

Adaptation Solutions for Transport

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How can we tackle the climate emergency?

Climate change is already affecting every region on Earth.

1. We can ***Mitigate*** climate change by reducing greenhouse gas emissions.
2. We can ***Adapt*** to changes in our climate to become more ***Resilient***.

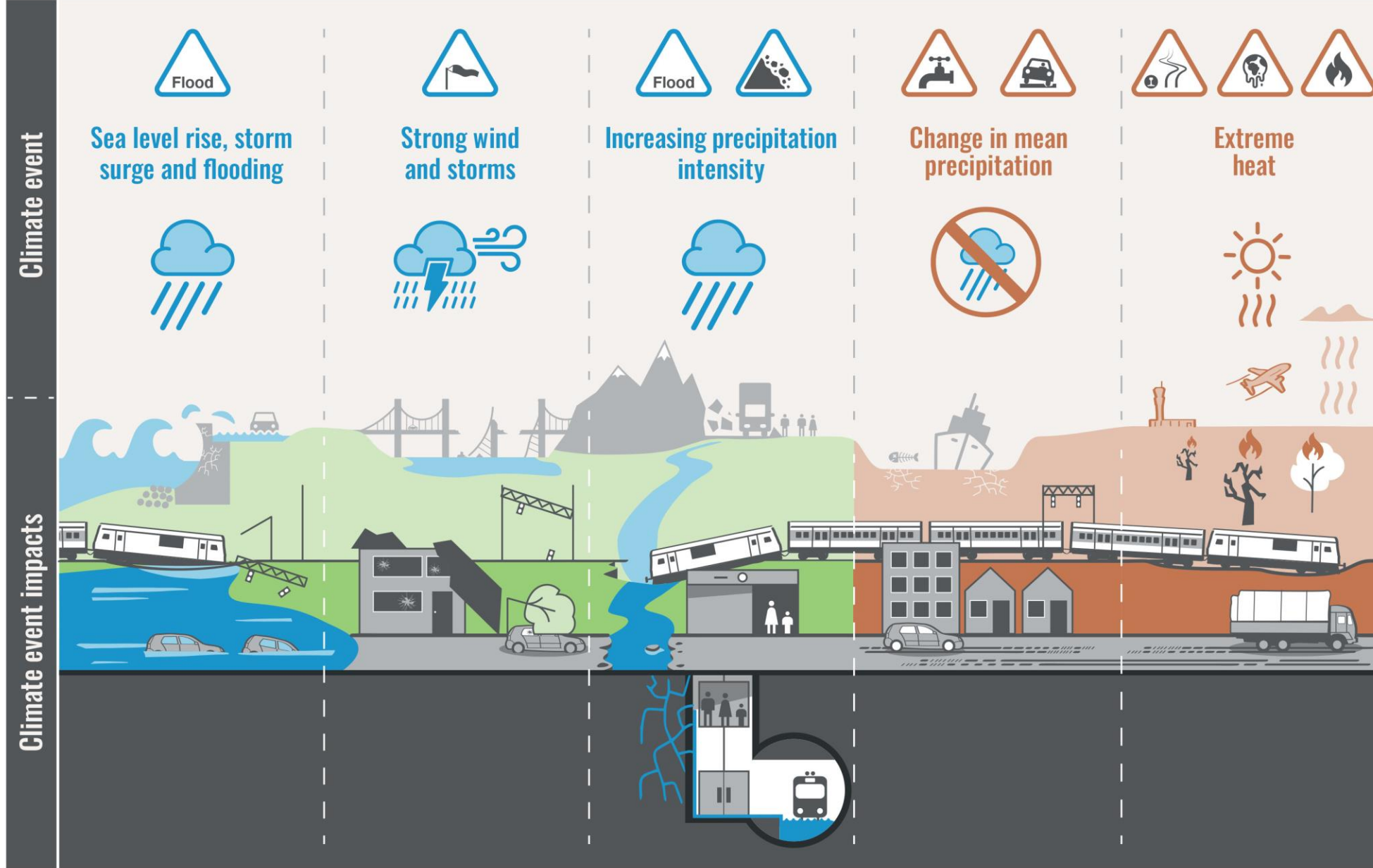


David Horsey, davidhorsey.com, seattlepi.com



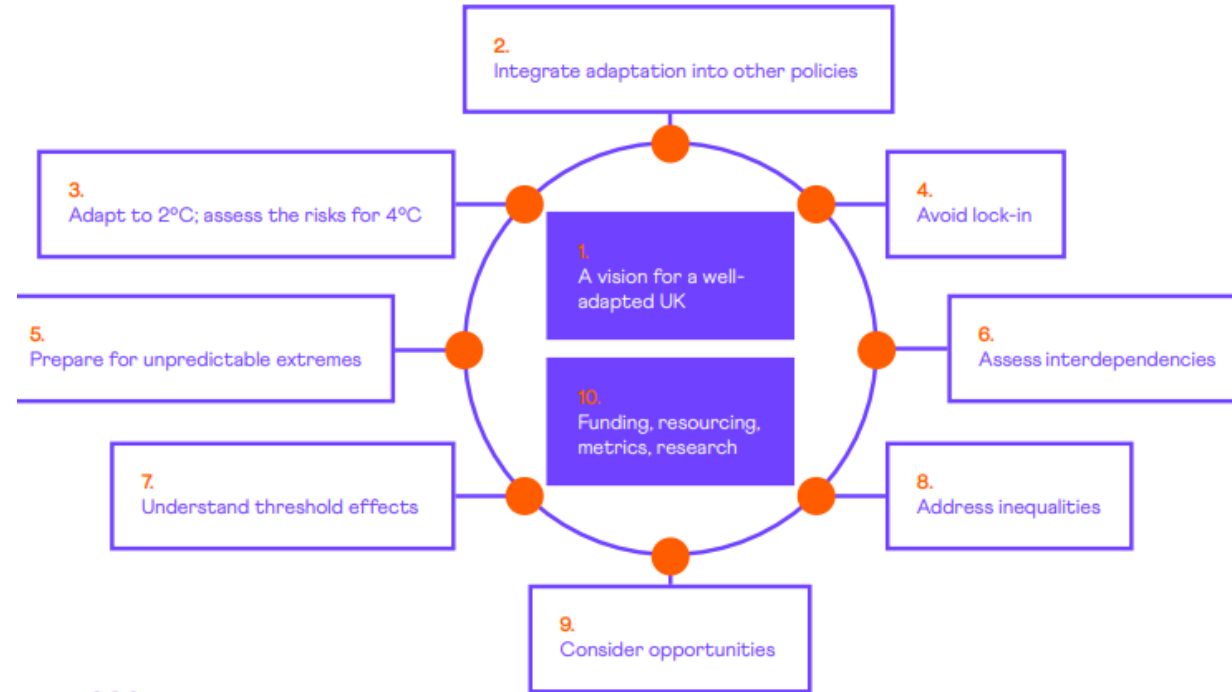
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Impacts of Weather & Climate Change on Transport Infrastructure



Greenham, S., Workman, R., Ferranti, E., McPherson, K., Quinn, A., Street, R., Dora, J., Fisher, R., Mills, S., Packham, K., Baxter, W., Roberts, C. 2022. [Climate-Resilient Transport: A policy guide for low-income countries in Africa and South Asia](#). Prepared by the University of Birmingham and TRL, UK. February 2022.

What does Transport adaptation look like?



Source: CCC

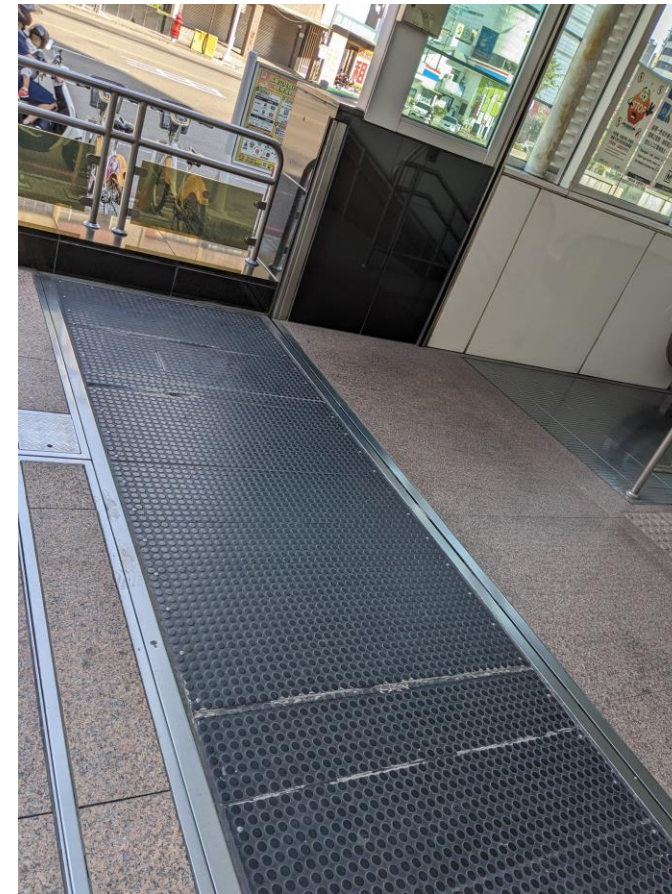
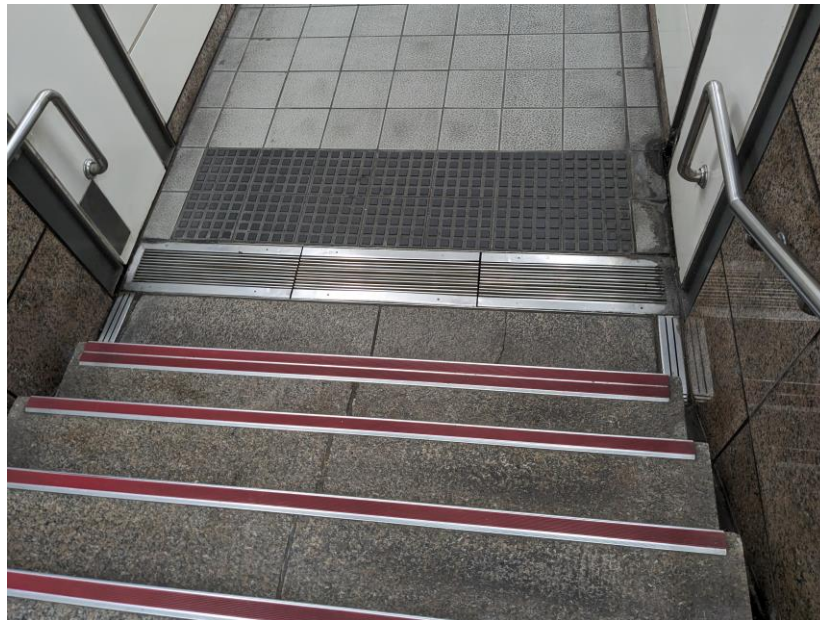
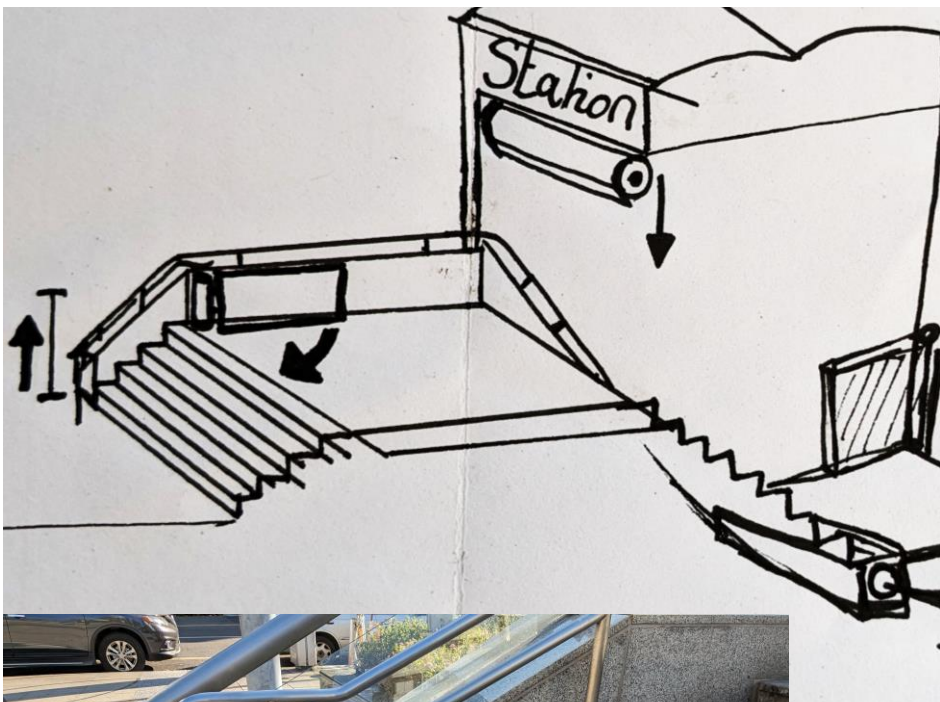


Adaptation – Protecting Routes

- 2001 Typhoon Nari hit Taiwan
- Taipei including the metro was under water.
- Two deepest tunnels were completely flooded.
- Recovery took 3 months.
- Extensive flood defences are present across Taipei and the metro hasn't flooded since.



Adaptation – Protecting Routes



Adaptation – Protecting Routes

- We don't have an underground metro in Birmingham, but we do have:
 - Pedestrian subways (e.g. Pagoda Island/Holloway Circus)
 - Road Tunnels (e.g. A38)
 - Main train station below street level
- Are there places where we might need more than sandbags?



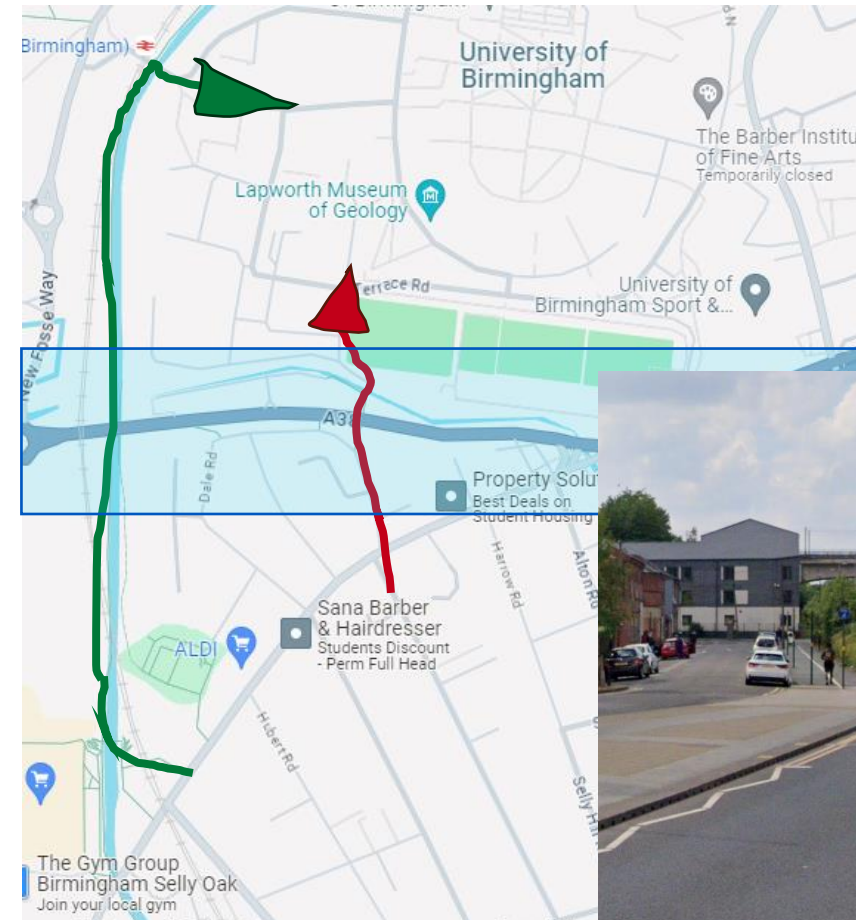
Adaptation – Alternative Routes

- Selly Oak May 2018
- Bristol Road and other areas across Birmingham impassable.
- How do students get to campus if the main routes are flooded?
- Do they know alternative safe routes?



Adaptation – Alternative Routes

- Communities can use other routes to still access amenities and workplaces.
- What about flooding in other communities? Kings Norton, Longbridge, Aston?



Adaptation – Routes for Wellbeing

- The scenic route is better for your wellbeing today.
- The “scenic route” might be an adaptation for warmer climates.
- Could include:
 - Walking to work near water.
 - Traveling at cooler times of day.
 - Cycling along shaded routes.



Adaptation – Routes for Wellbeing

- What about when changing modes?
- Do you have a favourite bus stop? Train station? Is there a reason why?
- Could include:
 - More central easy to access hydration.
 - Well ventilated.
 - Shaded by trees.
 - Covered from the rain



Questions?

Ten Principles for good adaptation

