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14th December 2007

Our Ref:CNS TR AWPR

Dear Sir

**THE ROADS (SCOTLAND) ACT 1984 ABERDEEN WESTERN PERIPHERAL ROUTE (AWPR)
ENVIRONMENTAL IMPACT ASSESSMENT (SCOTLAND) REGULATIONS 1999
ENVIRONMENTAL IMPACT ASSESSMENT (SCOTLAND) AMENDMENT REGULATIONS 2002
A90 SPECIAL ROAD (ABERDEEN WESTERN PERIPHERAL ROUTE) SCHEME 200_
A956 SPECIAL ROAD (ABERDEEN WESTERN PERIPHERAL ROUTE) SCHEME 200_
A90 TRUNK ROAD (CHARLESTON TO BLACKDOG) DETRUNKING ORDER 200_
A96 TRUNK ROAD (DYCE DRIVE TO HAUDAGAIN ROUNDABOUT) DETRUNKING ORDER
200_**

Thank you for sending SNH a copy of the revised Environmental Statement (ES) for the AWPR. This letter provides further updated advice from SNH, but should also be read in conjunction with our previous response of 9th March 2007.

Background

The proposal involves the construction of a new 46km trunk road with Special Road status, bypassing Aberdeen to the west between Charleston in the south and Blackdog in the north and creating a fastlink between Stonehaven in the south and Cleanhill. The route comprises 3 sections: Northern Leg, Southern Leg and the Fastlink.

The ES published in September 2007, provides further detailed information on the southern leg and fastlink, as well as amendments made to the northern leg, with additional information on the cumulative assessment for the entire route. We are pleased to note a number of issues raised in our letter of 9th March have been addressed. There are, however, still some outstanding issues, along with new issues arising from the additional environmental information on the southern leg, fastlink and cumulative issues.

Please also note we have not yet received a copy of the appropriate assessment appraisal for the crossing of the River Dee SAC. Our advice on the route is therefore incomplete until such time as we have been able to review the appraisal's findings.

SNH Position

SNH advises that the proposed development is likely to:

- have a significant effect on the River Dee Special Area of Conservation (SAC). In accordance with the Habitats Regulations, the Scottish Government is, therefore, required to carry out an appropriate assessment, in view of the site's conservation objectives, to see whether it can be ascertained that the proposal will not adversely affect the integrity of the site.
- result in the need for licences under Regulation 44 of The Conservation (Natural Habitats, &C.) Regulations 1994, as amended, (the Habitats Regulations) with respect to bats and otters, which are European Protected Species.
- have adverse impacts on protected species in the wider countryside.
- have adverse impacts on habitats within the wider countryside.
- have adverse impacts on landscape character and visual amenity over certain sections of the route.

SNH Appraisal of the Proposals

In our opinion, a project of this scale and magnitude cannot be undertaken without having significant impacts on the natural heritage. We have identified that without the appropriate assessment appraisal for the River Dee crossing, our assessment and therefore our comments are by necessity incomplete. We have for the remainder of the route provided detailed considered, comments. Our advice regarding the Draft Road Orders and accompanying revised ES on natural heritage interests, excluding the River Dee crossing is detailed in Annex 1.

Throughout the consultation process we have recognised that to achieve the 'best fit' for the route and to reduce adverse natural heritage impacts mitigation measures will be key, we therefore welcome Transport Scotland's commitment to the identification of measures to reduce the scale of the residual impacts through the adoption of a range of additional mitigation approaches. These include a combination of the mitigation identified in the ES, the ongoing application of the principles set out in the Mitigation Vision Statement and the development of the Offset Mitigation Project.

Mitigation Vision Statement

As part of the design iteration, it was recognised at an early stage that there is a need for a clear statement on the mitigation principles to be applied when assessing the overall cumulative impacts and identifying adequate mitigation measures. SNH has been fully engaged in this process and has supported the development of the resulting mitigation vision statement and the process it sets out to explore the key principles and objectives for mitigation along the entire route of the AWPR, as well as in individual sections of the route. We are keen for this process to continue.

We also recommend that as elements of mitigation are further discussed and agreed that clarification is provided on how mitigation measures will be translated into the scheme construction. Clarity is required on how the different elements proposed as part of this process e.g. the Environmental Management Plan (EMP), the schedule of environmental commitments and species management plans are translated into the actual employer's requirements as part of the 'Design and Build' contract.

Offset Mitigation Project

SNH has also recommended and provided advice on a project examining and exploring the principles and methods for identifying mitigation actions offset from the route, and which would be able to assist in mitigating or compensating residual impacts. We seek further assurances as to the mechanism which will be available to implement these actions. SNH considers that the ability and commitment to carry out offset mitigation actions such as wetland creation, outwith the road corridor, is an important aspect of the overall development proposal.

Policy Context

In our letter of 9th March 2007, we indicated 3 broad principles which guide our view on transport. These three broad principles have guided and will continue to guide our comments on this proposal.

Conclusion

If you have any queries or require further information on any aspect of this letter, please do not hesitate to contact Erica Knott (direct dial: 01738 458674, email erica.knott@snh.gov.uk) in the first instance. We would also find it useful to organise a meeting to discuss our advice with yourself, the Managing Agents and the consultants in the near future, once you have had a chance to review this letter.

Yours sincerely

DAVID BALE

Area Manager, Grampian

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Annex 1 SNH's Detailed Appraisal of the Proposals

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1. Natural Heritage Interests Affected

Please refer to our letter of 9th March 2007 for a full list of the natural heritage interests affected. Our assessment of the revised 2007 ES has not identified any further natural heritage interests.

2. SNH Appraisal of the Likely Impacts of the Proposal on the Natural Heritage

2.1 Whole Route Issues

SNH recognises that steps have been taken to identify the 'best fit' for the route as the principle approach to attempting to reduce and/or mitigate impacts. Given the length of the route at approx. 46 km and the area of land take required to undertake the construction, it is, however, inevitable that there will be adverse impacts on natural heritage interests. SNH recognises that Transport Scotland is committed to the identification of measures to reduce the scale of the residual impacts through the adoption of a range of additional mitigation approaches. These include a combination of the mitigation identified in the ES, the ongoing application of the principles set out in the Mitigation Vision Statement and the development of the Offset Mitigation Project. The following paragraphs provide SNH advice to assist the mitigation process.

2.1.1 Mitigation Vision Statement

The Mitigation Vision Statement provides a clear framework in which issues connected with mitigation for specific features and / or cumulative issues will be addressed. SNH has indicated its willingness to support the application of generic mitigation measures. We will, however also continue to comment in detail on individual and specific mitigation measures for natural heritage interests.

2.1.2 Offset Mitigation

SNH very much supports and welcomes the commitment by Transport Scotland in seeking to secure mitigation projects which would help to address residual adverse impacts. These projects will seek to secure mitigation in areas offline from the route itself, to further minimise adverse residual impacts on natural heritage interests. We will continue to provide advice and comment on projects identified to secure long term, appropriate mitigation.

2.1.3 Schedule of Commitments / Employer's requirements

Within the ES, the schedule of commitments provides an indication of the mitigation measures which are to be adopted during the construction and operation of the route. In our detailed comments below, we indicate whether or not these commitments are likely to be effective. We also identify further measures that we consider should be adopted. We are however concerned as to how in practice the mechanism for these commitments will be incorporated into the design and build contract. We therefore recommend that a further section is included, detailing the requirements for the implementation of the schedule of commitments during the construction and operation of the route.

2.1.4 Environmental Management Plan (incl. species management plans)

As stated in our earlier response we welcomed the intention to produce an Environmental Management Plan (EMP). This document, will draw together the detailed mitigation measures for each section of the route. It is also intended that this EMP, will also bring together the individual species management plans e.g. red squirrel, badger, water vole etc. and identify how they will be applied in practice along the route. We very much welcome the production of these species management plans, and recommend that these are prepared as soon as possible in order to ensure that the mitigation measures identified are adequate and are fully incorporated into the design and build phase.

2.1.5 Environmental Clerk of Works

We welcome the intention to employ an Environmental Clerk Of Works (ECOW) to provide an overview of the mitigation works during construction. We would recommend that more than one ECOW is employed or the services of a multi-disciplinary team are used to ensure that there is adequate expertise in overseeing the mitigation for some of the more specialised areas of work

e.g. freshwater, species, landscape etc.. The role of this function should also be clearly defined and a clear timetable for the recruitment and retention identified – this should also consider the requirement of advice during pre-construction preparatory works.

2.1.6 Greenbridges

We welcome the innovative approach that has been taken to reduce adverse effects on natural heritage interests. One approach that is being taken forward is the construction of 'greenbridges'. Three greenbridges are proposed along the length of the route to promote wildlife movements and prevent road traffic accidents. We have however some concern that some of the assertions made regarding the suitability of these structures as mitigation for some species e.g. red squirrels. SNH would wish to give further comments on the design and suitability for individual species as the design is developed in association with the proposed Species Management Plans. Given that these structures are innovative within the context of Scottish, if not UK road schemes, we recommend that detailed post construction monitoring is carried out and the results made publicly available.

2.1.7 Aberdeen Airport

We are aware that British Airports Authority (BAA) will have been consulted on the scheme. In certain instances it may be that mitigation measures identified for natural heritage interests are at odds with the policies of safeguarding Aberdeen Airport. In those instances we would like to suggest that any conflicting measures / locations are identified and a meeting held in order to discuss a way forward.

2.1.8 SEPA Regulations

A number of the engineering activities will require to be assessed by SEPA under their regulatory functions under the Water Environment (Controlled Activities) (Scotland) Regulations 2005 (CAR). We are in liaison with SEPA in this regard, in particular the issue concerning the crossing of the River Dee SAC.

2.2 **European Sites**

2.2.1 **River Dee SAC - Southern Leg**

SNH considers that the development is likely to have a significant effect on salmon, freshwater pearl mussel and otter – all qualifying interests of the Special Area of Conservation. Impacts could arise from the construction of the bridge crossing, associated bankworks and the potential for sediment release and pollution. Consideration also needs to be given to potential impacts once the road is in operation, for example from surface water drainage.

In our letter of March 2007, we indicated the requirement for an appropriate assessment and we are aware that a report is currently under preparation. We will be able to advise further once we have received a copy of this report.

2.2.2 **Red Moss of Netherley SAC – Southern Leg**

As stated in our letter of 9th March, SNH considers that there will be no significant effect from the routing of the road, on any qualifying interest either directly or indirectly. Our advice is therefore that an appropriate assessment is not required.

2.3 **SSSIs**

Lily, Corby and Bishop's Lochs SSSI – Northern Leg

We welcome the changes made to this section of the route to ensure hydrological connectivity is maintained between Lily Loch and Red Moss, as a result of our earlier comments.

2.4 **European Protected Species**

The term European Protected Species (EPS) is normally applied when considering the specific requirements of Part III of the Habitats Regulations. Both otters and bats are 'European Protected

Species' under Regulation 39(1) of the Conservation (Natural Habitats &c.) Amendment (Scotland) Regulations 1994.

As there will be a requirement for licence(s) from the Scottish Government Licensing Team, the impact on the favourable conservation status of otters and bat species will need to be addressed.

It is indicated in the ES that 'ghost licences' will be prepared. Please note whilst we recognise what is intended by this term it would be preferable for it to be spelled out in full to foster wider understanding. For the benefit of clarity, we believe it refers to the process for identifying the detailed conditions that would need to be attached to any species licence. We also recommend the early involvement of the Scottish Government Licensing Team in this procedure.

Please note that for otter, there will be a need for assessment of impacts along the whole of the length of the proposed road as an EPS, as well as a specific assessment of the potential impacts on the species as a qualifying interest of the River Dee SAC.

2.4.1 Appraisal - Otter

In general terms, otters are probably one of the species least susceptible to the construction of the route, but only if adequate and effective mitigation as indicated in the schedule of commitments is put in place.

We have concerns that there is an emphasis on barriers and fencing to manage wildlife movements. Reliance on fencing to divert otter (and badger), movements is only likely to be effective for relatively short distances. In conjunction with this, the provision of mammal underpasses and the greenbridges are potentially in locations too far apart to prevent potential attempts to cross the AWPR and ultimately road traffic accidents, with potential consequences for the public as well as wildlife. We recommend that the distance between underpasses is examined to ensure that there are wildlife crossing points at suitable distances and locations along all sections of the route. Further detailed comments in relation to badgers on this aspect are included within the badger section below.

Our detailed comments in addition to the proposed mitigation include:

- In the Southern Leg at Ch. 106500 which is in close proximity to the Beanshill Burn and the Gairn Burn, there may be an issue of potential road traffic accidents due to the lack of provision of a safe otter crossing at this point. This needs to be considered further.
- In addition to the requirements for information to inform any licence conditions, the provision of an Otter Management Plan which details all mitigation measures should be provided. This should also link to the Environmental Management Plan and the schedule of commitments.

2.4.2 Appraisal – Bat Species

Our detailed comments on bats consider both the information contained in the September 2007 ES as well as the additional bat report received in October 2007.

The construction and operation of the AWPR is likely to impact on 5 species of bats, confirmed as breeding within the vicinity of the AWPR. A further 2 species, whose status in the area is less clear, may also be impacted. The route of the southern leg in particular is likely to cause destruction of roosts, severance and fragmentation of habitat and foraging routes as well as commuting routes for bats. Each species of bat has specific ecological requirements and whilst there are similarities in behaviour between species there will also be a need for individual requirements to be further considered.

We have previously stated concerns, that the significance given to bat roosts in the evaluation of bat habitats may lead to an underestimation of impacts and therefore result in inadequate mitigation. Our reasoning for this is that although all bat roosts are legally protected, a roost of 1 or 2 male pipistrelles, is arguably insignificant in biological terms compared with a critical, (but unprotected) foraging area or commuting route for an entire colony of breeding females.

The issue of generic mitigation not meeting the individual requirements for all bat species, is relevant and evident in the dimensions provided for culvert / underpass options. The dimensions provided may be suitable for Daubenton's, but are likely to be too small for some of the other species in the area - section 40.6.22 in the ES refers.

Detailed comments on the individual sections of the route are below:

- For all pre construction surveys and also to inform the licence considerations, actual roosts will require to be identified through emergence and dawn swarming of trees bat surveys and also winter survey work for hibernacula. The timings of these surveys should be used to inform both the mitigation, but also the construction work timeline.
- Please note bats are not attracted to sodium lighting, but only to white lighting.
- The assessment identifies the need for new tree planting. In order for this to be successful, there is a need to consider the timescales for such planting to minimise the short term impacts.
- Within the additional bat report, it would be useful if the survey maps could also identify the areas which were not surveyed, this will provide greater context from which to gauge connectivity issues.
- We recommend in particular, that a winter (hibernaculum) survey is undertaken due to the presence of an ice house at Kingcausie.
- Further details are required to assess the potential impacts on Leisler's bats. Please provide clear commentary as to the validity of the 2006 survey record, including the date of the sighting and the dates of any subsequent follow-up investigations and also identify whether or not any further survey work was undertaken at Rumlin's Fauld and did this include an Anabat survey?
- The high value of habitat around Kincausie for a number of species, but particularly bats is recognised within the ES. We would recommend that further consideration is given to realigning the route in this area to minimise the loss of woodland. In addition, there is a need for increased provision of wildlife crossing points, particularly a greenbridge in this area. A greenbridge would link the severed woodland at approximately ch. 101450 and facilitate movement by high flying species of bats, as well as a range of other wildlife. It is unlikely that the dimensions of the proposed culvert at ch.101470 will support use by high flying species of bats.
- In addition to the requirements concerning information to inform any licence conditions, the provision of a Bat Management Plan which details all mitigation measures should be provided. This should also link to the Environmental Management Plan and the schedule of commitments

2.5 National Species

2.5.1 Red Squirrel

Red Squirrels are listed in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and receive enhanced protection under the Nature Conservation (Scotland) Act 2004.

Appraisal

As stated in our March response letter, the AWPR will form an effective barrier around Aberdeen which will result in difficulties for species dispersal and survival Mitigation measures may assist in reducing these impacts. We welcome the significant effort to identify and address these impacts since our earlier response and the amount of work that has been undertaken to recognise the sensitivity of this species to the effects of the AWPR.

There are however still a number of outstanding concerns and issues that SNH wish to see further addressed, including:

- Issues regarding survey methodology and subsequent assessment in assessing the importance of populations where quantitative data has not been collected. This is likely to have a bearing on the detailed mitigation priorities that need to be applied.
- Recent local records suggest that red squirrels have been recorded at Culter House Woods and Road. Further consideration is now required to be given to habitat creation to strengthen links between Culter House Woods and Guttrie / Milltimber Woods.
- Use of 'greenbridges' by red squirrel. We are still concerned that there has been very little evidence provided on the active use of greenbridges by red squirrels. There is a need for further consideration to be given to the use of this concept within the AWPR as a 'pilot' study, and for adequate monitoring and analysis to be undertaken during construction, and into the post construction period, to provide information against which to measure their success. Identification as to how and who will conduct such work is also required.
- There is various mention of a 'Red Squirrel Strategy' that is to be developed in conjunction with SNH and others. Whilst we welcome the commitment for this strategy, there is a need to identify how further mitigation, identified as part of this process, will be incorporated into the schedule of commitments and carried out as part of the design and build contract.
- We also have concerns that there is limited recognition in the assessment of the potential short- falls, in the short term, in habitat replacement. In many instances pre-planting mitigation is proposed. In order for this to provide adequate alternative habitat for red squirrels at the earliest opportunity, there is a need to identify when such planting will be carried out in practice.
- As part of the Red Squirrel Strategy, detailed guidance is required on the timing and method for felling trees, within the overall project management timescale.
- The detailed mitigation for red squirrel, included within the Environmental Commitments, the Mitigation Vision Statement, the Red Squirrel Strategy and the Offset Mitigation project all need to be drawn together into the overall Environmental Management Plan. It is vital that those documents not already prepared, are completed shortly in order to influence the design and build contract and the overall project management timeline. SNH are seeking assurances as to how these mitigation measures will be implemented in practice.

Cumulative Impacts

It remains difficult to assess the species-specific implications across the whole route. A lot of dependency is placed on the provision of further information to be incorporated within either the evolving Red Squirrel Strategy and / or the Environmental Management Plan. The mitigation for red squirrel will require consideration to be given to full squirrel records (grey and red) in order to identify the impacts (adverse and beneficial) to the local population to further inform details for the proposed red squirrel conservation projects, as part of the Offset Mitigation.

2.5.2 Water Vole

Water voles are listed in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended by the Nature Conservation (Scotland) Act 2004) in respect of Section 9(4) of the Act only.

Appraisal

Further to our letter of March 2007, a route appraisal paper has been provided for the Fishermyre alignment section of the Fastlink, an area where water voles have been recorded. SNH welcomes the further consideration given to the mitigation for water voles in this area. We recommend that a Water Vole Management Plan is provided and any further recommendations for mitigation are incorporated into the schedule of commitments.

Detailed comments are as follows:

Northern and Southern Legs

- SNH are content that the survey work has identified that no water voles signs were recorded. The mitigation measures identified for general ecological and water habitat requirements should not prevent future recolonisation efforts by water voles.

- In the Southern Leg, we note a change in the assessment of suitable sites for water voles has changed from six in the December 2006 ES to two in the September 07 ES. Further detail to account for this change in the assessment is required.

Fastlink

- Water voles have been recorded within this section of this route at Fisherymyre. However the maps only show the fully surveyed areas and do not identify other places where other evidence was found for water vole presence. SNH request that the maps are amended to provide an opportunity to understand how the sites with positive records may be connected.
- We also recommend that the riparian zone for water vole is extended and is the same as for otter, i.e. 5m.
- The proposed mitigation for the water vole sites rely heavily on translocation and habitat creation. SNH support the habitat creation proposal, however we would wish to see further consideration given as to how best to retain connectivity between the severed habitats. This should include the replacement of the proposed culvert at Green Burn with a larger, wider structure (such as an under bridge) which would allow the retention of a riparian strip linking the habitats on either side of the new road.

2.5.3 Reptiles

Reptiles (adder, slow worm and viviparous lizard) are listed in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and received enhanced protection under the Nature Conservation (Scotland) Act 2004.

Appraisal

Whilst the ES acknowledges the limitations of the survey work undertaken, it still uses the results of this survey work to identify impacts and therefore mitigation. Whilst a precautionary approach also appears to have been adopted in relation to identifying impacts, the intention is to rely on generic mitigation measures for other species. This approach does not consider opportunities to manage sympathetically south facing embankments for reptiles or to take measures to avoid road kill where the route dissects good reptile habitat.

We recommend that where good habitat for reptiles (particularly adders) has been identified, consideration is required to be given to more direct mitigation measures e.g. fencing, habitat management, greenbridges and dry mammal underpasses to avoid RTA's.

2.5.4 Badgers

Badgers are protected under The Protection of Badgers Act 1992.

Appraisal

The AWPR will cause severance issues to a number of badger social groups located along the route of the AWPR. The ES has attempted to address this issue through the provision of dry mammal underpasses, greenbridges, barriers and directive fencing. Some of these measures have been designed specifically to reduce impacts on badgers, whilst other measures have been designed for other species, but will also benefit badgers.

As stated above within the otter section, we have concerns that there is an emphasis on barriers and fencing to manage wildlife movements. The Dutch publication *Provision For Badgers Against Traffic* (Vereniging Das & Boom, 1990) recommends that badger underpasses are at intervals of no greater than 250m in areas of relatively high badger density. We recommend that the distance between underpasses is examined to ensure that there are wildlife crossing points at suitable distances and locations along all sections of the route.

Critically, for badger tunnels to be effective with only minimal fencing, they need to be located precisely on existing badger runs. By incorporating frequent wildlife crossing points at carefully selected locations, including on the line of established badger runs, there will be a reduced requirement for badger/otter fencing overall. In our previous response we identified that further clarification was required in the choice of locations for underpasses and whether these had been based on existing badger paths.

We also recommend that the fencing specification for badger fencing follow the guidelines provided in the SNH booklet 'Badgers and Development'. This specification is a tried and tested design that is recommended both by SNH and *Scottish Badgers* (the Scottish non-governmental organisation dedicated to badger conservation).

Our detailed comments on the individual sections of the route are below:

Northern Leg

- Comparison of the badger survey map report with the badger mitigation maps, indicates that there are a number of areas where the distance involved in reaching an underpass is greater than the recommended maximum of 125m.
- In some areas of the route the assessment given to the level of importance of the badger populations present is at times underestimated, i.e. county when it should be regional etc, e.g. Section NL4. In Section NL 4 the ES identifies in two separate sections, a differing number of social groups recorded in this area. In section 10.2.303 four social groups are recorded and in section 10.3.203 only one social group is recorded. Please clarify which is correct.
- Between ch. 318100 – 318250, the badger fence appears to exclude badgers from the created scrub woodland on the west side of the AWPR. The provision of fencing in this area means that there is a distance greater than 400m between the existing badger route and the proposed underpass.
- Between the two over bridges at ch 318900 and 320200, a distance of 1km exists. This area has a high density of badgers with three social groups (E, F & G) present in the area, with a number of established paths.
- The distance between the mammal underpass at ch. 319250 and the wildlife overbridge at ch.319250 extends to 700m, yet there are seven badger paths identified between these two crossing points.
- Another badger hotspot is identified within the area between ch.323200 (River Don) and ch.325000, a distance of 1.8km. Clarification is sought as to whether or not there is provision for badger crossing points in this location e.g. Goval lade, Goval Bridge 3 and possibly the Buchan and Formatine Way. This location is also where social group K is identified for relocation to the south side of the road, although currently a large part of the territory is identified to the north side of the AWPR.
- Similarly going further west, there is a proposed culvert at Red Burn Moss , but there are four probable badger routes between the identified crossing points and this extends to 800m. This is also the case between ch. 32900 and 329500.
- In a number of locations where scrub planting is proposed the fencing identified appears to exclude access to it by badgers and other mammals. Please provide further clarity as to whether this is the case.

Southern Leg

- We previously recommended in our March response for the need for bait marking in carrying out the survey for the southern leg and fastlink. No bait marking has been completed and no justification has been provided.
- There are also sections of the route where the distance between wildlife crossing points are too far. This has been picked up by comparing the badger activity maps with the mitigation maps.

Fastlink

- The ES indicates that the soils are thin in this section and may not support a significant earthworm population and therefore the habitats may be sub optimal. SNH suggests that this statement needs to be further justified as we are aware that badger densities between Stonehaven and Peterculter are similar to those north of Aberdeen. The use of land classification maps along with the badger density mapping may assist for this.
- Clarification is sought as to the extent of fencing and barriers along this section. The maps indicate that a mixture of fencing and dry stone dykes will be used along the entire route of the Fastlink, yet section 7.1.2 indicates that the entire route will be fenced. Furthermore, if constructed across the route of a traditional badger path, it may be that badgers would endeavour to climb a drystone dyke.

- As detailed above, we have concerns that an over reliance on fencing / barriers will not prevent road traffic accidents, as it will never be possible to predict movements at weak points at junctions, farm access point etc.
- We recommend that the badger activity maps provide the basis for the precise location of mammal underpasses etc. This is likely to result in the requirement for less fencing etc.

We welcome the intention to provide a Badger Management Plan.

2.5.5 Birds

Our detailed comments on birds consider both the information contained in the September 2007 ES as well as the additional breeding bird report received in October 2007.

The approach taken to avoid impacts on breeding and wintering bird interests is acceptable to SNH provided that the mitigation as detailed in the ES and additional October report is carried out.

2.6 Local Interests

2.6.1 Habitats

A number of habitats will be directly or indirectly affected by the construction and operation of the AWPR.

Water Environment

- As part of the route construction, a number of watercourses will have extensive engineering operations carried out including bridging, realignments and culverting. SNH has previously stated our policy against culverting of watercourses as it can have adverse impacts on ecological interests. The main watercourses affected by such engineering works are the Bogenjoss, Craibstone, Gough, Green, Kingcausie, Burnhead and Limpet Burns. Apart from the Limpet Burns, there is an intention to culvert sections of all these burns as well as some realignment.. Further justification on the engineering design at these locations is required. The potential impact of the culverting and realignment on *Brachyptera putata* – a stonefly, is also detailed below.

Wetlands

- We are concerned that planting of trees and shrubs is considered to be adequate compensation for losses of wetland and wetlands habitats.. This general environmental mitigation is not acceptable. SNH is strongly of the opinion that like should be replaced with like. Accordingly, wetland loss should where possible be mitigated by wetland creation and / or habitat enhancement. We consider this is a form of mitigation that would be particularly suitable for offset mitigation projects.
- During the construction stage, further consideration needs to be given to the maintenance of hydrological integrity for both watercourses and wetlands. Restricting silt input into wetland areas during and after construction is as important as prevention of siltation in watercourses.
- In section NL3 (N38 and N42), impacts on wetlands connected to the Bogenjoss Burn are not mentioned within the mitigation.
- At Hare Moss, there will be a direct loss of peat from the southern edge, and possible hydrological consequences across a larger area. Mitigation for the loss of this peat should consider alternative sites to restore degraded peatland to an active state. This could be achieved by the offset mitigation projects.
- We have previously asked for consideration of an alternative location for the proposed SUDS at Hare Moss. The reason behind this was to protect the marshy / marshy grassland, linking the SUDS to the other wetland habitat by locating and linking it into the fields cuts off by the route alignment.
- Loss of wetland at Crynoch Burn is not compensated for and at Rotten O' Gairn the wetland loss is compensated for by woodland planting.

2.6.2 Species

The presence of *Brachyptera putata* (*B.putata*), a species of stonefly and a UK BAP priority species, is recorded in the Gough, Bogenjoss, Craibstone and Green Burns. As stated in our

previous response we have indicated that we have concerns on the impact of this species as the proposed culverting will reduce the extent of habitat availability to this species.

- Further consideration and justification for the proposed culverting is required.
- We had previously asked for further survey work to identify the extent of potential habitat loss, this information has not yet been made available.

2.6.3 Non Statutory Nature Conservation Sites

We welcome the intention to produce habitat management plans for inclusion in the Environmental Management Plan.

2.7 Soil

In our earlier response we made reference to the requirement for more detailed assessment to be given to the risk of damage to soils arising from the AWPR. Whilst we note mitigation is proposed in relation to safeguarding the agricultural capability of soils, protection of soils generally is not specifically mitigated for.

We recommend that further consideration is required to be given to the storage and management of all soils throughout the scheme. Further details on good practice guidance on the treatment of soils pre, during and post construction of the road including mitigation measures for soil restoration, should be addressed within the Environmental Management Plan.

2.8 Landscape and Visual Interests

The landscape and visual impact assessment has now been completed for all sections of the route (northern and southern legs, fastlink and cumulatively).

Please note SNH requested further visualisations of the River Dee crossing to be prepared in October 2007, these visualisations have not yet been forwarded to SNH for our assessment and as such the comments on the Southern Leg which are relative to the River Dee crossing are incomplete.

Whole Route Issues

The construction of the AWPR is to be undertaken as a design and build contract. The provision of the schedule of commitments within the ES is to provide a mechanism in which the commitments identified as part of the EIA process are incorporated into the contract(s) / employer's requirements of the successful contractor(s). There are a number of aspects on which SNH make further recommendations to ensure that impacts arising from the AWPR are reduced, albeit not removed. These include:

- SNH recommends that the provision of the proposed design handbook should be incorporated into the schedule of commitments. The contents of the design handbook should cover aspects such as bund and rock cutting operations and design, noise barrier design and selection, SUDS micro-siting and design and compatibility of ecological and landscape and visual mitigation measures. We also recommend that the statutory consultees are consulted on the preparation and approval of the handbook.
- As part of the design handbook and overall mitigation package, SNH would support the inclusion of the Acoustic Green Barrier – a noise barrier comprising woven willow. The identification and agreement of the most appropriate locations for this type of noise barrier should be agreed and included within the Schedule of Commitments / employers requirements.
- Similarly the design of the SUDS proposals for treatment ponds and retention basins, should explore alternatives to the proposed organic, curvilinear shapes where appropriate to the landscape context. There may be opportunities to provide alternative designs including the provision of more linear features to reflect the local landscape pattern, but also to avoid repetitive design features across the entire length of the route.

- A large part of the mitigation for both landscape and ecological impacts relies on mass tree / shrub planting, particularly in close proximity to junctions and bridges. Further consideration of planting should be provided in the road design manual to help avoid accentuating features of the road.
- Further advice should also be included within the design handbook on the proportion / percentage species mix for mass planting areas, to reflect local site conditions. This will promote best establishment practices and reduce future maintenance issues.

Northern Leg

In our letter of 9th March 2007, we provided detailed comments on the Northern Leg assessment. Since then a number of amendments have been made or further justification provided which have now addressed most of our concerns.

We do however recommend that further consideration is given to the issue of the proposed junction at North Kingswells. Our concerns relate to the scale and need for this proposed junction with a minor road. The location for this proposed junction is close to a number of other alternative road junctions in close proximity. Given the likely impacts, we again question the rationale for this junction.

Southern Leg

The Southern Leg would have cumulative impacts on the Aberdeen City's Areas of Local Landscape Significance (ALLS) which comprise the majority of the landscape beyond the defined urban edge. It is considered that there would be a significant negative impact on the quality of the landscape elements which contribute to the distinctiveness of the landscape surrounding Aberdeen - this includes in some instances the contribution they make to the setting of the City. There will also be a reduction in the condition of the greenspaces that buffer the satellite settlements to the west and southwest of Aberdeen.

The River Dee Area of Landscape Significance (ALS) follows a linear corridor along the river valley stretching from Garthdee to Funach Wood (approx. 20km). There would be significant local adverse landscape and visual impacts on a section of the ALS, where the AWPR crosses the River Dee at Milltimber. Whilst the ALS covers only the valley to the south of the river lying within Aberdeenshire, SNH has considered the impact of the river crossing on the entire valley landform and not just that lying within the ALS designation in Aberdeenshire.

The River Dee crossing route crosses the river at a separate grade, necessitating cutting in on the side valleys and an embankment across the floodplain with a new structure spanning the river itself. The magnitude of change will be significant due to cuttings up to 14m deep, embankments up to 11m high and the concentration of these changes within a 3km valley section. SNH considers there will be a localised significant adverse impact on the ALS. We will be able to provide further comments on this section of the route once the further visualisations are prepared.

Detailed Comments

Charlestown - Clean Hill Wood (approx Ch 207000 - 100400)

The area comprises Open Farmland type with small extents of Woodland Farmland type. There are small concentrations of dwellings, as well as infrequent scattering of dwellings and farm clusters. The main impact will arise from the convergence of routes at Cleanhill, including the Southern Leg and Fastlink.

Our comments include:

- We seek further clarity on the rationale for the minor road proposed to the west of Clarkston junction.
- At Greenhowe, the species planting mix is identified as mixed woodland to integrate with adjacent planting. The adjacent planting appears to be coniferous woodland, we therefore recommend that a planting mix with a higher proportion of coniferous species is more appropriate.

- SNH supports that the area adjacent to Duff's Hill has incorporated graded out, less steep slopes to fit with the landscape, however SNH recommends that the planting should be re-orientated i.e. a more north – south orientation to reflect the field boundaries.
- At the Bishopston Accommodation Overbridge, we are unsure as to the reason for the section of the road to the dead end immediately to the south.
- At Ch. 201000 a section of noise barrier is identified at Whitestone. We recommend that dry stone dyking should be utilised if possible, to tie in to the adjacent walls. This will also reflect the local field pattern.
- Burnhead Overpass, we recommend that the existing truncated drystone walls, adjacent to the roads which are to be realigned, are relocated in the immediate vicinity. This in particular applies to the area to the south of Burnhead and to the north at Blair –Crynoch.
- Cleanhill Junction – We recommend that further consideration be given to the SUDS location. The current location and design of the SUDS could be altered to create a more compact junction through the separation of SUDS into two smaller schemes located into the lower areas to the northeast and southwest of the junction. This would reduce the severity of adverse visual impacts on Burnhead.

Cleanhill - crest of Beanshill (approx Ch 104000 - 105000)

The landscape character across the River Dee valley varies between the flat open floodplain landscape on the valley floor contrasting with the undulating wooded farmland slopes. Beyond which, the upper slopes of Craingles and Beanshill provide the upper slope and physical, visual containment to the valley.

As stated above, SNH is currently awaiting further visualisations in relation to the River Dee crossing. Comments on the bridge alignment and design will be forwarded as soon as we have received these further visualisations.

- Further details are required on the noise barriers to be used on either side of the road at the Milltimber junction.
- Similarly the retention wall at section O-O, A93 overbridge, there is an opportunity for this wall to become a 'green' vegetated wall.
- We recommend the continuation of the planting of extra heavy standard trees along the existing dyke to west by the golf course to link into the proposed avenues to the north and south.

Crest of Beanshill – lower slope of Gairnhill Wood (approx Ch 105000 - 107500)

This area comprises high ground forming distinctive skylines. The local landscape character types for Beanshill, Auchlea and Fifeshill also comprise elements of woodland and openness, with the Broomfield Wooded Farmland comprising undulating agricultural landscape.

- The section of drystone wall at ch.105500 appears limited and is not repeated on the west side of the AWPR or further north / south to tie into the existing field pattern. Clarification is required, as to whether this is to avoid accentuating the road alignment or is for the visual benefit of residents in Westfield.
- SNH recommends that greater use of standard tree planting is used to provide a focal view from the AWPR on embankments and in areas of immature woodland. This would also tie in with current lines of trees which will be disrupted by the route of the AWPR e.g. at Broomwood.
- We would also recommend that the proposed extra heavy standard tree planting at Ch 108000 is extended to screen views east and west from Ben View, Lythewood, Tigh na Bruaich and Backhill dwellings.

Kingswell wooded areas, Fifeshill, Clinterty – West Brimmond (approx Ch 107500 - 111200)

This landscape area is typified by the Kingswell wooded farmland LLCA and is a typically rural, diverse landscape with a small to medium irregular field pattern. The fields are bounded by stone dykes and pronounced mature deciduous tree belts.

The main impacts arising from the AWPR will be the landscape and visual impacts associated with the A944 South Kingswells Junction and the grade separated junction and the fragmentation to the field patterns and landform associated with the alignment to the north of Fairley.

- South Kingswells junction either side of Ch.108500. The drawings currently suggest that there will be no views from one side of the A944 to the other. Please clarify if this is the case, and if so whether any other alternative design options were considered.
- The SUDS at this same junction are proposed in just one area. Consideration should be given to separating into different areas to reduce proximity to Westhome. The area in lower topography to the southwest may be feasible for consideration.
- The minor road to the west of the SUDS scheme giving access to Kingsford Industrial Units and West Hatton is on an embankment. The adjacent roundabout, to this minor road appears to be below or at grade. SNH recommends that further consideration is given to the vertical alignment of the minor road, relative to the elevation to the roundabout.
- The consideration of the route alignment in the area of Cloghill and Fairley. The route has undergone further realignment increasing the buffer distance between the road and the Consumption Dyke. We have previously stated it would be beneficial to examine the merits of moving the route further east at this location and also at Derbeth to further minimise the landscape impacts. We would be keen that further realignment was examined to avoid the wooded farmland and to avoid disrupting the distinctive landscape patterns within the area.

Fastlink

The assessment of the landscape and visual impacts for the Fastlink causes concern, particularly in regard to the discussion on 'susceptibility' and the contribution it makes to overall landscape sensitivity. In some sections of the assessment the description and justification are not that apparent e.g. Hill of Megray and Blaikiehill / Cleanhill landscape character assessments. The apparent differences in weighting given to different factors in the individual assessments of sensitivity of a number of the character areas, varies resulting in some of the attributes conflicting. This then leaves further questions as to how the individual sensitivity ratings can be combined to make the overall sensitivity rating. We think this could lead to the underestimation of the sensitivity.

There are a number of issues on the assessment of a number of the landscape character areas where we have identified these methodological concerns. We would be happy to discuss these further to ascertain whether or not any changes would fundamentally alter the overall levels of impacts and significance identified.

Stonehaven – Cookney (approx Ch 00 – 6000)

This general area comprises Open Farmland split into 2 local areas - Megray and Muchalls. The former typically comprises locally prominent hills, which form an integral part of the physical and visual setting to the north of Stonehaven. Open scale with irregular field patterns, there is also a mature deciduous tree belt which forms a prominent feature in the landscape. Muchalls comprises medium scale, geometric field patterns and a more open character which is emphasised by the remnants of stone dykes and the elevated plateau with undulating landforms. Incising these landscapes there are two valleys: Glenury and Burn of Muchalls.

The route alignment crossing the slopes of the Hill of Megray will have impacts on the wider setting of Stonehaven. The extent and scale of embankments required to cross the Kempstone plateau and the complexity and scale of the route corridor to the east of Cookney are also likely to have adverse effects.

- Extent of cutting at Megray is considered to be an underestimation of severity of impacts even with the proposed mitigation. The grading out of cuttings will still result in moderate adverse impacts even after 15 years. It is likely that the AWPR will introduce a new linear feature which could compete with the existing prominent mature tree line which runs up the hill slope.
- We support the proposed mitigation to ease out embankments at Kempstone and Blaikiewell and the linear design of the swales Kempstone Hill.

- At Strathgyle Cottage there is no description of the proposed barrier. We would recommend that this is a dry stone dyke to reflect sections of dykes on the west side of the AWPR. Similarly at the Allochie Underpass, there is an opportunity to tie works into existing drystone dykes.
- The proposed siting and design of the retention ponds is welcomed as this broadly reflects the existing line of the Burn of Muchalls.
- We would recommend that the Cookney Overbridge is further considered particularly to see if the road could go deeper within a cutting. This would reduce the significant embankments to the east around North Cookney Farm.
- There are a number of questions in relation to the treatment of existing and minor roads in and around North Cookney. The existing road at North Cookney is to be realigned onto embankments. This will increase the landscape and visual impacts. We also question the need for the existing rural road between North Cookney Croft and the junction to the north to be realigned.

Cookney – Blaikiewell (approx Ch. 6000 – 11500)

This landscape is typically a rounded topography comprising the smooth slopes of Cookney, Berry Hill and Stranog Hill. This open landscape is reinforced by the elevated location, which partially includes rough pasture land and limited smaller woodland blocks. Going further north the landscape is a gently rolling landform with large scale geometric field patterns enclosed by stone dykes.

The AWPR crossing the plateau landform on the scale and extent of embankments will introduce a new landscape and visual element.

- Between Greens of Crynoch and Blaikiewell Farm at between ch. 10300 and 10920, we would recommend that the dykes extend onto the new slopes and up to the edge of the AWPR.

The access road for Blaikiewell, should be further considered as to whether this route could come off at the Cleanhill junction rather than the Stranog underbridge to reduce the extent of new access road required to the west of the AWPR route.

2.9 Access and Recreation Interests

SNH welcomes the assessment to evaluate impacts on pedestrians, cyclists and equestrian and community effects. This assessment has given due regard to both the requirements of the Land Reform (Scotland) Act 2003 and the Disability Discrimination Act 1995.

The Provision under Part 1 of the Land Reform Act, means that both Aberdeenshire Council and Aberdeen Council have a duty to draw up core path plans. We would therefore recommend that ongoing dialogue regarding the mitigation for recreation and access is maintained with the Council's access officers.

Appendix A Government Legislative and Policy requirements for European Sites and European Protected Species

European Sites

The River Dee's status as a SAC under the EC Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna (the "Habitats Directive"), means that the Conservation (Natural Habitats, &c.) Regulations 1994 as amended, (the "Habitats Regulations") apply. The requirements are summarised in SE Circular 6/1005 as amended June 2000 and include at paragraph 12,

"The Regulations (48) require that, where an authority concludes that a development proposal unconnected with the nature conservation management of a Natura 2000 site is likely to have a significant effect on that site, it must undertake an appropriate assessment of the implications for the conservation interests for which the area has been designated."

The need for appropriate assessment extends to plans or projects outwith the boundary of the site in order to determine their implications for the interests protected within the site.

Under regulation 48 of the Habitats Directive, this means that the Scottish Government as competent authority, has a duty to:

- determine whether or not the proposal is directly connected with or necessary to site management for conservation; and if not,
- determine whether the proposal is likely to have a significant effect on the site either individually or in combination with other plans or projects; and, if so, then
- make an appropriate assessment of the implication (of the proposal) for the site in view of that site's conservation objectives.

The competent authority can only agree to the proposal under Regulation 48 after having ascertained that it will not adversely affect the integrity of the site. If this is not the case, and there are no alternative solutions, the proposal can only be allowed to proceed if there are imperative reasons of overriding public interest, which in this case can include those of a social or economic nature. If proposals are allowed to proceed in accordance with Regulation 49 then it should be noted that Regulation 53 requires that Scottish Ministers shall secure that any necessary compensatory measures are taken to ensure that the overall coherence Natura 2000 is protected.

European Protected Species

Legal Position

Regulations 39 and 43 of Conservation (Natural Habitats &c.) Amendment (Scotland) Regulations 1994 (as amended) (Habitats Regulations) provide full protection for certain animal and plant species. The species identified above are referred to as European protected species and are listed on Schedules 2 (animals) and 4 (plants) of the habitats Regulations.

This means it is illegal to:

- Deliberately or recklessly capture, injure or kill a European protected species of wild animal or to deliberately or recklessly (i) harass an animal or group of animals; (ii) disturb an animal while it's occupying a structure or place used for shelter or protection; (iii) disturb an animal while it's rearing or otherwise caring for its young; (iv) obstruct access to a breeding site or resting place, or otherwise deny the animal use of the breeding site or resting place; (v) disturb an animal in a manner that is, or in circumstances which are, likely to significantly affect the local distribution or abundance of the species to which it belongs; (vi) disturb an animal in a manner that is, or in circumstances which are, likely to impair its ability to survive, breed, or reproduce, or rear or otherwise care for its young

- Deliberately or recklessly take or destroy its egg
- Deliberately or recklessly disturb any cetacean
- Damage or destroy the breeding sites or resting places of such animals
- Deliberately or recklessly pick, collect, cut, uproot or destroy European Protected Species of wild plant

Where it is proposed to carry out works which will affect European Protected Species or their shelter/breeding places, whether or not they are present in these refuges, a licence is required from the licensing authority (in this case likely to be Scottish Executive). It is strongly advised that you refer to the Scottish Executive information on the current interim licensing arrangements, which can be found in the document *European Protected Species, Development Sites and the Planning System: Interim Guidance for Local Authorities on Licensing Arrangements*, (October 2001) before applying for a licence. Copies of this are available at <http://www.scotland.gov.uk/library3/environment/epsq-00.asp> or by writing to the Species Licensing Team, Countryside & Natural Heritage Unit, 1 H South, Victoria Quay, Leith Edinburgh, EH6 6QQ or by telephoning 0131 244 7381.

As highlighted in the Interim Guidance, three tests must be satisfied before the licensing authority can issue a licence under Regulation 44(2) of the Conservation (Natural Habitats &c.) Regulations 1994 or Regulation 14 of The Conservation (Natural Habitats &c.) Amendment (Scotland) Regulations 2004 to permit otherwise prohibited acts. An application for a licence will fail unless all of the three tests are satisfied. The three tests involve the following considerations:

- Test 1 - The licence application must demonstrably relate to one of the purposes specified in Regulation 44(2) or Amendment Regulation 14. For development proposals, the relevant purpose is likely to be Regulation 44(2)(e) for which Scottish Executive is currently the licensing authority. This regulation states that licences may be granted by Scottish Executive only for the purpose of *"preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment."*
- Test 2 - Regulation 44(3)(a) states that a licence may not be granted unless Scottish Executive is satisfied *"that there is no satisfactory alternative"*.
- Test 3 - Regulation 44(3)(b) states that a licence cannot be issued unless Scottish Executive is satisfied that the action proposed *"will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range"* (Scottish Executive will, however, seek the expert advice of Scottish Natural Heritage on this matter).

Consideration of European Protected Species must be included as part of the planning application process, not as an issue to be dealt with at a later stage. Any planning consent given without due consideration to these species is likely to breach European Directives with the possibility of consequential delays or the project being halted by the EC.