



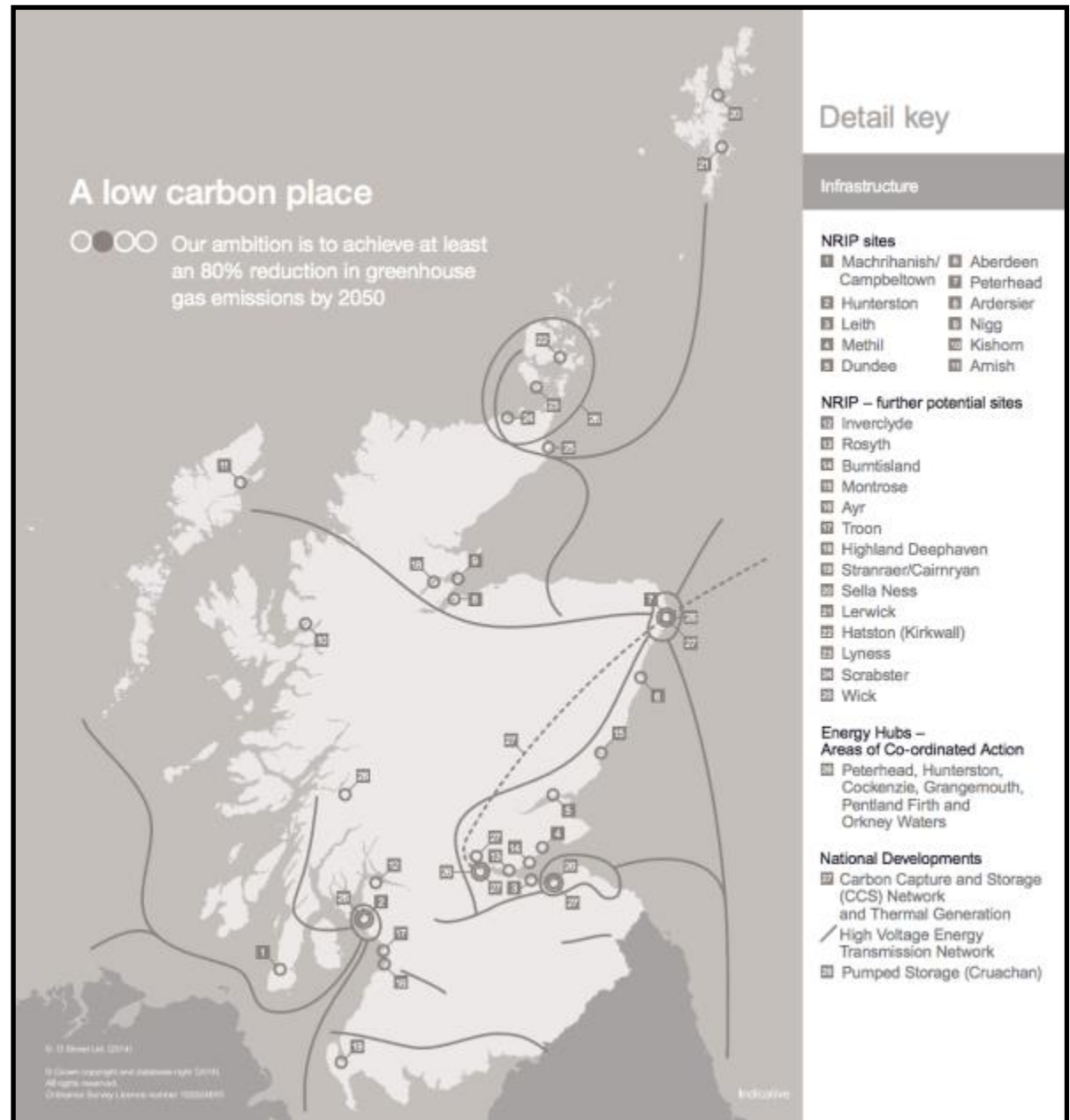
# Planning for wind farms – Scottish experiences

Graham Marchbank  
Scottish Government Planning and Architecture Division

Reykjavik – 17 September 2015

# National Planning Framework 3

- Four main themes:
  - successful/sustainable
  - natural/resilient
  - connected
  - **low carbon**
- Aligned with Scottish Planning Policy (SPP)



# Policy context

Ambition is that planning makes Scotland a low carbon place.

**By 2020 reduce energy demand by 12%...**

...and from renewables:

- meet at least 30% of overall energy demand
- **generate equivalent of 100% of electricity consumption**
- **source 11% of heat demand and 10% of transport fuels**
- at least 500MW renewables in community and local ownership

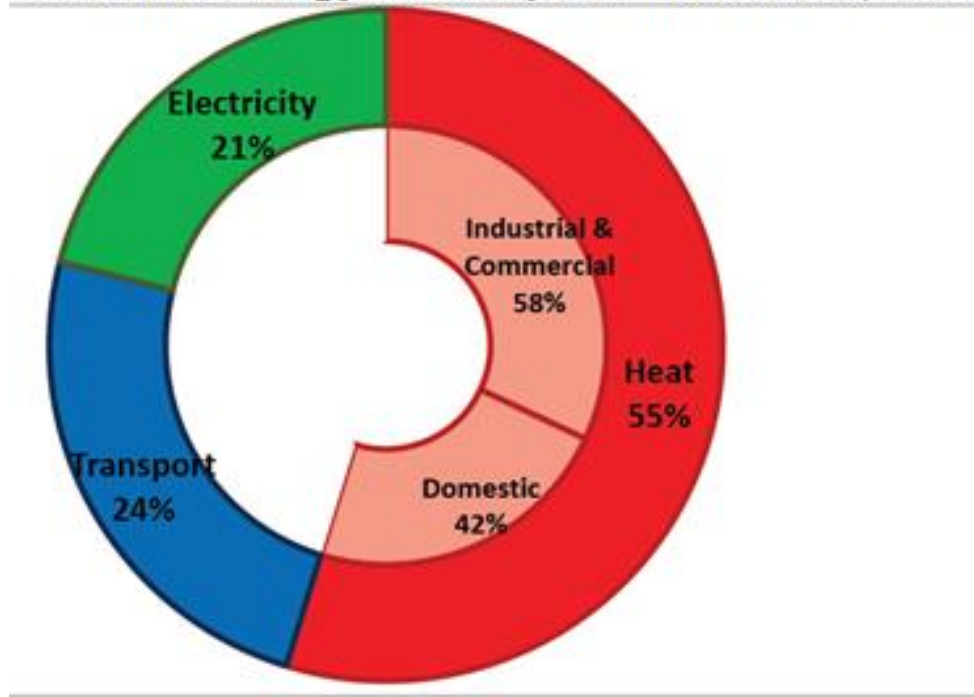
and by 2050

- reduce greenhouse gas emissions by 80%
- **achieve a largely decarbonised heat sector**

# Heat

- Heat is 55% of Scotland's energy use
- Heat is largest source of emissions - 47%

**Total final energy consumption in Scotland, 2012**



# Policy update

UK Government has since May 2015:

- Cut existing onshore wind subsidies early (2016 not 2017)
- Cut solar subsidies
- Cut energy efficiency budget
- Cut zero carbon homes obligation
- Consulted on changes to the Feed-in tariff
- Postponed announcements on future wind subsidies

# Policy update

Scottish Government has since May 2015:

- urged UK Government to reconsider early end to current subsidies
- held a summit with businesses in July
- criticised UK Government
- voiced concern about generating capacity margin (as low as 1.2% this winter) – is the answer “**Demand Response**”?
- Formed Longannet task force (coal power station closing 2016)

Í dag!

- **15:00 UTC Scottish Government Debate: The Future of Renewables in Scotland’s Energy Policy**

# Wind farms and health

- Scottish Government is advised by Health Protection Scotland and Public Health England
- some evidence from Canada and Australia but not causal
- insufficient evidence to conclude that wind turbines are harmful to health
- WHO plans for new Environmental Noise Guidelines for the European Region
- EU Directive on environmental noise  
<http://ec.europa.eu/environment/noise/directive.htm>
- research on amplitude modulation – the whoosh! whoosh! sound

# Making plans for wind farms

- Scottish Planning Policy provides the context
- Frameworks are mapped at a local authority level
- Excludes Glasgow, Edinburgh, Aberdeen, Dundee and the two national park authorities
- Framework minimum scales can be indicated
  - height of turbines (for example 50m.)



**Group 1: Areas where wind farms will not be acceptable:**

**19% of Scotland's landmass**

National Parks and National Scenic Areas.

**Group 2: Areas of significant protection:**

Recognising the need for significant protection, in these areas wind farms may be appropriate in some circumstances. Further consideration will be required to demonstrate that any significant effects on the qualities of these areas can be substantially overcome by siting, design or other mitigation.

**National and international designations:**

- World Heritage Sites;
- Natura 2000 and Ramsar sites;
- Sites of Special Scientific Interest;
- National Nature Reserves;
- Sites identified in the Inventory of Gardens and Designed Landscapes;
- Sites identified in the Inventory of Historic Battlefields.

**Other nationally important mapped environmental interests:**

- areas of wild land as shown on the 2014 SNH map of wild land areas;
- carbon rich soils, deep peat and priority peatland habitat.

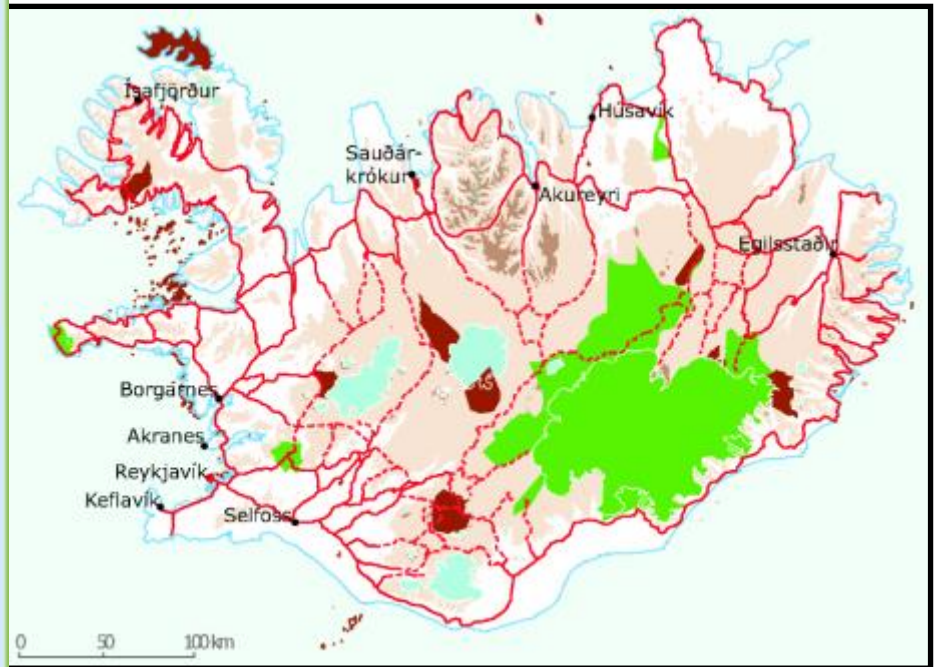
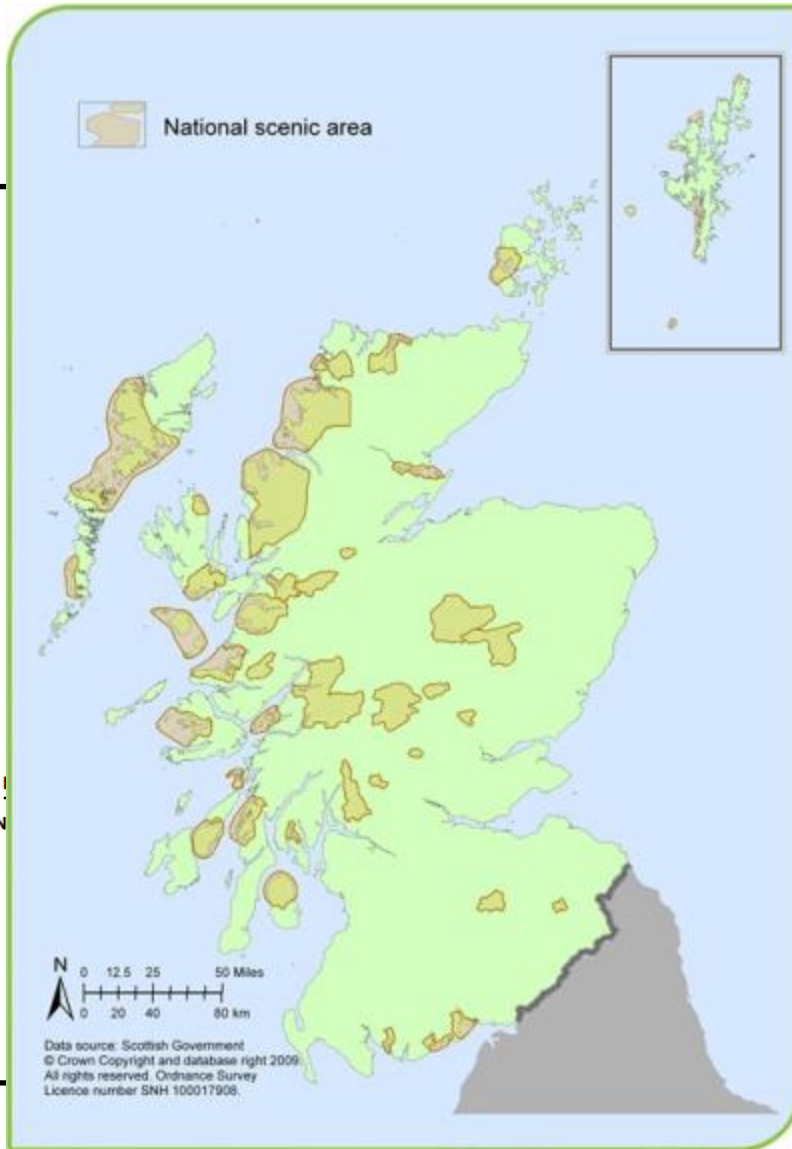
**Community separation for consideration of visual impact:**

- an area not exceeding 2km around cities, towns and villages identified on the local development plan with an identified settlement envelope or edge. The extent of the area will be determined by the planning authority based on landform and other features which restrict views out from the settlement.

**Group 3: Areas with potential for wind farm development:**

Beyond groups 1 and 2, wind farms are likely to be acceptable, subject to detailed consideration against identified policy criteria.

# National Parks and National Scenic Areas



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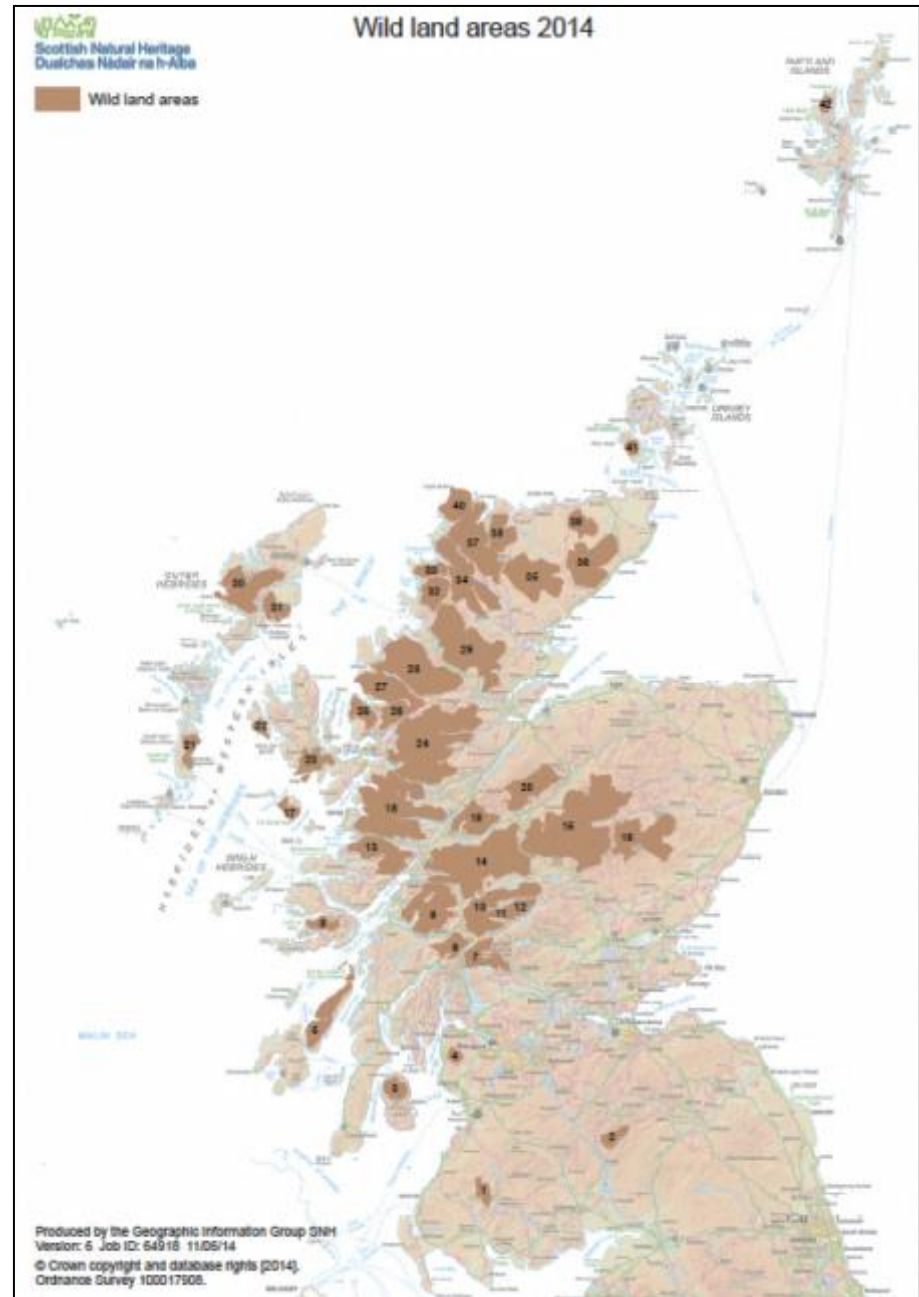
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# Wild land

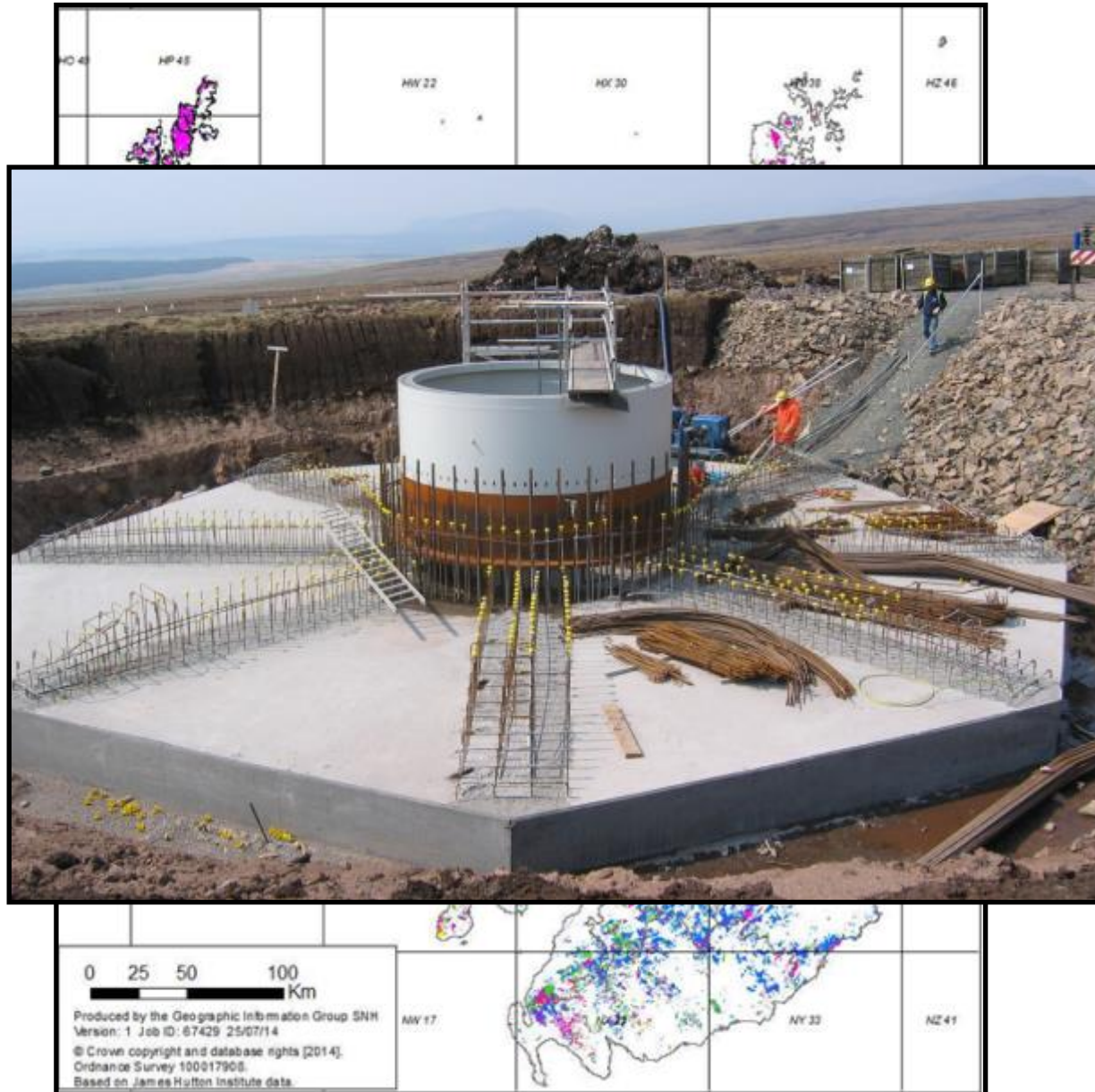
*“Wild land character is displayed in some of Scotland’s remoter upland, mountain and coastal areas, which are very sensitive to any form of intrusive human activity and have little or no capacity to accept new development*

*Plans should identify and safeguard the character of areas of wild land as identified on the 2014 SNH map of wild land areas”*



# Carbon-rich soils

- SPP Table 1 refers to C-rich soils, deep peat and priority peatland habitat (CPP)
- SNH map
- Pink and yellow for inclusion in spatial framework but yellow may contain some non-CPP
- Carbon calculator



## Carbon calculator

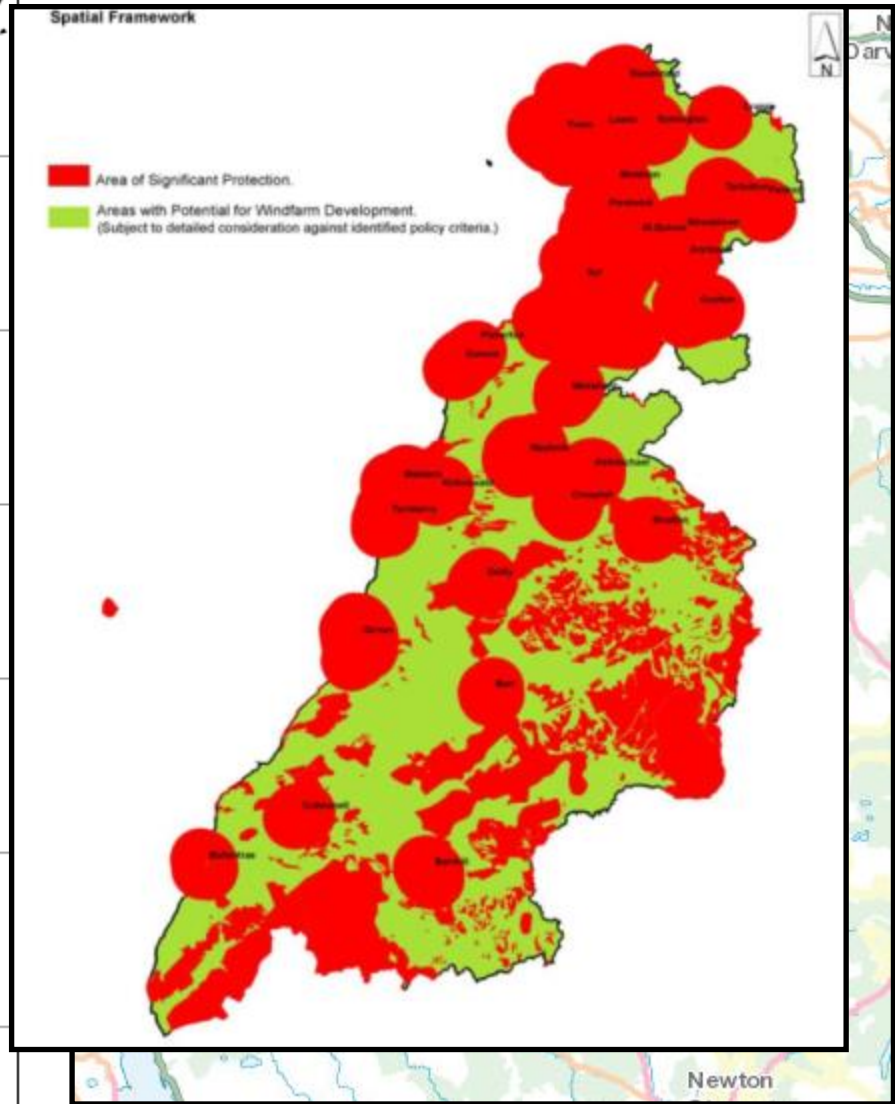
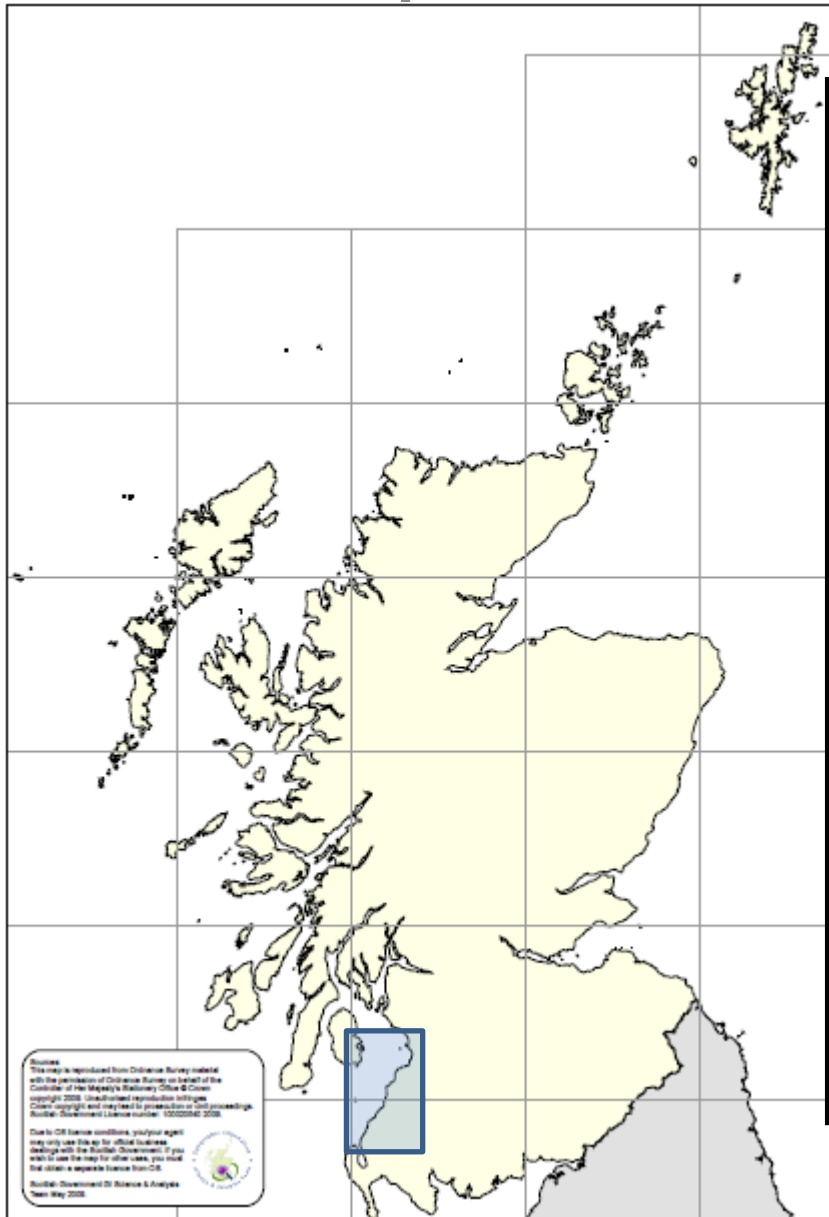
- On behalf of Scottish Government, the Scottish Environment Protection Agency maintains and updates the carbon assessment tool
- The tool is available to use on our website for developers of section 36 (50MW+) wind farm applications
- <http://www.gov.scot/Topics/Business-Industry/Energy/Energy-sources/19185/17852-1/CSavings/CC2-9-0>



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# Spatial Framework – South Ayrshire

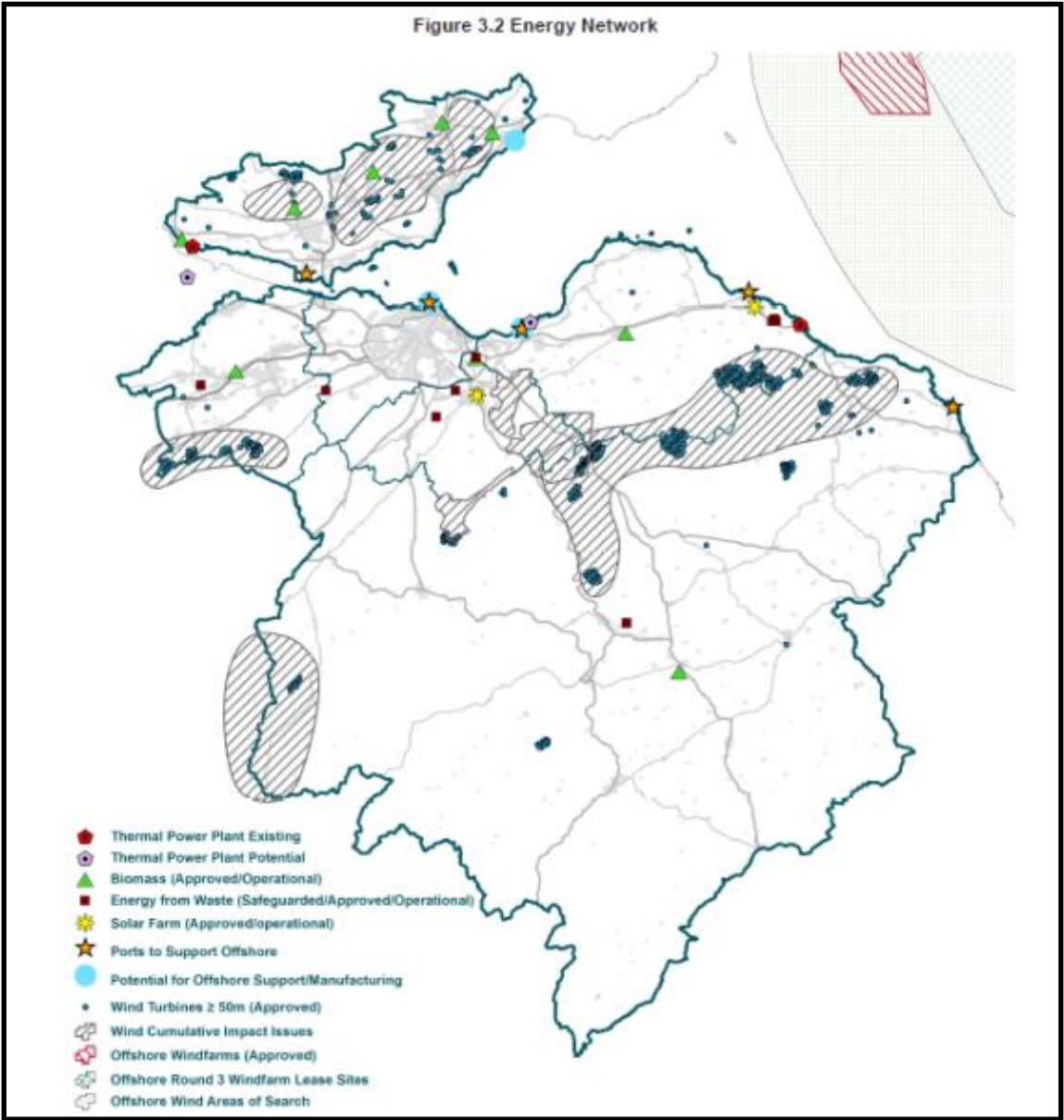


# Landscape Capacity Studies

- Not part of the spatial framework but LCSs help identify the potential of groups 2 and 3
- Help to:
  - **identify strategic capacity**
  - **assess cumulative impacts**
  - establish a better view of local landscape sensitivities
  - identify acceptable levels of landscape change
  - identify scope for further development
  - **inform development decisions**

# Strategic Development Plans

Cumulative impacts



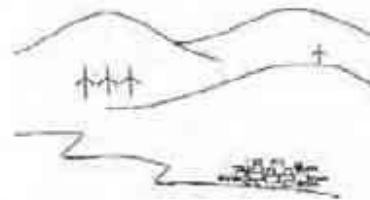
# Cumulative impacts - using landscape capacity assessment

169. "...planning authorities should be clear about likely cumulative impacts arising ... recognising that in some areas the cumulative impact of existing and consented energy development may limit capacity for further development;"

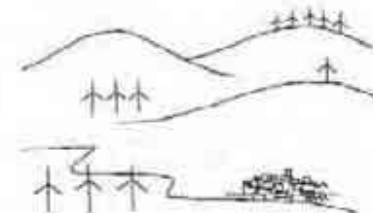
1. Define baseline wind turbine landscape typology from operating and consented wind turbines;
2. Identify limits/thresholds of acceptable cumulative change expressed in terms of the SNH wind turbine landscape typologies;
3. Set objectives defining how areas could be developed, to manage acceptable cumulative change within the lifetime of the plan;
4. Consider for strategic or local planning policies and/or supplementary guidance, review capacity situation when drafting next plan.

## SNH Wind Turbine Landscape Typologies

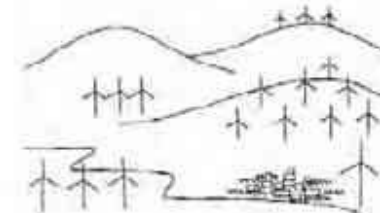
1. Landscape With No Wind Turbines
2. Landscape With Occasional Wind Turbines
3. Landscape With Wind Turbines
4. Wind Turbine Landscape
5. Windfarm



Separate isolated features



Windfarms become key characteristic of the landscape

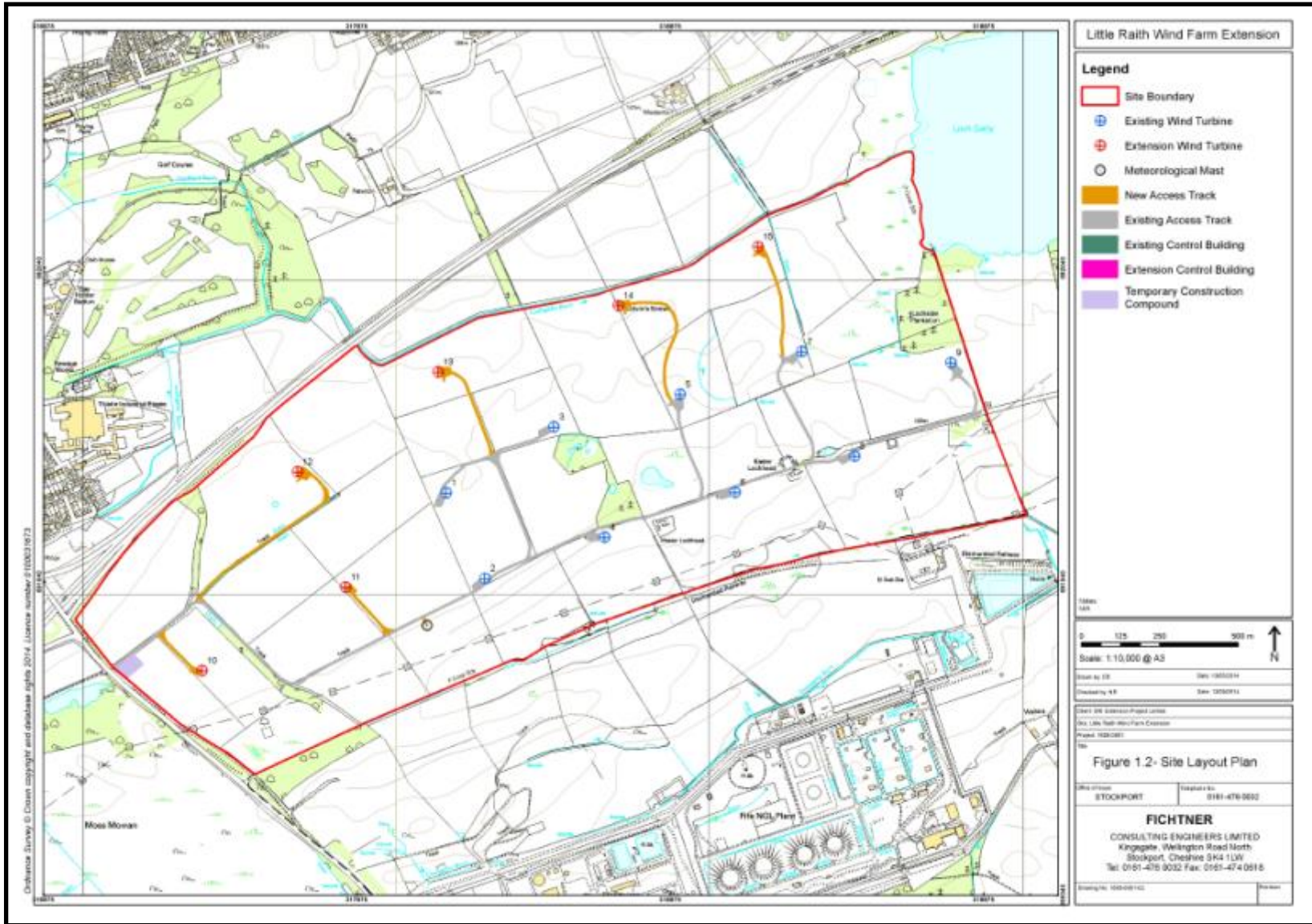


Windfarms become dominant characteristic of the area, creating a 'windfarm landscape'

# A wind turbine landscape?



# A wind turbine landscape?

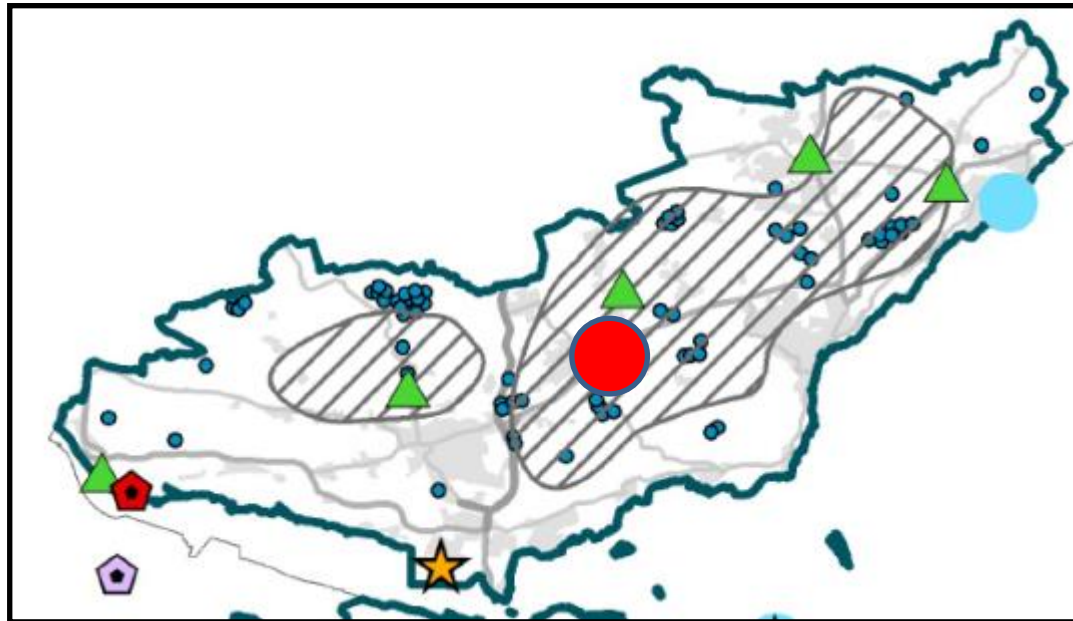




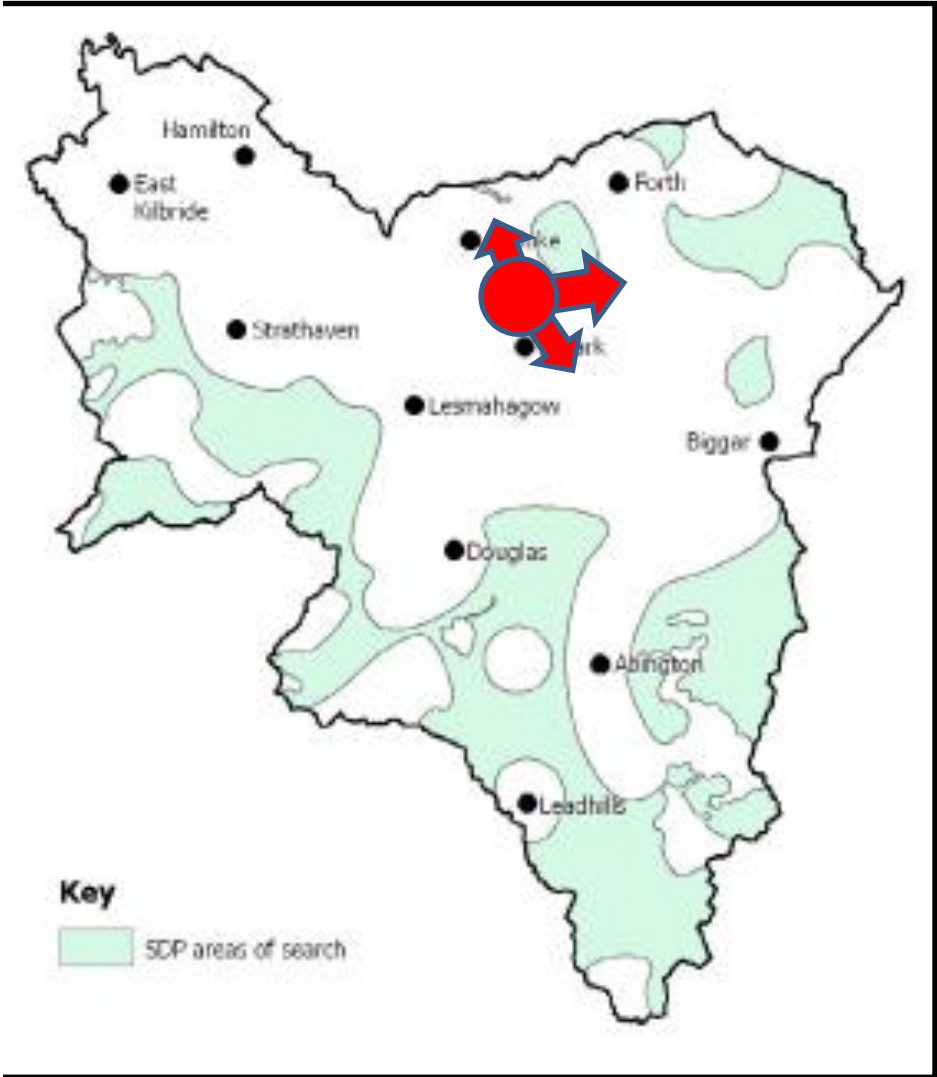
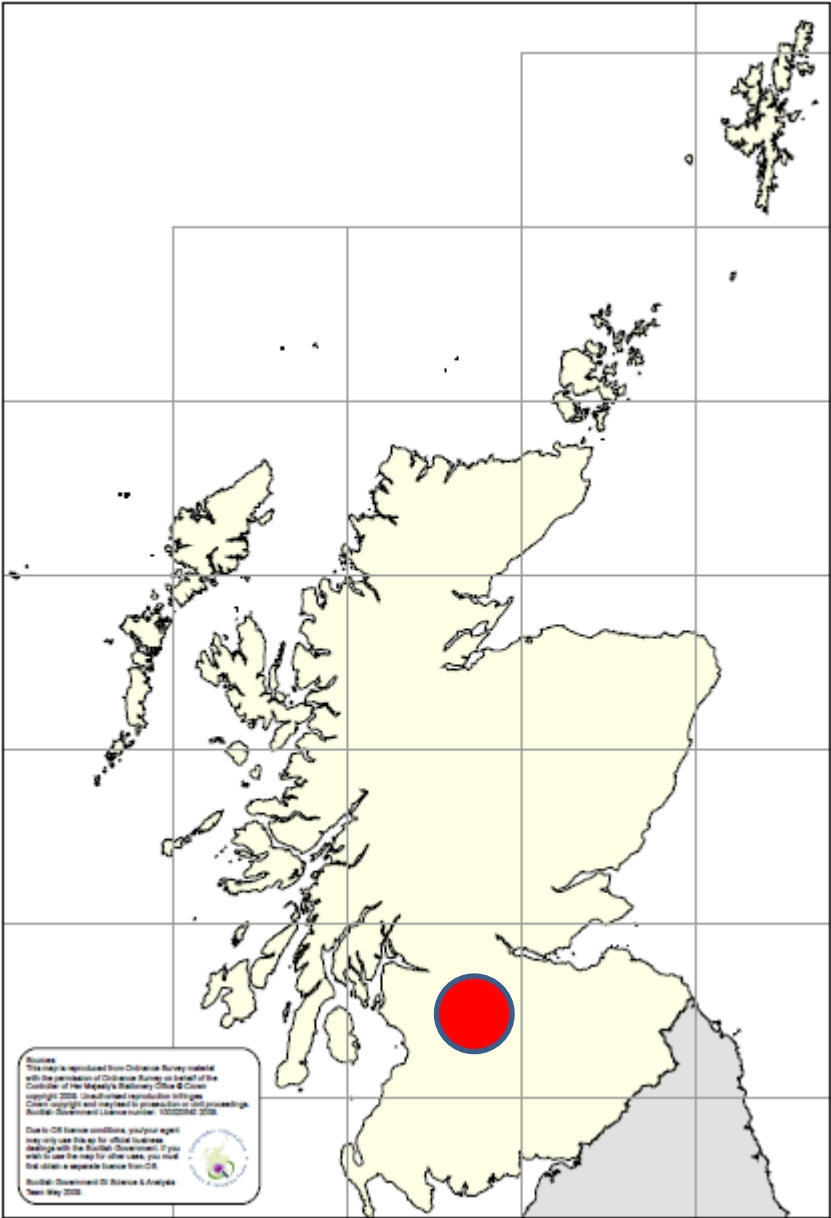
## A wind turbine landscape?

In a decision in July 2015 to refuse the wind farm extension, the appeal reporter said:

- He agreed with the council that should the proposed development proceed, the local landscape would change from a landscape “with wind turbines” to a “wind turbine landscape”



# A wind turbine landscape? – South Lanarkshire



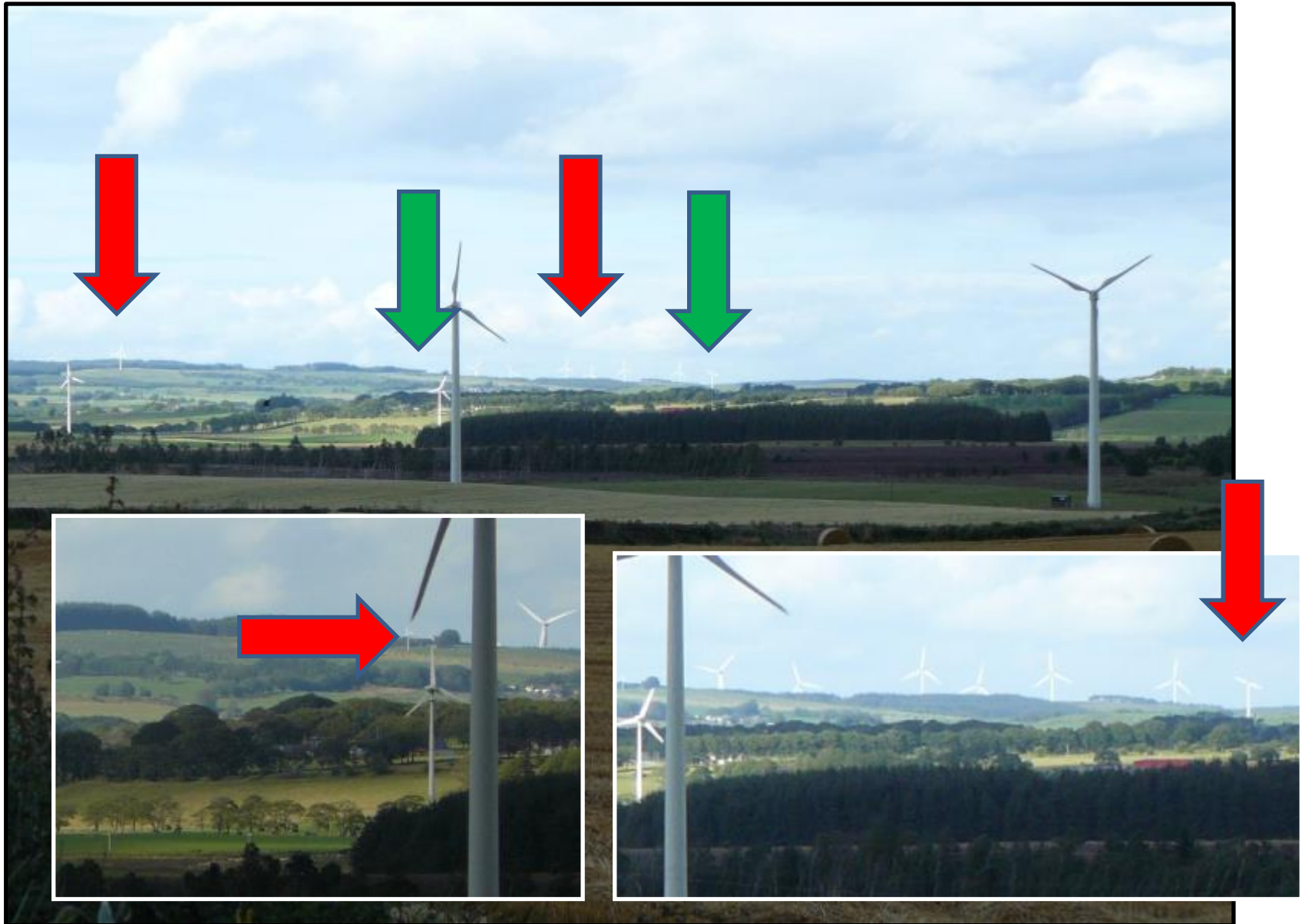
# A wind turbine landscape?



# A wind turbine landscape?



# A wind turbine landscape?



# A wind turbine landscape?



# A wind turbine landscape?



# Repowering

- Maintains and enhances installed capacity potentially “in perpetuity” (for a long time)
- Current use of sites a material consideration
  - 1996 - Scotland's second largest wind farm 36x 600 kW turbines: 21.6 MW
  - 2014 consent - 15x 4 MW turbines: 60 MW.





## Areas of activity

- Repowering – an agenda for the 2020s
- Restoration guarantees
- **Energy storage**
- Working with campaign groups...
  - Scotland Against Spin
  - John Muir Trust
  - Mountaineering Council of Scotland
- Working with <http://www.scottishrenewables.com/>
- **Research on “before and after”** and wind turbine noise
- Encouraging local ownership
- Public engagement for sub-20MW turbines - good practice <http://www.gov.scot/Publications/2015/06/6645>

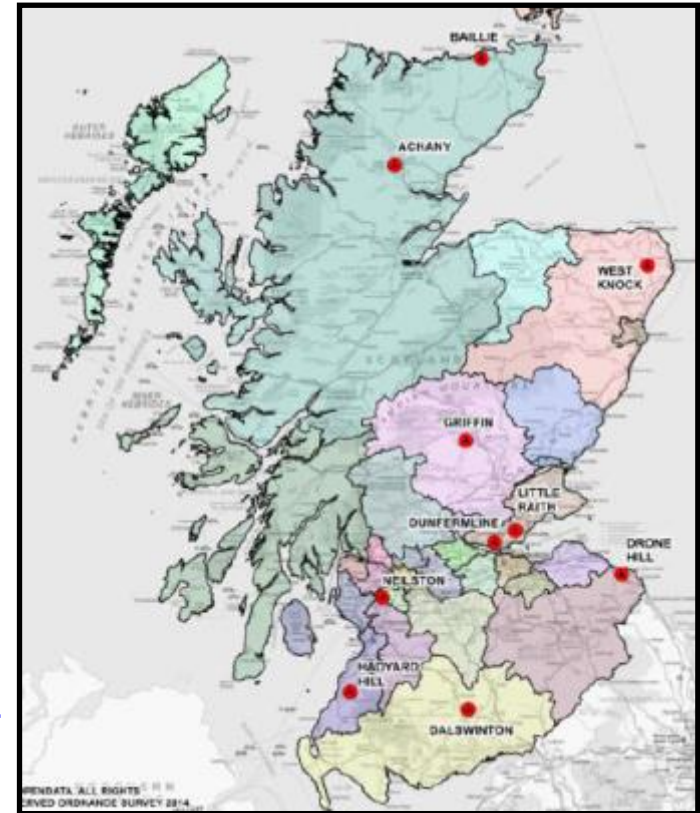
# Energy storage

**INVEST IN FIFE**



# Wind Farm Impact Study - research into before and after experiences

- ten wind farms studied
- prediction, measurement, assessment and documentation of impacts need to be more consistent
- decisions and reports should be consistent and clear about whether assessment has been done in accordance with recognised guidance and whether they agree with findings
- implications of micro-siting must be identified
- final report published in July 2015  
<http://www.climatexchange.org.uk/reducing-emissions/wind-farm-impacts-study1/>



# Wind farms, access and recreation



# Overhead lines and “Holford” rules



## The future

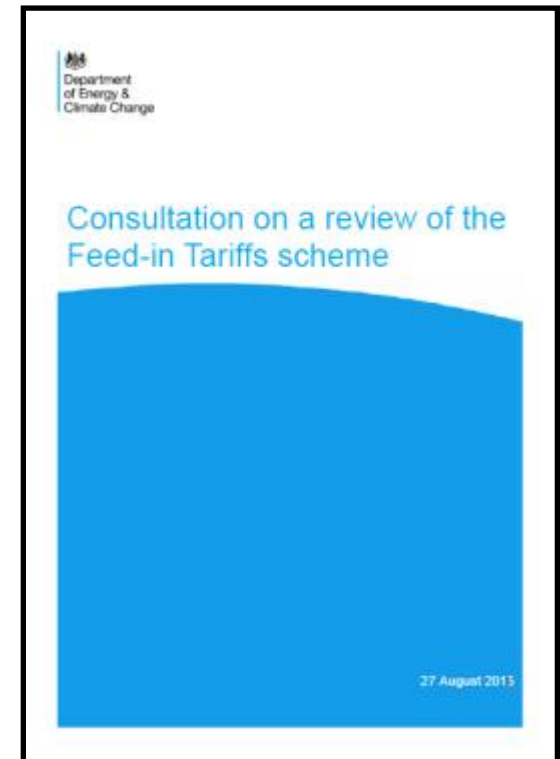
First allocation for projects delivering power in 2018/19 was announced February 2015

2 offshore wind farms	- 1162 MW
<b>Scotland - 10 onshore wind farms</b>	<b>- 545 MW</b>
England & Wales - 5 onshore wind farms	- 204 MW
Other technologies	- 227 MW

Second round postponed, questions of remote islands and community support remain unanswered.

# The future

- Feed-In Tariff – an initiative to generate electricity and supply excess to grid has been very successful - over-subscribed
- Review underway – UK Gov consultation until 23 October 2015
- Was available for up to wind farms up to 5MW
- Uptake and reduction in costs means wind above 1.5MW will receive no funding
- Solar and hydro subsidy also significantly reduced
- Question about future of community benefit and local ownership

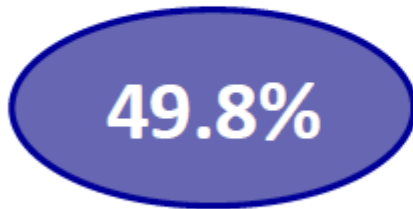


# The future

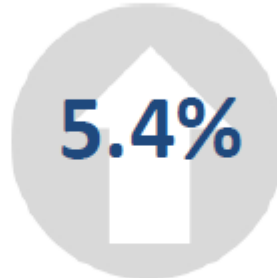
- A little uncertain but at June 2015....

## KEY FACTS...

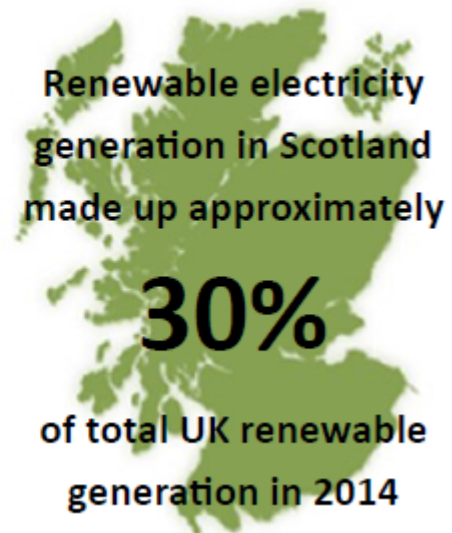
Provisionally, renewable sources  
generated...



...of gross electricity consumption in  
2014



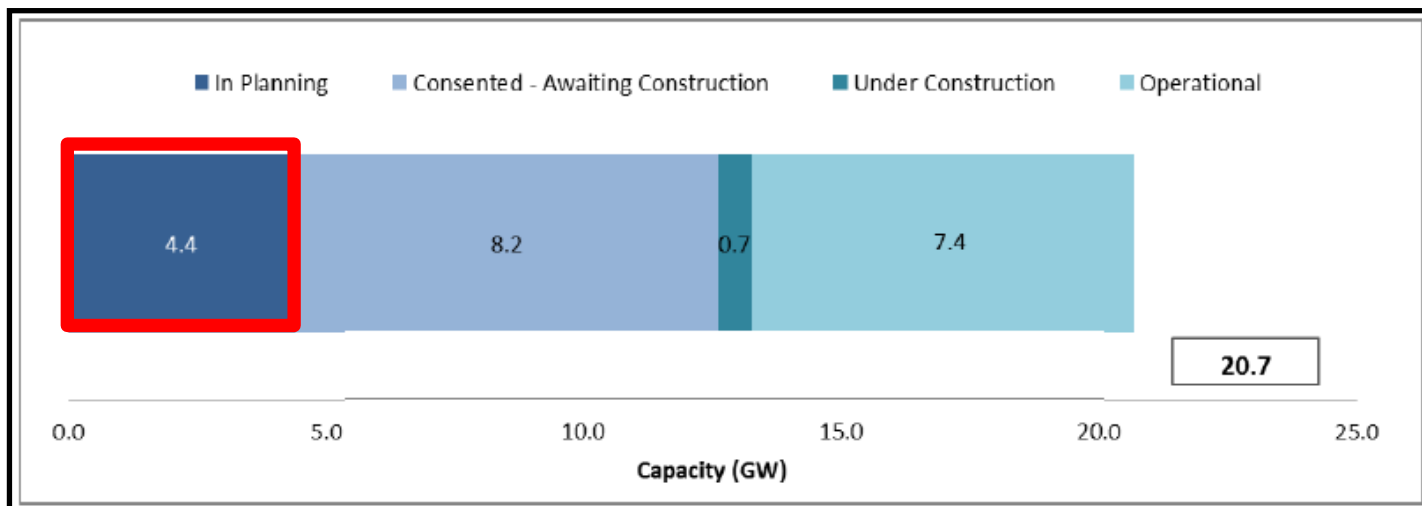
POINTS HIGHER  
THAN 2013



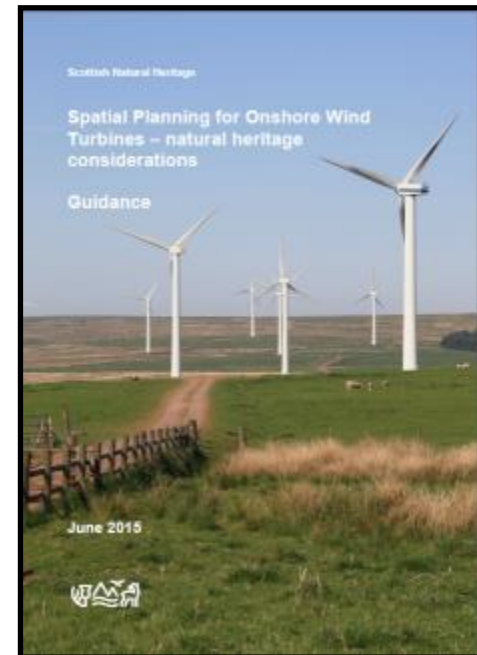
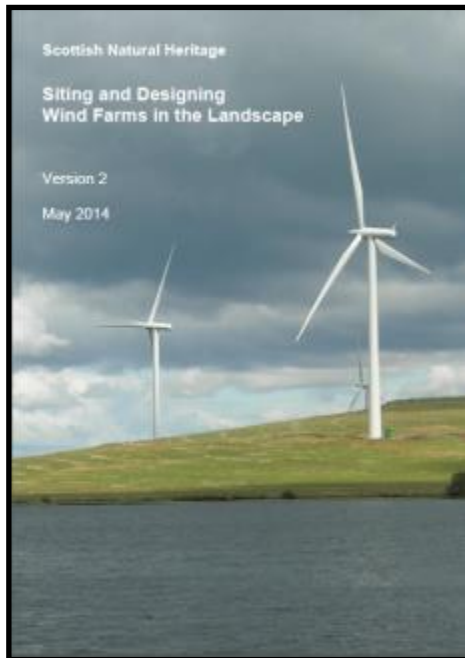


# The future

- Around 70 per cent of all onshore wind projects in planning across the United Kingdom – the projects at risk – are located in Scotland
- Projects eligible for a “grace” period under RO must have a grid connection offer, planning consent and land rights



# Hjálpa! Help!



Onshore Wind – Some questions answered

<http://scotgovplanningarchitecture.com/2014/12/05/onshore-wind-questions-answered/>