

## RESILIENCE IN INFRASTRUCTURE – REPORT REVIEW AND CASE STUDY REFERENCE

SUE TREZISE – Sue-lutions Ltd

This article provides a brief overview of the *Anticipate, React, Recover: Resilient infrastructure systems*, published in July 2020 by the UK National Infrastructure Commission. The case studies reviewed by the Commission cover a range of scenarios and sectors which could be useful for risk scanning and business continuity planning in the NZ context.

In 2018 the UK's National Infrastructure Commission undertook a study on the resilience of that nation's economic infrastructure. While the study drew on evidence collected before the COVID-19 pandemic, it can inform thinking about recovery from this type of situation also and help ensure resilience for future challenges.

The Commission's report *Anticipate, React, Recover: Resilient infrastructure systems* focuses on lessons learnt from previous disruptions and failures and the response of the UK's energy, water, digital, road and rail infrastructure. It sets out a vision for a resilient UK: equipped and ready to respond to whatever an uncertain future may hold. Maintaining a resilient system requires a proactive approach: a framework for resilience. Such a framework would see resilience standards set by government and encourage infrastructure operators to carry out stress tests and address any vulnerabilities. It would also value resilience properly and drive adaptation before it is too late.

<https://www.nic.org.uk/our-work/resilience/>

Of particular interest is the technical annex to the report which presents a selection of the key case studies reviewed in the study. The list below (taken directly from the technical annex) includes the infrastructure sectors highlighted by the case studies:

1. Beast from the East 2018 – water, power
2. August 2019 power outage – power, rail
3. Summer floods 2007 and the Pitt review – power, water, roads, flooding
4. O2 network outage 2018 – telecoms, transport
5. National rail timetable disruptions 2018 – rail
6. Thames estuary 2100 plan – flooding, cross-sector
7. Forth Road Bridge closure 2015 – roads

8. Rail impacts during heatwave 2019 – rail
9. Lancashire Cryptosporidium water contamination 2015 – water
10. Lancaster winter floods 2015/16 and the Flood Resilience review – power, telecoms, flooding
11. Water resilience and regional water planning 2020 – water

Each case study includes a summary description of the event (cause, impact, outcome) and key findings along with specific examples of good practice and areas of improvement. The examples highlight actions and attributes spanning the six aspects of resilience: anticipate, resist, absorb, recover, adapt, and transform. These provide tangible measures that can be taken by infrastructure operators, regulators and government to enhance resilience.

The examples of good practice and areas of improvement are likewise a valuable reference for risk and business continuity practitioners to prompt and inform management discussion and decision making for improving organisational resilience. Bear in mind too that resilience will likely involve a trade-off between the benefits and disbenefits of a system's attributes. An example of such a trade-off is the tension between allocating resources to improve BAU efficiency and productivity, versus investing in adaptive capacity to deal with future challenges and stresses.

Any serious thinking about resilience needs to consider reducing the existence of and exposure to disruptive conditions, lowering uncertainty, and addressing vulnerability, as well as dealing with the consequences of disruption. An organisation that does little to protect themselves from disruptive conditions, will forever be faced with the need to respond to and recover from actual disruption.

<https://www.nic.org.uk/wp-content/uploads/Technical-Annex-Good-practice-case-studies.pdf>

## SUE TREZISE – Sue-lutions Ltd

Sue Trezise has over 12 years experience providing risk expertise and advice for government and organisations on strategic, enterprise and operational risk management. An experienced facilitator, Sue assists communication between technical experts and non-technical stakeholders and makes managing risk practical and effective.

