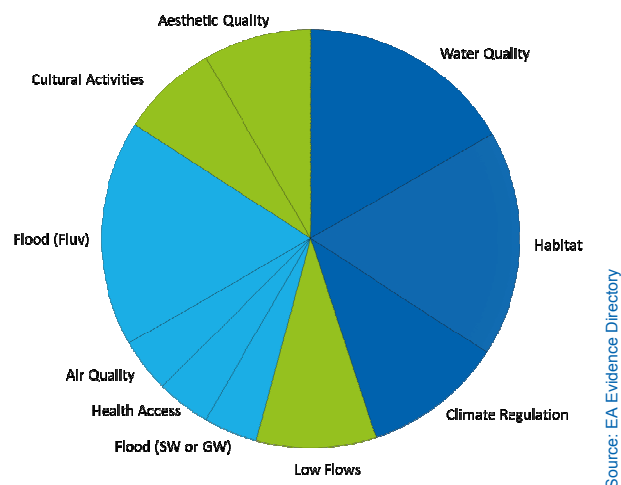


## The added benefits to NFM

NFM has the potential for many additional benefits for people, wildlife and the wider environment than simply flood alleviation. Habitat and water quality improvements are clear examples along with adapting landscapes to become more resilient to climate change. The level of benefit to each area will vary depending on the NFM measures used, scale of project, and existing condition of the environment.



The multiple benefits of Natural Flood Management

Understanding other challenges the landscape is facing and how NBS and NFM can help to tackle these will gain support from the landowners, members of the community, and possible funding opportunities.

## Contact us

Get in touch if you have any questions;

### Natural Flood Management Programme Manager

Stephen Haywood

Stephen.Haywood@thames21.org

## NATURAL FLOOD MANAGEMENT Lessons Learnt

To increase the protection to homes, businesses and valuable, productive land, local, regional and national authorities are turning to Nature Based Solutions (NBS) and the practice of using Natural Flood Management (NFM). Through a number of NFM projects working in the peri-urban landscape of London, Thames21 have developed a wealth of knowledge that has contributed to the UK Government's Department for Food,



Source: Stephen Haywood, Thames21

Working in partnership with Lead Local Flood Authorities (LLFAs) within their respective Boroughs, our showcase examples of methodologies and techniques used have been documented here as lessons learnt.

These key findings will contribute to the successful delivery of future NFM projects as the need grows in urban and peri-urban landscapes.

## Partnership working

The nature of all NFM projects means that there will be multiple stakeholders involved. This could include Local authorities, environmental organisations, land owners, local community groups, resident associations, and land users, all of whom will be able to contribute a great deal at the start, during and after the project.

A community consultation early on will indicate key stakeholders who will become partners but the list will continue to grow as the project develops. Many will bring valuable knowledge and the land, past projects, be able to introduce you to their relevant contacts, and be able to assist when and where required. Regular communication with those involved and the wider community is always appreciated by all.

Giving communities more power and involvement over their local area have proven to benefit project development and delivery.

## First steps to take

Assuming that the work site has been because of a high level flood risk downstream, an understanding of the level of effectiveness that NFM could achieve would be beneficial to secure funding for the works.

Using free GIS software and topographical data, it is possible to map flow paths and channels that won't always be present on other official maps. From here, sub-catchments can be mapped and measured allowing focus to be made on areas that could provide more significant benefits. Site walks to ground truth these areas are useful as it will increase the understanding of what measures could be achievable. For a detailed step by step guide to this please see our QGIS manual.

To understand the river catchment and how the surrounding landscape influences it, a simulation of rainfall events through a hydrological model can enable what measures will be best placed where and at what scale. This step can often be expensive but support or funding could be sourced

## Types of NFM

The type of NFM used will vary depending on the characteristics of the landscape, the challenges it faces, and any restraints on the area, i.e. permissions required for Sites of Special Scientific Interest (SSSIs).

Little and often is perceived to be more effective than larger and fewer. Using a range of features that vary in size and functionality will also provide differing results to the challenges being tackled. i.e leaky dams that store water earlier on, or help to slow the flow complement larger dams that may start to function only in extreme rainfall events.

By using a google map, markers can be placed (and named) indicating measures, survey sites, access points etc. This can then be shared with the relevant people.

## Monitoring and adjusting

It is acknowledged that most NFM measures used may not be perfect first time. Monitoring is key and taking photographs will help in comparisons over periods of time.

The benefit to working with natural materials is that slight adjustments can be made that improve the effectiveness in flood conditions.



Leaky dam created to slow the flow

Source: Stephen Haywood, Thames21



A restored pond in the landscape

Source: Stephen Haywood, Thames21