TURBINE WATCH 312

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NEWSLETTER

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Oh what a circus, oh what a show. I needed a change and I guess you did too so why not an introduction from Evita. Hello to you all.

The wind farm circus has certainly come to town, unfortunately, it has gone beyond a passing entertainment and has overstayed its welcome.

New planning applications entered the ring this month but the star turns were: a proposal for a scheme of up to 30 turbines at Quantans Hill, Carsphairn and a further 6-10 turbine scheme exhibited for Blackmyre Moor near Creetown. And, of course, applications for 'smaller' turbines continue to scramble onto the back of the FiT's elephant.

Whilst on the subject of circuses, the D&G IPP Wind Energy Development has suffered a further delay and won't now be in the show ring until February.

The show was of course the Scottish Wind Farm Conference in Ayr and we had a good contingent in attendance from Dumfries and Galloway—more on the next page. Grateful thanks to CATS for organising such a splendid event.

I leave you to choose the clowns!

As this will be our last newsletter in 2011 may we wish you all a wonderful Christmas and all the very best for the New Year. Let's hope that in 2012 our voices will be heard.

Royal backing

In case it has escaped your notice, the Duke of Edinburgh has made a withering attack on windfarms describing them as "absolutely useless" and "a disgrace".

He accused people who support them as believing in a fairy tale and was heavily critical of the wind industry's reliance on subsidies from electricity customers.

The Duke's views are echoed by Prince Charles who has refused to have any on his Duchy of Cornwall land.

(Reported by Jonathan Wynne-Jones in The Telegraph, 19 November 2011)

Wake effect

This photo shows clouds forming in the wake of the forward turbines. Wake reduces the wind speed at turbines down the line —look carefully and you will see the serried ranks of turbines. The problem is one of reduced efficiency and ultimately reduced pay off. Downstream turbines can lose up to 30% of their power and, according to David MacKay, a physicist at Cambridge University, it is virtually impossible to gain a "steady state" on large wind farms because of variable wind directions.

Wind farm noise case settled out of court

The High Court case brought by the Davis family of Lincolnshire against a landowner and wind farm operator has been settled out of court at the eleventh hour. A condition of the settlement is that neither party may disclose any details of the settlement. The case hinged on the damage suffered by the family and the failure on the part of the wind farm owners to resolve the problem of the pulsing noise (amplitude modulation) experienced at their property at 1060 metres from the nearest turbine.
Press reports say that damages of £2.5 million were being claimed.
It would appear from the last minute nature of the settlement that the wind industry would prefer to stop detailed information on the severity of the noise getting into the public domain and a legal precedent being set.

All images and photos courtesy of National Wind Watch

Scottish Wind Farm Conference 2011

Roughly 250 people attended the Conference in Ayr on Friday 11 November and I think it would be fair to say that most left well satisfied, not only with the variety and quality of the presentations but by the opportunity it gave to touch base with others of a similar mind and sharing similar problems.

Graeme Pearson MSP chaired the event sympathetically. He had his work cut out as the presenters had very strict time guidelines to adhere to.

The technical presentations in the morning were taxing for those unfamiliar with the complexity of electricity generation but there was no doubt about the level of experience and expertise placed at our disposal.

Two presentations stood out for their clarity, that by Dr Hanning on sleep deprivation was especially well-organised and instructive but the show stealer, in my opinion, was the presentation by Helen McDade of the John Muir Trust. Her straightforward examination of policy and practice was impressive.

I think Dick Bowdler's presentation suffered from shortage of time and because of this we did not fully benefit from his extensive experience .

Struan Stevenson MSP was his usual confident self, reiterating the critical position on wind power that he has consistently adopted.

Questiontime was illuminating as we heard many testimonies to the folly of turbines in the countryside and the strains experienced by those living in proximity to them and for whom the notions of "appropriately sited" and "protection of residential amenity" have undergone a radical redefinition.

The final proposal for uniting as one nation-wide body under the auspices of CATS was approved almost unanimously.

We await the next steps.

Even if one accepts the need to cut carbon emissions, not a universal sentiment by any means, it is clear that the dash for wind-power can only be "justified" by Britain's misguided commitment to the 15% renewables target by 2020 under the EU's Renewables Directive. It is proving, and will continue to prove, a very costly commitment indeed.
Perspectives by Ruth Lea, Economic Adviser to the Arbuthnot Banking Group

A major finance group has urged extreme caution over investing in Scotland's renewable energy sector, partly because of the independence referendum.
Citigroup said the referendum process will create huge uncertainty at the moment when major decisions on green projects are needed.
BBC News 2 Nov 2011

Is this a policy shift? All offshore?

At a conference in London today, Ministers will meet potential investors in offshore wind projects to establish what can be done to increase investment in this area. The UK needs around £200bn much of this will need to come from sources beyond the UK's current major energy suppliers.
The Prime Minister David Cameron, said:
"I see offshore wind as a significant energy and industrial opportunity for the UK, and one that I am determined to seize.
"I believe the UK will remain the world's most attractive offshore wind market for many years to come. We have abundant natural advantages and a world-leading marine engineering base.
"The Coalition Government strongly supports the growth of renewable energy in order to help diversify and decarbonise our long-term energy mix."
Charles Hendry, Minister of State for Energy, said:
"Getting new capital into projects like offshore wind farms is the difference between getting them off the drawing board and into the water, creating jobs and stimulating growth."
"We have invited potential investors to London today to make the case for offshore wind as a stable, long-term and lucrative investment opportunity. The UK is a global leader in offshore wind and if people are not seriously considering investing here then I want to know why." (a Head Boy command?)

Holyrood debate—1 December 2011

'Gold rush in wind turbines leaves Scots feeling under attack'

A moratorium should be placed on new wind turbine developments until councils are given clearer guidance from government, environment minister Fergus Ewing has been told.

MSPs warned that local communities feel they are "under attack" from energy firms whose desperation to snap up land across Scotland "resembles the prospecting days of the American gold rush".

Hundreds of local campaigners packed into Holyrood's public gallery last night and heard warnings that the issue could now threaten flagship government energy policies.

Labour's Neil Findlay warned that the SNP's plans to generate 100 per cent of Scotland's electricity from renewables by the end of the decade could be "scuppered" by public anger surrounding the "over-concentration" of wind farms in some areas. "It resembles the prospecting days of the American gold rush with landowners hawking their land for rental and developers seeing steady treasure in the form of subsidies," he said.

Mr Findlay warned that after permission was granted for the Black Law wind farm in South Lanarkshire, the area became a "prime target" for developers who have flooded it with 15 applications for more than 250 turbines. "They're not motivated by environmental concerns, but by pound notes," he said. "Close to the grid and to demand, not a tourist spot, relatively rural and with what they wrongly viewed as a passive, compliant community – this ticked many investment boxes."

The impact on the landscape is not a "priority consideration" as developments spread, according to the Labour MSP who said the system is "unco-ordinated, unplanned and incoherent."

Former Holyrood presiding officer Alex Fergusson told MSPs that he rented out land on his farm for seven turbines, so was not an opponent, but added that wind farms are not a cheap form of energy.

"It is massively expensive, it is something for which we're all paying through the nose through our electricity bills and the energy produced by wind farms would not be produced by any commercial company without the huge subsidies," he said.

The build-up of wind farms in many areas was becoming "unbearable" for many people living there, Mr Fergusson added. "The lack of proper guidance to local authorities from government on the siting of wind farms is actually the root cause of much of this anger and frustration." "The time has come to consider a moratorium on further development until justifiable concerns have been answered."

Adam Ingram, the SNP MSP for Carrick, Cumnock and Doon Valley, voiced concerns about the "damaging impact" of wind farms in the South Carrick area. The former children's minister added: "All of these problems are compounded and exacerbated by the scale and rapidity of proposed development." He added new sites were "targeted relentlessly by all sorts of wind farm developers, large and small".

Former Tory leader Annabel Goldie called for a review of energy policy and planning guidance.
"The current position is unsustainable and ludicrous," she said.

Mr Ewing said that Scottish Natural Heritage will be publishing new guidance on the "cumulative impact" of wind farms, as well as guidance on landscape and siting. "We have been considering these matters about which people feel very strongly and doing so in some detail," he added.

(Source: Scott MacNab, The Scotsman, 2 December 2011)

Note: the full transcript of the debate is available on the Parliament website.

Green Energy could blot out countryside

Thanks to the Sunday Times of 20 November 2011 for this eye-catching heading.

According to the article, the Government's chief energy adviser has warned that vast tracts of countryside will have to be covered in wind turbines, solar panels and biofuel plants if the UK is to meet its renewable energy targets.

Professor David MacKay is the chief adviser to the energy and climate change ministry (DECC) and he has calculated that if only 10% of the country was covered in turbines they would generate only a sixth of the nation's energy needs.

The problem, as he sees it, is that renewable energy of all forms is "inherently diffuse" so that vast tracts of land are needed to generate significant amounts of energy.

According to Professor MacKay, powering a single car on biofuels for a year *"would take a strip of land 80 metres wide by 8 kilometres long".*

He made these points at a meeting of the Royal Society two weeks ago and said that he was not attempting to undermine the UK target to meet 20% of energy demands from renewables by 2020. He simply wanted to make clear the scale of the engineering and environmental impact of covering so much land with turbines, solar farms and biofuel plants.

He said, *"There's a general message, you can run through all renewables and you find that all of them are diffuse, so to make a difference they have to be country-sized."*

"Let's be realistic. What fraction of the country can we really imagine covering with windmills? Maybe 10%? Then we conclude: if we covered the windiest 10% of the country with windmills we would be able to generate 20 kilowatt hours per day per person."

Britains's energy consumption is about 125 kilowatt hours per day per person.

He concluded, *"Whatever mix of renewables you take, they all deliver about 2.5 watts per square metre. It means the total land use occupied by renewable energy sources to supply today's lifestyle would be about half the UK."*

By contrast, a nuclear power station produces about a 1,000 watts per square metre.

From an article by Jonathan Leake in the Sunday Times, 20 November 2011.

Forgive me returning to an old theme but whilst on the subject of blots on the landscape take a look at these two photographs (courtesy of National Wind Watch)

14,000 abandoned turbines at Southpoint, USA

The above ground legacy

What was that about decommissioning?

The below ground legacy

And minimum impact?

visit: www.tw312.org.uk

Scottish Institution of Mechanical Engineers Report

Never in my wildest dreams did I think I would be reading the Report of the Institution of Mechanical Engineers (*Scottish Energy: 2020?,* IMechE, Nov.2011) and not for a moment did I ever think I would say the following words: "It was interesting". But it is and I learned something which, for what it's worth, I am about to pass on (I imagined you turning the page).

Just to recap: the Scottish Government announced in 2009 that by 2020, 20% of the total energy demand for Scotland would be met from renewable sources. More recently this was upgraded to 30%. (the UK as a whole opted for 15%) And further, as a component of energy, the electricity generation target was revised upward to 100%. Note Scotland's legal obligation is the same as the UK (15%) as there is no devolved energy policy.

One significant problem for IMechE was to discover how total energy consumption in Scotland was split—Heat, Transport, Electricity—because no figures are available in the public domain. Note the three subtypes of Energy.

You will appreciate the problem as IMechE saw it, without such figures it would be impossible to measure subsequent achievements.

In the end the Report settled on the indicative set of figures on the components published in the 2006 Scottish Renewable Forum's "Routemap". The projections then for energy consumption by 2020 underpinning the Report are: Heat 49%, Transport 30% and Electricity 21%. Note that Electricity is the smallest component of energy demand.

The Report mentions several key issues with which you are familiar—intermittency caused by unpredictable weather conditions affecting wind speeds and ultimately generation, the problem of storage of electricity and neglect of the part played or to be played by conventional or on-demand backup.

However, the Report also highlights a number of other factors which are perhaps not usually given prominence. Those elements and recommendations of the Report are set out below.

- Energy is not electricity alone but includes as well heat and transport. Precise language needed.
- Future energy policy should be built on an "Energy Hierarchy" - Energy Conservation, Energy Efficiency, Utilisation of Renewables, Utilisation of other low-GHG-emitting resources, Utilisation of conventional resources as at present.
- There must be a re-focussing from wind and solar (intermittent and unpredictable) to more on-demand predictable resources like biomass and energy from waste.
- The Institution supports development of marine technologies.
- There is a tension between energy and emissions policies from unwarranted assumptions that renewables will have a mitigating effect on climate change or enhance energy security.
- Scotland's emissions targets: 42% reduction below 1990 levels by 2020 and 80% reduction by 2050 are not solely reliant on energy sector reductions and would be impacted on by the amount of manufacturing, waste recycling/ exporting, embodied carbon on imports and diminishing nuclear supply.
- As well as the difficulty of accessing data on energy consumption by sector (heat, transport, electricity) the researchers had equal difficulty in accessing any data in relation to the penetration of renewables into the 3 sectors. These data are not in the public domain.
- Estimates suggest that 6.4% of transport energy, 5% of heat energy and 34% of electricity from renewable sources can be achieved by 2020.
- Need a clear understanding of the difference between "installed generation capacity" and ACTUAL amount of electricity supplied by installation.
- Significant challenges exist in relation to technology (more R&D needed), infrastructure (grid upgrades), skills (sparse indigenous supply or problem attracting overseas engineers), manufacturing capability (existing low base) and funding (accessing finance).

There appears to be no credible evidence that the skills base necessary to support the Government's Manifesto pledge of the creation of 130,000 jobs in the "green" energy sector in Scotland is achievable over the next nine years." (p 15)

- There is an inherent problem in trying to achieve the overall target for all energy from renewables by electricity. The focus of the nation's energy policy on electricity was misplaced.
- Even if Scotland's electricity supply could be sourced totally from renewables this would barely meet the overall 2020 target of 30%.
- Technically remiss to assume the heat and transport targets can be reached by a shift of those sectors to electricity. Electricity is an inefficient way of providing heat.
- The installation rate to achieve targets would need to be 5 times that of the past decade.
- Need to explicate an engineering based methodology and assessment for achieving the ambitious renewable targets, there is none in the public domain.
- Scotland's ambitious pledge to wipe out fuel poverty by 2016 when fuel poverty is rising and forecast to continue rising is a major challenge.

Summary of turbine numbers in Stewartry planning applications

158 turbines approved
19 masts approved

69 turbines: applications awaiting decision
4 masts awaiting decision

102 turbines: applications to be submitted

A total of 329 turbines

13 turbines refused (6 applications out of 134) (not all yet submitted but pending)

Stewartry planning— turbines and masts
Submitted applications awaiting decision

Date	Location	Application No	No of turbines/mast & height
25/11/2011	Barnbarroch Fm, Dalbeattie	11/P/2/0451	1 x 19.05m
23/11/2011	Auchengibbert Fm Crocketford	11/P/2/0443	2 x 21.9m
23/11/2011	Rerrick Pk Fm Dundrennan	11/P/2/0428	1 x 41m
21/11/2011	Kings Grange Old Br of Urr	11/P/2/0442	1 x 20.3m
16/11/2011	Ernespie Dairy Castle Douglas	11/P/2/0437	1 x 39.6m
14/11/2011	Low Chapelton Farm, Borgue	11/P/2/0423	1 x 22.05m
01/11/2011	Margrie Farm Borgue	11/P/2/0418	2 x 46.5m
02/11/2011	High Banks Kirkcudbright	11/P/2/0400	2 x 45.5m
02/11/2011	Banks Hill Fm Kirkcudbright	11/P/2/0399	2 x 44.5m
24/10/2011	Colt Cottage Borgue	11/P/2/0409	1 x 19.36m
13/10/2011	Cambret Hill Creetown	11/P/2/0383	1 x 45m
30/09/2011	Barstobrick Ringford	11/P/2/0384	1 x 26.13m
30/09/2011	W Kirkcarswell Dundrennan	11/P/2/0370	1 x 79m
08/09/2011	Conchieton Hse Twynholm	11/P/2/0358	1 x 15m
08/09/2011	Larg Farm Creetown	11/P/2/0350	2 x 27.13m
22/08/2011	Holmhead	11/P/2/0333	1 x 45.7m
22/08/2011	Moniaive	11/P/2/0332	1 x 45.7m
10/08/2011	Craigdarroch Blackcraig	11/P/2/0299	70m mast
21/07/2011	Brighouse Bay Compressor Stn	11/P/2/0289	3 x 24.5m
11/07/2011	Trostrie Farm Twynholm	11/P/2/0277	40.5m mast
10/06/2011	Muirhead Fm Twynholm	11/P/2/0237	1 x 27m
07/06/2011	Culnaightree Fm Auchencairn	11/P/2/0230	1 x 75m
19/05/2011	Blairshinnoch Kirkgunzeon	11/P/2/0195	3 x 27.1m
11/05/2011	Larghill Farm Crocketford	11/P/2/0182	1 x 21m
04/11/2010	Loch Hill Nth of Dalry	10/P/2/0427	11 x 100m 76m mast
22/01/2010	Milnmark Fm Dalry	10/P/2/0021	5 x 81m 55m mast
20/10/2009	Plascow Farm Nr Dalbeattie	09/P/2/0359	3 x 84m
05/08/2009	Galtway Hill Milton Fm,Kbt	09/P/2/0267	2 x 100m
18/07/2006	Margree Dalry	06/P/2/0391	17 x 120m

Applications awaiting submission

?	Standingstones Auchencairn	11/E/2/0068	5 x 20.8m
?	Blackmyre Moor Creetown	?	6/10 x 125m
14/11/2011	Quantans Hill Carsphairn	11/E/2/0067	17-30 x 125m
08/11/2011	Barstobrick Fm Ringford	11/E/2/0066	1 x 26.13m
07/11/2011	Kirkcudbright Golf Club	11/E/2/0065	1 x 24.8m
24/10.2011	Auchenlosh Dalbeattie	11/E/2/0061	2 x 50m
10/10/2011	Valley View Ringford	11/E/2/0058	1 x 80m
10/10/2011	High Barcaple Ringford	11/E/2/0057	1 x 80m

Applications awaiting submission

Date	Location	Application No	No of turbines/ mast & height
30/09/2011	Erncrogo Hill Crossmichael	11/E/2/0056	1 x 66.7m
12/09/2011	CastlecreavieFm Kirkcudbright	11/E/2/0054	1 x 25m
01/09/2011 25/08/2011	Larg Farm, Creetown	11/E/2/0052 11/E/2/0051	2 x 27.13m 2 x 27.13m
18/08/2011	Mayfield Farm Rhonehouse	11/N/2/0001	6 x unknown 1 mast
21/07/2011	Garrochar Tree Farm, Creetown	11/E/2/0045	1 x 65m
13/07/2011	Guffogland Dalbeattie	11/E/2/0044	1 x 87m
04/07/2011	Moorbrock Hill Carsphairn	11/F/2/0005	Not known
June 2011	Benshinnie Parton	?	24 x 125m
?? 28/09/2010	Mark Farm Creetown	Not known	11 x 110m
15/06/2011	Little Sypland Kirkcudbright	11/E/2/0039	1 x 84m
31/05/2011	Auchenlosh Dalbeattie	11/E/2/0035	1 x 34.2m
21/02/2011	Blairshinnock Fm Kirkgunzeon	11/E/2/0017	1 x 27m
21/02/2011	Trostrie Farm Twynholm	11/E/2/0015	1 x 66.6m
22/10/2010	Standingstone Fm, Borgue	10/E/2/0033	1 x 62m
22/10/2010	Irelandton Farm Twynholm	10/E/2/0032	4 x 100m
01/07/2010	Glenquicken Moor, Creetown	10/E/2/0023	1 x 67m
24/06/2010	Rutherford's Wit Gatehouse of Ft	10/E/2/0021	2 x 45.5m
24/06/2010	Knockenbrex Moss Carrick	10/E/2/0019	2 x 45.5m
14/06/2010	Barcloy Hill Gelston	10/E/2/0018	5 x 115m

Applications refused

10/06/2011	Balmangan Fm Dundrennan	11/P/2/0238	3 x 39.6m refused
16/05/2011	Ingleston Farm Borgue	11/P/2/0193	2 x 39.6m refused
21/12/2010	Culraven Farm Borgue	10/P/2/0490	2 x 45.5m refused
20/12/2010	Craigmore Hill Lochfoot	10/P/2/0487	2 x 45.5m refused
08/01/2007	Barnbackle Fm Lochfoot	07/P/2/0006	2 x 100m refused
2005	Doon Hill, Kirkgunzeon	07/P/2/005	2 x 100m refused

Approved

04/05/2011	Garrochar Tree Fm, Creetown	11/P/2/0170	2 x 27m
26/08/2011	Shirmers Farm Parton	11/P/2/0321	1 x 27.1m
06/09/2011	Edingham Fm Kirkgunzeon	11/P/2/0356	1 x 19.8m
02/08/2011	Livingstone Castle Douglas	11/P/2/0297	1 x 22.4m
02/09/2011	Lochdougan Dairies, Kelton	11/P/2/0330	1 x 27.1m
15/02/2011	Littleton Farm Gatehouse of Ft	11/P/2/0065	3 x 40m
26/08/2011	West Bamoffity KirkpatrickDm	11/P/2/0337	2 x 21m
18/08/2011	Craigley Farm Gelston	11/P/2/0317	1 x 27.1m
04/04/2011	Chapel Farm Kirkcudbright	11/P/2/0131	1 x 39.6m
22/12/2010	Ingleston Farm Twynholm	10/P/2/0491	2 x 45.5m
22/07/2011	Kirkmabreck Creetown	11/P/2/0290	1 x 45.9m
08/07/2011	Kirkland Fm Kirkp' Durham	11/P/2/0275	1 x 27m
15/04/2011	Shenrick Farm Crocketford	11/P/2/0154	2 x 21m
05/04/2011	Crocketford Hs Crocketford	11/P/2/0134	2 x 27.1m
08/07/2011	Cullinaw Farm Buittle	11/P/2/0273	1 x 19.25m
28/06/2011	Ingleston Farm Gelston	11/P/2/0264	1 x 21m
20/06/2011	Culnaightrie Fm Auchencairn	11/P/2/0229	50.2m mast
24/08/2011	East Kirkcarsell Dundrennan	11/P/2/0117	3 x 19.6m
31/05/2011	Low Arkland Kelton	11/P/2/0213	2 x 27m
31/05/2011	Kelton Hill Fm Castle Douglas	11/P/2/0212	2 x 27m
04/04/2011	Croft Hd Farm Crocketford	11/P/2/0132	2 x 39.6m

Approved

Date	Location	Application No	No of turbines/ mast & height/
23/03/2011	Blackcraig Hill New Galloway	05/N/2/0005	23 x 110m
04/03/2011	Furmiston Crag Carsphairn	11/P/2/0088	80m mast
04/03/2011	Quantans Hill Cairsphairn	11/P/2/0087	80m mast
15/02/2011	Larg Farm Creetown	11/P/2/0063	1 x 27m
14/02/2011	Merklandwell Lochfoot	11/P/2/0060	1 x 27m
14/02/2011	Crochmore Fm Crocketford	11/P/2/0059	1 x 27m
27/01/2011	Portmary House Dundrennan	11/P/2/0041	1 x 22.4m
23/12/2010	High Barcaple Fm Ringford	10/P/2/0498	1 x 21m
22/12/2010	Auchenlock Fm Auchencairn	10/P/2/0496	1 x 27m
22/12/2010	Barstilby Farm Tongland	10/P/2/0495	2 x 21m
22/12/2010	Slagnaw Farm Kelton	10/P/2/0494	2 x 41m
08/12/2010	Sypland Kirkcudbright	10/P/2/0474	2 x 20m
25/11/2010	Drumhumphry Corsock	10/P/2/0455	2 x 15m hub
09/11/02010	Ladies Walk Fm Kirkcudbright	10/P/2/0433	85m mast
01/11/2010	Greenburn Creetown	10/P/2/0421	30m mast
11/08/2010	Larg Farm Creetown	10/P/2/0316	1 x 23.4m
26/07/2010	Boreland of Col-vend Farm	10/P/2/0296	1 x 20m
22/07/2010	Milnmark Farm Dalry	10/P/2/0291	1 x 20m
15/06/2010	Mark Farm Creetown	10/P/2/0247	60m mast
02/06/2010	Culnaightrie Fm Auchencairn	10/P/2/0238	1 x 20m
25/05/2010	Milnthird Hill Kelton	10/P/2/0228	50m mast
07/05/2010	Barcloy Hill Kirkcudbright	10/P/2/0202	80m mast
28/04/2010	Boreland o Borg Kirkcudbright	10/P/2/0186	1 x 20m
21/04/2010	Arvie, Castle Douglas	10/P/2/0158	1 x 20m
14/04/2010	Glensone Fm Southwick	10/P/2/0146	1 x 20m
30/03/2010	Low Barend Fm Dundrenan	10/P/2/0122	1 x 20m
19/03/2010	Torrs Farm Castle Douglas	10/P/2/0102	1 x 20m
19/01/2010	Plascow Farm Dalbeattie	10/P/2/0018	50m mast
19/01/2010	Balmangan Fm Borgue	10/P/2/0017	1 x 20m
24/12/2009	Blairshinnock Fm Kirkgunzeon	09/P/2/0434	1 x 15m
21/12/2009	Corse Hill Dunchrae Dalry	09/P/2/0429	Mast
05/11/2009	Ardendee, Kirkcudbright	09/P/2/0373	Mast
08/09/2009	Portmary Cott Dundrennan	09/P/2/0311	1 x 15m
28/08/2009	Durham Hill Kirkpatrick Dm	09/P/2/0300	1 x no height given
12/06/2009	Little Farm Gatehouse	09/P/2/0208	1 x no height given
16/02/2009	Glenquicken Fm Creetown	09/P/2/0049	2 x 15m
07/07/2008	Magree Dalry	08/P/2/0289 08/P/2/0290	Mast x No ht Mast x No ht
17/01/2008	High Barley Fm Gatehouse	08/P/2/0011	Mast x no ht
18/12/2007	Mackilston Dalry	07/P/2/0518	1 x no height given
22/05/2007	Forest Estate Dalry	07/P/2/0223	1 x 15m
26/02/2007	Adj 93 Cottan St, Castle Douglas	07/P/2/0084	1 x no height given
13/12/2005	Rainton Farm Gatehouse	05/P/2/0510	1 x 25m
23/08/2005	Windy Standard	05/P/2/0357	2 x 50m masts
17/06/2003	Edgerton Cothse Laurieston	03/P/2/0262	1 x no height given
10/06/2003	Torrs Hill Forest Estate Dalry	03/P/2/0252	2 x 100m 1 x mast no ht
28/01/2003	Windy Standard N of Carsphairn	03/P/2/0022 03/P/2/0018	1 x 60m mast 1 x 60m mast
04/01/2002 ?	Windy Standard N or Carsphairn	04/01/2002	30 x 100m 36 x 53.5m