanks to Huw Richardson for his time at Caldicot: we found his knowledge of the hydrology of the site to be invaluable. I have now had the opportunity to discuss the site visits with my colleagues and offer the RSPB's views on the mitigation proposals.

#### **Caldicot**

We note your position on behalf of the Welsh Government that this site is suitable for cranes on the basis that sites in similar proximity to roads are used by cranes elsewhere in Europe. However, our previous view was only reinforced, i.e. that this site is very unsuitable for breeding cranes and the measures proposed to try to make it more attractive to cranes are very unlikely to prove effective. It was clear from our site visit that this is a very open landscape which also experiences constant noise from the M4 behind it. In comparison the crane's breeding site last year was surrounded by high and thick hedges around the outside, and there was no noticeable vehicular noise except when cars passed on the road we were standing on. Although some cranes *might* choose a noisier site for breeding it is important to note that these birds have specifically chosen this comparatively secluded and quiet site. To endeavour to make the Caldicot site suitable would require a combination of extensive earthworks and significant vegetation planting as well as a number of years to enable it to mature to offer a similar level of screening. In addition, we think that effective screening with earth bunds would need to be much more extensive than shown in the indicative plan discussed on site, if it worked at all. We also note that the topography and hydrology of the site is such that the lowest part, most suitable for a breeding lagoon, is at the point on the site closest to the M4 toll booths, thereby exacerbating the effect of the site's proximity to the motorway. There seem to be several other shortcomings from the site: a lack of control over water levels in the adjacent reed, and therefore the adequacy of feed into the site; questions about the water budget available on the site; the ability of the site to retain sufficient quantities of water to the required depth for a secure crane pool; and the restricted area of topographically suitable land for wetland creation. All these strongly indicate that the site is highly unlikely to be able to provide sufficient secure wetland area for breeding cranes. In addition, vegetation on most of the remainder of the site seems to consist of either improved rye grass sward or arable crops. As we have said previously, it is likely to take several years before these areas could provide adequate invertebrate-rich feeding habitat for cranes and their chicks, and this would be a major problem for any cranes displaced by the proposed road. Due to these significant differences and issues we do not consider that the Caldicot site can be made suitable for cranes.

#### **Tatton Farm**

This SSSI is in desperate need of proper management in order to restore the SSSI to favourable condition. In particular this would require a change to the grazing regime. We consider that it is possible that Cetti's warblers and lapwing could be delivered on elements of the site.

However, as we set out in our representations, we can only consider doing this once the SSSI has been returned to favourable condition. The site is unsuitable for breeding cranes and we did not discuss this as a proposition when on site with you.

#### **Maerdy Farm**

As we noted on our visit the site there are currently shallow ephemeral pools supporting lapwing. We agree with your suggestion that there is scope to add more and there is potential to deliver habitat for Cetti's warbler on parts of the site.

We remain concerned about the current condition of the SSSI and, as per Tatton Farm, we can only consider mitigation measures on the SSSI once it has been returned to favourable condition. Again, we did not discuss this site as a serious proposition for breeding cranes with you when on site.

#### **Outcome**

In order to take this forward, the RSPB consider that the following steps are necessary by the Welsh Government:

1. More detailed, worked up, information about how the SSSI condition at Maerdy and Tatton Farms will be addressed. This needs to be done in isolation from any potential M4-related enhancement works to these sites.
2. Detailed plans need to be provided for all three sites. This would include planting and management details as well as clear information on how the water levels will be managed.
3. Details of the financial commitments will need to be provided by the Welsh Government which will cover the costs of providing ongoing security of the site condition of the three mitigation sites.
4. In light of our views on Caldicot Moor the Welsh Government needs to identify further areas of search for crane habitat.

In addition we still need to arrange discussions about the shrill-cardier bee mitigation between Dr Jones and Dr Comont.

In the meantime we will be reviewing the Register of Commitments and the current draft SSSI mitigation scheme in the hope that we can identify the most appropriate means by which to secure and deliver any mitigation which addresses effectively the point above.

Kind regards,  
James

**James Dawkins**  
Casework Officer  
Policy and Advocacy Department

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The RSPB is the country's largest nature conservation charity, inspiring everyone to give nature a home. Together with our partners, we protect threatened birds and wildlife so our towns, coast and countryside will teem with life once again. We play a leading role in BirdLife International, a worldwide partnership of nature conservation organisations.

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**APPENDIX 2** – letter from the RSPB and the Gwent Wildlife Trust of 26<sup>th</sup> May 2017 to the Cabinet Secretary for Economy and Infrastructure



yn rhoi  
cartref i  
fyd natur

giving  
nature  
a home

RSPB Cymru

Mr Ken Skates  
Cabinet Secretary for Economy & Infrastructure  
Welsh Government  
Ty Hywel  
Cardiff Bay  
CF99 1NA

26 May 2017

Dear Ken

We are writing to you to express our sincere concern regarding the comments made by the Welsh Government's barrister, Morag Ellis QC, at the M4CAN public inquiry last week. In addition in her cross-examination of NRW's witness, Jessica Poole, Ms Ellis appeared to suggest that the Well-being of Future Generations Act Wales 2015 and the Environment (Wales) Act 2016 duties towards nature conservation protection could be balanced off against other considerations and mitigation of adverse development impacts were a matter of choice for the Welsh Government.

As reported by both RSPB and GWT staff present at the inquiry (and by BBC<sup>1</sup>), Ms Ellis' submissions included the following:

- That the Welsh Government's duty towards biodiversity under the Environment (Wales) Act (section 6) and the Sustainable Development Principle include the notion of balancing environmental, social and economic factors;
- That it was an option for the Welsh Government under section 28I(6) of the Wildlife and Countryside Act 1981 (as amended) not to take account of NRW's advice at all, and that *at most* Ministers have a duty to *consider* NRW's advice;
- That full mitigation of the harm of the M4CaN was not required as part of the Welsh Government's legal duties under section 28G of the Wildlife and Countryside Act 1981 to take reasonable steps to further the conservation and enhancement of SSSIs; and
- That it is for Welsh Ministers to balance any potential impact on a SSSI and its features with other public interests related to the new motorway, and that section 28G put the Welsh Government in a more favourable position due, as Ms Ellis phrased it, "to a whole welter of other public interests".

Of greatest concern is the way in which Ms Ellis seemed to invoke the Environment Act and the Well-being of Future Generations Act duties as a reason why the Welsh Ministers may opt to do less for biodiversity under their section 28G duty, due to the 'notion of balancing' and the 'whole welter of other public interests' at play.

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The RSPB is a member of BirdLife International, a partnership of conservation organisations working to give nature a home around the world.

**Noddwr/Patron:** Ei Mawrhydi y Frenhines/Her Majesty the Queen **Cadeirydd y Cyngor /Chairman of Council:** Professor Steve Ormerod, FIEEM **Uywydd/President:** Miranda Krestovnikoff  
**Cadeirydd Pwyllgor Cymru/Chairman, Committee for Wales:** Dr Havard Prosser **Cyfarwyddwr, RSPB Cymru/Director, RSPB Cymru:** Katie-jo Luxton

Mae'r Gymdeithas Frenhinol er Gwarchod Adar (yr RSPB) yn elusen gofrestrdedig: Lloegr a Chymru rhif 207076, yr Alban rhif SC037654  
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The only notion of 'balancing' in the Well-being of Future Generations Act relates to short and long term needs – with an emphasis on ensuring that short term needs do not jeopardise the ability to meet long term needs. With regards to environmental, social and economic factors, the Sustainable Development Principle requires **integration**. Both the Well-being of Future Generations Act and the Environment (Wales) Act make clear that the health of the natural environment is inextricably linked to well-being.

Our expectation was, from the spirit of the legislation, that they should be used to enhance the consideration given to the natural environment, including biodiversity, in decision making by public bodies including the Welsh Government. Furthermore, during the passage of the Environment Bill, the then Minister for Natural Resources made clear that the new framework it contained was intended not to replace, but to work in concert with, the existing nature conservation framework.

We have always accepted that these legal duties on the Welsh Government do not act as an absolute prohibition on harm. However, the position Ms Ellis seemed to advance last week seriously undermines the Welsh Government's responsibilities towards SSSIs and biodiversity more broadly. This appears entirely against the duties towards species, habitats and ecosystems set out in section 6 and 7 of the Environment (Wales) Act, and the overall purposes of the legislation and commitments given during its development, for example: -

*“The objective is to ensure that in managing natural resources the long term resilience of ecosystems and the benefits they provide are fully considered. As such considering the potential impact of decisions, which might have an impact on the benefits provided by Wales' natural resources and ecosystems, will ensure they are maintained<sup>ii</sup>.”*

Furthermore, it neglects to recognise the Welsh Government's own planning policy (Technical Advice Note 5), which sets out clear requirements for avoiding damage to protected sites, mitigating damage as far as possible and compensating for unavoidable damage. Indeed, Welsh Government's own witness at the inquiry, John Davies, accepted under cross-examination that the Welsh Government ought to be an exemplar in the way it delivers against this new legal and policy framework. Yet disappointingly, this did not appear to be the case outlined by Ms Ellis.

As you know, we strongly object to the proposed M4 Relief Road development. In our view the framework for sustainable development and biodiversity set out in Wales' new legislation and policy, in combination with existing nature conservation protections, make the Welsh Government's position as proponents of the scheme untenable. We have submitted evidence to the public inquiry accordingly. We are now gravely concerned that in this first major case where the Welsh government is the developer, it is appearing to use its ground-breaking legislation on sustainability to justify environmental damage and avoid committing to appropriate reparations. Finally, we are also particularly concerned by the aspect of the questioning that appeared to suggest that because NRW had not commissioned an array of experts beyond its role as the Welsh Government's statutory adviser on nature conservation their concerns should be treated as not fully evidenced. We consider that NRW had properly discharged its functions and that this point is deeply troubling in the way that it seeks to undermine the views being offered.

We urgent seek clarification of the Welsh Government's position with regard the Well-being of Future Generations Act and the Environment Act duties and their interaction with the biodiversity and conservation requirements including arising from the SSSIs protection in the Wildlife and Countryside Act 1981. We also seek clarification on your intentions towards mitigation of damage and additional commitments required to seek to build the resilience of the Gwent Levels ecosystem and finally Welsh Government's view on NRW's remit in provision of its statutory advice

We look forward to your reply to these pressing matters and hope that you can respond by 13 June 2017, particularly in the context of public inquiry reopening.

Yours sincerely



Katie-jo Luxton  
Director RSPB CYmru



Ian Rappel  
Chief Executive of Gwent Wildlife Trust

cc. Lesley Griffiths, Cabinet Secretary for Environment & Rural Affairs  
cc. Mark Drakeford – Cabinet Secretary for Finance & Local Government  
cc. Sophie Howe – Future Generations Commissioner

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<sup>i</sup> <http://www.bbc.co.uk/news/uk-wales-south-east-wales-39962189>

<sup>ii</sup> Explanatory Memorandum accompanying the Environment (Wales) Bill

**APPENDIX 3** – letter from the RSPB of 31<sup>st</sup> August 2017 to the Cabinet  
Secretary for Economy and Infrastructure

Ken Skates AM  
National Assembly for Wales  
Cardiff Bay  
Cardiff  
CF99 1NA

31 August 2017

Dear Ken,

### **M4 Corridor around Newport – proposed ‘mitigation’ measures**

When we met last October to discuss our concerns on the environmental impact of the proposed new M4, you impressed upon us your commitment to delivering tangible ecological improvements in tandem with the proposed M4 Relief Road, should it proceed, in order to compensate for the substantial damage the development would cause.

Whilst we remain opposed to the development we have worked without prejudice with the RPS team charged with delivering measures to address the ecological impacts of a new road. We have done this in good faith, in anticipation of ambitious compensatory measures, commensurate with Welsh Government commitments to sustainable development.

We are therefore very disappointed with the lack of progress made to date regarding ecological compensation for the M4 development. We are losing confidence that there is any serious attempt to deliver meaningful mitigation for direct impacts let alone compensatory measures and biodiversity enhancement. We have a number of serious concerns:

- After being extinct in Wales for more than 400 years, a pair of common cranes have made the Gwent Levels their home returning to the same location each year for the last few years. The proposed motorway would destroy their chosen nest site and would be a major lost opportunity for one of our most spectacular wetland birds. It is incumbent on the Welsh Government to provide suitable alternative habitat. We have communicated to the RPS team, based on our expertise and extensive experience, that none of the proposed compensation sites are suitable, or could be made suitable, for common crane. It is

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therefore imperative that alternative options are advanced and explored as a matter of urgency. We are concerned that more than five months after the Public Inquiry opened no alternative sites have yet been formally proposed to us, despite our preparedness to advise further on suitable options, our opposition to the relief road notwithstanding.

- We understand that the Welsh Government intends to issue a rebuttal of our evidence (which includes our serious concerns about the shortcomings of the proposed compensation) however this has yet to be issued. As you know the public inquiry is nearing its conclusion and the time available for us to respond to this rebuttal - and for the inspector to consider our response to it- will be extremely tight. The Welsh Government and its agents have now had our written submission for six months so we find the delays particularly troubling. It is imperative that the Inspector is able to consider all relevant information if he is to be in a position to advise you fully, including making appropriate recommendations about compensation measures should the scheme proceed.
- The 'Resilient Wales' goal of the Well-being of Future Generations Act is for a nation that maintains and enhances a biodiverse natural environment with healthy, functioning ecosystems that support social, economic and ecological resilience and the capacity to adapt to change. As recently reiterated in the newly published Natural Resources Policy (NRP), the Welsh Government's biodiversity duty under Section 6 of the Environment (Wales) Act requires you, and the Welsh Government as a whole, to maintain and enhance biodiversity and promote the resilience of ecosystems as part of your business planning and day-to-day activities. Finally, the NRP specifically states Welsh Government's intention to make a modal shift away from roads and promote sustainable transport in order to enhance the resilience of our ecosystems, and reverse the decline of biodiversity. This includes plans to improve the connectivity and diversity of our ecosystems, and to integrate nature based solutions into the planning and development of transport related infrastructure. It is not clear to us how the M4 proposal fits into this modal shift away from roads, and in our view the proposed compensation package will not meet the objective of reversing biodiversity declines.

We believe – as our evidence to the public inquiry sets out – that the result of Wales' new legislative requirements, reiterated in the NRP, should be the withdrawal of the M4 proposal and the reconsideration of the problem of congestion around Newport with a view to finding truly sustainable solutions. However, should the inspector reject our arguments in this regard, we believe the Welsh Government must commit to meaningful actions to build the resilience of ecosystems and enable biodiversity to flourish. The State of Natural Resources Report showed that none of Wales' ecosystems are resilient, and wetland systems are faring particularly badly. The Gwent Levels SSSIs have deteriorated through inadequate protection and inappropriate management, yet the common cranes that have adopted the Levels as their home signify the great potential of this wetland ecosystem if it is managed properly. We urge the Welsh Government to commit to comprehensive restoration of the special habitats across the remainder of the Gwent Levels if it consents the M4 proposal.

Please, be under no illusion: the proposed development would have a severe, negative impact on this valuable yet impoverished ecosystem, destroying the habitats of a number of rare and vulnerable species. The proposed compensation measures, as they stand, do not ameliorate this impact. Bigger and bolder actions, that will only happen with your personal commitment to drive them, will be required if you are to deliver on the Welsh Government's duties to sustainable development and biodiversity. As the Acts and the new NRP recognise, such

actions will also benefit socio-economic resilience – including through the provision of essential ecosystem services and the enhanced potential of the area as a destination for wildlife based recreation and tourism.

We would welcome a meeting with you to discuss these urgent matters.

Yours sincerely,

A handwritten signature in black ink that reads "Katie-jo Luxton". The signature is written in a cursive, flowing style.

Katie-jo Luxton  
Director, RSPB Cymru

Cc Lesley Griffiths, Cabinet Secretary for the Environment & Rural Affairs