



# Natural flood management and Local Authorities in Scotland



**Final Report**

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This document was produced by: Kirsty Holstead, James Hutton Institute, Craigiebuckler, Aberdeen, Scotland, AB15 8QH

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## Executive Summary

### Background to research

- Local Authorities (LAs) have little or no experience of engaging with land managers and owners to implement NFM.
- A number of reasons were found to explain this, mainly lack of finances and information on: NFM and suitable land, the NFM implementation process and how to engage with land managers. Some LAs argued that there was little evidence base for NFM and its effectiveness and as such, required more information before they could justify a flow to resources to implementation.
- These barriers corresponded to the support that LAs require from Scottish government if they are to encourage implementation of NFM– mainly more information and more financial resources.
- Easements<sup>1</sup> are seen to be the most useful tool for implementing NFM, followed by land sale/purchase. These results should be treated with caution however, given respondent’s limited knowledge and experience with the policy mechanisms.
- LAs are under increasing pressure due to tightened budgets and the need to meet current objectives; this was very much reflected in the survey, and affects implementation of NFM.

### Objectives of research

To understand what LAs require to enable them to work with land managers to implement NFM measures.

### Key findings and recommendations

This research indicates that in order for LAs to promote implementation of NFM on the ground there is a need for:

- Training for LAs including information on NFM, suitable locations for features and how to promote it
- Guidance and support for LAs on how to engage with land owners and managers to implement NFM
- Increased financial incentives for land managers/owners for NFM implementation and LAs to implement agreements with land managers/owners

**Key words:** Natural flood management

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<sup>1</sup> An easement is “Typically, a one-off payment is made to the land manager to reflect the reduction in the capital value of their land due to the sale of the right to flood. Easements can be designed so that annual payments are made to land managers or payments made when flood events occur. They can also include scope for renegotiation of terms, including opt-outs, and may incorporate other eco-system services, such as biodiversity or landscape management.” <http://www.scotland.gov.uk/Resource/0039/00393714.pdf>

## 1.0 INTRODUCTION

Under the Flood Risk Management (Scotland) Act 2009, SEPA is responsible for assessing where natural flood management measures (NFM) could contribute to reducing flood risk and detailing this in flood risk management strategies. Local Authorities (LA) then have responsibility for identifying how these measures will be implemented in local flood risk management plans. To encourage LAs to use NFM measures in the future, the Scottish Government and SEPA asked CREW to survey LAs to find out what they need to enable them to work with land managers/owners to implement NFM measures.

### 1.1 Research undertaken

An online survey was created and sent out via Survey Monkey to all 32 LA flood management teams in Scotland. The survey included a brief introduction to NFM as well as links to the recently published report “Land Owner Compensation and Approaches for Flood Protection Work” (see: <http://www.scotland.gov.uk/Resource/0039/00393714.pdf>) and definitions of the policy mechanisms discussed in the report. The survey was piloted at SEPA, the James Hutton Institute and the Scottish Government and changes were made accordingly. The respondents were given a week to complete the survey. After 5 days a reminder was sent, and finally those who had not completed the survey were personally called.

In total 28 LAs completed the survey of these responses, 23 were complete. In order to provide a more robust output, the incomplete responses were also analysed and are included in the findings. The main findings are noted below.

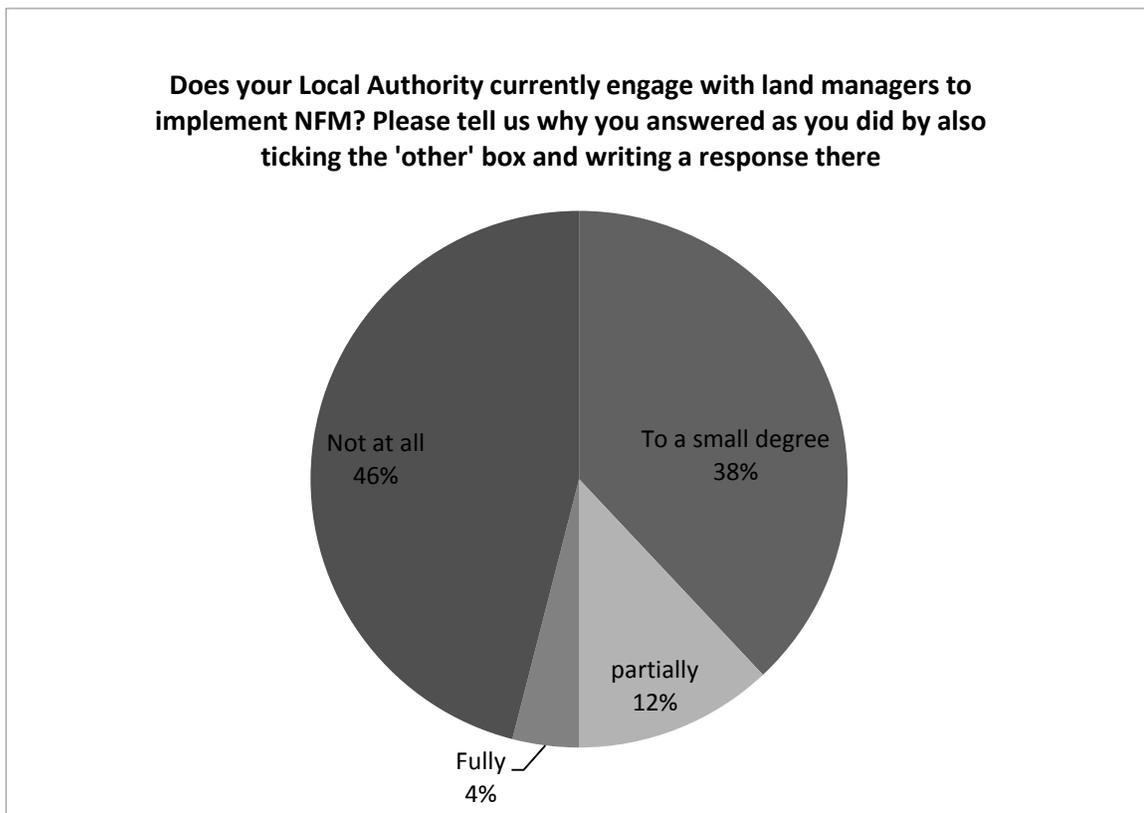
### 1.2 Findings

The findings from the survey are noted below.

#### 1.2.1 *Land management engagement*

The first question in the survey dealt with the current level of land management engagement (Figure 1). The results show that LAs generally do not engage with land managers to implement NFM - around half do not engage at all (46%) and the majority of other respondents engage a little (50%). A very small percentage (representative of 1 LA) felt that they fully engage with land managers. Around half of the respondents explained their answers; there was a clear correspondence between the responses here and the barriers set out in Table 2.

**Figure 1: % LA response to question (n=28)**



### **1.2.2 Instruments for implementing NFM**

Table 1 and Figure 2 show that Easements are considered to be the most useful tool for implementing NFM (14.8% consider them 'very useful,' 14.8% 'useful' (Table 1) and 45% consider them the most useful policy instrument to encourage NFM (Figure 2). Land purchase/sale and land purchase/sale with lease back are also both overall considered to be 'useful' tools for encouraging NFM (while 18.5% and 25.9% respectively considered them to be 'quite useful' (Table 1), 23% and 18% thought them to be the most useful tool to implement NFM (Figure 2).

These results should be treated with caution because although respondents selected preferred policy mechanisms, they also noted that their selections were based on little experience or understanding of the mechanisms. Further, that implementation would depend on circumstances. Some quotes are noted below:

"All of the options above are heavily dependent on available finance, which is severely curtailed at the moment due to restraints."

"Please note I do not know how useful these policy instruments will be in practice."

"As the locations where NFM may reduce flood risk have not yet been established as far as I am aware until these locations are known I am not convinced we can comment on which policy tool would provide the greatest benefit in implementing NFM."

“Insufficient experience to select one of the above ahead of the rest.”

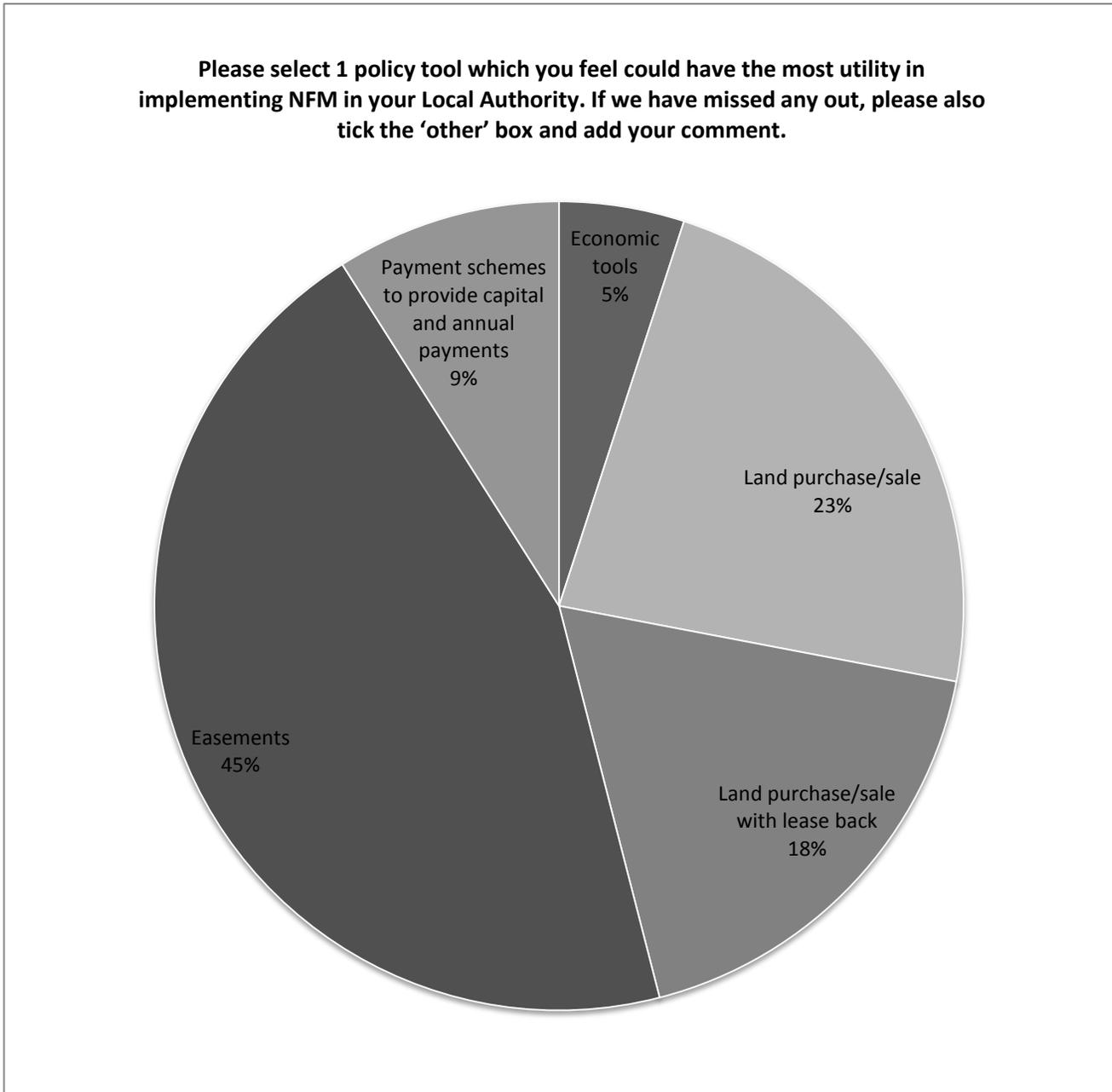
Similarly, when asked about the least useful tool to implement NFM, 6 of the 8 comments noted that they had insufficient experience to assess the options:

“Again as per previous statements we have insufficient experience to recommend that one of the above options is least useful.”

**Table 1: How useful are the following policy instruments for implementing NFM in your Local Authority? (Please add any comments or any tools which have been missed out in the 'other' box) (n=27)**

	Not at all useful	A little useful	Moderately useful	Quite useful	Very useful	Response Count
Land purchase/sale	7.4% (2)	<b>40.7% (11)</b>	25.9% (7)	18.5% (5)	7.4% (2)	27
Land purchase/sale with leaseback	11.1% (3)	<b>40.7% (11)</b>	18.5% (5)	25.9% (7)	3.7% (1)	27
Easements	7.4% (2)	<b>37.0% (10)</b>	25.9% (7)	14.8% (4)	14.8% (4)	27
Payment schemes to provide capital and annual payments	14.8% (4)	<b>33.3% (9)</b>	29.6% (8)	11.1% (3)	11.1% (3)	27
Economic tools	14.8% (4)	<b>48.1% (13)</b>	25.9% (7)	7.4% (2)	3.7% (1)	27

Figure 2: % LA response to question: (n=25)



### 1.2.3 Barriers to the use of policy tools to encourage NFM

A number of factors are seen by LAs as barriers to the use of policy tools to encourage NFM:

- lack of available finance
- lack of land owner cooperation
- legal complexity and resources required to reach agreements with individual land owners

- the need for increased confidence that NFM is the most cost effective solution guaranteed to reduce flood risk to justify spending.

#### **1.2.4 Actions that government could take to aid LA in NFM implementation**

The barriers noted above correspond with the results of the final question which aimed to identify actions that government could take to aid LA in NFM implementation (Table 2). Overall respondents thought that increased funding is required to implement NFM. Action was needed both in terms of financial resources for LA to implement agreements with land managers/owners, and also for the individual land owners who need financial compensation for the use of their land for flood management (8 responses).

A second important action demanded by LAs was guidance and information on NFM (7 responses). 3 respondents seek further evidence of the effectiveness of NFM, and 3 want guidance on how to engage with land owners and managers (see recommendations).

**Table 2: Are there any resources or support which you feel could be provided to your Local Authority to implement NFM? If so please tell us what you require (n= 23 but adds up to more as some respondents listed more than one support mechanism)**

Required support	Number of respondents
Increased funding for LA and financial incentives for land owners and managers	8
Guidance, information and training (what is NFM, which areas/methods would be suitable in Each council and how to promote and implement NFM)	7
None/N/A	3
Further evidence to show the value of NFM in reducing flood risk i.e. for large return period events	3
Guidance and support to establish mechanisms of engagement with land owners and managers	3
Detailed ownership records	1
An external ability to negotiate with landowners/ national representative bodies	1
Concise information: one booklet (rather than multiple) that contains information on NFM/ better land management/best practises/improving water quality/assisting in flood risk management	1
Support of outside agencies (i.e. SLC, SEPA, SNH, Forestry Commission etc.	1
Exemplar NFM sites that are typical of the geography of council areas	1

**CREW Facilitation Team**

**James Hutton Institute**

**Craigiebuckler**

**Aberdeen AB15 8QH**

**Scotland UK**

**Tel: +44 (0) 844 928 5428**

**Email: [enquiries@crew.ac.uk](mailto:enquiries@crew.ac.uk)**

**[www.crew.ac.uk](http://www.crew.ac.uk)**

