Clashindarroch Wind Farm
Information Note 1

This information note has been produced to respond to queries raised at the public meeting in Glass Village Hall. AMEC will strive to respond to further queries raised from www.glassclash.info.

A number of questions were raised with regard to Hydrology and Transport issues. AMEC believes that the Hydrology and Transport chapters from the Environmental Impact Assessment address the issues raised. These chapters have been provided in pdf format to www.glassclash.info. Any follow up questions from the chapters should be directed to the Clashindarroch Wind farm Project Manager:

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Q. AMEC claim that the Clash wind farm will power 53,000 homes. Can they please explain how they arrive at this figure? What do they anticipate the average power consumption per home to be?

A. The 53,000 homes figure comes from a leaflet distributed in November 2002 based on a wind farm of fifty 1.75 MW turbines. Since the publication of this leaflet, intended to introduce the proposal to the local community, the proposal has altered in size as results of environmental studies became available. The planning submission made in July 2003 consists of 47 turbines. Assuming each turbine has a capacity of 1.75MW the wind farm would have a maximum output of 82.25MW. The amount of energy from a wind farm of this size, with a 30% capacity factor, would produce an amount of energy equivalent to that required for 45,990 homes. The methodology for this can be found at www.bwea.com/edu/calcs.html.

Note: The figures for the November 2002 leaflet were calculated assuming an average UK household electricity consumption of 4,345kWh. This average UK household electricity consumption figure has since risen to 4,700kWh.

Q. How will these massive lorries get up a single track without considerable distruction to the road itself, road verges and some of the woodland along the way?

A. A detailed study will be carried out in conjunction with the local council to ensure that potential problems are identified and preventative measures put in place to ensure problems don't occur. A condition survey would form part of the detailed studies carried out prior to construction so that, in the unlikely event that damage did occur, it would be rectified and made good in a timely manner. A traffic management system would be discussed and agreed with the Council and the Police. Local residents living along access routes would be kept fully informed of progress and likely timescales of activity etc.

Q. Who owns the wind farms at the end of the day - the contractors, The Scottish Executive, Scottish Power, or the Government? - and how can the community group extract cash from the profits of the owners and be guaranteed compensation in the future?

A. A wind farm is likely to be owned by either a utility like Scottish Power or private sector shareholders like AMEC. AMEC has investigated the possibility of community ownership in the past for developments such as Lewis. Neither the Scottish Executive nor Government will ultimately own the wind farm. If the Clashindarroch wind farm proposal follows the route of the majority of other wind farm projects, an agreed sum of money will be provided each year of the operational life of the wind farm to the community. In the case of the Clashindarroch wind farm proposal the distribution of that community fund would be agreed with Aberdeenshire Council and local Community Councils. Any community fund / benefit agreed will be an integral part of the wind farm development and will be honoured regardless of who owns the wind farm.

Q. Why do they think that load factor will be 35% when Denmark only manages 24% - 20% of which they have to export (cheaply) as it is produced when it is not required?

A. The wind resource has an effect on the final capacity factor of any wind farm. The UK has the best wind resource in Europe and therefore is likely to witness better capacity factors than Denmark. The figures we have used in our energy calculations have incorporated a capacity factor of 30%. AMEC has two wind monitoring masts collecting data within the Clashindarroch Forest the results of which are currently being analysed but are expected to be over 30%.

Q. Why use the Deveron side for access when roads for HGV already exist?

A. The four existing Forestry Commission Scotland access routes are suitable for HGV type vehicles. The vehicles which are used for turbine delivery are considerably longer than an HGV and would not be able to negotiate these existing routes.

Q. What is to prevent AMEC/Scottish Exec. Using this Grummack access road as a Trojan Horse for additional wind turbines (this access road will go further than the centre of the complex. Would the Gordon's burn road not be adequate for 47 turbines?

A. All the constraints of the site have been taken into consideration and AMEC consider the proposed site layout to be the optimal design. There is no intention to apply for an extension to this site.

Q. How will the integrity of the private water supplies by guaranteed from: a) physical damage b) pollution, together with verges, track ways and personal wayside parking bays?

A. The Hydrology chapter from the Environmental Impact Assessment has been provided to www.glassclash.info to give full details of the Hydrology study that accompanied the planning application and the results. A number of mitigation measures will be implemented during the design, and operation of the scheme to minimise the hydrological effects of the proposed development. These measures include:

- The access tracks will be constructed of inert material of suitable grade to withstand the expected traffic loading. If incorrect materials are used ruts may form which will reduce infiltration, provide preferential flowpaths and erode rapidly. The track will be constructed of coarse material if possible, to maximise infiltration through the track. This will reduce surface runoff on the track itself, reducing the risk of erosion and pollution.
- Roadside drainage will be avoided where possible and where it is required roadside ditches will be designed to affect the natural hydrology as little as possible. It is envisaged that roadside drains will be provided only on the upslope side of cut tracks.
- Depths of the ditches will be kept to the minimum required for free drainage of the track.
- Individual drain lengths will be kept to a minimum to avoid significant disruption of natural drainage patterns and avoid accumulation of large volumes of water within an individual drain. The relevant forestry guidelines recommend that land drains are no longer than 30 m in length under normal gradients, plus cross-drains at appropriate (much longer) intervals. A reduction in drain length also reduces pollution risk. Regular cross-drains will be placed in the track surface, especially in high gradient areas, to prevent significant flows occurring on the track surface. Drain lengths will be shortened in high gradient areas and bars placed across the track to avoid accumulations of large volumes of surface water.
- Drains will not discharge directly into a watercourse but will flow out into a buffer zone which will act as a filter strip, often with a sediment trap to intercept suspended solids. Buffer zones are used to allow infiltration of water and reduction of runoff velocities. This reduces the flashiness of response, encourages deposition of sediments and allows pollutants to be filtered out. It is vitally important that the risk of pollutants entering the flush zone and stream channel system be minimised. Flow within these upland streams is rapid and turbulent, making containment of pollution once it has entered the stream channels extremely difficult.
- Where appropriate, a cut-off drain will be installed at the top of the track cutting to control seepage from natural ground into the cut.
- Pesticides will not be used to maintain the access tracks.
- Alkaline leaching from the turbine bases will be minimised by using a concrete mix designed to withstand sulphate attack, as detailed in the code of practice for concrete design BS5328. Sulphate resistant concrete will be used where appropriate in the construction of all turbine bases, reducing sulphate attack effects to a negligible level.
- Culverts and drainage pipes will be laid beneath the track whenever it crosses a flush zone, drain or gully to avoid disruption of natural drainage. Culvert inlets and outlets will be protected to avoid erosion.

Q. Why is there such a large disparity between the 2 EIA surveys?

A. The Environmental Statement was submitted in July 2003 and contained the majority of the assessment work carried out for the site. The Scottish Executive asked for some supplementary work to be carried out (refer to www.glassclash.info for the Supplementary Ecological Report) and this was submitted in August 2004. AMEC do not consider that there is a disparity between the reports because the bird report backed up the original findings and the ecology and mammal reports considered issues in more depth than the original submission.