

Tackling climate change

- Identify some potential changes to the National Park arising from climate change
- Provide a snapshot of current activity to respond to climate change
- Identify potential challenges for the future

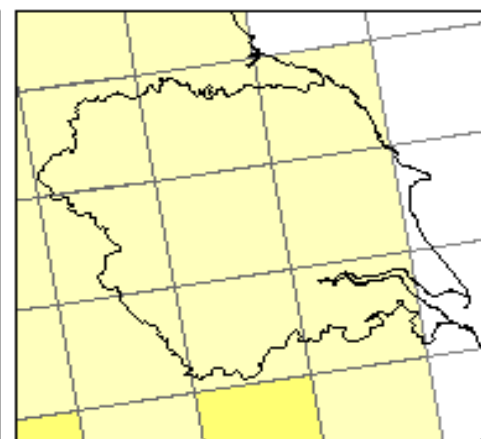


Yorkshire and Humberside

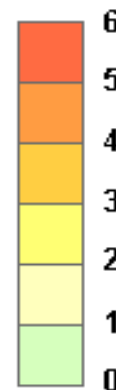
Change in annual average daily temperature

Source: UKCIP02 Climate Change Scenarios (funded by Defra, produced by Tyndall and Hadley Centres for UKCIP)

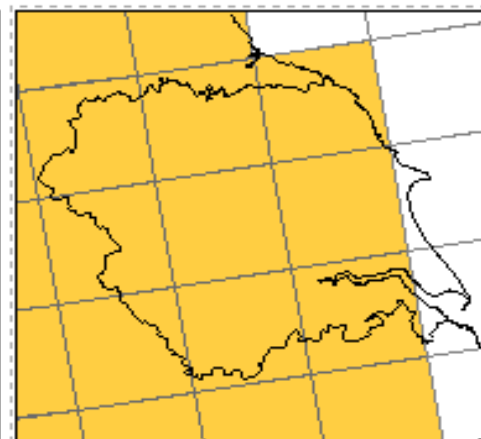
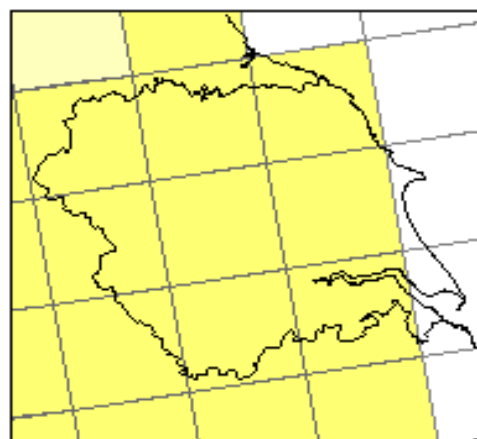
Low
Emissions
scenario



change in
deg C



High
Emissions
scenario



2020s

2050s

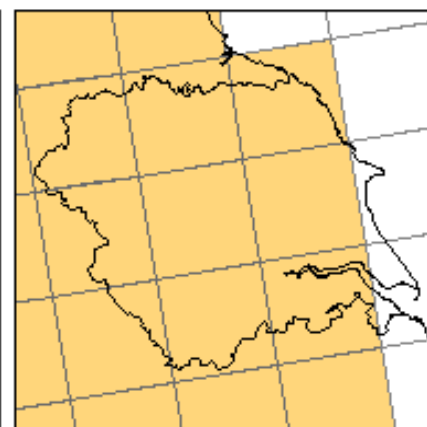
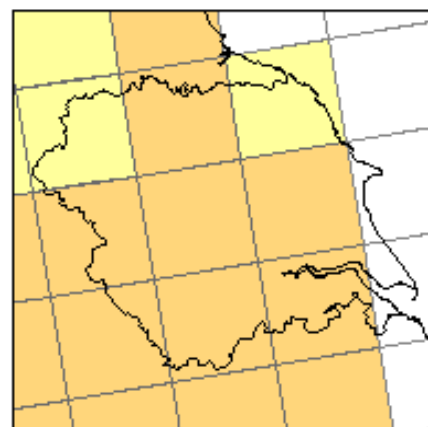
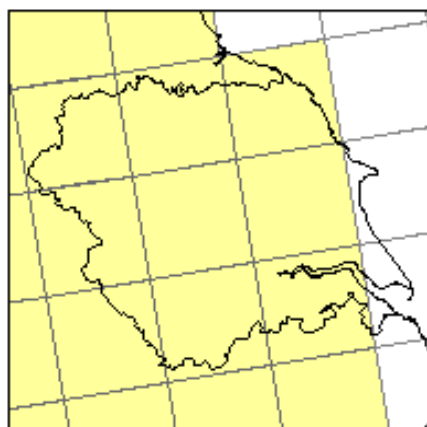
2080s

Yorkshire and Humber

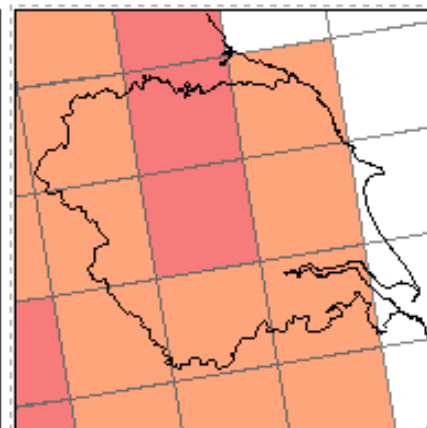
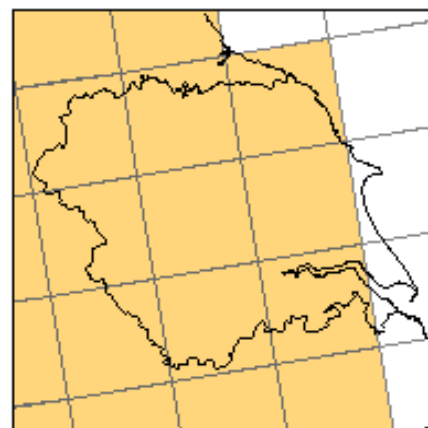
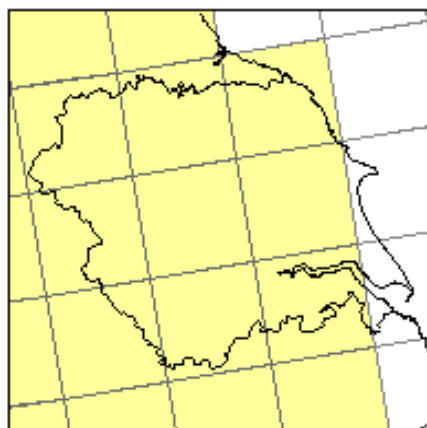
Source: UKCIP02 Climate Change Scenarios (funded by Defra, produced by Tyndall and Hadley Centres for UKCIP)

Percentage change in summer precipitation

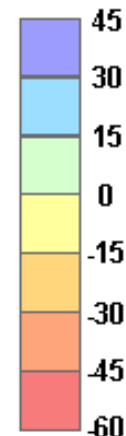
Low
Emissions
scenario



High
Emissions
scenario



per cent
change



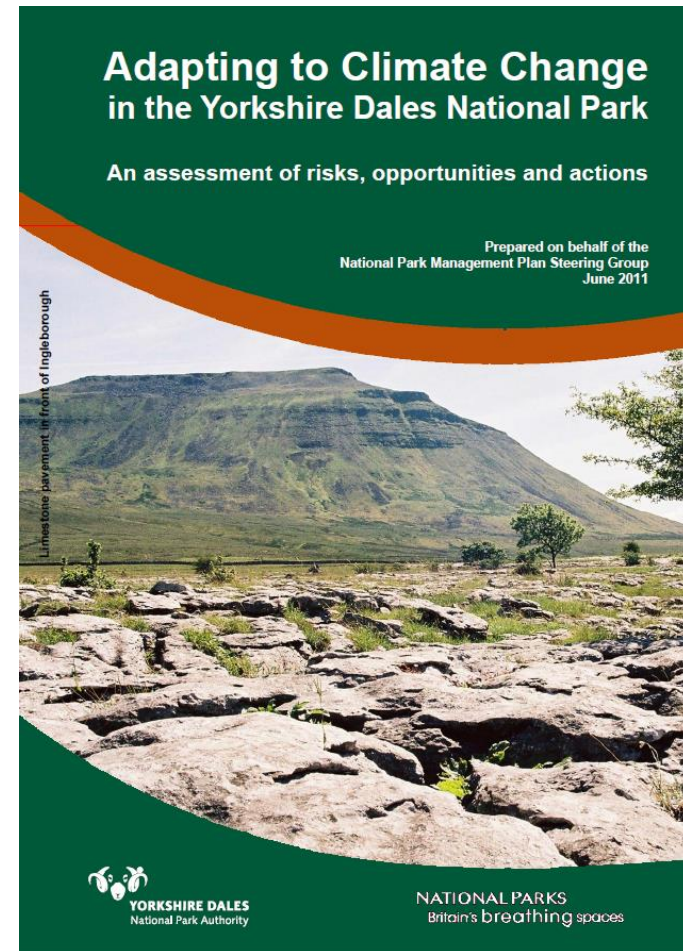
2020s

2050s

2080s

Impacts of climate change

- Detailed assessment in 2011
- Available on YDNPA website

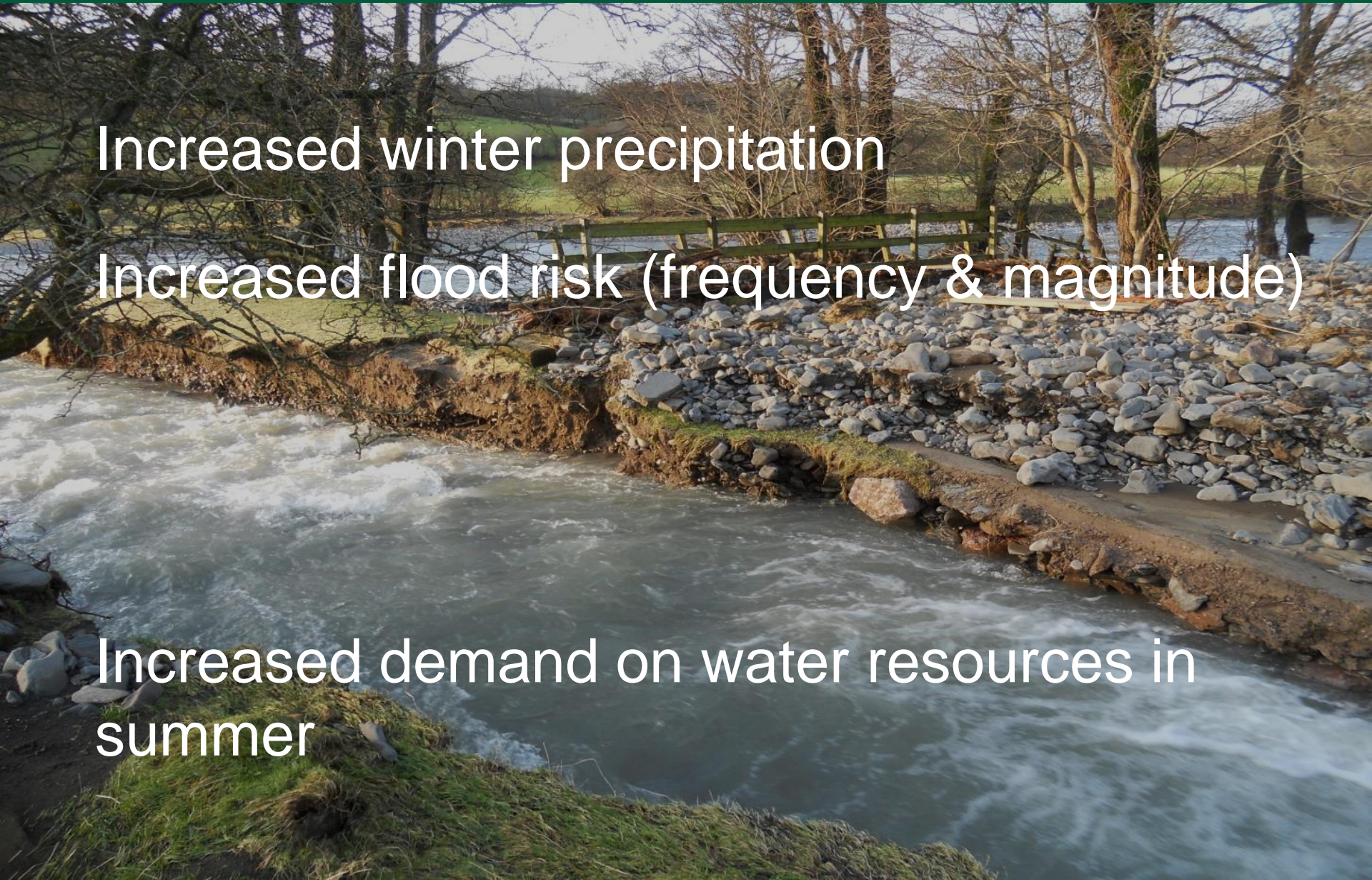


Rivers and water

Increased winter precipitation

Increased flood risk (frequency & magnitude)

Increased demand on water resources in summer



Land management

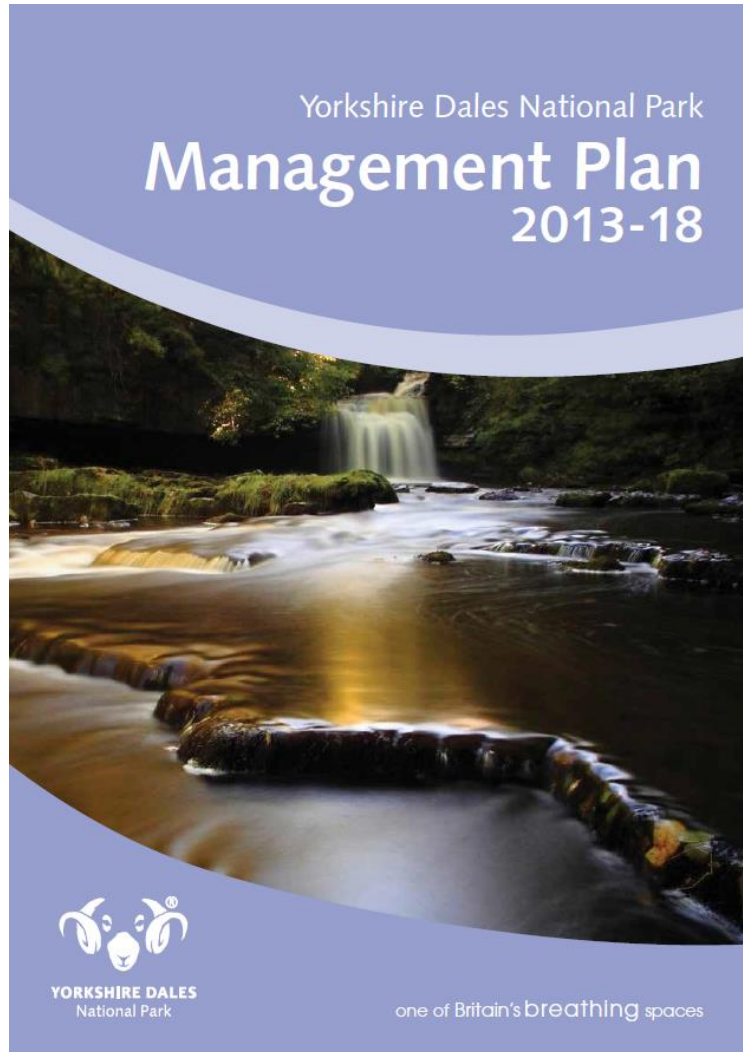


- Effects on crop production and livestock
- Farming for carbon' – impact on landscape character?

- Moorland fire risk
- Loss of species/habitat
- Invasive species



Tackling the impacts



One of the 6 ambitions for the National Park by 2040:

“Resilient and responsive to the impacts of climate change, storing more carbon each year than it produces”

How do we tackle it?

Action falls into two main categories:

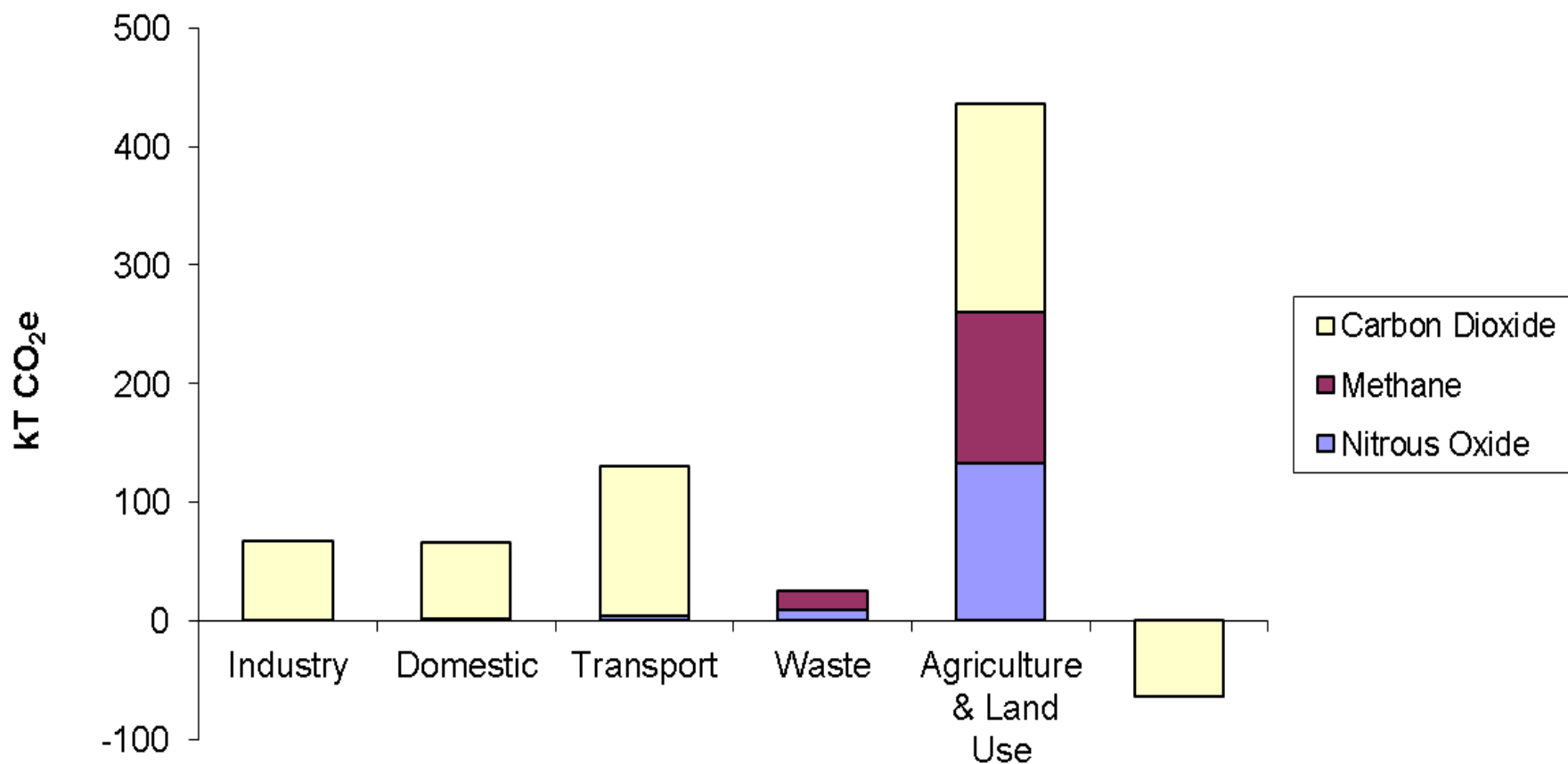
- **Adaptation**
 - Action to cope with changes that are already likely.
- **Mitigation**
 - reducing the amount of carbon produced;
 - increasing the amount of carbon stored naturally

Emissions in the Park

- Total emissions relatively low...
- ...but emissions per person are high:
 - Car ownership
 - Access to services
 - Inefficient buildings
 - Reliance on e.g. oil-fired heating

Where's the problem?

Yorkshire Dales GHG Emissions



Putting our house in order





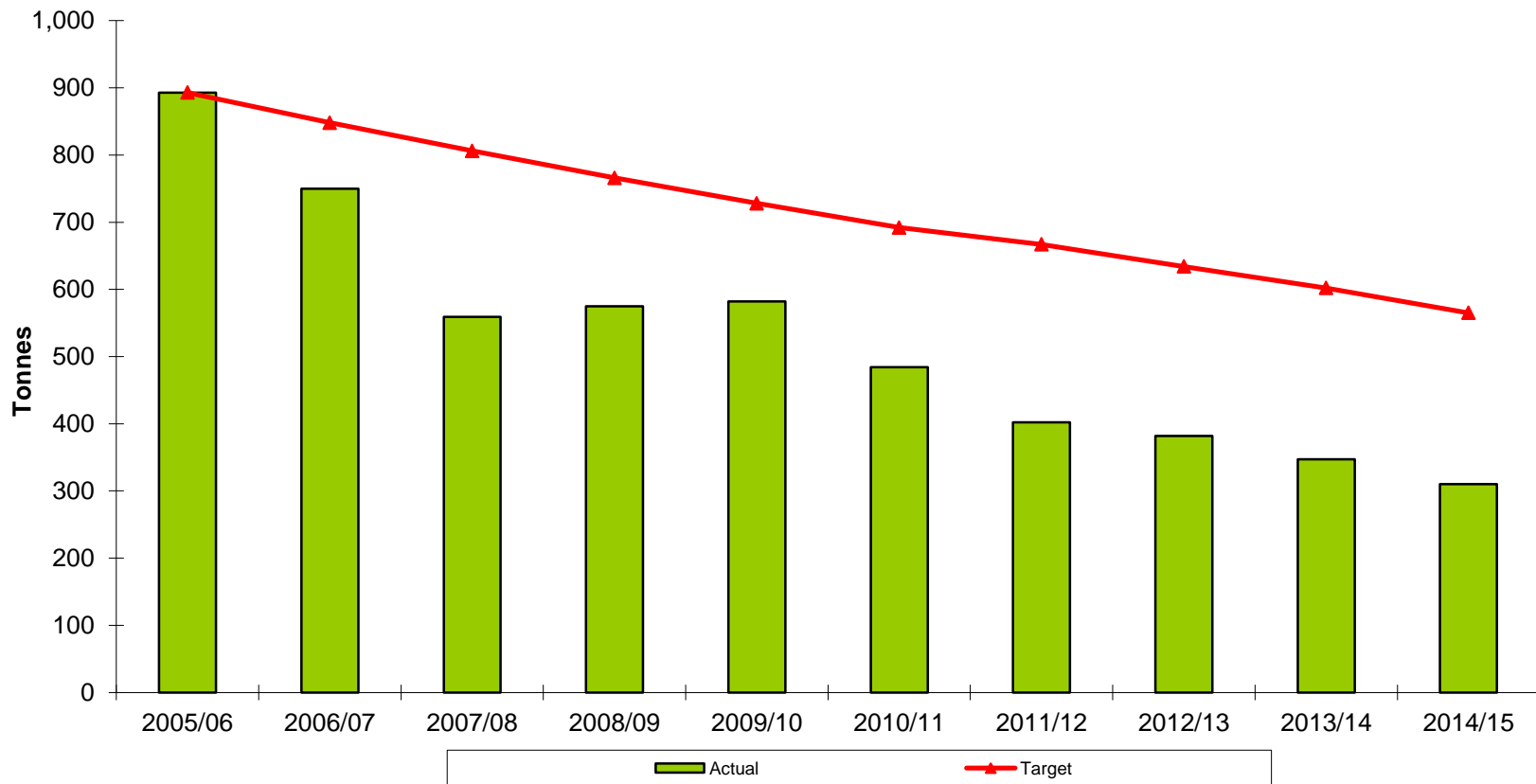


Biomass boilers at
Grassington Office and
Dales Countryside Museum

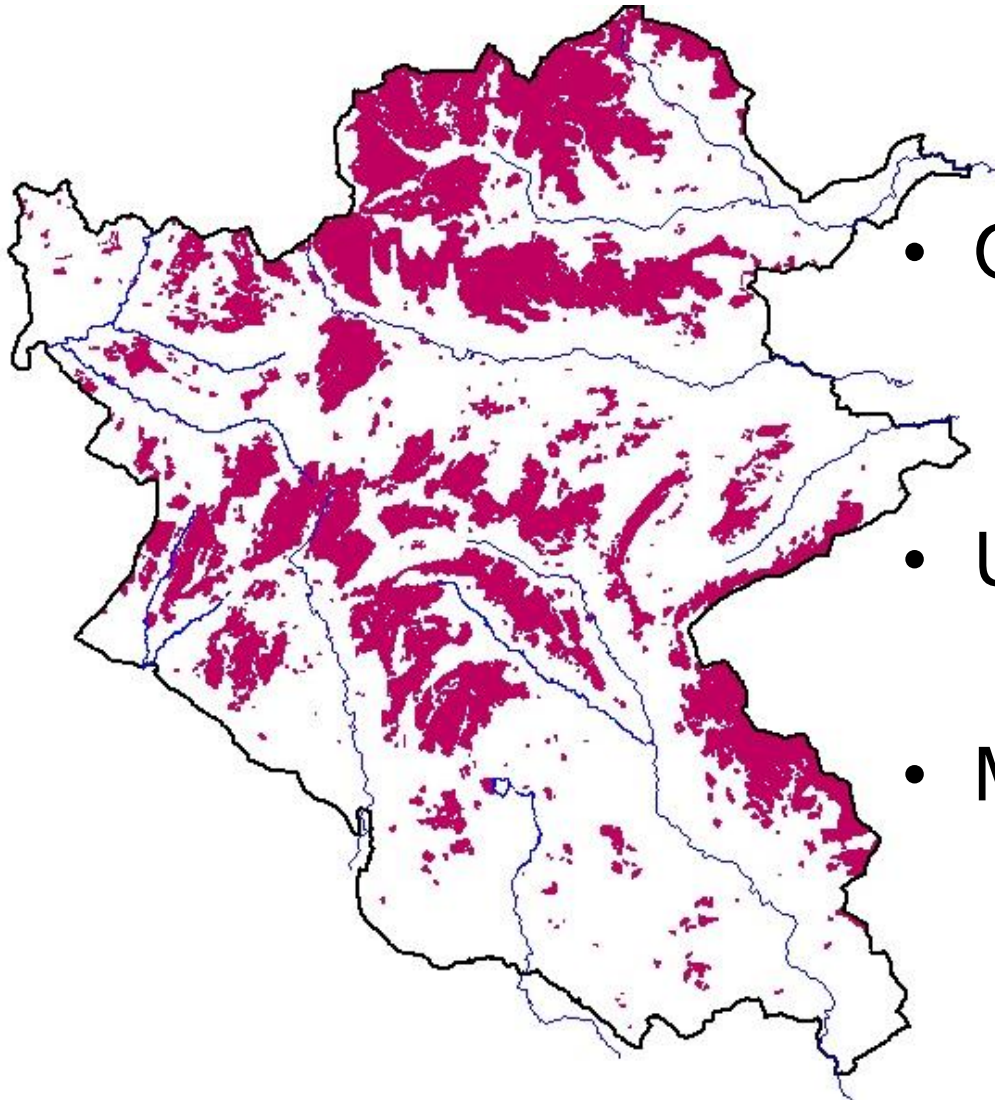


Progress

Total greenhouse gas emissions from Authority operations (tCO₂e)



Peatland



- Over 50,000 ha of peat
- Up to 7 metres deep
- Much of it damaged

Main rivers
Blanket & Raised Bog



Artificial drainage

Fleet Moss

“Help farmers and landowners to restore more natural drainage...across a further 14,000 hectares by 2018”

Map scale 1:1500

Impacts

- Rapid water run-off and....

...significant loss of carbon



Restoring natural drainage

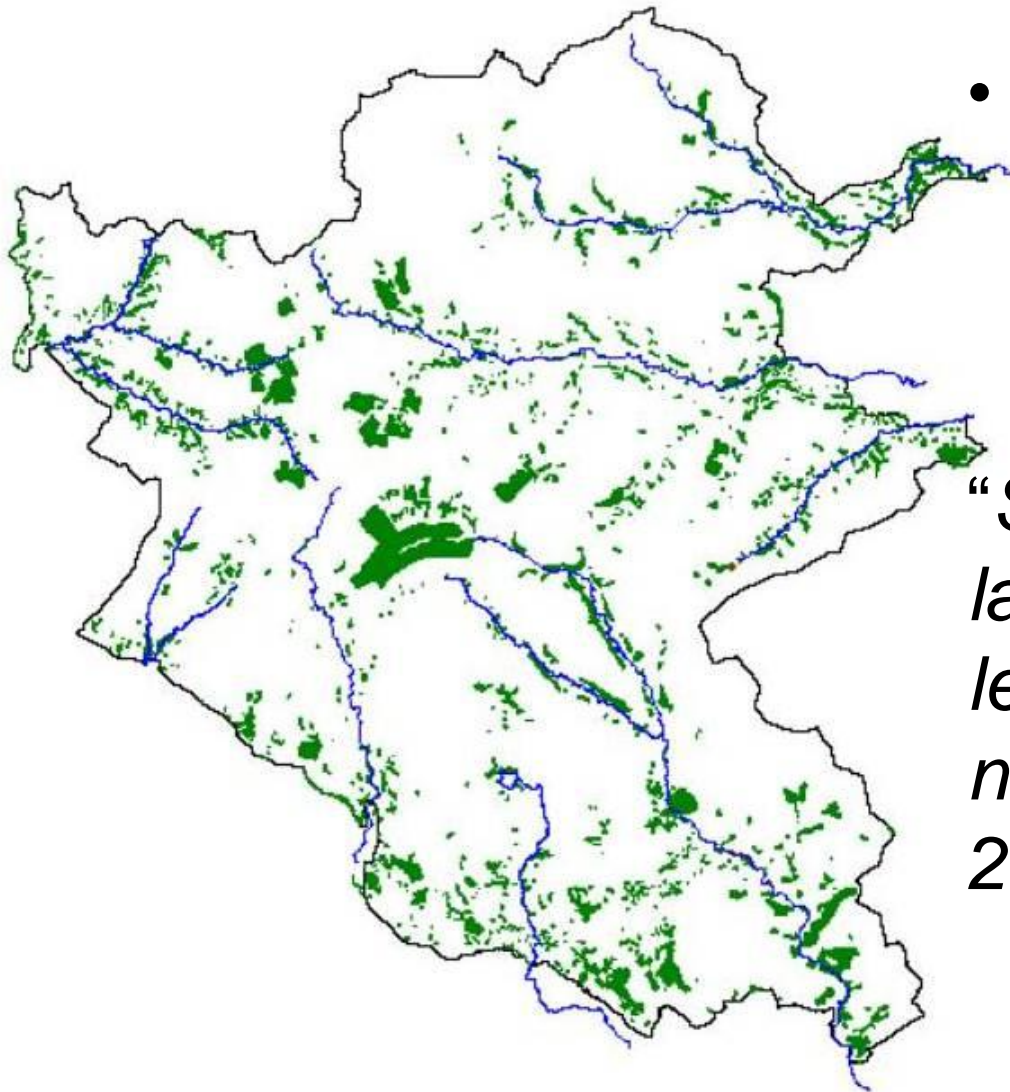


..and more resilient biodiversity, better water quality,
better flood management etc

Progress

- Yorkshire Peat Partnership – YWT, Environment Agency, Natural England, YDNPA and many more
- Restored natural drainage across more than 16,000 ha since 2009
- Roughly, another 20,000 ha to restore

Creating Woodland



- Only 4.5% of the Park is woodland

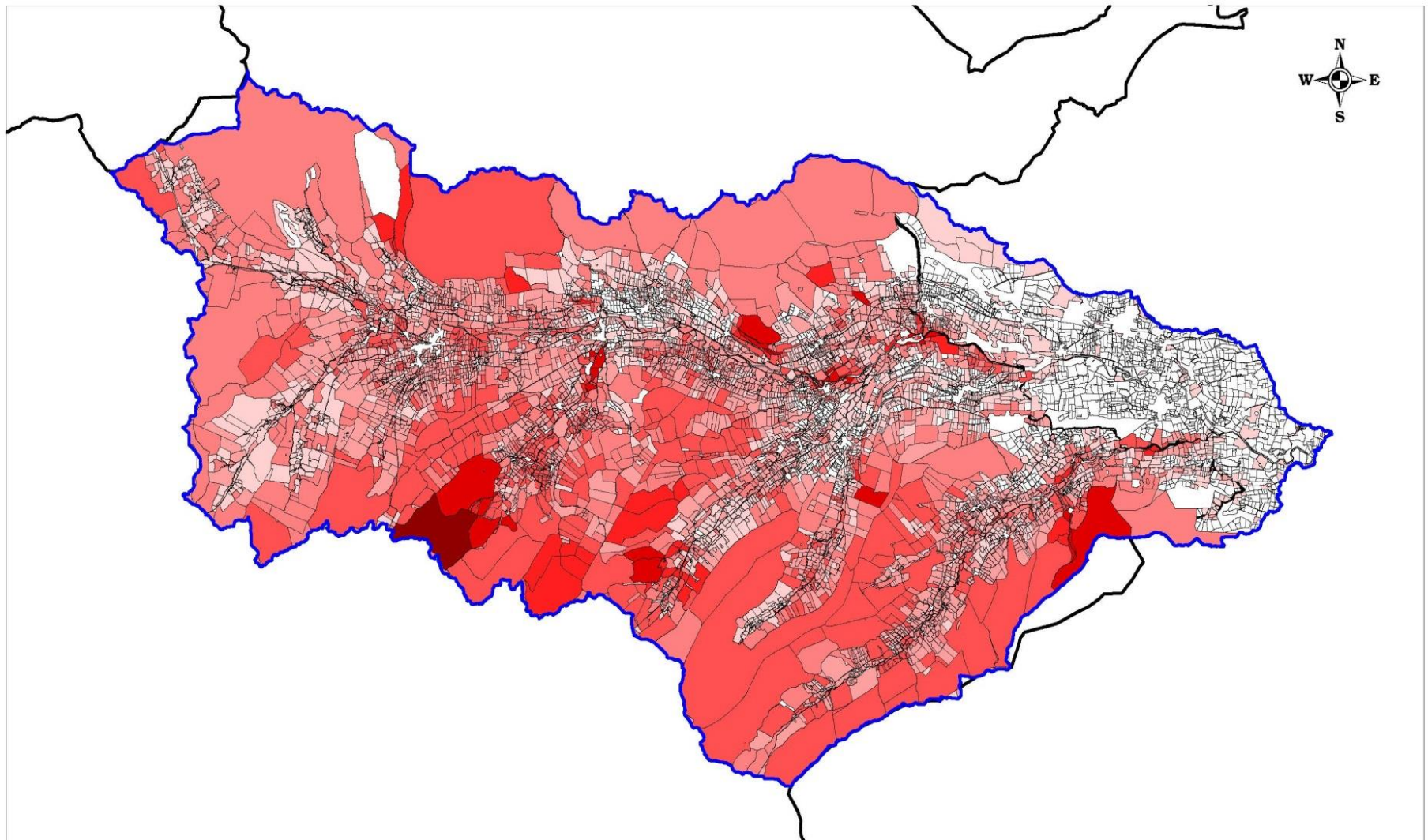
“Support farmers and landowners to create at least 400 ha of new native woodland by 2020”

Provisional Heat Map: Distribution of multiple benefits

Based on the equal scoring of NPMP objectives C1, C2, C4, C5, D1, D4, D6. Source: Mapped by YDNPA.

Scale 1:176563

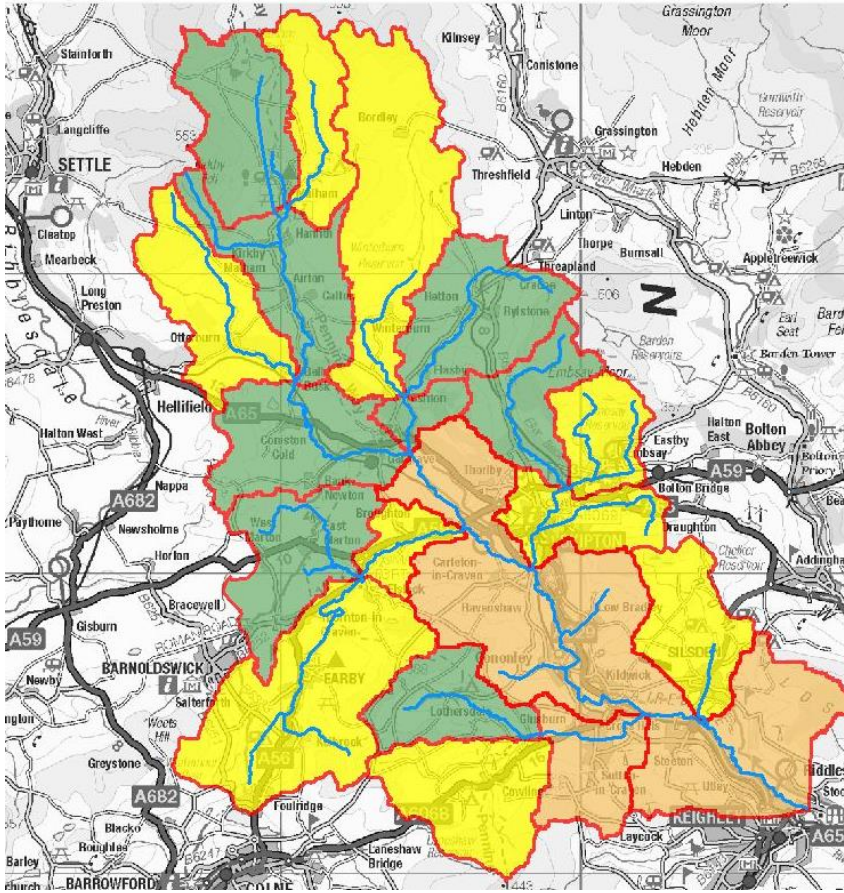
Compiled by Fran Graham on 24 March 2015



Progress


- 
- Dales Woodland Restoration Programme
– Forestry Commission, YDMT, YDNPA
 - Over 700 ha of native woodland planted since 2007

Upper Aire project



- YFWP and YWT, funded by EA
- Working with farmers between Keighley and Malham since 2011
- Focus on improving ecological status;
- Elements of natural flood management

Upper Aire Project

- 
- 24 hectares of new woodland planted
 - 54 hectares planned in next 2 years
 - Trialling construction of “leaky dams” and ‘brash dams’ in sub-catchments

Small-scale renewables

“...increasing the take-up of small-scale renewable energy so that at least 1 mW has been installed by 2018”



Progress since 2010

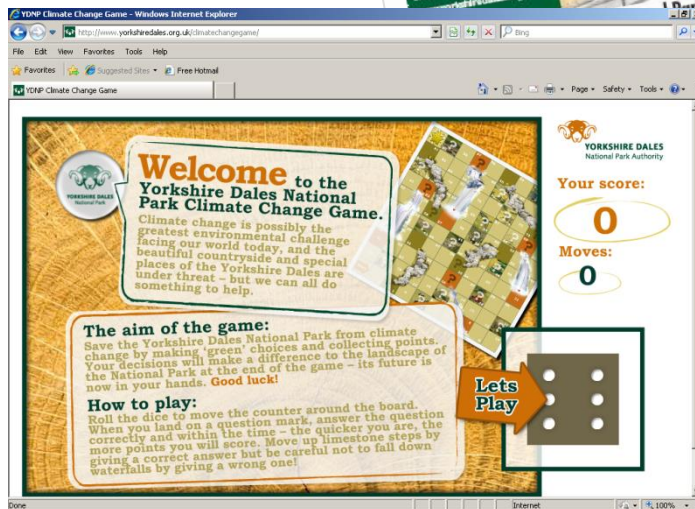
Total Output (kW) 2015						
Wind	Biomass	Heat pump	Hydro	Anaerobic	Solar	Total
170	2,388	235	430	155	244	3,622

= 3.6 mW of installed capacity

Promoting awareness



YORKSHIRE DALES
National Park Authority



Page 6 Dales 2008

Communities go green

Communities are taking collective action to reduce their energy use and save money with the help of the Yorkshire Dales 'Green Communities' Project.

"By using less energy, residents reduce their carbon footprint - and their fuel bills - so it's a win-win situation," explains Project Officer, Jill Armstrong, who is based at the National Park Authority's office in Bainbridge.

"These 'green communities' are combating higher fuel costs - which they incur due to being off main gas - as well as looking at insulation measures for stone-built properties. They are also successfully installing renewable technologies, such as solar panels, onto Dales homes whilst preserving the character of the area."

What are people doing?

'Greener Together' - Grasmere & Thirlmere's Green Communities Group - held a Sustainable Energy Day which attracted those with homes with hard to treat unlit stone cavity walls.

Usually constructed from 1980 to 1990, the walls cannot be filled with conventional insulation.

Yorkshire Energy Partnership has teamed up with Polyseal Ltd to pilot a solution using tiny beads of polystyrene. This will be offered to a limited number of households in Grasmere and Thirlmere at a significantly reduced price with the hope it can be made more widely available in future.

Interested? Contact the Yorkshire Energy Partnership on 01904 554406.



Oil Clubs are popping up all over the Dales, with residents bulk buying their heating oil in order to get a discounted price from suppliers. As well as cost savings, householders benefit from fewer tankers squeezing along small rural roads - fewer miles means less carbon emissions too.

For more information, contact Jill on 01969 652391 or jill.armstrong@yorkshiredales.org.uk. The Green Communities Project is funded by the Yorkshire Dales LEADER programme, made available through the Rural Development Programme for England which is jointly funded by Defra and the European Union.

Authority halves emissions

Carbon emissions from buildings and vehicles owned by the National Park Authority have been almost halved over the last five years.

And the Authority has cut its costs by nearly £60,000 a year in the same period.

In 2005/06 our emissions were 701 tonnes of CO₂ and in 2010/11 they stood at 355 tonnes - a reduction of 49%, substantially beating the target we set ourselves of 25% by March 2013.

In 2007 the Authority signed up to the Nottingham Declaration, committing to ensuring that tackling climate change was a cornerstone of its work.

We have installed a ground source heat pump in our Bainbridge office and a biomass (wood-fuelled) heating boiler in Grasmere. Other projects include energy saving improvements to buildings and fewer and lower-emission vehicles in the Authority's fleet. Staff mileage has also been cut by a fifth.

As recognition of the Authority's work, the National Park Centres have been accredited by the Green Tourism Business Scheme, and the biomass boiler won first place in the public building insulation category of the Yorkshire and Hummer Microgeneration Partnership awards in 2010.

Find out more at www.yorkshiredales.org.uk/climatechange



Yorkshire's Premier Solar Panels - Information Centre

Confused about Solar Electricity? Unsure of where to start? Don't know who to trust? Come along and visit us at The Energy Centres.

We'll explain the benefits and risks of solar energy, help you decide if it's right for you, and we'll help you get started.

By installing a solar panel system, you can save up to £4000 per year thanks to the government's Feed-in Tariff.

Call us now on 0500 127 005 or visit our website at www.yorkshiredales.org.uk/energycentres

The Energy Centres, Skipton 146

for the Linton group have carried out survey of the woodland they are looking after as part of the project, with enthusiastic support from local children.

In Dentdale, the Cowgill Community Orchard group (pictured below) have cleared and prepared their ground and sown a wildflower mix reflecting the local meadows in order to create a rich grassland beneath the hardy trees they've planted.

If you have the land but lack confidence or equipment, or are keen to get involved but don't have a site, maybe we can help. Email mark.bewitt@yorkshiredales.org.uk or call 01756 751627.



Find out more about the work of the Authority at www.yorkshiredales.org.uk



Future challenges

- 
- Improving energy efficiency in traditional buildings
 - Financial rewards for carbon management
 - Reducing downstream flood peaks