

Anticipated Climate Change Health Service Impacts

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Introduction

- Our engagement with the LSP in Croydon
- Work on NI188 with Croydon team
- Particular points for health and social care
- Resilience implications of climate change
- Anticipated change
- Climate impact
- Adaptation and mitigation action plan slides for the story so far

Anticipated change

- Sea level rise
- Increased storminess
- Seasonal increase in precipitation
- Hotter, drier summers
- Accentuated wet/dry cycles
- Warmer winters

Climate impact

- Flood
- Drought
- Heat wave
- Wind storms

Anticipated Change Sea Level Rise

Implications for Service Provision	Geographic Predictability	Implications for Service Demands	Adaption Options
Flood risks spread to new areas. Sea level rise is not currently included in Environment Agency flood risk assessments.	Medium	More homes at risk from tidal flooding. Proxy data could be used to establish whether there is a bias towards more vulnerable households.	Key service relocation and emergency route assessments.

Anticipated Change Increased Storminess

Implications for Service Provision	Geographic Predictability	Implications for Service Demands	Adaption Options
Possible implications for building design (stress to buildings and infrastructure) and staff access to the workplace.	Low	Probability of physical injury increases.	Public information. Risk assessment of buildings.

Anticipated Change

Seasonally increased Precipitation

Implications for Service Provision	Geographic Predictability	Implications for Service Demands	Adaption Options
Greater risk of localised surface water and sewer flooding.	Low	Potential for greater prevalence of breathing-related conditions.	Sustainable Urban Drainage (SUDS).

Anticipated Change

Hotter, Drier Summers

Implications for Service Provision	Geographic Predictability	Implications for Service Demands	Adaption Options
Greater risk of power outages. Greater risk of water shortages.	Low	Increase in prevalence of various sun and heat related health conditions.	Rainwater harvesting. Greywater recycling. On-site renewable (particularly solar). Public information.

Anticipated Change

Accentuated Wet/Dry Cycles

Implications for Service Provision	Geographic Predictability	Implications for Service Demands	Adaption Options
Potential implications for building structures, particularly subsidence.	Low	Potential for greater prevalence of breathing-related conditions where people's homes are affected. Also, contaminated land be subject to an increasing risk of exposure of contaminated materials at the ground surface .	SUDS Rainwater harvesting/ greywater recycling.

Anticipated Change Warmer Winters

Implications for Service Provision	Geographic Predictability	Implications for Service Demands	Adaption Options
Recent studies have indicated that warmer winters likely to be associated with an increase in precipitation, which counter intuitively, may be more likely to fall as snow.	Low	Service demand reduction for cold-related conditions associated with reduction in fuel poverty.	Care closer to home may benefit staff access to the workplace.

Climate Impact Flood (Fluvial)

Implications for Service Provision	Geographic Predictability	Implications for Service Demands	Adaption Options
Healthcare buildings physically damaged/isolated.	High	Emergency services diverted, emergency plans triggered.	Relocation/defence.
Dwellings physically damaged/isolated	High	Physical injury. Stress/mental health.	Care closer to home. Community flood planning.
Access to healthcare buildings restricted for staff and contractors.	High	Increased pressure on neighbouring facilities.	Increased total capacity and greater distribution of expertise.

Climate Impact Flood (Fluvial) Cont'd

Implications for Service Provision	Geographic Predictability	Implications for Service Demands	Adaption Options
Failure or damage to key buildings services, such as heating, cooling or drinking water supply.	High	Increased pressure on neighbouring facilities.	Greater resilience designed into key buildings and services.
Contamination of drinking water.	High	Problem likely to be common to local population.	Relocation/defence of water pumping facilities. Backup bottled water.
Supply chain interruptions	Medium	Increased pressure on neighbouring facilities.	Greater resilience designed into the supply chain including climate change-specific lifecycle assessment.

Climate Impact Flood (Tidal)

Implications for Service Provision	Geographic Predictability	Implications for Service Demands	Adaption Options
As for Fluvial Flooding.	High		

Climate Impact Flood (Surface Water)

Implications for Service Provision	Geographic Predictability	Implications for Service Demands	Adaption Options
Contamination of drinking water.	Medium	As above.	Back-up bottled water.
Access restrictions/ damage to buildings.	Medium	Travel disruption/ physical health risk	More alternative facilities in less at-risk locations. Community flood planning.

Climate Impact Flood (Sewer)

Implications for Service Provision	Geographic Predictability	Implications for Service Demands	Adaption Options
Contamination of drinking water through sewage backing up in buildings.	Medium	As above and likely to be associated with surface water flooding.	Backup bottled water.

Climate Impact Drought

Implications for Service Provision	Geographic Predictability	Implications for Service Demands	Adaption Options
Increased potential for power outages – reducing energy availability for demands which may currently be considered non-essential including cooling and ICT	Medium	Demand spike for heat –related emergencies. If power outages occur – potential difficulty in securing repeat prescriptions, medical records etc.	On site generation/ decentralised energy.

Climate Impact Drought (cont/d)

Implications for Service Provision	Geographic Predictability	Implications for Service Demands	Adaption Options
Assuming drought is associated with high temperatures, there is the potential for failure of some road and rail infrastructure (such as embankment collapse), restricting access.	Medium	Access to health facilities more challenging.	Care closer to home. Greater water efficiency.
Abstraction limits for water imposed.	Medium	Vulnerable individuals likely to suffer the most from lack of access to water.	Rainwater harvesting. Drinking water shortage solution.

Climate Impact Drought (cont/d)

Implications for Service Provision	Geographic Predictability	Implications for Service Demands	Adaption Options
Water storage shortages due to pre-existing concerns about legionella.	Medium	Emergency services may need to be diverted.	Drinking water storage solutions.

Climate Impact Heatwave

Implications for Service Provision	Geographic Predictability	Implications for Service Demands	Adaption Options
Increased potential for power outages.	Low	Demand spike for heat-related emergencies.	On site generation/ decentralised energy.
Productivity/staff shortages problems.	Low	Service restricted to priorities only.	Workplace design. Emergency staffing plans.
Indoor mechanical ventilation has capacity to spread infectious disease.	Low	Services may be diverted to alternative locations.	Awareness and prevention. Maintenance/update of ventilation systems.

Climate Impact

Heatwave (Cont/d)

Implications for Service Provision	Geographic Predictability	Implications for Service Demands	Adaption Options
Increased risk of poor water sanitation and food contamination.	Low	Risk of poor water sanitation and food contamination increasing demand.	Reduce risk of poor water sanitation or food contamination through building design and procedural changes. Building technology solutions such as use of air source heat pumps on reverse cycle.
Potential loss of front line staff to illness.	Low	Increased prevalence of vector-borne diseases unfamiliar to medical staff.	Research and information on probable diseases at each UKCIP average temperature scenario.

Anticipated Change Windstorms

Implications for Service Provision	Geographic Predictability	Implications for Service Demands	Adaption Options
Buildings physically damaged. Loss of utilities.	Low	Dust-related health problems. Risk of physical injury.	Care closer to home.