TOWN AND COUNTRY PLANNING SCOTLAND ACT 1997

TOWN AND COUNTRY PLANNING (INQUIRIES PROCEDURES) (SCOTLAND) RULES 1997 AS AMENDED

OUTLINE PLANNING PERMISSION FOR GOLF COURSE AND RESORT DEVELOPMENT ON LAND AT MENIE HOUSE, BALMEDIE, ABERDEEN

SUMMARY PRECOGNITION OF

STEWART ANGUS BSc (Hons), Dip.Ed.

Policy & Advice Manager
Scottish Natural Heritage, Inverness

Evidence on behalf of Scottish Natural Heritage

(DPEA REFERENCE CIN/ABS/001)

19 May 2008

Scottish Natural Heritage
16/17 Rubislaw Terrace
Aberdeen
AB10 1XE

INTRODUCTION

1. I am Stewart Angus, Policy & Advice Manager in SNH responsible for coastal ecology advice.

2. I have occupied this post since 1997, with involvement in international dune science since 1991. I have published two peer-reviewed books, and 14 peer-reviewed scientific papers.

3. I am on the Editorial Board of the international *Journal of Coastal Conservation* and Honorary Senior Lecturer in the Geography and Environment Department of Aberdeen University.

4. In my Precognition I will outline:

   - Foveran Links SSSI and its reliance on processes and dynamism
   - The context of the SSSI and the wider development
   - The dune habitats, their inter-relationships, and the importance of bare sand
   - The development's impact on the SSSI's ecological interest
   - The development's impact on wider habitat interests.

Foveran Links SSSI

5. The development affects the southern third of this SSSI which is an outstanding example of the relationship between processes that shape landscape and the way habitats adapt to changes in these processes. These habitats also have individual value.

6. Ecologically, the main processes involve relationships between climate, sand movement, water within sand, and topography of land beneath sand. The result is a constantly changing landscape.

7. More stable sand is colonised by vegetation, classed as 'mobile', 'semi-fixed' and 'fixed' with increasing stability. The SSSI comprises a complete sequence of stability.

8. The SSSI:

> *contains extensive areas of mobile foreshore and sand dunes as well as fixed dunes, dune pasture, marshes and heath. The relationship between various plant communities and sand stability is clearly shown and the continuing movement of sand masses allow direct observation of these interactions.*
> *Although closely linked and similar to the Sands of Forvie and Ythan Estuary NNR to the north, the site does contain several species and communities which are absent from or less well represented in the NNR.*

The vegetation of the dune hollows and pasture, some of which are grazed, are especially interesting. (SNH1)

Dunes outwith the SSSI

9. SSSI characteristics are to some extent duplicated between the SSSI and Balmedie (referred to hereafter as South Menie). Although the movements of sand are less dramatic (except the Balmedie sand sheet), ecological effects of past sand movement are still evident. South Menie habitat quality is high, adding considerably to the integrity of the unit. The SSSI plus South Menie is more valuable than the sum of the parts.

Ecological importance of the development site

10. The SSSI and development site form part of a unit stretching from Ythan to Bridge of Don, conforming to Dargie's "Newburgh to Bridge of Don" site assemblage in his Sand Dune Vegetation Survey of Scotland (SDVSS) (SNH22,23). This work was commissioned by SNH to map and describe the vegetation of Scottish sand dunes using the National Vegetation Classification (NVC).

11. High conservation interest was noted thus:

    In addition to … Foveran Links SSSI, much land in this site is of very high nature conservation interest. The mobile dune environments, acidic grasslands and acidic slacks are all notable … every attempt should be made to keep existing semi-natural conditions in their present form and dynamism." (SNH 23)

12. At 1083ha, Newburgh-Bridge of Don is tenth-largest Scottish sand dune with 2.16% of Scottish dune extent.

13. The relationship between habitats and processes is critical to the natural heritage interest of within the development site.

Dune habitats

14. This section addresses each Annex I habitat listed by the EU Habitats Directive in a wider context. Annex I lists "Natural habitat types of community interest whose conservation requires the designation of Special Areas of Conservation". Priority habitats are those for which the Community has particular responsibility. The Directive gives Annex I habitats a level of protection outside SACs. These are:
    1 Mobile dune including bare sand and marram dune; the latter is Annex I habitat 'Shifting dunes along the shoreline with marram'
    2 Fixed acid dune - Annex I habitat 'Fixed dunes with herbaceous vegetation ("grey dunes")'.
    3 Dune heath - Annex I 'Decalcified fixed dunes with *Empetrum nigrum*' (crowberry).
    4 Dune slacks, corresponding here to Annex I 'Humid dune slacks'.

15. Vegetation is assigned to Annex I using the NVC, which is a vegetation classification, not a quality assessment, and the development site unquestionably contains Annex I habitats of very high quality, as confirmed by the ES.

16. Levels of dynamism and process dependency are such that the impacts of the proposals on individual holes are impossible to predict, so that the development will damage or destroy much of the Annex I habitat within the wider footprint of the development, as recognised in the ES (7.4).

Bare sand

17. Not Annex I, but vital to functionality of Annex I habitats, affecting not just sand distribution, but indirectly changing water tables and, as the sand sheet progresses, distribution of dune slacks.

18. The importance of the dynamism of the system to habitat functionality is emphasised by the ES. SNH believes that maintenance of dynamism is **critical** to conservation of habitats, and that the planned stabilisation constitutes a severe level of impact on habitats.

19. The *Sand Dune Vegetation Survey of Scotland* (SNH22, SNH23) notes the greatest extents of bare sand in Scotland:

Newburgh-Bridge of Don	79.46ha
Inverallochy-Peterhead	58.29ha
Forvie	26.33ha

Newburgh-Bridge of Don has Scotland's largest bare sand area.

20. Newburgh-Bridge of Don holds 12.1% of Scotland's 656ha of bare dune sand, and has the most bare sand of any British dune system (SNH21,31).

21. Processes associated with bare sand depend to varying extents on past, present and future dynamism.

22. Bare sand is extraordinarily extensive here in a British context, as is the extent of the relationship between dynamism and habitat development of. No other British sites approach this scale of interaction.

Mobile dune

23. Shifting dunes along the shoreline with marram is often restricted to a narrow coastal fringe but is more extensive here due to association with dynamic sand sheets.

24. Marram is adapted to high sand deposition, but growth declines when accretion slows. With bare areas extensively stabilised, marram dune would lose extent and functionality.

25. There are 2220ha in the UK (JNCC web site) and 1134ha in Scotland (SNH22).

Dune slacks

26. Corresponds to SD13 young slack developing in the wake of retreating sand sheets and the SD16 creeping willow dune slack that follows it.

27. The importance of the dune slacks is highlighted by the the ES:

> *A very important feature of the mobile sand sheets is that they expose bare damp sand behind them as they move north and these areas then undergo habitat succession to form … dune slack. The variety of successional vegetation types present at Menie … is probably unique in Scotland in terms of its completeness. It has the largest areas of young dune slack, with much bare damp sand, and these are probably the largest extents of this habitat in Scotland and perhaps in Britain….The topographic positions of dune slacks at Menie are unusual … slacks form at markedly different levels, each with their own watertable.. (ES 7.3.2)*

28. The rarest dune slack in Scotland is SD13 young dune slack. The *Sand Dune Vegetation Survey of Scotland* (SNH22) has a Scottish total of 0.17ha, with 0.12ha (70.6%) at Newburgh-Bridge of Don, 11.36ha in England, (SNH31) and 13.22 in Wales (SNH21).

29. The 2006 survey (T50) identified much more young dune slack than had been previously reported for Scotland (SNH22), noting 3.73ha, 3.48ha of this within the SSSI –increasing known Scottish young dune slack area 20-fold from this site alone. The development now holds 98.67% of Scotland's young dune slack, and 13.18% of the adjusted British resource.

30. Slack vegetation is very process-related and it is extremely unlikely that transplanting could emulate these processes. Young dune slack vegetation often incorporates a thin skin on the sand surface that is likely to be badly damaged during translocation.

31. Slacks not directly destroyed during construction would be adversely affected by stabilisation, drainage, and fertiliser and/or herbicide. Vegetation of damper slacks would be damaged by clubhead impact, trampling and tracking by buggies, impacts that even at a low level will inhibit the development of any new young dune slack vegetation.

Dune Heath

32. Though the only mapped heath is Priority-rated H11b *Empetrum nigrum* crowberry heath, there is more heath on the site, especially in the south, as has

been acknowledged in T50 (Table 1 gives 15.56ha in 2008, almost all outside the SSSI).

33. The proposed course cuts through the main H11b area, which is likely to destroy areas of priority-rated European habitat. The development holds 15.56ha, almost all south of the SSSI, 4.6% of the Scottish and UK resource of 338ha.

Grey dune

34. Priority-rated habitat **2130 Fixed dunes with herbaceous vegetation ("grey dunes")** represents a wide range of NVC types.

35. The 2008 map (T50) substantially revises grey dune extent. Though SNH has had insufficient time to provide new figures, it is clear from T50 maps and tables that a large proportion of grey dune would be impacted.

36. Excavation and removal of grey dune turf to form fairways would remove large areas of habitat from their natural situation.

37. The course would have a **severe impact** on the condition of this Priority habitat within and outwith the SSSI.

The impact of golf on sand dune interest

38. 'Principles of an Ecological Approach' to golf development published by SGEG (SNH37), state: *The primary principle is to work with nature, rather than against it, to produce a viable and environmentally sustainable recreational resource. A golf course should fit into its surroundings and not be imposed on them.*

39. The course will fragment and disrupt ecological processes over the golf course's entire footprint on the dunes. Fairways and paths will interrupt ecological gradients and constitute biogeographical barriers.

40. Construction, management and the playing of golf will have an adverse interest on Annex I habitats over the whole dune development.

Biodiversity

41. The adverse impacts also affect biodiversity of habitats and species. The policy context for evaluating their significance is in SNH's *Written Statement*.

Favourable Conservation Status and other aspects of the Habitats Directive

42. As set out in SNH's Written Statement the overriding aim of the Habitats Directive is to achieve Favourable Conservation Status for habitats on Annex I and species on Annex II.

43. Article 17 requires habitat reporting based upon range, extent, structure and function, and future prospects. This proposal adversely affects all but range. Article 17 applies to all habitat, not designated habitat.

44. The SSSI was in Favourable Condition in 2000 with minor, local problems. If this development proceeded, the impacted part of the SSSI would be permanently Unfavourable, to the extent that denotification of the affected section would have to be considered.

45. SNH includes SCM results in its reports to JNCC informing the UK's report to Europe on the Favourable Condition Status (FCS) of Annex I habitats.

46. The main impacts on FCS of the four Annex I habitats would be on area, structure and function.

47. T50 reports instances Unfavourable condition but issues reported can be addressed and resolved. Loss of condition associated with the construction of this golf course would be irretrievable.

Conclusion

48. Stabilisation of bare and mobile sand will have a very serious impact on the condition of dune habitat, within and outwith the SSSI. When the processes are seriously disrupted by this stabilisation, overall biological interest will be very seriously compromised, probably to the extent that denotification of part of the SSSI would be proposed. This damage would be compounded by golf course construction and management: reprofiling, drainage, herbicide and fertiliser application, and mowing. Play will also have an adverse impact on more vulnerable habitats, even where these are not part of the rebuilt fairways.

49. In the ES, the developer accepts that the proposed golf course would have a 'very severe' impact on the natural heritage interest. The developer proposes to translocate habitats on to bare areas. Paul Rooney will show that this is most unlikely to succeed.