

To:**CC:**

LT520 Cambushinnie 400kV Substation – Memorandum

1. Introduction

AECOM was appointed by SSEN Transmission to undertake ecological surveys and assessment for the proposed Cambushinnie Substation (the 'Proposed Development'). This memorandum sets out the opinion of AECOM regarding Habitats Regulations Appraisal (HRA) for the Proposed Development. In summary, there are not considered to be any likely significant effects on European sites, and it is not considered necessary to produce any fuller HRA reporting.

2. Summary description of the Development

The proposed substation is approximately 325 m south-west of an existing substation. Both sit within commercial forestry plantation, dominated by non-native conifers at various levels of maturity, with occasional small patches of open habitat.

A short section of underground cable (UGC) is required between the proposed and existing substations, again within the commercial forestry plantation. Adjustments to an existing overhead line (OHL) are also proposed, including one temporary tower (which will duly be removed) and one (possibly two or three) new permanent OHL towers and associated cables. However, all these OHL adjustments will be beside the proposed substation in the same plantation.

A proposed permanent haul road largely follows an existing track from a point on the B8033 approximately 800 m south-west of Braco. The majority of this haul road travels beside further commercial forestry plantation, and a few small agricultural pasture fields. A small additional section of permanent haul road is proposed approximately 160 m south of Braco – together with a temporary compound of approximately 50 x 50 m, this is located in agricultural pasture fields between the A822 and B8033.

3. Effects on European sites

3.1 Special Areas of Conservation

3.1.1 Relevant Special Areas of Conservation

Special Areas of Conservation (SACs) (and their summarised qualifying interests) within 20 km of the Development are as follows:

- Shelforkie Moss SAC – Annex I active and inactive raised bog;
- River Teith SAC – salmon *Salmo salar* and lampreys (*Lampetra/Petromyzon* species);
- Kippenrait Glen SAC – Annex I base-rich woodland on rocky slopes;
- Glenartney Juniper Wood SAC – Annex I juniper *Juniperus communis* on heaths or calcareous grassland;
- Upper Strathearn Oakwoods SAC – Annex I western acidic oakwood; and,
- Flanders Mosses SAC – Annex I active and inactive raised bog.

The closest of the above SACs to the Development is Shelforkie Moss SAC, approximately 1.3 km to the east. The others are 5 km or further from the Development.

3.1.2 Surface water impacts

Shelforkie Moss SAC is separated from the Development by various watercourses including the River Knaik, and the common confluence of surface waters from the Development and the SAC is downstream on the Allan Water. Therefore there is no hydrological connectivity between the Development and Shelforkie Moss SAC with regard to discharges into surface waters. The same applies to Kippenrait Glen SAC (with the common confluence much further south near Dunblane) and to Flanders Mosses SAC (for which the common confluence is many kilometres downstream of the SAC near Stirling). Glenartney Juniper Wood SAC and Upper Strathearn Oakwoods SAC are in the River Earn catchment, rather than the River Forth water catchment, with no hydrological connectivity at all to the Development. Therefore there is no possibility of effects on qualifying habitats in these SACs through surface water contamination. Moreover, there is no likelihood of significant contamination of surface waters by the Development in the first instance because: a) it is reasonable to expect adherence to standard pollution controls during construction as per Scottish Environment Protection Agency (SEPA) guidance, and b) the Development is not a type that could cause significant pollution during construction or operation.

Surface waters from the Development vicinity do ultimately meet the River Forth section of the River Teith SAC near its downstream end. However, this is following dilution along approximately 20 km of intervening rivers and, given the same reasonable expectation of adherence to SEPA pollution controls, and that the Development is not a type that could cause significant pollution. Notable fish species associated with the River Teith SAC could theoretically be present within some of the watercourses within the Site and the surrounding area; however, fish will be suitably protected via embedded mitigation measures.

Given the above, there is no likelihood of significant contamination of the River Teith SAC via surface waters, and therefore no likelihood of significant effects on the qualifying fish species.

Consequently, there is no likely significant effect on any SAC through surface water impacts.

3.1.3 Other impacts

There will be no direct habitat loss within any SAC because the Development is not close to any SAC.

The Development is sufficiently far from all SACs that construction airborne pollution is not a possible effect. Since there will be no airborne pollution during operation (excepting very insignificant emissions from maintenance activities), there is also no possibility of operational airborne pollution effects on any SAC.

There is no other means by which the Development could cause effects on the qualifying habitats or fish species of the above SACs. There is also no reason to expect that effects could be caused on SACs beyond the standard 20 km search distance.

3.1.4 Summary of effects on SACs

It is concluded from the above that there are no likely significant effects on any SAC.

3.2 Special Protection Areas

3.2.1 Relevant Special Protection Areas

The only Special Protection Area (SPA) within 20 km of the Development is South Tayside Goose Roosts SPA, for which the qualifying interests are greylag goose *Anser anser*, pink-footed goose *Anser brachyrhynchus* and waterfowl assemblage (all non-breeding), and wigeon *Anas penelope* (breeding).

This SPA overlaps Shelforkie Moss SAC at its western end, and is therefore also 1.3 km from the Development at closest. It comprises three widely-separated patches. The closest includes the lochs known as Lower Rhynd and Carsebreck Loch. The second-closest is Pond of Drummond, approximately 9 km north-east of the Development. The third patch contains Dupplin Loch and Pitcairnie Loch, over 21 km to the east.

3.2.2 Loss of functionally-linked supporting habitat

Greylag and pink-footed geese associated with SPAs often use agricultural fields in the region around such SPAs, in particular pasture fields, which can then constitute functionally-linked supporting habitat for the relevant geese.

However, in this case it is clear that loss of functionally-linked habitat cannot lead to a significant effect. Firstly, the total permanent loss of pasture (arising only from the shorter section of new haul road approximately 160 m south of Braco) amounts to only 0.25 ha (0.0025 km²). Secondly, there is an abundance of similar or more suitable pasture fields around the SAC. For example, considering only the land between the A9 (from Greenloaning eastwards to Blackford) and the A822 (from Greenloaning northwards past Braco to Muir of Orchil), and considering only brighter-green pasture on current aerial imagery, there are approximately 5.4 km² of such pasture, often in larger flat fields that geese prefer (for increased safety from ground predators). The permanent loss amounts to 0.04% of this extent of habitat, with much more suitable habitat further afield (including around the other parts of the SPA and extensively between the different parts).

Other habitat affected by the Development comprises forestry plantation or small areas of habitat closely associated with it, and therefore of no value to the qualifying birds of South Tayside Roosts SPA.

Consequently, there is no likely significant effect from loss of functionally-linked supporting habitat of geese associated with South Tayside Goose Roosts SPA. Whilst certain other bird species might occur as part of the general qualifying waterbird assemblage and might at times also use pasture fields for foraging (such as curlew *Numenius arquata*), the same arguments apply of negligible habitat impact and plentiful local abundance of such habitat. The other qualifying species (wigeon) does not use such pasture anywhere near as often or as distantly from standing waters as geese, and is very unlikely to make any use of the two fields affected by the haul road.

3.2.3 Disturbance of qualifying birds using functionally-linked supporting habitat

It is possible that greylag and pink-footed geese (and possibly other species, such as curlew) associated with South Tayside Goose Roosts SPA could be disturbed during construction if present in or close to the relevant fields during construction. However, similarly to the argument made above in Section 3.2.2, there is such an abundance of similar and often more suitable pasture fields around the nearer part of the SPA, and much more around the two other parts of the SPA, and between the different parts, that there is clearly no likelihood of a significant effect.

3.2.4 Other impacts

There will be no direct loss of habitat in South Tayside Goose Roosts SPA or any other SPA, because the Development is not close to any SPA.

For the same reasons given above in Section 3.1 for SACs, there is no possibility of surface water or airborne pollution of South Tayside Goose Roosts SPA, during construction or operation.

There is no other means by which the Development could cause effects on the qualifying bird species of SPAs. There is also no reason to expect that effects could be caused on SPAs beyond the standard 20 km search distance.

3.2.5 Summary of effects on SPAs

It is concluded from the above that there are no likely significant effects on any SPA.

4. Conclusion

Given the points made in Sections 3.1 and 3.2, it is concluded that there are very clearly no likely significant effects on any European site, and no need to proceed to any more detailed HRA reporting.

It is ultimately for the competent authority, in liaison as necessary with NatureScot, to decide on HRA-related matters, however it is unlikely that there would be disagreement with the conclusion stated here.