

Natural Flood Management Minimising the Risks - Quick guide

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What is this document about?

This quick guide will help Environment Agency officers understand potential risks and liabilities to consider when working with natural processes to reduce flood and coastal erosion risk. This is relevant when working on projects involving natural flood management (NFM) interventions to be undertaken by:

- the Environment Agency itself
- contractors or other risk management authorities on our behalf
- others, such as local community groups, landowners and non-governmental organisations (NGOs) with whom we are working in partnership

Who does this apply to?

Staff working in:

- Asset Performance Teams
- Operations Field teams
- PSO - Partnership and Strategic Overview
- NEAS - National Environmental Assessment Service and NCPMS National Capital Programme Management Service
- FBG - Fisheries, Biodiversity and Geomorphology
- IEP - Integrated Environment Planning and Programme teams, in particular catchment coordinators and those responsible for WFD programme of measures

We will promote our approach and position through partnership working with Natural England (NE), the Forestry Commission (FC), lead local flood authorities (LLFAs), NGOs, Catchment Based Partnerships and Local Nature Partnerships (LNPs).

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Natural Flood Management

Understanding the risks

NFM interventions can lead to risks including:

1. Legal risks - such as the risk of legal action by a third party
2. Financial risks - such as the risk of unplanned expenditure to maintain NFM features or structures.
3. Reputational risks - such as the risk of challenge over the failure of NFM features

These risks can be minimised through careful design and implementation of NFM interventions and projects.

Potential Legal Liabilities

Legal Liabilities

Three areas where legal liabilities associated with NFM project may arise are:

1. Damage, e.g. unintended flooding, caused by putting an NFM intervention in place
2. Failure of an NFM intervention once in place
3. Failure to secure landowner permissions before installing or creating NFM features

Liability can also arise from harm to people through unintended use (eg crossing NFM structures). However, this is beyond this guide's scope.

Understanding the limitations of NFM

The risk of incurring liabilities will be site-specific and depend on many factors, including location and scale at which NFM measures are used. Consider the most appropriate measures and locations and the effect on flood and coastal erosion risk. If a particular site gives rise to specific concerns, you should contact your legal team for further advice.

In many instances, NFM measures will complement other more traditional flood defences, so it may not always be possible to identify accurately the effect of the NFM in isolation, or to guarantee that NFM measures will not lead to unintended flood risk consequences. Guidance on assessing the risk of unintended consequences is provided in the 'Working with Natural Processes' evidence base¹.

¹ Working with natural processes: using the evidence base (section 2.2)
(https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/654435/Working_with_natural_processes_using_the_evidence_base.pdf)

Potential for liability

NFM project teams should ensure landowners are fully engaged and understand how NFM structures will operate. The Working with Natural Processes evidence base includes guidance on engaging landowners².

Thorough consideration should help reduce the potential for liability but things can go wrong. When this happens the Environment Agency, or those we work with, may have to compensate third parties, such as neighbouring landowners, who incur losses as a result.

You should contact your legal team immediately if NFM measures have or may have caused damage to third parties. They can advise whether compensation is payable in any particular case. In general, however, liability depends on a number of factors discussed below.

A third party landowner seeking to claim compensation would need to prove that the NFM measures were actually responsible for damage. Liability would only arise for that proportion of damage over and above what would have occurred without the NFM measures being in place.

The potential for liability if an NFM measure causes unintended flooding or other damage is also dependent on:

- how foreseeable that flooding or other damage was
- what precautions ought reasonably have been taken to avoid the flooding or damage

If flooding, or other damage, could not reasonably have been foreseen, liability would not arise. For example, it might be foreseeable that a particular NFM measure you are planning could retain water leading to flooding immediately up stream. It may not be foreseeable that the same NFM measure would alter hydrology in more complex ways, and cause flooding elsewhere in a catchment.

If damage is foreseeable, liability depends on whether or not reasonable steps were taken to avoid that damage. What is 'reasonable' is case-specific and depends on all the circumstances. Relevant factors may include the state of scientific/technical knowledge and the capabilities and financial means of both the person causing the damage and the third party who has suffered it.

Responsibility

Who is responsible for the failure of an NFM measure depends on what caused that failure and who was responsible for that aspect of an NFM intervention. Such responsibility is independent of the funding source and (where relevant) the permissions, such as environmental permits, granted to carry it out.

For example, if flooding is caused by poor design then the designer (whether Environment Agency, contractor or other partner) will be responsible. If an asset fails because necessary maintenance was not undertaken, the party with maintenance responsibility will also be responsible for the consequences of failure. Where maintenance obligations are not expressly dealt with as part of an NFM intervention, ordinarily, the

² Working with natural processes: mapping user guide (Appendix 2) (https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/693018/Working_with_natural_processes_mapping_user_guide.pdf)

landowner remains responsible to take reasonable steps (which could include maintenance) to ensure that structures or features on their land do not pose a risk to third parties.

If you intend to develop NFM measures on third party land, consult your manager or legal team for advice and engage with the landowner so that the potential liabilities of the proposed NFM measures, and steps to minimise risk, can be considered. The landowner may want to take their own legal advice.

Minimising the Risks

Design

Assessing the risks of NFM measures will help limit potential for any unintended harm. The evidence behind NFM is still developing so we need to be careful when considering it.

If a risk assessment indicates that a particular type of damage is possible, consider what steps can be taken to reduce that risk. In appropriate cases, this may include altering the design, characteristics or siting of NFM measures to ensure the risk to third parties is minimised.

Wherever possible, follow established standards and recognised good practice for designing, constructing, siting and maintaining NFM measures, like those set out in the [existing evidence base](#) for working with natural processes to reduce flood risk, published on GOV.UK. This must be balanced with the benefits of experimentation and innovation. There may also not be directly applicable standards, particularly for measures that work to restore and protect natural landforms and features. You should consider whether existing standards and practices developed for other purposes could be applied to NFM measures, as well as the potential impacts on third parties from choosing to adopt, or not adopt, a particular approach.

Expected life

When introducing NFM measures, you should consider what will happen to them over time. For example, how long will the measure take to become fully effective? How long will its flood risk benefits last? Will it become part of the natural environment, or need removing or replacing towards the end of the expected life? Will the likelihood that the NFM measure could cause unintended flooding change over its lifetime? Your assessment of risk, and choice of mitigation measures, should take this variation over time into account.

Inspection

A risk-based approach should be taken when considering whether inspections of NFM structures and features are required and, if so, their frequency. Use local knowledge and engineering judgement and engage with stakeholders early on to agree the appropriate inspection and maintenance plan. This should set out when inspections are needed and who should carry them out.

Inspecting NFM features may be important because they may need to be altered or adapted following a storm event. There may be uncertainty over how NFM features will perform in a storm event so an inspection regime triggered by storm events may be needed to take an adaptive management approach.

Maintenance

Unlike some traditional 'hard' flood defences, NFM measures may not require maintenance. There is no absolute requirement for the Environment Agency or others to maintain an NFM measure. However, the risks of not providing maintenance must be considered and understood (including legal and reputational risks). If it would have been reasonable in all the circumstances for a landowner to undertake maintenance, and failure to do so causes damage to a third party, they may be liable as a result.

Wherever possible you should evaluate the likelihood of an NFM measure failing and causing flooding or damage as well as the potential cost and difficulty of taking preventative action. If we, a partner or landowner agree to maintain an NFM measure the risks involved should be considered. Partners and landowners may want take their own legal advice.

Maintenance will vary according to which NFM measures are used. Variables can include:

- Catchment typology and geology
- Geomorphology of the watercourse (including stream power)
- Type of vegetation
- Agricultural use nearby
- Weather conditions

If maintenance is considered necessary, responsibility should be clearly allocated with appropriate funding arrangements in place.

The Aquatic Vegetation Management Handbook (EA 2014) and the Channel Management handbook (EA 2015) both provide supporting information to be considered when planning, timing, implementing, and maintaining in-river schemes.

Insurance

The Environment Agency self-insures against risks such as having to pay flood risk compensation to third parties. However, it may be possible for our partners, including landowners, to obtain insurance against the risk of NFM measures failing and causing damage to third parties. Such insurance may already be in place and you should consider advising partners to check their existing policies. Where existing policies do not already provide cover, additional cover may be available. You should consult your manager or legal team for further advice in such cases.

Permitting requirements

Some NFM measures may require a flood risk activity or other permit from the Environment Agency or other authorising body. For further guidance on environmental permitting see [GOV.UK](#) and the relevant [Easinet page](#). Where a permit is needed, an appropriate and satisfactory flood risk assessment will be required. Conditions, such as maintenance conditions, may also be imposed and must be complied with.

Guidance on carrying out an environmental permit risk assessment is available on [GOV.UK](#). Carrying out such a risk assessment, and complying with any permit conditions, can be relevant to liability, in particular to demonstrating whether reasonable steps have been taken to minimise harm to third parties from NFM measures.

Even if a permission is not required, you should consider the effect on flood risk, for example whether there is a risk of damage or flooding to neighbours.

!Important: If you are planning NFM measures on third party land consult your manager or legal team for advice and engage with the landowner so that potential liabilities can be considered. The landowner may want take their own legal advice.

Related Documents

Links

- Aquatic Vegetation Management Handbook (EA 2014):
<http://evidence.environment-agency.gov.uk/FCERM/en/Default/FCRM/Project.aspx?ProjectID=B081237C-AF90-4E75-B74B-586A6C254709&PageId=a0fe6dfc-506a-452c-9bff-a7ec06b4e6b0>
- Channel Management Handbook (EA 2015):
<https://www.gov.uk/government/publications/channel-management-handbook-for-flood-risk-management>
- Working with natural processes to reduce flood risk (2017):
<https://www.gov.uk/government/publications/working-with-natural-processes-to-reduce-flood-risk>
- Using woody material in rivers (Position 43_12) (2017):
http://ams.ea.gov/ams_root/2012/01_50/43_12.doc