



TAYplan

adapting to climate change

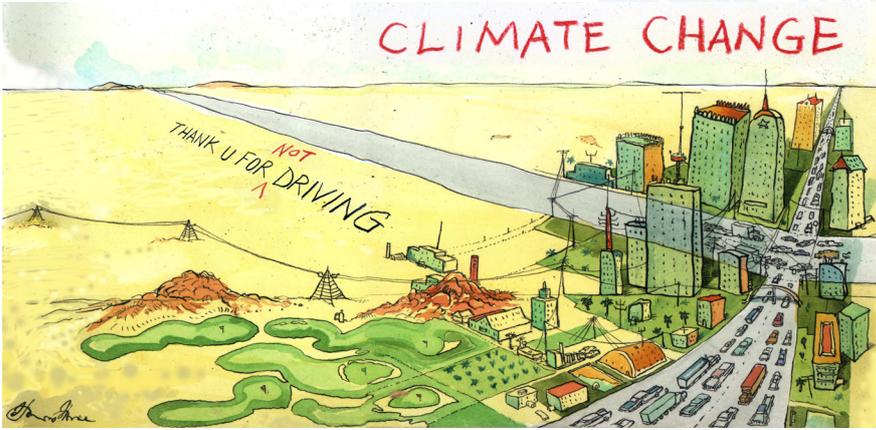
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Enterprise House
13 February 2013



Securing the future... • Improving services
• Enhancing quality of life • Making the best use of public resources





Perth & Kinross Council



The Carse of Gowrie



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The Eastern Carse





The central Carse



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The Carse looking West



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Towards Errol



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The Sidlaws



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Introduction



Climate change is a challenge that affects us all. Its implications are profoundly important not only for Perth & Kinross, but for the country and the world in general

These implications will become more severe over time and we all need to start adapting our systems, assets, services and management approaches to this challenge

Recognising this, some 2 years ago, the Council & Community Planning Partners undertook a study to look at what we may face and, most importantly, look at what needs to be done to tackle the predicted impacts.

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Planning tools



Planning tools and climate change risk reduction

Generally speaking, planning tools can be used to reduce climate risks in four ways:

- limiting development in hazard-prone areas
- ensuring that the built environment can withstand a range of environmental stress
- helping to preserve natural environments that protect communities against hazards (for example, dunes that absorb coastal storm effects)
- educating stakeholders and decision makers about risks and opportunities and fostering dialogue about adaptation

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Communicating and involving



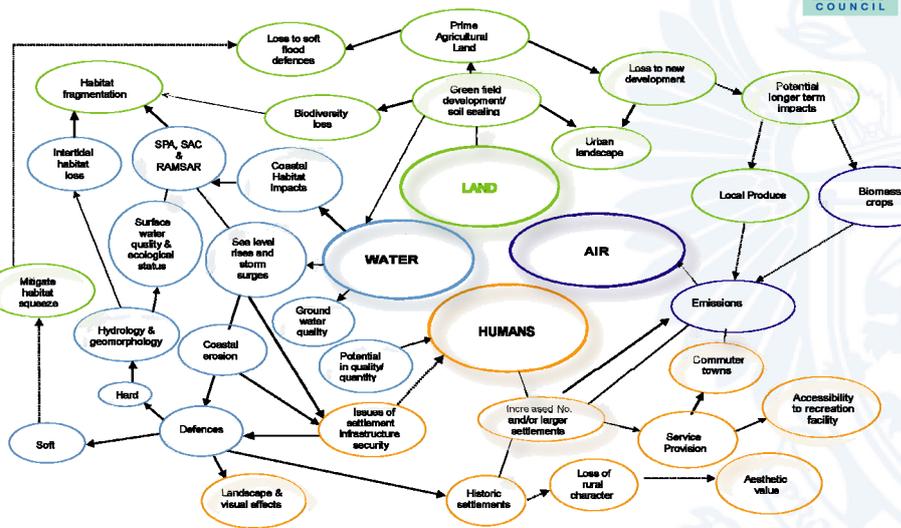
The changing climate will affect many of the people who live, work and visit Perth and Kinross

Climate change will have direct impacts on communities, as will the range of adaptation and mitigation responses

The involvement of communities is vital in developing plans and strategies and informing decisions

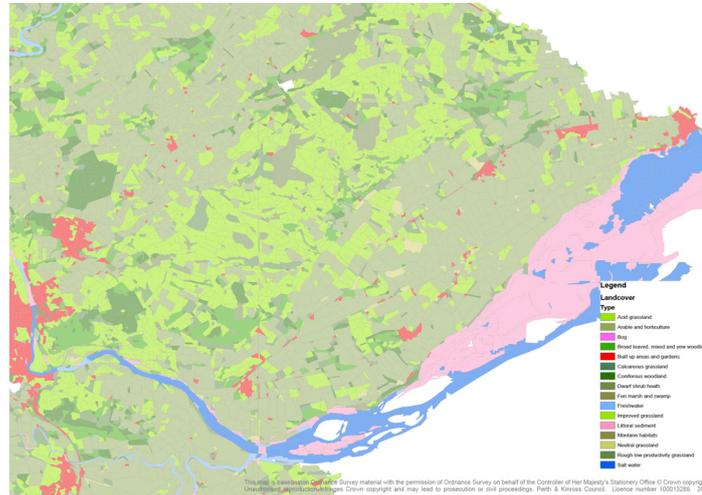


Cause and effect





Land cover



Problems and issues



LDP should take account of those areas which are already at risk from the effects of climate change:

- *Flooding and sea level rise*
- *Consideration given to the need for a managed retreat of development in the Carse of Gowrie*
- *Potential of renewable energy technologies*
- *Creating sustainable communities*
- *Maximising resource use and energy efficiency*
- *Food security*



Adaptation to climate change



Adaptation to risks and opportunities generated by our changing climate will be primarily achieved through guiding development to locations which do not flood or increase flood risk elsewhere and offer greater protection from impacts such as erosion, storms, water shortages and subsidence.

The preferred option is to ensure development does not take place in areas of flood risk by:

- *Updating existing Development Plan policies in light of the most recent climate change projections*
- *Ensuring the land use planning system contributes to local flood risk plans by identifying and protecting land for water storage and flood protection*

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Strategies for tackling impacts



Twin track (with impacts on contrasting timescales):

- Mitigate impacts by reducing greenhouse gas emissions (but uncertainties with climate models and emission scenarios – no excuse for inactivity and will reduce over time)
- Adapt and manage most severe impacts. But needs to be sensitive to varying impacts across Perth & Kinross
- Latter consistent with precautionary principle and sustainability

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Strategies for tackling impacts



To meet overall objectives, the following needs must be **balanced**:

- Social** Enhance community benefit
- Environmental** Protect and work with the environment
- Economic** Deliver resilience at affordable cost with fair economic outcomes and the protection of local jobs and health
- Future generations** Allow for future uncertainty (the 'precautionary principle'), balance between meeting present needs and those of future generations

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Staged adaptation



Not all impacts require an immediate response, and a single big change is not always the safest or most cost-effective means of adapting to the gradual changes in climate.

A more staged approach enables regular review, of markets and assets, but also of developing knowledge and best practices.

Introducing changes incrementally also builds in flexibility. As such even long-term decisions do not lock the area into an un-adapted future.

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What does it mean for the area?



What will this mean for Carse of Gowrie?

- threats
- opportunities

How will climate change affect the aspects of the area that you value? Will it make existing problems worse?

What choices will we need to make?

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Natural environment



The whole of the Carse
Orchards, new and old
Paths and trails
River Tay – reedbeds - designated
Birds – some rare and secret
Diverse wildlife and habitats
Ancient trees and hedges
Historic gardens and designed landscapes
Pows
Scenic quality – landscape and views over the Carse and Braes
Farming and fruit growing



Lack of woodland
Poor access to the river & trails blocked elsewhere
Flooding, poor drainage, clay soils, maintenance of Pows
Lack of protection for orchards
Vermin
Noise from the A90

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Built environment



Small villages
 Historic buildings – steadings, churches, listed buildings, historic gardens – all fitting the landscape
 Community use of public buildings
 A90 flyovers
 Good links via A90

Flooding, including housing being built in flood risk areas, and reliance on electricity for pumping
 Design and character of new housing
 Poor public transport
 Poor opportunities for cycling
 Poor roads off the A90
 Severance by A90 and railwayline



Local economy



Agriculture, soft fruit production, polytunnels
 Specialist producers – herbs, winery
 Fisheries
 Local foods
 SCRI
 Good transport access
 Local businesses e.g. garden centre, caravan centre, markets and car auction
 'Visitor' attractions – castles, hotels

Intensive agriculture – polytunnels, loss of dairy, no rotation
 Poor public transport, no P+R
 Poor visitor infrastructure
 Lack of support and sites for business development
 Commuting out of the area
 Poor IT and telecoms
 Inappropriate development – loss of local identity



Social and community



Long list of:

- Community facilities
- Recreation opportunities
- Shops and mobile shops
- Community organisations
- Community initiatives



Poor schools facilities and lack of secondary school
Poor road maintenance
Lack of policing
Poor public transport
Loss of shops and POs
Need for sustainable communities (new housing at Abernyste)
Car boot sale



Cultural and heritage



Long list of historic buildings – churches, forts, castles, houses, archaeological sites
Designed landscapes, historic orchards, Redwood trees
Local arts and crafts businesses
Local heritage and conservation groups
Community events - village fetes, fun runs
Conservation areas
Distinct CoG identity and culture
River Tay – heritage and history



Risk of losing community identity – speed and type of development
Lack of cultural activities, lack of focal point in some areas
Lack of information and interpretation of culture and heritage
Apathy and lack of communication
Some historic buildings in poor condition



...so what could the effects be

Direct effects of climate change

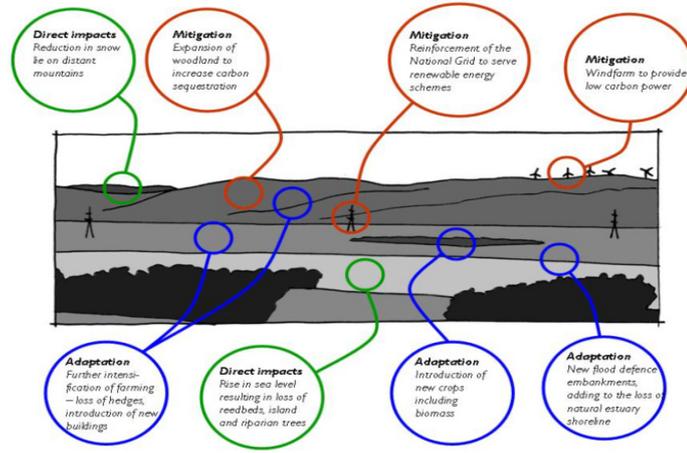
- Winter flooding along rivers
- Summer drought
- Flooding along the coastline
- Impact on woodlands and natural habitats
- Possible increase in storm damage
- New species, pests, diseases affecting plants, trees, crops, animals and humans



...also about how we respond ...

Different types of response:

- ***Climate change mitigation*** – actions we take to reduce carbon emissions renewables, woodland expansion etc) – we have choices and trade-offs
- ***Climate change adaptation*** – actions we take to adapt to the changing climate (flood protection, new crops etc) – we have choices and trade-offs





Do you have
any questions?