Committee on Climate Change

How local authorities can reduce emissions and manage climate risk

17 May 2012

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Key messages

1. There is a crucial role for local authorities in reducing emissions to meet national carbon budgets

2. Local authorities should develop low-carbon plans

3. Government should provide additional funding to local authorities and/or introduce a statutory duty for local authorities to develop and implement carbon plans

4. Local authorities have an important role in preparing for climate change

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Background

This report responds to a June 2011 request (confirmed in October 2011) from Greg Barker, (DECC) asking the CCC to provide advice on:

- How local authorities in England can be encouraged to show strong leadership and responsibility in cutting carbon emissions both from their own estates and operations and those arising within their areas; and

- Benchmark levels for the scale of ambition that local authorities might appropriately set themselves, possible approaches to deliver that ambition and how this would contribute to the national carbon budgets.

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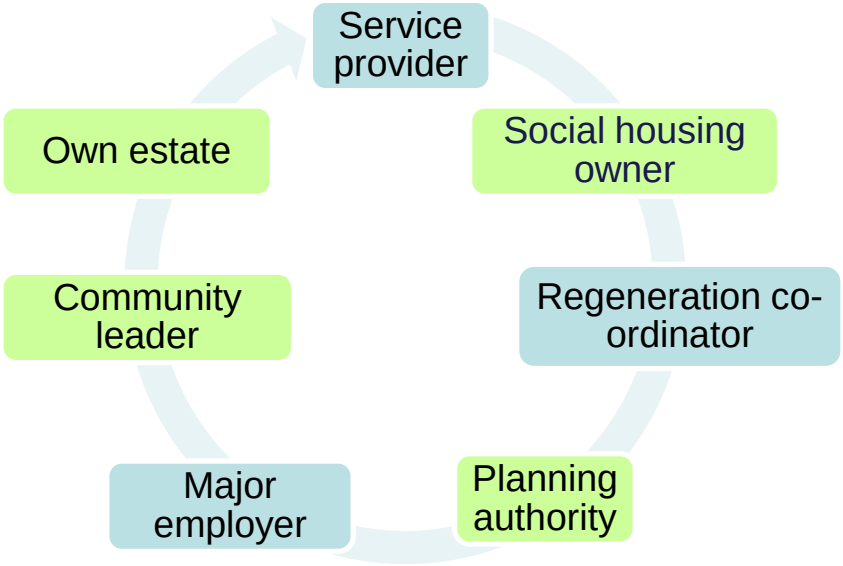
The context for local authority action

Key local authority roles:



Through these roles functions and services, they are well placed to drive and influence emissions reductions

Economic and social benefits include:

- Alleviation of fuel poverty
- Development of local skills and job creation
- Infrastructure improvements
- Cost savings

There have been changes to the framework for local authority action on climate change

1. **Changes to policy framework**

   No requirement for local authorities to set or negotiate targets to reduce own or area-wide emissions following:

- Loss of National Indicators:
  - NI185 on own estate emissions
  - NI186 on area-wide emissions
  - NI188 on adaptation
- Abolition of Regional Development Agencies (loss of climate change objective)

2. **Major reductions in local authority budgets**

- Reductions in Government funding (e.g. -26% between 2010/11 and 2014/15)
- Caps on council tax increase

While there is promising activity in a number of English local authorities (e.g. London and the 8 Core Cities) action is weaker/absent in other authorities

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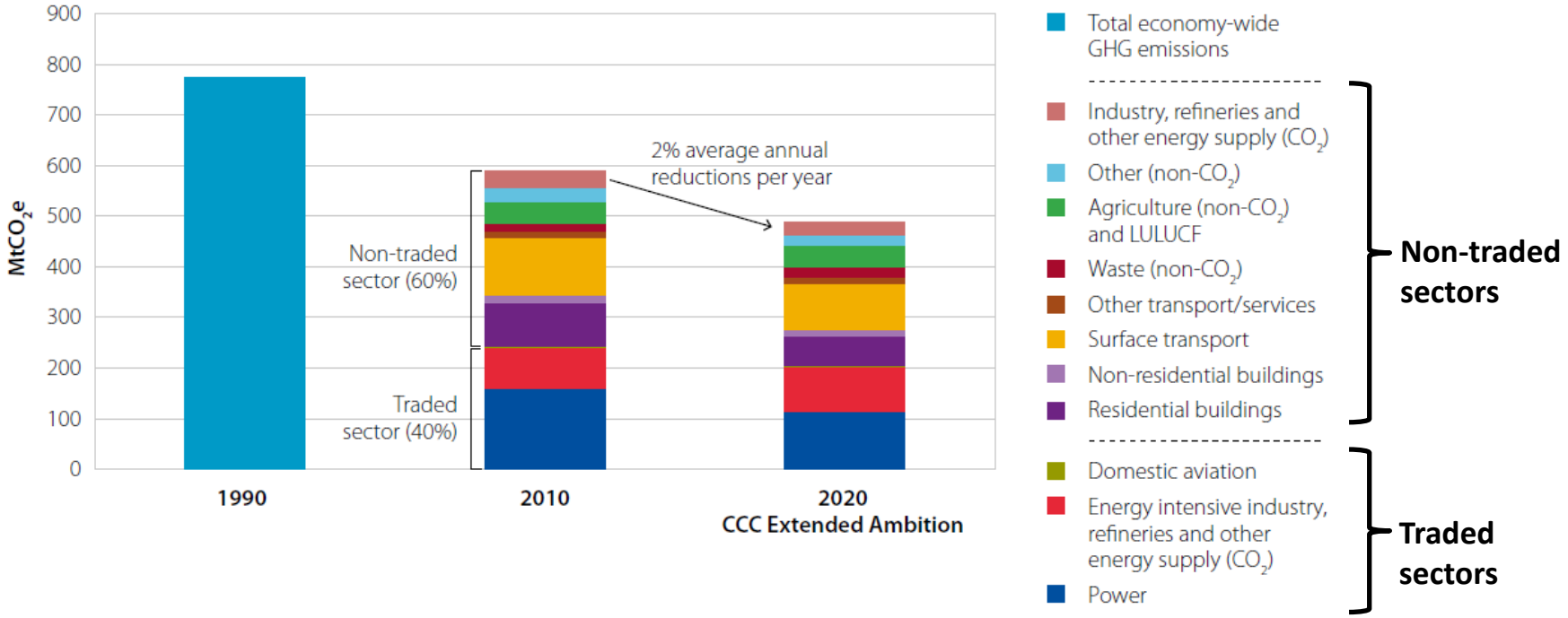
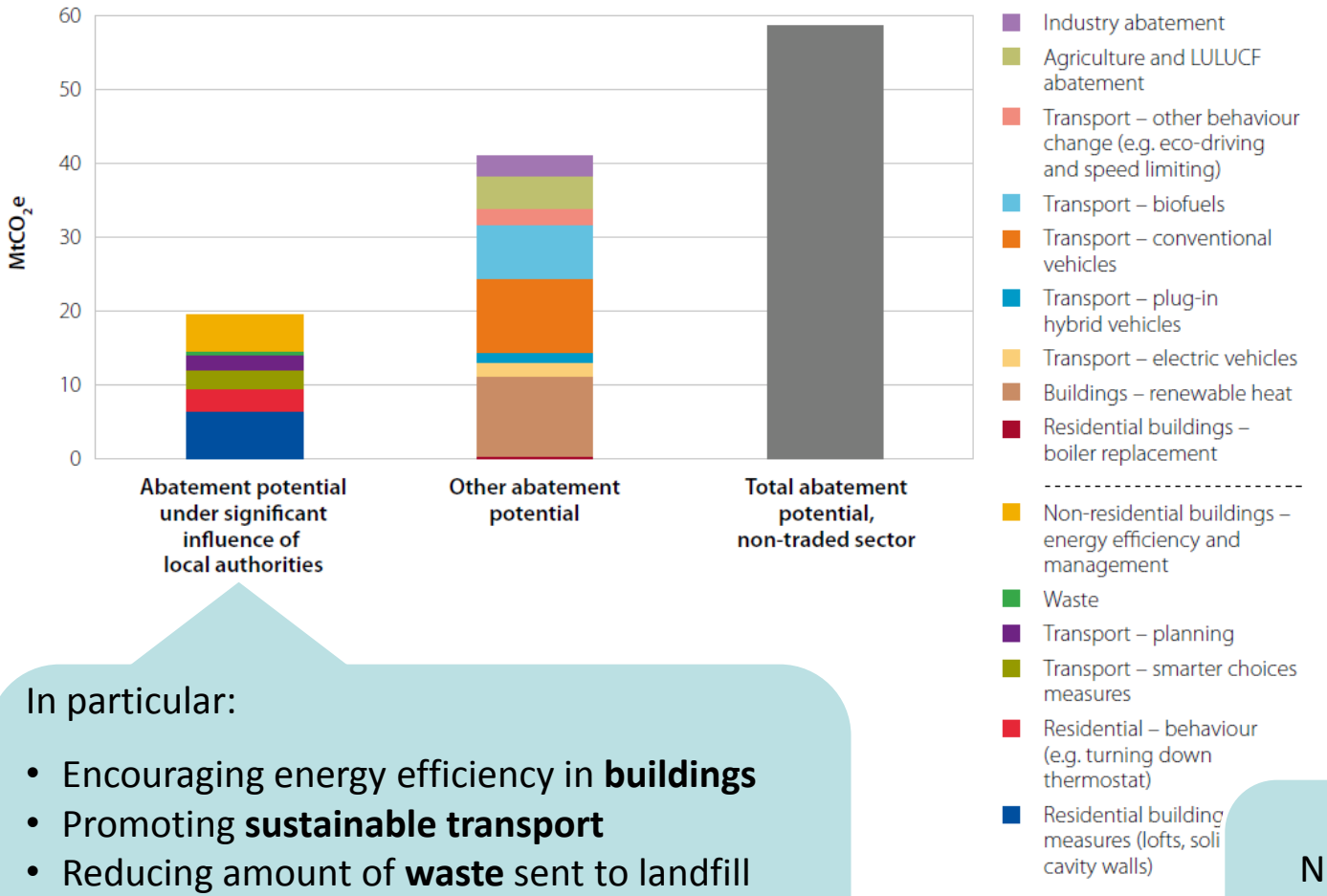
The legislated carbon budgets require a 17% emissions cut by 2020 on 2010 levels (34% on 1990) and a 50% cut by 2025 (on 1990 levels)

The Climate Change Act distinguishes between the non-traded and traded sectors of the economy, that is sectors outside and within the EU Emissions Trading System



The non-traded sector, comprising buildings, transport, non-energy intensive industry, and non-CO_2 emissions (e.g. agriculture and waste) contribute 60% of UK GHG emissions

Local authorities have most scope to influence emissions reduction in the non-traded sector (60% of UK emissions)



Additional role in power sector decarbonisation:

- Planning approval for *renewables*
- *Decentralised energy* (e.g. district heating)

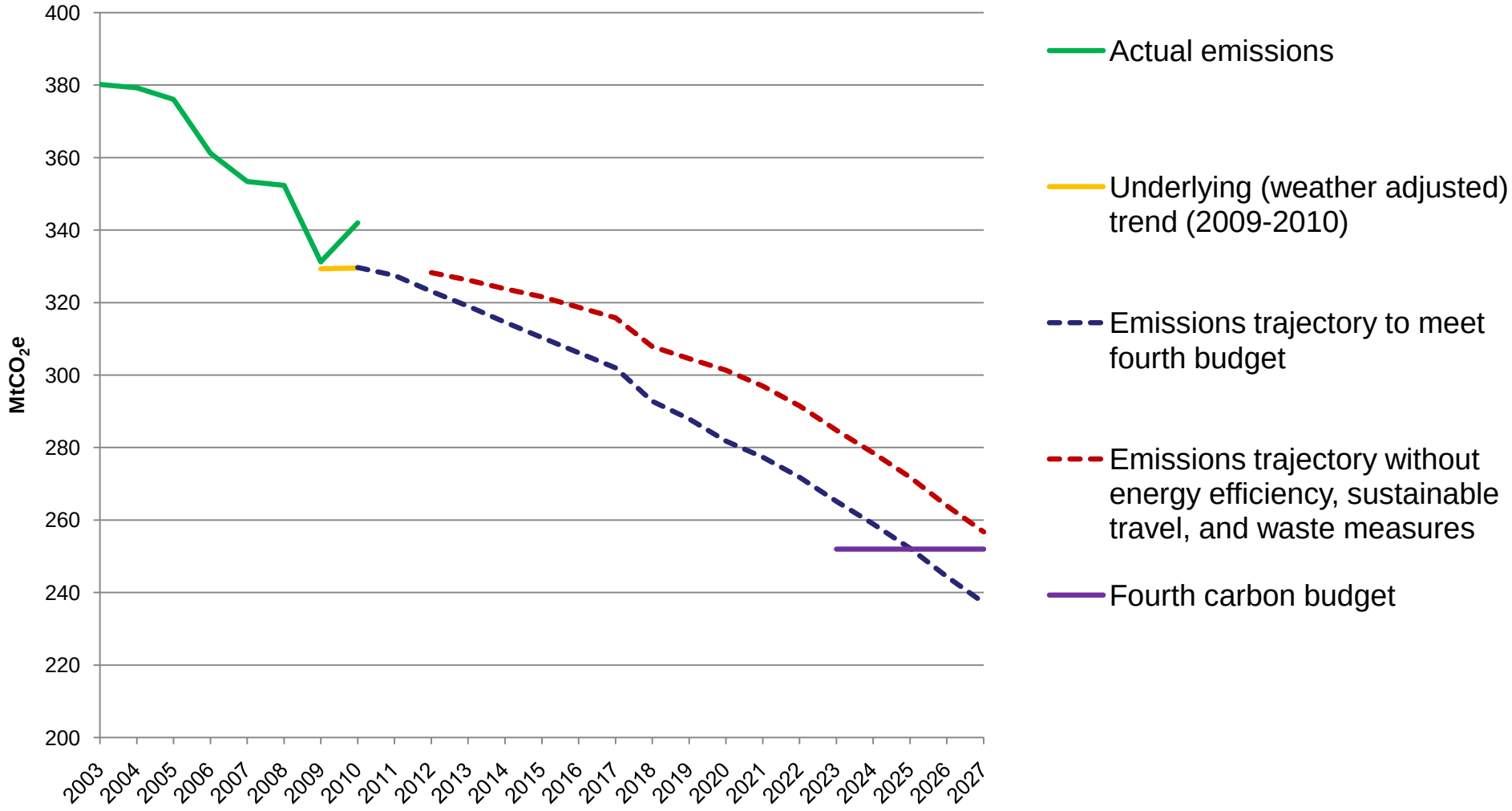
In particular:

- Encouraging energy efficiency in **buildings**
- Promoting **sustainable transport**
- Reducing amount of **waste** sent to landfill

Combined these areas account for 2/3 of emissions and 1/3 of abatement potential in the **non-traded sector**

Need non-traded sector emissions to reduce by around **20% by 2020** (on 2010 levels)

Local authority action is required to help us achieve carbon budgets



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Reducing buildings emissions (energy efficiency)

Providing and supporting **energy efficiency programmes** (especially in residential sector) offers the largest opportunity for local authorities to reduce area-wide emissions

Green Deal and Energy Company Obligation (ECO) from 2013

- Local authorities can directly provide or partner with private delivery company
- Birmingham City Council recognises multiple benefits of being a GD provider

(e.g. alleviate fuel poverty and local job creation)

But need to address potential barriers to role of provider:

- Adoption risk – require minimum take-up to recoup financial outlay
- Funding required for in-house staff /expertise
- Good quality housing stock data to identify suitable houses

Other levers (new and existing buildings)

- Development control: set criteria for approving planning applications
- Building control: enforcement of Part L energy efficiency standards
- EPC enforcement: compliance carried out by trading standards department

Reducing buildings emissions (district heating)

Meeting national carbon budgets requires low-carbon heat sources, with long term focus on **waste heat** from low carbon generation (i.e. nuclear & CCS)

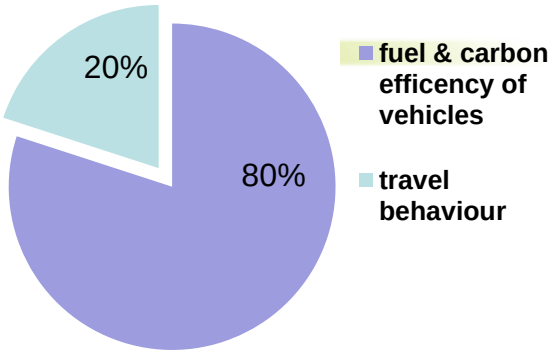
Local authorities can support increased district heating (DH) beyond the 2% of heat demand that DH currently meets

- **Identify opportunities:** ideally placed, given knowledge of planned new developments and relevant data on energy demand of existing buildings.
- **Develop schemes:** e.g. committing own buildings and social houses as heat loads for new schemes
- **Use the planning system:** e.g. use planning function to require new developments to incorporate district heating network
- **Delivery options:** e.g. help support schemes via private, public or hybrid Energy Service Companies (ESCos)

Reducing transport emissions

Local authorities have most scope to reduce emissions through influencing **travel behaviour**

Drivers of emissions reductions in surface transport by 2020



Promoting sustainable travel

- Encouraging 'Smarter Choices' (modal shift to public transport, walking & cycling)
- Public transport provision

Planning and designing new developments

- Land use planning has significant implications for transport emissions
- Densely populated areas with frequent & closely located public transport have lower CO_2
- New developments should be situated in existing towns and/or be well served by public transport

Support up-take of low-carbon vehicles

- Installing charging points for electric vehicles (EVs)
- Incentives (e.g. provide free parking for EVs)
- Purchase electric public buses and council vehicles

Reducing emissions from waste

While declining waste emissions (mostly methane) has been mainly driven by reduced biodegradable waste sent to landfill in response to the landfill tax, there is **scope for local authorities to do more**.

Food waste prevention

- WRAP's Love Food Hate Waste campaign implemented by 300 English LAs
- Contributed to 1mt (12%) reduction (from 8mt) in household food waste between 2007-10
- Prevention more cost-effective than collection for composting or anaerobic digestion

Separate collection and treatment of food waste

- Required to unlock potential for composting or anaerobic digestion
- Need rates to increase beyond the 50% of local authorities that provide for some separate collection of food waste

Waste-to-energy schemes

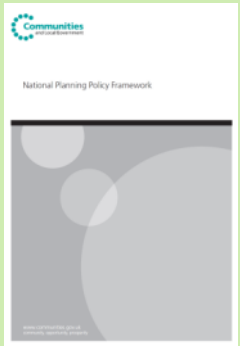
- Only 14% of local authority collected waste in England is used for energy recovery
- Support of AD, pyrolysis and incineration with energy recovery of waste heat

Reducing emissions from power generation

While national and EU policies are the main drivers to reduce emissions in power, local authorities have a **supporting role to play** in small scale generation.

Granting approval for small scale onshore wind

- Local planning approval required for projects below 50MW
- Some smaller scale onshore wind required to meet EU renewable energy target
- Risk that fall in approval rates (down to 35% of capacity in 2011 compared to 70% in 2007) could undermine renewable energy targets



The New National Planning Policy Framework requires local authorities to:

- Recognise the responsibility on all communities to contribute to renewable energy generation
- Seek strategies that promote and maximise renewable energy development
- Identify areas suitable for renewable energy
- Support community-led initiatives

Wider benefits from taking climate change measures

Energy efficiency programmes provide many economic and social benefits including:

- Fuel poverty alleviation
- Skills development and job creation
- Cost savings (e.g. council buildings)

e.g. 250 jobs created by Kirklees Warmzone

Sustainable travel options have:

- Health benefits (less air pollution, more physical exercise) and
- Economic benefits (less congestion, better access to jobs and services).

Renewables can generate revenue for councils and community benefits

e.g. Burton Latimer Council receives £10,000 each year from a 20 MW wind farm

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Reducing emissions from own estate and operations

Important local authorities act, not only to reduce own emissions (and achieve cost savings), but to **show leadership** to legitimise their wider role in local emissions reduction, and **motivate** staff, residents and businesses in the area.

Buildings

- National policy (CRC) captures 153 LAs (including schools) and 5.8 $MtCO_2$
- Largest source of emissions for local authorities (e.g. town halls and libraries)
- Significant scope to reduce emissions cost-effectively while lowering energy bills

Street lighting

- Significant source of emissions (18% of Leicestershire County Council's own estate emissions)
- Abatement options include dimming of lights, switch off at night and use of low energy bulbs (e.g. LEDs)

Transport

- Encourage behaviour change in how staff commute to work (e.g. provide cycle racks, charging points) and less use of own cars for business (e.g.teleconferencing)
- For own fleet, use of low carbon vehicles and route optimisation to reduce mileage of fossil fuel vehicles.

Manchester City Council has a 10 year programme to reduce emissions by 41% by 2020 (on 2025 levels)

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Local approaches to adapting to climate change

Important role using **planning and other policy levers** to ensure buildings and infrastructure in their localities are resilient to increased risk of flooding and heat stress

Land use planning
- Steer developments to areas of lowest climate risk
- Increase sustainable urban drainage

Providing infrastructure
- Resilient roads and road related infrastructure
- Minimise damage to buildings and infrastructure from floods

Designing and innovating buildings
- Require resilience measures in new developments
- Retro-fit own buildings (including schools and social homes)

Managing natural resources
- Expand and improve ecological resilience of green spaces
- Make space for water along rivers

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Key message one: There is a crucial role for local authorities in reducing emissions to meet national carbon budgets

Local authorities have most scope to influence emissions reduction in the non-traded sector, specifically in the following sectors

Buildings	• leading or participating in programmes to improve energy efficiency • advising on energy efficiency measures • encouraging behaviour change
Road transport	• promoting sustainable transport (e.g. travel planning, parking and congestion charging, supporting investment in EV charging infrastructure)
Waste	• waste prevention programmes • providing for separate collection of food waste • promoting energy-from-waste schemes

Cut of 20% required by 2020 (on 2010) to meet carbon budgets

- Less influence over **power and industry emissions** but still have an important role (e.g. planning process and district heating)
- Reducing **own estate emissions:** important for carbon budgets, both directly and to underpin the wider leadership role of local authorities in reducing emissions.

The precise opportunity at the local level will depend on specific local characteristics and action to date

Buildings

- Age/quality/composition of housing stock (e.g.):
  - % of solid walls
  - flats versus houses
  - % of social housing

Transport

- Population density
- Public transport options
- Proximity to amenities

Waste

- Recycling rates
- Provision of separate food waste collection

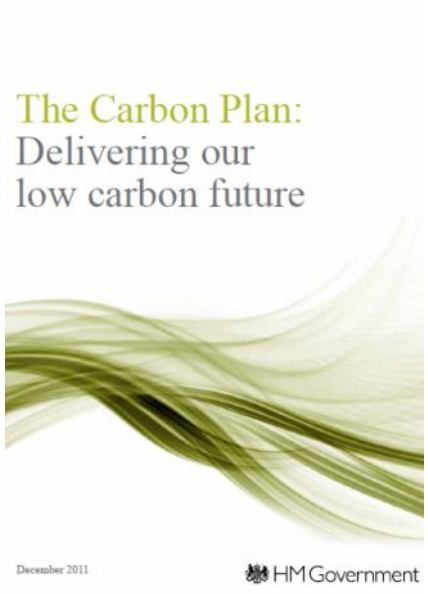
Given local factors

One recent study* which assessed opportunities in buildings, transport and industry in the LAs comprising the Leeds city region found that:

- Cost effective abatement potential could vary across the region by between **20% and 30%** in 2022 (relative to 2010 levels).

* Source: Study by Centre for Low Carbon Futures (2011)

Key message two: Local authorities should develop low-carbon plans



- Carbon plans should include a high level ambition for emissions reduction (e.g. 20% reduction across buildings, surface transport and waste relative to 2010 levels).
- Specifically, it should focus on drivers of emissions over which they have influence (e.g. number of homes insulated, car miles travelled).
- The plan should be based on a subset of indicators for residential and non-residential buildings, surface transport, waste and own estate emissions .

It would not be appropriate for local authorities to set (or be set) binding carbon budgets given the multiple drivers of emissions, many of which are beyond the control of local authorities.

Key message three: There is a significant risk that some local authorities will not develop and implement ambitious carbon plans. Therefore, Government needs to consider further action

- No national framework in place on climate change action (voluntary only), and ever tightening fiscal budgets.
- In order to mitigate this, and the associated risk for meeting national carbon budgets, we recommend that the Government:

Provides additional funding (e.g. to support local authorities to become Green Deal providers/partners, and to increase roll out of sustainable travel programmes)

and /or

Introduces a statutory duty for local authorities to develop and implement carbon plans

Key message four: Local authorities have an important role in preparing for climate change

- Local authorities can use planning and other policy levers to ensure that buildings and infrastructure are resilient to increased risk of flooding and heat stress.
- There is a question whether adaptation is adequately resourced and whether climate risk has been given sufficient weight in local authority decision making.

There is a need for increased focus by local authorities so that climate risk is managed appropriately

Conclusions

- Meeting the first four carbon budgets will be **challenging**: requires a 17% reduction in emissions by 2020 and 36% by 2025 (on 2010 levels)
- **Action is needed by all** parties, including local authorities, to help meet the carbon budgets
- Local authorities are best placed to influence **emissions reductions in buildings, road transport and waste**, and on **own estate** and operations
- Many measures are **cost-effective** to implement, with wider benefits for the local authority and community
- But some benefits of action are not visible at the local level, and action planned in some local authorities is limited
- Therefore, to mitigate potential risks of inaction, we recommend the provision of **additional funding** and /or a **statutory duty** for local authorities to implement a carbon plan.