

A14. SOIL AND WATER

A14.1 INTRODUCTION

The design of the proposed Viking Wind Farm has changed since the Section 36 application, and its associated Environmental Statement, were submitted in the spring of 2009. This chapter describes how these changes would affect Soil and Water interests.

Before reading this chapter, please first read Addendum Chapter A1, the Introduction, and Chapter A4, the Development Description. Failure to read these two chapters carefully may lead to a misunderstanding of the assessment work described in this chapter. Furthermore, because this addendum chapter is not intended to provide a complete new assessment of the issues, but instead provides a discussion of the effects of the work which has taken place since the 2009 ES was submitted, it must be read in conjunction with the Soil and Water chapter of the 2009 Environmental Statement.

A14.2 CONSULTATION RESPONSES

Table A14.1: Objections from Statutory Consultees

Ref	Summary of objection	Response
SEPA - Water ecology, waste and decommissioning		
SEP 4.6.5a	Siltation from development a major problem for aquatic life. Particular concern regarding sediment impacts on lochs. SEPA object due to lack of information on potential impact of sedimentation.	Extensive further consultation has been entered into with SEPA. Appendix A14.6, the Site Environmental Management Plan (SEMP), has been re-written and expanded and now provides further information and commitments on how construction activities will be managed to protect the environment.
SEP 9.3	Objection until worst case scenario for peat volume extraction is calculated.	The volume of peat which would be excavated is now less than that which would have been required in the 2009 design. Extensive further consultation with SEPA has resulted in revised estimates which are presented in Appendix A14.4, Estimated Peat Extraction and Reuse Volumes.
SEP 9.4	Objection until firmer conclusions reached regarding [peat] storage, re-use and disposal options.	The Site Environmental Management Plan (SEMP), Appendix A14.6, has been re-written and expanded and now provides further information and commitments on peat management and how construction activities will be managed to protect the environment. Appendix A14.4 provides estimates on the peat excavation and reuse volume estimates.

Ref	Summary of objection	Response
SEP 11.2	Object until further principles of proposals for decommissioning and aftercare submitted. To include plan showing elements removed/left <i>in situ</i> .	Developed proposals for decommissioning are contained within the re-written and expanded SEMP, Appendix A14.6 TS7. Turbines would be removed but bases left <i>in situ</i> , and the ground surface reinstated with peat. In general, tracks, cable trenches and other structures will be left <i>in situ</i> . To remove them would cause unacceptable ground disturbance and risk of pollution and siltation. A plan is not thought appropriate at this stage because any variation to this general strategy would be determined on a case-by-case basis nearer to the time of decommissioning, depending on current best practice, the requirements of landowners, the planning authority and other relevant stakeholders at the time.

For a full list of all comments from all consultees please refer to Appendix A1.1.

Clarification was requested from SEPA on sedimentation of lochs and the hydraulic linkage between specific borrow pits (NBP03 and NBP04) and Sand Water SSSI. Such matters are discussed below.

Sediment within watercourses can be expected to be released in locations where water velocity is reduced (and entrainment of particulate matter within the water column becomes accordingly reduced) leading to sediment drop-out. The mitigation measures described elsewhere in the specific pollution prevention documents are designed with this concept in mind and to encourage drop-out at chosen locations prior to entry to natural watercourses. Sediment control procedures shall be undertaken ‘at source’ across the site, with a view to minimising generation and transport of such material. This approach would aim to avoid sediment reaching watercourses which would act as pathways to downstream lochs. Overland flow of sediment-laden water would be avoided in the vicinity of lochs to prevent direct sedimentation; the site has been designed with a 50m buffer zone around infrastructure (except where stream crossings necessitate access) with such pollution prevention in mind.

Groundwater levels would be expected to remain as per *status quo* except very locally to the borrow pits and only during periods where dewatering activities were deemed necessary, Groundwater would be expected to return to former levels quickly following cessation of such activities given the hillside location of the borrow pits.

With specific relation to borrow pit sites NBP03 and NBP04, effects on groundwater are anticipated to be local and temporary. With mitigation measures adopted, including surface water being diverted away from the borrow pit excavations, and considering the relative distance downstream (minimum distance of 800m to Sand Water SSSI or 250m to the feeder tributary Burn of Pettawater) no adverse impact would be expected at the designated site from excavation work at NBP03 or NBP04.

The mitigation measures are described in full in the Site Environmental Management Plan (SEMP), presented with this Addendum as Appendix A14.6.

A14.3 CHANGES IN THE POLICY CONTEXT

The new Scottish Planning Policy (SPP) requires applicants to assess the likely effects associated with development work where peat and other carbon rich soils are present. In this context, the redesign of the proposed Viking Wind Farm has significantly reduced impacts on peat, and this aspect of the 2009 design was explicitly addressed in the context of the new requirements of the SPP.

Land, flooding and drainage related items within the new SPP were presented in the delivery of the original submission, including avoidance of better quality agricultural land, risk-based assessment of individual catchments with regard to SEPA Flood Mapping, use of sustainable drainage techniques and appropriate design of stream crossing structures.

Following the redesign and changes and additions to the Habitat Management Plan, the Viking Wind Farm is likely to have significantly beneficial effects on peat condition across the Viking Wind Farm area and the wider Habitat Management Plan area which, it is proposed, will be managed for nature conservation purposes.

A14.4 CHANGES IN METHODOLOGY

There have been no changes in methodology for the Soil and Water chapter.

A14.5 CHANGES IN BASELINE CONDITIONS

A14.5.1 Soil

Section 14.5.5 of the 2009 ES described the situation regarding soil. Owing to the reduction in size of the proposed development (specifically the removal of Collafirth area), the relative regional coverage of different soil units has changed, although the same soil units remain present. The vast majority of the site (over 87%) remains underlain by soil units 605, 604 and 24.

A14.5.2 Hydrology (Surface Water)

Section 14.5.8 of the 2009 ES dealt with the baseline hydrology, and Section 14.5.8 (b) with water resources. The following additional information is provided in relation to the now-proposed 127-turbine wind farm.

Water Quality

The Water Framework Directive River Basin Management Plan requires classification of water bodies in relation to their ecological status. In addition to the chemical water quality previously reported (Table 14.12 of the 2009 ES), the updated classification system (SEPA, 2010) requires assessment of hydromorphology, biological elements (including fish, plant life and invertebrates) and specific pollutants known to be problematic. Heavily modified waterbodies, which can no longer be considered to be natural, are classified on the basis of 'ecological potential'.

Five watercourses within the site area have been classified under the new system. These are the Burn of Laxobigging, Laxo Burn/Gossawater Burn, Burn of Grunnafirth/Burn of

Forse, Burn of Weisdale and South Burn of Burrafirth. An additional watercourse, Stromfirth Burn, lies immediately adjacent to the area. Details of all six waterbodies are summarised in Table A14.3. Please note that this table is in addition to Table 14.12 of the 2009 ES.

Table A14.3 Summary of Waterbody Classification

Waterbody	Waterbody ID	Overall Status	Summary of Pressures
Burn of Laxobigging	20670	Poor	Morphological alterations: mixed farming impounding – weir/dam
Laxo Burn / Gossawater Burn	20671	Good	none
Burn of Grunnafirth / Burn of Forse	20672	Good	none
Burn of Weisdale	20679	Moderate	Diffuse source pollution: livestock farming
South Burn of Burrafirth	20682	Good	none
Stromfirth Burn	20678	Good	none

A14.5.3 Modifying influences

The updated UK Climate Projections were released in 2009. The UK Climate Projections Report’s probabilistic projections of climate change (UKCP, 2009) suggest that Northern Scotland will experience slightly increased temperatures in both summer and winter. This may result in a reduction in summer precipitation and an increase during winter.

If climate change leads to drier summers, low flows and water shortages may occur in prolonged periods of dry weather. Increase in winter precipitation could lead to an increased risk of flooding.

No additional changes to the baseline have been identified.

A14.6 CHANGES IN THE PROPOSED WIND FARM

A14.6.1 Basis of assessment

(a) Development characteristics

A number of turbines have been removed from the 2009 project as assessed in the ES, in particular all turbines (and associated infrastructure) in the Collafirth region which had exhibited a relatively large number of peat depth recordings greater than 2.5m. This has resulted in an associated reduction in numbers of turbine foundations, construction compounds, access track length, borrow pits and stream crossings across the site. Please see Chapter A4 for full details.

There has also been a reduction in width of double-width track from 12m to 10m with the aim of reducing the landtake impact of the development and associated reduction in peat

disturbance. Double-width tracks will also be restored to single-width upon completion of the construction works.

The design changes in the three remaining regions of the wind farm proposal would lead to a reduction in the amount of proposed infrastructure, compared with the 2009 proposals, in a number of hydrological catchments.

Following the removal of Collafirth quadrant, catchments 13 and 14 would no longer contain any infrastructure and catchment 1, which would have held most of the Collafirth infrastructure, would have a greatly reduced infrastructure landtake. The catchment areas are shown in Figure 14.13 of the 2009 ES.

Table A14.4 shows the infrastructure planned for each of the hydrological catchments.

Table A14.4 Development Features Proposed in Hydrological Catchments

Catchment ID	Site Area	Proposed Development Features – T127 Layout	Development Alterations between 2009 and T127 Layout
1	Nesting	Track, 7 stream crossings, 18 turbines, 1 anemometer	Removal of 11 stream crossings, 8 turbines, 1 anemometer, notable reduction in track length
2	Kergord	Track, 18 stream crossings, 2 borrow pits, 27 turbines, 2 anemometers	Removal of 1 turbine Additional borrow pit KBP05 situated on catchment margin (with catchment 4)
3	Kergord/Nesting	Track (on catchment margin), 2 borrow pits (both pre-existing), 10 turbines (on catchment margin), 1 anemometer	
4	Kergord	Track, 8 stream crossings, 8 turbines, 1 substation (adjacent to convertor station), 1 anemometer	Additional borrow pit KBP05 situated on catchment margin (with catchment 2)
5	Delting	Track, 17 stream crossings, 1 borrow pit, 15 turbines, 1 anemometer	Removal of 5 turbines
6	Nesting	Track, 6 stream crossings, 24 turbines, 1 borrow pit (on boundary with catchment 7), 1 anemometer	
7	Nesting	Track, 3 stream crossings, 1 borrow pit (on boundary with catchment 6), 1 construction compound, 8 turbines, 1 anemometer, 1 substation	Removal of 2 turbines

Catchment ID	Site Area	Proposed Development Features – T127 Layout	Development Alterations between 2009 and T127 Layout
8	Kergord	Track, 1 borrow pit, 1 turbine	Removal of 2 stream crossings, notable reduction in track length
9	Delting	Track, 6 stream crossings, 1 borrow pit (on boundary with catchment 23), 1 construction compound, 4 turbines, 1 substation	
10	Delting	Track, 2 turbines (on catchment margin)	Removal of 1 turbine, 1 anemometer
11	Nesting/Kergord	Track, 4 stream crossings, 1 borrow pit, 2 construction compounds, 4 turbines	
12	Delting	Track, 4 stream crossings	Removal of 1 turbine
13	Delting	None	Removal of track, 1 borrow pit, 1 construction compound
14	Delting	None	
15	Kergord	None	
16	Kergord	None	
17	Nesting	Track, 3 turbines	Removal of 3 stream crossings, 2 turbines
18	Delting	Track, 1 stream crossing	
19	Nesting	None (track and turbine on catchment margin)	
20	Kergord	Track	
21	Nesting	None	
22	Delting	Track, 1 borrow pit (existing, on catchment margin), 2 turbines	
23	Delting	Track, 1 borrow pit (on boundary with catchment 9), 1 turbine, 1 anemometer	
24	Nesting	Track, 1 stream crossing, 1 borrow pit	Removal of 2 stream crossings, notable section of track, 1 borrow pit, 1 turbine
25	Nesting	None (track on catchment margin)	
26	Delting	Track (upgrading of existing track), 2 stream crossings	
27	Nesting	None	

Catchment ID	Site Area	Proposed Development Features – T127 Layout	Development Alterations between 2009 and T127 Layout
28	Nesting	None	
29	Delting	Track, 1 stream crossing, 1 construction compound (on catchment margin)	Removal of 2 turbines
30	Kergord	Track, 1 stream crossing, borrow pit, 1 construction compound	

Owing to the proposed changes in infrastructure, there are now only three track types proposed on the site. The lengths of cut track and floating track have been recalculated for each of the three remaining track types, and the details are summarised in Table A4.3 of Chapter A4 of this Addendum.

Table A14.6 Summary of Stream Crossings shown on OS 1:50,000 Mapping

Crossing Type	Stream Size (Defined in Appendix A of the 2009 ES Stream Crossing Technical Appendix, Appendix 14.3)*			
	Large	Medium	Small	Total
Bridge	3			3
Rectangular culvert / arch		10	6 (-3)	16 (-3)
Rectangular culvert /arch with mammal passage		1	1	2
Circular culvert		3	10 (-1)	13 (-1)
Multiple circular culverts		3	2	5
Circular pipe			(-1)	(-1)
Multiple circular pipes				
Circular pipe with mammal passage				
Drainage layer (narrow crossing)				
Drainage layer and pipes (broad crossing)		3 (-1)		3 (-1)
Total new crossings	3	20 (-1)	19 (-5)	42 (-6)
<i>Existing crossing structures, with probable upgrade requirement</i>		2	(-3)	2 (-3)
TOTAL (new + upgraded existing)	3	22 (-1)	19 (-8)	44 (-9)

The reductions in infrastructure would result in a number of stream crossings no longer being required, compared with the 2009 proposals. These consist of nine CAR-regulated crossings (CS01-03, KS01-02, NS15-18) and nine unregulated crossings (CX01-08, NX10), reducing the overall number of crossings from 97 to 79. The details of the 44

remaining CAR-regulated crossings are summarised in Table A14.6 (superseding Table 14.19 in the 2009 ES). Numbers in brackets show reductions from the 2009 proposals.

Following the reduction in the number of turbines, there would be 30 (reduced from 38) turbine locations in areas where peat depth greater than 2.5m was found at some or all of the probing locations. Of these, 20 turbines had a single point where peat deeper than 2.5m was recorded and the remaining 10 turbines (D5, D10, D30, K50, K51, K53, K72, K74, N93 and N143) had two or more peat results greater than 2.5m within 25m of the proposed turbine centre point.

Of the fourteen primary borrow pits proposed in the 2009 ES, and assessed in detail, two would not be required for the revised infrastructure layout. These are CBP01 in the Collafirth region and NBP09 in the Nesting region. On the other hand, one additional borrow pit is proposed for the Kergord quadrant; this has been designated KBP05. The volume of aggregate required has been recalculated and the updated borrow pit dimensions and estimated extraction volumes are provided in Table A14.7. Borrow pit locations are shown on Figures A4.1.1 and A4.1.2, and detailed assessments are illustrated on Figures A14.16a to A14.16m (equivalent to the Appendix Figures 14.2 series in the 2009 ES).

This reduces the total number of proposed borrow pit locations to 13, of which three are existing quarries and the remaining ten will be new borrow pits. Note that it is anticipated that the borrow pits NBP03 and NBP04 will not both be reopened although both have been subject to assessment, resulting in the intention to operate up to 12 active borrow pits. This will allow extraction of c. 1.4M m³ of aggregate.

In terms of other infrastructure, there would be 7 rather than 8 construction compounds and 9 rather than 11 permanent anemometer masts.

Concrete volumes required for the revised development have been estimated to be 62,897m³, primarily to form turbine foundations. This is a reduction of 11,355m³ from the 150-turbine layout.

The percentage landtake in relation to hydrological catchments is given in Table A14.8, including reference to 2009 landtake values. This table uses the indicative areas of borrow pits rather than the larger areas of search. Note that these catchment values take a conservative viewpoint that the larger of borrow pits NBP03 and NBP04 (i.e. NBP04) will be constructed in catchment 3.

The total landtake for the proposed wind farm has significantly decreased compared with the 2009 layout. A number of catchments would be subjected to reduced landtake following the changes in proposed infrastructure, particularly where turbines, construction compounds, borrow pits and/or sections of tracks have been removed. Compared with the 2009 design, double-width tracks have been reduced from 12m to 10m in width (with an additional 2m temporary construction strip each side), and single width tracks would be 6m wide as before (with a similar 2m construction strip each side). Post-construction, it is intended to reduce all double-width track down to single-width carriageway, thereby reducing landtake of the operational windfarm.

Table A14.7 Indicative Borrow Pit Dimensions & Extraction Volumes

Pit ID	NGR Location	Approximate footprint dimensions (m) *	Approximate footprint area (m ²)	Max. depth (m)	Approximate volume (m ³)	Probable extraction method
DBP01	HU 3689 6949	65 x 87	2,981	22	40,000	Drilling & blasting
DBP02	HU 3771 6691	114 x 174	17,190	30	195,000	Drilling & blasting
DBP03	HU 4065 6985	109 x 124	12,130	15	115,000	Drilling & blasting
KBP01	HU 4057 6069	65 x 200	12,350	16	85,000	Drilling & blasting
KBP02	HU 3918 5763	116 x 130	14,140	18	125,000	Drilling & blasting
KBP03	HU 3834 5527	123 x 130	14,690	20	133,000	Drilling & blasting
KBP04	HU 3780 5048	112 x 128	13,410	12	85,000	Drilling & blasting
KBP05	HU 3913 5595	65 x 94	5,725	15	33,000	Drilling & blasting
NBP01	HU 4198 6151	126 x 228	25,360	8	155,000	Drilling & blasting
NBP03**	HU 4211 5619	90 x 93	7,403	23	83,500	Drilling & blasting
NBP04**	HU 4212 5587	68 x 130	9,371	20	83,500	Drilling & blasting
NBP05	HU 4380 5684	114 x 208	21,700	12	165,000	Drilling & blasting
NBP06	HU 4657 5630	150 x 160	21,460	15	172,000	Drilling & blasting
Total estimated volume (m³):					1,470,000	

* Please note that borrow pits are not regular in shape. Footprint dimensions represent the maximum length and width whereas footprint area is derived from the indicative design.

** Please note that the development intention is to re-open either NBP03 or NBP04, not both.

Table A14.8 Proposed Landtake of Development

Catchment ID	Landtake in Catchment (km ²)	Percentage of Total Development within Catchment – T127 Layout	Landtake as Percentage of Catchment Area - T127 Layout	Landtake as Percentage of Catchment Area - 2009 Layout
1	0.135	7.95%	0.64%	1.02%
2	0.291	17.21%	1.58%	1.59%
3	0.085	5.04%	0.58%	0.63%
4	0.125	7.36%	0.95%	0.79%
5	0.199	11.75%	1.76%	1.91%
6	0.243	14.37%	2.29%	2.43%
7	0.126	7.44%	1.85%	1.92%
8	0.025	1.50%	0.43%	0.75%
9	0.110	6.49%	2.28%	2.32%
10	0.013	0.75%	0.27%	0.38%
11	0.097	5.74%	2.18%	1.72%
12	0.023	1.34%	0.53%	0.69%
13	0.000	0.00%	0.00%	0.65%
14	0.000	0.00%	0.00%	0.04%
15	0.000	0.00%	0.00%	0.00%
16	0.000	0.00%	0.00%	0.00%
17	0.035	2.07%	1.20%	2.36%
18	0.012	0.69%	0.43%	0.50%
19	0.000	0.00%	0.00%	0.00%
20	0.019	1.10%	0.69%	0.72%
21	0.000	0.00%	0.00%	0.00%
22	0.034	2.02%	1.70%	1.72%
23	0.014	0.83%	0.85%	0.77%
24	0.041	2.41%	2.42%	3.40%
25	0.001	0.04%	0.03%	0.00%
26	0.009	0.53%	0.67%	0.68%
27	0.000	0.00%	0.00%	0.00%
28	0.000	0.00%	0.00%	0.00%
29	0.026	1.54%	6.05%	7.13%
30	0.031	1.85%	8.68%	5.96%
Total	1.692	100.00%	1.07%	1.19%

However, there have also been some amendments to indicative borrow pit footprints, some of which result in increased landtake. A 5m buffer zone has been incorporated to surround all construction compounds, substations and borrow pit indicative locations resulting in increased planned landtake at all such locations.

The small size of catchments 29 and 30 means they continue to show the largest percentage of catchment-specific landtake.

A14.7 CHANGES IN AGREED MITIGATION

The Site Environmental Management Plan (SEMP) has been extensively revised and expanded since the 2009 version, and is presented with this Addendum as Appendix A14.6. The SEMP would guide the conduct of construction activities on site, and contains specific requirements of the construction workers in terms of the protection of peat, other soil, groundwater and hydrology, amongst many other topics.

The recent publication of the 'Floating Roads on Peat' document (SNH & FCE, 2010) has been reviewed and it is considered that the iterative design approach used to ES submission stage during this project is represented within this new best practice publication.

The approaches advocated in sections related to route identification and pre-construction considerations are closely aligned with practice carried out to date with regard to peat stability. A number of the early site investigation works have also been carried out on site and using similar principles to those suggested e.g. desk study, walkover to identify particular local peat characteristics (hagged terrain for example), peat probing at 50m intervals along track route (using GPS for accuracy) and on site shear vane testing.

In addition, further examples of best practice documented to be undertaken on this project during construction include monitoring of weather conditions, documented 'stop conditions', use of specific sustainable drainage techniques, adequate watercourse crossing design and cable trench reinstatement. All of these are now advocated by the SNH & FCE publication. Indeed, the Viking project Stream Crossing Guidelines are advocated as best practice within the guidance document.

A14.8 CHANGES IN THE IMPACT ASSESSMENT

The amendments in layout from 150 to 127 turbines, with associated reduction in track length, construction compounds and borrow pits, would reduce the likelihood of a pollution incident occurring. This, in turn, would lessen the impact of the development especially through the reduction in construction activity.

These changes would not materially alter the evaluation results of any of the categories from the original 150 turbine assessment.

Specific elements of the assessment where proposed changes have required a more detailed consideration are discussed below.

A14.8.1 Effects on water supplies

Following the removal of Collafirth Quadrant from the proposals, the private water supply at Grutin is now situated in a catchment where no infrastructure is proposed (catchment 13). The nearest infrastructure to this supply is in an adjacent catchment (catchment 5) within which the nearest turbine to this source has been removed from the 150 turbine scheme (following the deletion of Turbine D22). However, this change is unlikely to affect the previous assessment, which is that anticipated effects on public or private water supplies would not be significant.

A14.8.2 Effects on soil and peat

Following the revisions to the infrastructure, nine peat slide risk areas identified in Technical Appendix 14.1 no longer lie adjacent to proposed infrastructure. These areas are: Df, Ca, Cb, Cc, Cd, Ce, Ka, Kb and Nl. The remaining 45 locations remain relevant to the current proposals. The changes in layout would not have any effect on the assessment, which is that potential impacts on peat during construction and operation phases of the proposed wind farm are envisaged to be minor, that there is potential for moderate adverse effects in relation to construction peat erosion and peat instability issues, and that moderately significant effects are anticipated from the operational phase into the decommissioning phase from track-side alterations in groundwater. The requirement to highlight and appropriately deal with these matters, and to minimise the likelihood and magnitude of such events, remains as stated in the 2009 ES.

Reduction in estimated peat excavation volumes (as a result of the reduction in turbine numbers, reduced length of track and reduction in width of double tracks and associated reinstatement requirements) will also reduce the likelihood of a pollution event from reduced storage and handling of excavated soil and peat. It is also demonstrated in Appendix A14.4 that the excavated peat is likely to be required for all reinstatement works on site and therefore it is unlikely that excess material will be generated. Appendix A14.6 indicates that where excavated material may be unsuitable for immediate use, it will be treated prior to use, thereby ensuring that no waste disposal will occur.

Further information regarding effects on peat is provided in Chapter A10, Non-avian Ecology, A11, Ornithology, and A16, Air and Climate, and in Appendices A10.9, Habitat Management Plan, A14.4, Estimated Peat Extraction and Re-use Volumes, and A14.6, Site Environmental Management Plan.

A14.9 SUMMARY AND CONCLUSIONS

The alterations in the layout design would not make a material difference to the original findings of the Soil and Water chapter for the 150 turbine scheme although it is recognised that the removal of infrastructure from Collafirth has removed a number of locations of concern relating to peat depth and peat stability.

Peat stability, lowering of groundwater levels and peat erosion continue to be likely to cause significant residual impacts in some locations, as established in the original 2009 submission.

A14.10 REFERENCES

SEPA (2010). *River Basin Management Planning, Interactive Map*. Scottish Environment Protection Agency; http://www.sepa.org.uk/water/river_basin_planning.aspx (accessed March 2010).

SNH & FCE (2010). *Floating Roads on Peat*. Scottish Natural Heritage and Forestry Civil Engineering; <http://www.roadex.org/index.php/services/partner-knowledge-bank/scotland/floating-roads-on-peat-report> (accessed August 2010)

UKCP (2009). *UK Climate Projections: Key findings for Scotland North*. <http://ukclimateprojections.defra.gov.uk/content/view/2153/528/> (accessed March 2010).