Project RPA/001/14: Assessing the Mechanisms for Compensating Land Managers

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Disclaimer

The views and propositions expressed herein are, unless otherwise stated, those of Risk & Policy Analysts and do not necessarily represent any official view of the Scottish Government or any other organisation mentioned in this report.

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Executive Summary

Introduction

The recently introduced Flood Risk Management (Scotland) Act 2009 (the FRM Act) aims to decrease the costs of flooding, primarily through more sustainable management of flood risk. This could include the use of natural flood management (NFM) measures such as flood storage areas, planting woodlands and changing management practices. Given that these measures are likely to have impacts for land managers, the FRM Act enables local authorities to make compensation payments for income lost as a result of the implementation of an NFM measure. However, it has been suggested that local authorities may be reluctant to apply NFM, partly because they lack knowledge and experience of the different ways to compensate land managers. This study investigated the options which can be used to compensate land managers who implement NFM measures on their property.

The specific aim was to:

- investigate the options for compensating land managers who implement NFM measures on their land.

This aim was supported by five objectives:

1. To assess appropriate financial mechanisms;
2. To write up case studies of occasions when a local authority or other public body has used financial mechanisms to compensate a landowner or land manager;
3. To investigate the state aid, taxation, single farm payment and other financial or legal consequences for land owners/managers who opt to receive these payments;
4. To make recommendations for how a local authority should determine a payment rate; and
5. To write guidance (to complement the NFM handbook) on how local authorities might best use these options to compensate land managers.

Approach

The approach combined desk based research, consultation at a workshop and case studies developed through detailed discussions. The study was broken down into four areas of work:

- Researching and assessing the viability of mechanisms;
- Identifying the legal and financial consequences of these mechanisms;
- Developing a set of case studies to illustrate the way the mechanisms are used; and
- Making recommendations on how a local authority should determine a payment rate.

Following the initial identification of a range of mechanisms (defined as agreements or arrangements used when implementing NFM), the study categorised the mechanisms into eight different groups:

- Land purchase/sale
- Land purchase/sale and leaseback
- Land lease to public body
- Servitude, wayleaves
- Capital and annual payments (including grants) – public funding
- Capital and annual payments (including grants) – private funding
- Economic instruments (fiscal, permits, service payments, auctions)
- Advice and technical support

These mechanisms were assessed against criteria to determine their viability, and their legal and financial implications. Case studies were identified and developed to illustrate the eight different mechanism types. Information from the assessment and the case studies was brought together for the development of the recommendations.

Findings

The key findings are:

- For the majority of the mechanisms, the onus is likely to be on the public body (or an independent broker organisation such as an NGO) to identify the potential mechanisms and lead the negotiation process. Most mechanisms will require negotiations at the start;
- The majority of mechanisms will require the land manager to consider the mechanism against their farm business plans;
- Where a mechanism does not place responsibility for land management with the public body, there may be a need to monitor the way the land is managed to ensure that the NFM measure is implemented as intended;
- Where a mechanism places the land in the public body's ownership, there may be fixed equipment obligations (buildings, fencing, electrical equipment) where this land is leased;
- Some of the mechanisms could have state aid implications for land managers. Any funding provided to a business from a state source could potentially be classed as state aid; and
- There is the potential for some mechanisms to compete with or invalidate other subsidies/payments that a land manager may receive. For example, payment for a particular type of land management could detrimentally affect a land manager's ability to claim the basic payment scheme (BPS).

Developing the payment rates

A five step process has been developed to assist public bodies with the mechanism and developing a payment rate (where relevant):

- Step 1: identification of key skills (by public body);
- Step 2: background research (by public body OR public body and broker);
- Step 3: discussions (between land manager and public body OR broker);
- Step 4: determination of which type of mechanism is most appropriate; and
- Step 5: final determination of mechanism and payment rate.

The factors to consider when developing a payment rate are different depending on which mechanism is used. However, resources required generally include:

- A surveyor/valuer (potentially the involvement of the District Valuer);
- Information on the land capability class; and
- A solicitor or legal team.

Determining the payment rate is likely to be simpler for some mechanisms than others. For land purchase/sale, where the public body buys the land from the land manager, the payment rate is based on the market value of the land concerned. However, for others, there may not be a monetary payment. Advice and technical support could involve payment in kind, e.g. animal feed damaged by a flood may be replaced by the public body. This study has identified the factors to take into account when determining a payment rate for each of the eight mechanism types. However, it is important to remember that each situation needs to be considered on a case-by-case basis.

Abbreviations

Abbreviation	Full name
BPS	Basic Payment Scheme
FRM	Flood risk management
FRM Act	Flood Risk Management (Scotland) Act 2009
LA	Local authority
NFM	Natural flood management
NGO	Non-governmental organisation
PES	Payment for ecosystem services
SEPA	Scottish Environment Protection Agency
WEF	Water Environment Fund

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1 Introduction

1.1 Background to the Study

1.1.1 Flooding and policy

Flooding is a naturally occurring event that can have devastating consequences on people, the environment, transport and utilities infrastructure and the economy. The aim of the recently introduced Flood Risk Management (Scotland) Act 2009 (the FRM Act) is to decrease the costs of flooding, primarily through more sustainable management of flood risk[1]. The FRM Act brought in a variety of measures including but not limited to[2]:

- A framework for coordination and cooperation for organisations involved in flood risk;
- The need to assess flood risk and prepare Flood Risk Management (FRM) plans;
- New FRM responsibilities for organisations such as the Scottish Environment Protection Agency (SEPA) and local authorities; and
- New ways in which stakeholders and the public can get involved to help manage flood risk.

The Scottish Advisory and Implementation Forum on Flooding (SAIFF), which is a partnership between the Scottish Government, Scottish public bodies and stakeholders, has been set up to assist with the implementation of the FRM Act and associated work plan (Scottish Government, 2009a). SAIFF has several aims including supporting the implementation of the FRM Act through advising the government, and preparing agreed technical guidance and procedures. Within SAIFF, the Land Management Group produced a research strategy to improve the understanding of the effectiveness of various natural flood management (NFM) measures. Work will include the development of guidance to assist with the assessment and adoption of such measures (Scottish Government, 2009a). This guidance will be important for local authorities, since Section 56 of the FRM Act gives them a broad power to implement measures to manage flood risk (Scottish Government, 2009b).

1.1.2 Natural Flood Management (NFM)

Several factors affect the frequency and extent of flooding incidents. For example, land use change may alter the way that catchments respond to periods of heavy rainfall. Research reported by Science for Environment Policy (2012) noted that whilst linear structures (e.g. ditches) could increase runoff by up to 30%, if such features expanded the distance that runoff had to travel or even decreased the flow rate, they could actually reduce runoff rates. NFM is regularly seen as a flexible and resilient flood management option (Environment Agency et al, 2012) that can be used to decrease flood risk. NFM can be defined as the use of techniques to restore or use the natural processes within a catchment to reduce flood risk through slowing the flow of flood water, retaining water in the floodplain or providing protection against tidal surges. It requires managers of land where measures can be implemented to work together with those responsible for managing flood risk (where the impacts may be felt much further downstream). NFM can provide benefits in

[1] See SEPA, the Flood Risk Management (Scotland) Act 2009, accessed at: http://www.sepa.org.uk/flooding/flood_risk_management/flood_risk_management_act.aspx on 16th December 2014.

[2] See the Scottish Government, Flood Risk Management Act 2009, accessed at: http://www.scotland.gov.uk/Topics/Environment/Water/Flooding/FRMAct on 16th December 2014.

addition to reduced flood risk including improved water quality, habitat creation and recreational opportunities. Several NFM techniques have been implemented in catchments across Scotland (such as the Eddleston Water, Allan Water, Callander Meadows and Mill of Gellan[3]). SEPA have also created NFM maps indicating where different measures could be implemented[4].

Despite the above, land managers may be reluctant to adopt NFM on their land, in part due to reduced economic viability (through reduced land functionality, production losses and grant and subsidy impacts) (James Hutton Institute, 2012a). Figure 1-1 presents factors which are likely to affect a land manager's decision to participate in NFM. A survey of 193 land managers carried out in 2011 indicated that NFM uptake may be increased by appropriate levels of compensation and facilitated/improved communication between local authorities/FRM organisations and land managers (CREW, 2011).

Figure 1-1: Factors influencing NFM uptake amongst land managers
Source: adapted from James Hutton Institute (2012a): Factors that affect uptake of natural flood management features by farmers in Scotland: A review

[3] See CREW NFM Case Studies, accessed at: http://www.crew.ac.uk/NFMcasestudies on 19th December 2014.

[4] See SEPA flood maps, accessed at: http://map.sepa.org.uk/floodmap/map.htm on 19th December 2014.

Part 4, Section 56 of the FRM Act enables local authorities to make payments as compensation for income lost as a result of agreements or arrangements relating to the management of land for flood risk reduction (i.e. management of land in a way that assists with the retention of flood water or slowing the flow of flood water). In order to appropriately compensate land managers, local authorities need to be aware of several factors including: funding availability, appropriate compensation mechanisms, the possible impacts of these payments and how to engage effectively with land managers. However, a recent survey indicated that local authorities are unsure of how best to compensate and engage with land managers (James Hutton Institute, 2012b). Disproportionate compensation and unsuccessful engagement has the potential to dis-incentivise additional land managers from implementing NFM. Consequently, there is a need for guidance on the types of compensation mechanisms which are available to local authorities, and how these mechanisms could be put into practice.

This study assesses the suitability and implications of a range of mechanisms which could be used for compensating land managers for implementing NFM measures. This is a technical report and provides information on the approach taken, the evidence gathered and the results of the assessment. A separate guidance document for public bodies is also available.

1.2 Aims and Objectives

As provided in the invitation to tender, the specific aim of the study is to:

- investigate the options for compensating land managers who implement NFM measures on their land.

This aim is supported by five objectives:

1. To research and assess appropriate financial mechanisms, such as sale and lease back or land burdens, for local authorities to compensate land managers for FRM purposes;

2. To research and write up case studies of occasions when a local authority or other public body such as Scottish Water or Scottish Natural Heritage has used financial mechanisms to compensate a land manager (not necessarily for FRM purposes). The case studies can include examples of when mechanisms did not work effectively;

3. To investigate the state aid, taxation, single farm payment and other financial or legal consequences for land managers who opt to receive these payments;

4. To make recommendations for how a local authority should determine a payment rate; and

5. Write guidance (to complement the NFM handbook) on how local authorities might best use these options to compensate land managers.

This report relates to Objectives 1 to 4; Objective 5 will be dealt with in a separate guidance document. Whilst a list of the case studies undertaken (Objective 2) is included in this document, the case studies themselves are provided separately.

1.3 Definitions for this Study

For the purposes of this study, the following definitions of "measure" and "mechanism" are used:

- **Measure** refers to the action undertaken to decrease the flood risk (i.e. the NFM measure); and
- **Mechanism** is the agreement or arrangement (between the public body and the land manager, OR public body, land manager and broker) which enables the implementation of the measure. Whilst the mechanism may sometimes involve a monetary payment, it could alternatively be advice, or payment in-kind e.g. replacement feed for a destroyed batch.

1.4 Structure of this Report

The remainder of this report is structured as follows:

- Section 2 provides the approach to the study. It presents the criteria used to assess the viability of the various mechanisms, as well as their legal and financial implications. It also identifies which mechanisms could potentially be used with the various different types of NFM measure (Objective 1). Information is additionally provided on the case studies selected (Objective 2);
- Section 3 presents the findings of the assessment. These include the state aid, taxation, single farm payment and other financial or legal consequences for land managers who are party to the agreements/mechanisms (Objective 3);
- Section 4 brings together the findings to summarise the key points from the assessment and the case studies, and to suggest situations when the different mechanisms might be appropriate;
- Section 5 considers the factors which should be taken into account when determining a payment rate. It also makes recommendations for how local authorities could determine payment rates (where appropriate) for the different mechanism types (Objective 4). Section 5.2 in particular provides an overview of the stepped process for developing an agreement, starting with the public body identifying the resources and skills they have available, and moving on to determine the information likely to be required and the variables to consider in each case;
- Section 6 provides the conclusions of the study;
- Section 7 lists the references; and
- Section 8 provides a glossary.

2 Approach

2.1 Overview

The study covered four key areas:

- Researching and assessing the viability of mechanisms;
- Identifying the legal and financial consequences of these mechanisms;
- Developing some case studies to illustrate the way the mechanisms are used; and
- Making recommendations on how a local authority should determine a payment rate.

The following sections discuss the approach taken for each of these areas.

2.2 Approach to Researching and Assessing Viability of Mechanisms

2.2.1 Identification and description of mechanisms and measures

Identification and grouping of mechanisms

Various documents and reports were reviewed to identify potential compensation mechanisms. Information on the different mechanisms was entered into a spreadsheet, along with the references. The details for each mechanism (where available) were recorded against the range of categories provided in Table 2-1. Following the identification of the mechanisms, consideration was given to the way in which they could be grouped to facilitate the assessment.

Table 2-1: Categories used to record information on the mechanisms

Category	Sub-category
Description	Brief description
Source and amount	Source of funding (may be grant, charity, etc.)
	Amount available
Timescale	Timescale of availability (some funding mechanisms may be time limited, e.g. if money is coming from a grant scheme)
	Timescale over which mechanism can realistically be used (lead in time, application time, etc.)
	One-off or ongoing? (i.e. one-off or continual payments?)
Responsibilities	Number of parties involved (e.g. does mechanism require a broker?)
	Who needs to apply for the funding?
	Role of local authority or other public body in accessing, setting up and running mechanism
	Role of others involved in accessing, setting up and running mechanism
Advantages and disadvantages	Key benefits of mechanism
	Disadvantages of mechanism
Risks and restrictions	Risks associated with mechanism
	Any restrictions (measures it can be used for, geographical location, etc.)
Examples	Examples of use
Other	Any other key points

Previous studies have categorised the mechanisms in different ways:

- Watts (2014) investigated funding for natural heritage projects and divided funding sources according to the type of organisation which was providing the money. This is similar to the approach followed by Entec (2010), which identified funding opportunities for the adoption of Sustainable Urban Drainage Systems (SUDS); and

- Beedell et al (2012) divided the mechanisms according to the type of approach rather than the source of funding. The following grouping was used (Beedell et al, 2012):
    - Land purchase/sale;
    - Land purchase/sale with leaseback;
    - Payment schemes to provide capital and annual payments;
    - Economic instruments; and
    - Advice and technical support.

For this study, grouping the mechanisms by funding source would have been useful for part of the assessment (e.g. it would have enabled state aid issues to be investigated where funding was obviously from government sources). However, this categorisation would not have allowed adequate consideration of mechanisms such as land purchase or servitude within the assessment.

Using the groups developed by Beedell et al (2012) would have enabled the assessment to pick out the issues specific to the different approaches. However, this approach would not have taken the source of funding into account. This issue was expected to be critical when determining the financial and legal implications of some of the mechanisms.

It was therefore determined that a new grouping needed to be developed specifically for this study. This grouping built on the approach used by Beedell et al (2012) but also took the funding source into account. Capital and annual payments were split into two categories (financed by government institutions or by non-government bodies/organisations) to ensure that the state aid implications could be properly considered within the assessment. The grouping used is given in Box 2-1.

Box 2-1: Mechanism grouping developed for this study

- Land purchase/sale
- Land purchase/sale and leaseback
- Land lease to public body
- Servitude, wayleaves
- Capital and annual payments (including grants) - EU, Government, Lottery, Agencies
- Capital and annual payments (including grants) - Trusts, Local initiatives (non-Government)
- Economic instruments (fiscal, permits, service payments, auctions)
- Advice and technical support

Notes: developed from the approach used by Beedell et al (2012)
The term 'wayleave' is not legally recognised in Scotland, but is currently used (and was referred to by attendees at the workshop for this study)

This study identified a total of 61 mechanisms. Table 2-2 presents the number of mechanisms identified by type of mechanism (as per the grouping in Box 2-1), whilst Table 2-3 summarises how each mechanism could operate.

Table 2-2: Number of mechanisms identified by type	
Mechanism type	**Number of mechanisms by group**
Land purchase/sale	1
Land purchase/sale and leaseback	3
Land lease to public body	1
Servitude, wayleaves	5
Capital and annual payments (including grants) - EU, Government, Lottery, Agencies	19
Capital and annual payments (including grants) - Trusts, Local initiatives (non-Government)	21
Economic instruments (fiscal, permits, service payments, auctions)	10
Advice and technical support	1
Total number of mechanisms	**61**

Table 2-3: Summary of how each type of mechanism could operate	
Mechanism type	**Way the mechanism could operate**
Land purchase/sale	Public body buys land from land manager and implements NFM measure on that land
Land purchase/sale and leaseback	Public body buys land from land manager, implements NFM measure on that land, and leases land back to the original land manager (or another land manager). The lease may restrict the type (or timing) of land use to ensure the NFM measure can be implemented effectively
Land lease to public body	Land manager leases land to the public body to implement the NFM measure (there may be the option for the public body to sublease the land back to the original land manager, e.g. for grazing/cutting)
Servitude, wayleaves	Servitude: servitude could be attached to a land title to benefit another property. A one-off capitalised payment could be made for this servitude, which could enable rights of access, or rights to construct and maintain an NFM structure (note that an adjacent benefiting property is required). Wayleave: a public body makes wayleave payments (usually annually) to a land manager in return for the public body being able to implement and maintain an NFM measure (e.g. a bund on their land). A wayleave payment could be incident based, i.e. the payment is made when the land is used for flooding
Capital and annual payments (including grants) - EU, Government, Lottery, Agencies	Capital payment: public body or other organisation provides funds for the purchase of equipment or materials to enable NFM implementation (e.g. fencing, trees). Capital payment minimises land manager financial outlay during initial implementation of measure. OR public body or other organisation makes a one-off capitalised payment to a land manager for compensation for loss of income due to a change in land management. Annual payment: public body makes an annual payment to a land manager so that they use or manage their land in a particular way (to enable implementation of an NFM measure). Payment could make up for loss of income, or encourage a particular land use. Funds for payment could be sourced from a grant (from a

Table 2-3: Summary of how each type of mechanism could operate	
Mechanism type	**Way the mechanism could operate**
	governmental source) or public body's own budget. Note that if a designated site (e.g. SSSI, SPA, SAC) is being considered for the implementation of an NFM measure, it may be possible to attract additional grant funding which may be used to help cover the capital or annual payments (where these are used to enable implementation of the measure)
Capital and annual payments (including grants) - Trusts, Local initiatives (non-Government)	Capital payment: an independent third party organisation (broker) provides funds for purchase of equipment or materials to enable NFM implementation (e.g. fencing, trees). Capital payment minimises land manager financial outlay during initial implementation of measure. OR an independent third party organisation (broker) makes a one-off capitalised payment to the land manager for compensation for loss of income due to changes in land management. Annual payment: an independent third party organisation (broker) makes an annual payment to a land manager so that they use or manage their land in a particular way (to enable implementation of an NFM measure). Payment could make up for loss of income, or encourage a particular land use. Funds for payment need to be sourced from a non-governmental body or grant fund (potentially via a broker)
Economic instruments (fiscal, permits, service payments, auctions)	Fiscal: tax breaks/credits could be used to encourage a particular type of land management (this is likely to require action at central government rather than local authority level). Permits: this could involve a system of tradable flood permits, where a public body buys permits to flood areas from land managers. Land managers are able to buy and sell their permits to each other. Service payments: a land manager sells a particular service such as flood storage or water retention (perhaps through planting woodland) to the public body, or an insurance company (which recoups money through decreased insurance payouts downstream) Auctions: with reverse auctions, land managers identify the payment they would accept to implement a particular land use, e.g. allowing flood storage. The public body selects the most cost effective options to achieve their NFM objectives
Advice and technical support	Advice: land manager is provided with advice on how best to minimise flood risk, e.g. changing the way they plough their fields, avoiding compaction. Advice could involve a negotiated agreement on land management Technical support: land manager is provided with support to enable them to continue their business operations which may otherwise be affected by the implementation of an NFM measure. Support may be provided as a one-off or on an incident basis. Examples could include:

Table 2-3: Summary of how each type of mechanism could operate	
Mechanism type	**Way the mechanism could operate**
	• If a land manager allows part of their field to be used as flood storage, they are provided with replacement feed/crop whenever there is an incident; • If cattle regularly access a river/stream for water leading to erosion and sediment being carried downstream, the watercourse may be fenced off as part of NFM. Support could therefore include provision of a water trough to provide an alternative water source; • If a particular field can no longer be used during wet periods (it may be used for flood storage), a land manager could be provided with a barn/other structure for the animals

Identification and grouping of measures

A list of NFM measures is presented in SEPA's 2013 report on 'Identifying opportunities for natural flood management' (2013). These measures include those covering (SEPA, 2013):

- Runoff reduction;
- Floodplain storage;
- Sediment management;
- Estuarine surge attenuation; and
- Wave energy dissipation.

From the land manager perspective, the impact of the measure on land use is likely to be more important than the type of measure. Thus, this study grouped the measures according to the anticipated extent of their impacts on land use. These groups reflected a range of impacts from 'no significant effect on productive land' to 'a reduction in the area of land available to the land manager' (but note that even where land remains available to a land manager, the conditions required as part of implementing the NFM measure may affect costs and income potential). Table 2-4 presents the seven groups of measures developed, along with an example of each type (with the examples extracted from SEPA, 2013).

Table 2-4: Types of NFM measure	
Measure type	**Example measure**
Measure likely to reduce area of land available for land manager (measure requires specific land use)	Woodland planting (including upland, floodplain, riparian, gully or cross slope woodlands)
Potential for reduction in land available to use (if managed realignment is implemented)	Restoration of intertidal habitats including managed realignment
May be temporary reduction in land available to use during wet periods	Offline storage areas and washlands
Land use may need to change in response to changing conditions after implementation of measure	Agricultural and upland drainage modifications (e.g. upland drain blocking)
Measure requires change in management practices but not necessarily land use	Land and soil management practices (e.g. ploughing along the contour of the land or soil aeration)
Minimal impacts on land use expected (measure focuses on watercourse and area alongside watercourse)	Instream structures (e.g. large woody debris and boulders)
No significant impacts (measure assumed not to affect productive land)	Sand dune restoration

Table 2-4: Types of NFM measure	
Measure type	**Example measure**
Note: Measure types have been developed as part of this study. Example measures have been extracted from SEPA (2013)	

2.2.2 Assessment of the viability of the mechanisms with different NFM measures

Combining mechanisms with measures

Some mechanism types are only likely to be appropriate for measures which have a particular impact on land use. Thus, the various groups of mechanisms were considered against the different types of measure to determine which mechanism/measure combinations would be feasible. Where mechanism/measure combinations were thought not to be appropriate, they were screened out and a justification recorded. Where it was not clear if a combination would be feasible, it was given the benefit of the doubt and taken forwards for assessment. The resultant matrix can be found as Table 2-5.

Development of criteria to assess the mechanism/measure combinations

A comprehensive list of assessment criteria was developed with the assistance of the Steering Group (see Table 2-6). These criteria cover various different variables which need to be taken into account when determining whether a mechanism is feasible (e.g. administrative burden, amount of support required to set up). Each variable is broken down into several characteristics (e.g. 'scale at which the mechanism can be applied' is divided into single measure level, single farm level, multiple measures and multiple farms) to ensure that all aspects are taken into account by the assessment.

It should be noted that these criteria do not cover the legal and financial implications of the mechanisms; these were investigated separately (see Section 2.3).

Table 2-5: Matrix to combine the mechanism and measure groups								
Extent of impact from measure	**Mechanism groups**							
	Land purchase/sale	Land purchase/sale and leaseback	Land lease to public body	Servitude, wayleaves	Capital and annual payments (including grants) - EU, Government, Lottery, Agencies	Capital and annual payments (including grants) - Trust, Local initiatives (non-Govt)	Economic instruments (fiscal, permits, service payments, auctions)	Advice and technical support
Land use may need to change in response to changing conditions after implementation of measure	✓	No/reduced value in renting back if cannot use land the way you want	Measure requires too much land use change for land manager to want to retain land following end of lease	✓	✓	✓	✓	Too large a change to be offset by advice and/or support
May be temporary reduction in land available to use during wet periods	Possible but unlikely	✓	✓	✓	✓	✓	✓	✓
Measure likely to reduce area of land available for land manager (measure requires specific land use)	✓	✓	✓	✓	✓	✓	✓	Too large a change to be offset by advice and/or support
Measure requires change in management practices but not necessarily land use	No incentive to sell	No incentive to sell	Minimal incentive to lease	Third party not involved	✓	✓	✓	✓

Table 2-5: Matrix to combine the mechanism and measure groups								
Extent of impact from measure	**Mechanism groups**							
	Land purchase/sale	Land purchase/sale and leaseback	Land lease to public body	Servitude, wayleaves	Capital and annual payments (including grants) - EU, Government, Lottery, Agencies	Capital and annual payments (including grants) - Trust, Local initiatives (non-Govt)	Economic instruments (fiscal, permits, service payments, auctions)	Advice and technical support
Minimal impacts on land use expected (measure focuses on watercourse and area alongside watercourse)	No incentive to sell	No incentive to sell	Minimal incentive to lease	✓	✓	✓	✓	✓
No significant impacts (measure assumed not to affect productive land)	No incentive to sell	No incentive to sell	Minimal incentive to lease	✓	Unlikely to meet funding criteria	Unlikely to meet funding criteria	✓	✓
Potential for reduction in land available to use (if managed realignment is implemented)	✓	No/reduced value in renting back if cannot use land the way you want	Would not want to retain freehold of land if managed realignment occurred	Responsibilities and liabilities outweigh value of land	✓	✓	✓	Too large a change to be offset by advice and/or support

Table 2-6: List of variables for initial assessment of mechanism/measure combinations		
Group	**Variable**	**Characteristics**
Variables likely to be relevant to the public body		
Support	Extent of support (in terms of time spent, number of officers involved, etc.) required by the public body to set up mechanism (i.e. background research)	Significant (more than one week's input); Moderate (between three days and one week's input); Low (one to two days' input)
	Extent of support (in terms of external independent advice/skills) required by the public body to set up the mechanism (i.e. background research)	No external independent support needed (all skills available in-house); Some external independent support needed/beneficial; External independent support necessary to apply mechanism
	Extent of support (in terms of time spent, number of officers involved, etc.) required by the public body to implement the mechanism	Significant (more than one week's input); Moderate (between three days and one week's input); Low (one to two days' input)
	Extent of support (in terms of time spent, number of officers involved, etc.) required by the public body to run and maintain the mechanism each year	Significant (more than one week's input); Moderate (between three days and one week's input); Low (one to two days' input)
Administration and convenience	Convenience in relation to setting up mechanism (convenience for public body)	Established procedure for mechanism (e.g. buying/selling, staff familiar with process); Procedure needs to be developed but can be done in-house (e.g. staff skills need to be developed but can be done in-house); Procedure needs to be developed with external independent support (e.g. new staff need to be brought in, a broker is required)
	Convenience in relation to implementation throughout the mechanism's lifetime	Mechanism requires ongoing management and modification; Once set up, mechanism does not require much ongoing management
Responsibility	Responsibility for setting up the mechanism	Main responsibility lies with the public body; Land manager jointly responsible with the public body; No (or limited) public body responsibility
	Responsibility for running/managing/maintaining the mechanism once implemented	Main responsibility lies with the public body; Land manager jointly responsible with the public body; Main responsibility lies with the land manager

Table 2-6: List of variables for initial assessment of mechanism/measure combinations		
Group	**Variable**	**Characteristics**
Scale	Scale at which mechanism can be applied	Single measure level; Single farm level; Multiple measures; Multiple farms
	Scale at which flood risk reduction benefits might arise	Catchment scale; Local scale
Finance	Extent of financial commitment required by the public body	High (e.g. for buying land); Moderate (e.g. for ongoing payments); Low (e.g. for small one-off payment if it floods, for replacement feed)
	Potential to combine mechanism with other grants and initiatives	High potential (no limits to matching with other funds); Moderate potential (some limits associated with matching with other funds); Low (restrictive criteria mean that there may be limited potential to combine with other funding sources)
Effectiveness	Effectiveness of the mechanism in ensuring the measure is implemented as intended	Likely to be effective (implementation of mechanism ensures that NFM measure can be implemented by public body); Probably effective (mechanism encourages land manager to implement measure and provides them with compensation); Effectiveness uncertain (mechanism provides land manager with a way of obtaining compensation should they implement measure)
	Effectiveness of the mechanism over time	Likely to be long-term: the mechanism provides long-term support such that the measure is likely to remain in place in the long-term (5-20+ years); Likely to be short-term: the mechanism may change or only provide one-off/short-term support which may affect longevity of the measure and associated benefits (<5 years)
Flexibility	Flexibility of mechanism (in terms of ability to adapt to changing requirements of the public body)	Very flexible (can be modified over time if circumstances change); Limited flexibility; No flexibility (once a decision has been taken, mechanism is fixed)
Time	Lead-in time required to set up the mechanism	Six months+; One or two months; A few weeks

Table 2-6: List of variables for initial assessment of mechanism/measure combinations		
Group	**Variable**	**Characteristics**
Variables likely to be relevant to the land manager		
Area of land holding	Extent of impact mechanism may have on economies of scale (in relation to the land use carried out on the land concerned)	Significant impact (e.g. where mechanism could totally prevent use of land); Moderate impact (where mechanism may limit use of land); Insignificant (where mechanism is not expected to affect use of land over the long term)
Land use type	Land use type (land use capability)	Class 1 Prime agricultural land (very wide range of crops with consistently high yields); Class 2 Prime (wide range of crops, except those harvested in winter); Class 3.1 Prime (moderate range of crops, with good yields for some e.g. cereals and grass, and moderate yields for others e.g. potatoes, field beans, other vegetables); Class 3.2 Non-prime agricultural land (moderate range of crops, with average production, but potentially high yields of barley, oats and grass); Class 4.1 Non-prime (a narrow range of crops, especially grass but harvesting may be difficult); Class 4.2 Non-prime (narrow range of crops, especially grass but harvesting may be difficult); Class 5 Non-prime (improved grassland with mechanical intervention possible to allow seeding, rotovation or ploughing); Class 6 Non-prime (rough grazing only); Class 7 Non-prime (very limited agricultural value)
	Land use type (type of business income)	Hill farm; Lowland farm; Mixed hill/lowland; Arable; Livestock; Mixed arable/livestock; Equestrian; Small holding/croft; Shooting estate; Other (specify)

Table 2-6: List of variables for initial assessment of mechanism/measure combinations		
Group	**Variable**	**Characteristics**
Recipient	Type of recipient	Land owner; Land manager/tenant; Land owner/land manager
	Number of recipients	Single agreement (between one recipient and public body); Potential for multiple partners (e.g. agreement between several land managers and a public authority)
Convenience for land manager	Convenience in relation to setting up mechanism (convenience for land manager)	Land manager does not require external independent support; Land manager requires external independent support (e.g. through a broker, consultant)
	Land manager payment frequency	Single one-off payment; Annual or other regular payment; Incident payment
Compatibility	Compatibility of mechanism with existing land management plans	Mechanism likely to require significant change in management (e.g. if land sold off); Mechanism likely to require minimal change in management; Mechanism only likely to require change/action if a flooding incident occurs
Flexibility	Flexibility of mechanism over time (for land manager)	Mechanism is fixed and inflexible once set up; Mechanism can be adapted over time as circumstances change
Time	Lead-in time required to set up the mechanism	Six months+; One or two months; A few weeks
Variables likely to be relevant to individuals/organisations other than the land manager and public body		
Level of involvement	Extent of involvement required by those in addition to land manager and public authority	None; One-off advice session required; More than one advice session needed (e.g. involvement of a broker is a necessity)
Time	Lead-in time required to set up the mechanism	Six months+; One or two months; A few weeks

Assessment of mechanism/measure combinations

To undertake the assessment, each mechanism/measure combination identified as potentially viable in Table 2-4 was considered against each variable in Table 2-5. The most appropriate characteristic for the mechanism/measure combination was selected for each variable (see Box 2-2 for an example).

Box 2.2: Example
Mechanism: land purchase/sale **Measure type**: land use may need to change in response to changing conditions after implementation of measure **Variable**: responsibility for setting up the mechanism **Relevant characteristic selected**: Main responsibility lies with the public body

When selecting the relevant characteristic, the following rating system was applied:

- Green = good characteristic from point of view of relevant stakeholder;
- Orange = uncertainty, may be positive or negative for relevant stakeholder; and
- Red = negative characteristic from point of view of relevant stakeholder.

Where appropriate, more than one characteristic was selected. For example, when considering "Land use type – type of business income", all the various characteristics (e.g. arable, livestock, equestrian) were assigned a rating. Justifications were recorded for each characteristic selected. This ensures that the resultant assessment is transparent and accountable and, importantly, can easily be updated should new information become available.

The results of the assessment of the mechanism/measure combinations are presented in Section 3.

2.3 Approach to Identification of Legal and Financial Consequences of Mechanisms

2.3.1 Development of legal and financial criteria

Table 2-7 provides a list of the legal and financial criteria which were developed to draw out the implications of the mechanisms.

Table 2-7: Draft list of assessment criteria to identify financial and legal implications	
Assessment criteria	**Implications and rationale for inclusion**
Legal	
Does the mechanism/measure combination mean that the land manager has a legal responsibility to maintain the land use (in accordance with the measure)?	Where the land is retained by the land manager but they receive a payment for its use in NFM, the land manager may have a legal responsibility to maintain a particular land use type
Does the mechanism/measure combination mean that the public body providing the compensation measure has a legal responsibility to maintain the land use (in accordance with the measure)?	Where land is taken over by the public body in return for a compensation payment, maintenance of the land may pass to the public body. This could lead to issues for the land manager (in relation to access for maintenance, timing, etc.)

Table 2-7: Draft list of assessment criteria to identify financial and legal implications	
Assessment criteria	**Implications and rationale for inclusion**
Does the mechanism/measure combination have any implications for inheritance of the land?	Where a mechanism is used to ensure land is managed in a particular way (e.g. non-productively), a land manager relying on qualifying for agricultural property relief may have their eligible land area reduced if they are no longer able to actively farm the part used for flood relief
If the mechanism/measure combination includes a flood storage area, how does the choice of mechanism affect who has responsibility for any risks related to the storage area?	Dependent on the mechanism used, the responsibility for any risks related to the measure implemented could lie with the original land manager or the public body. This could have implications for the land manager's ability to obtain insurance, and also health and safety responsibilities
Does the mechanism/measure combination change the legal occupier of the land?	Where a lease is put in place, an additional party becomes involved in land management. This has implications for the individual who is entitled to any compensation or grant measures. It also puts the landlord's responsibilities on the acquiring authority
Financial	
Does the mechanism/measure combination result in land being taken out of productive use?	Taking land out of productive use could affect whether or not the land qualifies for a subsidy or grant, with knock on effects on its income earning potential. The Basic Payment Scheme (BPS) is based upon the total amount of actively farmed land and payments are made per hectare of land. If a land manager were to receive a payment to implement an NFM technique that could not be actively farmed and grazed, this land could be exempt, thus reducing the amount of BPS payable to the farmer (note that agricultural land which is newly planted with woodland remains eligible for BPS[5]). Land taken out of productive use also reduces its wider income earning potential, be it by growing vegetables, crops, fodder or grazing livestock
Could the mechanism/measure combination be classed as state aid?	An example of state aid is given on the Scottish Government website[a] as: the sale or lease of public land or property at a discounted rate. This could apply to the sale and lease back mechanism if the land manager's property is sold to the local authority and leased back to the land manager at a discounted rate. Public funding of privately owned infrastructure is also considered state aid. Thus, an annual payment to maintain an NFM mechanism could potentially be classed as public funding of FRM infrastructure and hence state aid. Classification as state aid could affect the amount of funding available under the compensation mechanism and also the way in which it is applied, in particular where a land manager is receiving other public funding, for example, through BPS payments. Where a business receives state aid funding from more than one source for the same eligible costs, the total amount received has to be under the state aid ceiling. In general, public funds cannot be used for

[5] See Scottish Government, Rural Payments and Services, Assessing your land eligibility, accessed at: http://www.gov.scot/Topics/Government/State-Aid on 1st April 2014.

Table 2-7: Draft list of assessment criteria to identify financial and legal implications	
Assessment criteria	**Implications and rationale for inclusion**
	operating costs (with the exception of up to €200,000 over a three year fiscal period)
Does the mechanism/measure combination limit or change the current land use?	Where a compensation mechanism means control of land is passed to the public body, the land manager may no longer be able to utilise the land for particular purposes, with potential impacts on income
Does the mechanism/measure combination prohibit the land manager from applying for any other grants or schemes (e.g. land may not be actively farmed for a sufficient time period to qualify for a particular grant)?	If a compensation mechanism is used to ensure that the land is managed in a particular way, this could have financial implications for the land manager in terms of qualifying for other grants and subsidies. For example, if land is taken out of productive use when implementing an NFM measure, the land may no longer be eligible for BPS payments. To receive BPS, a land manager needs to be classed as a "farmer" undertaking an "agricultural activity", with the extent of activity required related to the payment region within which the land falls[b]
What sort of payment goes to the land manager as a result of installing the measure/mechanism?	Large one off payments, as opposed to annual sums, will give rise to potential tax bills
Sources: [a]Scottish Government (2014): Some examples of state aid, internet page accessed at: http://www.gov.scot/Topics/Government/State-Aid/About/Examples on 2nd April 2015. [b]Rural Payments and Services (2015): Eligible hectares and minimum agricultural activity, accessed at: https://www.ruralpayments.org/publicsite/futures/topics/all-schemes/basic-payment-scheme/basic-payment-scheme-full-guidance/eligible-hectares-and-minimum-activity---bps/ on 2nd April 2015.	

It was determined that the legal and financial implications could be divided into two types:

- Those which are immediate and relate to the setting up and implementation of the mechanism; and
- Those which are likely to be ongoing and relate to the maintenance or management of the mechanism.

Each mechanism and measure combination was therefore assessed against the legal and financial criteria given in Table 2-7, with the immediate and ongoing implications recorded separately. The results of this assessment can be found in Section 3. It should be noted that where relevant points were recorded during the workshop on recommendations (see Section 2.5), these were subsequently added to the legal and financial assessment.

2.4 Approach to Development of Case Studies

A range of methods was used to identify potential case studies including:

- Database searches – these have included, for example, the CREW database (http://www.crew.ac.uk/NFMmap/casestudy), the Restoring Europe's Rivers database (https://restorerivers.eu/wiki/index.php?title=Main_Page) and the River Restoration Centre's interactive project map (http://www.therrc.co.uk/uk-projects-map);
- Key background documents for the study including Beedell et al (2012) (the forerunner to this study) and information provided by the Steering Group (e.g. SEPA spreadsheet);
- Key word internet searches, such as 'natural flood management';
- Personal knowledge and contacts to obtain case studies relevant to Scotland; and

- Documents and reports identified as part of the process of researching compensation mechanisms. Many of these reports have contained case studies, and have also provided further examples to follow up through the reference lists.

The long list of case studies was presented in the Interim Report. A 'wish list' of case studies was subsequently drawn up based on the comments and opinions of the Steering Group. Table 2-8 summarises the case studies which have been developed and are available in the guidance document. Note that for some of the case studies on the wish list, limited additional information was available so they have not been taken further.

Table 2-8 Case studies developed

Name	Brief description	Mechanism(s) used
Allan Water improvement project	This ongoing project is being overseen by a Steering Group including representatives from local authorities, government agencies and the RSPB. The case study focuses on the NFM scoping study which has been carried out to assess the opportunities for restoring habitats to reduce flood risk from the Allan Water. Measures which have been implemented following the scoping study include woodland/orchard planting	Advice and technical support
Aquarius project	A four phase pilot project was undertaken to work with farms and land managers to improve water quality and support the development of certain flood prevention schemes. The project focused on engagement and identifying actions (with no payments made)	Advice and technical support
Belford Proactive Flood Solutions	Traditional flood defences were not suitable for use within Belford, thus the use of Runoff Attenuation Features (RAFs) was proposed. Compensation was paid to farmers as a one off payment to cover disruption and the loss of land for farming. This was set at £1,000 per RAF to ensure a consistent approach among neighbours	Capital grant via Environment Agency's North East Local Levy
Crook of Baldoon	The RSPB purchased land at the Crook of Baldoon to create a new wetland area. Land purchase was enabled through an appeal in early 2010 together with grant aid from SNH, and contributions from various charitable trusts	Land purchase
Dearne Valley Green Heart	The Dearne Valley Green Heart partnership aims to restore and create floodplains and woodland. Targeted advisory work, management advice and training are provided to farmers. The Environment Agency is also buying back tenancies and re-leasing the land to the RSPB	Land purchase/sale and leaseback; Land lease to public body; Advice
Elgin Flood Alleviation	Funding for the £86 million Elgin Flood Alleviation scheme has come from the Scottish Government (£55.6 million) and the Moray Council (£30.5 million). Land purchase was used to secure land for engineering works and structures such as set-back flood embankments, bridges and flood channels. Land managers were paid a sum based on the value of their property in a 'no scheme' situation	Land purchase
Holnicote	On the National Trust owned Holnicote Estate, a variety of mechanisms have been used to enable the implementation of NFM measures. These have included demonstrations, face-to-face "kitchen table" discussions, capital grants, free surveys and indirect payments (through reduced rent). Funding for the overall project came from Defra (with contributions from the National Trust)	Advice and support; Indirect payments; Capital grants/compensation payments
Long Philip Burn	Flooding from the Long Philip Burn has previously affected parts of Selkirk. The Selkirk Flood Protection Scheme has used a variety of NFM measure to reduce flood risk to a number of properties. Various	Capital grant/ payments (Scottish Government & local

Table 2-8 Case studies developed		
Name	**Brief description**	**Mechanism(s) used**
	different mechanisms were used when implementing the scheme. These included a one-off compensation payment to an affected land manager to cover losses and future servitudes, and SRDP derived funding for measures on land belonging to two different owners (but tenant farmed) in the upper reaches. The delivery of these latter measures was managed by the Tweed Forum	authority); Scottish Rural Development Programme (SRDP) grants; Land manager contributions
Nigg Bay	Nigg Bay was the first planned realignment in Scotland. The scheme was undertaken by the RSPB and aimed to create important habitats for wildlife at Meddat, while also reducing maintenance requirements. The RSPB purchased the land with grant funding from the Heritage Lottery Fund (HLF), SNH and SEPA. The project was also part funded by a legacy payment from the Miss EMP Scott Will Trust	Land purchase, Government grants and Heritage Lottery Funding (HLF)
Pumlumon Project	This is a pilot ecosystem services scheme, in which land managers were offered support, advice and payments to implement a range of management options. The initial approach to land managers was made by letter, with follow up site visits where interest was shown. All funds come from non-government sources, so there are no state aid issues	Capital payments (non-govt); Economic instruments (service payments); Advice and support
Scottish Rural Development Programme (SRDP)	The current programme runs from 2014-2020. It includes payments for management options (e.g. floodplain management), as well as capital grants (e.g. for ditch blocking). There is a Knowledge Transfer and Innovation Fund to promote skills development and knowledge transfer in the agricultural sector	Capital grants and annual payments – EU, Government, Lottery, Agencies
Scottish Water (Sustainable Land Management Incentive Scheme)	The Sustainable Land Management Incentive Scheme aims to protect drinking water sources in six priority catchments across Scotland, including the River Deveron and River Ugie catchments. It covers a suite of measures including funds for farm water management plans, capital grants and technical support	Capital grants and annual payments – EU, Government, Lottery, Agencies
State of Victoria, Australia	The State Government established a buyback scheme (costing €12 million) to buy land then resell it with flood covenants attached. Properties were valued by the state valuer. The scheme ran from 1st July 2011 for twelve months with buy backs managed by the Rural Finance Corporation. It is estimated that 20 farming families took advantage of the scheme to leave the district	Sale and leaseback;Land buy back scheme
Sussex Flow Initiative	The Sussex Flow Initiative is a two year partnership project that has evolved from the Trees on the River Uck project (TrUck). To incentivise land managers to plant woodlands and hedgerows the project provides free trees and hedgerow plants alongside a planting service	Advice/technical support and capital support (provision of plants)
The Woodland Trust	The Woodland Trust acts as a delivery body and an ethical broker to encourage tree planting and management to provide multiple benefits including FRM. It provides tailored advice and capital grants, for example, through the MOREwoods scheme. The scheme provides up to 60% of the project costs if a land manager wishes to plant the trees themselves or up to 50% of the project costs if the land manager wishes to use a contractor	Tailored advice and capital funding (provision of materials)

Table 2-8 Case studies developed		
Name	**Brief description**	**Mechanism(s) used**
Tweed Forum	Tweed Forum has carried out many Natural Flood Management (NFM) and land management projects, including: the Eddleston Water Project, Bowmont Water, Gala Water and Restoring the River Till. Tweed Forum undertakes land manager engagement, scheme design, sourcing funding, tendering, overseeing works, post-implementation monitoring/reporting and ongoing maintenance	Broker/agent providing facilitation and enabling NFM implementation
Upper Garnock, Scotland	Various options have been investigated to decrease the impacts of flooding at Kilbirnie, Glengarnock and Dalry. These include upstream storage on-line on the River Garnock. North Ayrshire Council is currently in negotiation with the land managers with regard to a compensation package	Land purchase, compensation in kind
Westcountry Rivers Trust (Upstream Thinking Initiative)	The Westcountry Rivers Trust is able to provide one-to-one advice, farm plans and capital grant to assist managers adapting land management practices to improve water quality. Any grant payments are made after work has been undertaken and approved by the Westcountry Rivers Trust. The work is funded by South West Water's flagship programme Upstream Thinking	Advice, capital payments and reverse auctioning
White Cart Water	The White Cart Water Flood Prevention Scheme in South Glasgow consisted of works in the upper catchment and to the urban defences. For the majority of land managers, one-off payments were made for the inconvenience of flooding that would occur once the scheme was in place. An annual payment was made to a farmer who suffered disruption during the works. The City Council also bought some land for flood storage and leased it back to the land manager	Land purchase; Land purchase and lease back; One off compensation and compensation in-kind
Wild Penwith (Upstream Thinking Initiative) Wildlife Trust Cornwall	Wild Penwith began in April 2009 and aims to work alongside farmers and the local community to encourage good management of the landscape to deliver a variety of benefits. Funding for the project is currently provided by South West Water. The project incentivises land manager participation though the provision of free ecological surveys to assess the condition of wildlife habitats, advice for positive management, free soil and nutrient testing, capital grants for habitat management or for projects that will improve water quality, and support for farm tourism businesses to enable them to improve visitor experience	Advice and capital grants

2.5 Approach to Development of the Recommendations and Guidance

Several different sources of information were used in the development of the recommendations required to meet Objective 4 (to make recommendations for how a local authority should determine a payment rate), namely:

- Information and details from the assessment of the viability of the mechanisms, and their legal and financial implications;
- Details from the case studies; and
- Comments and feedback from a workshop involving local authorities, other public bodies (including the Scottish Government and SEPA) and land manager representatives. The workshop was held in Edinburgh on 10th February 2015 and considered the different

variables which could affect what a public body might be willing to pay, and a land manager to accept to enable the implementation of an NFM measure.

When developing the recommendations, the first task was to identify the factors which should be taken into account when determining a payment rate. Consideration was given to the point in the negotiation process when these factors would be important. This led to the development of a five step process which could be followed by local authorities (or other public bodies) when requiring a mechanism to implement an NFM measure.

The final step in this process was deemed to involve the agreement between the land manager and the public body on the mechanism and the payment rate (where payment was required). Since each mechanism type was likely to require a different approach to determine the payment rate, a different set of functions (or combinations of variables) was developed for each mechanism. The method followed starts with a basic formula, and breaks this down into the various components. Thus, for each mechanism, the payment rate calculation consists of:

- An overall formula; and
- The key components.

The recommendations developed can be found in Section 5.

3 Findings

3.1 Overview

This section presents the findings of the main assessment work undertaken as part of the study. It includes:

- Section 3.2 on assessing the viability of the mechanisms; and
- Section 3.3 on assessing the legal and financial implications of the mechanisms.

3.2 Assessment of the Viability of the Mechanisms

Each of the mechanism/measure combinations as identified in Table 2-5 was assessed against the variables and characteristics given in Table 2-6. The assessment focused on identifying the characteristics the mechanisms were likely to show for each variable, and whether these would be:

- Positive characteristics;
- Uncertain characteristics; or
- Negative characteristics

For example, where a public body would be likely to require minimal support to implement a mechanism/measure combination, this would be classed as positive. Alternatively, if extensive support was required, this would be negative. In some cases, mechanism/measure combinations were thought to have both positive and negative characteristics under one variable. For example, for the mechanism 'Capital and the Annual payments (including grants) – EU, Government, Lottery Agencies', the extent of support required by the public body to implement the mechanism would vary greatly according to the type of payment being used.

The full results of the assessment (along with the justifications) are provided in Annex 1. Tables 3-1 to 3-3 provide an overview of the assessment of the mechanisms against the different variables. In particular:

- Table 3-1 presents a summary for the variables relevant to the public body;
- Table 3-2 presents a summary for the variables relevant to land managers; and
- Table 3-3 presents a summary for the variables relevant to individuals excluding the land manager and public body.

There is clearly a lot of uncertainty about the mechanisms. However, it should be borne in mind that this is a generalised assessment which is not focusing in on the specifics of a particular situation. Much of the uncertainty would likely disappear if the assessment was considering a specified mechanism for use by a particular local authority in a named location.

Despite the uncertainty, the assessment has highlighted where mechanisms do have particular characteristics. For example, whilst 'Advice and technical support' does not require the extent of lead-in time to organise that other mechanisms might, it unlikely to be as effective over time.

Table 3-1: Summary of viability assessment for variables relevant to the viewpoint of the public body			
Variable	**Categorisation of mechanisms according to whether they are likely to show positive, negative or uncertain characteristics under the variables**		
	Mechanisms may show positive characteristics	**Mechanism characteristics may be uncertain**	**Mechanisms may show negative characteristics**
Support required to set up mechanism: time, no. of officers, etc. for background research	Land purchase/sale Servitude, wayleaves Capital and annual payments (including grants) - Non-govt Advice and technical support	Land purchase/sale & leaseback Land lease to public body Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Economic instruments Advice and technical support	Economic instruments
Support required to set up mechanism: external independent advice/skills needed	Land purchase/sale Land purchase/sale & leaseback Land lease to public body Servitude, wayleaves Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt	Economic instruments Advice and technical support	
Support required to implement mechanism: time, no. of officers, etc.	Servitude, wayleaves Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Economic instruments Advice and technical support	Land purchase/sale Land purchase/sale & leaseback Land lease to public body Servitude, wayleaves Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Economic instruments Advice and technical support	Capital and annual payments (including grants) - Govt Economic instruments
Support required to run and maintain mechanism: time, no. of officers, etc	Land purchase/sale & leaseback Servitude, wayleaves Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Economic instruments Advice and technical support	Land lease to public body Servitude, wayleaves Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Economic instruments	Economic instruments
Convenience for the public body: setting up the mechanism (established procedure or new process?)	Land purchase/sale Land purchase/sale & leaseback Land lease to public body Advice and technical support	Servitude, wayleaves Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Advice and technical support	Capital and annual payments (including grants) - Non-govt Economic instruments Advice and technical support

Table 3-1: Summary of viability assessment for variables relevant to the viewpoint of the public body			
Variable	**Categorisation of mechanisms according to whether they are likely to show positive, negative or uncertain characteristics under the variables**		
	Mechanisms may show positive characteristics	**Mechanism characteristics may be uncertain**	**Mechanisms may show negative characteristics**
Convenience for the public body: running and maintaining the mechanism	Land purchase/sale	Land purchase/sale & leaseback Land lease to public body Servitude, wayleaves Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Economic instruments Advice and technical support	
Responsibility for setting up the mechanism	Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt	Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Economic instruments Advice and technical support	Land purchase/sale Land purchase/sale & leaseback Land lease to public body Servitude, wayleaves Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Advice and technical support
Responsibility for running/ managing/ maintaining the mechanism once implemented	Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Advice and technical support	Land lease to public body Servitude, wayleaves Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Advice and technical support	Land purchase/sale Land purchase/sale & leaseback Capital and annual payments (including grants) - Govt Economic instruments Advice and technical support
Scale at which mechanism can be applied	Land purchase/sale Land purchase/sale & leaseback Land lease to public body Servitude, wayleaves Economic instruments Advice and technical support	Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Economic instruments	
Scale at which flood risk reduction benefits might arise	Land purchase/sale Land purchase/sale & leaseback Land lease to public body Servitude, wayleaves Economic instruments	Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Economic instruments Advice and technical support	
Extent of financial commitment required by the public body	Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Economic instruments Advice and technical support	Land purchase/sale & leaseback Land lease to public body Servitude, wayleaves Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Economic instruments	Land purchase/sale

Table 3-1: Summary of viability assessment for variables relevant to the viewpoint of the public body			
Variable	**Categorisation of mechanisms according to whether they are likely to show positive, negative or uncertain characteristics under the variables**		
	Mechanisms may show positive characteristics	**Mechanism characteristics may be uncertain**	**Mechanisms may show negative characteristics**
Potential to combine mechanism with other grants and initiatives	Capital and annual payments (including grants) - Govt Economic instruments	Land purchase/sale Land purchase/sale & leaseback Land lease to public body Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Advice and technical support	Servitude, wayleaves
Effectiveness of the mechanism in ensuring the measure is implemented as intended	Land purchase/sale Land lease to public body Servitude, wayleaves Capital and annual payments (including grants) - Govt Economic instruments	Land purchase/sale & leaseback Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Economic instruments Advice and technical support	
Effectiveness of the mechanism over time	Land purchase/sale Servitude, wayleaves Economic instruments	Land purchase/sale & leaseback Land lease to public body Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Economic instruments	Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Advice and technical support
Flexibility of mechanism (in terms of ability to adapt to changing requirements of the public body)	Servitude, wayleaves Economic instruments Advice and technical support	Land purchase/sale & leaseback Land lease to public body Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt	Land purchase/sale Servitude, wayleaves Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt
Lead-in time required to set up the mechanism	Advice and technical support	Land purchase/sale Land purchase/sale & leaseback Land lease to public body Servitude, wayleaves Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Economic instruments	

Table 3-2: Summary of viability assessment for variables relevant to the viewpoint of the land manager			
Variable	**Categorisation of mechanisms according to whether they are likely to show positive, negative or uncertain characteristics under the variables**		
	Mechanisms may show positive characteristics	**Mechanism characteristics may be uncertain**	**Mechanisms may show negative characteristics**
Extent of impact mechanism may have on economies of scale (in relation to the land use carried out on the land concerned)	Servitude, wayleaves Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Economic instruments Advice and technical support	Servitude, wayleaves Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Economic instruments Advice and technical support	Land purchase/sale Land purchase/sale & leaseback Land lease to public body Servitude, wayleaves Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Economic instruments
Land use type (land use capability): Class 1, 2 and 3.1 Prime agricultural land		Land purchase/sale Land purchase/sale & leaseback Land lease to public body Servitude, wayleaves Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Economic instruments Advice and technical support	Land purchase/sale Land purchase/sale & leaseback Land lease to public body Servitude, wayleaves Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Economic instruments Advice and technical support
Land use type (land use capability): Class 3.2, 4.1, 4.2, 5 and 6 Non-prime	Servitude, wayleaves Economic instruments Advice and technical support	Land purchase/sale Land purchase/sale & leaseback Land lease to public body Servitude, wayleaves Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Economic instruments Advice and technical support	Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt
Land use type (land use capability): Class 7 Non-prime (very limited agricultural value)	Land lease to public body Servitude, wayleaves Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Economic instruments Advice and technical support	Land purchase/sale Servitude, wayleaves Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt	Land purchase/sale & leaseback Advice and technical support

Table 3-2: Summary of viability assessment for variables relevant to the viewpoint of the land manager			
Variable	**Categorisation of mechanisms according to whether they are likely to show positive, negative or uncertain characteristics under the variables**		
	Mechanisms may show positive characteristics	**Mechanism characteristics may be uncertain**	**Mechanisms may show negative characteristics**
Land use type (type of business income): Hill farm, Lowland farm, Mixed hill/lowland	Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Economic instruments Advice and technical support	Land purchase/sale Land purchase/sale & leaseback Land lease to public body Servitude, wayleaves Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Economic instruments Advice and technical support	Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt
Land use type (type of business income): Arable	Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Economic instruments Advice and technical support	Land purchase/sale Land purchase/sale & leaseback Land lease to public body Servitude, wayleaves Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Economic instruments Advice and technical support	Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Economic instruments Advice and technical support
Land use type (type of business income): Livestock	Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Advice and technical support	Land purchase/sale Land purchase/sale & leaseback Land lease to public body Servitude, wayleaves Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Economic instruments Advice and technical support	Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt
Land use type (type of business income): Mixed arable/livestock	Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Economic instruments	Land purchase/sale Land purchase/sale & leaseback Land lease to public body Servitude, wayleaves Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Economic instruments	Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt

Table 3-2: Summary of viability assessment for variables relevant to the viewpoint of the land manager			
Variable	**Categorisation of mechanisms according to whether they are likely to show positive, negative or uncertain characteristics under the variables**		
	Mechanisms may show positive characteristics	**Mechanism characteristics may be uncertain**	**Mechanisms may show negative characteristics**
Land use type (type of business income): Equestrian	Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Economic instruments Advice and technical support	Land purchase/sale Land purchase/sale & leaseback Servitude, wayleaves Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Economic instruments Advice and technical support	Land lease to public body Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt
Land use type (type of business income): Small holding/croft	Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Economic instruments Advice and technical support	Servitude, wayleaves Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Economic instruments Advice and technical support	Land purchase/sale Land purchase/sale & leaseback Land lease to public body Servitude, wayleaves Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Economic instruments Advice and technical support
Land use type (type of business income): Shooting estate	Servitude, wayleaves Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Economic instruments Advice and technical support	Land purchase/sale Land purchase/sale & leaseback Land lease to public body Servitude, wayleaves Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Economic instruments Advice and technical support	Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt
Type of recipient	Land purchase/sale Land purchase/sale & leaseback Land lease to public body Servitude, wayleaves Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt	Land purchase/sale Land purchase/sale & leaseback Servitude, wayleaves Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Economic instruments Advice and technical support	Land lease to public body
Number of recipients	Land purchase/sale Land purchase/sale & leaseback Land lease to public body Servitude, wayleaves Economic instruments Advice and technical support	Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Economic instruments Advice and technical support	

Table 3-2: Summary of viability assessment for variables relevant to the viewpoint of the land manager			
Variable	**Categorisation of mechanisms according to whether they are likely to show positive, negative or uncertain characteristics under the variables**		
	Mechanisms may show positive characteristics	**Mechanism characteristics may be uncertain**	**Mechanisms may show negative characteristics**
Convenience in relation to setting up mechanism (convenience for land manager)	Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Advice and technical support	Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt	Land purchase/sale Land purchase/sale & leaseback Servitude, wayleaves Land lease to public body Economic instruments
Land manager payment frequency	Land purchase/sale Land purchase/sale & leaseback Land lease to public body	Land purchase/sale & leaseback Servitude, wayleaves Capital and annual payments (including grants) - Non-govt Capital and annual payments (including grants) - Govt Economic instruments Advice and technical support	Land purchase/sale & leaseback Capital and annual payments (including grants) - Non-govt
Compatibility of mechanism with existing land management plans	Servitude, wayleaves Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Advice and technical support	Land purchase/sale & leaseback Servitude, wayleaves Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Economic instruments Advice and technical support	Land purchase/sale Land purchase/sale & leaseback Land lease to public body Servitude, wayleaves Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Economic instruments
Flexibility of mechanism over time (for land manager)	Economic instruments Advice and technical support	Land purchase/sale & leaseback Land lease to public body Servitude, wayleaves Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Advice and technical support	Land purchase/sale Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Economic instruments
Lead-in time required to set up the mechanism	Advice and technical support	Land purchase/sale Land purchase/sale & leaseback Land lease to public body Servitude, wayleaves Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Economic instruments Advice and technical support	Land purchase/sale Land purchase/sale & leaseback Land lease to public body Economic instruments

Table 3-3: Summary of viability assessment for variables relevant to individuals excluding the land manager and public body			
Variable	**Categorisation of mechanisms according to whether they are likely to show positive, negative or uncertain characteristics under the variables**		
	Mechanisms may show positive characteristics	**Mechanism characteristics may be uncertain**	**Mechanisms may show negative characteristics**
Extent of involvement required by those in addition to land manager and public authority	Land purchase/sale Land purchase/sale & leaseback Land lease to public body Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Advice and technical support	Servitude, wayleaves Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Advice and technical support	Land purchase/sale Land purchase/sale & leaseback Land lease to public body Servitude, wayleaves Capital and annual payments (including grants) - Non-govt Economic instruments Advice and technical support
Lead-in time required to set up the mechanism	Advice and technical support	Land purchase/sale Land purchase/sale & leaseback Land lease to public body Servitude, wayleaves Capital and annual payments (including grants) - Govt Capital and annual payments (including grants) - Non-govt Economic instruments Advice and technical support	Economic instruments

3.3 Assessment of the Legal and Financial Implications of the Mechanisms

3.3.1 Key findings

Tables 3-4 to 3-6 present the results of the legal and financial assessment for the various mechanisms. In particular:

- Table 3-4 shows the legal and financial implications of mechanism types: land purchase and sale; land purchase/sale and leaseback; and land lease to public body;
- Table 3-5 provides the legal and financial implications of mechanism types: servitude/wayleaves; capital and annual payments (including grants) – EU, government, lottery, agencies; capital and annual payments (including grants) – non-government; and
- Table 3-6 provides the legal and financial implications of mechanism types: economic instruments; and advice and technical support

Whilst the tables do consider state aid, this is a complex area so it is not possible to provide an in depth analysis without looking at specific cases. Some mechanisms are more likely to have state aid implications than others. For example, economic instruments, and capital and annual payments (including grants) – EU, government, lottery, agencies could well have implications for state aid due to the source of the funding used. A case-by-case approach is required, taking into account the individual circumstances. For the other mechanism types, state aid implications may be less likely, but still need to be given due consideration. However, they are expected to be avoided if the

mechanism involves a transaction (e.g. land purchase/sale) or funding is provided purely from a non-government source (e.g. an NGO or broker organisation such as the Woodland Trust).

For situations where a public body purchases land, the public body might be able to recoup some of the costs due to asset appreciation. However this is unlikely if the land has been purchased specifically for FRM, and may not be used productively as a result.

Where land is not purchased by the public body, but retained by the land manager, consideration needs to be given to who is liable (i.e. who retains the risk) should the NFM measure not perform as expected. For example, an NFM measure may fail, resulting in flooding to downstream properties. Being liable for the maintenance and condition of the NFM measure (and potentially its performance) is likely to make land managers nervous about implementing a measure on their land. They may also have concerns about the implications for their insurance. Consequently, dependent on the type of NFM measure implemented, the public body may want to take on ownership of the land to avoid issues related to risk/insurance and a lack of maintenance of the structure.

Table 3-4: Legal and financial implications of mechanism types: land purchase and sale; and land purchase/sale and leaseback; land lease to public body			
Type of implication	**Implications by mechanism: some variation by measure**		
	Land purchase and sale	**Land purchase/sale and leaseback**	**Land lease to public body**
Immediate legal implications	Change of ownership, hence change in title and exchange of missives. Potential to involve compulsory purchase powers. New ownership responsibilities for public body	Change of ownership, hence change in title and exchange of missives. New ownership responsibilities for the public body. Potential to involve compulsory purchase powers. Prepare and grant of new agricultural lease. Conditions of lease may require particular type of land management (in accordance with measure)	Preparation and negotiation of terms of a new lease. Awareness of immediate land management responsibilities (public body may need to maintain a particular land use in accordance with lease and implementation of measure)
Ongoing legal implications	Ownership responsibilities, such as maintenance, rates, insurance, land management. Restrictions on use, obligations re noxious weed control, fly-tipping, etc. Landowner responsibilities, particularly where land is subject to an agricultural tenancy, with fixed equipment obligations (need to provide suitable buildings, fencing, etc. to meet purpose of tenancy). New land manager (public body) may need to ensure that a particular land use is maintained in accordance with measure. If land is used for flood storage, public body needs to be aware of any risks associated with this	Ownership responsibilities, such as maintenance, rates, insurance. Supervision of tenancy agreement, enacting any restrictions on use. Landowner responsibilities with fixed equipment obligations to the tenant (includes need to provide suitable buildings, fencing, etc.)	Public body needs to abide by terms of the lease, with ongoing land management responsibilities such as cropping plans, grazing plans, woodland planting. Original land manager retains land but becomes a 'landlord', so taking on new legal responsibilities, with a potential impact on taxation status. Public body could sub-lease land back to land manager (e.g. for grazing), thus ensuring land is managed
Immediate financial implications	Capital cost of land purchase (one-off payment to land manager avoids the public body taking on a revenue commitment), plus obligation to pay the legal and any valuation/land agency costs for both sides (and possibly a tenant if land is leased). Potential for significant capital gains tax payment by landowner. Also, decrease in size of land holding with potential impacts on	Capital cost of land purchase by public body, plus obligation to pay the legal and any valuation/land agency costs for both sides. Buying the land means that the public body does not take on a revenue commitment however, there may be immediate fixed equipment concerns. Potential for significant capital gains tax payment by landowner.	Legal and other professional costs to be met for both parties. Public body has to make ongoing rental payments Change in tax status of landowner - Schedule A (income from property i.e. lettings) instead of Schedule D (income from trading). Depending on eventual use (i.e. whether land is used for agricultural production or not), there are

Table 3-4: Legal and financial implications of mechanism types: land purchase and sale; and land purchase/sale and leaseback; land lease to public body			
Type of implication	**Implications by mechanism: some variation by measure**		
	Land purchase and sale	**Land purchase/sale and leaseback**	**Land lease to public body**
	viability of business/productivity of farm (dependent on area and type of land sold)		impacts on land eligibility for Inheritance Tax Reliefs. When public body takes on lease, land manager also loses any subsidies or grants associated with land management
Ongoing financial implications	Land management and maintenance costs, on a practical level for items such as fencing, drainage, property repairs. Professional fees to advise on land management. Fixed equipment obligations if land is subject to an agricultural lease (need to provide suitable buildings, fencing, etc. to meet purpose of tenancy). Loss of land may have ongoing financial implications for land manager in terms of decreased Basic Payment Scheme, Less Favoured Area Support and agri-environment payments (i.e. potential for loss of annual income due to less land being under production). If measure results in irregular field boundary or feature, this could affect access and use of equipment (e.g. it may take longer to harvest a field) with knock-on financial implications for land manager. If public body farms the land itself (considered unlikely), there could be income from subsidies such as BPS payments. However, there may be monitoring costs associated with determining the impact of the NFM measure	Some land management and maintenance costs, for example, professional fees to advise on land management and tenancy issues. Fixed equipment obligations with regard to buildings, equipment, housing. Public body may also incur monitoring costs when determining the impact of the NFM measure. Original land manager has to make ongoing rental payments if they lease the land back themselves (with impact on annual income). If the lease is at a discounted rate, this could be classed as state aid. Lease may be restrictive (e.g. requires particular land use); this could have ongoing implications for the land manager's annual income (e.g. if they have to change from arable to pasture). Length of lease needs to be considered against business plan (which may cover 20-50 year timeframe). If measure results in irregular field boundary or feature, this could affect access and use of equipment (e.g. it may take longer to harvest a field) with knock-on financial implications for land manager	Land management responsibilities for public body under the tenancy agreement, such as fertiliser, cropping and grazing plans, woodland establishment/management, professional fees, securing land income streams if applicable (e.g. Under Basic Payment Scheme, SRDP). If land is taken out of productive use, it may not be eligible for payments. Public body may also incur monitoring costs when determining the impact of the NFM measure. Land management choice could impact on Inheritance Tax Reliefs (for tenancies beginning after 1st September 1995, agricultural rate relief is 100%). Land manager likely to receive annual payment for lease, but loses any subsidies/grants associated with managing the land. Overall impact on annual income is dependent on the individual situation. Land manager needs to consider length of lease against business plan (which may cover 20-50 year timeframe). If measure results in irregular field boundary or feature, this could affect access and use of equipment (e.g. it may take longer to harvest a field) with knock-on financial implications for land manager

Table 3-5: Legal and financial implications of mechanism types: servitude/wayleaves; capital and annual payments (including grants) – EU, government, lottery, agencies; Capital capital and annual payments (including grants) – non-government			
Implication	**Implications by mechanism: some variation by measure**		
	Servitude/wayleaves	**Capital and annual payments (including grants) – EU, government, lottery, agencies**	**Capital and annual payments (including grants) – non-govt**
Immediate legal implications	Terms of agreement to be negotiated, agreed and drawn up. Measure and route to be negotiated and agreed. Land manager may be prevented from using the land at particular times in accordance with conditions. No change to legal occupier of land	Check legal agreement or contract, short term compliance (depending on term). Land manager may have to implement specific land use to suit measure and receive grant/payment. No change in legal occupier of land	Check legal agreement or contract, short term compliance (depending on term). Land manager not expected to have to change land use. No change in legal occupier of land
Ongoing legal implications	Servitude/wayleave associated with land title (may continue for as long as needed)	Ensure compliance with the terms of the contract for its duration. Potential for implications for Inheritance Tax Relief if land cannot be used for agricultural purposes	Ensure compliance with the terms of the contract for its duration. Potential for implications for Inheritance Tax Relief if land cannot be used for agricultural purposes
Immediate financial implications	One off compensation costs due to granting of the servitude/wayleave. Ability to meet both parties' legal and land agent costs in negotiating terms. Land depreciation. Potential need for land manager to change way in which land is used, or not use land at particular times (with immediate implications for income from land and eligibility for certain payments)	Grant or payment provides support or incentive for land manager to make application (and potentially at least partially reimburses for the cost of doing so) and manage feature in a certain manner. Potential State Aid funding conflict, depending on structure of funding/support. There can be an upfront capital cost (which can exceed the capital grant), again depending on what is applied for and how it is structured. Where land has to be taken out of productive use, this could result in the loss of any subsidies associated with the original land use	Grant or payment provides support or incentive for land manager to make application (or reimburses for the cost of doing so). There can be an upfront capital cost (which can exceed the capital grant), again depending on what is applied for and how it is structured. Where land has to be taken out of productive use, this could result in the loss of any subsidies associated with the original land use

Table 3-5: Legal and financial implications of mechanism types: servitude/wayleaves; capital and annual payments (including grants) – EU, government, lottery, agencies; Capital capital and annual payments (including grants) – non-government			
Implication	**Implications by mechanism: some variation by measure**		
	Servitude/wayleaves	**Capital and annual payments (including grants) – EU, government, lottery, agencies**	**Capital and annual payments (including grants) – non-govt**
Ongoing financial implications	Reduction in capital value of the land due to lack of full income earning possibilities. Potential loss of income during the construction period (if applicable). Potential loss of income from or eligibility for annual grants and subsidies (where land use needs to change to fit with implementation of measure). Potential for annual compensation claim for disturbance, or alternatively an event based payment. Payment may also be needed if land manager is to carry out maintenance. There may also be monitoring costs for the public body associated with determining the impact of the NFM measure. If measure results in irregular field boundary or feature, this could affect access and use of equipment (e.g. it may take longer to harvest a field) with knock-on financial implications for land manager. Where the public body makes an incident based payment, this is a contingent liability that cannot be calculated until a future date	Potential for annual management payments to the land manager. These will effectively be compensation for income foregone where measure limits use of land. Payment could have State Aid implications, dependent on the amount of other grants/subsidies received by the land manager. An annual claim is likely (e.g. to cover income foregone and maintenance costs), and there may be an ongoing cost to prepare and submit this. Public body may have ongoing monitoring costs to ensure that the conditions of the grant/payment are adhered to enabling the measure to be implemented as intended (there may also be monitoring costs associated with determining the impact of the NFM measure). If measure results in irregular field boundary or feature, this could affect access and use of equipment (e.g. it may take longer to harvest a field) with knock-on financial implications for land manager. Any shortfalls in capital funding or funding cuts at the public body may result in central government having to pay to ensure agreed payment terms are met. Public bodies may view incident based payments as a contingent liability that cannot be calculated until a future date	Potential for annual management payments to the land manager. These will effectively be compensation for income foregone where measure limits use of land. An annual claim is likely (e.g. to cover income foregone and maintenance costs), and there may be an ongoing cost to prepare and submit this. Public body may have ongoing monitoring costs to ensure that the conditions of the grant/payment are adhered to enabling the measure to be implemented as intended (there may also be monitoring costs associated with determining the impact of the NFM measure). If measure results in irregular field boundary or feature, this could affect access and use of equipment (e.g. it may take longer to harvest a field) with knock-on financial implications for land manager

Table 3-6: Legal and financial implications of mechanism types: economic instruments; and advice and technical support		
Implication	**Implications by mechanism: some variation by measure**	
	Economic instruments	**Advice and technical support**
Immediate legal implications	Land manager to check eligibility for such a mechanism, check and agree to any legal documentation. Land management plans may have to be altered to fit measure. No change in legal occupier of land (unless an auction is used and land is sold off - refer to land purchase/sale mechanism for implications)	Potential legal agreement to prepare and check. No change in legal occupier of land
Ongoing legal implications	Annual involvement if returns are required, with legal and/or accountancy input as required	Agreement may require change in management practices with new practices to be retained for period of agreement. Public body or other organisation may have access to watercourse under the agreement to implement the measure
Immediate financial implications	Cost of any documentation preparation and professional advice. Potential State Aid funding conflict, depending on structure of funding/support. Potential for tax implications for land manager dependent on type of economic instrument used	Cost of providing or supporting the advice/service or grant towards the cost
Ongoing financial implications	Ongoing administration costs and associated professional fees, potentially also monitoring/compliance costs (to determine land manager eligibility for payment and impacts of NFM measure). Potential ongoing State Aid funding conflict, depending on structure of funding/support. Where land use is changed, land manager's eligibility for grants/subsidies (e.g. Basic Payment Scheme) may be altered e.g. if land is taken out of productive use. This would negatively affect annual income (unless economic instrument makes up for this). Land manager will need to consider period of time for which economic instrument is likely to be valid against any farm business plans (which could be for 20-50 years). If measure results in irregular field boundary or feature, this could affect access and use of equipment (e.g. it may take longer to harvest a field) with knock-on financial implications for land manager	If an annual provision, then the ongoing cost of supporting the advice, providing the advice or providing a grant towards the advice or service. There may also be monitoring costs associated with determining the impacts of the measure. Impacts on annual income of land manager are unlikely (land use change not required) unless land is unavailable for an extensive period

3.3.2 Additional investigations

Some additional investigation has been carried out into the Water Environment Fund, and the use of conservation covenants, but these do not have natural flood management as their primary objective. Thus, they are considered below and not as part of the wider assessment.

The Water Environment Fund (WEF)

The WEF provides funding to projects to help restore Scotland's catchments from the source, down through rivers, lochs, floodplains into the estuaries and out to sea. The primary focus of the funding is to tackle impacts on the morphology or physical condition of these ecosystems. The WEF aims to restore Scotland's catchments where historical activities have left them damaged, often leading to waterbodies being downgraded in the River Basin Management Plan. Thus, WEF funds projects which:

- Restore the morphology of the water environment;
- Remove barriers to fish migration; and
- Control invasive non-native species.

The WEF is managed by SEPA with support from Scottish Natural Heritage, Forestry Commission and the Scottish Government. SEPA and the Scottish Government provide £1 million of funding each year for applications from individuals, charities, non-governmental organisations, local authorities and companies. Projects must go beyond the applicant's duty or regulatory responsibility. Whilst funding can be combined with other funding sources, there must not be any overlap (funding must be complementary and not provided for the same purposes).

WEF would also be applicable in situations where rivers have previously been straightened and embanked to improve the quality and quantity of land available for agriculture, cutting them off from their floodplain. Such actions affect the in-stream and riparian habitat quality. Where these schemes were built with public funds, the WEF would be available for removal of such land drainage works and restoration of the water environment (SEPA, no date).

Conservation covenants

The Law Commission for England and Wales has recently produced a report (see Law Commission, 2014) which sets out several recommendations for introducing conservation covenants as a statutory scheme (Law Commission, 2015). A conservation covenant is an agreement which is made between a land manager and conservation body which ensures the conservation of natural or heritage features. It is a private and voluntary arrangement which continues to be effective even after the land is sold. These statutory agreements could be used to provide a binding arrangement for NFM. For example, if a land manager wishes to remove woodland in an upstream catchment which is providing flood protection, a conservation covenant could be put in place to bind the land manager to an agreement whereby they retain the woodland, restoring and maintaining it. Yearly payments could be used to incentivise a land manager to agree to the covenant. The conservation covenant provides a secure way to ensure the long-term fulfilment of the ecosystem service and ensures that the payment to the land manager produces the desired outcome.

Conservation burdens[6] are a similar mechanism that is already in place within Scottish law. The purpose of a conservation burden is to protect or preserve particular characteristics within the land; this is set out in the Title Conditions (Scotland) Act 2003, section 38[7]:

> *"….for the purpose of preserving, or protecting, for the benefit of the public—*
>
> *(a) the architectural or historical characteristics of any land; or*
>
> *(b) any other special characteristics of any land (including, without prejudice to the generality of this paragraph, a special characteristic derived from the flora, fauna or general appearance of the land)"*

These burdens can be entered into by a number of designated bodies including all Scottish local authorities (Reid, 2014). Whilst it is possible that a Scottish local authority could use a conservation burden within an NFM scheme, NFM would have to be an additional benefit and not the primary aim of the burden.

Thus, similar to the WEF, conservation covenants could be used in the implementation of NFM measures, but the objective of reducing flood risk would have to be a secondary one, achieved alongside the main aim of the covenant or project.

[6] Note that the term 'burden' is used to be consistent with the reference.

[7] See Title Conditions (Scotland) Act 2003, accessed at: http://www.legislation.gov.uk/asp/2003/9/section/38 on 6th March 2015.

4 Analysis of the Findings

4.1 Overview

This section draws out the key points from the viability assessment, the legal and financial assessment, and the case studies. It also considers the situations where certain mechanisms are likely to be useful.

4.2 Key points from the Assessment of the Mechanisms

Tables 4-1 to 4-8 provide an overview of some of the positives and negatives associated with each of the mechanisms (see Annex 1 for full details). In general, where mechanisms involve a high upfront financial commitment by the public body, there is less flexibility but potentially greater effectiveness in terms of ensuring the measure is implemented as intended. Where land is not bought or leased, long term effectiveness is dependent on there being a long term funding source which can provide annual or incident based payments as required. For land managers, mechanisms which are more flexible may also be more uncertain in terms of their duration and long term availability (in particular when looking at provision of advice and technical support).

Table 4-1: Key points for mechanism: land purchase/sale

Party	Main advantages/positives	Main disadvantages/negatives
Public body	• Familiar process of buying and selling • Mechanism does not need ongoing management • No long term financial commitment • Public body can manage land as it wishes	• High upfront financial commitment • Public body takes on responsibility for managing land • No flexibility (whole process needs to be repeated if public body wishes to sell land in the future)
Land manager	• Process of buying and selling is likely to be familiar • Single one off payment for land could enable investment in other areas	• Mechanism likely to be incompatible with existing land management plans • Requires solicitor, valuer, etc.

Table 4-2: Key points for mechanism: land purchase/sale and leaseback

Party	Main advantages/positives	Main disadvantages/negatives
Public body	• Familiar process of buying and selling • Public body does not have to manage land • No long term financial commitment • Some flexibility through ability to vary terms of lease	• Public body has to operate the lease • High upfront financial commitment (but regular rental income) • No flexibility (whole process needs to be repeated if public body wishes to sell land in the future)
Land manager	• Process of buying and selling is likely to be familiar, leasing may be too • Land can still be used • Single one-off payment for land could enable investment in other areas (but ongoing rental payments)	• Ongoing rental payments • Land manager becomes a tenant on land they previously owned • Land use may be restricted by lease • Requires solicitor, valuer, etc.

Table 4-3: Key points for mechanism: land lease to public body		
Party	**Main advantages/positives**	**Main disadvantages/negatives**
Public body	• Relatively flexible, since lease could be renegotiated	• Ongoing rental payments (could be long term commitment) • Public body would need to manage land as per conditions of lease
Land manager	• Regular rental income received • Freehold is retained	• Administrative cost of managing lease • Land can no longer be used • Requires solicitor, valuer, etc.

Table 4-4: Key points for mechanism: servitude, wayleaves		
Party	**Main advantages/positives**	**Main disadvantages/negatives**
Public body	• Public body does not have to take on management of land or a lease • Could be relatively flexible (wayleave)	• May only be suitable for certain NFM measures • Upfront payment required for servitude, annual or incident based for wayleave (an incident based payment is viewed as a contingent liability that cannot be calculated until a future time) ; • Flexibility may be limited and dependent on negotiations
Land manager	• Less impact on property rights than sale or lease • Land management can probably continue as previously • Payment could be one-off upfront, or regular annual amount	• Could be unexpected temporary disruption to use of land • Payment may be irregular if incident based • Requires solicitor, valuer, etc.

Table 4-5: Key points for mechanism: capital and annual payments (including grants) - EU, government, lottery, agencies		
Party	**Main advantages/positives**	**Main disadvantages/negatives**
Public body	• Public body likely to be experienced at funding applications • Public body does not have to take on management of land or a lease	• Significant background research may be needed • Public body may need to lead bid/organise payment. Incident based payments may be seen as a contingent liability which cannot be calculated until a future time • Monitoring may be required to ensure conditions of funding are met • Measure may only be effective for as long as funding lasts
Land manager	• No change in title or land ownership • Likely to have minimal implications for land management and business plan	• Time period over which funding is provided may be relatively short term when considered against the farm business plan • Time and resource costs associated with hosting monitoring inspections

Table 4-6: Key points for mechanism: capital and annual payments (including grants) - trust, local initiatives (non-govt)		
Party	**Main advantages/positives**	**Main disadvantages/negatives**
Public body	• Public body does not have to take on management of land or a lease • Independent external organisation may need to lead bid for funding/provide annual/capital payment	• Significant background research may be needed • Monitoring may be required to ensure conditions of funding are met • Measure may only be effective for as long as funding lasts
Land manager	• Minimal implications for land management and business plan • No change in title or land ownership	• Funding from sources outside the public sector may be less stable, thus increasing uncertainty for land managers • Time and resource costs associated with hosting monitoring inspections

Table 4-7: Key points for mechanism: economic instruments (fiscal, permits, service payments, auctions)		
Party	**Main advantages/positives**	**Main disadvantages/negatives**
Public body	• Flexibility could be built into mechanism • Land manager responsible for identifying payment (especially for reverse auction)	• Some economic instruments may need government input • Set-up time may be considerable • Independent external support may be required for set-up, management and monitoring • Public body may need to learn about or implement new processes (time and resources associated with this)
Land manager	• No change in title or land ownership • Impact on land use and management may be limited (but could be extensive – land manager may be able to choose how much they want to commit to the mechanism)	• Independent external support may be required for set-up • Time and resource costs associated with hosting monitoring inspections • Mechanism may be susceptible to policy changes

Table 4-8: Key points for mechanism: advice and technical support		
Party	**Main advantages/positives**	**Main disadvantages/negatives**
Public body	• Minimal administration/monitoring required • Limited financial commitment likely to be needed • Very flexible mechanism • Quick and easy to set up	• Effectiveness of mechanism over time and also at ensuring measure is implemented may be limited • Public body may need independent external advice to be able to provide appropriate advice/technical support to land managers • May be considerable administration requirements • Short term contracts/ agreements
Land manager	• Minimal impact on land use and management • Advice could be beneficial for the business	• May be considerable administration requirements • Uncertainty over duration of advice/support programme

Other points identified by the assessment include:

- For the majority of the mechanisms, the **onus is likely to be on the public body (or broker) to identify the potential mechanisms and lead the negotiation process**. In such instances, administrative and legal costs are expected to lie with the public body, since they are requiring the mechanism/measure combination to be implemented. There may be a few cases, perhaps for some capital and annual payments, where other organisations (e.g. community groups) or land managers themselves initiate the grant application process. It is assumed that this is more likely to occur where there is already awareness of NFM measures, for example, in some of the existing Scottish case study areas.

- **Most mechanisms require negotiations at the beginning**. There is a need to be aware of the cost implications of this process if it is drawn out for whatever reason. Public bodies are likely to be keen to reach agreement and implement a measure in case there is a flood. However, it may be worth taking the time to negotiate a mechanism which is likely to be more effective over time.

- The **majority of mechanisms will require the land manager to consider the mechanism against their farm business plans**. Care will need to be taken with regard to different interpretations of timeframes, since what is long term for a public body is unlikely to be long term for a land manager. For a farmer, long term could well be 20+ years.

- Where a mechanism does not place responsibility for land management with the public body, there **may be a need to monitor the way the land is managed** to ensure that the NFM measure is implemented as intended. There may be ongoing costs for the public body associated with this. The land manager may also have time/resource costs for inspections.

- Where a mechanism places the land in the public body's ownership, there **may be fixed equipment obligations** (buildings, fencing, historical features) where this land is leased. These obligations may well result in costs being incurred by the public body.

- **Some of the mechanisms could have state aid implications** for land managers. Although state aid rules are complex, any funding provided to a business from a state source could potentially be classed as state aid. Where the mechanism does not involve a straightforward business transaction (i.e. buying, selling or leasing at market rates), consideration will need to be given to any state aid impacts.

- There is the **potential for some mechanisms to compete with or invalidate other subsidies/payments** that a land manager may be in receipt of (for example, payment for a particular type of land management could detrimentally affect a land manager's ability to claim the BPS). Being open to using a range of different mechanisms may help to reduce this. The involvement of independent third party organisations with previous experience of implementing NFM measures may also ensure that appropriate mechanisms are used for land managers in different situations.

4.3 Key Points from the Case Studies

The case studies highlighted several recurring tactics and/or skills that appear to contribute to the success of a project and can be used with a number of compensation mechanisms. These include:

1. There needs to be a **good relationship between the seller and buyer** (i.e. the two parties to the agreement); this can be improved through the use of an ethical broker or a trusted intermediary. This has significant benefits in terms of engaging land managers and ensuring that both organisational and compensation costs are manageable. The majority of the case studies have shown that partnership working is very important in a successful project as it offers up a range of skills and flexibility that might not be available within one organisation.

2. **Good agricultural knowledge** is needed to be able to understand how the NFM measures might impact the land manager's business, and also to determine a payment which is acceptable to both parties to the agreement. An agricultural background will also help with engagement and building trust with the land manager.

3. **Engagement activities** such as workshops and information leaflets/letters early on in a project can be useful to get participants interested in schemes without feeling pressurised into agreeing to anything straight away. These activities also provide an opportunity to identify land managers who may be more receptive to NFM measures.

4. **Demonstrations** help land managers to understand how the measures work and what the direct benefits will be. Furthermore, identifying benefits in addition to flood risk mitigation can encourage land manager buy-in and can open up additional funding opportunities.

5. Where productive farms are being approached, it is vital to **bear in mind that the farm is a business and that viability is important**. The right mechanism will be dependent upon each land manager's individual circumstances and the type of land available. It should also be acknowledged that for catchment wide schemes a consistent approach is needed to maintain fair levels of compensation between neighbouring land managers.

Table 4-9 below draws together the key points that have been raised by the case studies for each compensation mechanism.

Table 4-9: Key points raised by the case studies for each compensation mechanism

Mechanism	Case studies	Key points
Land purchase/sale	• Crook of Baldoon • Elgin Flood Alleviation • Nigg Bay • State of Victoria • Upper Garnock • White Cart Water	The process of land purchase can be complicated and time consuming if the project involves a significant number of land managers. Two time consuming activities were identifying which land managers owned which parcels of land, and also negotiations. It was identified that low grade agricultural land was easier to purchase; it is still possible to purchase higher grade land, but more incentives/additional payments or arrangements are often needed to encourage participation. The payment is a one-off/lump sum dependent on land value and the use. Successful negotiation and agreement of payment requires a good negotiator, who understands agricultural issues and how to talk to

Table 4-9: Key points raised by the case studies for each compensation mechanism		
Mechanism	**Case studies**	**Key points**
		farmers, agricultural landowners and their land agents. A District Valuer and knowledgeable solicitor are needed for this process. Although this mechanism requires a significant upfront cost (especially if a large amount of land is required or there are many land managers), there are thought to be minimal long term costs involved. In addition to this, land purchase gives overall control of land and its management to the purchaser
Land purchase/sale and leaseback	• Dearne Valley NIA • State of Victoria • White Cart Water	The key points raised in the case studies about land purchase/sale and leaseback are the same as those raised for land purchase/sale (see above)
Land lease to public body	• Dearne Valley NIA	In cases where there are already tenant farmers on the land and the current lease is not ready for renewal, the owner will need to negotiate with the current tenant to surrender the lease. Often a payment will be needed to "buy out" the tenant's lease; this payment can be calculated by having the land independently valued and taking into consideration how long the lease has been held and how long it has left to run. Using an independent valuer is important as this helps the tenant to feel they are getting a fair payment. If there is no tenant on the land, it is thought that the process is simpler as only a rental payment will need to be agreed. Long term leases (up to 100 years or more) can be agreed with this mechanism which can help secure land
Servitude, wayleaves	• State of Victoria • Westcountry Rivers Trust (Upstream Thinking Initiative)	Servitude agreements work well in combination with other payments/mechanisms to secure longevity of a project or to ensure that actions implemented will be maintained for a minimum period of time. Servitude agreements can be restrictive for the land manager and in some cases there can be concerns about land re-sale value. These issues can be overcome in some cases by emphasising any additional benefits or having a time limit on the agreement
Capital and annual payments (including grants) - EU, Government, Lottery, Agencies	• Belford Proactive Flood Solutions • Long Philip Burn • Scottish Rural Development Programme • Scottish Water (Sustainable Land Management Incentive Scheme)	Capital and annual payments can be an attractive mechanism/incentive for land managers as they remove some of the financial burden or barriers to implementing measures. Some payments can also become a secure income for the land manager if made on a regular basis (annually). The case studies have indicated that there are two main methods for providing payments: • a maximum amount is made available per applicant and quotes for works are submitted up to this maximum amount; or • fixed sums are set for specific actions or measures implemented e.g. (£xx for xx metres of fencing). There needs to be consistent criteria so payments are fair between

Table 4-9: Key points raised by the case studies for each compensation mechanism		
Mechanism	**Case studies**	**Key points**
		applicants and agreements (servitude) are useful for ensuring works/actions are implemented. Many payment schemes use liaison/inspection officers to review and approve all applications for grant funding. This usually involves site visits and a final site visit to ensure measures have been completed to the required standard. There is a need to be mindful of how much funding is available and how long the payments scheme can be sustained for (if an ongoing payment) as this has the potential to affect the size of the project and the longevity of the options/measures implemented. If funding runs out, there may be little incentive for land managers to retain the measure(s)
Capital and annual payments (including grants) - Trusts, Local initiatives (non-Govt)	• Pumlumon Project • Sussex Flow Initiative • Westcountry Rivers Trust (Upstream Thinking Initiative) • Wild Penwith • Woodland Trust	Many of the points raised for the above mechanism are the same for non-Government capital and annual payments. Running a grants scheme can create resource pressures for trusts and charities; the use of a quota system and eligibility criteria can help reduce this. In addition, open/voluntary schemes where the applicant approaches the organisation running the scheme can lead to the need for less funding as the applicant has often already bought into the measures and thus needs less incentive (payment). As the funds come from non-national or EU sources there are no state aid issues to consider, but funding volumes can be unpredictable. However, charities have the ability to fundraise which can give them more flexibility that is not available to local authorities. Non-regulatory organisations offering payments are in a good/trusted position to discuss sensitive issues and can receive a better reception from land managers. The case studies on non-Government capital and annual payments have highlighted that minimising the amount of paperwork the land manager has to do is important when using this mechanism, especially if the payment scheme is new
Economic instruments (fiscal, permits, service payments, auctions)	• Pumlumon Project • Westcountry Rivers Trust (Upstream Thinking Initiative)	Auctions are useful when there is a limited budget for a project as payments are awarded on a basis of best value for money. Applicants can also be encouraged to add value for money to their bids to make them more competitive. Auctions can reduce the resources needed as there is less need for initial tailored advisory visits as the land manager will propose what they are willing to do/implement. Payment for ecosystems services (PES) can be an agreeable mechanism with land managers as they are similar to other agreements they are used to (i.e. agri-environment schemes) and it still allows farms to be viable
Advice and technical support	• Allan Water improvement project • Aquarius project • Dearne Valley	The provision of an advisory service by an ethical broker/trusted intermediary (such as a charity) helps to develop meaningful, trusting relationships with land managers. Partnership working also brings together different skills/knowledge and funding sources. Free workshops and the use of volunteer groups can be beneficial in

Table 4-9: Key points raised by the case studies for each compensation mechanism		
Mechanism	**Case studies**	**Key points**
	NIA • Holnicote • Pumlumon Project • Sussex Flow Initiative • Tweed Forum • Upper Garnock • Westcountry Rivers Trust (Upstream Thinking Initiative) • White Cart Water • Wild Penwith • Woodland Trust	encouraging land manager involvement. Identifying the additional "free" benefits of measures (such as wood fuel and livestock shelter) has been significant in many case studies in increasing land manager participation. When providing an advisory service, knowledge of farming is fundamental as it allows the delivery body to recognise the concerns and pressures felt by landowners and managers. The case studies have shown technical support to be a useful mechanism as it allows farms to continue normal day-to-day activities and remain viable if the measures implemented restrict activities (e.g. provision of a barn for livestock if field is used for floodwater retention). Technical support is also useful as an additional incentive if productive or higher value land is required

4.4 Identifying the Situations where Mechanisms could be used

The different types of mechanisms are likely to be more or less appropriate in different situations. Table 4-10 draws on the assessment to compare the mechanisms for a range of variables including:

- Public body responsibility for land management;
- Upfront financial commitment by public body;
- Ongoing financial commitment by public body;
- Effectiveness over time; and
- Flexibility over time.

The table also suggests situations where the mechanisms could be used.

Where public bodies have upfront funding, possible mechanisms include land purchase/sale, and land purchase/sale and leaseback. Whilst these mechanisms require the public body to take on land management (or at least management of the lease), they are likely to be effective over time since the public body has control of the land without any ongoing financial commitment. However, as identified by the case studies, they may be time consuming to set up in situations where there are many land managers, and identifying who owns which parcel of land is complicated.

If there is some upfront funding available, it may be possible for public bodies to use mechanisms such as servitude, wayleaves, capital and annual payments, and economic instruments (e.g. through organising an auction). With servitude, a one-off payment can be made to ensure that any measures implemented are maintained for a minimum period of time. However, such a mechanism may not be appropriate for all land managers, since servitude can lead to concerns about the re-sale value of a property. Using capital and annual payments may be a preferred option, since these are likely to be highly flexible (where government sourced) and unlikely to have any long term negative implications for the land manager. The case studies have illustrated that capital payments tend to

be provided as fixed sums for specific actions, or as maximum amounts made available to each applicant with quotes for works submitted up to this maximum. With ongoing payments, the duration (and availability) of funding should be given careful consideration. If funding is only likely to be available for a few years, the overall effectiveness of the measure may be low, since if funding stops there may be little incentive for land managers to retain the measures implemented.

If independent third party broker organisations are involved, then a mechanism such as advice and support may provide a relatively low cost way of starting NFM implementation and getting land managers interested, perhaps before moving to a mechanism which required greater public body investment.

Table 4-10: Comparison matrix showing which mechanisms are low, moderate or high for a range of variables			
Variable	**Mechanisms which are low for variable**	**Mechanisms which are moderate for variable**	**Mechanisms which are high for variable**
			
Public body responsibility for land management	**Low level of public responsibility for land management:** Servitude, wayleaves Capital and annual payments (including grants) - government source Capital and annual payments (including grants) - non-government source Economic instruments Advice and technical support **May be appropriate where:** Limited resources to undertake land management; many land managers are involved	**Moderate level of public responsibility for land management:** Land purchase/sale and leaseback **May be appropriate where:** Funding for initial purchase can be borrowed and paid back over time; public body does not want (or need) to have to manage land (White Cart Water, Glasgow provides an example of purchase/sale and leaseback); land manager is happy to continue managing the land despite the implementation of the NFM measure	**High level of public responsibility for land management:** Land purchase/sale Land lease to public body **May be appropriate where:** Public body has the resources to undertake ongoing land management; area of land acquired is limited and expected to result in considerable flood risk reduction benefits (e.g. Upper Garnock flood prevention scheme); loss of land does not detrimentally impact land manager's business
Upfront financial commitment by public body	**Low level of financial commitment by public body:** Capital and annual payments (including grants) - non-government source Advice and technical support **May be appropriate where:** Limited capital available for upfront funding; independent third party organisations are already active and engaged with land managers	**Moderate level of financial commitment by public body:** Land lease to public body Servitude, wayleaves (dependent on whether servitude or wayleave is used) Capital and annual payments (including grants) - government source Economic instruments **May be appropriate where:** Some funding is available to start NFM implementation, but there is uncertainty over how long the funding may last	**High level of financial commitment by public body:** Land purchase/sale Land purchase/sale and leaseback **May be appropriate where:** Capital sums are available for purchasing land and land managers can be readily identified (case studies have determined that this process can be time consuming)

Table 4-10: Comparison matrix showing which mechanisms are low, moderate or high for a range of variables			
Variable	**Mechanisms which are low for variable**	**Mechanisms which are moderate for variable**	**Mechanisms which are high for variable**
			
Ongoing financial commitment by public body	**Low level of ongoing financial commitment:** Land purchase/sale Land purchase/sale and leaseback Capital and annual payments (including grants) - non-government source Economic instruments Advice and technical support **May be appropriate where:** Limited funds are available to maintain mechanism	**Moderate level of ongoing financial commitment:** Servitude, wayleaves (dependent on whether servitude or wayleave is used) Capital and annual payments (including grants) - government source **May be appropriate where:** Some funding is available to maintain mechanism, but this is not unlimited; land managers agree to maintaining land use in line with agreement (and implementation of NFM measure)	**High level of ongoing financial commitment:** Land lease to public body **May be appropriate where:** Funding can be secured for a set amount of time (to enable the lease to be paid for its term and thus provide security to the land manager)
Effectiveness over time	**Low level of effectiveness over time:** Advice and technical support **May be appropriate where:** Amount of buy-in and commitment from land managers, as well as the effectiveness of NFM measures are uncertain	**Moderate level of effectiveness over time:** Land lease to public body Servitude, wayleaves Capital and annual payments (including grants) - government source Capital and annual payments (including grants) - non-government source Economic instruments **May be appropriate where:** Land managers are interested in NFM and likely to be engaged	**High level of effectiveness over time:** Land purchase/sale Land purchase/sale and leaseback **May be appropriate where:** There is a degree of certainty with regard to the likely effectiveness of the NFM measure being implemented on the land

Table 4-10: Comparison matrix showing which mechanisms are low, moderate or high for a range of variables			
Variable	**Mechanisms which are low for variable**	**Mechanisms which are moderate for variable**	**Mechanisms which are high for variable**
			
Flexibility over time	**Low level of flexibility over time:** Land purchase/sale Land purchase/sale and leaseback **May be appropriate where:** There is a degree of certainty with regard to the likely effectiveness of the NFM measure being implemented on the land. The case studies have shown that land purchase negotiations may be complicated and time consuming, so the public body needs to be clear that these mechanisms are appropriate	**Moderate level of flexibility over time:** Land lease to public body Servitude, wayleaves Capital and annual payments (including grants) - non-government source (dependent on funding and conditions from third parties) Economic instruments **May be appropriate where:** The land manager and public body agree to implement an NFM measure, but they want to use a mechanism which has some flexibility so that changes to the agreement can be made over time if necessary	**High level of flexibility over time:** Capital and annual payments (including grants) - government source Advice and technical support **May be appropriate where:** Land managers do not want to commit to long term changes without seeing how the mechanism/measure combination affects their business; there is uncertainty with regard to the effectiveness of the NFM measure being implemented, thus there may be a need to adapt the mechanism used

5 Developing the Payment Rate

5.1 Factors to Consider when Determining a Payment Rate

There are many factors to consider when determining the acceptability of the different mechanisms/agreements to land managers and public bodies. Some of these mechanisms/agreements will result in the exchange of money, whilst others will involve in-kind payments, or advice and technical support. There are two sides to each mechanism or agreement, as represented by Figure 5-1. A variety of factors may affect the land manager's position, whilst another set of factors affects the public body's position. Identifying the area of overlap between the two positions enables agreement to be reached in the form of the mechanism.

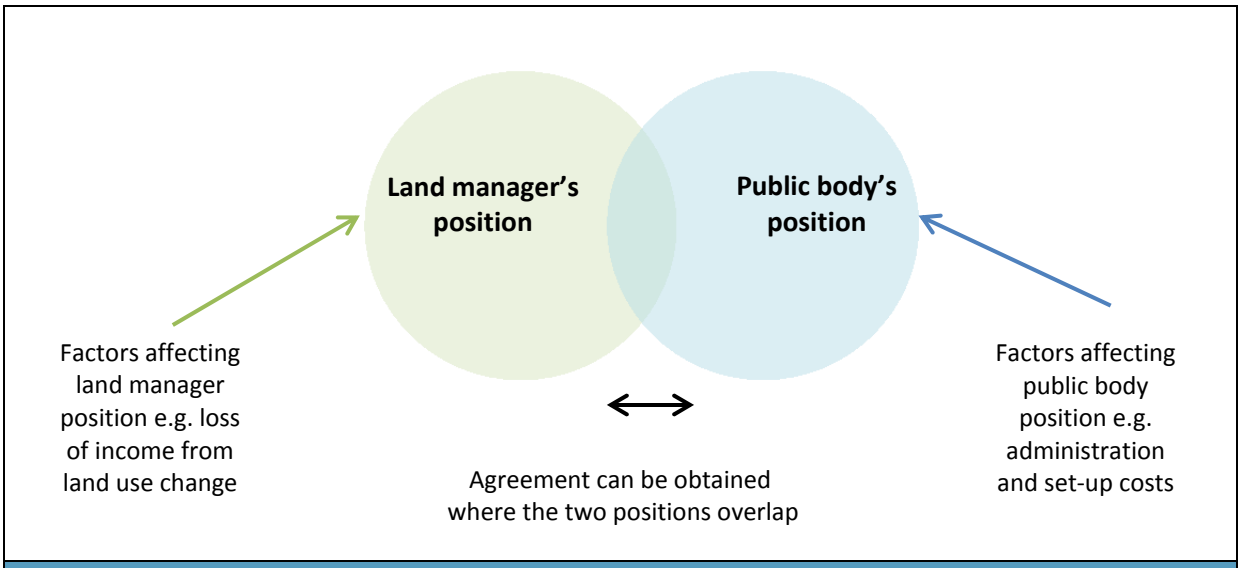

Figure 5-1: Land manager and public body

Whether or not the mechanism/agreement involves a monetary payment, it should be seen as a process of negotiation where information is gathered and shared to enable both parties to come to a satisfactory outcome. Thus, this section brings together the findings of the assessment, the information gained through the case studies and the comments received at the workshop to help set out this process.

The various factors to consider when agreeing on a mechanism (and potentially a payment rate) have already been identified in the assessment process undertaken as part of this study. The assessment of the viability of the mechanisms, in addition to the assessment of their legal and financial implications used criteria to help draw out the differences between the various mechanisms. These criteria can be seen as the factors which affect where one mechanism may work, and another fail. The following section draws on these criteria to present the process which can be followed to obtain an agreement and determine a payment rate (where relevant).

5.2 Recommendations for How a Local Authority should Determine a Payment Rate

5.2.1 Overview of process

The recommendations for developing an agreement (or mechanism) and determining a payment rate (where this is relevant) can be viewed as a process involving the following steps.

- Step 1: identifying key skills (by public body)
- Step 2: background research (by public body OR public body and broker);
- Step 3: discussions (between land manager and public body OR broker);
- Step 4: determining which type of mechanism is most appropriate; and
- Step 5: final determination of mechanism and payment rate.

5.2.2 Detail for each step

Step 1: identifying key skills

The first stage is for the public body to identify the key skills required to be able to negotiate agreements/mechanisms. Consideration needs to be given to:

- What can the public body actually do in terms of setting up the mechanism?
- Does the public body have the resources to manage a mechanism/agreement over time?
- How much agricultural knowledge does the public body have?
- Is the public body aware of the different NFM measures and their likely impacts on land?
- Is the public body aware of any broker organisations within its area?

Further detail on each of these points is provided below.

The public body needs to consider the **convenience of the mechanism/agreement in terms of administrative requirements and resources**. Is there an established process (e.g. buying/selling) which the public body is familiar with, or does the procedure need to be developed (perhaps with some independent external support)? Table 5-1 indicates which mechanisms are likely to require additional investigation or support to set up. It is important to note that the mechanisms which need additional resources should not be excluded at this stage. Involving a broker as an enabler or facilitator for the agreement could enable any of the mechanisms to be used.

Table 5-1: Convenience of the mechanism for the public body during the set-up process

Level of convenience	Potential mechanism type to consider
Established procedure for mechanism	Land purchase/sale Land purchase/sale and leaseback Land lease to public body Advice and technical support (where providing like for like replacement goods)
Procedure needs to be developed but can be done in-house	Servitude/wayleaves Capital and annual payments (including grants) – government based Capital and annual payments (including grants) – non-government based

Table 5-1: Convenience of the mechanism for the public body during the set-up process	
Level of convenience	**Potential mechanism type to consider**
Procedure needs to be developed with independent external support	Capital and annual payments (including grants) – non-government based (an independent third party may need to source the funding) Economic instruments Advice and technical support (for provision of advice on management and technical support)
Notes: this table provides a guide to the convenience of the mechanisms during set-up. The situation will differ by public body and type of measure being considered. Involvement of an independent broker organisation as a third party could enable a public body to utilise any of the mechanisms	

Consideration should also be given to the **availability of resources which may be required to manage a mechanism/agreement over time**. Some mechanisms necessitate ongoing management and maintenance during their lifetime, whilst others can be left alone once set up. Table 5-2 indicates the mechanism types which are likely to require management versus those which do not require work once set up.

Table 5-2: Convenience of the mechanism for the public body during the mechanism's lifetime	
Level of convenience	**Potential mechanism type to consider**
Once set up, mechanism does not require much ongoing management	Land purchase/sale Servitude/wayleaves (dependent on agreement)
Mechanism requires ongoing management and modification	Land purchase/sale and leaseback Land lease to public body Servitude/wayleaves (dependent on agreement) Capital and annual payments (including grants) – government based Capital and annual payments (including grants) – non-government based Advice and technical support
Notes: this table provides a guide to the convenience of the mechanisms during set-up. The situation will differ by public body and type of measure being considered. Involvement of an independent broker organisation as a third party could enable a public body to utilise any of the mechanisms	

Public bodies may have varying **levels of agricultural knowledge**. Questions to consider include: is there an understanding of agricultural land classes? Is there a valuer (or access to the district valuer)? Such background knowledge is likely to be important if the public body decides to approach the land manager directly, without the involvement of a broker.

The public body also needs to consider how much **awareness there is of the different NFM measures and their likely impacts on land**. This study has classified the types of NFM measure according to their impact on the land, since this is what will be important to the land manager. A public body may be more aware of the types of NFM measure and their likely effectiveness. Consideration will need to be given to how the measures which are being considered could affect a land manager's ability to run their business. Table 2-4 in Section 2 lists the measure types as determined in this study along with some examples.

Relationships with other organisations may also be important. Having good links with a broker organisation such as an NGO could help provide the link between the public body and the land manager, and also bring in additional funding, knowledge and resources.

Having considered the above, the public body is likely to be more aware of what is within its capabilities, and what would require additional resources or skills. Once completed, Step 1 is unlikely to be needed every time a mechanism is required to implement an NFM measure.

Step 2: background research

Step 2 involves the public body identifying what needs to be achieved in terms of the flood risk reduction goal. It also covers the background research required prior to approaching any land managers. The extent to which this step is carried out by the public body itself, or a broker on behalf of the public body can be varied.

Following the identification of the decrease in flood risk which is required, consideration needs to be given to a range of factors. These are summarised in Box 5-1.

Box 5-1: Factors to consider when undertaking background research

The NFM measures which could be implemented to achieve the reduction in flood risk.
The extent of the impacts of these NFM measures on land use/management (based on the measure impact types identified in this study).
The scale at which the measures need to be implemented (catchment scale or local scale).
The likely number of measures required (single measure level, single farm level, multiple measures, multiple farms).
The maintenance responsibilities which may result dependent on the measures implemented. Liability for the measures (their performance) also needs to be considered.
Background research on the land managers with whom agreements may need to be made. This could include:

- Area of land holding in relation to area required for NFM measure
- Land use type (land use capability class; type of business income e.g. hill farm, lowland farm)
- Type of recipients who may be involved in agreements (landowner, land manager, tenant)
- Number of recipients (single agreement, multiple partners requiring multiple agreements)

Notes: Where a public body does not have the time or resources to identify land managers, this research could be undertaken by a broker organisation (who may already know the catchment)

Undertaking background research on the catchment and the land managers will help ensure that any mechanisms and measures are likely to be appropriate, thereby avoiding wasted negotiations which would be costly to both public bodies and land managers. Table 5-3 provides an overview of the factors and characteristics relevant to the land managers, and how these relate to the various mechanisms. The table is based on the assessment work undertaken earlier in the study. Colour coding is used to help highlight the characteristics which are negative (red), positive (green) and in-between or neither positive nor negative (pale orange).

Table 5-3 identifies that mechanisms such as land purchase/sale, and land lease to public body could have a significant impact on the area of the land holding, and are unlikely to be considered for prime agricultural land. In contrast, advice and technical support could potentially be implemented on any land use type (capability class or type of business income). For areas where ownership and tenancy arrangements are complex, it might be advisable to look at mechanisms where negotiations can be undertaken just with land managers, rather than managers, owners and tenants (where all three exist), for example, advice and technical support. Bringing everyone together in a partnership may

also be a consideration (it could save time and resources). This could be possible with economic instruments or advice and technical support. For the other types of mechanism, individual agreements are generally needed, although several individual agreements could be negotiated with a number of land managers to bring overall catchment benefits.

Researching the catchment and the land management within it helps ensure that appropriate mechanisms can be selected. Importantly, it also enables discussions with land managers to be productive, because they can be focused on the mechanisms and ideal outcomes.

Table 5-3: Matrix matching land manager factors and characteristics to the mechanism types									
Factor	Characteristic	Mechanisms							
		Land purchase/ sale	Land purchase/ sale and leaseback	Land lease to public body	Servitude/ wayleaves	Capital and annual payments (gov related)	Capital and annual payments (non-gov)	Economic instruments	Advice and technical support
Area of land holding – extent of impact mechanism may have on economies of scale	Significant impact (could totally prevent use of land)	Potential for significant impact	Potential for significant impact	Potential for significant impact	Potential for significant impact	Potential for significant impact	Potential for significant impact	Potential for significant impact	N/A
	Moderate impact (may limit use of land)	N/A	Potential for moderate impact	N/A	Potential for moderate impact	Potential for moderate impact	Potential for moderate impact	Potential for moderate impact	Potential for moderate impact
	Insignificant (not expected to affect use of land over the long term)	N/A	N/A	N/A	Likely to be insignificant impact	Likely to be insignificant impact	Likely to be insignificant impact	Likely to be insignificant impact	Likely to be insignificant impact
Land use type (capability class)	Class 1 Prime; Class 2 Prime; Class 3.1 Prime	Unlikely to be suitable	Unlikely to be suitable	Unlikely to be suitable	Measure dependent	Measure dependent	Measure dependent	Measure dependent	Measure dependent
	Class 3.2; Class 4.1; Class 4.2; Class 5 (Non-prime)	Possible to negotiate	Possible to negotiate	Possible to negotiate	Measure dependent	Measure dependent	Measure dependent	Measure dependent	Measure dependent
	Class 6 Non-prime	Possible to negotiate	Possible to negotiate	Possible to negotiate	Measure dependent	Measure dependent	Measure dependent	Likely to be suitable	Likely to be suitable
	Class 7 Non-prime	Possible to negotiate	Unlikely to be suitable	Likely to be suitable	Measure dependent	Measure dependent	Measure dependent	Likely to be suitable	Measure dependent

Table 5-3: Matrix matching land manager factors and characteristics to the mechanism types									
Factor	Characteristic	Mechanisms							
		Land purchase/ sale	Land purchase/ sale and leaseback	Land lease to public body	Servitude/ wayleaves	Capital and annual payments (gov related)	Capital and annual payments (non-gov)	Economic instruments	Advice and technical support
Land use type (business income)	Hill farm; Lowland farm; Mixed	Possible to negotiate	Possible to negotiate	Possible to negotiate	Possible to negotiate	Measure dependent	Measure dependent	Possible to negotiate	Possible to negotiate
	Arable	Possible to negotiate	Possible to negotiate	Possible to negotiate	Possible to negotiate	Measure dependent	Measure dependent	Measure dependent	Measure dependent
	Livestock; Mixed	Possible to negotiate	Possible to negotiate	Possible to negotiate	Possible to negotiate	Measure dependent	Measure dependent	Likely to be suitable	Possible to negotiate
	Equestrian	Possible to negotiate	Possible to negotiate	Unlikely to be suitable	Possible to negotiate	Measure dependent	Measure dependent	Likely to be suitable	Possible to negotiate
	Small holding/croft	Unlikely to be suitable	Unlikely to be suitable	Unlikely to be suitable	Measure dependent	Measure dependent	Measure dependent	Measure dependent	Measure dependent
	Shooting estate	Possible to negotiate	Possible to negotiate	Possible to negotiate	Possible to negotiate	Measure dependent	Measure dependent	Likely to be suitable	Possible to negotiate
Recipient type	Landowner	Direct involvement	Direct involvement	Direct involvement	Direct involvement	May be involved (if manager)	May be involved (if manager)	May be involved	May be involved
	Land manager/tenant	Potentially involved	Potentially involved	Unlikely to be involved	Potentially involved	Directly involved	Directly involved	May be involved	Directly involved
Number of recipients	Single agreement	Individual agreement needed	Individual agreement needed	Individual agreement needed	Individual agreement needed	Single agreements possible	Single agreements possible	Single agreements possible	Single agreements possible
	Potential for multiple partners	Could have several agreements	Could have several agreements	Could have several agreements	Could have several agreements	Multiple agreements possible	Multiple agreements possible	Could have partnership	Multiple agreements possible; could have partnership

Step 3: discussions

Step 3 covers initial negotiations with the land manager. These may be carried out by the public body, or the broker. They enable the public body/broker to present their initial ideas to the land manager, and the land manager to consider how these ideas could fit with their land management and business plans.

There are several factors which could affect the negotiating position of the land managers, including, but not limited to:

- Convenience/administrative requirements when setting up the mechanism (including whether external independent support is likely to be needed);
- Payment frequency (where relevant);
- Flexibility of mechanism over time (allowing adaptation to land management plans);
- Time spent in meetings/making arrangements; and
- Any implications in terms of maintenance e.g. would the land manager be responsible for maintaining the measure?

Land managers will need to make their own judgements on the above. It is important to note that whilst the public body (or broker acting as mediator) makes the first approach, the land manager will need time to consider the proposal against existing land management and business plans (and tenancy agreements where applicable). They may also need to consult with others (e.g. land agents) as required. Thus, it is important that the background research undertaken in Step 2 identifies relevant suggestions.

Step 4: determining which type of mechanism is most appropriate

Once a broker or public body has discussed the potential suggestions with the land manager, there will be a need to short list the options taking into account factors such as:

- Effectiveness of the mechanism in ensuring the measure is implemented as intended;
- Effectiveness of the mechanism over time;
- Flexibility of the mechanism (in terms of ability to adapt to changing requirements of the public body) (it may also be prudent to consider the flexibility and adaptive capacity of the desired NFM measure(s) at this point); and
- Lead-in time required to set up the mechanism.

Table 5-4 summarises the likely effectiveness, flexibility and set-up time of the various mechanism types from the viewpoint of the public body. Colour coding has been used to indicate positive characteristics (green), negative characteristics (red), and those which are uncertain or midway (pale orange). The public body (or broker) needs to consider which mechanism (or mechanisms) is likely to be most appropriate given the requirements and also the outcomes from the initial land manager discussions in Step 3. There may be trade-offs to be made, for example, between a mechanism which takes time to set up, but which is likely to be more effective. A public body may be keen to obtain agreement to enable an NFM measure to be implemented in case there is a flood. However, it might be worth spending longer negotiating an agreement/mechanism which is likely to be more effective over time. These decisions will need to be made against the background of the types of funding, resources and external independent support (e.g. brokers) available to the public body.

Table 5-4: Summary of the likely effectiveness, flexibility and set-up time of the mechanism types from the viewpoint of the public body									
Factor	Characteristic	Mechanisms							
		Land purchase/ sale	Land purchase/ sale and leaseback	Land lease to public body	Servitude/ wayleaves	Capital and annual payments (gov related)	Capital and annual payments (non-gov)	Economic instruments	Advice and technical support
Effectiveness of the mechanism in ensuring the measure is implemented as intended (public body viewpoint)	Likely to be effective	Public body can manage as required	N/A	Public body can manage as required	Legal contract to implement measure	If SRDP used, targeted inspections ensure compliance	N/A	Measure dependent	N/A
	Probably effective	N/A	Public body determines conditions	N/A	N/A	May provide incentive but not certainty	Provides incentive but not certainty	Measure dependent	Dependent on way agreement is monitored
	Effectiveness uncertain	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Dependent on way agreement is monitored
Effectiveness of the mechanism over time (public body	Likely to be long-term: the mechanism provides long-term support (5-20+ years)	Public body can manage as required	Dependent on length of lease	Dependent on length of lease	Can negotiate for long term with servitude	If land use change has occurred, may be effective over long term	If land use change has occurred, may be effective over long term	If land use change has occurred, may be effective over long term	N/A

Table 5-4: Summary of the likely effectiveness, flexibility and set-up time of the mechanism types from the viewpoint of the public body									
Factor	Characteristic	Mechanisms							
		Land purchase/ sale	Land purchase/ sale and leaseback	Land lease to public body	Servitude/ wayleaves	Capital and annual payments (gov related)	Capital and annual payments (non-gov)	Economic instruments	Advice and technical support
viewpoint)	Likely to be short-term: the mechanism may change or only provide one-off/short-term support (<5 years)	N/A	N/A	N/A	N/A	Short term funding – may limit effective-ness	Short term funding – may limit effective-ness	N/A	Short term agreements
Flexibility of the mechanism in terms of ability to adapt to changing needs of public body (public body viewpoint)	Very flexible (can be modified over time if circumstances change);	N/A	N/A	N/A	Potential to renegotiate wayleave	N/A	N/A	Likely to be flexible design	In general, very flexible
	Limited flexibility;	N/A	Limited flexibility	Limited flexibility	Servitude is relatively fixed	Flexibility may be limited by funding source	Flexibility may be limited by funding source	N/A	May be limited flexibility if permanent structure
	No flexibility (once a decision has been taken, mechanism is fixed)	No flexibility	N/A	N/A	N/A	Flexibility may be restricted by funding source	Flexibility may be restricted by funding source	N/A	N/A

Table 5-4: Summary of the likely effectiveness, flexibility and set-up time of the mechanism types from the viewpoint of the public body									
Factor	Characteristic	Mechanisms							
		Land purchase/ sale	Land purchase/ sale and leaseback	Land lease to public body	Servitude/ wayleaves	Capital and annual payments (gov related)	Capital and annual payments (non-gov)	Economic instruments	Advice and technical support
Lead in time required to set up mechanism (public body viewpoint)	Six months+	Depends on negotiations	Depends on negotiations	Depends on negotiations	Depends on negotiations	Varies by funding source	Varies by funding source	May take time to set up	N/A
	One or two months	Depends on negotiations	Depends on negotiations	Depends on negotiations	Depends on negotiations	Varies by funding source	Varies by funding source	N/A	N/A
	A few weeks	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Simple agreements

Step 5: final determination of mechanism and payment rate

The final step involves the public body (or broker) and land manager agreeing on the mechanism and negotiating the payment rate. Following the initial discussions in step 3, the land manager is likely to have considered the options against their land management and business plans. The public body (or broker) will have identified the most applicable mechanism for the measures they wish to implement. A formal meeting is then required to enable the most appropriate mechanism (for both parties) to be agreed, and the terms of the agreement (including the amount of any payment, where applicable) to be finalised. The way in which a payment rate could be determined for each of the mechanism types is discussed further in Section 5.2.3 below.

5.2.3 Determining payment rates

Overview

Comments from the District Valuer Services (DVS) indicate a preference for a before and after approach to calculating any payment (with this approach accepted by the Lands Tribunal). This method results in a one-off capital payment to the land manager, which can be referenced to market value by way of direct comparisons. However, the DVS also acknowledge that flexibility is required in all negotiations since there is no 'one size fits all' and each case needs to be treated on its own merits.

The following text and tables therefore provide an indication of the way in which an initial payment rate could be calculated for each of the mechanism types. It is important to note that payment rate determination should take place as part of the five step process described above.

The payment rates have been developed as a formula given as a function (f) of a series of variables. Each variable relates to a type of cost, e.g. the rental value of the land.

Land purchase/sale

Table 5-5 provides a summary of the key points to consider when determining a payment rate for land purchase/sale, whilst Table 5-6 presents the variables needed for the payment rate calculation.

Table 5-5: Key points to consider when determining a payment rate for land purchase/sale

Method to determine rate	Resources required	Additional factors/uncertainties
For all relevant measures: Obtain independent valuation of land to be purchased (taking into account land capability class). The capital value of the land includes its ongoing earning capacity. Relevant measure types include: • Land use may need to change in response to changing conditions after implementation of measure; • Measure likely to reduce area of land available for land manager (measure requires specific land use); • Potential for reduction in land available to use (managed realignment)	Surveyor/valuer; Land capability class information; District valuer; Solicitor/legal team	Additional costs will include legal and valuation fees

Table 5-6: Payment rate calculation: land purchase/sale	
Calculation	**Formula**
Overall formula	**Overall payment rate = f (capital value for land purchase)**
Components	Capital value for land purchase = f (land value, area of land)
Examples	Nigg Bay managed realignment scheme, Scotland; Crook of Baldoon nature reserve project, Scotland; Upper Garnock flood prevention scheme, Scotland

Land purchase/sale and leaseback

Table 5-7 provides a summary of the key points to consider when determining a payment rate for land purchase/sale and leaseback, whilst Table 5-8 presents the variables needed for the payment rate calculation.

Table 5-7: Key points to consider when determining a payment rate for land purchase/sale and leaseback		
Method to determine rate	**Resources**	**Additional factors/uncertainties**
For all relevant measures: **For initial sale**: obtain independent valuation of land to be purchased (taking into account land capability class) **For negotiation of lease**: obtain market rental value by land class Mechanism is deemed suitable for two measure types: • May be temporary reduction in land available to use during wet periods; • Measure likely to reduce area of land available for land manager (measure requires specific land use)	Surveyor/valuer; Land capability class information; District valuer; Solicitor/legal team; Agricultural advice (to ensure fixed equipment obligations are taken into account where relevant)	Additional costs will include legal and valuation fees. Consideration needs to be given to length of lease, extent of disruption to land manager's operations, any fixed equipment obligations on behalf of the leaseholder (the public body). If the rental payment is discounted, this could be considered to be state aid. Capital gains tax may be payable by land manager on sale of land

Table 5-8: Payment rate calculation: land purchase/sale and leaseback	
Calculation	**Formula**
Overall formula	**Overall payment rate = f (capital value for land purchase, annual value of rental payment)**
Components	Capital value for land purchase = f (land value, area of land)
	Rental payment (to public body from land manager) = f (area of land, market rental value by land class)
Example	Dearne Valley Green Heart, England (tenancies were bought out and re-leased) White Cart Water Flood Prevention Scheme, Scotland

Land lease to public body

Table 5-9 provides a summary of the key points to consider when determining a payment rate for land lease to public body, whilst Table 5-10 presents the variables needed for the payment rate calculation.

Table 5-9: Key points to consider when determining a payment rate for land lease to public body		
Method to determine rate	**Resources**	**Additional factors/uncertainties**
For all relevant measures: **For negotiation of lease:** market rental value by land class needs to be identified for the area likely to be affected by measure. Measures to which this mechanism is applicable are: • May be temporary reduction in land available to use during wet periods; • Measure likely to reduce area of land available for land manager (measure requires specific land use)	Land capability class information; District valuer; Solicitor/legal team; Agricultural advice (to ensure fixed equipment obligations are taken into account. This could be complex where land is sub-let back to the land manager)	Length of lease may be important against business plan (likely to be 20-50 years). Tax liabilities could change from Schedule D (income from trading) to Schedule A (income from property, i.e. lettings). Liability for the measure needs to be considered given that the land manager retains the freehold for the land

Table 5-10: Payment rate calculation: land lease to public body	
Calculation	**Formula**
Overall formula	**Overall payment rate = f (annual value of rental payment)**
Components	Rental payment (to land manager from public body) = f (area of land, market rental value by land class)
Example	Dearne Valley Green Heart, England (Environment Agency leased to NGO)

Servitude/wayleaves

Table 5-11 provides a summary of the key points to consider when determining a payment rate for servitude/wayleaves to public body, whilst Table 5-12 presents the variables needed for the payment rate calculation.

Table 5-11: Key points to consider when determining a payment rate for servitude/wayleaves		
Method to determine rate	**Resources**	**Additional factors/uncertainties**
For all relevant measures: **For servitude**: negotiations needs to take place to determine the long term impact on land value of the servitude which needs to benefit an adjoining land title. Extent of impact and conditions of servitude will relate to extent of impacts under measure. **For wayleave**: negotiations need to occur to determine the annual payment which should be made for access or other permission. Agreement could be set up to account for inconvenience on an annual or incident basis (dependent on frequency with which flooding is expected to occur). Relevant measure types include: • Land use may need to change in response to changing conditions after	Solicitor/legal team; Surveyor/valuer; Agricultural advice (measure dependent)	Installing an NFM measure/structure on someone else's land generally leads to the land manager taking on legal ownership of the structure. This needs to be carefully considered since it could affect maintenance and long term effectiveness of the measure. Consideration also needs to be given to the issue of who retains liability for the measure and its performance, and also the implications for insurance Where annual payments are being considered, there is a risk that a long term arrangement could result in a total payment which is greater than the value of the land.

Table 5-11: Key points to consider when determining a payment rate for servitude/wayleaves		
Method to determine rate	**Resources**	**Additional factors/uncertainties**
implementation of measure; • May be temporary reduction in land available to use during wet periods; • Measure likely to reduce area of land available for land manager (measure requires specific land use); • Minimal impacts on land use expected (measure focuses on watercourse and area alongside watercourse); • No significant impacts (measure assumed not to affect productive land)		Thus, the market value of the land as a purchase should be checked when setting up an annual payment agreement. Furthermore, the right to maintain an NFM measure does not require compensation; it is the associated depreciation/damage which necessitates compensation

Table 5-12: Payment rate calculation: servitude/wayleaves	
Calculation	**Formula**
Overall formula	**Overall payment rate = f (change in capital value OR annual value OR capitalised annual value) depends on mechanism: servitude one-off; wayleave annual or irregular (event-based) but could be capitalised)**
Components	**One-off upfront (capitalised) payment** Capital payment rate = f (area of land, change in market value per ha)
	Annual or incident based payment Annual/irregular payment rate = f (change in rental value, damage costs) where: Change in rental value = f (area of land affected, change in market value per ha) Damage costs = f (area of land affected, interference or disturbance). Interference or disturbance covers the impacts caused by a reduction in yield and the cost of time spent avoiding structures due to changes in working practices
Example	Land buy back scheme, State of Victoria, Australia (land was resold with flood covenants attached)

Capital and annual payments (including grants) – government based

Table 5-13 provides a summary of the key points to consider when determining a payment rate for capital and annual payments (government based), whilst Table 5-14 presents the variables needed for the payment rate calculation.

Table 5-13: Key points to consider when determining a payment rate for capital and annual payments (government based)		
Method to determine rate	**Resources**	**Additional factors/uncertainties**
For all relevant measures: Discussions need to take place to agree amount of capital or annual payment which is made to enable implementation of NFM measure, or to compensate for loss of income due to change in land management. Amount of funding available may relate to grants available. Relevant measure types include: • Land use may need to change in response to changing conditions after	Surveyor/valuer (where land is taken out of production/land use is changed); Solicitor/legal team; Economic development departments (may have familiarity with grant funding)	Installing an NFM measure/structure on someone else's land generally leads to the land manager taking on legal ownership of the structure. This needs to be carefully considered since it could affect maintenance and long term effectiveness of the measure. Consideration also needs to be given to the issue of who retains liability for the measure and its performance, and

Table 5-13: Key points to consider when determining a payment rate for capital and annual payments (government based)		
Method to determine rate	**Resources**	**Additional factors/uncertainties**
implementation of measure; • May be temporary reduction in land available to use during wet periods; • Measure likely to reduce area of land available for land manager (measure requires specific land use); • Measure requires change in management practices but not necessarily land use; • Minimal impacts on land use expected (measure focuses on watercourse and area alongside watercourse); • Potential for reduction in land available to use (if managed realignment is implemented)		also the implications for insurance State aid implications need to be given careful consideration given that grant funding is from government sources. Where annual payments are being considered, there is a risk that a long term arrangement could result in a total payment which is greater than the value of the land. Thus, the market value of the land as a purchase should be checked when setting up an annual payment agreement

Table 5-14: Payment rate calculation: Capital and annual payments (including grants) – government based	
Calculation	**Formula**
Overall formula	**Overall payment rate = f (loss/change in income, cost of measure, costs due to grant conditions, grant payment)**
Components	Loss/change in income = f (area of land affected, loss of income from change in production from land per ha, likelihood of flood incident affecting income)
	Cost of measure = f (cost of equipment or resources used, if any)
	Costs due to grant conditions = f (monitoring costs, management costs) if grant is used
	Grant payment = f (grant paid to land manager, if any)
Examples	Belford proactive flood solutions, Northumberland, England; White Cart Water flood prevention scheme, Scotland; Sustainable Land Management Incentive Scheme – Scottish Water, Scotland; Scottish Rural Development Programme (SRDP), Scotland
Notes: Particular payment programmes (e.g. SRDP) may have specific requirements that will affect the relevance of the different components	

Capital and annual payments (including grants) – non-government based

Table 5-15 provides a summary of the key points to consider when determining a payment rate for capital and annual payments (non-government based), whilst Table 5-16 presents the variables needed for the payment rate calculation.

Table 5-15: Key points to consider when determining a payment rate for capital and annual payments (non-government based)		
Method to determine rate	**Resources**	**Additional factors/uncertainties**
For all measures: Discussions need to take place to agree amount of capital or annual payment which is made to enable implementation of NFM measure, or to compensate for loss of income due to change in land	Surveyor/valuer (where land is taken out of production/land use is changed); Solicitor/legal team; Economic development	Installing an NFM measure/structure on someone else's land generally leads to the land manager taking on legal ownership of the structure. This needs to be carefully considered

Table 5-15: Key points to consider when determining a payment rate for capital and annual payments (non-government based)		
Method to determine rate	**Resources**	**Additional factors/uncertainties**
management. Amount of funding available may relate to grants available. Relevant measure types include: • Land use may need to change in response to changing conditions after implementation of measure; • May be temporary reduction in land available to use during wet periods; • Measure likely to reduce area of land available for land manager (measure requires specific land use); • Measure requires change in management practices but not necessarily land use; • Minimal impacts on land use expected (measure focuses on watercourse and area alongside watercourse); • Potential for reduction in land available to use (if managed realignment is implemented)	departments (may have familiarity with grant funding)	since it could affect maintenance and long term effectiveness of the measure. Consideration also needs to be given to the issue of who retains liability for the measure and its performance, and also the implications for insurance Where annual payments are being considered, there is a risk that a long term arrangement could result in a total payment which is greater than the value of the land. Thus, the market value of the land as a purchase should be checked when setting up an annual payment agreement

Table 5-16: Payment rate calculation: Capital and annual payments (including grants) – non-government based	
Calculation	**Formula**
Overall formula	**Overall payment rate = f (loss/change in income, cost of measure, costs due to grant conditions, grant payment)**
Components	Loss/change in income = f (area of land affected, loss of income from change in production from land per ha, likelihood of flood incident affecting income)
	Cost of measure = f (cost of equipment or resources used, if any)
	Costs due to grant conditions = f (monitoring costs, management costs) if grant is used
	Grant payment = f (grant paid to land manager, if any)
Example	Holnicote, Exmoor, England (specific parts of the project were funded by the National Trust, although the overall flood management demonstration scheme was funded by Defra) Pumlumon Project, Wales Wild Penwith, Cornwall, England

Economic instruments

Table 5-17 provides a summary of the key points to consider when determining a payment rate for economic instruments, whilst Table 5-18 presents the variables needed for the payment rate calculation.

Table 5-17: Key points to consider when determining a payment rate for economic instruments		
Method to determine rate	**Resources**	**Additional factors/uncertainties**
For all relevant measures: Negotiations will be required to determine area of land affected and extent of impacts (measure dependent) bearing in mind the economic instrument(s) available to the public body Relevant measure types include: • Land use may need to change in response to changing conditions after implementation of measure; • May be temporary reduction in land available to use during wet periods; • Measure likely to reduce area of land available for land manager (measure requires specific land use); • Measure requires change in management practices but not necessarily land use; • Minimal impacts on land use expected (measure focuses on watercourse and area alongside watercourse); • No significant impacts (measure assumed not to affect productive land); • Potential for reduction in land available to use (if managed realignment is implemented)	Solicitor/legal team; Surveyor/valuer; Agricultural advice (measure dependent); Economic development team (may bring familiarity of use of incentive measures)	Installing an NFM measure/structure on someone else's land generally leads to the land manager taking on legal ownership of the structure. This needs to be carefully considered since it could affect maintenance and long term effectiveness of the measure. Consideration also needs to be given to the issue of who retains liability for the measure and its performance, and also the implications for insurance

Table 5-18: Payment rate calculation: economic instruments	
Calculation	**Formula**
Overall formula	**Overall payment rate = f (loss/change in income, costs due to requirements of economic instrument)**
Components	Loss/change in income = f (area of land, loss of income from production on land per ha, likelihood of flood incident affecting income)
	Costs due to requirements of economic instrument = f (monitoring costs, management costs)
Example	Pumlumon Project, Wales

Advice and technical support

Table 5-19 provides a summary of the key points to consider when determining a payment rate for advice and technical support, whilst Table 5-20 presents the variables needed for the payment rate calculation. Note that for this mechanism, payment may not actually be a monetary value but could be in-kind goods, or even advice to enable land management changes.

Table 5-19: Key points to consider when determining a payment rate for advice and technical support

Method to determine rate	Resources	Additional factors/uncertainties
For all relevant measures: Hold discussions with land managers to identify low and no cost options for decreasing flood risk. Relevant measure types include: • May be temporary reduction in land available to use during wet periods; • Measure requires change in management practices but not necessarily land use; • Minimal impacts on land use expected (measure focuses on watercourse and area alongside watercourse); • No significant impacts (measure assumed not to affect productive land)	Agricultural expertise (to be able to provide advice); Purchasing/accounts department (e.g. for when replacement feed has to be supplied under the terms of the agreement)	Discussions with the land manager could help identify the most appropriate type of advice/technical support to suit their business and bring about FRM benefits. Land managers may have their own suggestions

Table 5-20: Payment rate calculation: advice and technical support

Calculation	Formula
Overall formula	**Overall payment rate = f (loss/change in income, additional costs incurred, savings achieved from taking up advice/support) [these may not result in a financial payment but could be an exchange of goods, e.g. replacement animal feed depending on discussions with land manager]**
Components	Loss/change in income = f (area of land, loss of income from production on land, likelihood of flood incident affecting income)
	Additional costs incurred = f (management costs)
	Savings achieved from taking up advice/support = f (savings from changes to management of land) [only captured where these would offset additional costs; it is not expected that the land manager would be expected to calculate savings as a means of paying for advice/support]
Examples	Holnicote, Exmoor, England; Pumlumon Project, Wales; Tweed Forum, Scotland and England (the Forum's role goes beyond advice and support; it is a broker/agent providing facilitation and enabling NFM implementation); Woodland Trust, UK wide; Sussex Flow Initiative, Sussex, England

6 Conclusions

This study identified and researched a wide range of potential mechanisms (i.e. arrangements or agreements) which could be used to enable the implementation of NFM measures. The mechanisms have been classified into eight different types to enable the assessment of their viability, and their legal and financial implications. The mechanism groups are as follows:

- Land purchase/sale;
- Land purchase/sale and leaseback;
- Land lease to public body;
- Servitude, wayleaves;
- Capital and annual payments (including grants) - EU, Government, Lottery, Agencies;
- Capital and annual payments (including grants) - Trusts, Local initiatives (non-Government);
- Economic instruments (fiscal, permits, service payments, auctions); and
- Advice and technical support.

Whilst the above categorisation helps ensure that the assessment is manageable, it is acknowledged that there is considerable variation within some of these groups. For example, capital payments require upfront funding, whilst annual payments need an ongoing funding source. Other implications relate to the likely effectiveness of a mechanism in ensuring that the measure is actually implemented and maintained over time (where appropriate). Issues such as responsibility for maintenance, flexibility of the mechanism to adapt to changing land management and any ongoing legal implications (e.g. meeting fixed equipment obligations where land is leased) all need to be given consideration.

The case studies investigated as part of the study helped to draw out some of these issues. Along with the workshop and assessment, they provided valuable information which was fed into the development of the recommendations for local authorities (see Section 4). These recommendations include the development of a five-step process that covers the preparatory work required as the basis for negotiations, and the assessment of variables and collection of information to inform estimation of the payment rate. The five steps are:

- Step 1: identifying key skills (by public body);
- Step 2: background research (by public body OR public body and broker);
- Step 3: discussions (between land manager and public body OR broker);
- Step 4: determining which type of mechanism is most appropriate; and
- Step 5: final determination of mechanism and payment rate.

These five steps, along with the approach to determining a payment rate, are also presented in a guidance document which local authorities and other public bodies can use when considering the implementation of NFM measures.

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8 Glossary

Term	Definition
Economic instrument	*(in this study*) An instrument which can be used to influence behaviour, for example, a tax, or a payment dependent on the provision of a particular service
Mechanism	*(in this study)* An agreement or arrangement (between the public body and the land manager, OR public body, land manager and broker) which enables the implementation of the measure. Whilst the mechanism may sometimes involve a monetary payment, it could alternatively be advice, or payment in-kind e.g. replacement feed for a destroyed batch
Natural flood management	An approach to flood risk management which involves using 'natural' features such as woodlands, wetlands and re-meandering channels to decrease flood risk
Natural flood management measure ('measure')	Technique or measure implemented to decrease flood risk. Technique does not involve a hard engineering solution (e.g. building a flood wall) but instead covers the use of natural features such as woodlands and wetlands to attenuate flows, and storage areas to hold flood waters
Payments for ecosystem services	Scheme whereby a beneficiary pays a provider of ecosystem services. The payment must be voluntary, and the provider undertakes to supply (or implement management actions to enable the supply of) ecosystem services such as water purification, recreational opportunities, etc. Any payment should be for management actions over and above those the land manager is expected to undertake in the absence of a scheme
Servitude	A right (e.g. a right of access) over a property which benefits an adjacent property (the benefited property)
Wayleave	Wayleave is not a legal term in Scotland, but in this study it is taken to refer to a right of use over someone else's land (e.g. a right of access, a right to install infrastructure) in return for a payment. Wayleaves have to be renewed on an annual basis

Annex 1 Detailed Results of Viability Assessment

Overview

The mechanism/measure combinations were assessed for their viability against each of the variables set out in Table 2-6 (see Section 2). Due to the number of variables to be considered for each mechanism/measure combination, the results below are broken down into:

- Relevance to different stakeholders (public body, land manager, and other individuals and organisations); and
- By group (support, administration and convenience, responsibility, etc.).

Each table shows the rating assigned to each characteristic, as follows:

- Green = good characteristic from point of view of relevant stakeholder;
- Orange = uncertainty, may be positive or negative for relevant stakeholder;
- Red = negative characteristic from point of view of relevant stakeholder; and
- Grey = variable is not relevant.

For some mechanism/measure combinations, the rating varies. This can be by:

- Measure, usually based on the level of impact caused by any particular measure (as described in Table 2-4, Section 2);
- Mechanism, where there is variation within the group of mechanisms in terms of the way they would be set-up, implemented, maintained or the information needed to develop them. This is particularly the case for different type of grants and the various mechanism types within the economic instruments group. These mechanisms can vary considerably and the actual mechanism used can, therefore, have an effect on the rating that would be assigned; or
- Individual situation. In some cases the rating may be dependent on factors which do not relate directly to either the mechanism or the measure, but to something else (e.g. willingness of land manager to enter negotiations).

Findings Relevant to Public Bodies

Level of support (time and resources, advice and skills) required by public body

Table A1-1 provides a summary of the ratings for the variables related to support required by the public body. They include:

- Support required when undertaking background research to set up the mechanism:
  - resources (time spent, number of officers involved);
  - external independent advice and skills;
- Support required to implement the mechanism (time spent, number of officers involved);
- Support required to run and maintain the mechanism for the remainder of its lifetime (time spent, number of officers involved).

Table A1-1 illustrates the variation between the different mechanisms, with minimal support potentially needed for servitude/wayleaves, but a considerable amount likely to be required for economic instruments.

Table A1-1: Findings of assessment of mechanism/measure combinations on support (time and resources, advice and skills) required by public body				
Mechanism/measure combination	**Support required to set up mechanism**		**Support required to implement mechanism**	**Support required to run and maintain mechanism**
	Time, no. of officers, etc.	**External independent advice/skills needed**		
Land purchase/sale	Limited background research required, e.g. land valuation	Assumes LA has legal and purchasing team	May require some negotiations	Not applicable: Once the land has been purchased there should be no additional support needed
Land purchase/sale and leaseback	Background research required e.g. land valuation, terms of lease	Assumes LA has legal and purchasing team	May require some negotiations	May require some admin, also may need to negotiate changes (dependent on length of lease)
Land lease to public body	Background research required e.g. terms of lease, time period, condition of land upon end of lease	Assumes LA has legal and purchasing team	May require some negotiations	Public body would hold lease so would have to ensure land management occurs; may require some admin; may also need to negotiate changes dependent on length of lease
Servitude, wayleaves	Less impact on property rights than sale	Less impact on property rights than sale	**Varies by measure:** Likely to be limited to negotiations for access only	**Varies by measure:** Where area of land affected is known minimal support needed
			Depends on how servitude, etc. will work. May require calculation of impacts (e.g. extent of land use change)	May need additional support where area of land that is unavailable exceeds that covered by mechanism

Table A1-1: Findings of assessment of mechanism/measure combinations on support (time and resources, advice and skills) required by public body				
Mechanism/measure combination	**Support required to set up mechanism**		**Support required to implement mechanism**	**Support required to run and maintain mechanism**
	Time, no. of officers, etc.	**External independent advice/skills needed**		
Capital and annual payments (including grants) - EU, Government, Lottery, Agencies	Time required for background research is dependent on source of funding	LAs assumed to have experience of applying for funding and justifying a need	**Varies by mechanism:** LA may need to lead bid/organise annual payment	**Varies by mechanism:** Some funding sources may have considerable reporting requirements e.g. EU structural funds. Big Lottery has monitoring forms
			LA may lead bid for funding e.g. Heritage Lottery Fund	
			LA cannot apply for some grants (e.g. Big Lottery Fund) so would have minimal involvement	One-off grant likely to require minimal maintenance
Capital and annual payments (including grants) - Trust, Local initiatives (non-Govt)	**Varies by grant:** Time required for background research is dependent on source of funding	LAs assumed to have experience of applying for funding and justifying a need	**Varies by grant:** LA may lead bid for funding (but often bid needs to be led by non-public body, e.g. community organisation)	**Varies by grant:** Some funding sources may have considerable reporting and monitoring requirements
	Some grant schemes offer several different types of grant with less background information required when applying for smaller grants		LA cannot apply for some grants so would have minimal involvement	One-off grant likely to require minimal maintenance

Table A1-1: Findings of assessment of mechanism/measure combinations on support (time and resources, advice and skills) required by public body				
Mechanism/measure combination	**Support required to set up mechanism**		**Support required to implement mechanism**	**Support required to run and maintain mechanism**
	Time, no. of officers, etc.	**External independent advice/skills needed**		
Economic instruments (fiscal, permits, service payments, auctions)	**Varies by measure:** May need to be significant time to set-up mechanism, especially making land managers aware of what the mechanism is and how it will work related to change in management practices	May require specialist input if requiring assessment of wider benefits as basis for applying economic instrument	**Varies by mechanism:** Will depend on actual mechanism used (auction likely to require significant time to implement)	**Varies by mechanism:** Will depend on actual mechanism used (auction likely to require external independent support, e.g. brokers)
	Likely to require time identifying additional benefits or explaining mechanism		PES and service payments may require less time	PES and service payments may require less support but may still need independent experts
			Fiscal mechanisms may require minimal time	Fiscal mechanisms may require little external independent support (but will depend on details)
Advice and technical support	**Varies by measure:** Research may be needed	External independent advice may be needed (source/type varies by measure)	**Varies by measure**: Some negotiations may be required	Minimal administration/ monitoring required
	But amount may vary		But may be minimal for measures with little or no impact	

Administration and convenience, and responsibility (from viewpoint of public body)

The amount of administration and the level of convenience associated with a mechanism are dependent on whether there is an established procedure to enable the mechanism to be implemented, and whether the mechanism needs to be continually managed and modified during its lifetime. Responsibility variables include who has to set up the mechanism and who will run, manage and maintain it. Table A1-2 provides a summary of the ratings for the variables of administration and convenience, and responsibility for setting up, running, managing and maintaining the mechanisms.

Table A1-2: Findings of assessment of mechanism/measure combinations on convenience and responsibility (from viewpoint of public body)				
Mechanism/measure combination	Convenience for public body		Public body level of responsibility	
	Setting up the mechanism (established procedure or new process?)	Running and maintaining the mechanism (ongoing management and modification required?)	Setting up the mechanism	Running, managing, maintaining, the mechanism
Land purchase/sale	Evidence LAs have bought/sold land before; LAs likely to have solicitors and surveyors	No management needed once land is bought	LA has to promote case for sale	LA would be responsible once own land
Land purchase/sale and leaseback	LAs have bought/sold/leased before; LAs likely to have solicitors and surveyors	Extent of ongoing management is dependent on length and terms of lease	LA has to promote sale and set up lease	LA has to manage freehold and operate lease
Land lease to public body	LAs have bought/sold/leased before; LAs likely to have solicitors and surveyors	Extent of ongoing management is dependent on length and terms of lease	LA has to promote the need for a lease and approach land manager (and negotiate conditions/terms)	LA has to ensure that management occurs according to conditions of lease, and also that land is in appropriate condition at end of lease
Servitude, wayleaves	Similar to purchase but may require LA to obtain additional skills	Once set-up should not need further management (only issue may be if agreement turns out to over or under estimate impact on land and hence costs to be covered)	LA would have to lead and promote mechanisms to land manager	LA may be responsible for measure; land manager would still be responsible for land and access
Capital and annual payments (including grants) - EU, Government, Lottery, Agencies	Specific application process may not have been followed by LA before, but LA assumed to have experience of applying for funding	Management will be required to ensure objectives of funding met	**Varies by mechanism:** Dependent on fund e.g. LA usually has to take responsibility for Heritage Lottery Fund (Parks for People) bids	**Varies by mechanism:** Dependent on fund e.g. LA usually has to take responsibility for Heritage Lottery Fund (Parks for People) bids
			Some funds may require partnerships, or could be led by LA, or by others e.g.	Some funds may require partnerships, or could be led by LA, or by others e.g.

Table A1-2: Findings of assessment of mechanism/measure combinations on convenience and responsibility (from viewpoint of public body)				
Mechanism/measure combination	**Convenience for public body**		**Public body level of responsibility**	
	Setting up the mechanism (established procedure or new process?)	**Running and maintaining the mechanism (ongoing management and modification required?)**	**Setting up the mechanism**	**Running, managing, maintaining, the mechanism**
			Climate Challenge Fund	Climate Challenge Fund
			Community groups and organisations may have to take responsibility e.g. Big Lottery Fund	Community groups and organisations may have to take responsibility e.g. Big Lottery Fund
Capital and annual payments (including grants) - Trust, Local initiatives (non-Govt)	**Varies by mechanism:** LA may need to work with external independent bodies/ organisations to apply for the grant (where applicant cannot be public body)	Management will be required to ensure objectives of funding met	**Varies by mechanism:** Dependent on fund e.g. LA may have to take responsibility	**Varies by mechanism:** Dependent on fund, but often applicant has to be NGO, voluntary/ community organisation, etc.
			Some funds may require partnerships, or could be led by LA, or led by others e.g. People's Postcode Trust	
	Specific application process may not have been followed by LA before, but LA assumed to have experience of applying for funding		Community groups and organisations may have to take responsibility	Community groups and organisations may have to take responsibility
Economic instruments (fiscal, permits, service payments, auctions)	Likely that LA will need to implement/use new processes. These could require brokers (e.g. auctions, permits). Simpler measures may not but LA is likely to need some external independent support	**Varies by measure:** Minimal impacts may reduce need for ongoing management; changing management may mean there is a need for ongoing management and modification	**Varies by mechanism:** Likely that some input will be needed from LA and land manager; may be greater input from land managers with reverse auctions	LA will need to manage the mechanism, ensuring measures are implemented, checking eligibility, etc. Likely to require some monitoring

Table A1-2: Findings of assessment of mechanism/measure combinations on convenience and responsibility (from viewpoint of public body)				
Mechanism/measure combination	Convenience for public body		Public body level of responsibility	
	Setting up the mechanism (established procedure or new process?)	Running and maintaining the mechanism (ongoing management and modification required?)	Setting up the mechanism	Running, managing, maintaining, the mechanism
Advice and technical support	**Varies by measure:** LA is likely to need some external independent advice where management practices need to change	Ongoing monitoring and administration required to review agreement	**Varies by measure:** LA responsible for initial approach and provision of technical advisor	**Varies by measure:** LA likely to have full responsibility due to lack of impact on productive area
	Extent of advice required by LA is dependent on measure			Land manager has to implement the agreement but LA would probably want to monitor it
	LA likely to already have skills required to set up an incident payment or construct a holding area (planning permission)		LA will have to initiate negotiation but the land manager may have to obtain quotes or provide estimates	If an agreement is made for replacement feed/payment for feed, it is likely the land manager will have to produce a receipt

Scale and finance (from viewpoint of public body)

Table A1-3 provides a summary of the ratings for the variables of scale and finance. Scale variables consider how the mechanism could be applied across farms and measures, and at the catchment or local scale. Finance variables capture the level of financial commitment likely to be required from the public body, and if there are any restrictions preventing or limiting combinations of mechanisms. Whilst some mechanisms may require a large upfront financial commitment (e.g. land purchase/sale), others may need lower financial input during their initial implementation, but this input may be required for the long term (e.g. land lease to public body). The most appropriate mechanism is likely to depend on the individual situation. Purchasing specific parcels of land may be more cost effective than implementing other mechanisms (e.g. economic instruments) over a larger area. However, it is important to remember that the level of financial commitment by the public body is just one factor to be considered when negotiating with land managers.

Table A1-3: Findings of assessment of mechanism/measure combinations on scale and finance (from viewpoint of public body)				
Mechanism/measure combination	Scale		Finance	
	Application	Flood risk reduction benefits	Commitment from public body	Potential to combine with other mechanisms
Land purchase/sale	Can be applied to single farm, single measure, multiple measures, multiple farms	Can be applied at catchment and/or local scale	Involves buying land so high upfront commitment	Depends on funder; could be high to low potential
Land purchase/sale and leaseback	Can be applied to single farm, single measure, multiple measures, multiple farms	Can be applied at catchment and/or local scale	Involves high initial outlay but some return through lease	Depends on funder; could be high to low potential
Land lease to public body	Can be applied to single farm, single measure, multiple measures, multiple farms	Can be applied at catchment and/or local scale	May be lump sum or regular amount dependent on terms and length of lease. Could be long term commitment	Depends on funder; could be high to low potential
Servitude, wayleaves	Can be applied to single farm, single measure, multiple measures, multiple farms	Can be applied at catchment and/or local scale (should be greater likelihood than land purchase)	**Varies by measure:** Will depend on extent of change in management practice - full land use change may require large payment	May not want lots of different funders for servitude, etc. due to complication of setting up agreement
Capital and annual payments (including grants) - EU, Government, Lottery, Agencies	May be applicable at single measure, single farm, multiple measure, multiple farm, dependent on specific objectives of fund	May be applicable at catchment and/or local scale; dependent on specific objectives of fund	**Varies by mechanism and measure:** Dependent on payment arrangement and whether match funding is required, e.g. EU Interreg provides up to 75% of funding	**Varies by mechanism:** Dependent on fund e.g. Life programme for 2014-2020 expects 60% co-financing for traditional nature and biodiversity projects but 75% for projects targeting priority habitats/species
			Amount of money required is likely to be relatively low if minimal impacts on land use expected	Having part of the cost paid by an independent third party decreases the financial commitment by the public body.

Table A1-3: Findings of assessment of mechanism/measure combinations on scale and finance (from viewpoint of public body)				
Mechanism/measure combination	**Scale**		**Finance**	
	Application	**Flood risk reduction benefits**	**Commitment from public body**	**Potential to combine with other mechanisms**
				Whilst the whole cost may not be covered (administration may have some costs), the ability share expenses is a benefit
Capital and annual payments (including grants) - Trust, Local initiatives (non-Govt)	May be applicable at single measure, single farm, multiple measure, multiple farm, dependent on specific objectives of fund	May be applicable at catchment and/or local scale; dependent on specific objectives of fund	**Varies by mechanism:** Dependent on way grant is organised - there may need to be some match funding	**Varies by mechanism:** Dependent on fund or payment arrangement
			Amount of money required is likely to be relatively low for management changes	
Economic instruments (fiscal, permits, service payments, auctions)	**Varies by mechanism:** May be possible at single measure, single farm, multiple measure level	**Varies by mechanism:** Simpler mechanisms could be used at the local scale (PES, fiscal)	**Varies by mechanism and measure:** Likely to depend on benefits being delivered and approach being used	**Varies by mechanism:** Economic instruments will require a funder so will depend to some extent on source of funds, but potential to combine funds from range of beneficiaries (e.g. PES)
	Multiple farms may better enable mechanism	Catchment scale may better enable mechanism, or types within this group of mechanism (trading, auctions)	Probably small for measures with minimal/no impact on land use (but will need to reflect costs of implementing measure)	
Advice and technical support	**Varies by measure:** Can be applied to single farm, single measure, multiple measures, multiple farms	**Varies by measure:** May be applicable at catchment and/or local scale	Likely to be small or one-off payments	**Varies by measure:** Dependent on measure and source of funding (e.g. if LA obtains grant)

Effectiveness, flexibility and time (from viewpoint of public body)

Table A1-4 provides a summary of the ratings for the variables of effectiveness, flexibility and time. Effectiveness covers ensuring the measure is implemented, and potential for long-term benefits. Flexibility considers whether the mechanism can be modified over time if circumstances change while time captures the period over which the mechanism may need to be set up.

Table A1-4: Findings of assessment of mechanism/measure combinations on effectiveness, flexibility and time (from viewpoint of public body)

Mechanism/measure combination	Effectiveness		Flexibility	Time to set-up mechanisms
	Implemented as intended	Over time		
Land purchase/sale	LA can manage land as they choose	LA can manage land as they choose	No flexibility, land would have to be sold again	6 months+ but depends on willingness of land manager to sell and time taken to agree price, etc. Having as short a lead in time as possible is best in case there is a flood
Land purchase/sale and leaseback	LA can stipulate management conditions in lease	Dependent on length and terms of lease	Limited; LA can vary terms of lease when renegotiating	6 months+ but depends on willingness of land manager to sell and lease, time to agree price and lease conditions. Having as short a lead in time as possible is best in case there is a flood
Land lease to public body	LA can manage land as they wish (provided that management is in line with terms of lease)	Dependent on length and terms of lease	Limited; LA could request changes to terms of the lease; there may also be an option to renew the lease	1 month+ but depends on willingness of land manager to lease, time to agree price and lease conditions. Having as short a lead in time as possible is best in case there is a flood

Table A1-4: Findings of assessment of mechanism/measure combinations on effectiveness, flexibility and time (from viewpoint of public body)				
Mechanism/measure combination	**Effectiveness**		**Flexibility**	**Time to set-up mechanisms**
	Implemented as intended	**Over time**		
Servitude, wayleaves	LA could implement measure on land without having to buy it	Mechanism can be negotiated over long-term enabling measure over same time period (some mechanisms, e.g. wayleaves, may not transfer to new managers so would need to be negotiated; servitude goes with land)	**Varies by mechanism:** Limited; servitude may be difficult to renegotiate (goes with land)	1 month+ but depends on interest/ willingness of land manager and length of negotiations. Having as short a lead in time as possible is best in case there is a flood
			May be very flexible: potential to renegotiate agreement but would require new agreements and further negotiations	
Capital and annual payments (including grants) - EU, Government, Lottery, Agencies	**Varies by mechanism:** Grant/payment may provide incentive but does not ensure measure is implemented	**Varies by measure**: Grant/fund only likely to be effective for as long as payments last	**Varies by mechanism:** Dependent on conditions of grant/fund. Fund may not be flexible	1 month+ but varies by grant/fund. Having as short a lead in time as possible is best in case there is a flood
	For SRDP, final payment occurs after inspection of large capital items. For smaller capital items and annual recurrent costs, a proportion of contracts are inspected. Targeted inspections may also occur to ensure grant compliance	Where grant/fund has resulted in change in land use, mechanism is likely to be effective over a relatively long time period	Dependent on conditions of grant/fund e.g. for Big Lottery Fund, tracking progress is important so changes can be made if necessary	
Capital and annual payments (including grants) - Trust, Local initiatives (non-Govt)	Grant/payment may provide incentive but does not ensure measure is implemented	**Varies by measure:** Grant/fund only likely to be effective for as long as payments last	**Varies by mechanism:** Dependent on conditions of grant/fund. Fund may not be flexible	1 month+ but varies by grant/fund. Having as short a lead in time as possible is best in case there is a

Table A1-4: Findings of assessment of mechanism/measure combinations on effectiveness, flexibility and time (from viewpoint of public body)				
Mechanism/measure combination	**Effectiveness**		**Flexibility**	**Time to set-up mechanisms**
	Implemented as intended	**Over time**		
		Where grant/fund has resulted in change in land use, mechanism is likely to be effective over a relatively long time period	Dependent on conditions of grant/fund	flood
Economic instruments (fiscal, permits, service payments, auctions)	**Varies by measure:** Mechanism likely to be linked to implementation of measure so should be effective (could also be linked to outcomes which could increase effectiveness but may be more difficult to assess)	**Varies by measure:** For low impact measures, changes in land management could easily be reverted (e.g. measures requiring change in land management practices, or temporary reduction in land available to use) so long-term benefits not secured	Likely to have some flexibility - could be built into mechanism	6 months+ but will depend on details of mechanism, some (e.g. trading, auctions) likely to need more time than others (e.g. fiscal); greater impacts may require more time to set-up. Having as short a lead in time as possible is best in case there is a flood
	For measures with more significant land management impacts (e.g. measures resulting in land use change, decreased area available for land manager and reduced land area due to managed realignment) land use change is likely to be permanent (unless there is another incentive to change back)	For measures with more significant land management impacts (e.g. measures resulting in land use change, decreased area available for land manager and reduced land area due to managed realignment) land use change is likely to be permanent (unless there is another incentive to change back)		
Advice and technical support	Land manager will only receive assistance if they allow the measure to be implemented	Most likely to be short term contracts/ agreements	Very flexible; most likely to be short term contracts/ agreements so can be altered if found to not be satisfactory	A few weeks: simple straight forward agreements/ advice should be quick to agree. Having as short a lead in time as

Table A1-4: Findings of assessment of mechanism/measure combinations on effectiveness, flexibility and time (from viewpoint of public body)				
Mechanism/measure combination	Effectiveness		Flexibility	Time to set-up mechanisms
	Implemented as intended	Over time		
				possible is best in case there is a flood

Findings Relevant to Land Managers

Applicability of mechanisms by land use capability (from land manager's viewpoint)

Table A1-5 assesses the likely relevance and desirability of the various mechanisms to land managers by land use capability. The table shows where land managers may be willing to consider the mechanisms (green), where there may be potential for the mechanism with negotiation (orange) and where it is unlikely that the land manager would be willing to take up the mechanisms (red).

In most cases, when prime land is involved, it is considered that land managers are less willing to use the mechanisms (but the decision will ultimately depend on the price). Advice and technical support is generally thought to be taken advantage of by land managers if it is freely provided (for example, it could help decrease soil erosion). However, this mechanism is not necessarily expected to be appropriate for the measure type where there "May be temporary reduction in land available to use during wet periods" for land classes 1, 2 and 3, since it is considered unlikely that land managers would accept temporary loss of their prime land. Take-up will ultimately depend on the circumstances in each particular case. There are also some negative (red) ratings for class 7 due to a likely lack of incentive for land managers to take on a lease for land of limited agricultural value. For servitude/wayleaves, there may be greater opportunities for negotiations where the impacts on land use are temporary or the impacts on land use are minimal. The interest in relation to grants and economic instruments is likely to be linked to the level of payment as well as the impacts caused by the measure.

In summary, the majority of the mechanisms could potentially be used across the different land classes, but their acceptability in each individual case will likely depend on the offer made to the land manager. Certain land classes (i.e. classes 1, 2; and 3.1) are expected to require higher payment rates than others for the mechanism to be attractive to the land manager.

Table A1-5: Applicability of mechanisms by land use capability (from land manager's viewpoint)								
Land use type	Mechanism groups							
	Land purchase/sale	Land purchase/sale and leaseback	Land lease to public body	Servitude, wayleaves	Capital and annual payments (including grants) - EU, Government, Lottery, Agencies	Capital and annual payments (including grants) - Trust, Local initiatives (non-Govt)	Economic instruments	Advice and technical support
Class 1 Prime agricultural land (very wide range of crops with consistently high yields)								
Class 2 Prime (wide range of crops, except those harvested in winter)								
Class 3.1 Prime (moderate range of crops, with good yields for some e.g. cereals and grass, and moderate yields for others e.g. potatoes, field beans, other vegetables)								
Class 3.2 Non-prime agricultural land (moderate range of crops, with average production, but potentially high yields of barley, oats and grass)								
Class 4.1 Non-prime (a narrow range of crops, especially grass but harvesting may be difficult)								
Class 4.2 Non-prime (narrow range of crops, especially grass but harvesting may be difficult)								
Class 5 Non-prime (improved grassland with mechanical intervention possible to allow seeding, rotovation or ploughing)								

Table A1-5: Applicability of mechanisms by land use capability (from land manager's viewpoint)								
Land use type	Mechanism groups							
	Land purchase/sale	Land purchase/sale and leaseback	Land lease to public body	Servitude, wayleaves	Capital and annual payments (including grants) - EU, Government, Lottery, Agencies	Capital and annual payments (including grants) - Trust, Local initiatives (non-Govt)	Economic instruments	Advice and technical support
Class 6 Non-prime (rough grazing only)								
Class 7 Non-prime (very limited agricultural value)								

Applicability of mechanisms by type of business income (from land manager's viewpoint)

Table A1-6 assesses the likely relevance and desirability of the various mechanisms to land managers by type of business income. The table shows where land managers are considered to be willing to consider applying the mechanisms (green), where there may be potential for the mechanism with negotiation (orange) and where it is unlikely that the land manager would be willing to take up the mechanisms (red). Here, it is mainly smallholdings/crofts that are shown as having negative (red) ratings due to the limited availability of land for implementing measures while still maintaining sufficient productivity. Similar issues in terms of limitations in land area, especially for measures that require change in land use, are assumed to apply to equestrian businesses. Changes in land use for shooting estates could be beneficial providing they continue to allow access. For grants and economic instruments, uptake is likely to depend on the size of the grant and the specific requirements so could be applicable (or not) to most business income types. Arable businesses may also be unwilling to rely on advice and technical support alone where the measures would result in flooding of crops.

Table A1-6: Applicability of mechanisms by type of business income (from land manager's viewpoint)								
Land use type	Mechanism groups							
	Land purchase/sale	Land purchase/sale and leaseback	Land lease to public body	Servitude, wayleaves	Capital and annual payments (including grants) - EU, Government, Lottery, Agencies	Capital and annual payments (including grants) - Trust, Local initiatives (non-Govt)	Economic instruments	Advice and technical support
Hill farm								

Table A1-6: Applicability of mechanisms by type of business income (from land manager's viewpoint)									
Land use type	Mechanism groups								
	Land purchase/sale	Land purchase/sale and leaseback	Land lease to public body	Servitude, wayleaves	Capital and annual payments (including grants) - EU, Government, Lottery, Agencies	Capital and annual payments (including grants) - Trust, Local initiatives (non-Govt)	Economic instruments	Advice and technical support
Lowland farm								
Mixed hill/lowland								
Arable								
Livestock								
Mixed arable/livestock								
Equestrian								
Small holding/croft								
Shooting estate								
Other								

Applicability of mechanisms by area of land holding, type of individual affected and number of land managers (from land manager's viewpoint)

Table A1-7 shows the applicability of the mechanisms according to:

- The area of the land holding;

- The type of individual affected (landowner, land manager, tenant); and
- The number of land managers who could be involved with the mechanism.

As would be expected, mechanisms such as grants, and advice and support have less of an impact on the area of land holding. They may also be more appropriate for ensuring that the organisation/individual who actually uses the land is the one compensated (mechanisms such as land purchase/sale do not really take the tenant/manager into account). However, mechanisms which require legal transfer of land may be easier to apply to multiple land managers (for example, when a catchment wide approach is needed), since the same process could be applied in each case. For mechanisms such as advice and technical support, multiple partners could be involved but the advice is likely to need to be tailored for each case.

Table A1-7: Findings of assessment of mechanism/measure combination by area of land holding, type of individual affected and number of land managers (from land manager's viewpoint)

Mechanism/measure combination	Area of land holding	Type of individual (landowner, manager, tenant) being compensated	Number of land managers
Land purchase/sale	Land would have to be sold	**Varies by type of individual:** Money would go to landowner following sale (could have right to buy back)	**Varies by measure:** Could have several single agreements
		Compensation package needed for tenant	Could have multiple agreements following same format
Land purchase/sale and leaseback	**Varies by measure:** Lease may limit use of land for particular purposes	**Varies by type of individual:** Money would go to landowner following sale (could have right to buy back)	**Varies by measure:** Could have several single agreements
	Lease may require specific land use	Conditions on lease might limit activities of land manager/tenant (they might in turn require a rent rebate or compensation)	Could have multiple agreements following same format
Land lease to public body	Local authority takes control of land for duration of lease	**Varies by type of individual:** Money would go to landowner following signing of lease (manager responsibilities may change	**Varies by measure:** Could have several single agreements
		Lease would likely prevent land use (tenant could lose current tenancy)	Could have multiple agreements following same format

Table A1-7: Findings of assessment of mechanism/measure combination by area of land holding, type of individual affected and number of land managers (from land manager's viewpoint)			
Mechanism/measure combination	**Area of land holding**	**Type of individual (landowner, manager, tenant) being compensated**	**Number of land managers**
Servitude, wayleaves	**Varies by measure:** Measure may necessitate change in land use	**Varies by type of individual:** Any capital payments would be made to the land owner	Would need to be agreements with individual land managers, but could have several agreements across multiple farms
	Will depend on frequency and severity of impacts, but temporary effects should have lower overall impact than change in land use; May be some need for change in management, but this would be limited to certain areas	Manager/tenant would need compensating where grazing/cropping/ other activities were affected	
	There may not be any impacts on area of land available (e.g. if measure just requires access)		
Capital and annual payments (including grants) - EU, Government, Lottery, Agencies	**Some variation by measure and mechanism:** Objectives of grant/fund likely to be strongly linked to measure output (e.g. creation of woodland) and so prevent original land use	**Varies by measure and mechanism:** Grant could go to manager/tenant if their activities were affected (payment could go to individual/organisation losing land)	**Varies by measure and mechanism:** May need single agreement (type of land use change likely to be specific to the individual; could have single agreement for small area) Multiple partners – may be possible to set up a collaborative approach depending on extent of land use change and requirements of mechanism
	Specific objectives of fund (e.g. creation of pond/scrape) may require original land use to change; there may be impacts for land use alongside the watercourse	Payment needs to go to individual/organisation temporarily inconvenienced	
	Grant/fund expected to enable implementation of measure with temporary impacts		

Table A1-7: Findings of assessment of mechanism/measure combination by area of land holding, type of individual affected and number of land managers (from land manager's viewpoint)			
Mechanism/measure combination	**Area of land holding**	**Type of individual (landowner, manager, tenant) being compensated**	**Number of land managers**
Capital and annual payments (including grants) - Trust, Local initiatives (non-Govt)	**Some variation by measure and mechanism:** Objectives of grant/fund likely to be strongly linked to measure output (e.g. creation of woodland) and so prevent original land use	**Varies by measure and mechanism:** Grant could go to manager/tenant if their activities were affected (payment could go to individual/organisation losing land)	**Varies by measure and mechanism:** May need single agreement (type of land use change likely to be specific to the individual; could have single agreement for small area) Multiple partners – may be possible to set up a collaborative approach depending on extent of land use change and requirements of mechanism
	Specific objectives of fund (e.g. creation of pond) may require change in land use; there may be impacts for land use alongside the watercourse	Payment needs to go to individual/organisation temporarily inconvenienced	
	Grant/fund expected to enable implementation of measure with temporary impacts		
Economic instruments (fiscal, permits, service payments, auctions)	**Varies by measure:** Mechanism could prevent use of land (possibly just over specific area)	Payments could be targeted at who is implementing measure so not limited to land owner	**Varies by measure and mechanism:** Single agreement - could be targeted at individuals or groups depending on mechanism. Agreements likely to be with one land manager
	Mechanism could limit use of land		Multiple agreement – may be possible for land managers to get together to form a partnership (e.g. along a watercourse). Payment could be complicated though unless based on expenditure as may be difficult to identify who is delivering what proportion of the benefits
	Measures may only require management changes, or have no significant impacts for land use		

Table A1-7: Findings of assessment of mechanism/measure combination by area of land holding, type of individual affected and number of land managers (from land manager's viewpoint)			
Mechanism/measure combination	**Area of land holding**	**Type of individual (landowner, manager, tenant) being compensated**	**Number of land managers**
Advice and technical support	**Varies by mechanism and measure:** Mechanism/measure will limit the original use of land during wet periods. If used for agriculture, mechanism should allow business to continue at a different location (i.e. in a barn)	Mechanism is likely to compensate the person actively using the land	**Varies by situation:** Mechanism would work well as a single agreement
	Mechanism/measure may have minimal/insignificant impacts on land use		Multiple partners would be possible (may require a number of farms, e.g. either side of a river)

Convenience of mechanisms (from land manager's viewpoint)

Table A1-8 shows the likely convenience of the mechanism/measure combinations for the land manager. It considers both convenience in relation to setting up the mechanism and the convenience of the payment frequency. In general, mechanism/measure combinations which involve transfer of land rights (e.g. through sale, lease or sale and lease back) are less convenient for the land manager than other types of mechanism (e.g. capital grants, advice and technical support). The payment frequency varies within mechanism types, since it is likely to depend on what is agreed within each individual situation.

Table A1-8: Findings of assessment of mechanism/measure combination for convenience for land managers		
Mechanism/measure combination	**Convenience in relation to setting up mechanism (convenience for land manager)**	**Convenience in relation to land manager payment frequency**
Land purchase/sale	Solicitor, land agent likely to be required by land manager	Single one-off payment on purchase
Land purchase/sale and leaseback	Solicitor, land agent likely to be required by land manager	**Varies by measure:** Single one-off payment on purchase
		Land manager has to pay annual or other regular payment for lease
		Potential for a rent rebate if an incident occurred
Land lease to public body	Solicitor, land agent likely to be required by land manager	Single one-off payment or annual/other regular payment dependent on terms of lease
Servitude, wayleaves	Some external independent support would be required during negotiations (land manager likely to need solicitor, land agent)	**Varies by mechanism:** Servitude would be a one-off payment; Wayleave could be payment as required

Table A1-8: Findings of assessment of mechanism/measure combination for convenience for land managers		
Mechanism/measure combination	**Convenience in relation to setting up mechanism (convenience for land manager)**	**Convenience in relation to land manager payment frequency**
Capital and annual payments (including grants) - EU, Government, Lottery, Agencies	**Varies by measure:** Where measure reduces land area available, land manager is likely to know if the operation is viable with reduced land	**Varies by grant/fund and measure:** Dependent on extent of land use change necessary (incident payment may occur but this would not enable financial planning)
	Land manager may need support to adapt land use/plan around temporary loss of land	
Capital and annual payments (including grants) - Trust, Local initiatives (non-Govt)	**Varies by measure:** Where measure reduces land area available, land manager is likely to know if the operation is viable with reduced land	**Varies by grant/fund and measure:** Where source of funding (grant) is non-government, there could be uncertainty regarding the longer term continuation of grant funding. This could be less stable than funding from central government
	Land manager may need support to adapt land use/plan around temporary loss of land; land manager (dependent on type of grant and applicant) may need assistance with grant applications to secure funding	Dependent on extent of land use change necessary (incident payment may occur but this would not enable financial planning)
Economic instruments (fiscal, permits, service payments, auctions)	External independent support likely to be required during set-up as land managers unlikely to be familiar with mechanisms (especially if newly introduced)	**Varies by mechanism and measure:** Single one-off payment could be linked to costs of implementing measure; Annual or other payment could be linked to benefits delivered (e.g. biodiversity); Incident payment could be linked to flooding events (but may not enable financial planning)
Advice and technical support	Land manager is not expected to need advice and support beyond that provided by the mechanism	**Varies by mechanism and measure:** Mechanisms are not financial so no payment will be made, but other support may be provided as a one-off intervention (e.g. provision of new barn or holding area) or whenever there is an incident (e.g. replacement feed)

Compatibility, flexibility and time to set up mechanism (from land manager's viewpoint)

Table A1-9 considers the mechanism/measure combinations in terms of:

- Their compatibility with existing land management plans;
- Their flexibility over time; and
- The lead-in time required to set up the mechanism.

In general, the compatibility with existing land management depends more on the measure than the mechanism. This would be expected since it is the impacts of the measure which are likely to drive the need for changes in land management (subject to the restrictions of some of the mechanisms e.g. land purchase/sale). There is considerable variation between mechanism/measure combinations in terms of whether they can be adapted over time. The most flexible mechanism from the land manager perspective is advice and technical support, whilst the least flexible is expected to be land purchase/sale. The lead-in time needed to set up the mechanisms also varies, although this is likely to be affected by the individual situation as much as by the specific mechanism/measure combination. It should be noted that even where a mechanism is recorded as having a red rating (e.g. land purchase/sale is considered incompatible with existing land management plans), this does not mean that it would never be considered by a land manager. The acceptability of any mechanism will depend on the individual situation and whether the payment rate (or advice/support) offered is high enough to compensate for the negative impacts expected by the land manager. For example, selling land may not fit with current business plans, but could provide money to enable the business to develop in other areas, and thus might ultimately be acceptable to the land manager.

Table A1-9: Findings of assessment of mechanism/measure combination on compatibility, flexibility and time (from land manager's viewpoint)

Mechanism/ measure combination	Compatibility of mechanism with existing land management plans	Flexibility of mechanism over time (for land manager)	Lead-in time required to set up the mechanism
Land purchase/sale	Land would be sold	Once sold unlikely to get land back (but could have a right of pre-emption, i.e. first option to buy)	**Varies by individual situation:** Depends on willingness of land manager to sell and time taken to agree price, etc.
			Depends on willingness of land manager to sell and time taken to agree price, etc.
Land purchase/sale and leaseback	**Varies by measure:** Where measure leads to temporary reduction in land available to use, lease would enable land use to continue, but with restrictions	May be possible to negotiate variations to lease	**Varies by individual situation:** Depends on willingness of land manager to sell and lease, time to agree price and lease conditions
	Some measures may necessitate a lease which requires a specific land use. Land managers need to understand the conditions imposed on them. Any uncertainty regarding the criteria with which land managers need to comply could result in them being wary of participating		Depends on willingness of land manager to sell and lease, time to agree price and lease conditions

Table A1-9: Findings of assessment of mechanism/measure combination on compatibility, flexibility and time (from land manager's viewpoint)			
Mechanism/ measure combination	**Compatibility of mechanism with existing land management plans**	**Flexibility of mechanism over time (for land manager)**	**Lead-in time required to set up the mechanism**
Land lease to public body	Lease would most likely lead to land management effectively being undertaken by the public body for the duration of the lease	May be possible to negotiate variations to lease	**Varies by individual situation:** Depends on willingness of land manager to lease, time to agree price and lease conditions
			Depends on willingness of land manager to lease, time to agree price and lease conditions
Servitude, wayleaves	**Varies by measure and mechanism:** Measure may require change in land use; this would be confirmed through mechanism. Land managers need to understand the conditions imposed on them. Any uncertainty regarding the criteria with which land managers need to comply could result in them being wary of participating	**Some variation by measure and mechanism:** Some renegotiation may be possible (e.g. wayleave) but likely to require some time and expertise	**Some variation by measure and mechanism:** Depends on length of negotiations
	May depend on frequency of impacts (where measure results in temporary reduction in land area available)		
	May just be change in access agreements (but could depend on frequency of impacts)		
Capital and annual payments (including grants) - EU, Government, Lottery, Agencies	**Varies by measure:** May require significant change, e.g. measure leads to wetter conditions or requires planting of woodland. Land managers need to understand the conditions imposed on them. Any uncertainty regarding the criteria with which land managers need to comply could result in them being wary of participating	**Varies by mechanism:** Dependent on conditions of grant/fund. Fund may not be flexible (mechanism may not be suitable for all measure types)	**Varies by mechanism:** Varies by grant/fund

Table A1-9: Findings of assessment of mechanism/measure combination on compatibility, flexibility and time (from land manager's viewpoint)			
Mechanism/ measure combination	**Compatibility of mechanism with existing land management plans**	**Flexibility of mechanism over time (for land manager)**	**Lead-in time required to set up the mechanism**
	Dependent on land use change; may just require change in management	Dependent on conditions of grant/fund e.g. for Big Lottery Fund, tracking progress is important so changes can be made if necessary	
	Measure may only lead to temporary inconvenience		
Capital and annual payments (including grants) - Trust, Local initiatives (non-Govt)	**Varies by measure:** May require significant change, e.g. measure leads to wetter conditions or requires planting of woodland. Land managers need to understand the conditions imposed on them. Any uncertainty regarding the criteria with which land managers need to comply could result in them being wary of participating	**Varies by mechanism:** Dependent on conditions of grant/fund. Fund may not be flexible (mechanism may not be suitable for all measure types)	**Varies by mechanism:** Varies by grant/fund
	Dependent on land use change; may just require change in management	Dependent on conditions of grant/fund	
	Measure may only lead to temporary inconvenience		
Economic instruments (fiscal, permits, service payments, auctions)	**Varies by measure:** Land use may have to change significantly. Land managers need to understand the conditions imposed on them. Any uncertainty regarding the criteria with which land managers need to comply could result in them being wary of participating	Will depend on design of mechanism, maybe fixed for a period then revised (e.g. trading, auctions)	**Varies by mechanism/ measure:** Will depend on details of mechanism, some (trading, auctions) likely to need more time than others (e.g. fiscal). Also dependent on measure, with complex measures requiring more time
	Measure may only result in temporary reduction in land available to use or have minimal impact on land use	May be more flexible although some element of fixing may be needed (e.g. PES) this could be more linked to needs of land manager than requirement of mechanism	Will depend on details of mechanism, some (e.g. trading, auctions) likely to need more time than others (e.g. fiscal)

Table A1-9: Findings of assessment of mechanism/measure combination on compatibility, flexibility and time (from land manager's viewpoint)			
Mechanism/ measure combination	**Compatibility of mechanism with existing land management plans**	**Flexibility of mechanism over time (for land manager)**	**Lead-in time required to set up the mechanism**
Advice and technical support	**Varies by mechanism and measure:** Mechanism/measure may require a change in management. Land managers need to understand the conditions imposed on them. Any uncertainty regarding the criteria with which land managers need to comply could result in them being wary of participating	**Varies by mechanism/measure:** May be difficult to exit if there is a contractual agreement to allow measures while the permanent structure (i.e. barn) is in use	**Varies by mechanism/measure:** May depend on willingness of land manager to accept offer. Time may be required to obtain quotes for permanent structures or gain advice of external independent experts
	Mechanism/measure may have minimal/insignificant impacts on current land management	Some mechanism/measure combinations are simple and fairly flexible	Simple straight forward agreements/advice should be quick to agree

Findings Relevant to Individuals Excluding the Land Manager and Public Body

Level of involvement and time by independent third parties

In some cases, there may be a need for external independent organisations to get involved with setting up and managing the mechanism, for example, a broker may be required to facilitate negotiations between the public body and land manager. Table A1-10 indicates that the involvement of an independent third party is likely to be necessary for the majority of the mechanisms. Whilst the extent of any involvement is not expected to be excessive, there is likely to be considerable variation dependent on the individual situation (as well as the mechanism/measure combination).

Table A1-10: Findings of assessment of mechanism/measure combination on level of involvement and time by independent third parties		
Mechanism/measure combination	**Extent of involvement required by those in addition to land manager and public body**	**Lead-in time required to set up mechanism**
Land purchase/sale	LAs are likely to have solicitors and surveyors/valuers so will not need external independent support	Depends on willingness of land manager to sell and time taken to agree price, etc.
	Land manager likely to need solicitor, land agent, etc.	
Land purchase/sale and leaseback	LAs are likely to have solicitors and surveyors/valuers so will not need external independent support	Depends on willingness of land manager to sell and lease, time to agree price and lease conditions
	Land manager likely to need solicitor, land agent, etc.	

Table A1-10: Findings of assessment of mechanism/measure combination on level of involvement and time by independent third parties		
Mechanism/measure combination	**Extent of involvement required by those in addition to land manager and public body**	**Lead-in time required to set up mechanism**
Land lease to public body	LAs are likely to have solicitors and surveyors/valuers so will not need external independent support	Depends on willingness of land manager to lease, time to agree price and lease conditions
	Land manager likely to need solicitor, land agent, etc.	
Servitude, wayleaves	LA might need some additional skills (although there are similarities to land purchase and hence skills required)	Depends on length of negotiations (**varies by measure** with simpler negotiations expected when impacts on land use are less significant)
	Land manager likely to need solicitor, land agent, etc.	
Capital and annual payments (including grants) - EU, Government, Lottery, Agencies	**Varies by mechanism and measure:** Land manager likely to have sufficient knowledge to know if business viability will be affected by some of the measures	**Varies by grant/fund**
	Advice may be needed for some grants and measures, also organisations other than LA might need to apply for funding. Land manager may need assistance to apply for funding in some cases	
Capital and annual payments (including grants) - Trust, Local initiatives (non-Govt)	**Varies by mechanism and measure:** Land manager likely to have sufficient knowledge to know if business viability will be affected by some of the measures	**Varies by grant/fund**
	Advice may be needed for some grants and measures, also organisations other than LA might need to apply for funding. Land manager may need assistance to apply for funding in some cases	
	Organisation other than public body and land manager may need to apply for and arrange funding. This could be an independent broker	
Economic instruments (fiscal, permits, service payments, auctions)	External independent advice likely to be needed by both land managers and public bodies as mechanism is designed and implemented	**Varies by mechanism and measure:** Will depend on details of mechanism and measure. For complex measures, expertise needed may be greater or over a longer period
		Some mechanisms (e.g. trading, auctions) likely to need more time than others (e.g. fiscal)
Advice and technical support	**Varies by mechanism and measure:** Land manager may only require the advice provided as part of the mechanism/measure implementation	**Varies by mechanism and measure:** Several months may be needed if quotes have to be gathered

Table A1-10: Findings of assessment of mechanism/measure combination on level of involvement and time by independent third parties		
Mechanism/measure combination	**Extent of involvement required by those in addition to land manager and public body**	**Lead-in time required to set up mechanism**
	If providing holding area (e.g. barn) is considered, then planning advice will need to be sought at the beginning of the process. For new land management practices, a one-off advice session may be needed from a farm/technical advisor. If abstraction is considered, then the relevant authority (SEPA) will need to be consulted	
	LA is likely to need external independent advice prior to offering advice and support to land managers. Appropriate skills and expertise are unlikely to be available in-house	Simple straightforward agreements should be relatively quick to set up

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