

Presented at the Community outreach event, Conference of Irish Geographers, Wexford, May 2023

Slowwaters

Nature-based-Solutions for floods
and water quality

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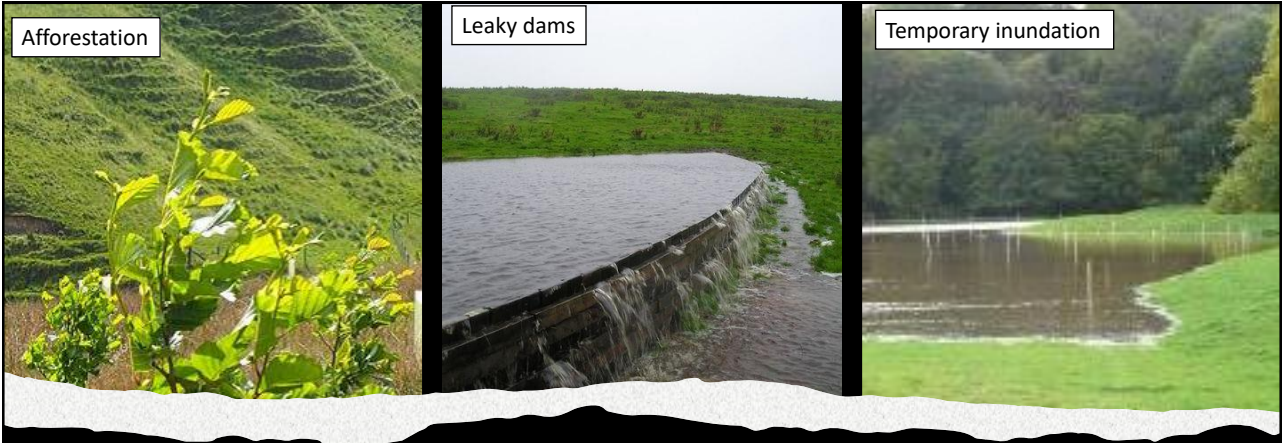
What are the Nature-based Solutions (NbS) for Water?

"A multifunctional form of green infrastructure that can play an important role in catchment-scale flood risk management"

Restore or enhance catchment processes that have been affected by human intervention.

Measures are installed to retain water in the landscape for a very short period (6-12 hours) during a flood.

2



Typical measures

These have been demonstrated to reduce flood hazard & improve water quality

3

Stop muddy floods!

Slow the Flow

Keep the fertile soil in the fields

Earthen bund

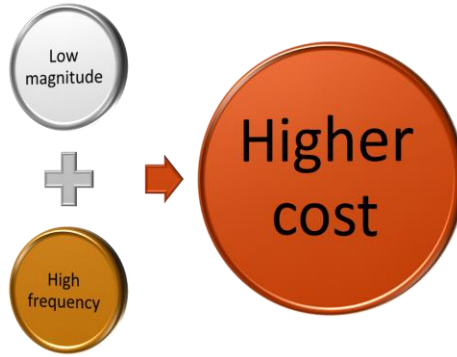
Figure 13. Drone image of the Second Sunnydale bund and stream restoration post storm Angus 22/11/16

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Nuisance floods



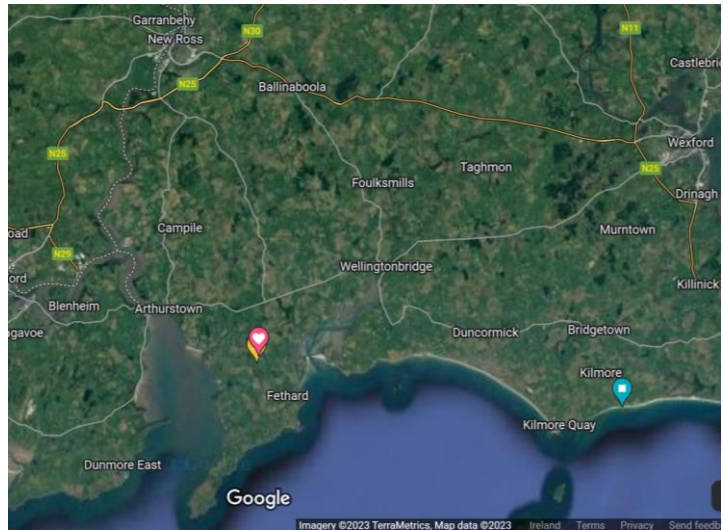
Leads to public inconvenience:
-road closure
-overwhelms storm drains
-compromises infrastructure



The cumulative cost of frequent floods over time may exceed the costs of the extreme but infrequent events for which societies typically prepare

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Wexford
Demonstration
Site (Ballygow)



Dr Bourke, Geography, TCD

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6




Ballygow farm

- 70 acres
- Farmed since 1996
- Beef, sheep
- First growth is Silage cut (50%)
- Then, all grazing
- Winter stock from Nov-March (weather dependent)
- Planted 400 native trees using GLAS payment scheme.

7


Demonstration Site Ballygow

Image of surface drainage



Google

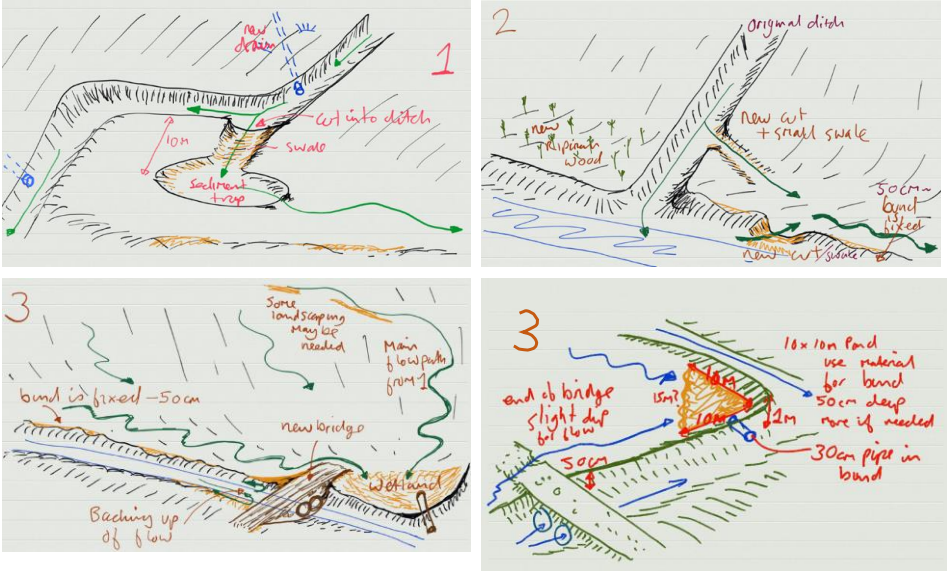
Some ideas to slow the flow



Google

8

Drawings to discuss and co-design with Farmer



9

The BUILD



Mix of clay, silt and fine-medium gravel

- Purchased 200 tonnes soil from farmer (€15 /T = 3,000)
- Excavated from new shed build

10



Hired *local* operator for 3.5 days

11

The BUND



12



13



14

