

Paper 2

APPENDIX 1

Extract from Environmental
Statement
Non-Technical Summary

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Introduction

- 1.1 RWE NPower Renewables Ltd (RWE NRL) proposes to develop a windfarm on Dunachton and Alvie and Dalraddy Estates in the Monadhliath Mountains, to the north of Kingussie and in the Badenoch and Strathspey district of The Highland Council administrative area. A site context plan is contained as Figure 1; a site location plan is contained as Figure 2 in this document.
- 1.2 Given the scale of the proposed windfarm, which is anticipated to have an installed capacity of around 60MW to 90MW, the current application and accompanying Environmental Statement is being submitted to the Scottish Government, Energy Consents Unit for consideration by Scottish Ministers under S36 of the Electricity Act 1989.
- 1.3 The final design of the proposed windfarm has been informed by a detailed Environmental Impact Assessment (EIA) and related consultation process, providing due consideration to the strategic planning policy framework, environmental policy, environmental management and the views of The Highland Council (THC), statutory consultees and the local community.
- 1.4 The Environmental Statement (ES) comprises the following:
 - Volume 1 Non Technical Summary (NTS)
 - Volume 2 The Written Statement
 - Volume 3 Figures (including A3 Landscape Technical Appendices)
 - Volume 4 Technical Appendices
- 1.5 The application is also accompanied by a separate Planning Statement, consultation report and separate Landscape Figures prepared in accordance with THC methodology. This NTS broadly demonstrates a need for the proposed windfarm in the context of international, national and development plan policy. It summarises the EIA process and provides a brief history of the scoping process; describes the proposed windfarm's design components and its location and summarises the key environmental considerations and proposed mitigation contained in the ES.

The Proposed Windfarm

- 1.6 The proposed windfarm consists of thirty-one (31) 3-bladed modern design wind turbines, each with an anticipated maximum rated capacity of 3MW. The maximum height of the blade tip from ground level is 125m (except at turbines specified, where tip height is restricted to 110m at three locations).
- 1.7 The proposed windfarm is connected by permanent access tracks leading into the site from an existing junction on the A9 (T) public highway. Two new access bell mouth arrangements from the A9(T) are also proposed. Other ancillary components include a 33kV/ 132kV electrical substation,; a control building, stores and offices; an 80m anemometry mast and all associated foundations and hardstandings. The proposed site layout is shown as Figure 3 of this document.

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Renewable Energy and Planning Policy

- 1.8 The UK Government is committed to achieving a reduction in 'green house' gas emissions to address global warming and has set targets to achieve this. The UK Government relies partially on renewable energy generated in Scotland to meet these targets.
- 1.9 The renewables industry plays a crucial role in Scottish Government's efforts to increase Scotland's energy security and to tackle climate change in order to meet Scotland's carbon emissions reduction target. Scotland has ambitious targets to source 80% of its electricity demand and 20% of all energy demand from renewables by 2020. The high targets set by Scottish Ministers are a reflection of Scotland's ability to generate an estimated quarter of Europe's potential wind energy capacity through its abundant natural energy sources.
- 1.10 Assuming the proposed windfarm has an installed capacity of 77.5 MW, based on thirty one 2.5 MW turbines being erected on the application site. This has the potential to generate electricity to supply in the region of 43,000 average homes¹.
- 1.11 The proposed windfarm will be assessed against the current development plan; comprising The Highland Structure Plan 2007 (HSP) approved by Scottish Ministers with modifications; The Badenoch and Strathspey Local Plan (BSLP) adopted by The Highland Council in September 1997 and The Cairngorms National Park Local Plan (CNPLP) adopted by Cairngorms National Park Authority (CNPA) in October 2010. Relevant material considerations will also be considered. These include the Highland Renewable Energy Strategy 2006. The application site is primarily within a preferred development area identified in this document, the proposed wind turbines are entirely located within the preferred development area.

Environmental Impact Assessment

- 1.12 An EIA has been carried out by SLR Consulting Ltd and others in accordance with the *Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2000 (the EIA regs)* and an ES prepared to accompany the S36 application for the proposed windfarm. The ES predicts the environmental effects of the proposed windfarm; assesses the significance of these effects and identifies measures to be taken to avoid or minimise significant effects.

¹ Predicted energy generation has been calculated using an assumed capacity of 30% (DTI Energy Trends UK regional capacity factors 1998-2004) and is based on an installed capacity of 77.5MW (note that the installed capacity may be higher or lower, subject to the final turbine choice). The energy capture predicted and the derived homes equivalent figures may change as site specific information is gathered.

Equivalent homes supplied is based on an annual electricity consumption per home of 4,700kWh. This figure is supported by recent domestic electricity consumption data available from The Digest of UK Energy Statistics and household estimates and projections from the UK Statistics Authority.

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Specifically, it describes the proposed wind turbine development, the nature of the site and its surroundings and the likely significant effects of construction, operation and decommissioning activities associated with the proposed wind turbines and associated infrastructure.

- 1.13 Consultation with THC, statutory consultees and the community, is also an important part of the EIA process as it aims to ensure that the planning and environmental considerations have been fully considered in advance of submitting the application and that the views of the community have been taken into consideration in the overall proposal and design concept.

Scoping and Consultation

- 1.14 The area of land available for the proposed windfarm was identified in a formal scoping submission made to the Scottish Energy Consents Unit (SECU) in June 2008 under Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2000 (the EIA regs). The scoping report defined the proposed windfarm as having a capacity of greater than 50MW, with turbines having a maximum capacity of 3MW and associated infrastructure.
- 1.15 A formal scoping opinion was received from SECU in August 2008. The report set out the required scope of the EIA and includes the formal responses from various statutory and non-statutory consultees. These comments have been taken on board in the EIA process.

Design evolution

- 1.16 RWE NRL has a legal agreement with the landowners of Balavil, Dunachton, Alvie and Dalraddy Estates which allows them to develop a windfarm. The total area available for wind turbines is extensive, and mostly located within the Highland Council's preferred area of search for windfarm developments.
- 1.17 During 2009 and 2010, extensive studies and assessments were undertaken to identify constraints (areas which should be avoided) within the potential area available. The windfarm layout was designed so that no turbines are located:
- Within 2.5km of an active or previously occupied golden eagle nest;
 - Within 50m of a water course;
 - On habitat used by protected species or classified as highest sensitivity to change;
 - On a slope greater than 15 degrees, or in areas where the local topography limits wind resource;
 - On areas of deep peat or where peat is heavily degraded.
- 1.18 Considerable effort was then given to produce a turbine layout which achieves the most satisfactory relationship with the landform of the site whilst respecting other environmental, technical and economic considerations. Particular attention was given to achieving a 'balanced' layout when viewed

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from key viewpoints and summits within the Cairngorm National Park (CNP), and to minimising visibility of the turbines from within the Spey Valley.

- 1.19 The routes of access tracks have been designed to limit the overall length of new track required (through efficient design and use of existing tracks where possible), follow the natural contours of the land form and use the natural landform to 'shield' the track where possible. Ecological and geological constraints were also avoided, and the number of water crossings minimised.
- 1.20 All other infrastructure has been sited in an effort to ensure the windfarm layout would be practical and effective through the construction and operation phases, but to ensure potential environmental impacts would be avoided or reduced.
- 1.21 The design for the proposed windfarm was frozen on 15th September 2010 following this iterative process. The site layout is shown in Figure 2 of this NTS

Landscape and Visual Impact Assessment

- 1.22 The Landscape and Visual Impact Assessment (LVIA) for the proposed windfarm has been carried out in accordance with current guidelines and following consultation advice to assess the potential effects of the proposed windfarm on the physical landscape of the application site, landscape character and visual amenity of the 35km radius study area. An assessment of the cumulative effects has been carried out of the proposed Allt Duine Windfarm with existing and consented as well as proposed windfarms with which it is considered that the proposed windfarm may give rise to significant cumulative effects.
- 1.23 The design of the proposed windfarm has been carefully considered to minimise landscape and visual effects and to create a turbine layout which relates to the landform of the application site and immediate surroundings, taking account of other environmental and technical considerations. The proposed access track, substation and interlinking cable, would be located in the CNP. Care has been taken in the location and proposed design of these ancillary components of the proposed windfarm to minimise potential effects on the physical landscape, as well as effects on landscape character and visual amenity. The effects of the proposed windfarm on the physical landscape of the application site are considered to be moderate and non-significant.
- 1.24 Some significant effects on landscape character are predicted from the proposed windfarm with the existing and consented as well as proposed windfarms for upland locations immediately around the application site within the Monadhliath Mountains; on the south west edge of the Strathdearn Hills to the north east and on the north west summits and shoulders of the Cairngorm Plateau. The proposed windfarm would be located close to the west edge of the CNP and some significant effects on elevated parts of the park are predicted. These would occur in the upland landscapes of the CNP: the edges of the Monadhliath North and South; Strathdearn Hills; the higher

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ground in Slochd; and the Cairngorm Central Massif at up to 16km distance. However, there would be no views of the proposed turbines from most of the lowland landscapes in the CNP, and limited visibility of the proposed access track and substation from elevated and open areas of the Strathspey landscapes where the limited change that would occur to the landscape and related views is not predicted to result in significant effects on landscape character or visual amenity. Having regard to the limited extent of significant effects in the CNP, and the fact that the proposed windfarm would be seen to be located outside of the CNP, often in the context of other existing and consented windfarms, and away from the core of the park with its distinctive landform and related vegetation cover, it is not considered that the proposed Allt Duine Windfarm would have an adverse effect on the special qualities of the CNP.

- 1.25 There would be a localised significant effect on landscape of the south west edge of the Lochindorb AGLV to the north east of the application site. However, having regard to the limited extent of views of the proposed windfarm predicted for this and the other AGLVs, it is not considered that the overall integrity of the landscapes in these locally designated parts of the study area would be significantly affected by the proposed windfarm. No significant effects would occur in the GDLs in the study area. A localised significant effect is predicted at the north east edge of one of the Wild Land search areas close to the application site.
- 1.26 Significant effects on visual amenity are predicted to occur for walkers and climbers at the same elevated locations where significant effects on landscape character are predicted, thus in the Monadhliath Mountains in the immediate vicinity of the application site; the Strathdearn Hills to the north east and the north west summits and shoulders of the Cairngorm Central Massif. No significant effects are predicted for users of the formal recreation facilities in the lowland parts of the CNP, although there would be some views of the proposed windfarm for users of walking and cycling routes on areas of higher ground and/or open areas outwith the extensive woodland and forest cover which characterises much of the lowland area.
- 1.27 No significant effects are predicted for residential receptors in any of the main settlements in the study area, with the nearest property predicted to have views of the proposed windfarm located at over 8km distance. No significant effects are predicted for users of the main road network or the railway which passes through the study area.

Geology

- 1.28 The average depth of peat within the footprint of the proposed windfarm is 0.8m, with a maximum depth of 2m at a turbine location and 2.6m along the access track. No significant effects are anticipated in respect of geology or soils on the site. An exercise was carried out to estimate the depth and structure of peat and inform the final layout of the turbines and access tracks to avoid steep topographic gradients and the deepest areas of peat. The proposed turbines, control room and construction compound have been located in areas of flatter ground with peat depths of generally less than 1m

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to avoid detrimental impacts on the site hydrology. The substation and borrow pits are not located in areas where peat is anticipated.

- 1.29 Where new access tracks are required in more sensitive areas, floating tracks are proposed to minimise potential impacts and roads have avoided deeper areas of peat where possible.
- 1.30 A detailed peat slide risk assessment has been carried out; all turbine locations are considered to be at low risk to peat slide, several points along the access tracks have been identified with medium peat slide risk and mitigation measures identified to limit that risk.
- 1.31 The assessment concludes that the construction, operation and decommissioning of the proposed windfarm are not anticipated to result in adverse impacts on the geology of the area.

Carbon Emissions

- 1.32 The carbon assessment has been undertaken using the Scottish Government methodology for calculating carbon losses and savings from wind farms on Scottish peatlands and is based on the detailed baseline data at the proposed windfarm, including the extent and depth of peat and its hydrological and ecological characteristics.
- 1.33 The calculation of total carbon dioxide emission savings and payback time for the proposed windfarm indicates the overall payback period of the proposed windfarm (with 31 turbines and approximately 22km of new access tracks) will be 24 months. This means that the proposed windfarm would take 24 months to repay the carbon exchange to the atmosphere (the CO₂ debt) through construction of the proposed windfarm. The site would be in a net gain situation following this time period and would contribute to national objectives to minimise carbon dioxide emissions.

Hydrology

- 1.34 The groundwater and surface water regimes at the application site and surrounding area have been subject to a detailed assessment. In addition to information held by the British Geological Society (BGS), Scottish Environmental Protection Agency (SEPA), THC, Speyside Foundation and published information sources, site investigations have been completed to identify and characterise the hydrological receptors including, private water supplies, watercourses (including tributaries of the River Spey Special Area of Conservation (SAC)) and peat. These data have been used to inform the site design and therefore minimise the potential effects associated with construction of the proposed windfarm.
- 1.35 Mitigation measures have been proposed specifically, to safeguard the River Spey and Kinveachy Forest SACs. These include, with the exception of the proposed watercourse crossings, maintaining a standoff of at least 50m from any part of the proposed site infrastructure to watercourses; establishing a water quality monitoring programme to record water quality which can be

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used to assess trends in water quality before, during and after site construction; and managing the quantity and quality of the runoff from foundation excavations, borrow pits and access tracks using SuDS to ensure sedimentation of watercourses is avoided and there is no increase in flood risk.

- 1.36 The proposed watercourse crossings would be constructed in accordance with best practice guidelines to ensure the crossings will not pose a potential obstacle to fish migration. Prior to the construction of any watercourse crossings a CAR application will be made to SEPA and this would be used to regulate the design of the crossings.
- 1.37 Subject to the employment of appropriate mitigation measures, identified within the assessment, the proposed windfarm is not predicted to have any significant effects relating to any hydrological or hydrogeological receptors, including private water supplies and the River Spey SAC.

Ecology

- 1.38 An assessment of the potentially significant impacts of the proposed Allt Duine windfarm on habitats and non-avian species of conservation interest has been completed. The full assessment is provided as Chapter 9 of the ES.
- 1.39 A wide range of detailed ecological data was collated from various sources including various nature conservation organisations and from specific field studies undertaken in 2009 and 2010. The more sensitive habitats/features within the area were mapped during an ecological constraints study which was used in the development of the proposed windfarm layout and has helped to minimise impacts on sensitive habitats. The nature conservation value of sensitive species and habitats present within the areas potentially affected was evaluated based on the available data. This information, along with details of the proposed windfarm design and construction methods, was then used to assess all potentially significant impacts.
- 1.40 The proposed windfarm is not located within any statutory site designated for the purposes of nature conservation (i.e. Special Protection Area (SPA), SAC, Site of Special Scientific Interest (SSSI)). However, there are watercourses in the vicinity of the proposed windfarm that are part of the River Spey SAC. The application site forms part of the River Spey catchment with the turbine site located within the River Dulnain catchment, a major tributary of the River Spey.
- 1.41 The proposed turbine site comprises a relatively diverse mosaic of upland habitats, including bog and dwarf-shrub heath vegetation communities, grasslands and wet flushes. The dominant habitat type is hydrologically connected blanket mire. Wet and dry heath habitats are also present on the steeper slopes where peat deposits are shallower or absent. At higher altitudes, the vegetation is dominated by wind-clipped lichen-rich heath. Acid/neutral flushes are present in discrete locations throughout the survey area.

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- 1.42 The proposed main access route runs from relatively low-lying ground in the floodplain of Strathspey, through enclosed fields of semi-improved pasture, broad-leaved woodland, dry dwarf-shrub heath, conifer plantation, and up into the unenclosed moorland of blanket bog and wet heath at the edge of the proposed turbine site.
- 1.43 There are several protected mammal species populations confirmed as present within the survey area; these include otter, water vole, red squirrel, pine marten and several bat species. Salmon and trout are present in the Feithlinn and the upper Dulnain and in the lower reaches of the Allt Duine and Allt Mor.
- 1.44 Potentially significant impacts on some sensitive receptors have been identified, e.g. for otter, water vole, blanket bog habitats, watercourses and associated fish populations. In order to address these impacts, a range of best practice mitigation measures, primarily in relation to minimising the potential impact of the construction works, have been proposed. With these measures in place it has been concluded in the assessment that the proposed windfarm would not result in any significant long-term adverse impacts on any designated site, sensitive habitat or protected species.

Ornithology

- 1.45 Desk based studies, consultation and bird surveys were undertaken to assess the potential impacts of the proposed windfarm on breeding, foraging and migrating birds. Potential impacts associated with construction and operation, together with the risk of bird collision with turbines were also assessed.
- 1.46 Surveys were undertaken to within 2km of the turbine site. Of the species recorded during the 2008 and 2009 breeding bird surveys, four are of high ornithological importance: golden eagle, merlin, golden plover and dunlin.
- 1.47 One pair of golden eagles was present outside the site, this pair bred successfully in 2009 and 2010. One pair of merlins was present outside the site. Golden eagles and peregrine falcons were recorded foraging at very low intensity over the turbine site. Approximately 77 pairs of golden plover, and 1 pair of dunlin were recorded breeding within or close to the proposed development site.
- 1.48 Construction work would cause localised unpredictable disturbance impacts that would be most significant for birds nesting close to operating machinery, however suitable undisturbed nesting habitat is likely to be available for most species within the site boundary and it can be concluded that construction disturbance would result in short-term disturbance impacts that will not compromise the long-term value or use of the site for breeding birds with high nature conservation value.
- 1.49 To reduce potential impacts of construction activity on breeding birds, the site working area would be minimised and clearly demarcated on the ground; an ecologist would monitor all construction works undertaken during the bird

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breeding season to ensure that disturbance to breeding birds is minimised by the implementation of specific mitigation measures such as the creation of 'no-go' areas to protect ground nesting birds within the construction site.

- 1.50 Operational turbines are unlikely to have any significant adverse impacts on breeding golden eagles. It is anticipated that a relatively small number of breeding golden plover may be displaced as a result of the proposed windfarm but there would be no significant impact on the population as a whole.
- 1.51 Collision risk estimates indicate the potential for one golden eagle death over a period of 89 years and one peregrine falcon death over a period of 59 years. This is unlikely to have any adverse impact on the current population of golden eagles or peregrine falcons breeding in the Central Highlands.

Cultural Heritage and Archaeology

- 1.52 An assessment of the cultural heritage within the proposed windfarm site and surrounding area was carried out. Data was gathered from THC HER, as well as statutorily compiled lists, for listed buildings, GDLs and SAMs. Aerial photographic archives were also inspected, as was the National Monuments Record and Historic Landscape Characterisation information, and the results of the data gathering was verified by a walkover survey.
- 1.53 Within the application boundary, a number of cultural heritage assets were identified – typically medieval or later rural settlement features. Within the turbine application area, sheilings (seasonally occupied huts) and grouse butts predominated, with rectangular building footings, enclosures and related farming features characterising the lower ground along the line of the access tracks. These were assessed as being of low importance. No SAMs or other designated features were present within the application area.
- 1.54 Some of the access tracks pass close to a small number of the grouse butts and several of the identified archaeological features, and a small number may be in the path of the construction works for the tracks. Due to their small size (the threatened features are about 3m in diameter) and the inevitable slight mapping inaccuracies incurred in both the recording of the sites and the translation of design to construction, it was not possible to definitively predict the exact level or certainty of impacts. It is anticipated that disturbance of these assets can be minimised by proactively cordoning off sensitive areas and making small adjustments to the track alignment on the ground during the detailed construction design, thereby ensuring that the effect of the proposed windfarm is of negligible significance.
- 1.55 Statutorily protected heritage assets (SAMs, GDLs and listed buildings) were assessed for indirect impacts up to 5km from the boundary of the turbine site, given that impacts would be primarily derived from the erection of the turbines, rather than the tracks or associated infrastructure. Only two listed buildings (Kinraig House and Meat Larder and Baden Cottage, B and C(S) listed respectively) and one SAM (Easter Delfour chambered cairn) were within the study area, and turbine ZTV analysis showed that there was no

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view of the proposed turbines from any of these assets. It was determined that these assets would not receive a significant impact from the proposal. Those listed or scheduled heritage assets, such as Ruthven Barracks, for which Historic Scotland requested specific consideration within the ES were out with the ZTV and were deemed to receive a negligible effect from the proposals.

Socio Economic Assessment

- 1.56 The potential socio economic effects that could occur as a result of the construction, operation and de-commissioning of the proposed Allt Duine Windfarm were considered.
- 1.57 A large proportion of the workforce in Badenoch and Strathspey is employed in tourism related business, and tourism is recognised as being important within the local economy. Consideration of the available data, including CNP visitor surveys and a tourism business survey undertaken specifically to inform the socio economic assessment, demonstrates that tourists visit the area because of its natural qualities, the scenery, hills and mountains and wildlife. Visitors enjoy a range of activities within the area, with the most popular being walking, snow sports, cycling and mountaineering/ climbing.
- 1.58 There are a large number of facilities and resources for visitors to Badenoch and Strathspey to enjoy, including walking routes, visitor attractions, outdoor activities, Munros and Corbetts, and organised events. In total 352 recreation resources and facilities were identified within 20km of the proposed windfarm, a large number of which are located in the settlements of Aviemore, Kingussie and Newtonmore within the Strathspey. Two of the attractions identified, Cairn Gorm mountain railway and Rothiemurchus Estate are listed in the top ten visitor attractions within the Highlands.
- 1.59 All tourism businesses surveyed were asked whether they considered the proposed windfarm would have an impact on their business, overall 80% predicted there would not be a significant effect, the remaining 20% expressing concern that the proposed windfarm could spoil views and scenery or affect wildlife.
- 1.60 Potential impacts on recreation resources were identified from a review of the other chapters within the ES, by highlighting the significant effects which recreational users could experience. The majority of resources (67%) would experience no direct impact and no visibility of the proposed windfarm, and notably none of the main settlements or transit routes (including the A9) are predicted to experience a significant effect. The proposed windfarm would be visible from Cairn Gorm mountain railway and from some parts of Rothiemurchus Estate, but it is not predicted to result in a significant effect on visual amenity. Only 4% of resources (14 in total) are expected to experience any significant effects, at or near to their location (or with respect to walking routes, at or near any point along the length of their route) and these are mainly associated with the visibility of the proposed windfarm.

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- 1.61 The proposed windfarm would cost approximately £120-£140 million to construct, with estimated civil and electrical works contracts in the order of £10 million and £4 million respectively. Approximately 100 temporary construction jobs would be created over the construction period (an active period of 18 months), and six Full Time Equivalent (FTE) jobs through the operational phase of the proposed windfarm.
- 1.62 Land owner benefits would accrue in terms of rent paid with the potential for this revenue to be reinvested in the estates on which the proposed windfarm would be located and a Community Benefits Scheme would also be established, the terms of which would be considered should the windfarm be consented.
- 1.63 The proposed Allt Duine windfarm is located in an area where tourism, based on natural assets and the CNP, is very important within the local economy. However the ecology and ornithology assessments within the ES do not identify any significant effects on wildlife and the landscape and visual assessment does not consider that there would be an adverse effect on the special qualities of the CNP resulting from the proposed windfarm. Experience drawn from comparative research across the UK, demonstrates that few tourists are discouraged from returning to an area as a result of windfarm development. Furthermore, the results of the tourism business survey and consideration of the overall impacts on recreation resources do not provide evidence that the tourism industry would be detrimentally affected.
- 1.64 The conclusion of the socio economic assessment is that the proposed windfarm would not have a significant effect in socio economic, tourism or recreation terms in either the study area or the CNP overall.

Traffic and Transportation

- 1.65 The nature of the proposed windfarm is that it would result in increased traffic movements during its construction phases, but negligible increases in levels of traffic during its operational phases. The proposed windfarm would comprise two access points from the A9: the main access point, for the delivery of turbine equipment and general construction materials would be located south west of Kincaig, at the existing junction to Leault Farm, with a further access solely for construction of the sub-station located north of Moor of Alvie. Both of these junctions would be improvements of existing private junctions and there would be no new accesses formed onto the trunk road.
- 1.66 Turbine equipment would be delivered by sea to the ports of Invergordon or Inverness, to then be transported via abnormal loads to the proposed windfarm along the A9 trunk road. Access tracks would be constructed from the points of access onto the A9, which would be used to transport turbine equipment to the proposed turbine locations, and for convention construction traffic access.
- 1.67 The construction period would occur over a 24 month period, and an allowance has been made for periods of non working during the winter

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months, making the actual time of construction on site 16 months. Traffic bringing construction materials to the site would vary over the construction period, with the peaks occurring on days when concrete foundations are being poured, of which there would be 31 days in total. The peak level of trip generation would be 99 HGV trips per day (198 HGV movements) which would occur on three individual days in the second month of the construction period. In total, on 31 individual days over the 16 month period, trip generation would amount to an average of 53 HGV trips per day (106 movements).

- 1.68 Excluding the days of concrete pours, trip generation at the site would amount to an average of 11 HGV trips per day (22 movements) over the 16 months period.
- 1.69 This level of trip generation is not considered to create a significant impact on the road network and it is considered that such trip generation may be incorporated into the road network without affecting its safe operation.

Noise

- 1.70 Noise, associated with the proposed Allt Duine Windfarm, will be emitted by the equipment and vehicles used during construction and decommissioning and by the turbines during operation. The level of noise emitted by these sources and the distance from them to the receiver locations (i.e. nearby dwellings including Leault Farm and Wester Delfour) are the main factors determining levels of noise at receptor locations.
- 1.71 Construction noise has been assessed by a desk based study of the anticipated construction programme and by assuming the proposed windfarm is constructed using standard and common methods. Construction noise, would be temporary and highly variable and therefore much less likely to cause an adverse impact. De-commissioning is likely to result in less noise impact than during construction of the proposed windfarm. The construction phase has been assessed to have a minor noise impact, therefore de-commissioning would, in the worst case, also have a minor noise impact.
- 1.72 The operational turbines would emit noise from the rotating blades as they pass through the air. This noise can sometimes be described as having a regular 'swish'. The amount of noise emitted would vary depending on the wind speed. When there is little wind the turbine rotors will turn slowly and produce lower noise levels than during high winds when the turbines reach maximum output and maximum rotational speed. Operational noise levels, associated with the proposed Allt Duine Windfarm, likely to be experienced at the nearest receptors, including Leault Farm, Alvie and Wester Delfour, around the application site have been predicted. Predicted noise levels are low due to the large separation distances between the proposed wind turbines and nearby receiver locations (> 5 km). It is concluded that operational wind turbine noise levels from the proposed windfarm will be within levels deemed, by national guidance, to be acceptable for wind energy schemes and that there would be no significant impact at any residential property.

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Aviation Telecommunications and Television

- 1.73 The potential impacts of the proposed windfarm on civil aviation and defence were assessed by analysing the proximity of the proposed windfarm to any aviation and defence facilities or activities, and by consulting the Civil Aviation Authority and the Ministry of Defence. No potentially affected facilities or activities were found. The Civil Aviation Authority confirmed that there are no potentially affected civil aviation facilities in the vicinity. A formal response from the Ministry of Defence is awaited. The proposed windfarm is assessed as having no impacts on aviation or defence.
- 1.74 The potential impacts of the proposed windfarm on telecommunications facilities and television reception were assessed by analysing the proximity of the proposed windfarm to radio and television transmitters and domestic properties, and by consulting Ofcom and telecommunications operators. Consultees confirmed that there are no potentially affected facilities in the vicinity. The proposed windfarm is assessed as having no impacts on telecommunications or television reception.

Obtaining copies of the environmental statement

- 1.75 Further copies of the this NTS and copies of the complete ES are available at a cost of £250 for ES Hard Copies, £15 for CD Rom version and the NTS is free of charge, from:

RWE Npower Renewables
North Range East Lodge
Mill Road
Stanley Mills
Stanley
Perthshire
PH1 4QE

- 1.76 The NTS is also available on line at www.npower-renewables.com/alltduine
- 1.77 Copies of the full ES are available for public inspection at the following locations:
- Kincaig Post Office and Stores
 - Kingussie Learning Centre and Library
 - Aviemore Library
 - Inverness Highland Council HQ