

Case study

Developing water-safe communities in Durham City

Durham is a market town in the north east of England, shaped by the River Wear. The older parts of the city follow an incised valley, leaving a peninsula that has been central to the city's development. The fabric of the river, its banks and bridges vary considerably in terms of design and age, changing from modern canalised structures to semi-urban and green spaces all within a short walk. Set among this are spectacular heritage locations and a designated UNESCO action area. The river – and access to it – is a central part of Durham's heritage and a significant tourist attraction, generating constant visitor and resident footfall with some locations along the river being important routes both day and night. City centre shopping, eating and drinking venues are in proximity and overlooking the river. Just under 4 million tourists visit the city annually, while a significant university population equates to approximately 20 per cent of the city's residents.

In Durham, from January 2010 to March 2015, there were 56 water-related incidents, of which five resulted in drowning fatalities. Common factors included being male, being alone at night, being under the influence of alcohol and being a student. The incidents happened close to the high footfall areas and the heritage locations.

A team led by the Durham City Centre Safety Group worked with RoSPA to undertake a strategic review of the water safety risks within the city. The team included representatives from the local authority, police and fire services, public health teams and various city centre riparian landowners including the cathedral, council and Durham University.



Durham City

Key outcomes to date include:

- Improved lighting and safe routing information around the city
- Engineered improvements to key sections of the riverside, considerate of the heritage needs for the location
- Increased provision of public rescue equipment at strategic positions along the riverside
- Improved inspection and monitoring systems and regimes for the key risk areas
- Awareness campaign to highlight new transport and route safety information, as well as alcohol safety awareness messaging and initiatives
- New policy to ensure that all new builds are planned with water safety in mind.



Example risk assessment: Riverside walk, Durham

Location:
Mill House Weir
(River Left).

Hazard: Fall or slip from path.
People at risk: Young adult visitors,
particularly at night or in low light conditions
(incident profile analysis provided separately).

Outcome: Impact injury,
immersion and drowning injury.
Serious to fatal.

Key risks: Fall into water, with impact injury.

Other site factors: Location is within 'dark zone' of UNESCO world heritage centre on opposite bank. Central tourist site, concentrated footfall during daytime hours. Pontoon above Mill House Weir is limit of navigation and mandatory portage point for rowing club and all river-based users (refer to visitor profile analysis provided separately).

Findings & Options	Decision	Actions	Who/When/ Status
<p>Approximately 100m of riverside walk with varying edges. At points, falls into moving and variable depth/flow water of one metre.</p> <p>Eroded bank side. Low light levels at night, hazard obvious to most visitors during daytime. Condition and hydraulic effects of weir unknown during assessment. Downstream, hazard of drops and hydraulics within 100m, and canalised section of river. Levels can vary by metres during spate/ flood events from base flow.</p> <p>Options:</p> <ol style="list-style-type: none"> 1. Improve condition and fabric of section 2. Re-instate traditional style (pre-war) balustrade along raised section 3. Provide temporary fencing for areas adjacent to weir and raised section 4. Provide improved routing at entry to path 5. Warning immediately upstream and downstream of weir 6. Improve Public Rescue Equipment (PRE) above weir. 	<p>To apply a consistent approach along this section by:</p> <ol style="list-style-type: none"> (a) Joining existing balustrade with a new sensitive design (b) Upgrading footpaths (c) Installing temporary fencing in immediate vicinity of weir and falls (d) Reviewing options for way-marking visitors and route choice at night (e) Closer monitoring of section during peak night-time tourism windows (f) Upgrading warnings/ PRE as soon as practicable near to weir (items 5-6) <p>Rationale: Consequence of entry could be un-witnessed fall into moving water, during night-time hours. Additional lighting could risk UNESCO status.</p>	<p>(a/b) Conservation and design team to submit proposals for consultation. Clarify capital monies impact</p> <p>(c/f) Immediate installation</p> <p>(d/e) Further monitoring of footfall patterns. Proposal by next group meeting</p> <p>(g) Route choice awareness to be aligned with safety campaign theme, when insight available. Target next meeting.</p>	