

OUTPUTS AND LESSONS FROM COMPLETED STRATEGIC CLIMATE ADAPTATION PATHWAY PROGRAMME FOR RAIL INFRASTRUCTURE IN WALES & WESTERN REGION

ABSTRACT The railway in the Wales & Western Region of Network Rail suffers regular bombardment from severe weather. With railways built 100-150 years ago, generally along lower-lying (flatter) ground, and with the most coastal rail network out of all five network rail regions, Wales & Western Region is particularly vulnerable to the impacts of climate change.

Over the last two years Network Rail Wales & Western region have embarked on a programme of strategic climate adaptation pathways. This has involved holding fourteen workshops from Llandudno on the North Wales coast to the Eden project in Cornwall via Machynlleth, Cardiff, North Cotswolds, Weston-Super-Mare pier and others in between.

Before going into the workshops, we first agreed some resilience categories which vary by line of route. For example, some parts of our network may need to be able to resist all but the most extreme weather, while for others it may be acceptable for them to provide a degraded service during severe weather, with a rapid recovery once the weather event has passed. There are five categories and these will be explained in the paper.

The workshops, each focussed on a particular geographical area, have brought together representatives from multiple disciplines, from asset engineers to maintenance and operational colleagues. The attendees were asked to identify risks from multiple climate variables for the lines of route in the workshop scope area, together with potential options to mitigate the risk alongside a timescale (short, medium or longer term). The attendees were also asked to brainstorm political, economic, social, technological, legal and environmental ('PESTLE') considerations to understand the needs of the particular rail users and their influences and how they might be changing.

The results have been fully digested and analysed and priority locations for more locally focussed climate adaptation pathways have been highlighted.