

Infrastructure & Utilities

Sectoral workshop comments summary

Buildings

- Buildings and assets may reach temperatures at which they are no longer able to perform as required;
- New building regulations are necessary to minimise flood risk. Building flood defences is often not sustainable in the long term so need for improved focus on flood integration; more holistic approach to water and land management;
- Gusts and turbulence from buildings – impacts on traffic & pedestrians (Bridgewater Place) - introduce natural shelter belts.
- Better insulation and retrofitting of low-carbon technologies;
- Cities need more green spaces and natural cooling features to overcome urban heat island effect.

Transport

- Reduced gritting & winter maintenance. BUT more marginal conditions (around zero degrees) leading to more gritting; also impacts on water quality and run-off.
- Melting tarmac in summer;
- Damage to railways from heat (eg tracks and power cables);
- Flooding of transport infrastructure in low-lying and other vulnerable areas;
- Challenge to the ability of buses and coaches, and train carriages to remain at comfortable temperatures in all conditions;
- Impacts of falling trees due to rising winds and drying soils – impact upon transport network. Plant trees most appropriate for future conditions.
- Subsidence on roads, paths, railways;
- Malfunctioning traffic control systems in high temps;
- HGVs blown over in stronger winds.

Utilities

- Can existing gullies support the forecast increases in rainfall? How vulnerable are existing embankments to extreme weather?
- Failing power lines due to increasing temperatures;
- Availability of water – shortages in particular in canals and cross-Pennine routes;
- Pluvial (urban) flooding affecting supply networks;
- Need to improve existing urban infrastructure which may be unable to cope with future flooding – substations etc. Are electrical and water supply substations 'climate change' proofed?
- Need to improve surface water management with eg sustainable drainage;
- Issue with how to meet expected water demand, particularly as agriculture demands ever more to cope with reduced rainfall and a longer growing season;
- Need for an effective method of maintaining SUDS (eg finance and ownership);
- Likely increase in the number of burst pipes as soils become drier/experience soil heave;
- Summer heat and energy supply are not going to be a significant issue (Utilities co view);

- Possible effect of increasing levels of moisture in gas pipelines;
- Significant water depths can result in backflow into private meters & can impact district supply governors. Need to improve efficiency and waterproofing of equipment (gas and electricity);
- Soil moisture impacts upon cable life. Also reduction in efficiency of energy transmitting lines with increased temps?
- Utilities that currently don't require it may start to need cooling water.
- Concern over future supply of water from Codney Reservoir;
- Biological treatment of waste water more effective in warm weather;
- Saline intrusion into eg aquifers along coastal fringe?
- Need for wider behavioural change to help conserve resources;
- Waste water should not all be directed into sewer system - stop people paving over driveways with impermeable surfaces.

General

- Need to work together; integrate working and communication;
- Uncertainty over who to talk to for advice and guidance;
- Will the costs involved in adaptation be prohibitive (cf Stern Review findings)? Current economic situation makes this all very difficult. Who will pay for these changes?
- Break down the steps into more manageable chunks – rolling action plans over 5 year periods. Problem requires co-operation across all sectors so much greater need for co-operation and coordination – overcoming different vested interests & priorities;
- Green and grey infrastructure must be planned together.