



# National Green Infrastructure Facility

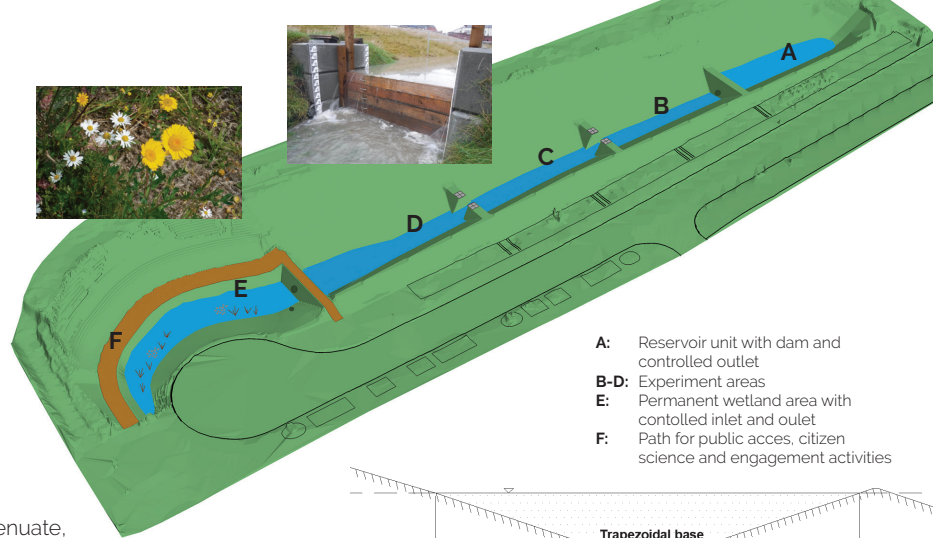
Extreme Event Swale

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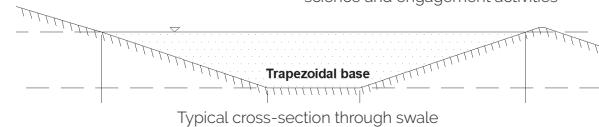
The swale is the largest sustainable drainage system (SuDS) feature within the National Green Infrastructure Facility's (NGIF) outdoor living laboratory. Swales are regularly integrated into the SuDS management train and are characterised by shallow vegetated ditches which temporarily fill and hold back storm water, and can therefore increase resilience to urban flooding.

Our life-size swale has been constructed to attenuate, store and filter runoff, whilst offering the ability to adapt and test the design (e.g. leaky barriers) during individual flood simulation experiments. The swale is being closely monitored using a dense network of hydrometric sensors and cameras. Citizen science monitoring is also generating additional observations and increases community interaction with the site.

As well as capturing runoff from real precipitation events, the swale's design allows water to be filled and released from the reservoir unit artificially under controlled 'laboratory' conditions. The latter makes this a rare test-bed and demonstration site which is highly accessible to researchers, the public, developers, professionals, schools and students. Lessons learnt are also applicable to the broader field of nature-based solutions.



- A:** Reservoir unit with dam and controlled outlet
- B-D:** Experiment areas
- E:** Permanent wetland area with controlled inlet and outlet
- F:** Path for public access, citizen science and engagement activities



**If you would like to find out more about the swale, get involved or attend a demonstration event, please email:**

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