



# Strategic Planning for Onshore Wind Farms: Scotland's Approach and Experience



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*Iceland Government Agency Webinar - 21<sup>st</sup> May 2019*



# Outline

1. SNH remit and role
2. Policy context & achievements
3. Planning for wind farms

## □ Questions?

1. Scotland's experience in practice
2. Key issues for SNH

- Birds
- Peat
- Cumulative landscape
- Wild land
- Larger turbines, repowering & lighting

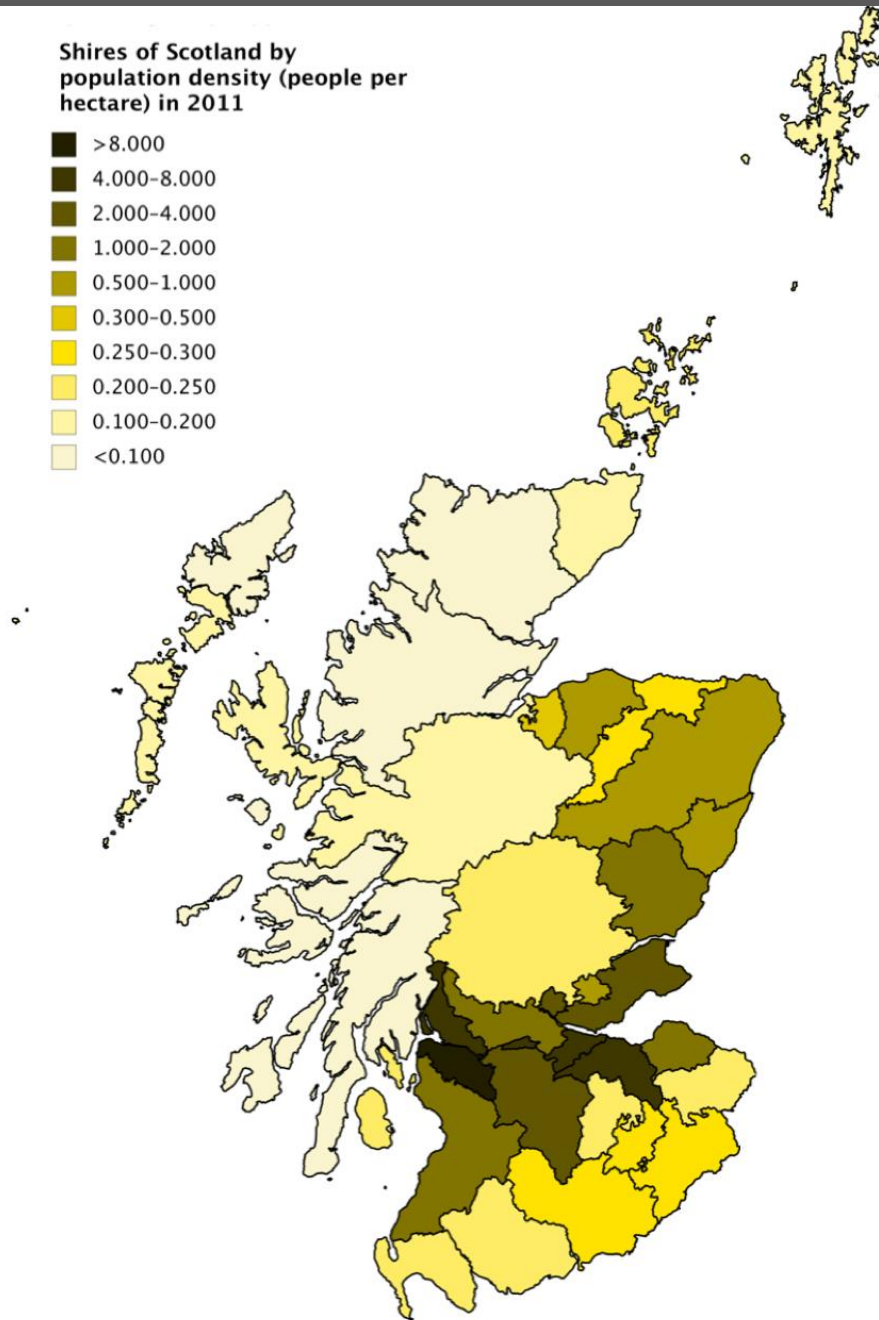
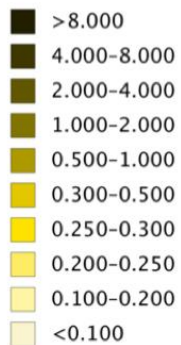


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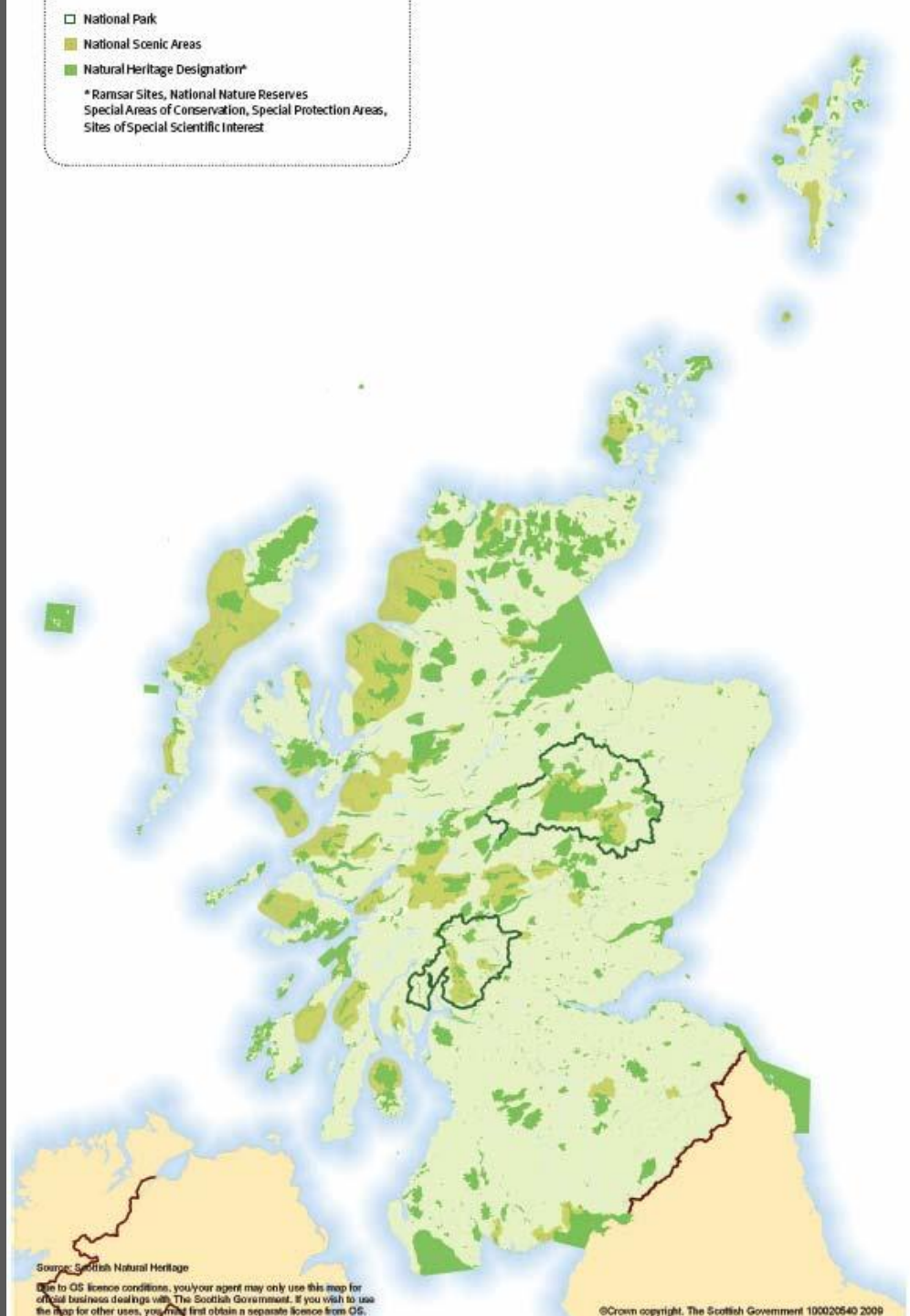
Shires of Scotland by  
population density (people per  
hectare) in 2011



# National natural heritage designations



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# 1. SNH remit and role

- a non-departmental public body, advising Scottish Government
- all aspects of nature and landscape in Scotland
- statutory adviser – not decision maker



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# Our objectives

- High quality nature and landscapes that are resilient to change and deliver public value
- Nature and landscapes that make Scotland a better place in which to live, work and visit
- More people experiencing, enjoying and valuing our nature and landscapes
- Nature and landscapes as assets contributing more to the Scottish economy



# Supporting renewables

- Why?
  - climate change greatest threat to natural heritage
- Our approach?
  - seek to guide development to best locations
  - accept change to some landscapes, habitats & species
  - not at any cost

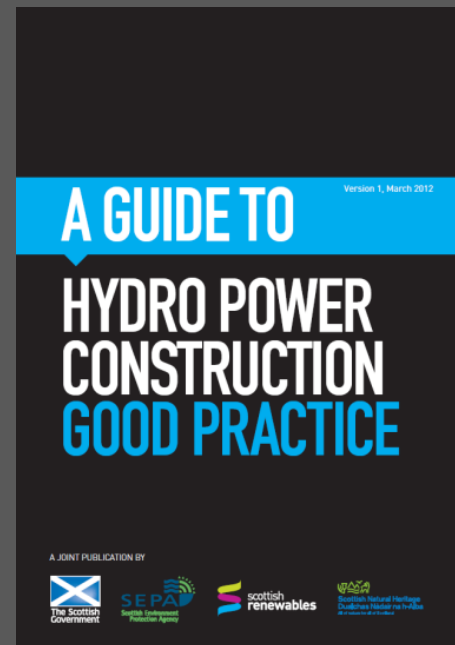
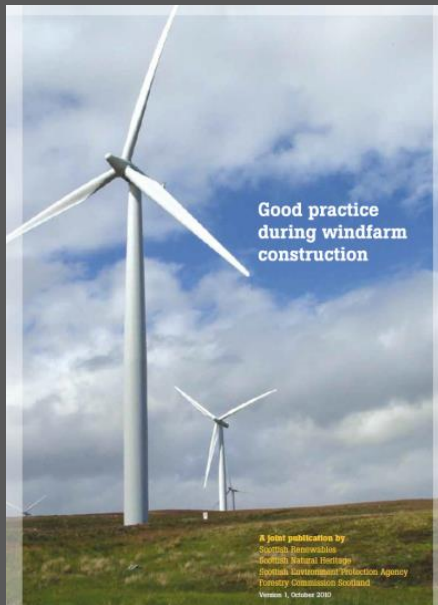


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- What we do
  - engagement - Government, industry, authorities
  - advice & research
  - Sharing Good Practice events
  - extensive guidance on website



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## 2. Policy Context

### Scotland's current renewables targets

- 2020 – generating 100% of electricity demand
- 2020 – 1GW community & locally owned
- 2030 - delivering 50% of total energy consumption
- 2030 – 2GW community & locally owned
- 2050 - CO2 emissions reduced by 80%

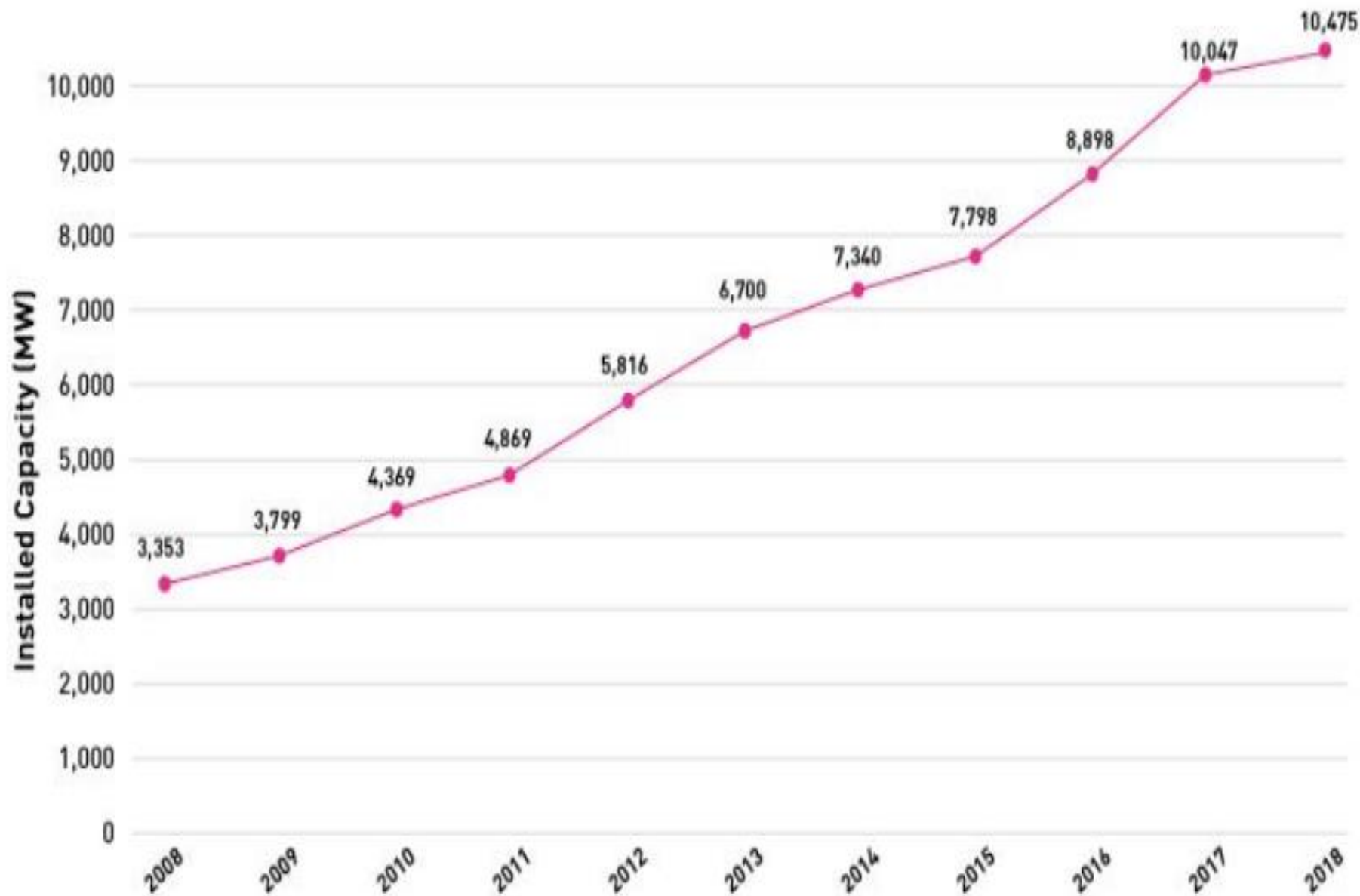
[2045 – net zero emissions proposed?]



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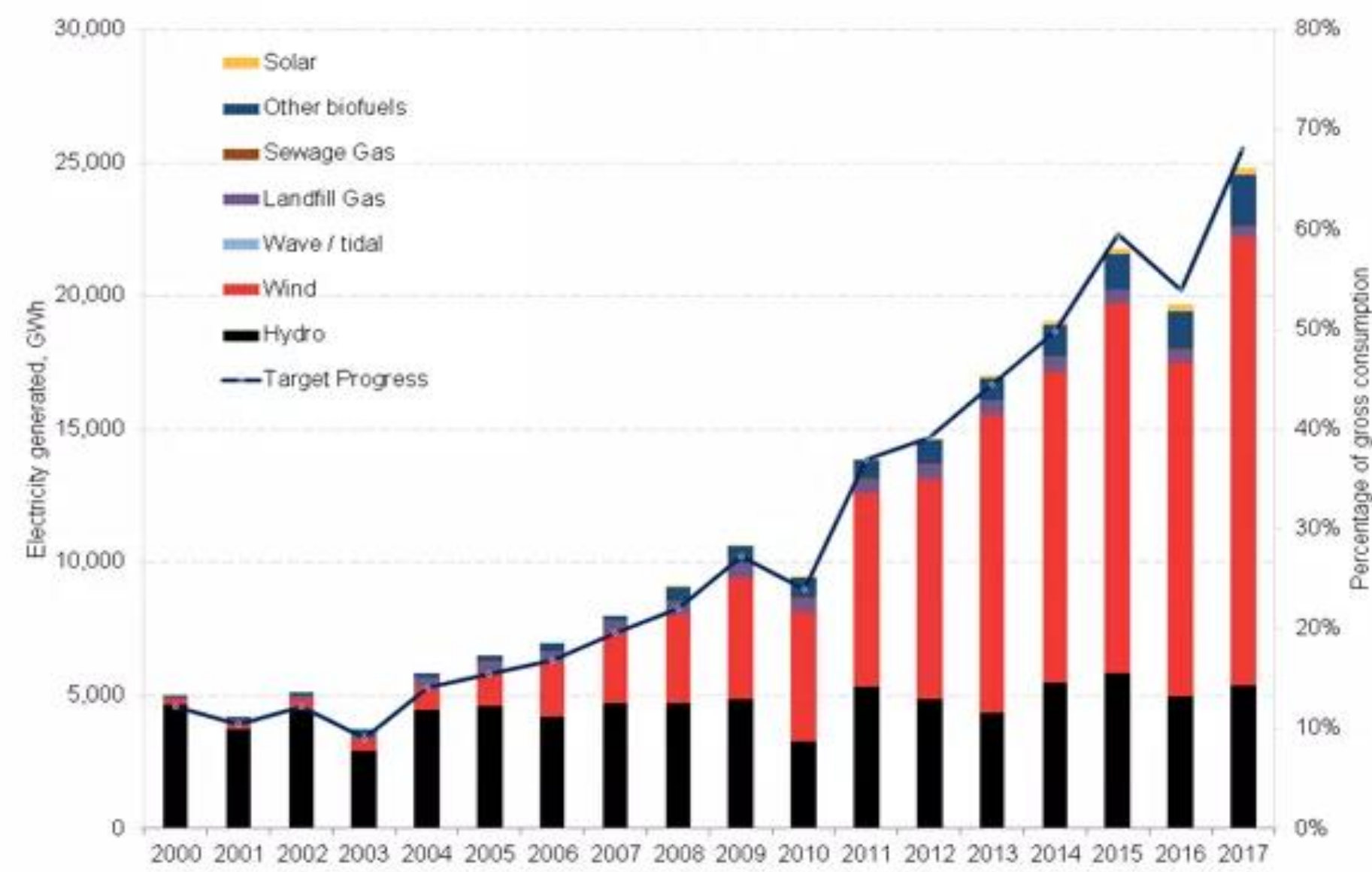
## TOTAL INSTALLED CAPACITY OF RENEWABLES ELECTRICITY IN SCOTLAND 2008-2018



Source: Scottish Government, Energy Statistics Database March 2019



Chart 1: Electricity generated (GWh) from renewable sources in Scotland: 2000-2017

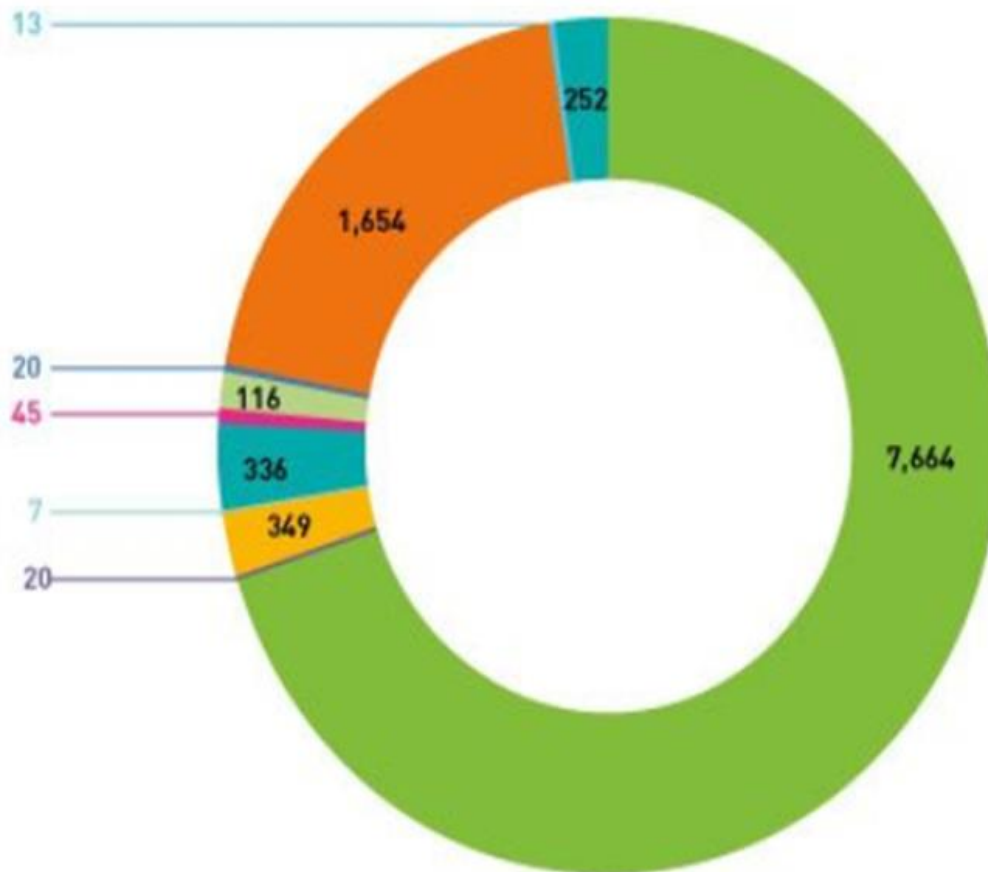


Source: Scottish Government

# Renewables installed capacity

INSTALLED CAPACITY BY TECHNOLOGY Q3 2018 (MW)

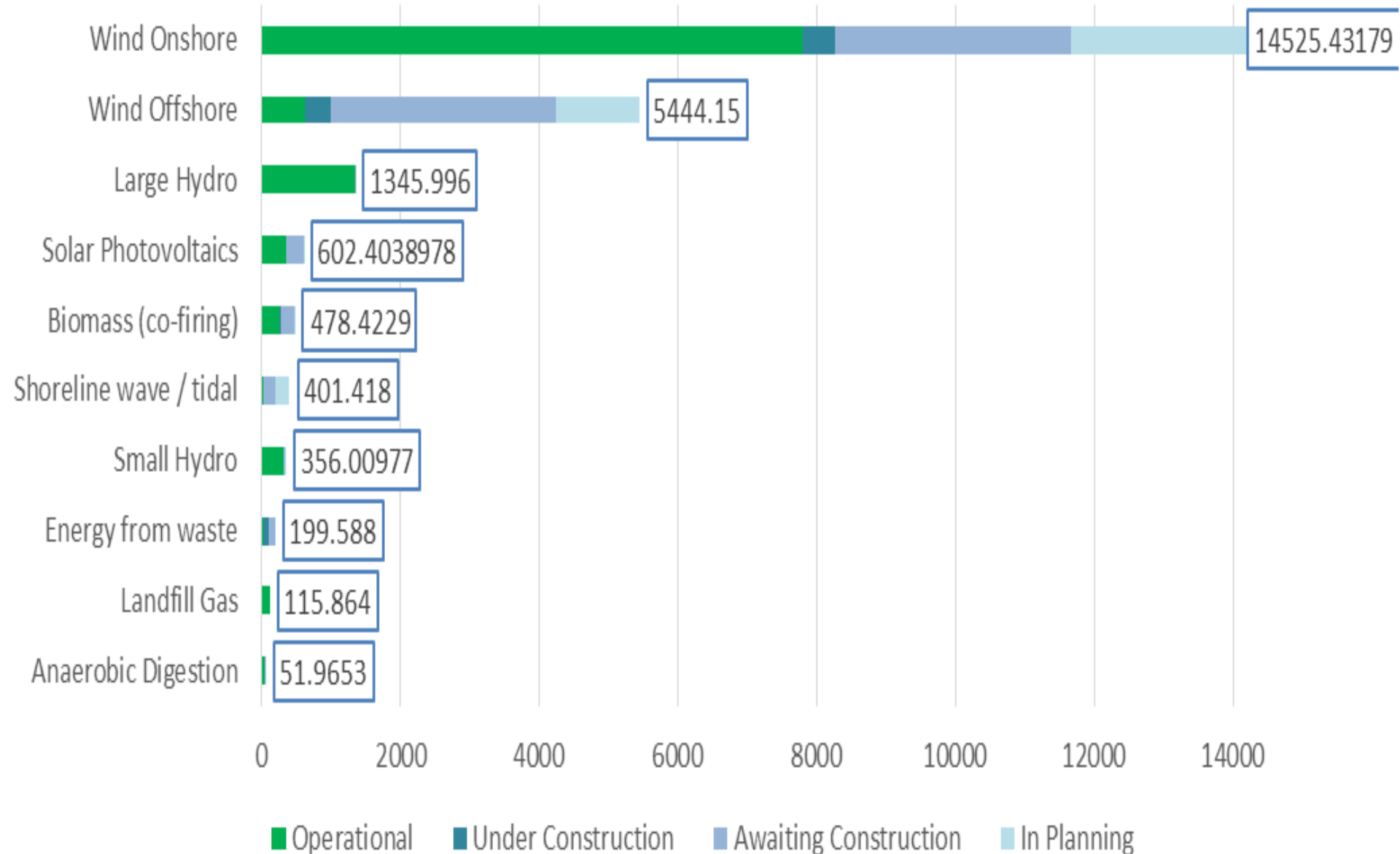
TOTAL = 10,475MW



- ONSHORE WIND
- WAVE/TIDAL
- OFFSHORE WIND
- SEWAGE SLUDGE DIGESTION
- SOLAR PHOTOVOLTAICS
- ANAEROBIC DIGESTION
- LANDFILL GAS
- ENERGY FROM WASTE
- HYDRO
- ANIMAL BIOMASS
- PLANT BIOMASS



## Pipeline renewable capacity by technology (MW), 2018 Q3



Source: *Scottish Government, Energy Statistics Database March 2019*

# Scotland's progress

Target of c.17,000 MW by 2030

- 10,896 MW installed (2018 Q4)
- 1,300 MW in construction
- 7,200 MW consented

**BUT**

- Post-subsidy - not all consented schemes financially viable
- Old schemes coming to end of lives

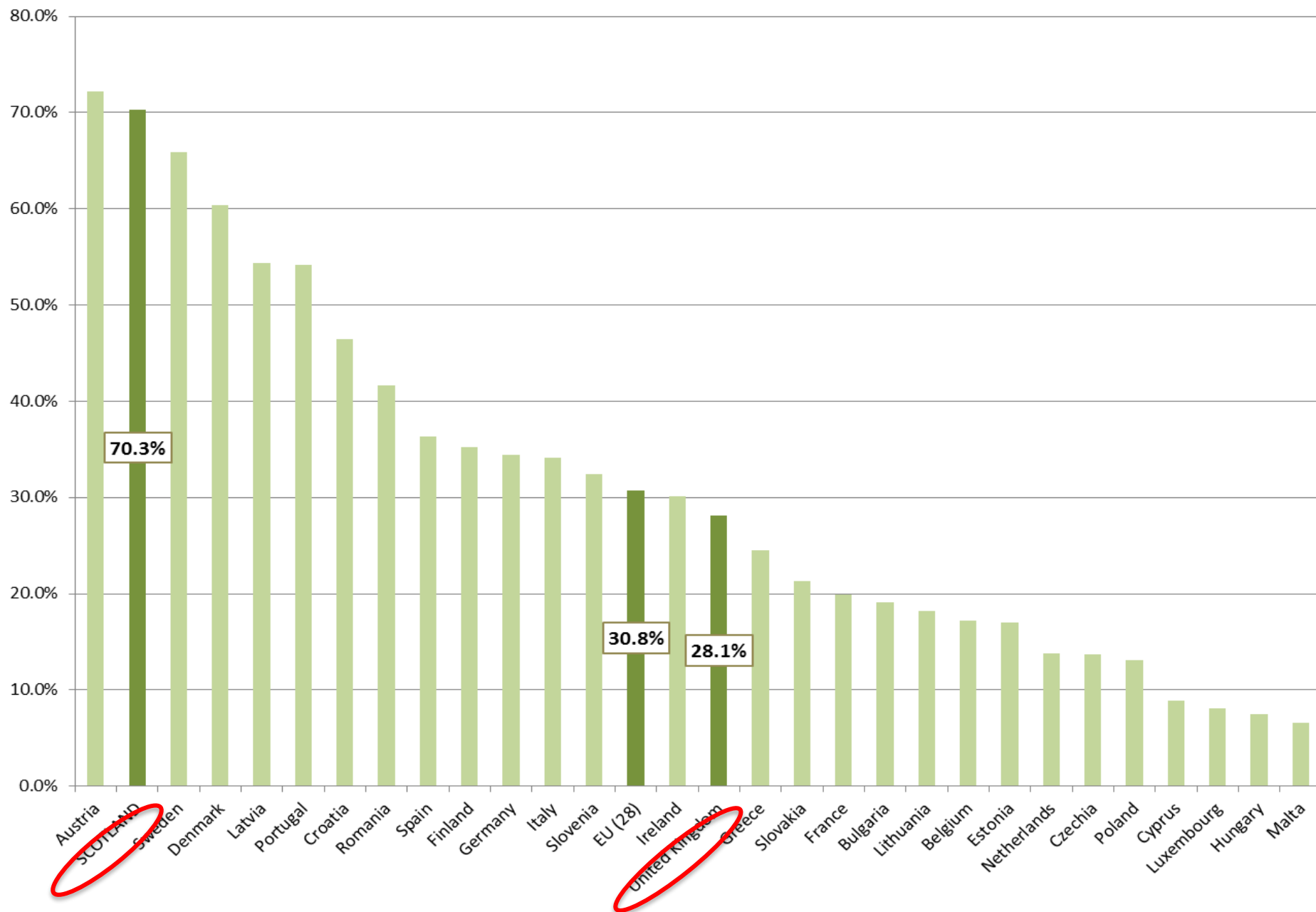


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Renewable electricity as a percentage of gross consumption for EU countries, 2017



Source: *Scottish Government, Energy Statistics Database March 2019*

# Planning Policy approach

- strong support for renewables – to deliver ambitious targets
- BUT ... balanced by environmental considerations – impacts need to be appropriate

*“Wind farms should be accommodated where the technology can operate efficiently and the environmental and cumulative impacts can be addressed satisfactorily.” (SPP6)*

- decisions made on case by case basis – considering the merits and circumstances



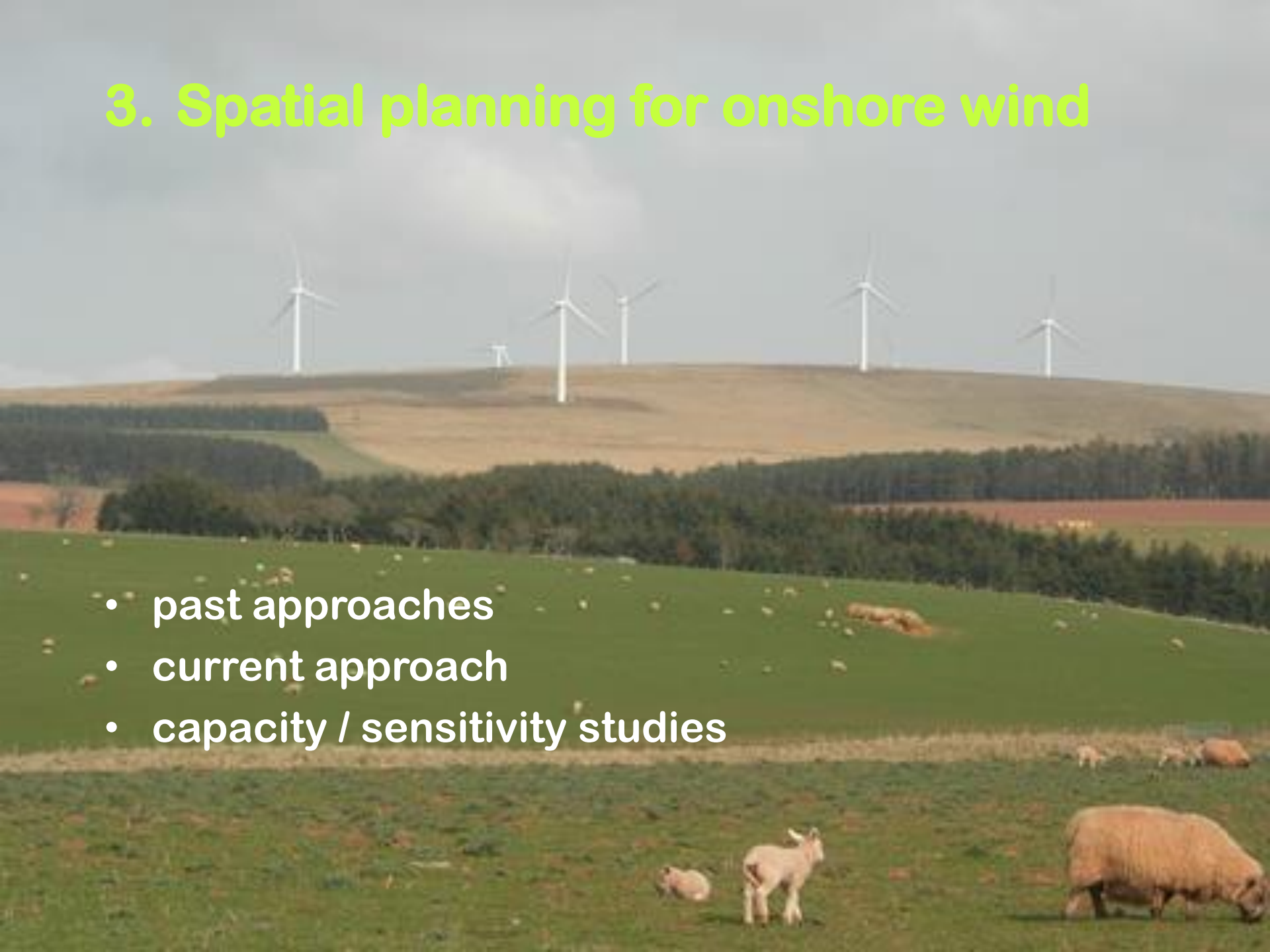
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### 3. Spatial planning for onshore wind

- past approaches
- current approach
- capacity / sensitivity studies

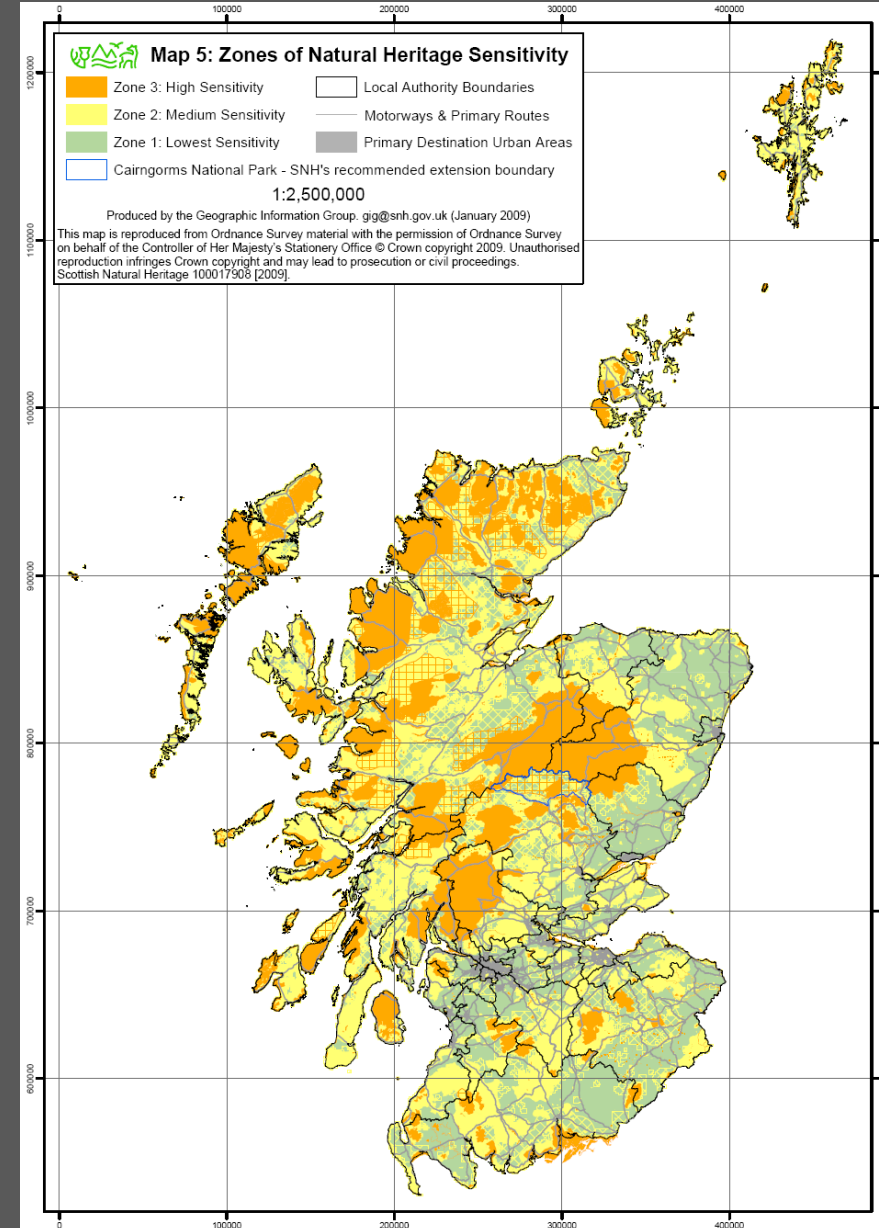


# SNH's Strategic Locational Guidance

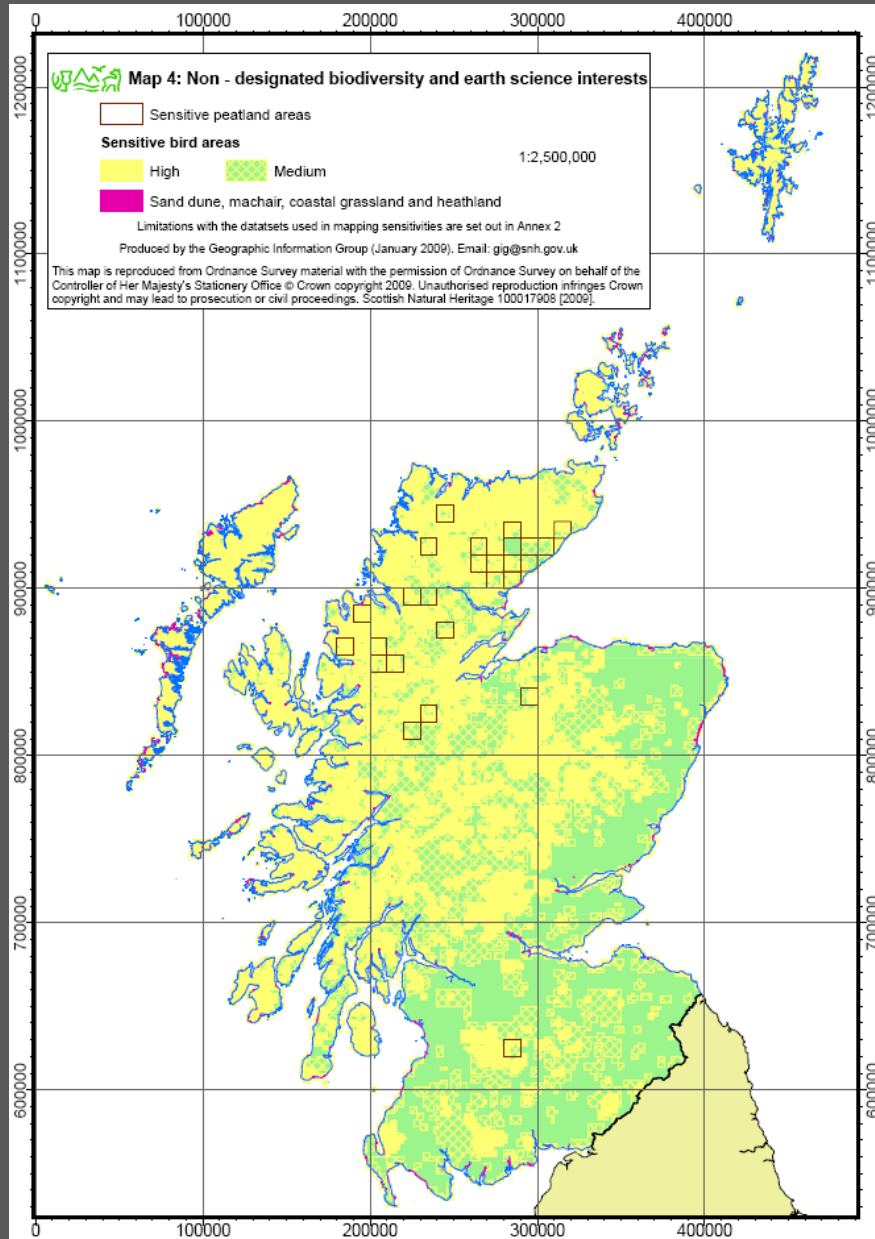
- H/M/L sensitivity assigned to designations & interests
- regular updates
- had strong industry support
- informed Development Plans



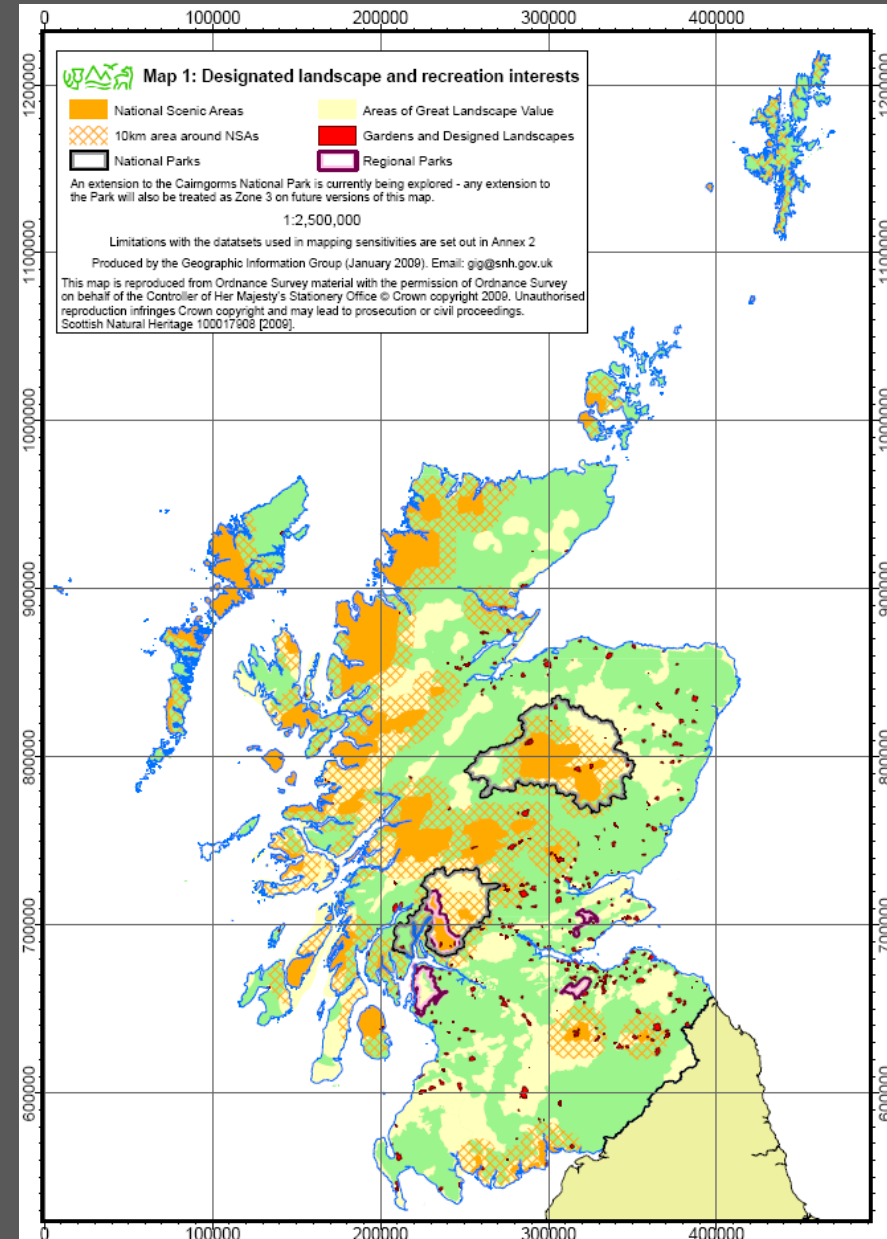
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# Non-designated biodiversity



# Designated landscape





# SPP 6 Renewable Energy (2007)

- *“wind farms should be accommodated where the technology can operate efficiently and environmental and cumulative impacts can be addressed satisfactorily.”*
- Spatial Framework >20MW prepared as supplementary planning guidance
  - broad areas of search – proposals likely to be supported
  - areas of significant protection
  - the rest – applications on their merits against criteria



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## Stage 1 – Identify areas of significant protection

- International and national natural heritage designations.
- Green Belts.
- Areas where the limits of cumulative impact have been reached.



## Stage 2 – Identify other constraints and policy criteria

- Historic environment.
- Areas designated for their regional and local natural heritage value.
- Tourism and recreational interests.
- Communities.
- Buffer Zones.
- Aviation and defence interests.
- Broadcasting installations.2

## Stage 3 – Refine remaining areas of no significant constraints to take account of:

- Other natural heritage interests.
- Project viability.
- Grid capacity issues.

## Stage 4 – Identify broad areas of search

# Scottish Planning Policy 2010

Part of Development Plan – for wind farms > 20 MW

- significant protection = national/international designation, Green Belt, cumulative
- potential constraints = proposals considered on merits against criteria
- areas of search = appropriate proposals likely to be supported subject to detailed consideration against criteria



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# Scottish Planning Policy 2014

1) Areas excluded

2) Areas of significant protection

3) Areas with potential



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**Table 1: Spatial Frameworks**

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

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.

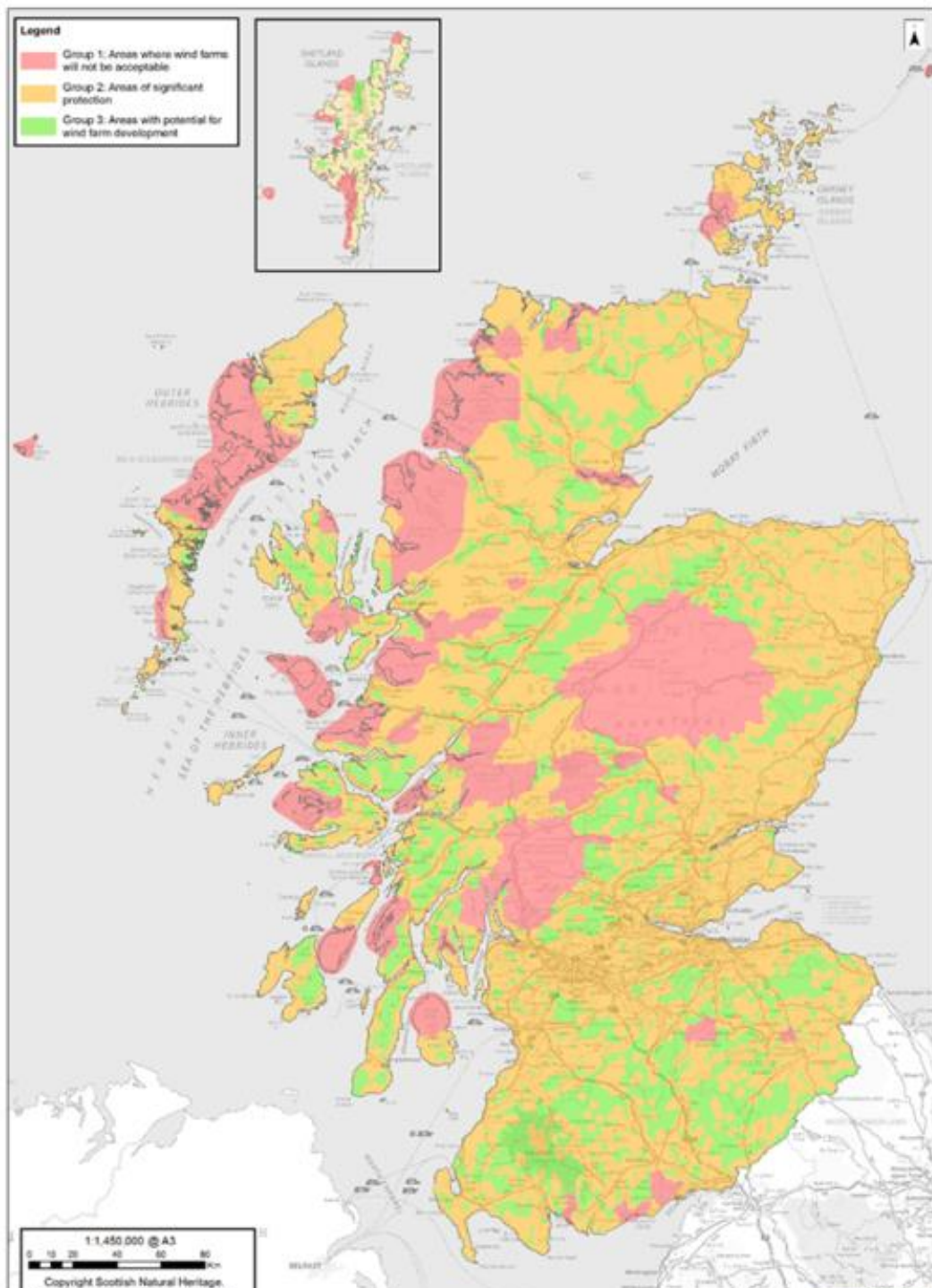
**Group 3: Areas with potential for wind farm development:**

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

*“..to deliver consistency nationally and additional constraints should not be applied at this stage”*



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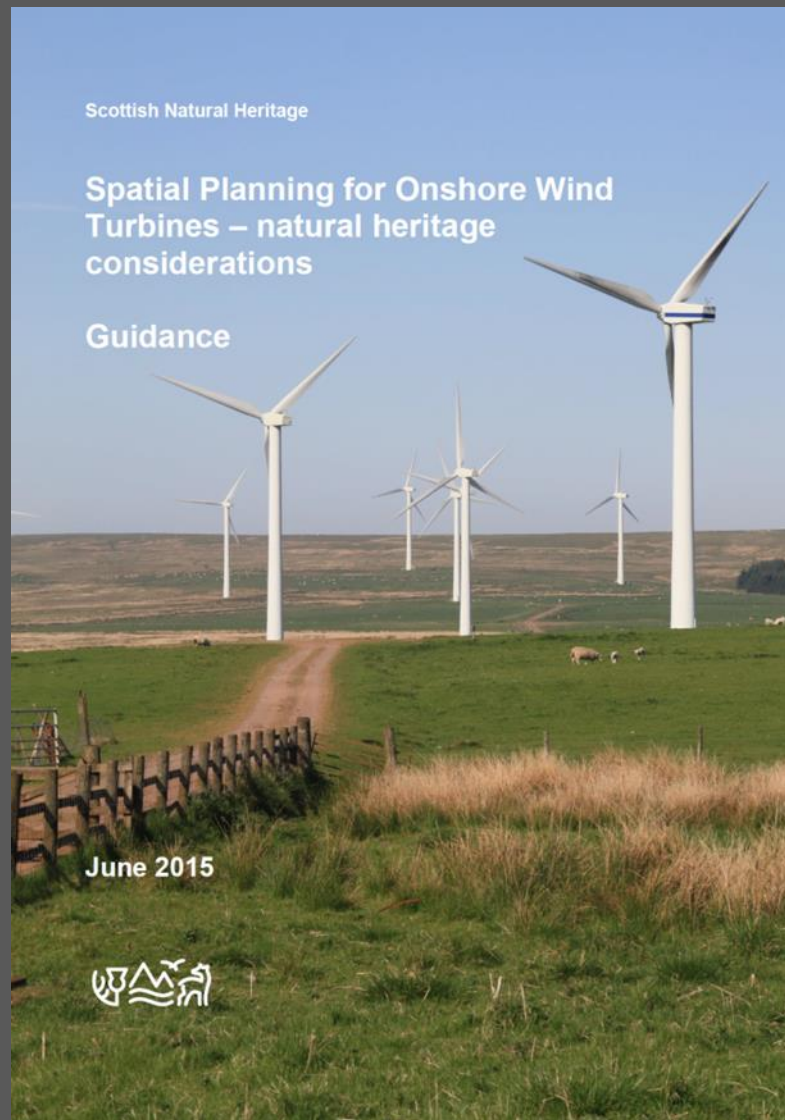
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## Spatial Planning for Onshore Wind Turbines – natural heritage considerations

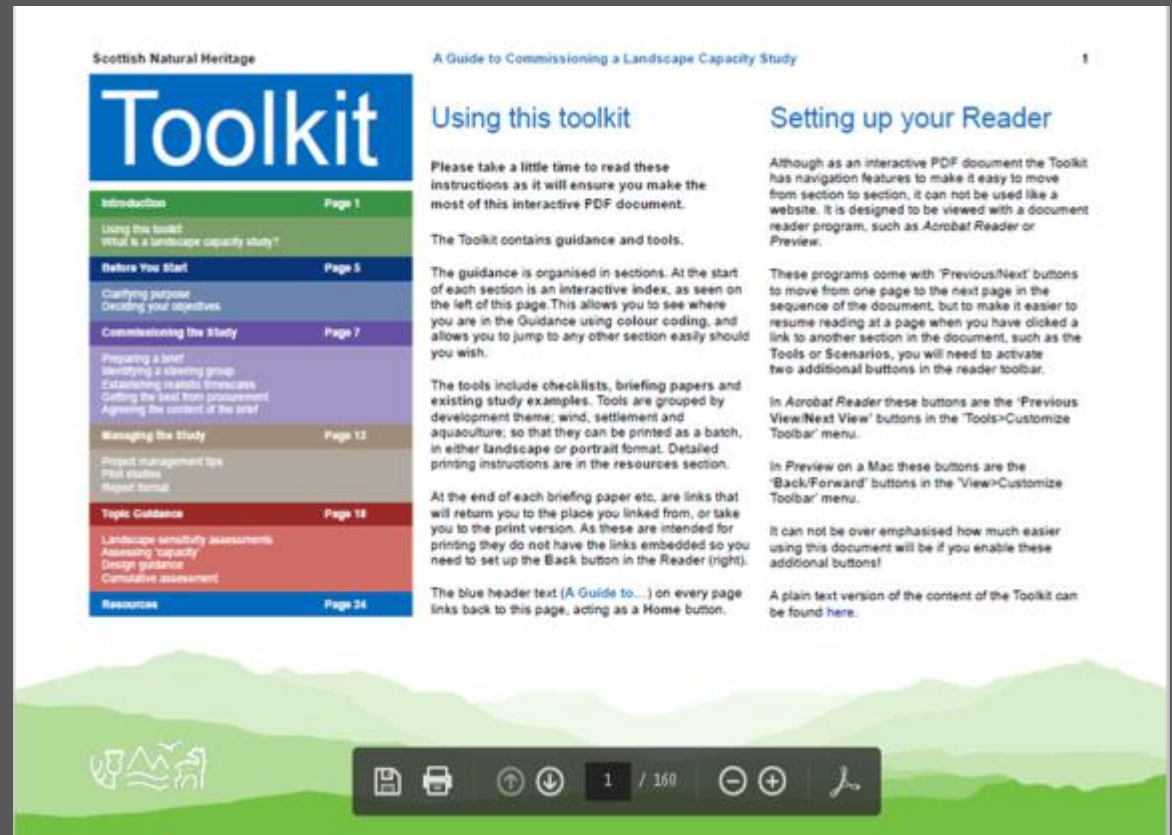
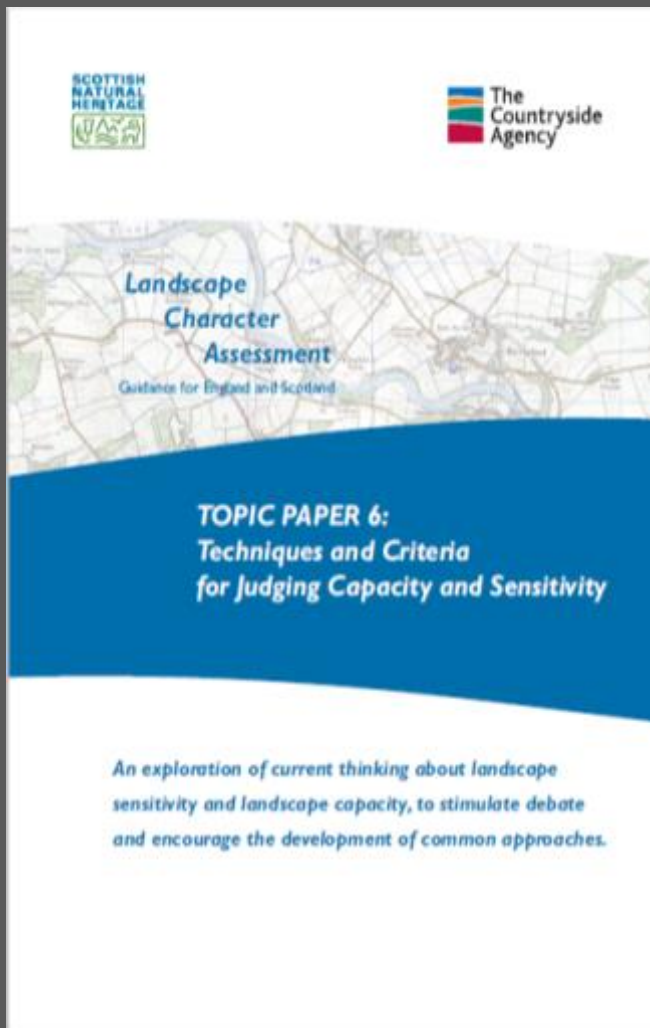
Guidance

June 2015





# Landscape Capacity / Sensitivity studies





## South Lanarkshire Landscape Capacity Study for Wind Energy Addendum: Tall Wind Turbines Capacity and Siting Guidance

September 2017

8945 GIS 112

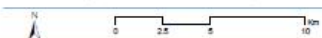
### Legend

- SLC Boundary
- Study Area 15km buffer
- Scottish Local Authority Boundaries
- Landscape Character Areas
- High
- Medium
- Low
- None

Note:  
Refer to Table 6.1 for more detail on background  
assessment and capacity for specific turbine sizes.

Code	Landscape Character Type
1	Urban Fringe Farmland
2	Upland River Valley
2A	Upland River Valley Broad Valley Floor
3	Broad Upland Valley
4	Rolling Farmland
4A	Plateau Farmland Foresty
5	Plateau Farmland
5A	Plateau Farmland Foresty
5B	Plateau Farmland Openness Mining
5C	Plateau Farmland Windfarm
6	Plateau Moorland
6A	Plateau Moorland Foresty
6B	Plateau Moorland Foresty Windfarm
6C	Plateau Moorland Windfarm
6D	Plateau Moorland Openness Mining
7	Rolling Moorland Foresty
7A	Rolling Moorland Foresty
7B	Rolling Moorland Windfarm
8	Upland River Valley
8A	Upland River Valley Foresty
8B	Upland River Valley Openness Mining
9	Broad Valley Upland
10	Footpaths
10A	Footpaths Foresty
11	Provenant Isolated Hills
12	Old Red Sandstone Hills
13	Southern Uplands
13A	Southern Uplands Foresty
13B	Southern Uplands Windfarm
13C	Southern Uplands Landfills
14	Upland Glen

Figure 6.1f  
Underlying Landscape  
Capacity for Wind Turbines  
(150 - ca. 200m)



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## Relationship with other assessments

**Landscape  
Character  
Assessment**  
(baseline information)

**Sensitivity /  
Capacity  
Studies**

**Landscape &  
Visual Impact  
Assessment**

*Increasing level of detail and specificity*



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# Key messages

- Spatial framework complemented by further analysis
- Clear distinction between the two
- Aiming for a more consistent approach
- Landscape sensitivity studies should be open to consultation, and kept up to date



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# Questions?

