

THE HIGHLAND COUNCIL

PLANNING, DEVELOPMENT, EUROPE AND TOURISM
COMMITTEE – 15th May 2006

Agenda Item	2
Report No	C/P/111/06

01/00380FULCA – Erection of four (50 metre to hub) wind turbines with associated accesses, fences, compounds and transformer buildings at Ex Navy base, Forss, Dounreay, Thurso, Caithness, KW14 7YB

Report by Director of Planning and Development

SUMMARY

The proposal is to erect 4 wind turbines on the A836 at the former US Navy Communications Base (25 to 50m AOND) which lies some Km west of Thurso on the A. The wind turbines would have a tower height of 47 metres and 78 metres to the rotor tip with a combined output of 4.99 Mw. These would be the same dimensions as the existing 2 turbines on the site and would bring the total number of turbines to 6 The development also involves laying foundations and hard-standing areas and upgrading of access roads and a new section of track, together with underground cables and an anemometer mast. Permission is sought for a 25 year operating period

The proposed development lies close to Caithness Lochs SSSI, SPA, SAC and Ramsar Site, Broubster Leans SSSI and Loch Calder SSSI designated for its wintering population of greylag and Greenland goose and whooper swan

There are 10 residential properties within 1km of the turbines and the Forss Technology Park buildings lie 95m from the nearest proposed turbine.

36 objections to the proposals have been received including objections from 3 tenants of the Business Park and the owners of the Business Park. The grounds of objection relate to safety issues, the lack of an overall national policy for the location of windfarms, the effect of the proposals on the locality in conjunction with other wind farm proposals, noise and shadow flicker effects, the visual impact in the landscape and that the proposals will have little local benefit and are out of keeping with the local character of the area.

RSPB withdraw an objection subject to clarification of collision risk calculations and subject to conditions being attached to any consent regarding construction outwith the bird breeding season and collision risk mitigation.

Caithness West Community Council are generally supportive of the proposals

The key considerations are the relationship between the proposed wind farm and nearby residents, the impact on the SSSI/SPA/SAC/Ramsar sites (birds) and the visual impact in the landscape of Caithness.

SNH have no objections regarding the Natural Heritage European Interests or on landscape and visual impact grounds.

The Renewable Energy Strategy shows the site at Forss as a possible development area for Local Scale Onshore Wind Energy development (less than 5MW) but as a site with a presumption against development for Major Onshore Wind Energy development.

The recommendation is to **approve** subject to an appropriate legal agreement and conditions..

The application is supported by an Environmental Report which is available for inspection in the Planning and Development Service at HQ Inverness and the Area Planning Office in Wick.

THE APPLICATION IS SUBJECT TO THE HEARINGS PROCEDURE.

1. PROPOSAL

1.1 DEVELOPMENT

Planning permission is sought for the erection of four 1.3MW wind turbines each having a hub height of 48m (78m overall to rotor tip). Permission is also sought for associated access roads and tracks including the digging of trenches for laying the underground power cables, compounds and GRP transformer enclosures.

1.2 LOCATION the former US Naval Communications Base at Forss, Dounreay, Caithness.

1.3 APPLICANT

Fivestone Ltd, c/o Abbey Produce Cambridgeshire Ltd, Funthams Lane, Whittesey, Peterborough, PE7 9PB.

2. SITE DETAILS AND BACKGROUND

2.1 The site was part of the US Navy Communications base and formerly accommodated a 600ft antennae mast and many smaller associated structures. These have been removed although the concrete bases remain in the ground as does the substantial former Transmission Building.

Planning permission was granted in June 2001 for the erection of 2 x 50 metre wind turbines at the site (prior to the occupation of the Forss Technology Park.) and these were erected in February 2003.

Since then the nearby former accommodation buildings have been developed into a business and technology park (Forss Business and Technology Park).

Other recent approvals of planning permissions have been to convert the transformer building into a dwelling (04/00099/FULCA) and to develop the 76 acre site around the wind turbines for business/commercial purposes (05/00129/FULCA). Abbey Properties have plans to use the site for flexible warehouse storage facilities, a concrete mixing plant, and area for biomass power generation (up to 20MW), and temporary contractors accommodation during the decommissioning of Dounreay nuclear plant.

It should be noted that in 2004 complaints regarding shadow flicker effects on the Business Park premises were dealt with by Environmental Health Officers who agreed that an automatic sensor be fitted to the turbines to shut them down when the effect was prevalent.

2.2 The detailed application was submitted in November 2001 and originally consisted of 9 turbines. The application was held in abeyance to allow an Environmental Statement to be prepared. An amendment was received in December 2004 for 4 x 47m to hub machines. These tri-blade driven turbines would have a total height of 78 metres to the rotor tip and would be identical to the two turbines already installed. Three of the proposed turbines are shown to be spaced 300 metres apart close to the coast at 25m AOND to maximise the efficiency of the turbines and minimise the visual impact. The fourth proposed turbine is shown to be sited at 50m AOND, 300m south of the existing turbines on Hill of Lybster. The turbines will be finished in a pale grey semi-matt finish. The proposals also involve upgrading existing access tracks and constructing a new access track, together with trenching for cables and a temporary construction compound. The output of the turbines is 1.3 Mw each, but regulated to give a maximum 4.99Mw total output for the scheme.

2.3 I draw Members attention to other recent applications for wind power developments in Caithness which have experienced intense interest from developers in recent

times. Other major planning applications or appeals in the public domain relate to sites at Borrowstoun (refused on appeal, decision on Legal challenge pending), Baillie Hill (S36), Hill of Lieurary (refused 12/9/05 and appealed), Camster (negotiations regarding access and ES continuing) and Stroupster, Dunbeath (S36), South Shebster (application received) and Bower Quarry (single turbine). Members will be aware that permissions have already been granted for Causeymire (24 turbines) and at Boulfruch (15 turbines). There are several other potential sites at 'Scoping Stage' in Caithness. These are Durran Mains, Spittal Hill, Schoolary, Nottingham Mains, and Burn of Whilk in East Caithness; and in Sutherland on the western edge of Caithness; Strathy North, Strathy South, Melvich and Akron nr Melvich,

3.0 PUBLIC PARTICIPATION

3.1 The application has been advertised under, Section 34 of the Planning Act and as a departure from the Development Plan. 15 letters of objection have been received as a result of public consultation on this application.

Letters of objection were received from:

- Mr T.C. Meyrick, of 3 Granville Street, Thurso object because the proposals are contrary to Policies G2, T6, E1, E2 of the Highland Structure Plan and that the applicant's Environmental Statement contains misleading information.
- John Webster of Rhana, Dounreay, Thurso objects for the reasons that the turbines will be a major and unacceptable feature in the Caithness landscape; that the ES is deficient; that the proposed turbines are too close to existing houses; that the proposals are contrary to policies L4 and T6 in the Structure Plan
- James Macgregor, Forss House Hotel, objects for the reasons that the proposed siting of wind generators would be detrimental to the coastal setting and scenic nature of the area and would be damaging to the tourist economy. He urges adoption of a Highland wide strategy on wind developments.
- Jackson Hickelston, Dwarwick Park, Dunnet, by Thurso, Caithness, KW14 8XD objects on the grounds that Caithness is being 'raped' by wind farm developments and the tourism resource ruined.
- Entec UK Ltd, 160-162 Abbey Foregate, Shrewsbury, Shropshire, as tenants of Forss Business Park objected to the proposals due to the possible shadow flicker into their offices. On the basis of the applicant offering mitigation to alleviate this effect Entec conditionally agree to withdraw their objection.
- New Park, Forss Business and Technology Park, Forss, by Thurso, KW14 7UZ strongly objects to the siting of additional wind turbines on the Abbey properties land adjacent to the Business and Technology Park. The Technology Park is a Strategic development for the North of Scotland aimed at securing 450 jobs and investing £6million into the site with the backing of HIE. The existing 2 turbines have caused considerable disruption to our current tenants in our phase 1 development and as such are extremely opposed to further turbines especially when these will affect the viability of future developments. The on-going project funded by ERDF linked to establishing a 'centre of decommissioning' excellence would be jeopardised. Turbine T10 is situated directly behind Building 1 (for 10,000sqft office accommodation) and would alter the proposed development and damage the commercial viability of the property. In addition there are future plans for new build even closer to the proposed turbine. If T10 were removed from the proposal we may be prepared to reconsider our position.
- William Brown, Dunvegan, Achscrabster, Thurso, Caithness, KW14 7QN objects because of existing problems with the turbines already built; that the proposals are contrary to the Development Plan; that no adequate

archaeological survey has been undertaken; and that the turbine close to the road is visually prominent, detrimental to tourism and should be refused.

- David Craig, Amon-Sul, Achrearnie, Thurso, Caithness, KW14 7YB objects because of omissions in the ES:-
 - The ES is lacking in assessment of the development on the 200 plus staff at Forss Business Park in regard to construction, operation of business and effect on staff so close to turbines.
 - The ES is lacking in a structural report on construction so close to a cliff edge and on coastal erosion effect.
 - The ES lacks information on any vibration effects on cliffs and ancient monuments nearby.
 - The ES lacks cumulative assessments for other wind farms e.g. Baillie, Lieurary
 - The ES contains out of date information
 - Policy T6 of the Highland Structure Plan seems to have been forgotten.
 - The Highland Renewable Energy Strategy does not support wind farm development in this location.
 - The development will have a detrimental effect on players at Reay Golf Course.
 - He adds "Highland Councillors need to ask themselves whether it is suitable and safe to approve turbines within 100m of occupied offices at Forss."

A comprehensive summary of wind farm accident data has been submitted to support an objection from Mr Craig.

- Diane Craven, Woodview, Halkirk, Caithness, KW12 6XA objects for the reasons that the application should be decided in the context of the Renewable Energy Strategy; that the windfarm is too close to the offices at new park; that the proposal would damage the scenic coastal beauty.
- Angela Craig, Amon-Sul, Achrearnie, Caithness, KW14 7YB objects on grounds of adverse impacts of the proposals on archaeology, tourism, ecology, health and safety (shadow flicker, noise) and EMI interference, and is contrary to the development plan.
- R.D.Gunn and Shirley Doull, Dunbeath House, Bldg 25, Forss Business & Technology Park, Forss object to the proposals which are close to their office at the Business Park. They object for reasons of noise, shadow flicker, visual disturbance and potential danger from mechanical failure. "The detrimental effect on the working environment imposed by the installation of additional wind turbines adjacent to the site can only serve to discourage new business using this developing site as a base in the county."
- RWE NUKEM Ltd, Craig More House, Dounreay, Thurso, KW14 7TZ objects to the proposals as a tenant of the Forss Business and Technology Park for the reasons that to introduce noise levels in excess of 50dB average close to an office working environment is unacceptable; that the construction period of 56 months will be unacceptable and be hostile to tenants; the current risk of accident from the wind turbines is high and the proposed turbines would increase that risk; that the 'strobe effect' which is already a problem will increase; that the proposals will prejudice the further development of the Business and Technology Park which has benefited from public investment.
- Carol Sutherland, Carran, Crosskirk, Forss objects for the reasons that the proposal would be a threat to the local environment; is too close to existing houses; would be detrimental to health and safety due to noise and flicker effects and vibration; would be a risk to public safety and damaging to sites of archaeological and tourist importance.
- Alison Ross, Lybster House, Lybster Road, Forss, KY14 7YA objects for the reasons that the proposal would be a threat to the local environment; is too

close to existing houses; would be detrimental to health and safety due to noise and flicker effects and vibration; would be a risk to public safety and damaging to sites of archaeological and tourist importance.

- A further 19 'e-mail' objections have been received from members of the public objecting on the various grounds of :

Vibration – no structural or civil engineering assessment of constructing turbines so close to the cliff edge has been made regarding stability or the effects of the development on coastal erosion. There is no data on the effects of constant vibration from the turbines on the nearby cliff, or on historic monuments located very close to the proposed turbines.

Building control – No civil engineers name appears on either the typical foundation drawings or in the list of specialist consultants. This is a potential minefield as the development is exempt from Building Control, meaning that the local authority has no control over the construction.

Cumulative Impact – no cumulative data is provided on the other proposed wind farm developments at planning stage, including Baillie and Lieurary Hill.

Visual Impact – There will be an impact on the setting of St Mary's Chapel due to the height and rotating parts of the wind turbines.

Shadow Flicker – shadow flicker is already a serious problem at Forss Business Park and further turbines will add to the problem both from direct shadow flicker and from the sun flashing off turbine blades and into windows of the surrounding offices (referred to as 'Blade Glint').

Employment – The effect of 4 additional turbines at Forss will be to deter further expansion of the site for commercial operations, removing potential employment opportunities which cannot be replaced by the increasing number of wind turbines. The current turbines are run from Denmark. There will be no medium or long-term jobs from this development – only short term consultancy and construction.

Safety – The Forss Business Park contains a high density of people very close to the turbines. There are over 200 people employed at the Business Park, with the closest buildings approximately 100m from the turbines proposed. This is well within the distance already documented to be achieved by ice throw and broken blade pieces –and those were from smaller turbines than those proposed at Forss.

- RSPB in their letter of 31st March state that they would be willing to withdraw their objection subject to clarification of details of the calculations for collision risk being presented to them and mitigation measures agreed to offset the predicted collision risk to greylag geese. They also consider that construction operations should avoid the main bird breeding season (April to mid August inclusive)

4.0 APPLICANT'S STATEMENT

- 4.1** The applicant has amended the proposals by reducing the number of proposed turbine from 9 to 4 and supported the proposals by an Environmental Report and by submissions of further supplementary natural heritage information. Various responses have also been made to consultation replies. The following points summarise the features of the site:

- Wind speeds are good at Forss and turbines need to be sited to maximise their efficiency
- There are no local transport or access issues
- There are no designations on the site e.g. SSSI, AGLV, NSA etc
- The land is 'brownfield' and modified by human activity
- There is good separation from residential property.
- The proposal will create a landmark feature.

- The development will not set a precedent as there are already 2 wind turbines at Forss
- There is no evidence that the proposals will affect tourism or house prices in the area
- The proposals will have minimal noise impact on the surroundings.
- The proposals will have minimal impact on bird life, flora and fauna in the locality.
- The proposals will have a positive benefit to the local community through employment and contribution to renewable energy.

- With regard to construction close to the cliff edge the applicant is willing to accept a condition on any consent requiring submission of an engineering assessment on coastal erosion. The applicant believes that the turbines would be anchored directly to the rock if possible, and there is no reason to believe that vibration could cause any deterioration in the cliffs. It should be noted that Historic Scotland and the Highland Council archaeologist have no objection to the proposals.
- Safety is ensured through compliance with British Standards for design and manufacture of the turbines; through the Construction (Design and Management) Regulations 1994 and approved code of practice which came into force on 31st March 1995.; The Health and Safety at Work Act 1974; The Management of Health and Safety at Work Regulations 1999 and The Construction (Health, Safety and Welfare) Regulations 1996. The developer also has comprehensive construction policies and procedures and public liability insurance.
- Cumulative impacts have been assessed for the wind farm proposals which were subject of planning applications and scoping at the time the application was made.
- Visual Impact – Historic Scotland have not objected to the visual effects of the proposals on St Mary's Chapel.
- Any adverse effects on residential or commercial property from shadow flicker can be mitigated.
- The applicants have planning permission for the development of 76 acres at the site at Forss and are fully committed to establishing warehousing and storage facilities, a concrete plant, 20MW biomass power plant and workers accommodation for the decommissioning of Dounreay nuclear plant. The turbines form part of the overall plan for development of the site in accordance with the Local Plan for Caithness.
- An existing turbine operates within 100m of the Forss Business Park and no issues of safety have been raised by the occupants of the Park previously, indeed they have occupied the buildings in the clear knowledge of the presence of the turbines. There is no reason to believe that the turbines pose any significant risk to occupants of the Business Park, now or in the future. Many examples can be given of large turbines sited close to business and industrial workplaces. E.g. Sainsburys distribution depot at East Kilbride, Ford at Dagenham, Michelin factory at Dundee and the Prudential, Green Park Building at Reading.

5.0 CONSULTATIONS

5.1 Caithness West Community Council

The Community Council are inclined to be in favour of this application but deplores the submission of an incomplete Environmental statement. They suggest that the anemometry mast would be better sited near to the coast to minimise visibility from the road. They also suggest that conditions be applied to any consent to protect archaeology in the area.

5.2 Highlands and Islands Airports Ltd

No objections

5.3 Scottish Executive

No comments to make on the environmental statement

5.4 Scottish Water

None of their assets affected; no objection.

5.6 Scottish Environment Protection Agency

SEPA have concerns about matters of waste and pollution control and recommended that conditions be attached to any consent requiring that the applicants submit a full site specific construction method statement and will be satisfied if the topics noted in correspondence are covered by conditions.

SEPA also note that as this site was previously used as a US Naval Communications base the possibility that the land has been subject to contamination should be explored and made a condition of any consent.

5.7 Archaeology

The Archaeological Unit acknowledges that an archaeological assessment has now been completed and this addressed both the direct impact on any archaeological remains and the effect on the setting of other monuments in the area. Provided the proposed mitigation measures are integrated with any permission then there are no objections on archaeological grounds.

5.8 NATS

No safeguarding objection to the proposals.

5.9 Scottish Executive Trunk Roads (TRNMD)

The proposed development is likely to represent an intensification of the use of this site with an increase in associated traffic movement, however no objection is made to the proposed development. The proposed traffic assessment within the ES should address access issues for construction vehicles particularly those impacting on the trunk road network, particularly potential stress points at junctions and approach roads. The applicant should liaise with TRNMD, Bridges Branch (0131 244 4363) to ensure minimal possible disruption to the trunk road network.

5.10 Area Roads and Community Works Manager

No objection subject to wear and tear agreement, conditions on details of haul routes, wheel washing and assessment of structures on proposed haul routes. An abnormal load application will be required and detailed bridge assessments provided along the proposed route of heavy haulage vehicles.

5.13 Highland Council Access Officer

Consideration should be given to allowing easy public access along the new access track and possibly providing car parking spaces at the start of the access track. The submission of a public access plan showing existing and proposed access routes should be made a condition of any consent

5.14 Scottish Natural Heritage

SNH consultation response of 20th May 2005 stated that SNH does not object to the proposal on landscape and visual grounds. They comment that the proposal will lead to localised visual effects from a number of viewpoints and sequential visual effects for travellers on the A836 for a length of 12Km between Dounreay and Brims Hill. These effects will affect the character and experience of the open intensive farmland landscape type, but will not dominate or overwhelm the key characteristics of the landscape. The cumulative visual effects and sequential visual effects do not constitute a significant reduction in the visual amenity of this stretch of coastline.

- 5.15** Following submission of Additional Information SNH commented on 22nd March 2006 as follows.
- European interest –Caithness Lochs SPA & Ramsar site; Broubster Leans SSSI and Loch Calder SSSI – It is unlikely that the proposal will have a significant effect on the qualifying interest of this SPA either directly or indirectly and therefore an appropriate assessment is not required.
 - Pink-footed Goose – We have carefully considered the potential impacts to this species as a result of habitat loss through displacement and direct mortality through collisions and we do not consider these impacts are likely to be significant.
 - Breeding Birds – from the data presented in the ES impacts are unlikely to be significant.

SNH also recommends that the specific details of the transportation methodology and construction method statement in relation to mitigation measures for Scottish Primrose be agreed with SNH prior to the construction works commencing.

5.16 Environmental Health

No objections and recommends that standard conditions on noise be applied to any consent. Notes that there have been problems with shadow flicker effects at Forss Business Park and this should be taken account of with conditions on any consent.

5.17 Historic Scotland

No objection

5.18 Defence Estates

No objection subject to a condition requiring notification of details.

5.19 OFCOM/JRC/CSS Spectrum

No objection

5.20 Health and Safety Executive

No objection

5.21 CAA

No objection

6.0 **PLANNING POLICY**

6.1 **DEVELOPMENT PLAN POLICY AND OTHER MATERIAL POLICY CONSIDERATIONS**

Section 25 of the Town and Country Planning (Scotland) Act 1997 requires that planning applications be determined in accordance with the Development Plan unless material considerations indicate otherwise. The Development Plan consists of The Highland Council Structure Plan (Approved March 2001) and the Caithness Local Plan (September 2002). Other material policy guidance and statements contained in National Planning Policy Guidance (NPPGs) (now being replaced by Scottish Planning Policy (SPPs)) and Planning Advice Note (PANs). Various documents are relevant to the present case and are listed below.

6.2 **Highland Structure Plan**

All policies in the Structure Plan are predicated on the Plan's sustainable objectives contained within its general policies G1-G8.

6.3 Policy G2, in particular produces a number of bullet points on **Design for Sustainability**. Some key considerations for proposed development are:-

- maximise energy efficiency in terms of location, layout and design, including utilisation of renewable resources
- impact on individual and community residential amenity

- impact *inter alia* on habitats, landscape, species, scenery
- demonstrate sensitive siting and high quality design
- contribute to the economic and social development of the community
- developments which are judged to be significantly detrimental in terms of the above criteria shall not accord with the Structure Plan

There are specific policies relating to Renewable Energy. The Council area is noted as having high potential for wind-energy but there are also many potential constraints.

6.4 Policy E1 – Distributed renewable energy developments

“The Council supports the utilisation of the region’s distributed renewable energy resource, including hydro, wind, wave and tidal stream power. Proposals will be assessed against the provisions of the General Strategic Policies. Approvals for renewable energy developments will normally be for a temporary period only (tied to the lifetime of a project), with provision where appropriate for the removal and reinstatement of affected areas. Earlier action for removal and reinstatement will be required in the event of premature permanent cessation of energy production”.

6.5 Policy E2 – Wind Energy Developments

“Wind Energy proposals will be supported provided that impacts are not shown to be significantly detrimental. In addition to the General Strategic Policies, wind energy proposals will be assessed in respect of the following:-

- visual impact
- noise
- electro magnetic interference
- roads, bridges and traffic
- aircraft flight paths/MOD operations
- cumulative effects

6.6 There are other Structure Plan considerations relevant to this case:-

Policy A2 (Agriculture): encourages proposals for farm diversification through adding value and through non-farming enterprises.

Policy T6 (Tourism): refers to the importance of strategic tourist routes.

Policy L4 Landscape Character

“The Council will have regard to the desirability of maintaining and enhancing present landscape character in the consideration of development proposals.....”

Policy B6 Diversification of Dounreay, The Council will work closely with the operators and the Local Enterprise Company, as well as the local community, to identify opportunities for diversification in the Dounreay area

6.7 Caithness Local Plan

The policies of the Local Plan are set within general Structure Plan considerations but also taking account of sustainable principles and national government policies.

Paragraph 1.34 – notes renewable energy interest in Caithness

Paragraph 1.61 – seeks balance in the conservation and enhancement of the environment.

There is a hierarchy of General Policies relating to development. This site lies within a PP2 area with a policy guideline for the site.

“PP2 – The Council will favour development unless this would significantly affect important features.

Policy 26 – the former US Navy communications base at Forss on the coast between Thurso and Dounreay is a large scale complex available for development. The major extent of the site and buildings, together with the existing infrastructure suggests potential for uses with a significant workforce and/or resident population. Consideration has been given to a range of uses including research centre, a wind turbine site, long term secure storage, tourist facilities, residential and industrial storage associated with the oil industry.

It should be noted that the A836 is shown as a main Tourist Route in the Local

Plan.

6.8 National Policy

The Scottish Executive expresses their planning policies principally through a series of National Planning Policy Guidelines (NPPGs) and practice statements, Planning Advice Notes (PANs). There are a number of these documents relevant to this current consideration.

SPP1 The Planning System

NPPG 6 Renewable Energy Developments (Revised 2000)

NPPG 14 Natural Heritage

SPP 15 Planning for Rural Development

PAN 45 Renewable Energy Technologies (Revised 2002)

PAN 56 Planning and Noise

PAN 58 Environmental Impact Assessment

PAN 60 Planning for Natural Heritage

Key documents for the consideration of wind farms are NPPG 6 and PAN 45.

6.9 NPPG 6 (Revised 2000) “Renewable Energy Developments”

This revised document is a much firmer statement of Government resolve to expand significantly the national capacity to generate renewable energy and thereby reduce emissions of green house gases. It is the Scottish target to increase renewable capacity from the current 11% of production to 18% by 2010 based on the implementation of a new Renewables Obligation (Scotland) (ROS) on licensed electricity suppliers.

It is expected that much of the new capacity needs by electricity suppliers to meet ROS will come from wind farms – (Para 13).

- renewable energy should be accommodated throughout Scotland where the technology can operate efficiently
- the commitment to renewable energy should be satisfied and supported through development control decisions “**unless at the site level there are serious adverse impacts that cannot be mitigated**”
- the wider environmental and economic benefits of such developments should be a significant consideration
- in relation to local community, developments should not be permitted where they would have a significant long term detrimental impact on the amenity of people living nearby, and where the impact cannot be mitigated satisfactorily
- Tourism and Recreation (Para 31)

In many areas of Scotland, tourism and recreation support local economies and to varying degrees such activities depend on the quality of the environment, in particular the landscape. This does not mean that renewable energy developments are incompatible with tourism and recreation interests. Sensitive siting can successfully minimise adverse impacts, particularly visual impacts, but it is unrealistic to expect such developments to have no effect at all. Opinions are divided as to whether some renewable energy developments, such as wind farms or hydro schemes, may themselves be of interest to tourists and the extent to which their existence can be compatible with recreational pursuits such as hill walking. (In relation to government targets for renewable energy productions, members will note the recent consultation by Ross Finnie, Minister for Environment and Rural Development, which seeks reaction to the proposals to produce as much as 40% of Scotland’s electricity from renewable sources by 2020).

6.10 PAN 45 (Revised 2002) Renewable Energy Technologies

PAN 45 gives extensive good practice guidance towards the issues raised by wind farm developments. In particular it addresses issues of visual impact and siting in the landscape indicating that public attitude surveys suggest significant change of perceptions prior to wind farm development and post development – respondents were generally positive – even in the close locality, once development was established. Assessment of noise is also prescribed in PAN 45. Properly controlled

it is unlikely to have a significant impact.

“Given the Scottish Ministers’ commitment to addressing the important issue of climatic change and the contribution expected from renewable energy developments, particularly wind farms, it is important for society at large to accept them as a feature of many areas of Scotland for the foreseeable future.”
(Para 71)

In relation to tourism PAN 45 notes that it is a well established and valuable contributor to the rural economy and to the prosperity of many towns and villages in rural Scotland. It is mainly associated with Scotland’s natural and scenic and cultural heritage. **It is therefore important that the role of tourism in the rural economy and the assets on which it is based should be reconciled with the need to promote renewable energy generation.**

6.11 NPPG 14 – Natural Heritage

This document seeks to safeguard and enhance natural heritage – particularly within a hierarchy of land designations. NPPG 14 also encourages safeguarding and enhancement of wider natural heritage – this can be a material consideration although the level of protection afforded outwith designated areas will not normally be as high.

Where there is a risk of damage to natural heritage, authorities should consider whether planning conditions or legal agreements might mitigate the impact sufficiently to allow the development to proceed.

6.12 SPP 15 – Planning for Rural Development

Seeks to promote appropriate sustainable development in rural areas and to maintain and enhance their viability through *inter alia* diversification and development.

6.13 Draft Highland Council Renewable Energy Strategy (May 2006)

In the Draft Strategy the site is shown within a ‘preferred development area’ for Local Scale onshore wind development. The strategy sets a 5MW threshold for definition of a local scale project.

Although the current proposal is described as an extension to the existing wind farm for the purposes of power generation it is a separate project. The two existing turbines were built under the Scottish Renewables Obligation, while the current proposals are under the Renewable Obligation (Scotland). Separate grid connections are required for each development.

This project consists of 4 X 1.3MW machines regulated to produce 4.99MW total output. It is therefore considered that this proposal has more characteristics of a local scale wind farm development than a major scale development and would therefore not be in conflict with the Strategy.

7.0 PLANNING APPRAISAL IN RELATION TO THE DEVELOPMENT PLAN AND OTHER MATERIAL CONSIDERATIONS

7.1 The application seeks planning permission for the erection of 4 wind turbines each of 1.3MW power rating regulated to 4.99MW total output. The turbines would be 47 metres to hub height with a blade diameter of 30 metres. The height from ground level to the top arc of a blade would therefore be 77m (47 + 30 metres blade radius).

7.2 Each turbine would be linked by internal access tracks and hard standing. Other physical elements of the scheme would be the construction of a permanent anemometer mast of lattice construction. The output will be connected to the grid via an underground cable. The existing access on to the A836 road will be used to accept construction and other traffic.

7.3 Planning applications should be determined in accordance with the Development Plan unless material considerations indicate otherwise. Material considerations are not legally defined but in relation to environmental protection government guidance (SPP1) suggests the following as most likely to be relevant:-

- government policy and guidance
- views of statutory and other consultees
- legitimate representations from the public
- infrastructure, access and planning history of the site
- impact on the natural and built environment including layout, siting, design, external appearance, and so far as it relates to the development and use of the land, the operational characteristics of the proposal.

7.4 The particular issues raised by these proposals at Forss relate to the following matters:-

- compliance with Development Plan and Government policies
- compliance with the Council's Renewable Energy Strategy.
- the possibility of noise pollution, shadow flicker and hazard to nearby residential and commercial properties
- proximity to dwellings, visual dominance and effect on residential amenity.
- the landscape impact on the character of this part of the Caithness
- the cumulative impact of turbines with those already built at Forss and Causeymire, and others proposed at Borrowston
- The impact of the proposals on the Natural Heritage.

8.0 Conformity with the Development Plan and Government Policy

8.1 Government policy in NPPG 6 (Revised 2000) and the Council's Structure Plan are strongly supportive of the principle of establishing renewable energy as a sustainable resource. The government have recently re-emphasised their commitment not only to 18 % renewable output in Scotland by 2010 but up to 40% by 2020. It is clear also that renewable energy projects are considered to have a strategic contribution to make as an indigenous source of electricity compared to reliance on imported oil, gas and coal. Much of this initially is expected to come from on-shore wind farms. There is an expectation that wind turbines will become a feature of the landscape that the population of Scotland must come to accept. The strongest environmental safeguards are more likely to be exercised over areas which are particularly designated for protection. There are no guidelines or policies which prescribe distance to residential or other properties, although it is clear that residential and community amenity are important considerations. The Council's Draft Renewable Energy Strategy suggests a 1km separation distance between turbines and residential properties as a minimum however it is accepted that this distance can be less where a house owner has a financial interest in a development. Also local individuality of terrain and slope can also have a modifying effect. The Renewable Energy Strategy shows the site at Forss as a possible development area for Local Scale Onshore Wind Energy development but as a site with a presumption against development for Major Onshore Wind Energy development.

8.2 The Council's Structure Plan is strongly based on policies of sustainability including the utilisation of resources to produce renewable energy. There are various safeguards built into policy wording. Policies T6 relating to scenic views and L4 relating to safeguarding landscape character both clearly apply and require to be given weight in the consideration. The key policy is E2 "Wind Energy Developments" where wind energy proposals will be supported provided that impacts are not shown to be significantly detrimental. That test requires to be applied particularly to visual impact, proximity to dwellings and other premises and to cumulative effects in this case.

8.3 Shadow Flicker, Noise Pollution and Physical Hazard

8.4 Possible health and safety hazards relate to shadow flicker, noise from the turbine operation, ice throw, the possibility of blades becoming detached while in operation, and the catastrophic destruction of the blades, turbine machinery or tower.

8.5 Shadow Flicker Effect

In the first case, shadow flicker is a particular characteristic of certain light conditions. Problems with shadow flicker have been experienced at Forss Business Park from the existing turbines and mitigation measures have been put in place to shut down the turbines when the conditions giving rise to shadow flicker are present.

8.6 The applicants have carried out a technical assessment for the proposed development and this indicates that a single domestic property (Borrowstoun Mains) may be affected between June to July from 03.45 hrs to 04.15hrs and the Forss Business Park may be affected during the following periods:-
March , 17.25 hrs to 18.08 hrs
April to August between 18.45 hrs and 20.30 hrs
September, 17.15 hrs to 18.00 hrs

8.7 This assumes that the sun will always be visible, that there will be sufficient wind to turn the blades and the blades will be aligned with respect to the sun's position. The normal working hours of the Business Park are 08.00 hrs to 16.30 hrs such that any flicker effect will occur outside normal working hours. The applicant is agreeable to conditions being attached to any consent to mitigate any shadow flicker effects should these prove problematic.

8.8 Noise

Disturbance effects from noise in this case relate to noise generated by the wind turbines and their effect on residential properties and the occupants of other 'noise sensitive premises', and noise and disturbance from construction. When planning a wind turbine project, careful consideration is given to any noise which might be heard outside nearby houses. Inside, the level is likely to be much lower, even with windows open. The potential noise impact is usually assessed by predicting the noise which will be produced when the wind is blowing from the turbines towards the houses. This is then compared to the background noise which already exists in the area, without the wind farm operating.

8.9 Source/Activity Indicative noise level dB (A)

Threshold of hearing	0
Rural night-time background	20-40
Quiet bedroom	35
Wind farm at 350m	35-45
Car at 40mph at 100m	55
Busy general office	60
Truck at 30mph at 100m	65
Pneumatic drill at 7m	95
Jet aircraft at 250m	105
Threshold of pain	140

Information taken from The Scottish Office, Environment Department, Planning Advice Note, PAN 45,

8.10 The Highland Renewable Energy Strategy Planning Guidelines suggests 1Km as a

minimum separation distance between residential properties and wind turbines to minimise impacts of noise, shadow flicker and visual dominance and a separation distance of 10 times the rotor diameter for safety.

- 8.11** In this case the dwellings which are nearest to a proposed turbine are sited at:
Borrowstoun Mains – 604metres from Turbine T3 (SW)
New House, Borrowstoun – 750 metres from Turbine T3 (SW)
No.3 Holding, Hill of Lybster – 600 metres from Turbine T3 (SE)
No. 2 Lybster Holdings – 890 m from Turbine T3 (SE)
No. 5 Lybster Holding – 900 metres from Turbine T3 (SE)
Lancrieg – 900 metres from Turbine T3 (SE)
Lybster Mains Farm – 987 metres from Turbine T3 (SE)
New House permission(04/362/FULCA) – 987 metres from Turbine T3(SE)
Crosskirk Cottage – 946 metres from Turbine T10 (E)
Crosskirk (old house by the shore) – 715 metres from Turbine T10 (E)
- 8.12** Proximity to workplaces:
Turbine T10 is 93m from the nearest commercial building at Forss Technology Park
Turbine T9 is 250 metres from the nearest commercial building at Forss Technology Park
- 8.13** Noise – Residential properties
A noise assessment has been carried out for all residential properties within 1Km of the turbines which shows that predicted noise levels are within both day time and night time noise limits at all wind speeds.
Objections to wind turbine proposals frequently cite noise impact on residential amenity as a particular concern. Noise impact is assessed by technical guidance in PAN 45. Environmental Health Officers of the Council are satisfied that the noise levels predicted by the applicant and required by technical guidance can be met on the site. There is, in my view, no substantive reason to reject these turbines solely on the basis of noise impact on residential properties. A condition can be applied to any consent to revisit this matter if effects are pronounced.
- In response to concerns that wind turbines emit infrasound and cause associated health problems, Dr Geoff Leventhall, Consultant in Noise Vibration and Acoustics and author of the Defra Report on Low Frequency Noise and its Effects, says:
"I can state quite categorically that there is no significant infrasound from current designs of wind turbines."
- Members will need to make a judgement regarding the impact of proximity on residential properties in this case bearing in mind that objections from local residents have been received and that there are 10 residential properties within 1Km of the turbines.
- 8.14** Noise – Business and Technology Park
Although most guidance considers the effect of wind turbine noise on residential property, the Environmental Health officers define ‘noise sensitive premises’ as being subject to controls on noise levels.
"Noise Sensitive Premises" means premises, the occupants of which could be exposed to noise from the wind farm and includes hospitals, residential homes, nursing homes, etc"
- 8.15** The noise study in the ES delineates the Park as a five sided structure. The nearest turbine to this building is 93m (T10) (not 205m as stated in the ES.) The ES states that the external noise levels at the buildings, at a wind speed of 8m/s could be in excess 50/55dB. It should be noted that the proposed turbines operate up to a wind speed of 25m/s therefore noise levels could be higher. The background noise levels

in a general office of 3-10 people would be about 50dB and a busy general office could have noise levels of 60dB however wind turbines generate different tones and sounds from office noise. It should be remembered that the background noise levels from the ocean in this location could be more than the noise from the turbines.

- 8.16** Noise is measured in decibels (dB). The decibel is a measure of the *sound pressure level*, ie. the magnitude of the pressure variations in the air. An increase of 10 dB sounds roughly like a doubling of loudness. Measurements of environmental noise are usually made in dB(A) which includes a correction for the sensitivity of the human ear.

The noise a wind turbine creates is normally expressed in terms of its sound *power level*. Although this is measured in dB(A), it is not a measurement of the noise level which we hear but of the noise power emitted by the machine. The sound *power level* from a single wind turbine is usually between 90 and 100 dB(A). This creates a sound *pressure level* of 50-60 dB(A) at a distance of 40 metres from the turbine, i.e. about the same level as conversational speech. At a house 500 metres away, the equivalent sound *pressure level* would be 25-35 dB(A) when the wind is blowing from the turbine towards the house. Ten such wind turbines, all at a distance of 500 metres would create a noise level of 35-45 dB(A) under the same conditions. With the wind blowing in the opposite direction the noise level would be about 10 dB lower.

- 8.17** Noise and disturbance will take place during construction but this will be of a temporary nature and as the business park develops there will inevitably be an on-going level of construction and vehicular activity which is normally associated with a commercial location.

8.18 Health and Safety Considerations

The applicant has made a full account of the Health and Safety issues relating to the construction and operation of this proposed wind farm in their additional supplementary information to the ES, Chapter 9 and concludes that the siting and operation of the proposed wind turbines has taken full account of health and safety concerns and considerations both in siting, construction and operation.

- 8.19** The Highland Renewable Energy Strategy gives guidance on safety considerations as follows:

“While ice throw is a concern, this can be mitigated by appropriate sensors. Lightning strikes are particular hazards for turbines and have resulted in destruction of blades and fires which are difficult to deal with at height. Consideration should therefore be given to the possibility of catastrophic failure of part or all of the turbine blades and the tower. For these reasons turbines are normally sited at least 10 rotor diameters from the nearest occupied property.”

Using this guidance, turbines T10 and T9 (proposed at 95m and 250m respectively from the business units), should be sited a minimum of 300 metres from these occupied properties.

- 8.20** Modern wind turbine components are designed to last 20 years. This means that they will have to endure more than 120,000 operating hours, often under stormy weather conditions. Large wind turbines are equipped with a number of safety devices to ensure safe operation during their lifetime. These include Vibration sensors to switch the turbine off if shaking starts and many other sensors in the nacelle, e.g. electronic thermometers which check the oil temperature in the gearbox and the temperature of the generator.

Rotor Blades Safety regulations for wind turbines vary between countries. Denmark is the only country in which the law requires that all new rotor blades are tested both statically, i.e. applying weights to bend the blade, and dynamically, i.e. testing the blade's ability to withstand fatigue from repeated bending more than five million times.

It is essential that wind turbines stop automatically in case of malfunction of a critical component. E.g. if the generator overheats or is disconnected from the electrical grid it will stop braking the rotation of the rotor, and the rotor will start accelerating rapidly within a matter of seconds. (called 'overspeed')

In such a case it is essential to have an overspeed protection system. Danish wind turbines are required by law to have two independent fail safe brake mechanisms to stop the turbine. The primary braking system for most modern wind turbines is the aerodynamic braking system, which essentially consists in turning the rotor blades about 90 degrees along their longitudinal axis Experience has proved that aerodynamic braking systems are extremely safe. They will stop the turbine in a matter of a couple of rotations, at the most. In addition, they offer a very gentle way of braking the turbine without any major stress, tear and wear on the tower and the machinery. The normal way of stopping a modern turbine (for any reason) is therefore to use the aerodynamic braking system. The mechanical brake is used as a backup system for the aerodynamic braking system, and as a parking brake, once the turbine is stopped in the case of a stall controlled turbine.

8.21 Wind turbines are like most other engineering products such as cars or aircraft , and are designed to operate to high standards of safety.

The British Wind Energy Association (a wind developers trade organisation) states that;

“Wind energy is a very low risk means of power generation compared with other power generation options.”

8.22 Safety is ensured through compliance with British Standards for design and manufacture of the turbines; through the Construction (Design and Management) Regulations 1994 and approved code of practice which came into force on 31st March 1995.; The Health and Safety at Work Act 1974; The Management of Health and Safety at Work Regulations 1999 and The Construction (Health, Safety and Welfare) Regulations 1996.

8.23 Although rare events, catastrophic failures of wind turbines have occurred and can be grouped into 4 types of event:-

Tower collapse has occurred due to faulty construction methods/ human error.

Blade failures have occurred due to manufacturing faults, overspeed and lightning strikes.

Fires have occurred due to system failures, mechanical friction igniting oil and lightning strikes.

Overspeed accidents have occurred where the control mechanisms have failed and the rotor speed increases to destructive stresses causing nacelle and blades to disintegrate.

8.24 The BWEA state that with thousands of turbines operating around the world there is no record of any member of the public having been injured as a result of the operation of commercial wind turbines.

8.25 PAN 45 gives the following advice (paras 48-50)

“A possible but rare source of danger to human or animal life from a wind turbine would be the loss of a piece of the blade or, in most exceptional circumstances, of the whole blade. Many blades are composite structures with no bolts or other separate components. Even for blades with separate control surfaces on or comprising the tips of the blade, separation is most unlikely. The build-up of ice on turbine blades is unlikely to present problems on the majority of sites likely to be developed in the near future. In those areas where icing of blades does occur, fragments of ice might be released from blades when the machine is started. However, most wind turbines are fitted with vibration sensors to detect any imbalance which might be caused by icing of the blades. This enables the operation

of machines with iced blades to be inhibited.

The possibility of attracting lightning strikes applies to all tall structures and wind turbines are no different. Appropriate lightning protection measures are incorporated in wind turbines to ensure that lightning is conducted harmlessly past the sensitive parts of the nacelle and down into the earth.

Companies supplying products and services to the wind energy industry operate to a series of international, European and British Standards. A set of product standards for wind energy equipment has been developed by the International Electro-technical Commission - IEC 16400. There are a number of British Standards that correspond to it, for example, BS EN 61400-1: 1995 "Wind turbine generator systems - safety requirements".

8.26

With regard to siting of turbines near roads and railways PAN 45 advises that; *"Although wind turbines erected in accordance with best engineering practice should be stable structures, it may be advisable to achieve a set-back from roads and railways of at least the height of the turbine proposed, to assure safety."*

8.27

In my opinion turbines T10 could pose a risk to the Forss Business and Technology Park if a catastrophic failure occurred. However, there is an existing turbine on-site which could pose a similar risk. The risk of a catastrophic occurrence is very small, given the requirements to comply with onerous design, safety and construction requirements. The existing turbines on site, one of which is 100 metres from the nearest building on the Business Park, have not prevented the successful development of the Business Park and safety issues have not been raised previously regarding the siting of these existing turbines. The separation distance of the proposed turbine T10 complies with the advice in PAN 45 but not with the advice in the Renewable Energy Strategy. Members will require making a judgement on this aspect of the proposals bearing in mind the particular objections to the siting of turbine T10 from owners and occupiers of the Business Park.

8.12 **Landscape Impact**

The landscape around Forss is characteristically undulating and agricultural Long views can be seen in this location from the A836. The landscape has been extensively modified by agriculture, defence and commercial activities. The 'Landscape Character Type' for this area is 'Open Intensive farming'.

8.13

A judgement must also be made in relation to Structure Plan Policy L4. "The Council will have regard to the desirability of maintaining and enhancing present landscape character in the consideration of development proposals." It is a consideration whether the experience of the landscape will be significantly diminished by the wind farm or whether it will become a new element of general interest. Both points of view have legitimacy. The proposals will change the landscape and this will be unwelcome to many observers but I consider it will have acceptable impact at a wider scale and that it will not significantly affect the tourist resource overall in this location given the existing turbines and the former use of the site for large scale structures and existing areas dereliction. SNH have not objected to the landscape and visual impact of the proposals and the local Community Council is also supportive of the proposals.

8.14 **Cumulative Impacts**

It is a requirement of policy that cumulative impacts be taken into account in the consideration of wind farm proposals. Relative distance and inter-visibility are important in this assessment. The applicants have included the following schemes in their assessment;- The built turbines at Forss and the proposed extension, the built windfarm at Causeymire and the proposed windfarm at Dounreay

8.15

There are clearly other substantial possibilities for wind farms such as Camster,

Shebster, Baillie, Stroupster, Spittal Hill, Burn of Whilk, Akron, Dunbeath, Melvich, North and South Strathy which may have particular cumulative issues in due course. None of these proposals can be assessed cumulatively in the context of this application as they were not subject of a scoping opinion or a planning application/appeal at the time this application was made

8.16 The proposed extension to the existing 2 turbine site is considered by the applicant's ES to have minor direct effects on the landscape of the application site because the site is considered as a 'brownfield site'. The site has a history of human activities and had several large masts and antennae on the site when it was a US Navy base. The assessment also concludes that there will be no significant effects on the 'Open Intensive Farmland' landscape type in the vicinity. The turbines being relatively small visual elements in the expansive coastal landscape.

8.17 There would be locally significant cumulative effects on visual amenity and the landscape character of the 'Open, Intensive Farmland' landscape type in the local area around the proposed Dounreay wind farm and the Forss extension wind farm. There are very few areas where all the wind farms considered in the ES would be seen simultaneously due to the distance and landscape character between Causeymire and the wind farm proposed for the north coast.

8.18 Impact of the Proposals on the Natural Heritage.

The Caithness Lochs status as a classified SPA and SAC under the EC Directive 79/409/EEC on the Conservation of Wild Birds (The Birds Directive) means that the provisions of the Revised Circular 6/95 and the Conservation (Natural Habitats etc) Regulations 1994 (The Habitats Regulations) apply. The Regulations 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, then it must undertake an appropriate assessment of the implications for the conservation interest for which the area has been designated. The need for the appropriate assessment extends to plans or projects outwith the boundary of the site in order to determine their implications for the interest protected within the site. The proposal may also have impact upon Landscape and Visual Amenity

8.19 The information provided by the applicant in the ES and in supplementary data shows that the risk through collision to the qualifying species of birds in the SPA is very low and SNH therefore has no objection to the proposal in this respect. A method statement for protection and/or relocation of Scottish Primrose colonies must be produced prior to any development. A pollution control plan and monitoring plan will be developed and this should be produced prior to any works commencing on site.

8.20 SNH considers that they have no objection in principle to a wind farm in this location on landscape and visual impact grounds.

9.0 Conclusion

9.1 The site is a previously developed 'brownfield' area which had large industrial scale structures on it and some remains of these are yet present on site. The site has 2 existing turbines the installation and operation of which predate the establishment of Forss Business and Technology Park. Although shadow flicker issues have been raised by the tenants of the Business Park, safety issues regarding the operation of the existing turbines have not previously been an issue.

9.2 European Nature Conservation interests are not affected by the proposals provided mitigation for Scottish Primrose is included in any consent and SNH have no objection on natural heritage grounds. SNH do not raise any objections on landscape and visual impacts from the proposals. All other statutory consultees

have no objections to the proposals subject to appropriate conditions.

- 9.3** Three tenants and the owners of the Business and Technology Park object to the proposals on grounds the proposals will blight the development of their office and 'Decommissioning Excellence Project' which has received considerable public funding. Furthermore they are extremely concerned on health and safety grounds at the close proximity of turbines to occupied offices.
- 9.4** A total of 36 objections to the proposals have been received. 13 objections have been received from nearby householders and business owners who object on grounds of noise, shadow flicker and visual impacts due to the close proximity of turbines to dwellings contrary to guidance.
- 9.5** 29 objections have been received from residents of Caithness who raise further issues stating that an assessment of the coastal erosion, safety and structural integrity of building on a cliff edge should be submitted and that building a turbine close to a cliff edge is dangerous.
A condition can be attached to any consent requiring an assessment of the effect of coastal erosion on turbine construction/safety and included in a construction method statement.
- 9.6** Turbines T10 and T9 in the proposals are less than 300m from the occupied office at the Business and Technology Park. Guidance in the Renewable Energy Strategy and best practice suggests a minimum separation distance from residential properties of 10 times rotor diameter. In this case using this guidance the minimum separation distances would be 300m. The precautionary principle would suggest that a 47m turbine tower with 30m diameter rotating blades sited 95 metres from an office workplace is unacceptable. However PAN 45 recommends that close to a road or railway, turbines should be sited at least the height of the turbine away from the road or railway for safety.
- 9.7** The applicant cites several examples of large scale wind turbines successfully operating close to commercial and industrial premises, such as Sainsbury's East Kilbride distribution depot, the Michelin Factory in Dundee, the Prudential office development at Green Park, Reading and the Ford factory at Dagenham. The applicant has also provided details of the Siemens (turbine manufacturer) ISO certificate, Siemens tower manufacturer (Tourg A/S) ISO certificate and the Type Approval for the Siemens 1.3 MW turbine which is planned to erect at Forss.
- 9.8** Turbine T3 is sited at 50m AOND near the crest of Hill of Lybster (51.8m AOND) and approximately 200 m south east of the existing turbines and in a visually more prominent location. Members will require to form an opinion on the extent to which the visual impact of the additional turbines impact on the visual amenity as viewed from the A836 and nearby dwellings. SNH have not objected on landscape and visual impacts of the proposals
- 9.10** I consider that overall, the scheme complies with National and Highland Council policy and is acceptable.

RECOMMENDATION

That subject to the conclusion of an appropriate legal agreement covering the following matters:-

- to secure a financial bond for the restoration of the site at the expiry of the permission or at the cessation of operation of the wind farm for a period exceeding six months;
- to bond a sum to correct any interference with television/radio reception during the first 12 months of operation of the wind farm;

- to secure a “wear and tear” agreement to cover any damage to the local road network;

that **planning permission be granted** subject to conditions covering the matters below, the final wording of the conditions to be delegated to the Director of Planning and Development in consultation with the Committee Chairman and the Local Member within whose ward the proposed development lies.

Matters to be the subject of planning conditions

1. Development to be approved for a period of 25 years to include construction, operation and reinstatement.

Reason: The anticipated design life of the wind farm is 25 years.

2. Development to be constructed and operated in full accordance with the provisions of the application, the Environmental Statement, other supporting documents and the submitted plans unless where explicitly altered by other conditions in this permission.

Reason: To ensure that the development is carried out in accordance with the approved plans.

3. Any wind turbine that fails to produce electricity for a continuous period of 6 months to be dismantled and removed from the site and the ground reinstated.

Reason: In the interests of visual amenity and to ensure that redundant equipment is removed from the site.

4. The number of wind turbines shall not exceed 4. Wind turbines shall only be sited at the locations shown on drawing number 01322D1001-01, Forss Wind Farm Phase II, Figure 3.3, Environmental Statement, dated December 2004.

Reason: In the interests of amenity and to comply with the terms of this permission.

5. Prior to the commencement of development, full details of the wind turbines including the make, model, design, power rating and sound power levels of wind turbine to be used on site shall be submitted to, and require the approval of, the Planning Authority. For the avoidance of doubt, wind turbine dimensions shall not exceed those stated in the application.

Reason: In the interests of visual and residential amenity.

6. Wind turbine blades shall all to rotate in the same direction as those currently installed under planning permission reference 01/00030/FULCA, that is in a clockwise direction.

Reason: In the interests of visual amenity.

7. Wind turbines shall be finished in non-reflective pale grey colour identical to those currently installed under planning permission reference 01/00030/FULCA unless otherwise agreed.

Reason: In the interests of visual amenity.

8. Details of locations and designs of any power performance and wind monitoring masts to be submitted for prior written approval of the Planning Authority.

Reason: In the interests of amenity.

9. Prior to the commencement of development the applicant shall submit for the further written approval of the Planning Authority a report of a detailed investigation of any potential land contamination of the site. The assessment shall be consistent with the approach to land contamination contained within PAN (Planning Advice Note) 33 and

the British Standard for site investigation of potentially contaminated land.

Reason: To ensure that there are no contaminants on the site that would have an adverse public health impact.

10. Prior to the commencement of development the applicant shall submit for the further written approval of the Planning authority a report of a detailed investigation of any potential coastal erosion resulting from the proposals and the effect of the proposals on the stability of the coastal edge.

Reason: To ensure that the proposals do not cause or contribute to coastal erosion.

11. Prior to commencement of development detailed alignment of all access tracks and associated passing places, lay-down area and construction compound(s) shall be agreed in writing with the Planning Authority in consultation with SEPA and SNH.

Reason: In the interests of amenity and to prevent pollution of watercourses.

12. Details of construction of all tracks shall be submitted for the prior written approval of the Planning Authority in consultation with SEPA and SNH.

Reason: In the interests of amenity and to prevent pollution of watercourses.

13. All cables between the wind turbines and the substation shall be laid underground and the ground thereafter reinstated.

Reason: In the interests of amenity.

14. A site-specific construction method statement which systematically identifies pollution risks in relation to each operation and how they are to be avoided or minimised, along with contingency measures, to be submitted for the prior written approval of the Planning Authority in consultation with Highland Council, SEPA and SNH. The method statement to include the following:-

- (i) detailed measures to prevent erosion, sedimentation or discolouration along with monitoring proposals and contingency plans
- (ii) measures to address silt-laden runoff from temporary and permanent access tracks and other engineering operations
- (iii) measures to prevent entry of cement materials to watercourses
- (iv) arrangements for fuel storage and management
- (v) the provision of welfare facilities on site and consequent disposal of effluent
- (vi) phasing of construction operations to avoid periods when pollution is most likely to occur
- (vii) protocols to ensure that sub-contractors are managed and aware of issues relating to pollution, including emergency procedures.
- (viii) details of any culverts
- (ix) identification of waste streams arising from the works, such as peat and other excavated materials, and the methods of dealing with these
- (x) measures to protect private water supplies
- (xi) construction management operations including proposals for working hours, site lighting, temporary servicing for workers, vehicle storage and other storage arrangements
- (xii) reinstatement of ground, including access track edges, post-construction, including proposals for monitoring its success; and
- (xiii) arrangements for the appointment of a site ecologist/environmental scientist to supervise operations on site during construction.
- (xiv) measures to prevent adverse effects on colonies of Scottish Primrose (*Primula Scotica*)

Reason: In the interests of amenity and to prevent pollution of watercourses.

15. All construction works to be undertaken in accordance with SEPA's "Guidelines for Preventing Pollution from Civil Engineering Contracts" in order to prevent pollution of groundwater or any watercourse.

Reason: In the interests of amenity and to prevent pollution of watercourses.

16. Details of any proposed crossing of any watercourses by the access road to be submitted for the prior written approval of the Planning Authority in consultation with SEPA.

Reason: In the interests of amenity and to prevent pollution of watercourses.

17. Details of river water quality monitoring points on any watercourses leading directly or indirectly to the ocean, in terms of location and parameters to be recorded, together with arrangements to be made for submitting the results of monitoring, to be submitted for the prior written approval of the Planning Authority in consultation with SEPA.

Reason: In the interests of amenity and to prevent pollution of watercourses.

18. Details of the emergency pollution prevention plan to be implemented in the event of spillage or other incident in respect of any watercourses leading directly or indirectly to the ocean to be submitted for the prior written approval of the Planning Authority in consultation with SEPA.

Reason: In the interests of amenity and to prevent pollution of watercourses.

19. Prior to commencement of development a programme of monitoring the condition of the public roads serving the site during the construction phase of the development to be agreed in writing with the Planning Authority. Any remedial works, or the payment of extraordinary maintenance costs incurred by The Highland Council, to be agreed within 3 months of the completion of the construction of the wind farm.

Reason: To ensure that any damage to the public road network is rectified.

20. Prior to the commencement of development the applicant shall provide for the written approval of the Planning Authority detailed proposals for any necessary public road improvements and shall implement these prior to the start of construction work.

Reason: In the interests of road safety.

21. Prior to the commencement of any development on site and in order to identify the capacity of the public road network for carrying abnormal loads an assessment of the roads and road structures shall be submitted for the written approval of the Planning Authority in consultation with the Roads Authority. The scope and methodology of the assessment to be agreed with the Planning Authority in consultation with the Roads Authority. The assessments shall include details of measures needed to make the public road capable of carrying abnormal loads and details of haul routes of all construction materials including sources and tonnages.

Reason: In the interests of road safety

22. Following the completion of all approved improvements and modifications to the public road network, a trial run to be undertaken in the presence of the relevant Roads Authorities to demonstrate that the proposed vehicles can use the route safely to gain access to the site. For the avoidance of doubt, the trial run to be undertaken once the exact dimensions and weight of the wind turbines are known and by the haulage contractor appointed to deliver the abnormal loads to the site. Any additional measures required to the public road network arising from the trial run to be completed prior to the commencement of any development on site.

Reason: In the interests of road safety

23. A detailed programme for the movement of abnormal loads to be submitted for the prior written approval of the Planning Authority in consultation with the Roads Authorities.

Reason: In the interests of road safety

24. Contingency plans in the event of the public road becoming blocked by a vehicle carrying an abnormal load to be approved in writing in consultation with the Roads Authority.

Reason: In the interests of road safety.

25. Prior to commencement of development on the site a wheel washing facility shall be provided adjoining the access and details of this and drainage and discharge points shall be submitted for the further written approval of the Planning Authority.

Reason: In the interests of road safety

26. Access to the site by heavy goods vehicles shall be restricted to 7.00am to 7.00pm Mondays to Fridays and from 7.00am to 12 noon on Saturdays with no such access on Sundays unless otherwise agreed in writing with the Planning authority in consultation with the Roads Authority. Any construction activity involving audible noise from cutting, hammering or welding shall be subject to the foregoing hours, unless specific exceptions have received the prior written approval of the Planning Authority in writing.

Reason: In the interests of amenity

27. The Wind Farm Operator shall log wind speed and wind direction data continually and shall retain the data which has been obtained for a period of no less than the previous 12 months. The data shall include the average wind speed in metres per second for each 10 minute period. The measuring periods shall be set to commence on the hour or in 10 minute increments thereafter. The wind speed data shall be made available to the Planning Authority on request. The data shall be provided on a Microsoft Excel spreadsheet in electronic format. In the case where the wind speed is measured at a height other than 10 m, the data shall be supplemented by adjusted values which allow for wind shear, normalised to 10m height. Details of the wind shear calculation shall be provided.

Reason: In the interests of residential amenity

28. At Wind Speeds not exceeding 12m/s, as measured or calculated at a height of 10m above ground level at the wind farm the Wind Turbine Noise Level at any dwelling or other noise sensitive premises, shall not exceed:-

- (a) during Night Hours, 38dB LA90,10min, or the Night Hours LA90, 10min Background Noise Level plus 5 dB(A), which ever is the greater.
- (b) during Quiet Waking Hours, 35 dB LA90,10min or the Quiet Waking Hours LA90, 10min Background Noise Level plus 5 dB(A), which ever is the greater.

Providing that this condition shall only apply to dwellings or other Noise Sensitive Premises existing at the date of this Planning Permission.

Reason: In the interests of residential amenity.

29. At the request of the Planning Authority, following a valid complaint to the Planning Authority relating to noise emissions from the Wind Turbines, the Wind

Farm Operator shall measure, at its own expense, the level of noise emissions from the Wind Turbines. The measurement and calculation of noise levels shall be undertaken in accordance with “The Assessment & Rating of Noise from Wind Farms”, September 1996, ESTU report number ETSU-R-97 having regard to paragraphs 1-3 and 5-11 inclusive, of The Schedule, pages 95 to 97; and Supplementary Guidance Notes to the Planning Obligation, pages 99 to 109. In comparing measured Wind Turbine Noise Levels with Background Noise Levels, regard shall be had to the prevailing Background Noise Levels as measured at specified properties and shown by the best fit curves in the Environmental Statement submitted with this planning application. In the event of a complaint from a property other than one of the specified properties in the Environmental Statement, the measured Wind Turbine Noise Levels at that other property shall be compared to the prevailing Background Noise Levels at the specified property which is most likely to have similar background noise levels.

“Wind Turbine Noise Level” means the rated noise level due to the combined effect of all the Wind Turbines at the Achairn Wind Farm, excluding existing background noise level but including any tonal penalty incurred under the methodology described in ETSU-R-97, pages 99 – 109.

“Background Noise Level” means the ambient noise level already present within the environment (in the absence of noise generated by the Development) as measured and correlated with Wind Speeds.

“Wind Speeds” means wind speeds measured or calculated at a height of 10 metres above ground level on the wind farm site at the location shown on Figure 4 of the Achairn Wind Farm, Environmental Statement, dated July 2002.

“Night hours” means 23:00 – 07:00 hours on all days.

“Quiet Waking Hours” means 18:00 – 23:00 hours on all days, plus 07:00 – 18:00 on Sundays and 13:00 – 18:00 hours on Saturdays.

“Noise Sensitive Premises” means premises, the occupants of which could be exposed to noise from the wind farm and includes hospitals, residential homes, nursing homes, etc

Reason: In the interests of the amenity of noise sensitive premises.

30. Should the noise levels in the forgoing condition be exceeded, the Wind Turbine Operator shall take steps forthwith, to ensure that noise emissions from the wind farm are reduced to the aforementioned noise levels or less.

Reason: In the interests of the amenity of noise sensitive premises.

31. Should adverse effects of shadow flicker effects on premises within 1Km of the development be identified a scheme for any necessary mitigation shall be submitted for the further written approval of the Planning Authority and the scheme implemented to the satisfaction of the Planning Authority.

Reason: In the interests of amenity.

32. Prior to the commencement of development the developer must carry out a survey of existing water supplies arising from and within 50 metres of the site, identifying the exact sources, premises served and distribution network including pipework, surface water streams etc. thereafter a risk assessment must be carried out of the potential detriment to the water supply occurring as a result of this development.

Reason: To ensure that public and private water supplies are safeguarded.

33. Details of the survey and assessment must be submitted for the written approval of the Planning authority in consultation with TEC Services (Environmental Health). The assessment shall include any mitigation measures or amendments to the development necessary to prevent detriment to the water supply. Where a supply is required to be temporarily or permanently replaced, the replacement supply shall provide sufficient quantity of water and meet relevant quality standards. Temporary water supplies must be provided to those affected until permanent mitigation and replacement measures can be implemented. Such permanent measures shall be completed within one month of the erection of any mast or other works affecting the supply, as identified in the assessment, to the satisfaction of the Planning Authority in consultation with TEC Services (Environmental Health).

Reason: To ensure public and private water supplies are safeguarded.

34. The site not to be permanently illuminated by lighting without the prior written approval of the Planning Authority.

Reason: In the interests of amenity and to avoid light pollution of the night sky.

35. No symbols, signs, logos or other lettering to be displayed on the wind turbines or any other buildings or structures without the prior written approval of the Planning Authority.

Reason: In the interests of amenity

36. That prior to development commencing the applicant shall confirm in writing to the Planning Authority that arrangements have been made for a competent archaeologist to be available to carry out archaeological recording should any artefacts or structures of interest be discovered during excavation for turbine bases and other construction.

Reason: To safeguard sites and finds of archaeological interest.

37. Prior to commencement of development known archaeological sites in the vicinity of the development site shall be identified on a plan and their location agreed in writing with the Highland Council Archaeology Service; thereafter the agreed sites shall be protected by forming 20 metre buffer zones around them using temporary fencing, the details of which to be agreed in writing with the Highland Council Archaeology Service. No works shall take place within the area inside that fencing without the prior approval in writing of the Planning Authority.

Reason: In order to ensure the protection of the scheduled monuments/archaeological sites.

38. Prior to the commencement of development, a programme of archaeological work for the preservation and recording of any archaeological features affected by the proposed development, including a timetable for investigation, shall be submitted to and require the approval in writing of the Planning Authority in consultation with the Highland Archaeologist. All arrangements thereby approved shall be implemented in accordance with the approved timetable for investigation.

Reason : In order to ensure the protection of the archaeological interest of the site.

39. No development shall commence on site until the applicant has provided the Ministry of Defence with the following information:

- The date of commencement of the construction;
- The height above ground level of the tallest structure;
- The maximum extension height of any construction equipment;
- The position of the turbine towers in latitude and longitude; and

- If the site will be lit.

Reason: To enable military aircrew to avoid flying over the site.

40 Prior to commencement of development a long-term Land Management Plan and Habitat Enhancement Plan shall be submitted for the prior written approval of the Planning Authority in consultation with in consultation with The Highland Council, SEPA, SNH and the RSPB and the landowners, this to include proposals for:

- a) The methodology for minimising potential impacts on raised saltmarsh habitat and Scottish primrose (*Primula Scotica*)
- b) Restoration of ground conditions and vegetation cover;
- c) The subsequent management of the vegetation;
- d) Appropriate measures to ensure the maintenance of the water quality and ecology.
- e) Appropriate general management measures;
- f) Timeous commitment on the eventual after use of the site;

Reason: In the interests of the amenity of the area and to ensure that the site is satisfactorily managed.

41. A Habitat Monitoring Programme shall be implemented to a methodology agreed in writing by the Planning Authority. Results of the monitoring shall be made publicly available except that concerning confidential plant or bird species.

Reason: To support the evaluation of the impact of wind farms on habitats

42. Prior to commencement of development an Access Plan shall be submitted to and approved in writing by the Planning Authority. The access plan shall detail all existing and proposed public access tracks and shall show how public access will be facilitated onto the site.

Reason: To ensure that public access to the site is maintained and enhanced.

43. Temporary masts erected for initial wind monitoring programme tests to be removed within 6 months of the wind farm becoming operational and the ground reinstated.

Reason: In the interests of amenity and to ensure that redundant equipment is removed from the site.

44. All portacabins, containers, machinery and equipment associated with construction, temporary areas of hardstanding, geo-grids and other lay-down materials to be removed and the ground reinstated in accordance with a method statement to be submitted for the written approval of the Planning Authority.

Reason: In the interests of amenity and to ensure that the site is restored.

45. An indicative scheme and method statement for the decommissioning and ultimate reinstatement of the site, including the removal of all turbines and ground reinstatement, to be submitted for the prior written approval in consultation with SNH and SEPA, prior to the commissioning of the wind farm. The scheme to be reviewed and amended as necessary, taking into account the operation of the scheme, at least 12 months prior to actual decommissioning and reinstatement works.

Reason: In the interests of the amenity of the area and to ensure the site is satisfactorily restored.

Signature:

Designation: Area Planning and Building Standards Manager

Author: Gordon Mooney Tel 01463 702249/01955 607754

Background Papers:

All those references in sections 1-9 of the above report including planning application casefile reference 01/00380/FULCA, Highland Structure Plan, Caithness Local Plan, Highland Council Renewable Energy Strategy

Date: 6th April 2006

Local Councillor:

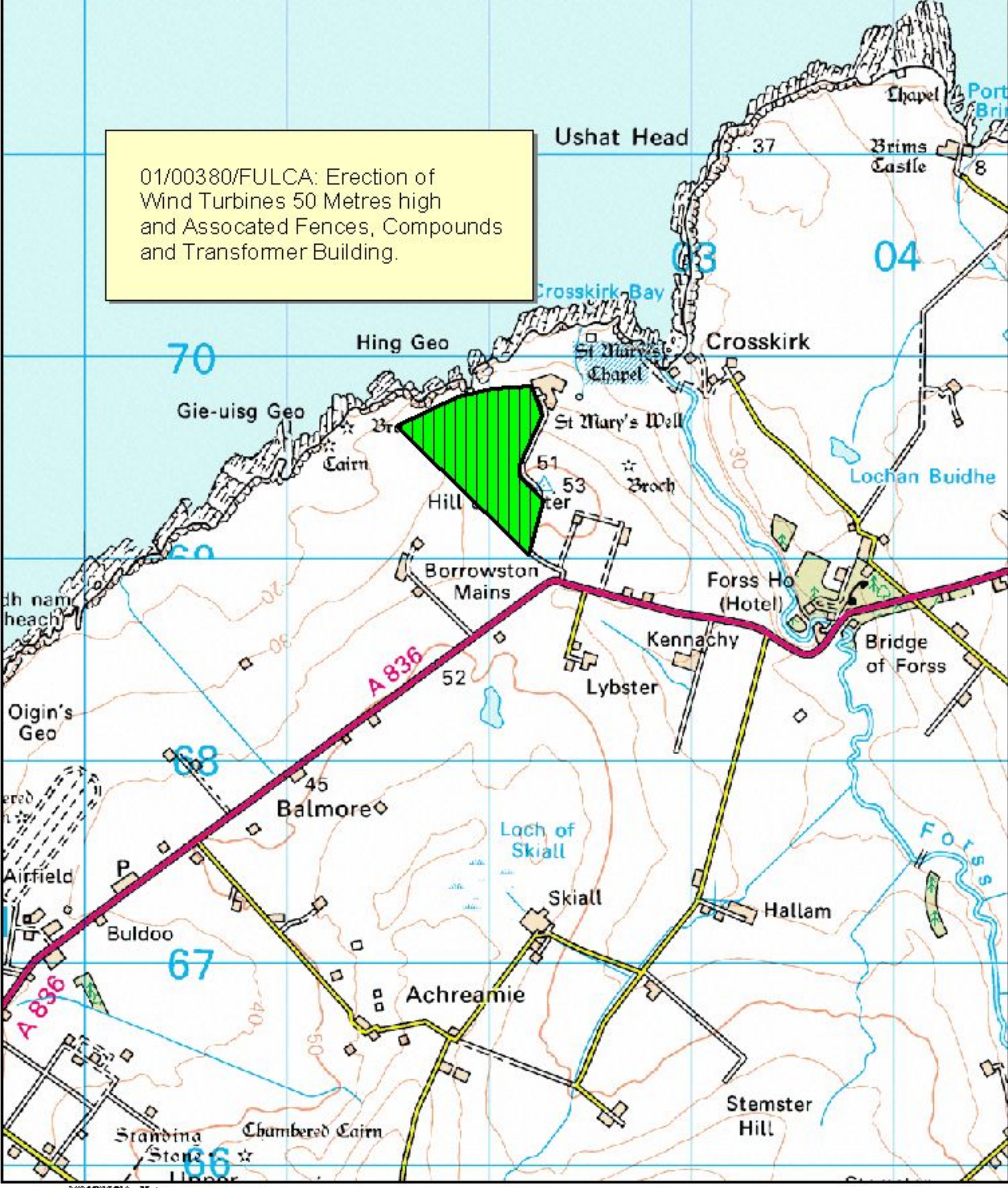
Councillor Alistair MacDonald.

**LIST OF REPRESENTATIONS FOR ERECTION OF WIND TURBINES
WITH ASSOCIATED ACCESSES, FENCES COMPOUNDS AND
TRANSFORMER BUILDINGS. AT
Wind Turbines Ex Navy Base Forss,, Dounreay, Thurso, Caithness, KW14 7YB
01/00380/FULCA**

OBJECTORS

1. Holmes MacKillop Solicitors,, 109 Douglas Street, Blythswood Square, Glasgow, G2 4HB, On Behalf Of Hertel (UK) Ltd,
2. Carol Sutherland,, Carran, , Crosskirk, , Forss, , Thurso, , Caithness , KW14 7XY,
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4. Alan Roberts, Lowood, Bower, Caithness, KW1 4TT,
5. Miriam Sutherland, Achiengullan, Reay, Caithness, KW14 7RR,
6. George Bundy, 66 Pennyland Drive, Thurso, Caithness, KW14 7PG,
7. Fiona Low, Cawhillan, Hilliclay, Thurso, Caithness, KW14 8YN,
8. James Paterson, 9 Vernon Place, Thurso, Caithness, KW14 8QJ,
9. Alastair MacDonald, Stempster House, Westfield, Thurso, Caithness, KW14 7QW,
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11. Sarah Egan, 1 Mill Road, Berriedale, Caithness, KW7 6HF,
12. Victoria Reeves, Kildonan Farm, Suisgill, Helmsdale, Sutherland, KW8 6HY,
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14. Neil Harvey, East Batsworthy Farm Rackenford, Tiverton, Devon, EX16 8EG,
15. Geoffrey Leet, 8 Burnside, Scrabster, Thurso, Caithness, KW14 7UG,
16. C S Young, Dunmore, Westside, Dunnet, Caithness, KW14 8YD,
17. Allan J Tubb, 20 Shore Street, Golspie, Sutherland, KW10 6TY,
18. Kenneth Graham, Conservation Officer, ALBA, Main Street, Golspie, KW10 6TQ,
19. John And Denise Brown, Upper Larel Farm, Halkirk, Caithness, KW12 6UZ,
20. Stephanie Craig, Amon-Sul, Achreamie, Caithness, KW14 7YB,
21. Alix Craig, Amon-Sul, Achreamie, Caithness, KW14 7YB,
22. William Craig, 18 Carlisle Avenue, Penwortham, Lancs, PR1 0QP,
23. Elizabeth Craig, 18 Carlisle Avenue, Penwortham, Lancs, PR1 0QP,
24. Stuart Hamilton, Lancrigg, Lybster Road, Forss, Thurso, Caithness, KW14 7YA,
25. B And J Wilson, Braehead, Armadale, By Thurso, KW14 7SA,
26. Jackson Hiiddleston, Dwarwick Park, Dunnet, By Thurso, Caithness, KW14 8XD,
27. John Webster, Rhana, Dounreay, Thurso,
28. Neil Robertson, Associate Director, New Park, Forss Business And Technology Park, Forss, By Thurso KW14 7UZ,
29. W Brown, Dunvegan, Achscrabster, Thurso, KW14 7QN,
30. David Craig, Amon-Sul, Achreamie, Thurso, KW14 7YB,
31. Diane Craven, Woodview, Halkirk, Caithness, KW12 6XA,
32. Angela Craig, Caithness Windfarm Information Forum, Amon-Sul, Achreamie, KW14 7YB,
33. T C Meyrick, 3 Granville Street, Thurso, Caithness, KW14 7JL,
34. R D Gunn And Shirley Doull, Dunbeath House, Building 25, Forss Business And Technology Park, Forss, KW14 7UZ,
35. Steve Burness, RWE NUKEM Ltd, Craig More House, Dounreay, Thurso, Caithness, KW14 7TZ,
36. James And Jacqueline MacGregor, Proprietors, Forss House Hotel, Forss, Nr Thurso, KW14 7XY,
37. Fred Catlow, 5 Strathmore Court, Thurso, KW14 7PS.

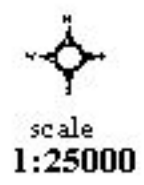
01/00380/FULCA: Erection of Wind Turbines 50 Metres high and Associated Fences, Compounds and Transformer Building.



3000000000 Metres



Ex Navy Base Forss Dounreay, THURSO.



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