

# 6 *Other Flood Losses*

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Infrastructure, Transport, Education & Health and Emergency Costs

## OVERVIEW

This Chapter presents information and appraisal guidance for indirect flood losses. This includes when floods disrupt utility services and communications, affects transportation networks and public buildings and imposes extra costs on those involved in managing floods and in the recovery phases. The impacts and losses experienced due to the disruption of services and transportation networks will have impacts outside of the flooded area as well as within it, and in some cases the impacts may be geographically far reaching. Understanding and being able to quantify such potential losses can provide a more comprehensive account of flood damages for inclusion in project appraisals.

Proportionality is a key feature of this chapter. The effort in the assessment of any type of loss should be proportional to its impact and although it may be technically feasible to assess the potential of loss to many assets, it may not be effective or necessary to do so. Methodologies for appraisal vary depending on the specifics of the losses but often include an element of the willingness of a consumer to avoid a disruption to a service or a traveller avoiding a delay. There is often little data from which to make an assessment of the potential losses due to flooding and therefore these methodologies draw on experiences from previous flood events (in particular 2007 and 2012) to underpin the approaches identified. The complexity and interdependency of many of these assets mean that when the likelihood of damages due to the disruption of services or damage to infrastructure is likely to be significant a site survey is recommended.

This Chapter is divided into five subsections. The first of which (Introduction) presents a process for filtering and prioritising those assets which should be included within appraisal and it is therefore recommended that appraisers review this introduction prior to other sub-sections:

- Introduction to appraising the losses from utilities, schools, hospitals, transportation networks and emergency services: Prioritisation of losses for inclusion in project appraisal;
- Infrastructure: Estimating the losses to electricity, gas, telecommunications, water and water treatment assets caused by the disruption to supply;
- Transport: Losses due to the flooding of roads and losses from rail disruption;
- Education and Health: Estimating the potential losses due to the disruption of school education and the flooding of hospital services;
- Local Authority, Emergency Services and Recovery costs: Appraising the additional costs of flooding to the emergency services, the Environment Agency and Local authorities.